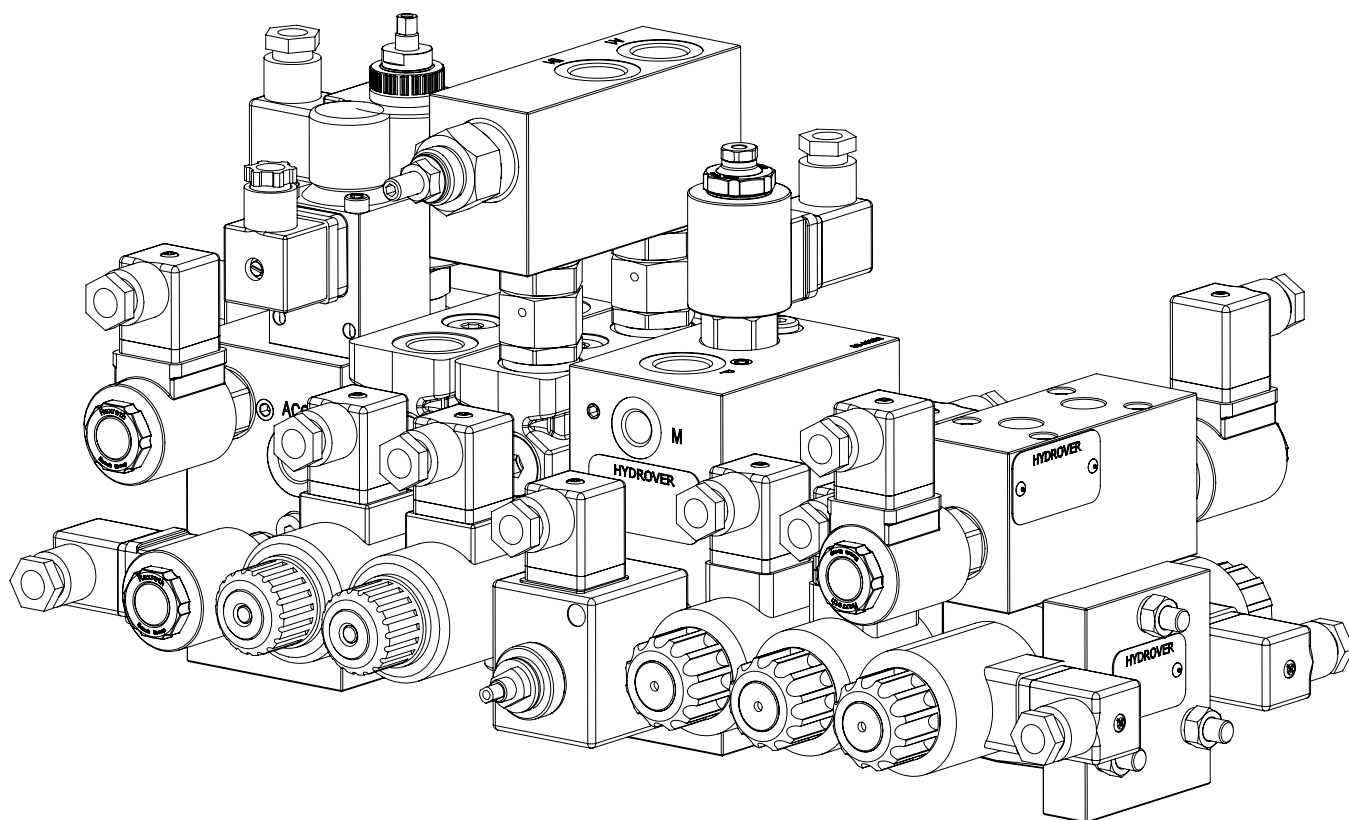


# HYDROVER

HYDRAULIC INTEGRATED CIRCUITS



## Catalogue

May 2025 edition

## ABOUT US

Our company designs, produces and sales Hydraulic components. We are a Bosch Rexroth Oil Control distributor.

Business starts in 1982 by the purchase of representations for Piedmont area of some companies concerning hydraulic sector (already Oil Control and Salami). This activity supports the development of a close technical relationship with the main enterprises of the construction machinery field, mobile equipment and industrial machines using hydraulic systems.

Hydrover's turns directly to the market and puts at the disposal of our guests a developed experience and the flexibility typical of a little business. These skills allow us during the time to tie commercial and technical relationship with many business located in our territory and also abroad.

Hydrover, your Hydraulic Partner.

### **HYDROVER S.r.L.**

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## **SALES, DELIVERY AND WARRANTY TERMS**

### **SALES AND DELIVERY TERMS**

Hydrover distributes its valves through its sales network in compliance with the delivery terms (contract) shown in the specific documents (offers, order, confirmations, invoices), and those conditions shall be applicable for all what not specified here.

### **ORDERS**

All orders shall be in written form and shall show the following information:

- date and place where the order is issued;
- full name and address of the purchasing company;
- signature of a legal representative, with indication of his/her qualification;
- reference of the suppliers offer (when applicable);
- complete ordering code and eventual description of the valves ordered;
- number of pieces;
- delivery time requested (eventual)
- carrier (eventual)

The order will be considered valid at the Hydrover delivery terms.

The delivery terms requested or shown, and eventually notified in writing, can be considered essential only in case of specific signed agreement between both parties, supplier and buyer.

### **WARRANTY**

The Hydrover limited warranty lasts for a period of one year starting from the delivery date of the valve. If the buyer deems that one or more products are faulty due to improper manufacturing, he undertakes to notify immediately the presence of these faults to the supplier, by means of detailed written report, so that Hydrover may verify, through an expert of its own trust, whether the complained faults are really present. Once the Hydrover expert has verified that the notified faults are effectively present and that they are due to manufacturing defects, Hydrover undertakes to repair or to replace the valve within an adequate term and the buyer undertakes not to ask for contract cancellation before the adequate term to repair or replace the valve has expired. Written permission for warranty returns must be obtained from Hydrover prior to shipment. All warranty returns shall be shipped freight prepaid and shall include a detailed description of the malfunction and of the working conditions. The warranty does not cover products which have been contaminated, used improperly or tampered without control and approval of Hydrover. Similarly the warranty is not valid if changes are made to the circuits or systems which could negatively affect the valve function. If the valve supplied must be assembled in systems which could cause damages to third parties exceeding by for the price of the valve, the buyer undertakes to adapt all safety measures in order to avoid any damage, since he recognizes that mass production of the valves at market prices entails the risk, even if limited, that occasional faulty valves may result. O-rings are excluded from the warranty.

### **USER'S INTRUCTIONS**

The buyer shall not use the vave for purposes different from what pointed out in the relevant drawings or in the Hydrover catalogues. If the buyer wants to use the valves for other purposes he shall ask specific approval from Hydrover. Specifically, the buyer are not authorised to use Hydrover valves for the following applications:

- any passenger or goods carrying road vehicle or equipment subject to Highway Safety Standards and Directives, such as (without limitation) steering, or brake systems
- aircraft or space vehicles
- ordnance equipment
- medical and health products, including life support equipment or vehicles
- systems to be used under any Nuclear Regulatory Act or Regulation
- systems for use in explosive or otherwise hazardous environments

### **STATEMENT**

The valves and the multifunction integrated blocks described in this catalogue can be employed in systems or machines falling into the specifications of EEC Directive 2006/42/CE (Machine Directive) and later amendments. The valves and the blocks shall not be operated before the complete machine is verified to be in compliance with the requirements of the above mentioned Directive.

### **JURISDICTION**

In case of a dispute where Hydrover is summoned before court, the Court of law in Cuneo (Italy) is exclusively competent.

## TECHNICAL DATA

### VALVES INSTALLATION

It is recommended to follow these steps:

- inspect the sub-plate to ensure that it is in good conditions and no external contaminant is present
- check that O-Rings are intact and correctly positioned
- don't tighten screws or connectors more than the maximum torque specified in the catalogue

### INLET VOLTAGE

To obtain correct operation and long life of coils it is necessary that the operating voltage fluctuations do not exceed +5% -10 % of nominal voltage.

### TEMPERATURE RANGES

- Ambient Temperature from -20°C to +50°C
- Oil Temperature from -20°C to +80°C

### SEALS

O-RINGS: Acryl – Nitrile Butadiene Rubber NBR (BUNA-N) standard for temperature between -20°C and +100°C. Fluorocarbo FPM (Viton) and other compounds are available on request.

### STOCKING OF NEW VALVES

Encapsulated by a protective wrapping, the valves shall not be exposed to direct sun light nor to source of heat or ozone (like electric motors running) and kept in a dry place at a temperature between -20°C and +50°C.

### WORKING DUTY

The working duty ED of a coil is the ratio between energized time  $t_i$  and full cycle time  $t_c$  where  $t_c = t_i + t_r$  and  $t_r$  = de-energized time.

$$ED = (t_i / t_c) \cdot 100 \%$$

All coils are rated for ED = 100 % provided that temperature limit of their insulation class is not exceeded.

### PROTECTION EN 60529

On request coils with IP65/IP69K protection.

### HYDRAULIC FLUID

It must have physical lubricating and chemical properties suitable for use in hydraulic systems such as, for example:

- MINERAL OIL FLUIDS HL (DIN 51524 part1)
- MINERAL OIL FLUIDS HLP (DIN 51524 part2)

For use of environmentally acceptable fluids (vegetable or polyglycol base) please consult LC Oleodinamica.

Viscosity class: with ISO-DIN, the viscosity class is expressed by ISO-VG (no.); the no. Indicates the average kinematic viscosity at 40°C in mm<sup>2</sup>/s or centiStoks (cSt).

### CONTAMINATION – FILTRATION

- GENERAL INFORMATION: Manufacturers and users of hydraulic equipment admit that contamination is the most likely cause of malfunction or failure in hydraulic systems and reduces security and reliability of components and systems. Metal particles flowing throughout the circuit scratch moving surfaces so that contamination level, if not controlled, increases very rapidly. It is strongly recommended to maintain contamination level at least at nominal values shown below, choosing adequate filtration products.
- FILTRATION RATIO BETAX: It's the ratio between the number of particles before and after the filter with diameter larger than X micron.
- ABSOLUTE FILTRATION RATIO ISO 4572: It's the diameter X of the largest particle with BETAX ≥ 75.
- CONTAMINATION CLASS ISO 4406: it's expressed by 3 scale numbers representing respectively: the number of particles equal to or larger than 4 micron (c); the number of particles equal to or larger than 6 micron (c); the number of particles equal to or larger than 14 micron(c), contained in 1 ml of fluid.
- CONTAMINATION CLASS NAS 1638: It's expressed by one scale numbers representing the number of particles of different size ranges contained in 100 ml of fluid.

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Code	Description	Page
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H3959	Cetop 3 modular poppet type solenoid operated directional valves between A1 and A / B1 and B / 40 lpm	382
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H3932	Modular Cetop 3 flow regulation 2 way compensated on B (in or out) with fast slow speed reversible with seal plate	394
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<b>H51-G1</b>	Mounted group sample H51-G1	490
<b>H5101</b>	Inlet subplate with 1 station / extensible / relief and bypass valve / side A-B ports crossing P-T ports	492
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<b>H5204</b>	Inlet plate / relief valve / 3 way compensated / for fixed displacement pump	502
<b>H5203</b>	Intermediate subplate / flow restrictor on P / 1 Cetop 5 station / side A-B ports	504
<b>H5213</b>	Intermediate subplate 2 way compensated / 1 Cetop 5 station / side A-B ports	506
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<b>H5603</b>	Cetop 5 single station subplate / relief valve / back P-T ports / side A-B ports	518
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<b>H5601</b>	Cetop 5 subplate from 1 to 6 stations / 3/4" G crossing P-T ports / 1/2" G side A-B ports	522
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<b>H5915</b>	Cetop 5 modular pressure reducing valve on P	544
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<b>H5906</b>	Cetop 5 modular counterbalance valve on B / 130 lpm	556
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<b>04.11.05-X-99-Z</b>	Valvola di massima pressione Bosch Rexroth <b>VS-80</b>	635
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<b>04.95.04-X-85-Z</b>	Bosch Rexroth reducing valve <b>VRPR-10A</b>	648
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<b>OD.21.01-X-04</b>	Bosch Rexroth bidirectional flow restrictor <b>ST-C-09</b>	662
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<b>OD.15-X-36-Y-Z-00</b>	Bosch Rexroth solenoid valve normally open <b>OD.15-X-36-Y-Z-00</b>	699
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<b>OD.15-X-21-Y-Z-00</b>	Bosch Rexroth solenoid valve normally open <b>OD.15-X-21-Y-Z-00</b>	707
<b>OD.15-X-89-Y-Z-00</b>	Bosch Rexroth solenoid valve normally open <b>OD.15-X-89-Y-Z-00</b>	711
<b>OD.92-X-77-Y-Z</b>	Bosch Rexroth flow regulator proportional solenoid valve <b>VEP-5A-2Q-09</b>	715

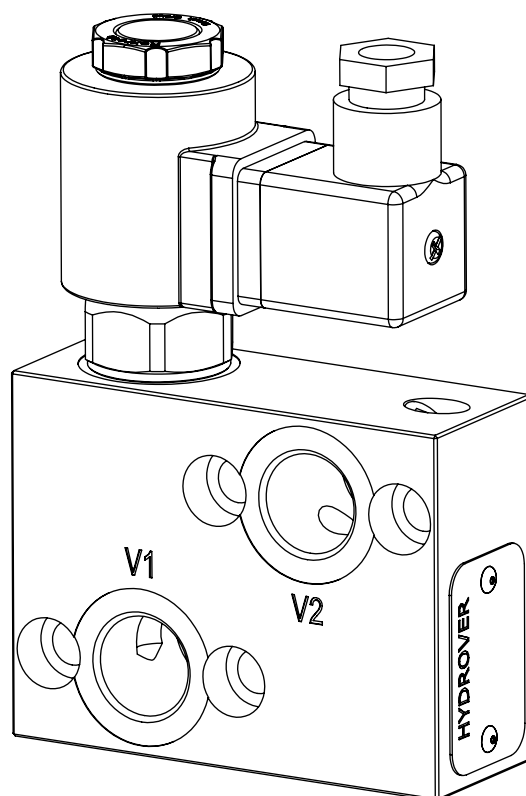
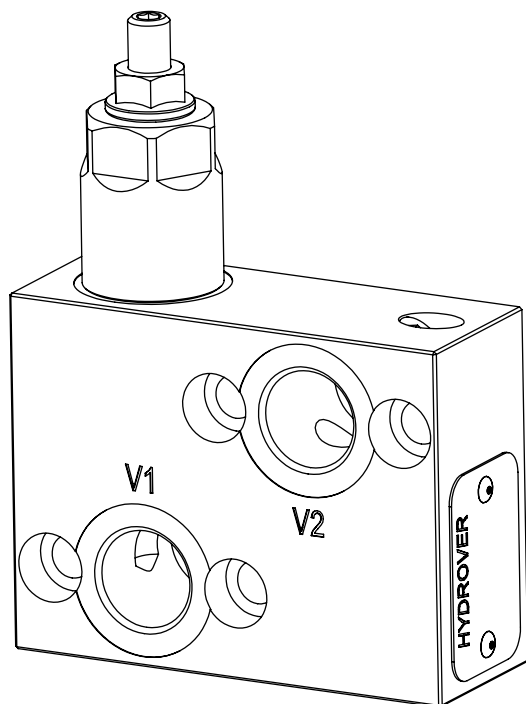
Code	Description	Page
<b>OD.95.06.89.72.00</b>	Bosch Rexroth flow regulator proportional solenoid valve <b>VEPN-12A</b>	719
<b>OD.94.01.18-Y-Z</b>	Bosch Rexroth pressure relief proportional solenoid valve <b>VEP-5B-2S-D</b>	723
<b>OD.91.06.77-Y-00</b>	Bosch Rexroth pressure reducing proportional valve <b>VEP-5A-2R-06-P</b>	727
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<b>OD.02.21.X-Y-Z</b>	Bosch Rexroth coil <b>R7</b> for proportional solenoid valves	733
<b>OD.02.09.01.30-Z-01</b>	Bosch Rexroth coil <b>S5</b> for proportional solenoid valves	734



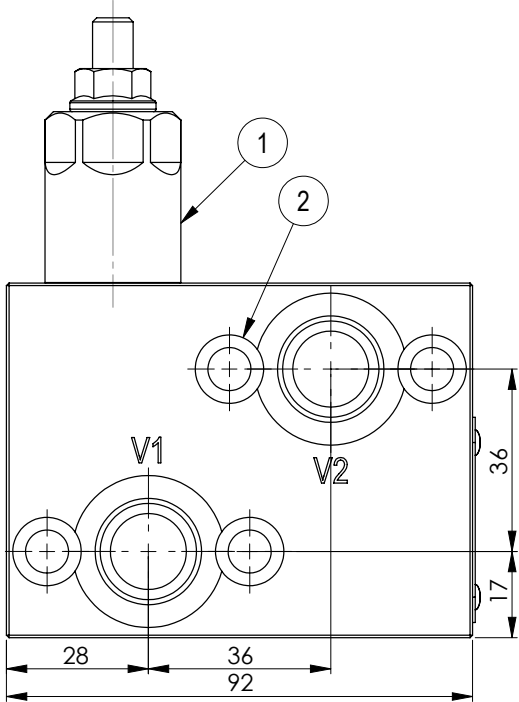
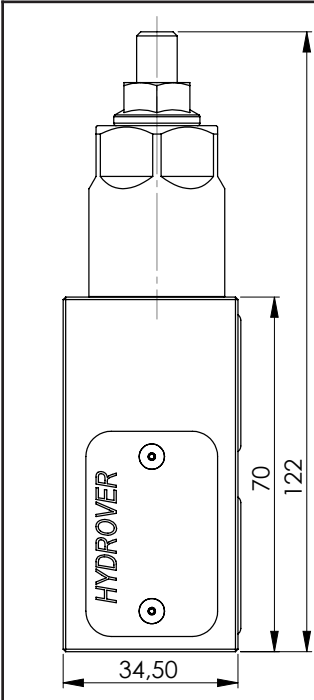
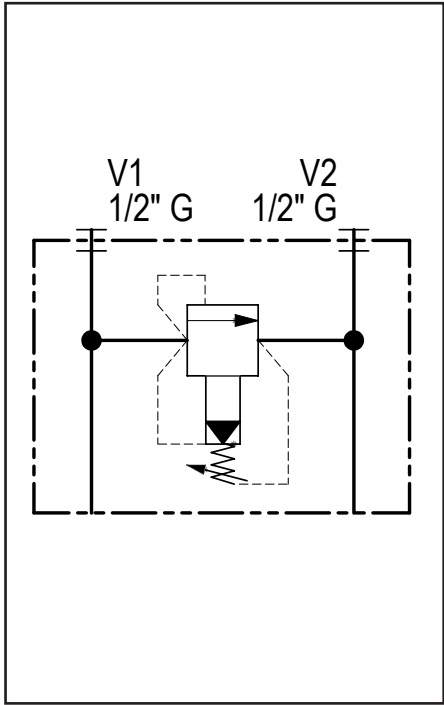


# 14 SERIES

## Valves for hydraulic motors

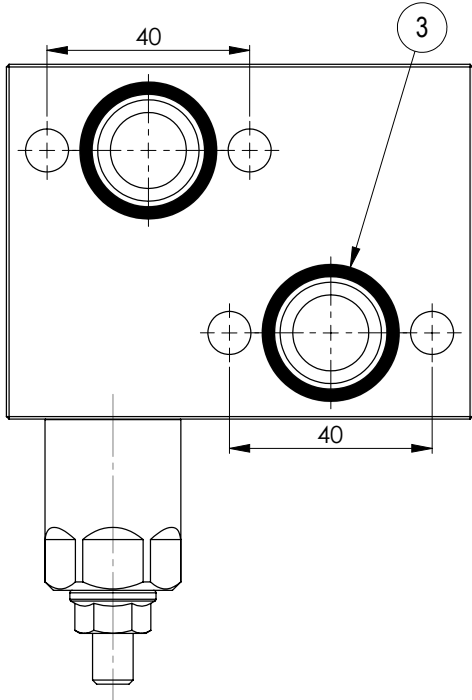
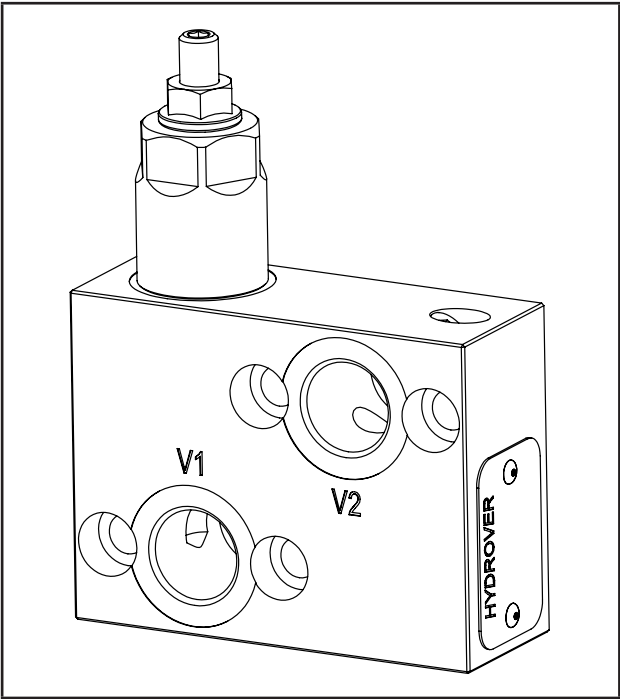


Relief valve single effect for OMH-OMP-OMR motors / 80 lpm **H14001**



Dimensions in mm

Technical data	
Max. pressure	250 bar
Max. flow	80 lpm *
Weight	0,7 Kg
Manifold material	Aluminium
V1 / V2 ports	1/2" G



N°	Description	Q.ty
1	Bosch Rexroth relief valve <b>VSPN-10A</b> depicted with screw adjustment *	1
2	Ø 8,5 through hole for mounting with counterbore	4
3	OR 130 i. Ø 22,22 cross section 2,62	2

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

Ordering code

H	1	4	0	0	1	A	-		
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Hydrover product

Product series  
14 series - Valves for hydraulic motors

Product ID

Manifold material  
Aluminium

Relief valve adjustment  
pressure range \*

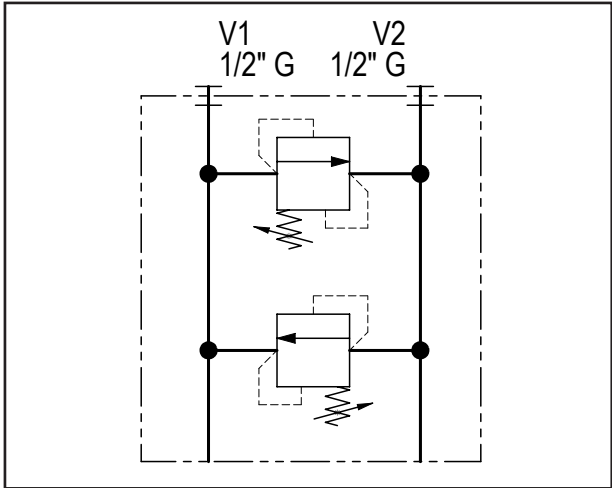
1 =	35-140 bar
2 =	70-280 bar
3 =	140-420 bar
3 =	35-350 bar (adj. knob)

Relief valve adjustment type \*

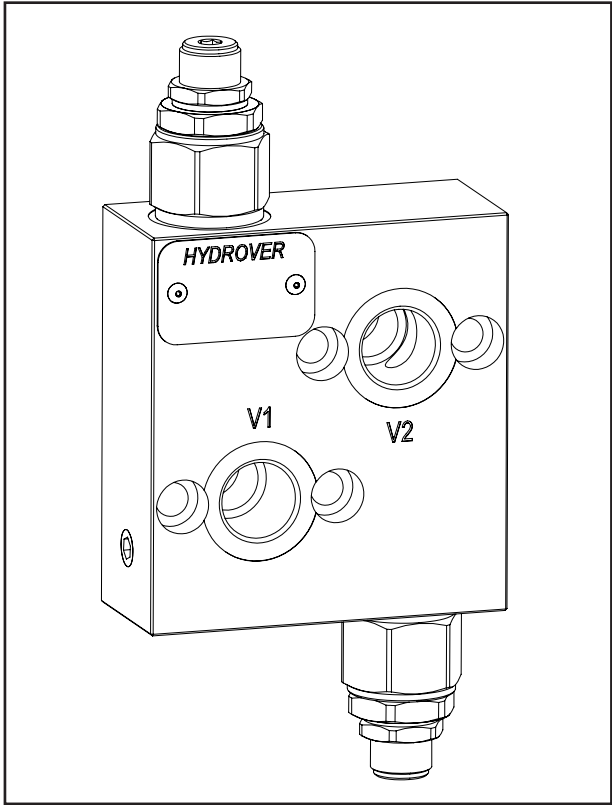
S =	Screw
K =	Knob

\* Omit if not required. To order the product without the pressure relief cartridge valve, omit the pressure range and the adjustment type options: H14001A.  
The manifold will still be provided with the corresponding cavity.

Relief valve double effect for OMH-OMP-OMR motors / 40 lpm **H14012**

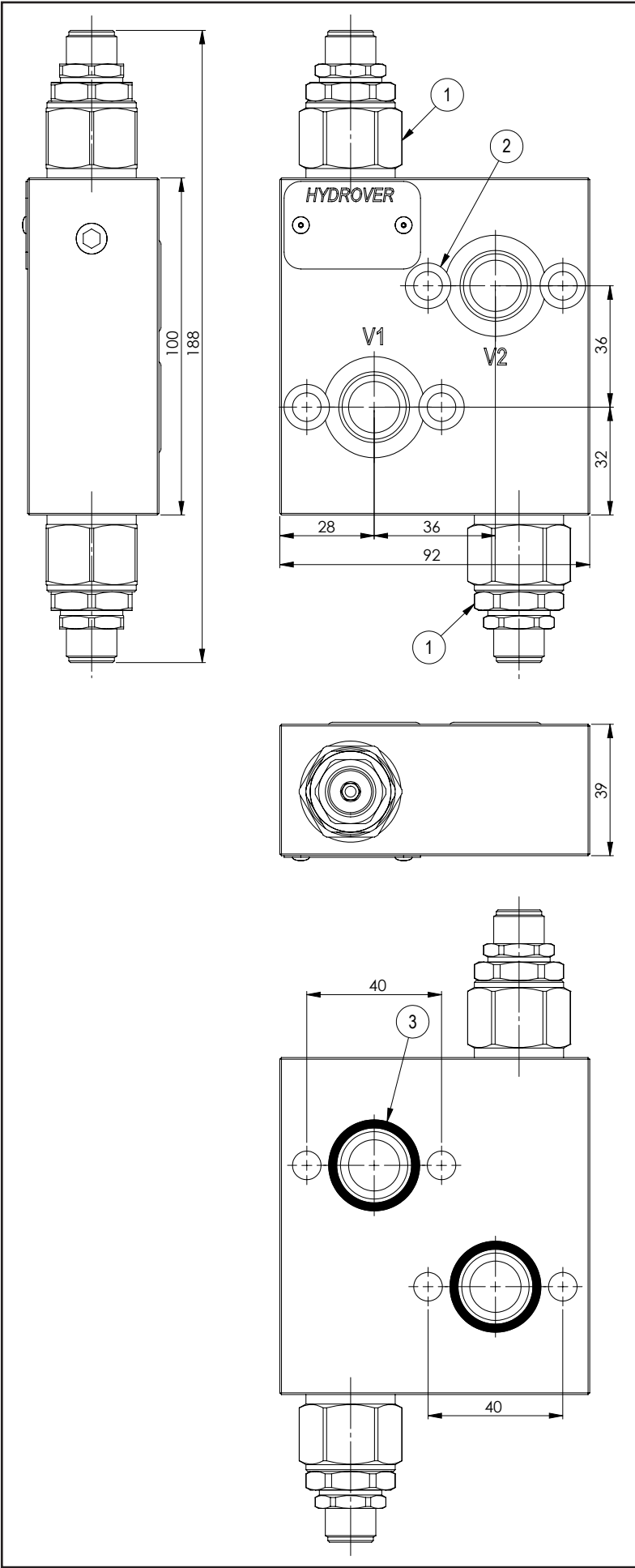


Technical data	
Max. pressure	250 bar
Max. flow	40 lpm *
Weight	1,2 Kg
Manifold material	Aluminium
V1 / V2 ports	1/2" G



N°	Description	Q.ty
1	Bosch Rexroth relief valve <b>VMD1.040</b> *	2
2	Ø 8,5 through hole for mounting with counterbore	4
3	OR 130 i. Ø 22,22 cross section 2,62	2

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue



Ordering code

H	1	4	0	1	2	A	-	-	-	-	-
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Hydrover product

Product series

14 series - Valves for hydraulic motors

Product ID

Manifold material

Aluminium

Relief valve adjustment type on V1 \*

Screw

= S

Relief valve adjustment pressure range on V1 \*

25-120 bar

= 1

40-200 bar

= 2

200-350 bar

= 3

Relief valve adjustment pressure range on V2 \*

1= 25-120 bar

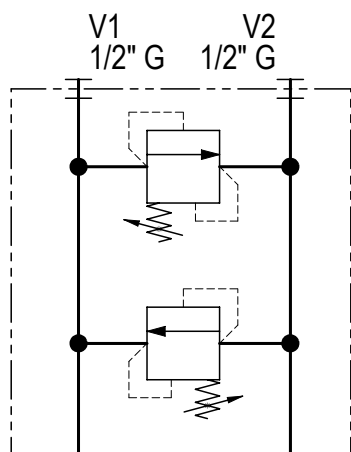
2= 40-200 bar

3= 200-350 bar

Relief valve adjustment type on V2 \*

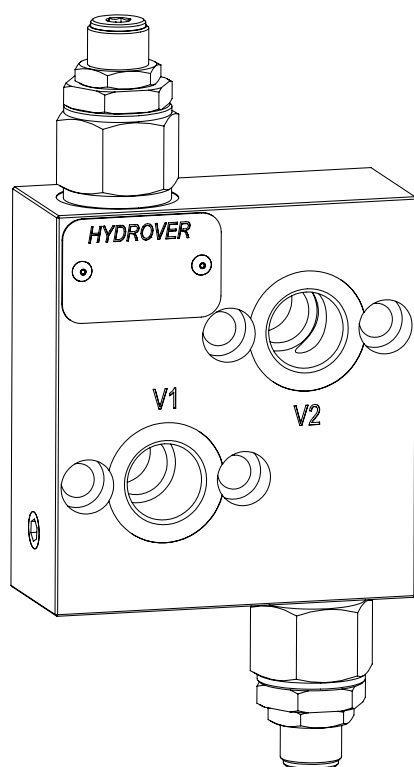
S = Screw

\* Omit if not required. To order the product without the pressure relief cartridge valves, omit the pressure range and the adjustment type options: H14012A.  
The manifold will still be provided with the corresponding cavities.

Relief valve double effect for OMH-OMP-OMR motors / 60 lpm **H14013**

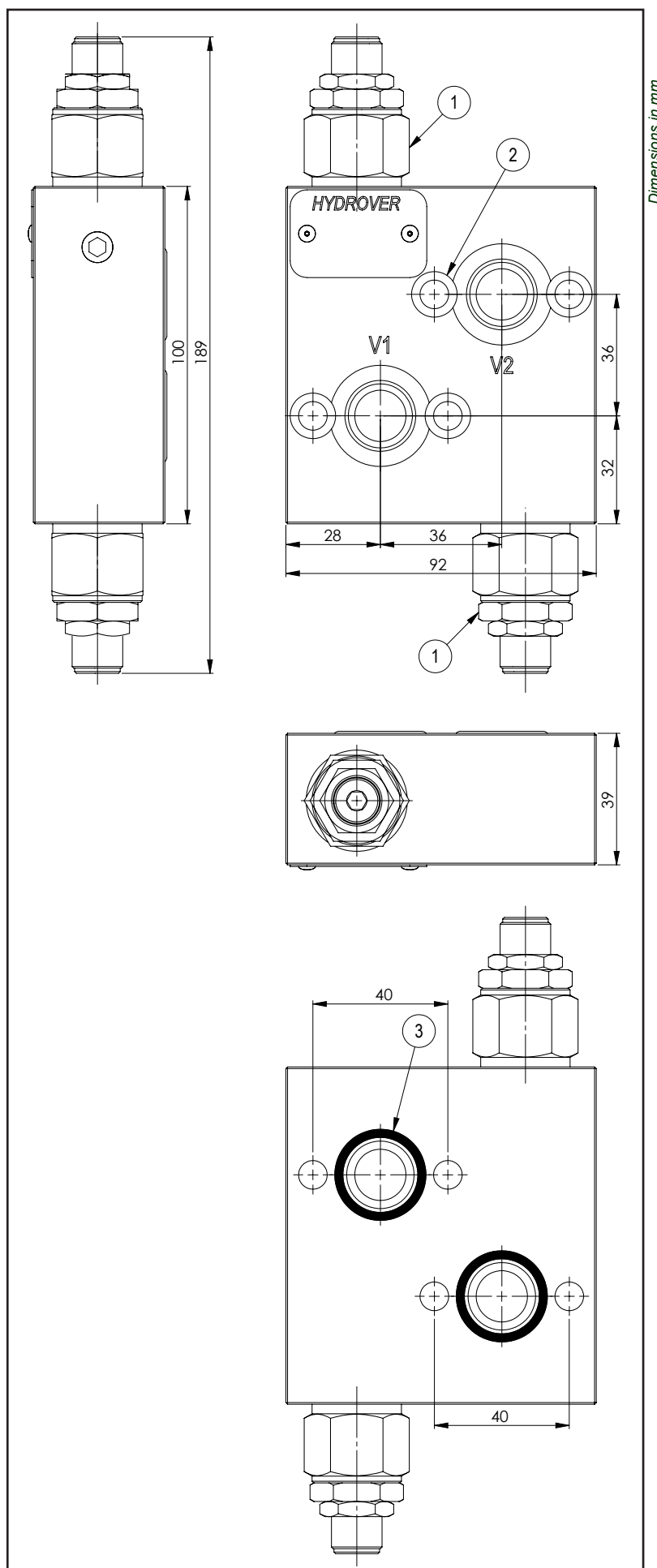
## Technical data

Max. pressure	250 bar
Max. flow	60 lpm *
Weight	1,2 Kg
Manifold material	Aluminium
V1 / V2 ports	1/2" G



N°	Description	Q.ty
1	Bosch Rexroth relief valve <b>VMD1.070</b> *	2
2	Ø 8,5 through hole for mounting with counterbore	4
3	OR 130 i. Ø 22,22 cross section 2,62	2

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue



Dimensions in mm

Ordering code

H	1	4	0	1	3	A	-	-	-	-	-
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Hydrover product

Product series  
14 series - Valves for hydraulic motors

Product ID

Manifold material  
Aluminium

Relief valve adjustment type on V1 \*  
Screw = S

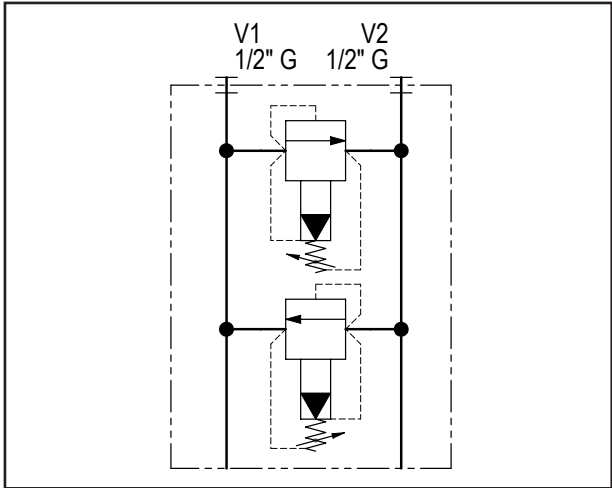
Relief valve adjustment pressure range on V1 \*  
10-60 bar = 0  
40-110 bar = 1  
110-220 bar = 2  
220-260 bar = 3

Relief valve adjustment pressure range on V2 \*  
0 = 10-60 bar  
1 = 40-110 bar  
2 = 110-220 bar  
3 = 220-260 bar

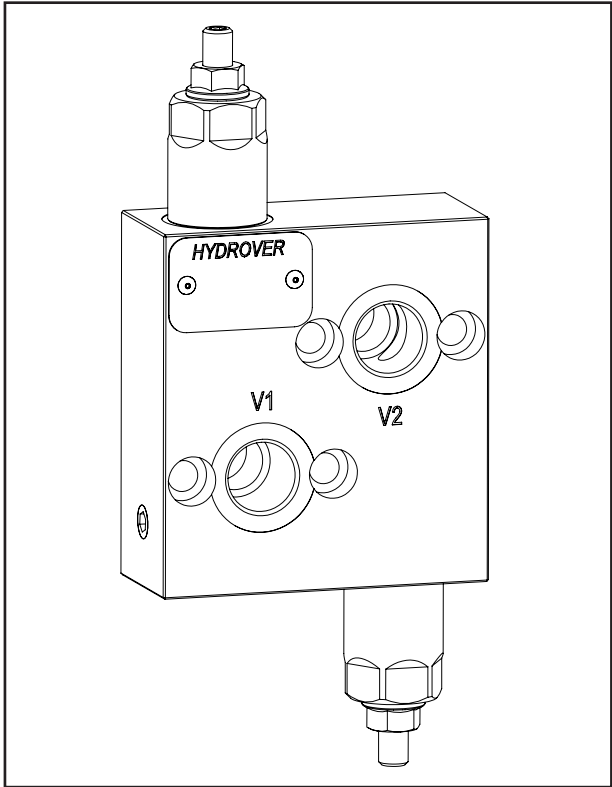
Relief valve adjustment type on V2 \*  
S = Screw

\* Omit if not required. To order the product without the pressure relief cartridge valves, omit the pressure range and the adjustment type options: H14013A.  
The manifold will still be provided with the corresponding cavities.

Relief valve double effect for OMH-OMP-OMR motors / 80 lpm **H14014**

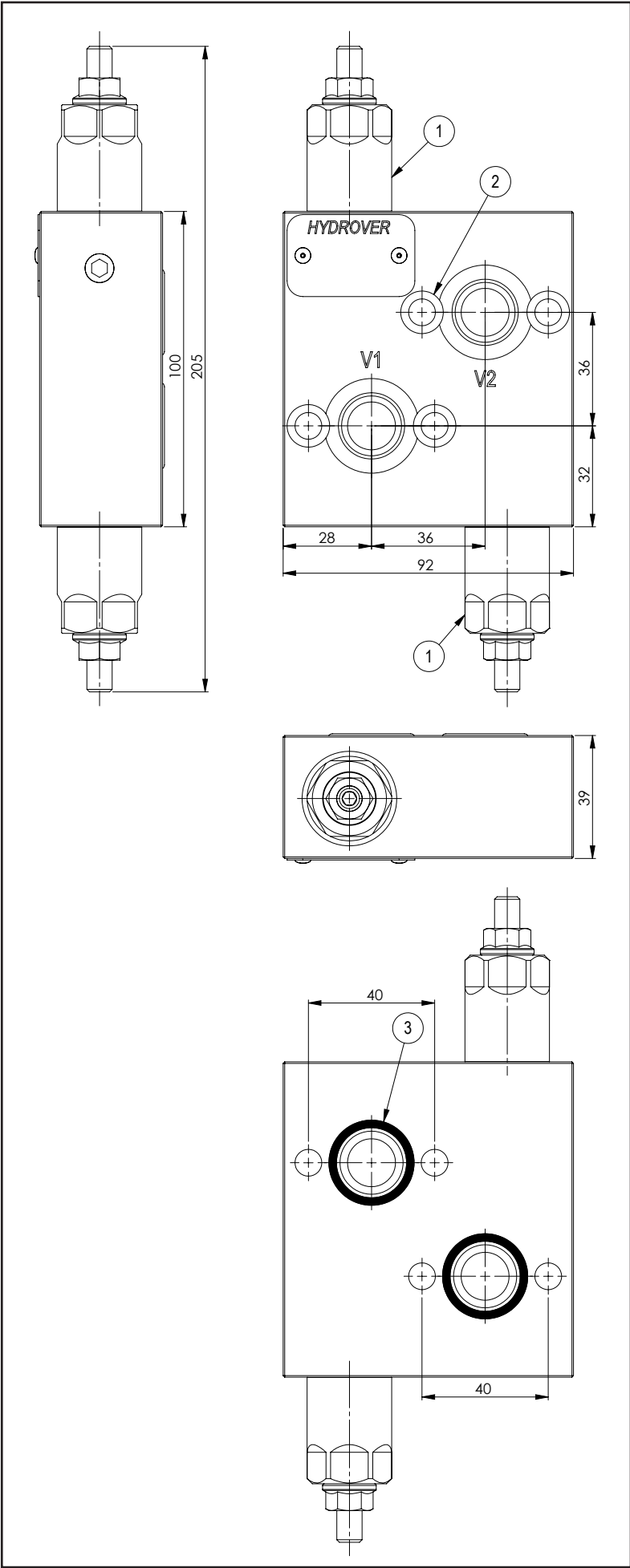


Technical data	
Max. pressure	250 bar
Max. flow	80 lpm *
Weight	1,3 Kg
Manifold material	Aluminium
V1 / V2 ports	1/2" G



N°	Description	Q.ty
1	Bosch Rexroth relief valve <b>VSPN-10A</b> depicted with screw adjustment *	2
2	Ø 8,5 through hole for mounting with counterbore	4
3	OR 130 i. Ø 22,22 cross section 2,62	2

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue



Dimensions in mm



Ordering code

H	1	4	0	1	4	A	-	-	-	-	-
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Hydrover product

Product series  
14 series - Valves for hydraulic motors

Product ID

Manifold material  
Aluminium

Relief valve adjustment type on V1 \*  
Screw = S  
Knob = K

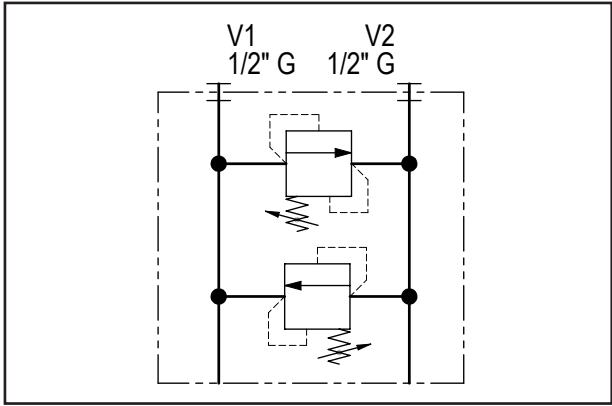
Relief valve adjustment pressure range on V1 \*  
35-140 bar = 1  
70-280 bar = 2  
140-420 bar = 3  
35-350 bar (reg. volante) = 3

Relief valve adjustment pressure range on V2 \*  
1 = 35-140 bar  
2 = 70-280 bar  
3 = 140-420 bar  
3 = 35-350 bar (reg. volante)

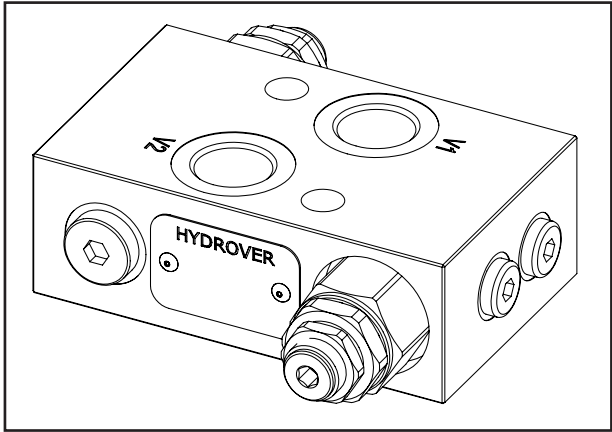
Relief valve adjustment type on V2 \*  
S = Screw  
K = Knob

\* Omit if not required. To order the product without the pressure relief cartridge valves, omit the pressure range and the adjustment type options: H14014A.  
The manifold will still be provided with the corresponding cavities.

Relief valve double effect for OMS motors / 60 lpm **H14032**

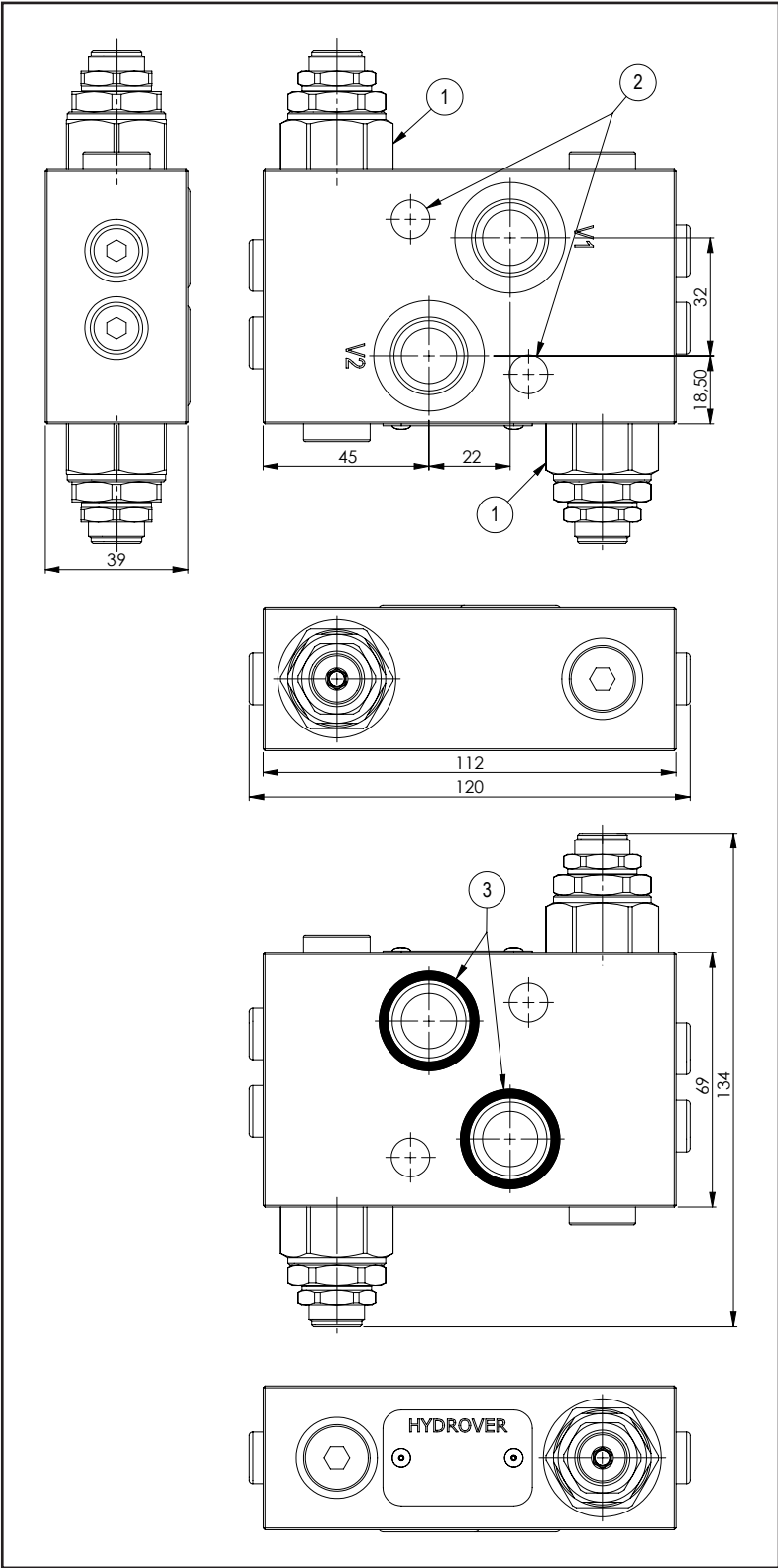


Technical data	
Max. pressure	250 bar
Max. flow	60 lpm *
Weight	1 Kg
Manifold material	Aluminium
V1 / V2 ports	1/2" G



N°	Description	Q.ty
1	Bosch Rexroth relief valve <b>VMD1.070</b> *	2
2	Ø 10,5 through hole for mounting	2
3	OR 130 i. Ø 22,22 cross section 2,62	2

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue



Dimensions in mm

Ordering code

H	1	4	0	3	2	A	-	-	-	-	-
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Hydrover product

Product series  
14 series - Valves for hydraulic motors

Product ID

Manifold material  
Aluminium

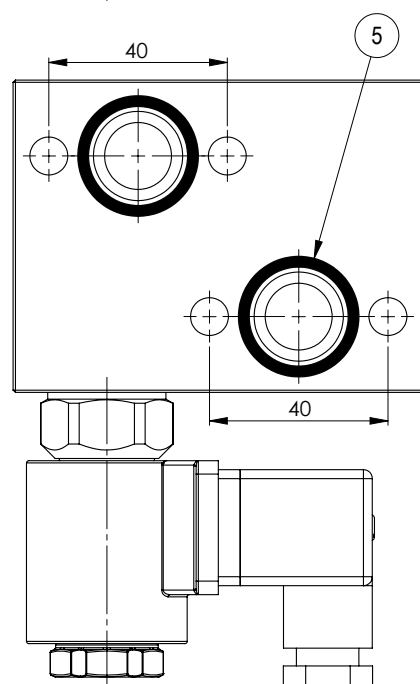
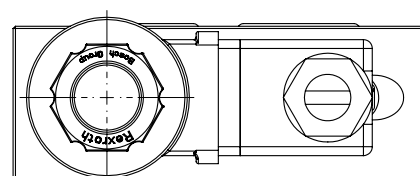
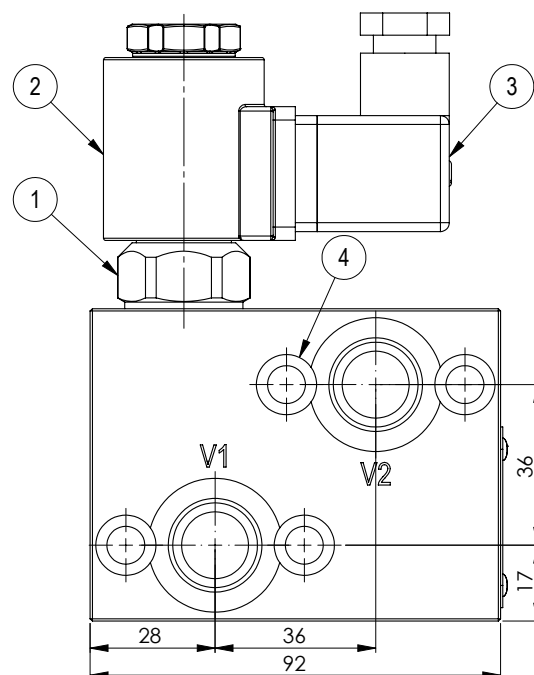
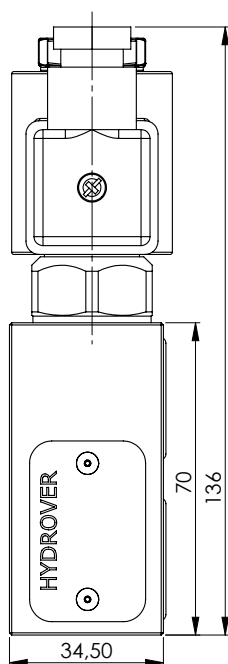
Relief valve adjustment type on V1 \*  
Screw = S

Relief valve adjustment pressure range on V1 \*  
10-60 bar = 0  
40-110 bar = 1  
110-220 bar = 2  
220-260 bar = 3

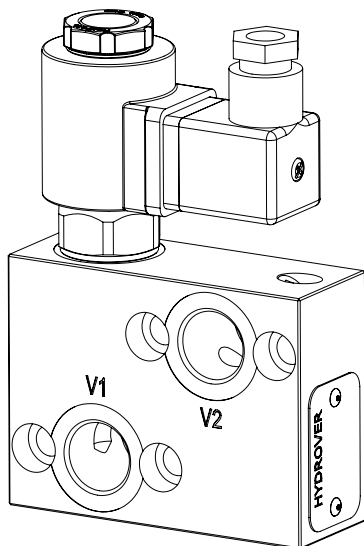
Relief valve adjustment pressure range on V2 \*  
0 = 10-60 bar  
1 = 40-110 bar  
2 = 110-220 bar  
3 = 220-260 bar

Relief valve adjustment type on V2 \*  
S = Screw

\* Omit if not required. To order the product without the pressure relief cartridge valves, omit the pressure range and the adjustment type options: H14032A.  
The manifold will still be provided with the corresponding cavities.


**Technical data**

Max. pressure	250 bar
Max. flow	70 lpm *
Weight	0,8 Kg
Manifold material	Aluminium
V1 / V2 ports	1/2" G



N°	Description	Q.ty
1	Bosch Rexroth solenoid valve <b>VEI-16-10A-NC OD.15-X-36-Y-000000</b> (normally closed) or <b>VEI-16-10A-NA OD.15-X-36-Y-000000</b> (normally open) depicted without manual override *	1
2	Bosch Rexroth coil <b>D36</b> - CLASS H DIN 43650 ISO 4400 *	1
3	Connector DIN 43650 ISO 4400	1
4	Ø 8,5 through hole for mounting with counterbore	4
5	OR 130 i. Ø 22,22 cross section 2,62	2

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

Ordering code

H	1	4	0	0	2	A	-	-	-	-	-	-	-	-
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**Hydrover product**

**Product series**  
14 series - Valves for hydraulic motors

**Product ID**

**Manifold material**  
Aluminium

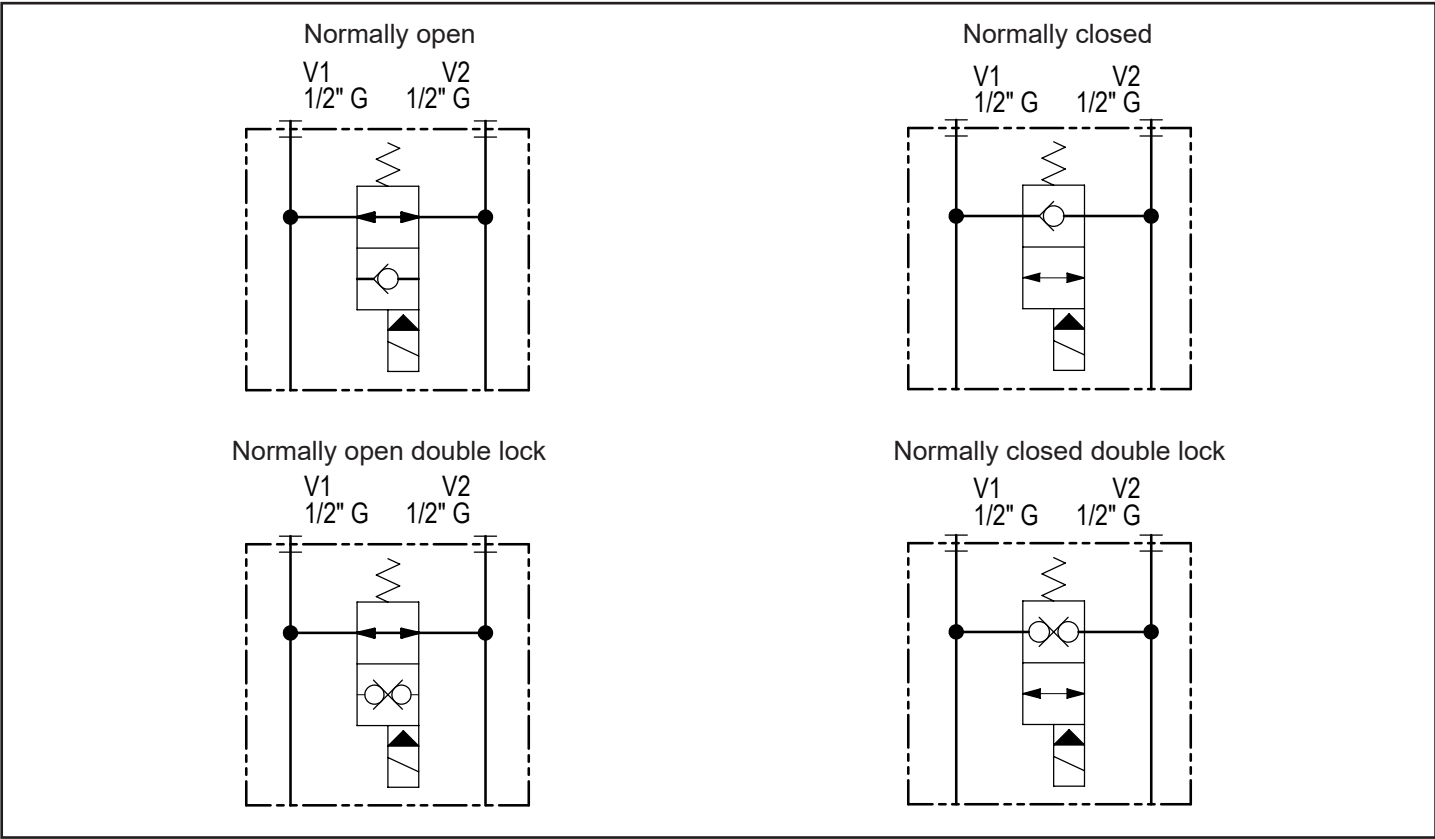
**Solenoid valve spool type \***  
Normally open = NA  
Normally closed = NC  
Normally open double lock = 2A  
Normally closed double lock = 2C

**Solenoid valve coil connection \***  
1 = DIN 43650 ISO 4400

**Solenoid valve coil voltage \***  
OB = 12V DC  
OC = 24V DC  
OD = 48V DC  
OU = 110V RAC  
AH = 230V RAC

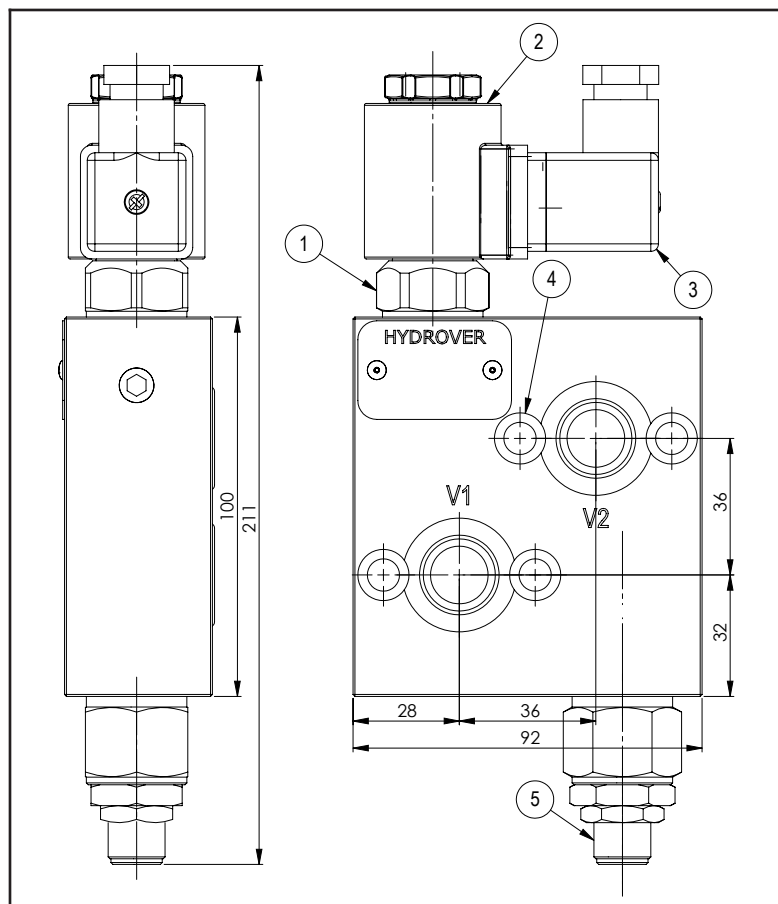
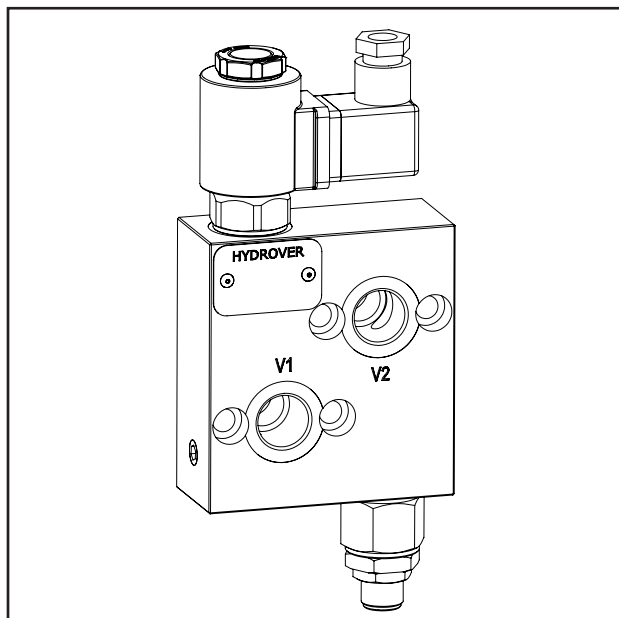
**Solenoid valve manual override \***  
E0 = Without  
EP = Push (NA)  
EV = Screw (NC)  
EG = Push and twist (NA)

\* Omit if not required. For example, to order the product without the solenoid cartridge valve, omit the coil connection, coil voltage and manual override options: H14002A.  
The manifold will still be provided with the corresponding cavity.



## Technical data

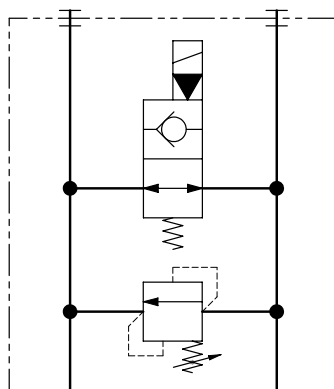
Max. pressure	250 bar
Max. flow	60 lpm *
Weight	1,4 Kg
Manifold material	Aluminium
V1 / V2 ports	1/2" G



Dimensions in mm

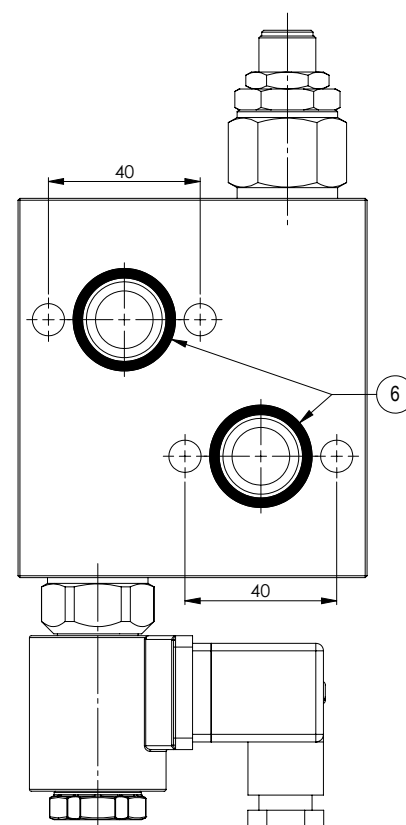
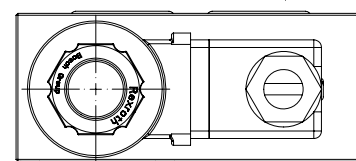
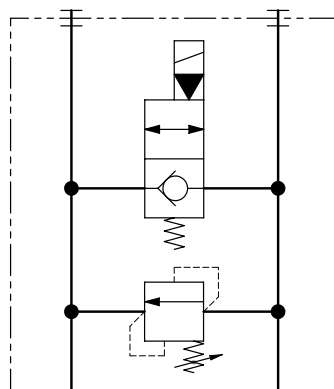
## Normally open

V1 1/2" G V2 1/2" G



## Normally closed

V1 1/2" G V2 1/2" G



N°	Description	Q.ty
1	Bosch Rexroth solenoid valve <b>OD.15.05.36-Y-000000</b> (normally closed) or <b>OD.15.06.36-Y-000000</b> (normally open) depicted without manual override *	1
2	Bosch Rexroth coil <b>D36</b> - CLASS H DIN 43650 ISO 4400 *	1
3	Connector DIN 43650 ISO 4400	1
4	Ø 8,5 through hole for mounting with counterbore	4
5	Bosch Rexroth relief valve <b>VMD1.070</b> *	1
6	OR 130 i. Ø 22,22 cross section 2,62	2

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

Ordering code

H	1	4	0	1	0	A	-	-	-	-	-	-	-	-	-
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Hydrover product

Product series  
14 series - Valves for hydraulic motors

Product ID

Manifold material  
Aluminium = A

Relief valve adjustment type \*  
Screw = S

Relief valve adjustment pressure range \*  
10-60 bar = 0  
40-110 bar = 1  
110-220 bar = 2  
220-260 bar = 3

Solenoid valve coil connection \*  
1 = DIN 43650  
ISO 4400

Solenoid valve coil voltage \*  
OB = 12V DC  
OC = 24V DC  
OD = 48V DC  
OU = 110V RAC  
AH = 230V RAC

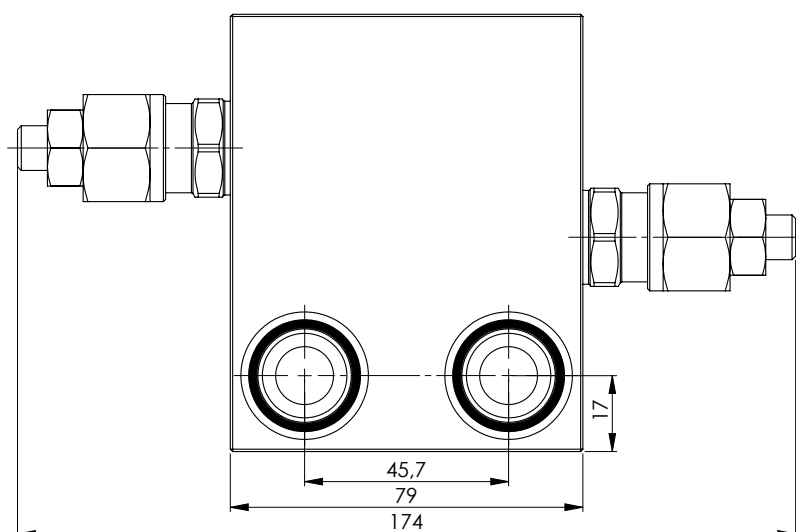
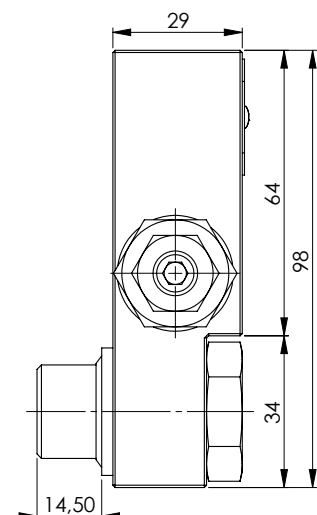
Solenoid valve manual override \*  
E0 = Without  
EP = Push (NA)  
EV = Screw (NC)  
EG = Push and twist (NA)

Solenoid valve spool type \*  
NA = Normally open  
NC = Normally closed

\* Omit if not required. For example, to order the product without the solenoid cartridge valve, omit the coil connection, coil voltage and manual override options: H14010A-S2.  
The manifold will still be provided with the corresponding cavity.  
To inhibit a function, replace the related valve options with TL: eg H14010A-S2-TL.  
In the cavity it will be mounted a long plug.

Valve	Cavity	Long plug code
Solenoid valve OD.15.05.36-Y-000000 o OD.15.06.36-Y-000000	CA-10A-2N	0489A2008500000
Pressure relief valve VMD1.070	CA-10A-2N	0489A2008500000

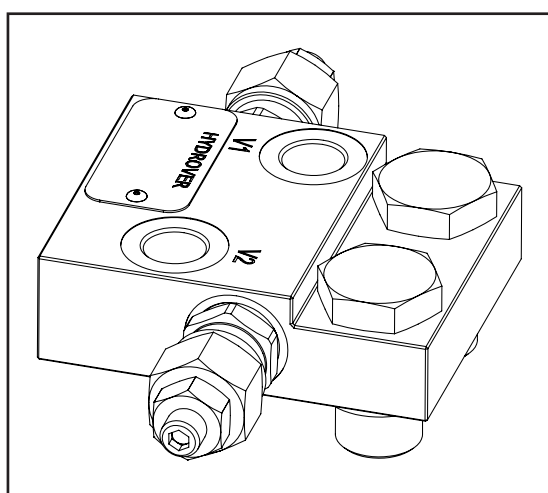
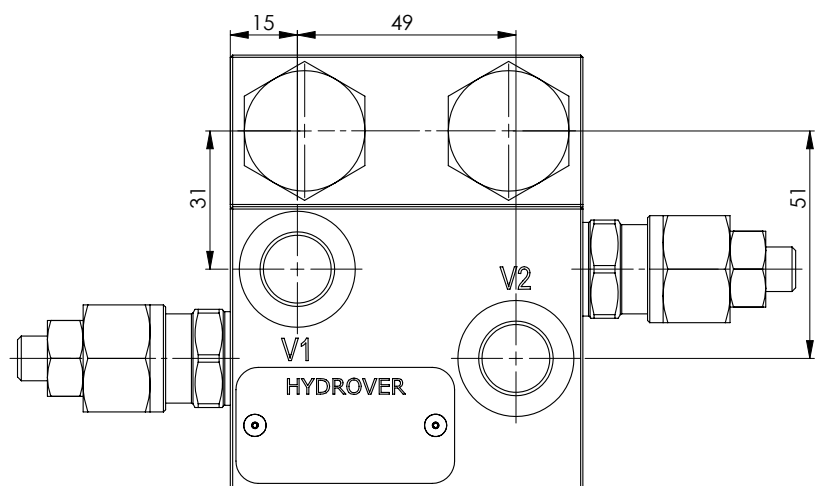
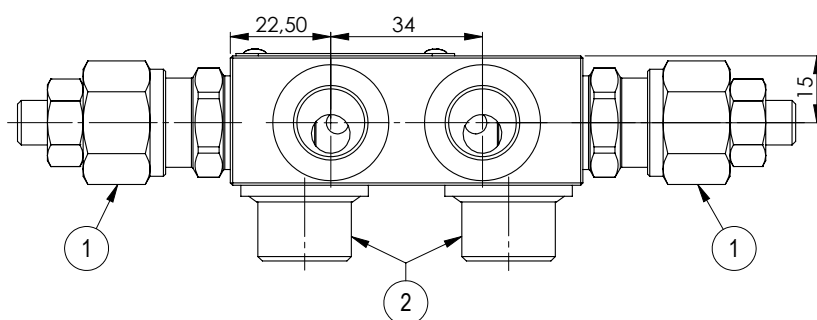
Relief valve double effect for Parker TE motors / 30 lpm **H14005**



Dimensions in mm

**Technical data**

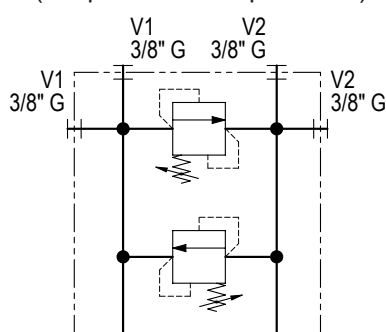
Max. pressure	250 bar
Max. flow	30 lpm *
Weight	1 Kg
Manifold material	Aluminium
V1 / V2 ports	3/8" G



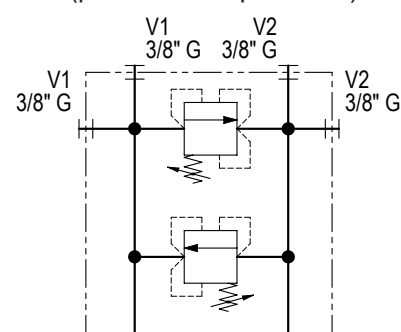
N°	Description	Q.ty
1	Bosch Rexroth relief valve <b>VS-30</b> (as depicted) or Bosch Rexroth sequence valve <b>VS-30-CC</b> *	2
2	Banjo bolt 1/2" G	2

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

With VS-30  
(not pressure compensated)



With VS-30-CC  
(pressure compensated)





Ordering code

H	1	4	0	0	5	A	-	-	-	-	-	-	-	-
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Hydrover product

Product series  
14 series - Valves for hydraulic motors

Product ID

Manifold material  
Aluminium

Adjustment type for valve on V1\*  
Screw = S  
Knob (only for VS-30) = K

Pressure range adjustment for valve on V1 \*  
5-50 bar = 0  
30-100 bar = 1  
50-210 bar = 2  
100-350 bar = 3

V2 valve type \*  
S = VS-30-CC  
M = VS-30

Pressure range adjustment for valve on V2 \*  
0 = 5-50 bar  
1 = 30-100 bar  
2 = 50-210 bar  
3 = 100-350 bar

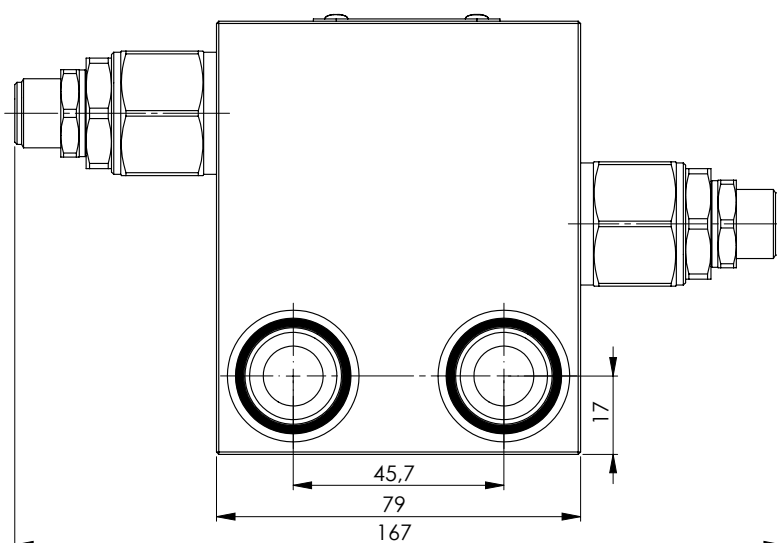
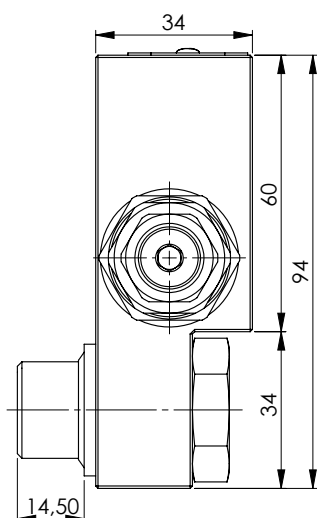
Adjustment type for valve on V2\*  
S = Screw  
K = Knob (only for VS-30)

V1 valve type \*  
S = VS-30-CC  
M = VS-30

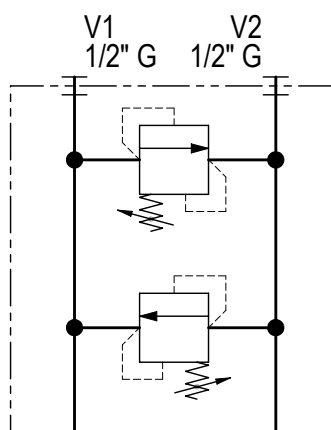
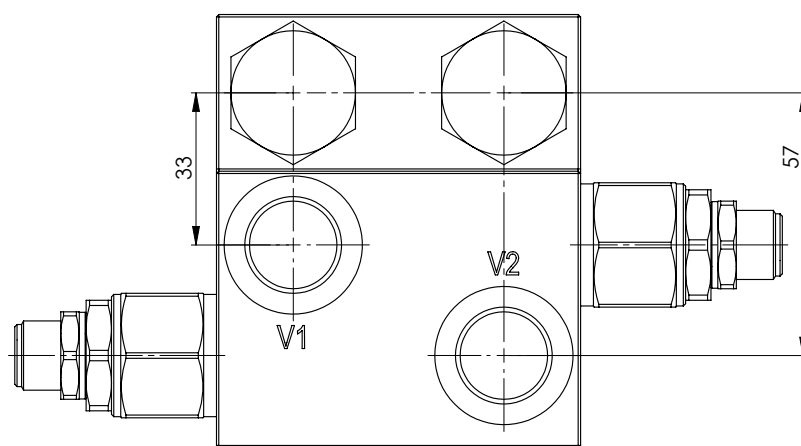
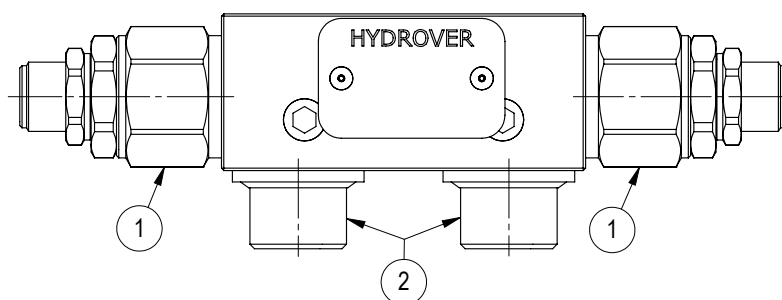
\* Omit if not required. To order the product without valves, omit their options: H14005A.  
The manifold will still be provided with the corresponding cavities.

Relief valve double effect for Parker TE motors / 40 lpm **H14006**

Dimensions in mm

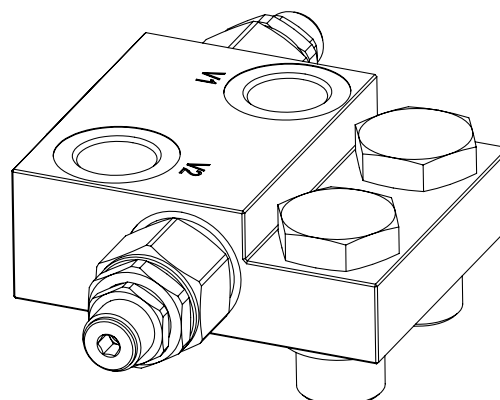


Technical data	
Max. pressure	250 bar
Max. flow	40 lpm *
Weight	1 Kg
Manifold material	Aluminium
V1 / V2 ports	1/2" G



N°	Description	Q.ty
1	Bosch Rexroth relief valve <b>VMD1.040 *</b>	2
2	Banjo bolt 1/2" G	2

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue



Ordering code

H	1	4	0	0	6	A	-	-	-	-	-
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Hydrover product

Product series

14 series - Valves for hydraulic motors

Product ID

Manifold material

Aluminium

Relief valve adjustment type on V1 \*

Screw

= S

Relief valve adjustment pressure range on V1 \*

25-120 bar

= 1

40-200 bar

= 2

200-350 bar

= 3

Relief valve adjustment pressure range on V2 \*

1= 25-120 bar

2= 40-200 bar

3= 200-350 bar

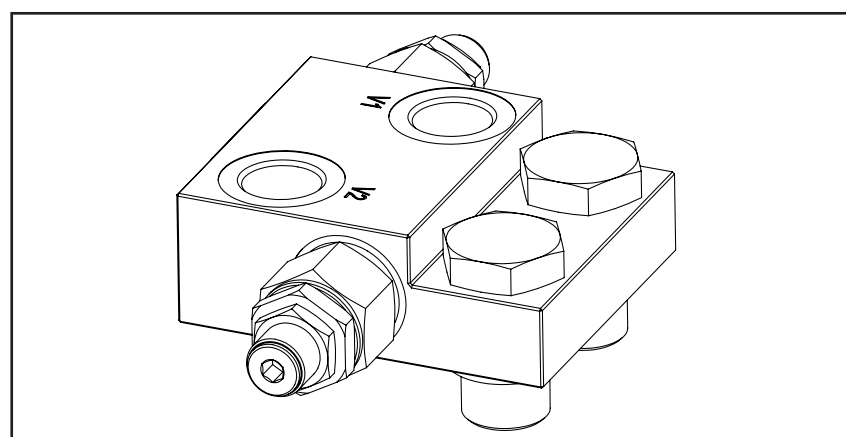
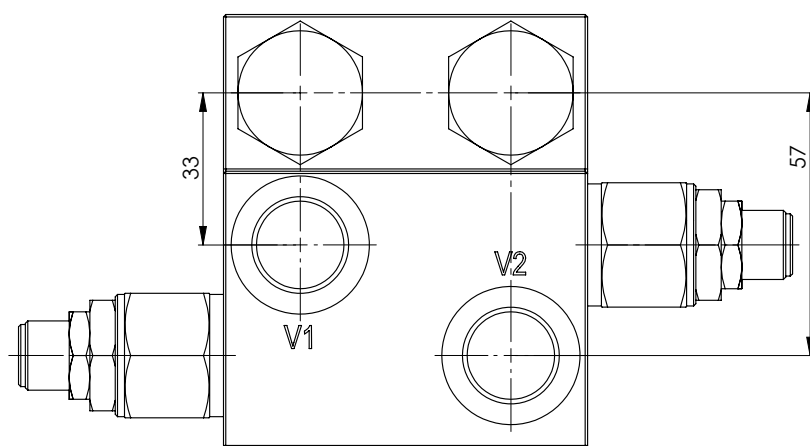
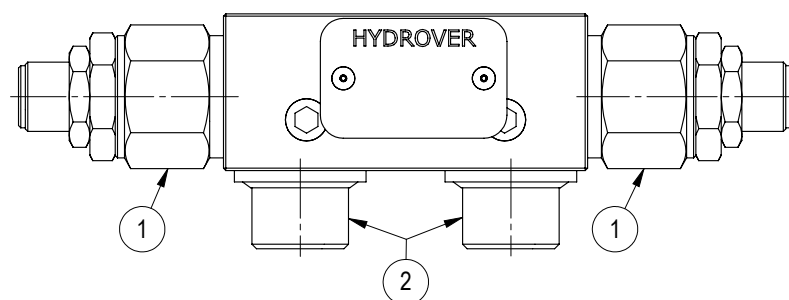
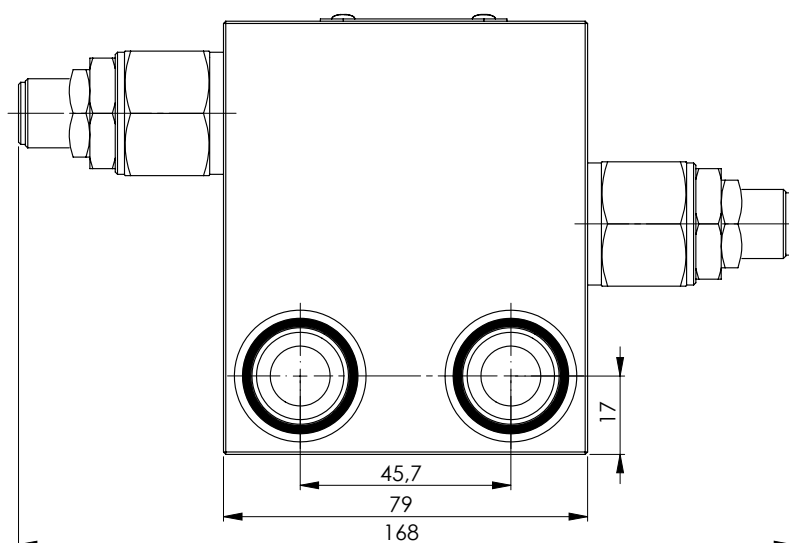
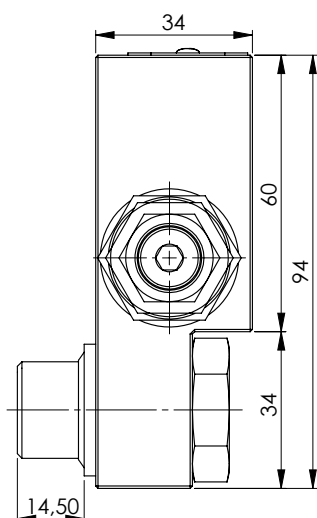
Relief valve adjustment type on V2 \*

S = Screw

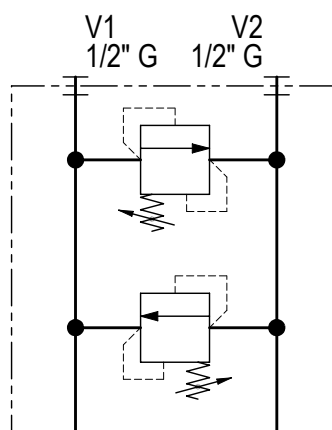
\* Omit if not required. To order the product without the pressure relief cartridge valves, omit the pressure range and the adjustment type options: H14004A.  
The manifold will still be provided with the corresponding cavities.

Relief valve double effect for Parker TE motors / 60 lpm **H14004**

Dimensions in mm

**Technical data**

Max. pressure	250 bar
Max. flow	60 lpm *
Weight	1 Kg
Manifold material	Aluminium
V1 / V2 ports	1/2" G



N°	Description	Q.ty
1	Bosch Rexroth relief valve <b>VMD1.070 *</b>	2
2	Banjo bolt 1/2" G	2

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

Ordering code

H	1	4	0	0	4	A	-	-	-	-	-
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Hydrover product

Product series  
14 series - Valves for hydraulic motors

Product ID

Manifold material  
Aluminium

Relief valve adjustment type on V1 \*  
Screw = S

Relief valve adjustment pressure range on V1 \*  
10-60 bar = 0  
40-110 bar = 1  
110-220 bar = 2  
220-260 bar = 3

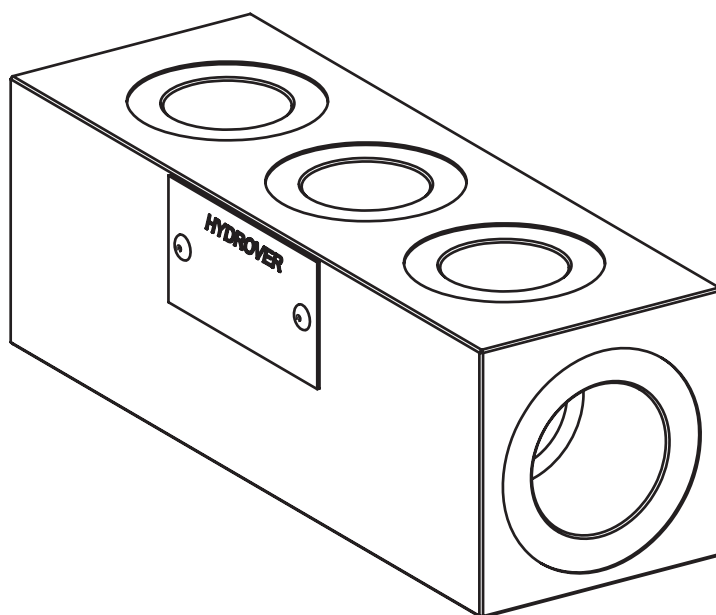
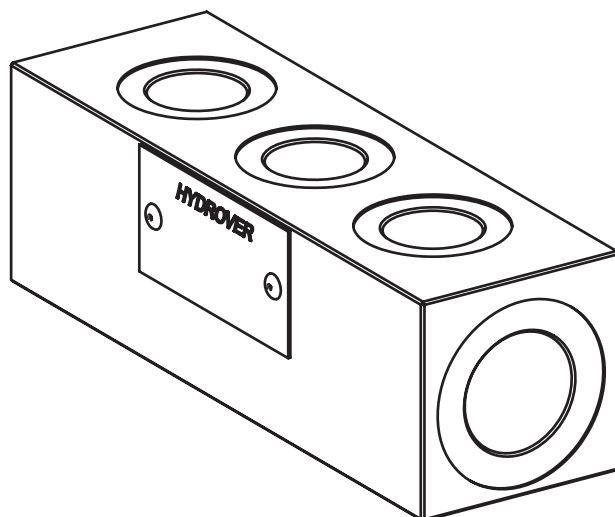
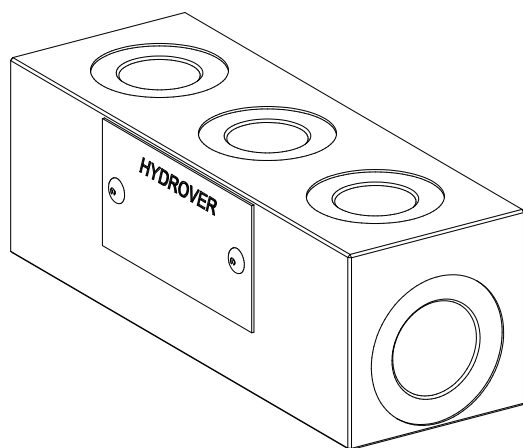
Relief valve adjustment pressure range on V2 \*  
0 = 10-60 bar  
1 = 40-110 bar  
2 = 110-220 bar  
3 = 220-260 bar

Relief valve adjustment type on V2 \*  
S = Screw

\* Omit if not required. To order the product without the pressure relief cartridge valves, omit the pressure range and the adjustment type options: H14004A.  
The manifold will still be provided with the corresponding cavities.



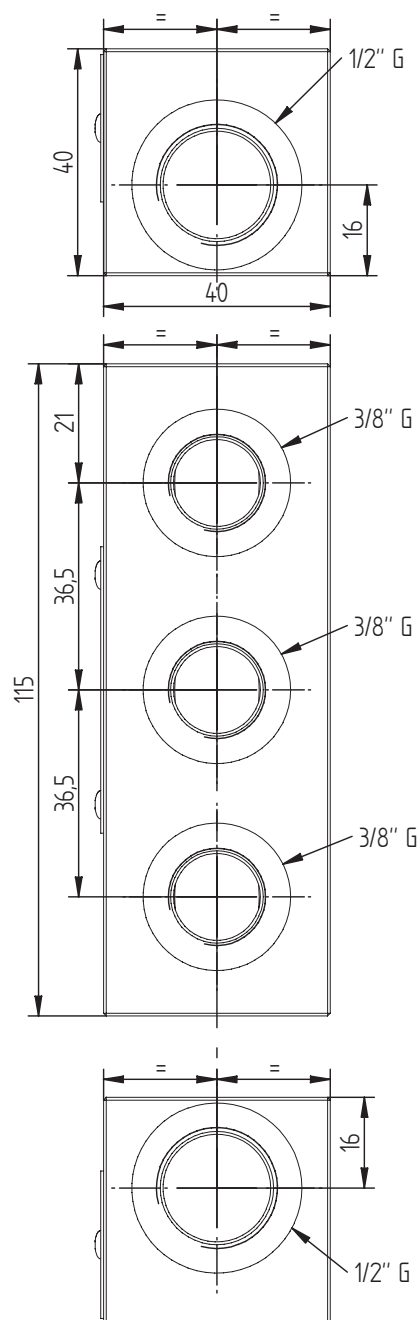
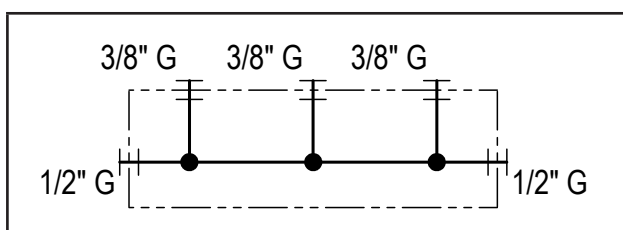
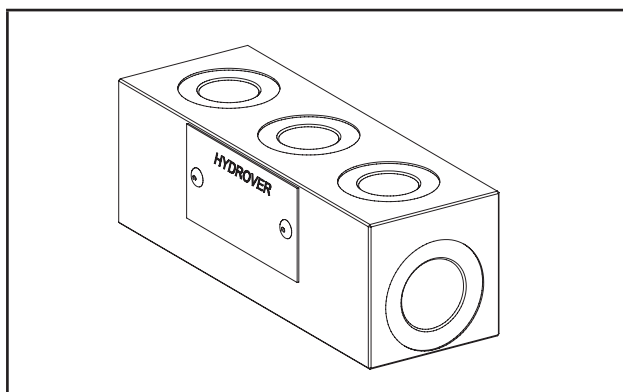
# 16 SERIES Manifolds



## Multi ports manifold / 2 ports 1/2" G / 3 ports 3/8" G

**H1601****Technical data**

Max. pressure	210 bar
Weight	0,4 Kg
Manifold material	Aluminium
Lateral ports	1/2" G
Top ports	3/8" G



Dimensions in mm



Ordering code

H	1	6	0	1	A
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Hydrover product

Manifold material  
Aluminium

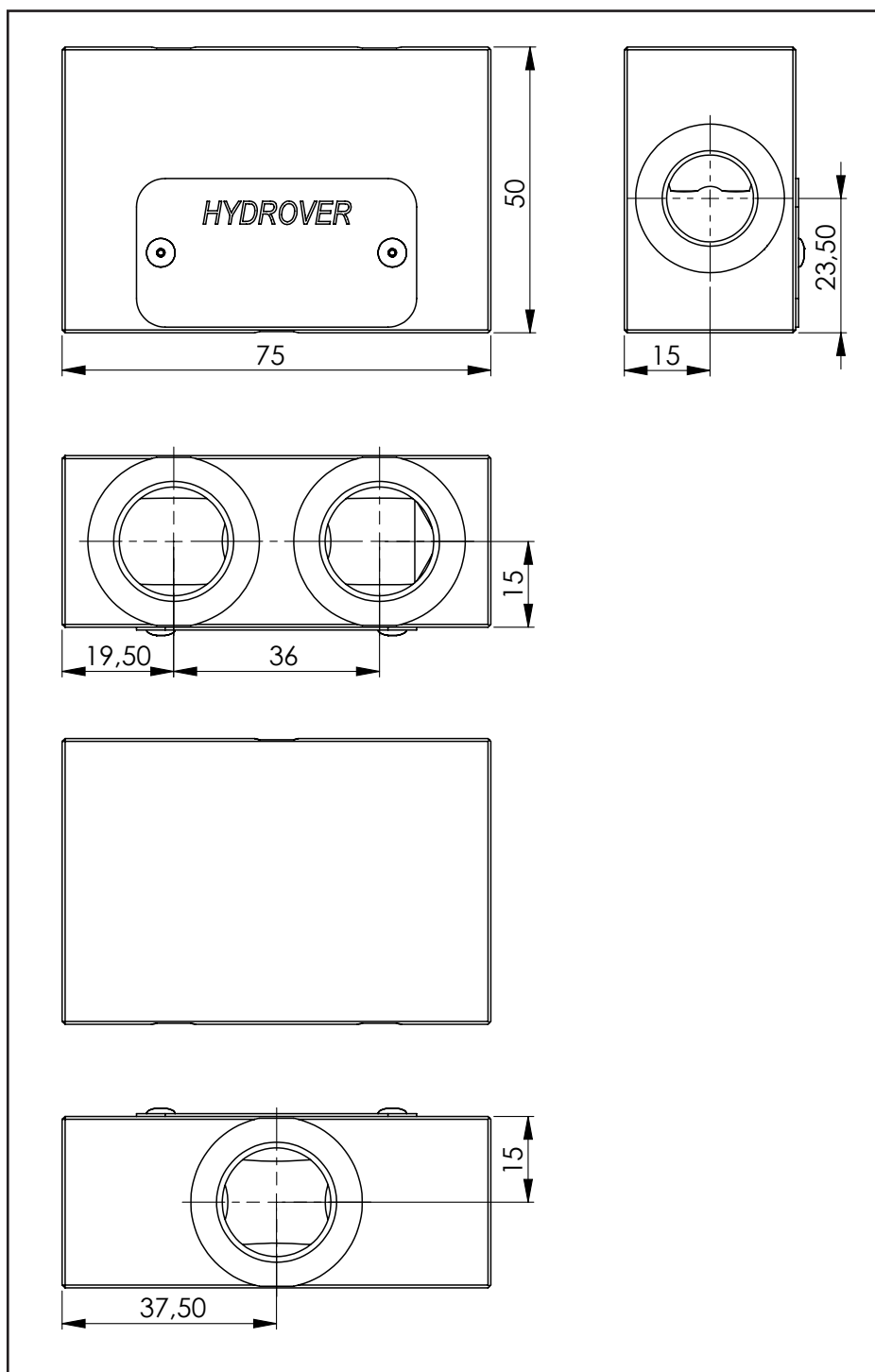
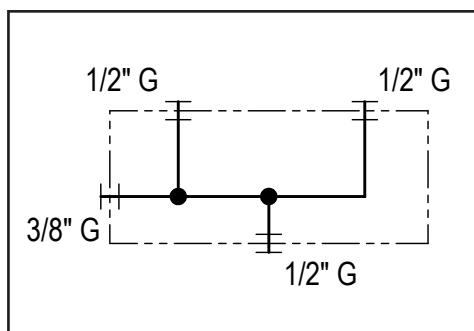
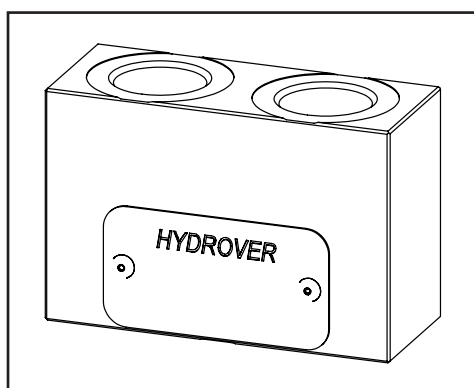
Product series  
Serie 16 - Manifolds

Product ID

Multi ports manifold / 3 ports 1/2" G / 1 ports 3/8" G **H1610**

## Technical data

Max. pressure	350 bar
Weight	0,7 Kg
Manifold material	Steel
Top and bottom ports	1/2" G
Lateral port	3/8" G



H1610

Ordering code

H	1	6	1	0	S
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Hydrover product

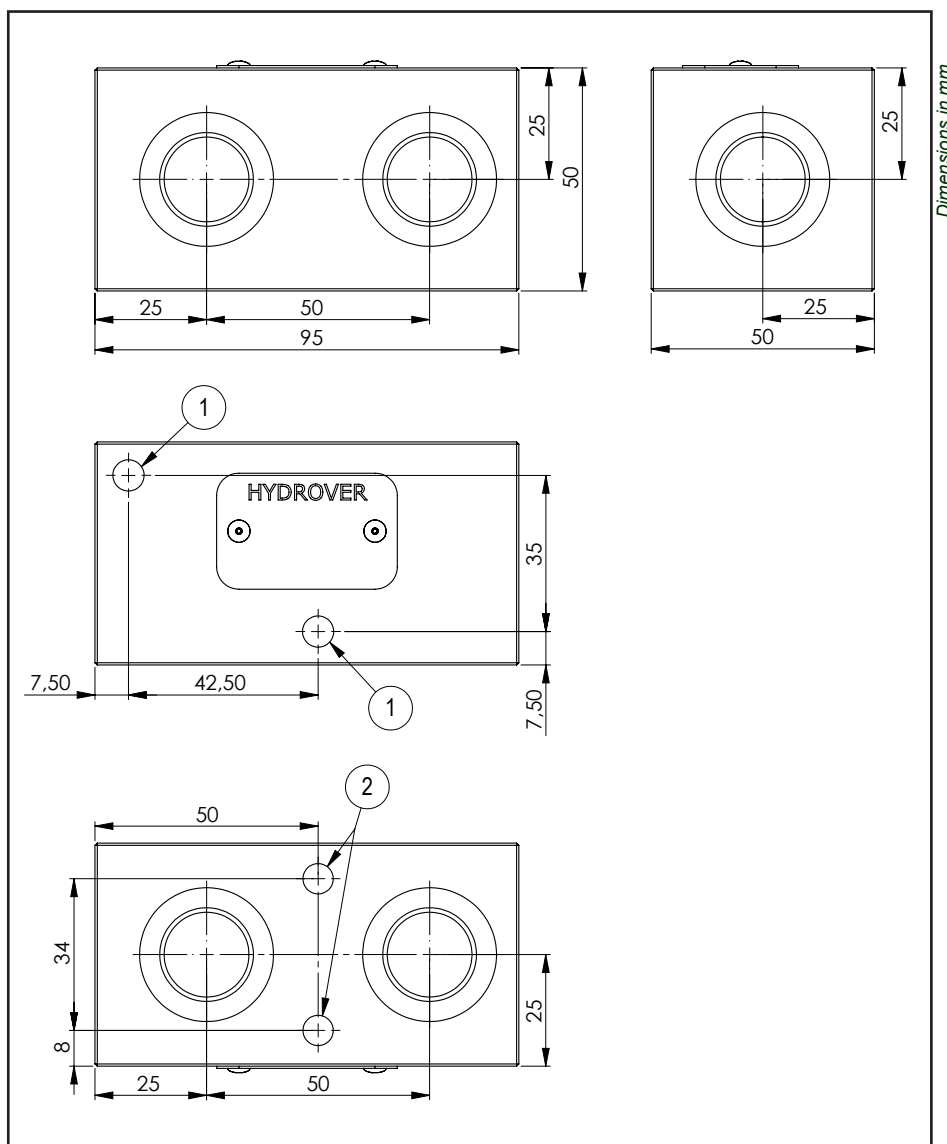
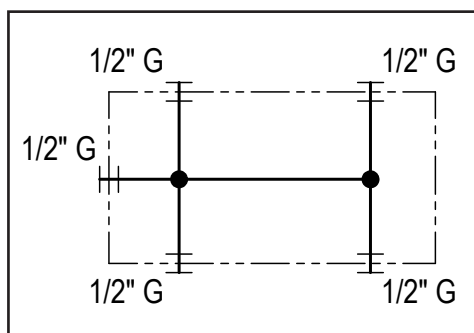
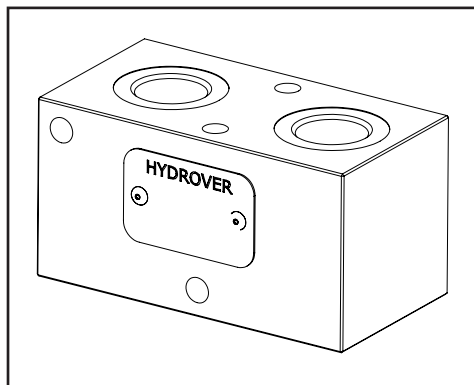
Manifold material  
Steel

Product series  
Serie 16 - Manifolds

Product ID

## Technical data

Max. pressure	350 bar
Weight	1,5 Kg
Manifold material	Steel
Ports	1/2" G



N°	Description	Q.ty
1	Ø 7 through hole for mounting	2
2	M8x10 thread for mounting	2

H1616

Ordering code

H	1	6	1	6	S
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Hydrover product

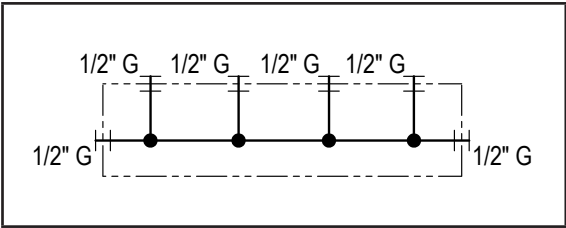
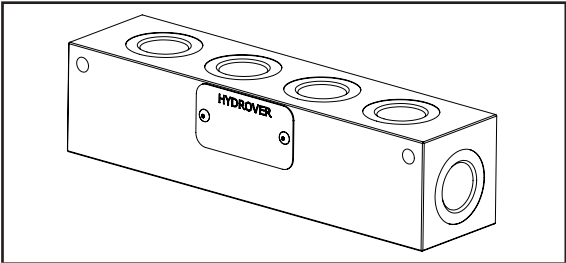
Manifold material  
Steel

Product series  
Serie 16 - Manifolds

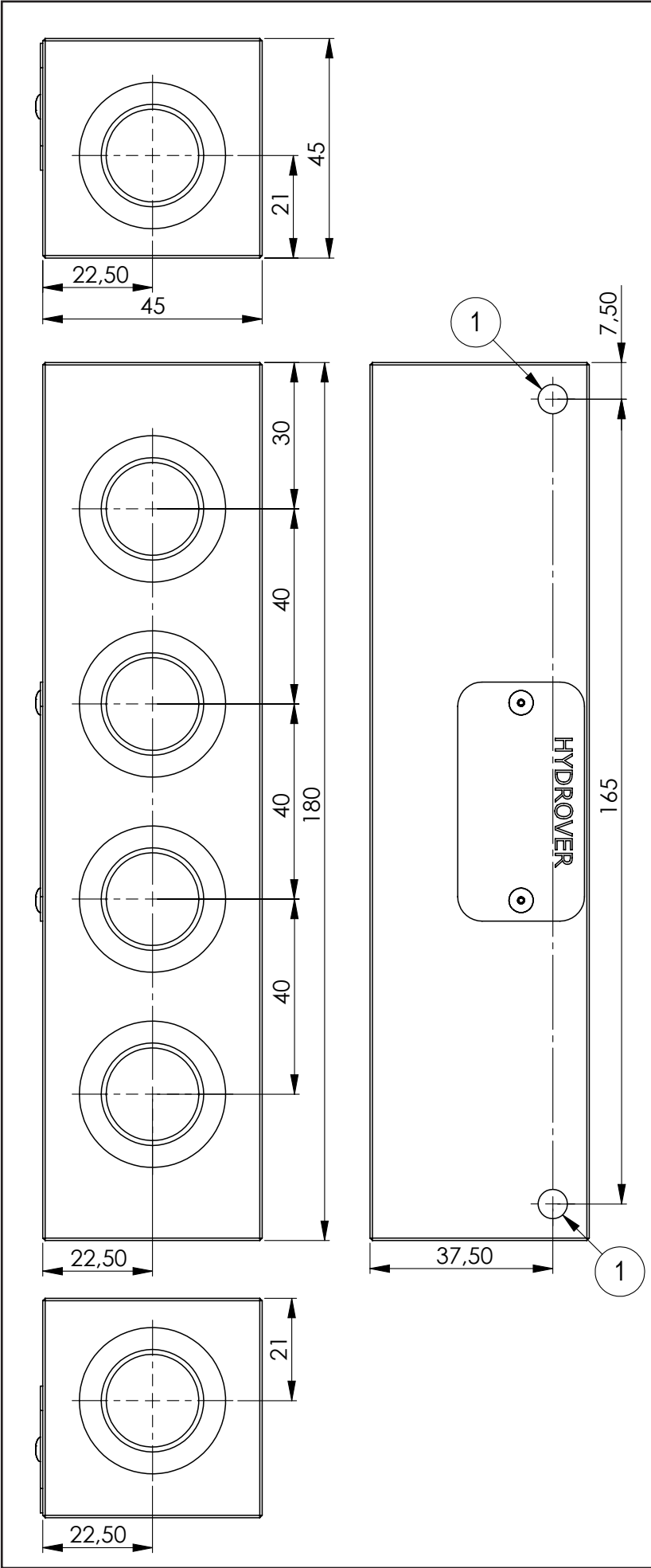
Product ID

Multi ports manifold / 6 ports 1/2" G H1611

Technical data	
Max. pressure	210 bar
Weight	0,85 Kg
Manifold material	Aluminium
Ports	1/2" G



N°	Description	Q.ty
1	Ø 6 through hole for mounting	2



Dimensions in mm

H1611

Ordering code

H	1	6	1	1	A
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Hydrover product

Manifold material  
Aluminium

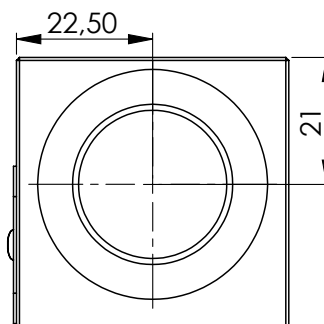
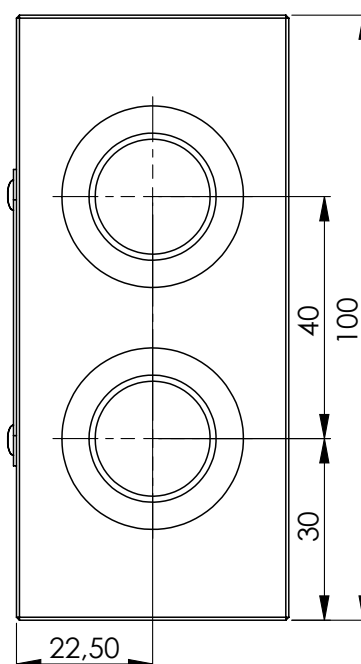
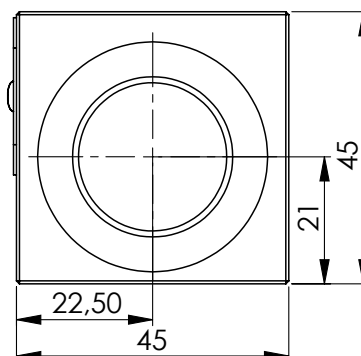
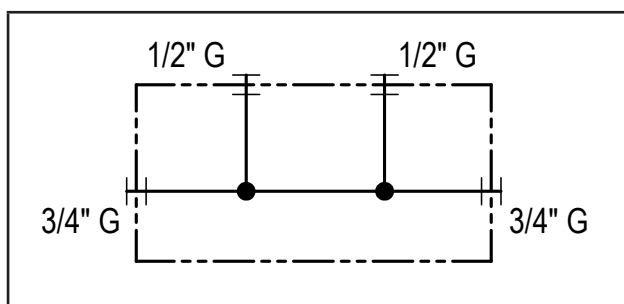
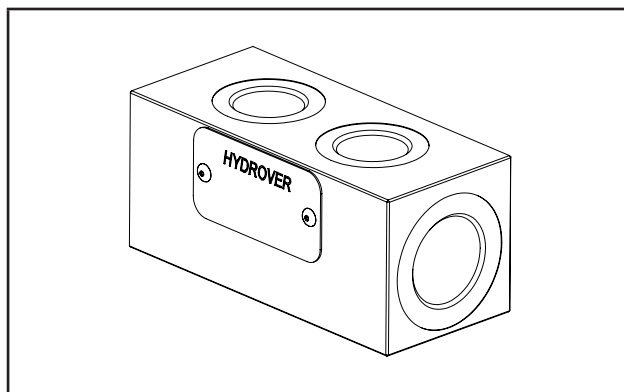
Product series  
Serie 16 - Manifolds

Product ID

## Multi ports manifold / 2 ports 3/4" G / 2 ports 1/2" G

**H1608****Technical data**

Max. pressure	210 bar
Weight	0,4 Kg
Manifold material	Aluminium
Lateral ports	3/4" G
Top ports	1/2" G



Dimensions in mm



H1608

Ordering code

H	1	6	0	8	A
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Hydrover product

Manifold material  
Aluminium

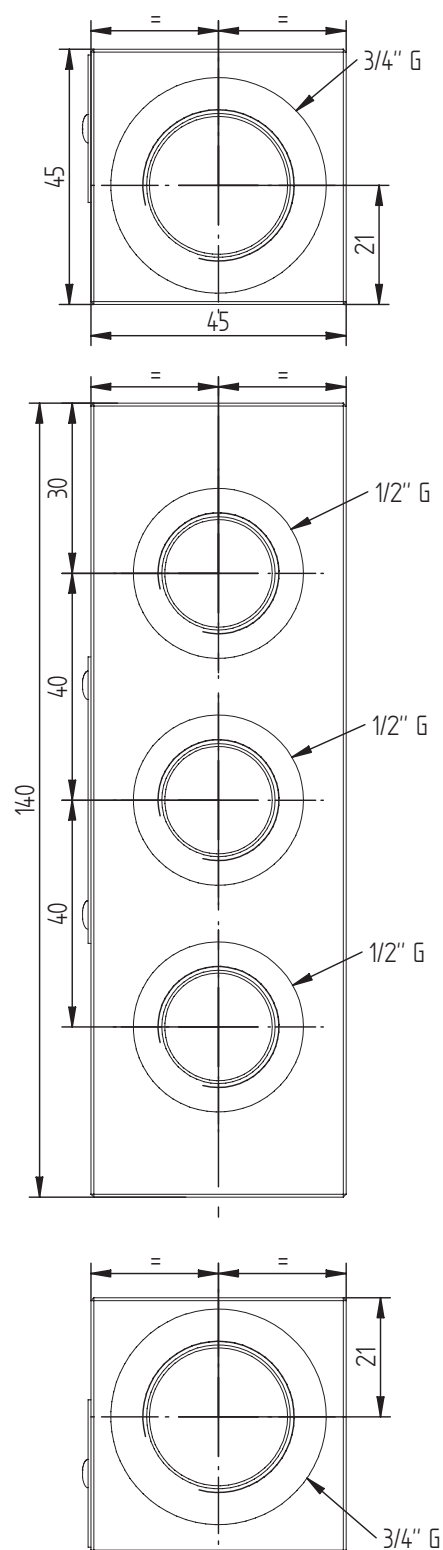
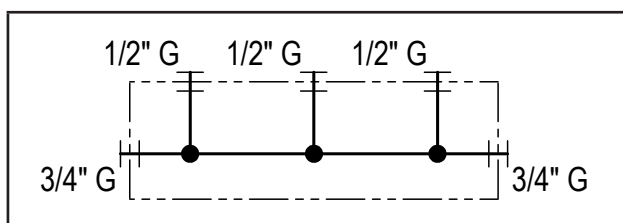
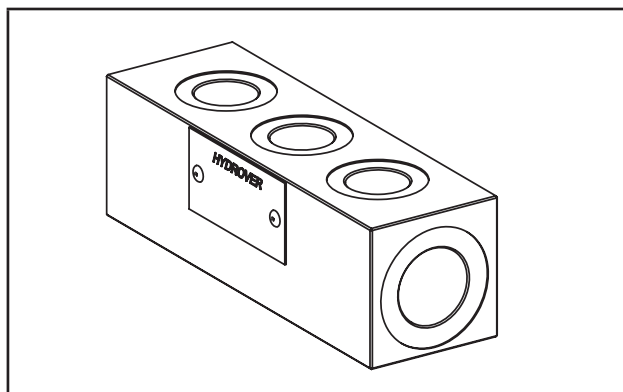
Product series  
Serie 16 - Manifolds

Product ID

## Multi ports manifold / 2 ports 3/4" G / 3 ports 1/2" G

**H1602****Technical data**

Max. pressure	210 bar
Weight	0,6 Kg
Manifold material	Aluminium
Lateral ports	3/4" G
Top ports	1/2" G



Dimensions in mm

H1602

Ordering code

H	1	6	0	2	A
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Hydrover product

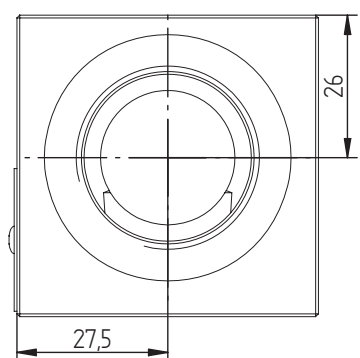
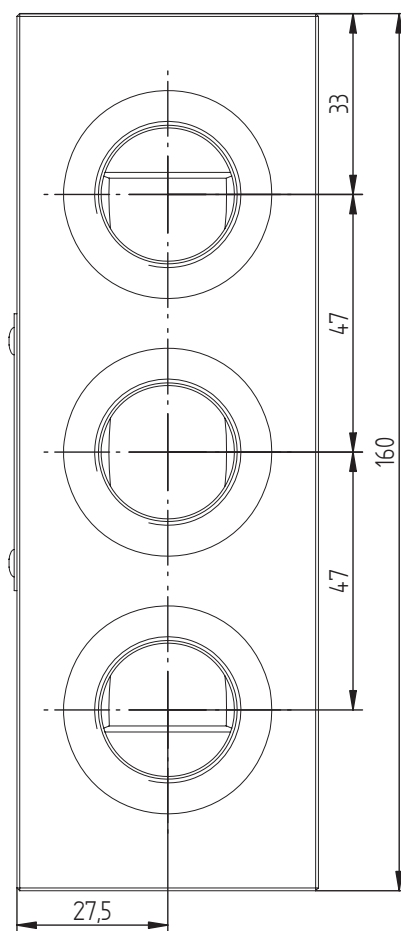
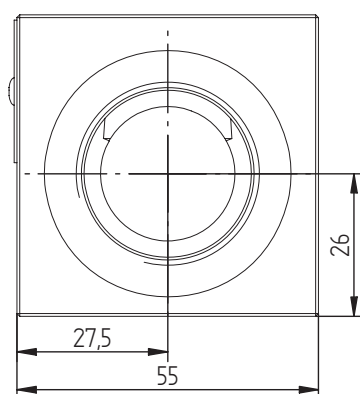
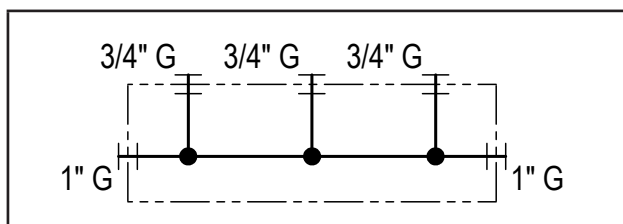
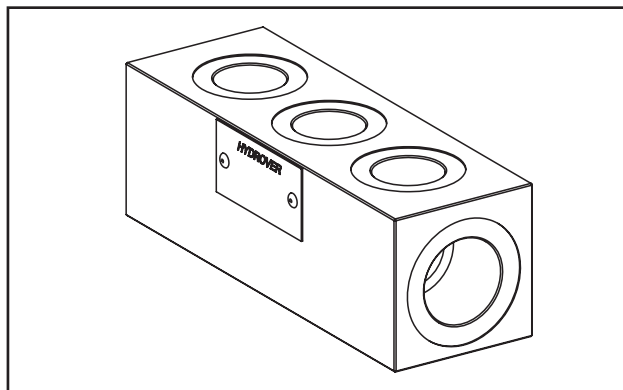
Manifold material  
Aluminium

Product series  
Serie 16 - Manifolds

Product ID

Multi ports manifold / 2 ports 1" G / 3 ports 3/4" G **H1603****Technical data**

Max. pressure	210 bar
Weight	1,1 Kg
Manifold material	Aluminium
Lateral ports	1" G
Top ports	3/4" G



Dimensions in mm

H1603

Ordering code

H	1	6	0	3	A
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Hydrover product

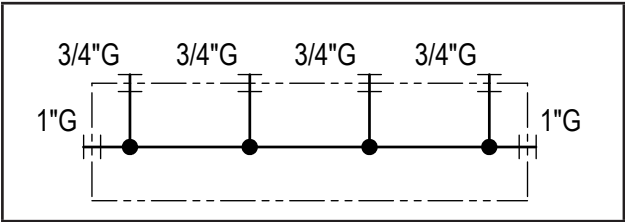
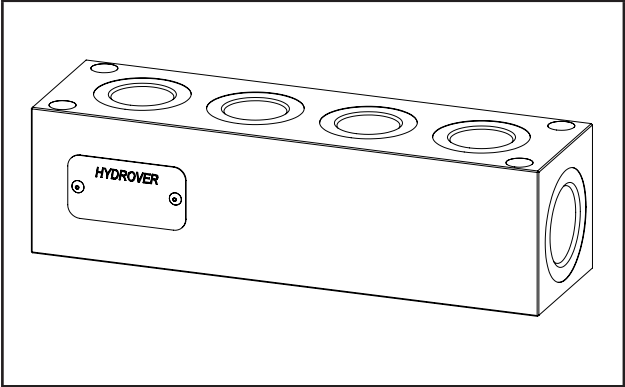
Manifold material  
Aluminium

Product series  
Serie 16 - Manifolds

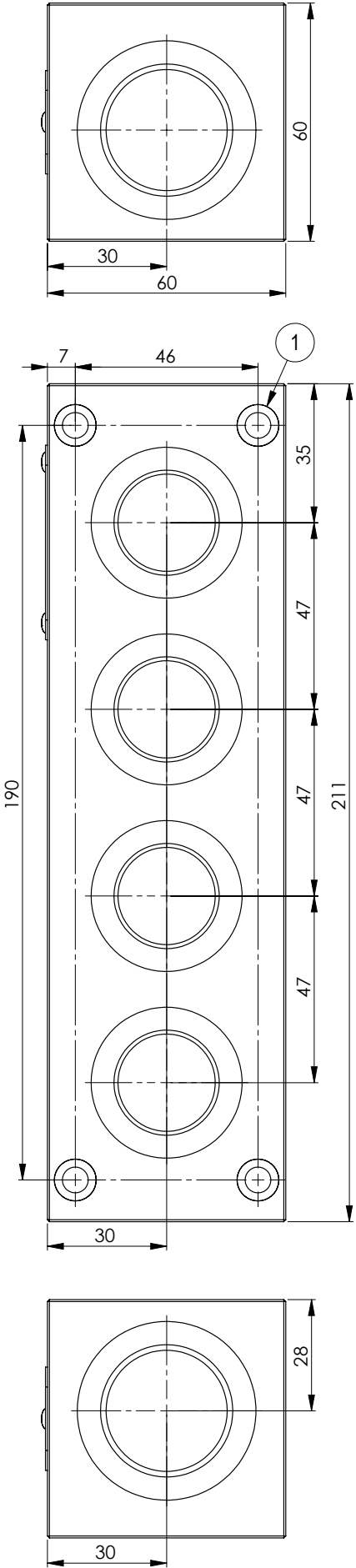
Product ID

Multi ports manifold / 2 ports 1" G / 4 ports 3/4" G **H1609**

Technical data	
Max. pressure	210 bar
Weight	1,6 Kg
Manifold material	Aluminium
Lateral ports	1" G
Top ports	3/4" G



N°	Description	Q.ty
1	Ø 6,5 through hole for mounting with counterbore	2



Dimensions in mm

H1609

Ordering code

H	1	6	0	9	A
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Hydrover product

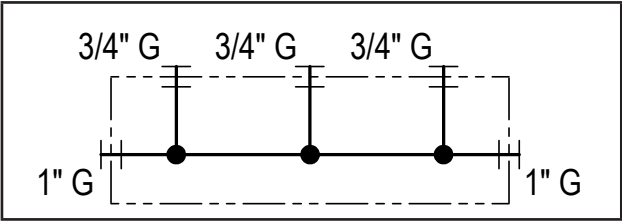
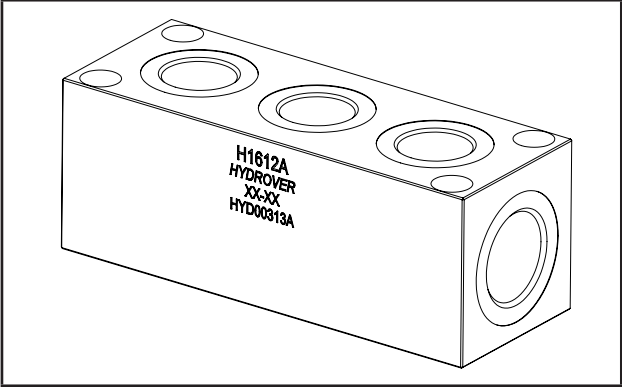
Manifold material  
Aluminium

Product series  
Serie 16 - Manifolds

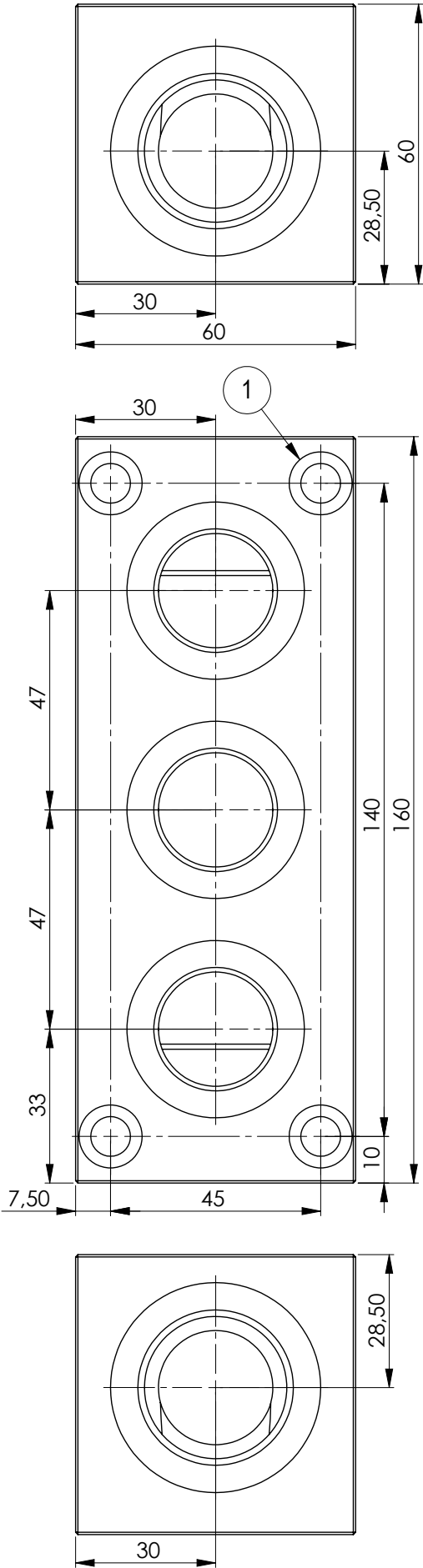
Product ID

Multi ports manifold - 2 ports 1" G - 3 ports 3/4" G **H1612**

Technical data	
Max. pressure	210 bar
Weight	1,25 Kg
Manifold material	Aluminium
Lateral ports	1" G
Top ports	3/4" G



N°	Description	Q.ty
1	Ø 8,5 through hole for mounting with counterbore	4



Dimensions in mm



Ordering code

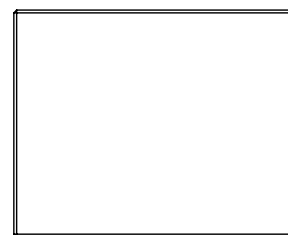
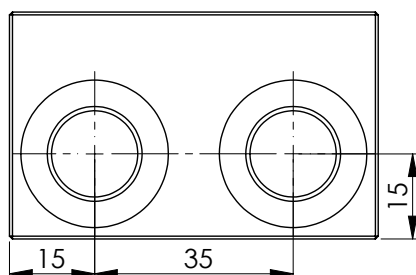
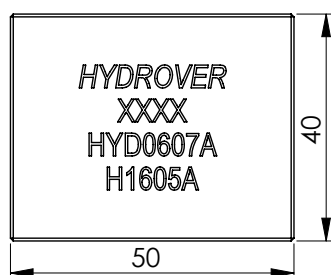
H	1	6	1	2	A
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Hydrover product

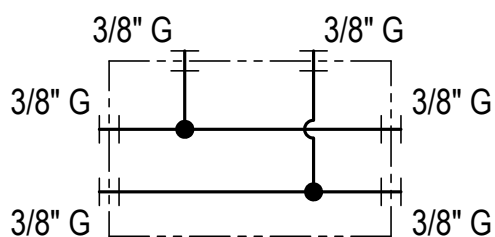
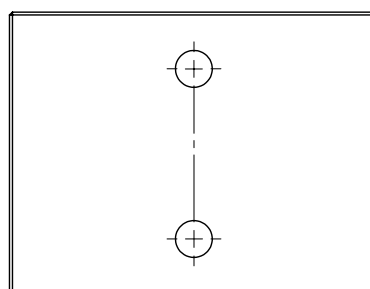
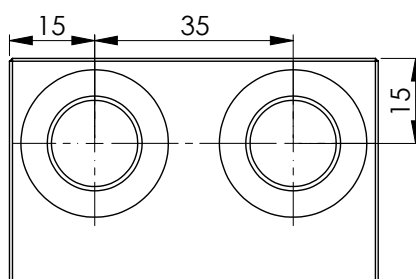
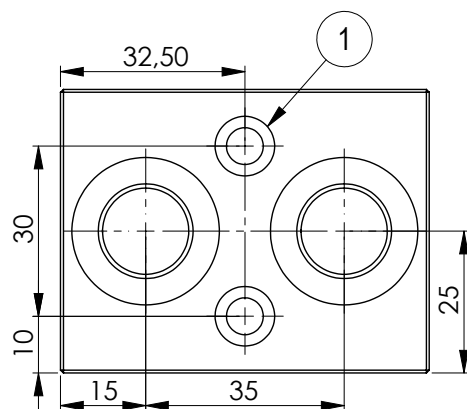
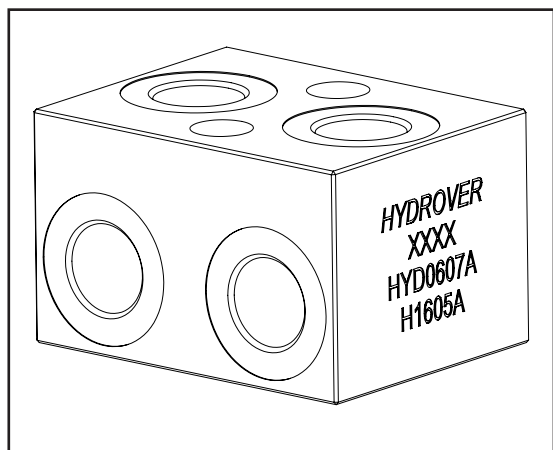
Manifold material  
Aluminium

Product series  
Serie 16 - Manifolds

Product ID



Technical data	
Max. pressure	250 bar
Weight	0,3 Kg
Manifold material	Aluminium
Ports	3/8" G



N°	Description	Q.ty
1	Ø 6,5 through hole for mounting with counterbore	2

H1605

Ordering code

H	1	6	0	5	A
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Hydrover product

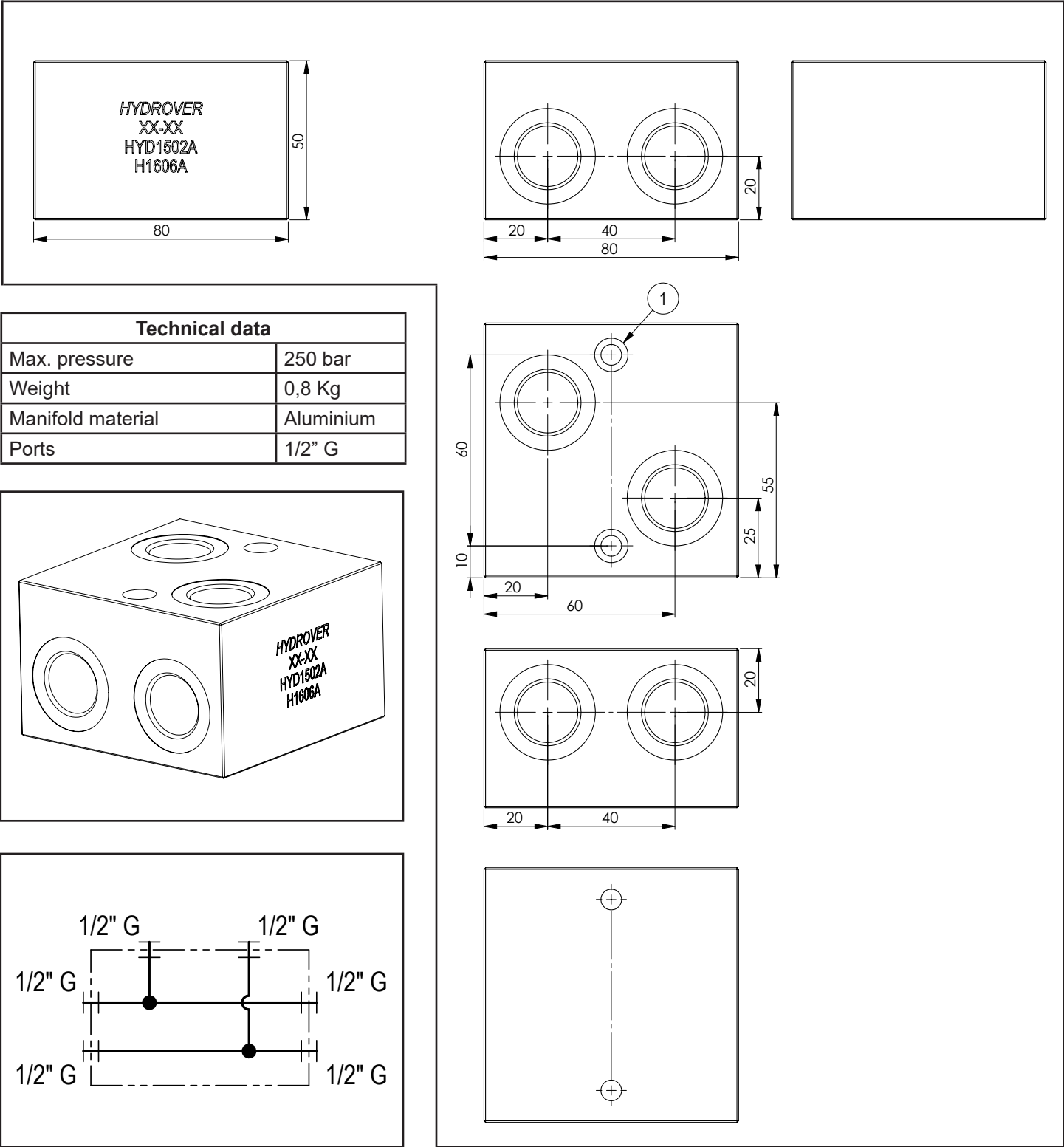
Manifold material  
Aluminium

Product series  
Serie 16 - Manifolds

Product ID

Multi ports manifold double T 1/2" G

H1606



Dimensions in mm

N°	Description	Q.ty
1	Ø 6,5 through hole for mounting with counterbore	2

H1606

Ordering code

H	1	6	0	6	A
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Hydrover product

Manifold material  
Aluminium

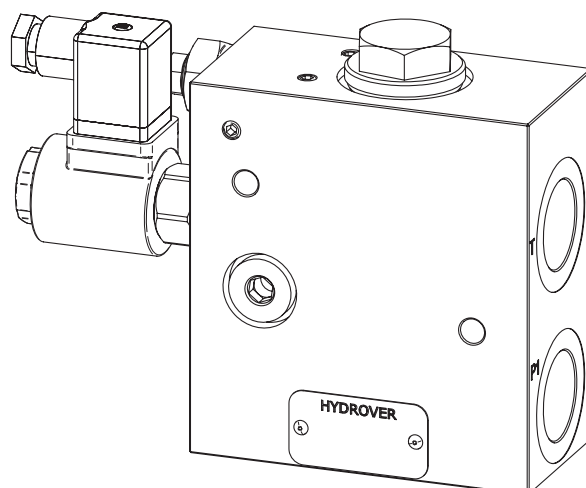
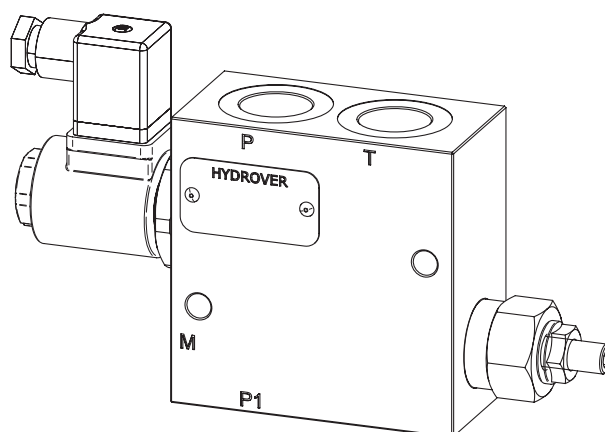
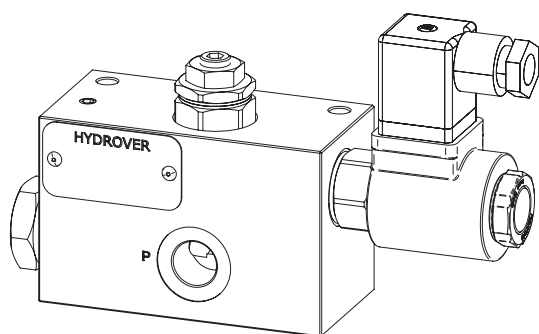
Product series  
Serie 16 - Manifolds

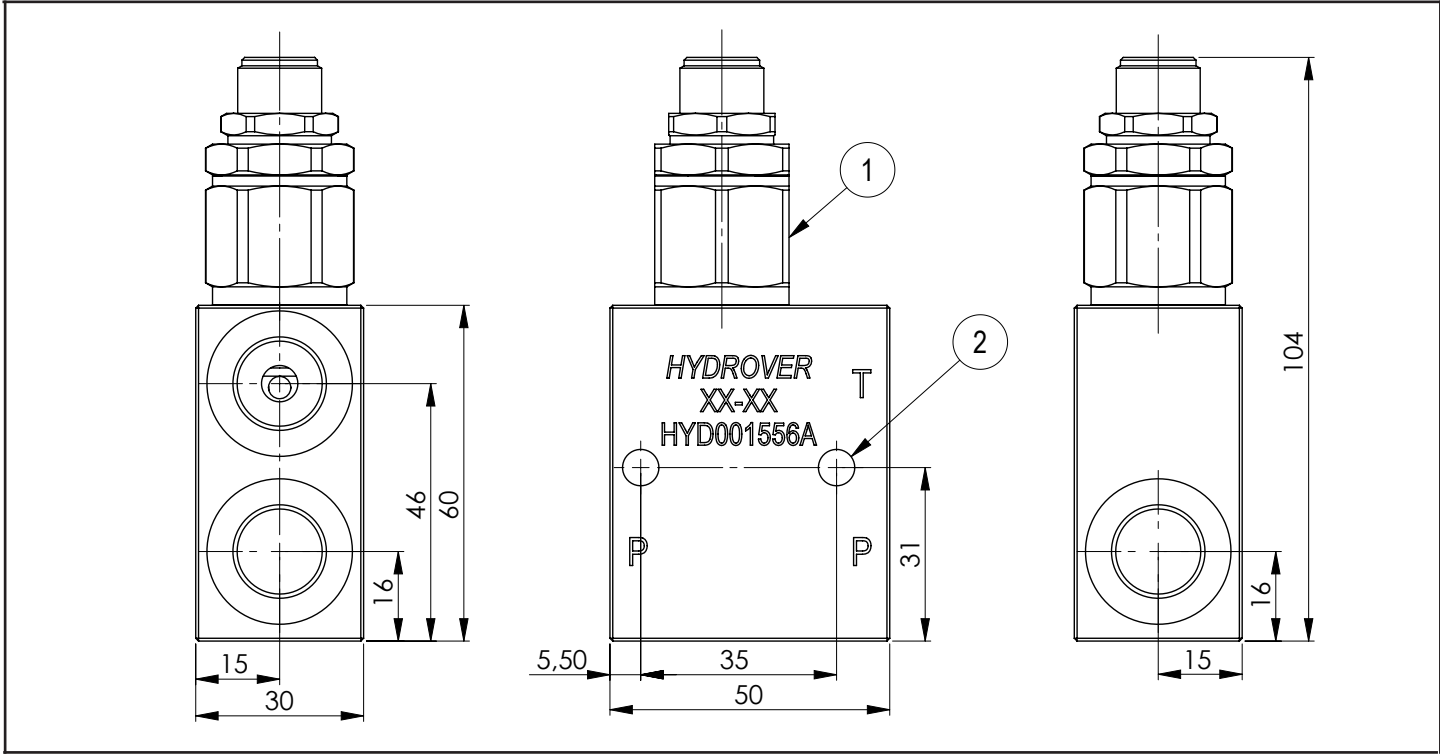
Product ID



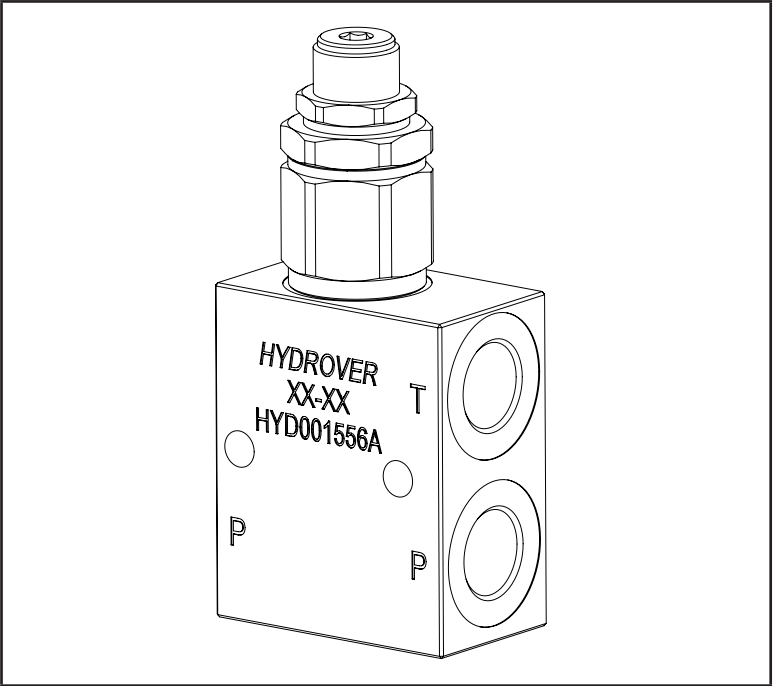
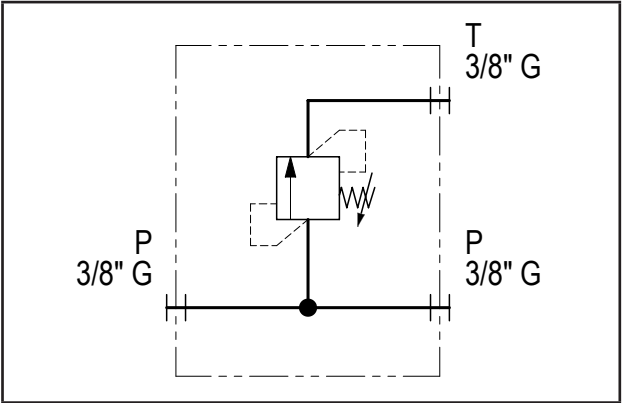
# 17 SERIES

## Inline valves





Technical data	
Max. pressure	250 bar
Max. flow	25 lpm *
Weight	0,4 Kg
Manifold material	Aluminium
P / T ports	3/8" G



N°	Description	Q.ty
1	Bosch Rexroth relief valve <b>VMD1.025</b> *	1
2	Ø 6,5 through hole for mounting	2

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue



Ordering code

H	1	7	0	5	3	A	-		
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Hydrover product

Product series  
17 series - Inline valves

Product ID

Manifold material  
Aluminium

Relief valve  
pressure range \*

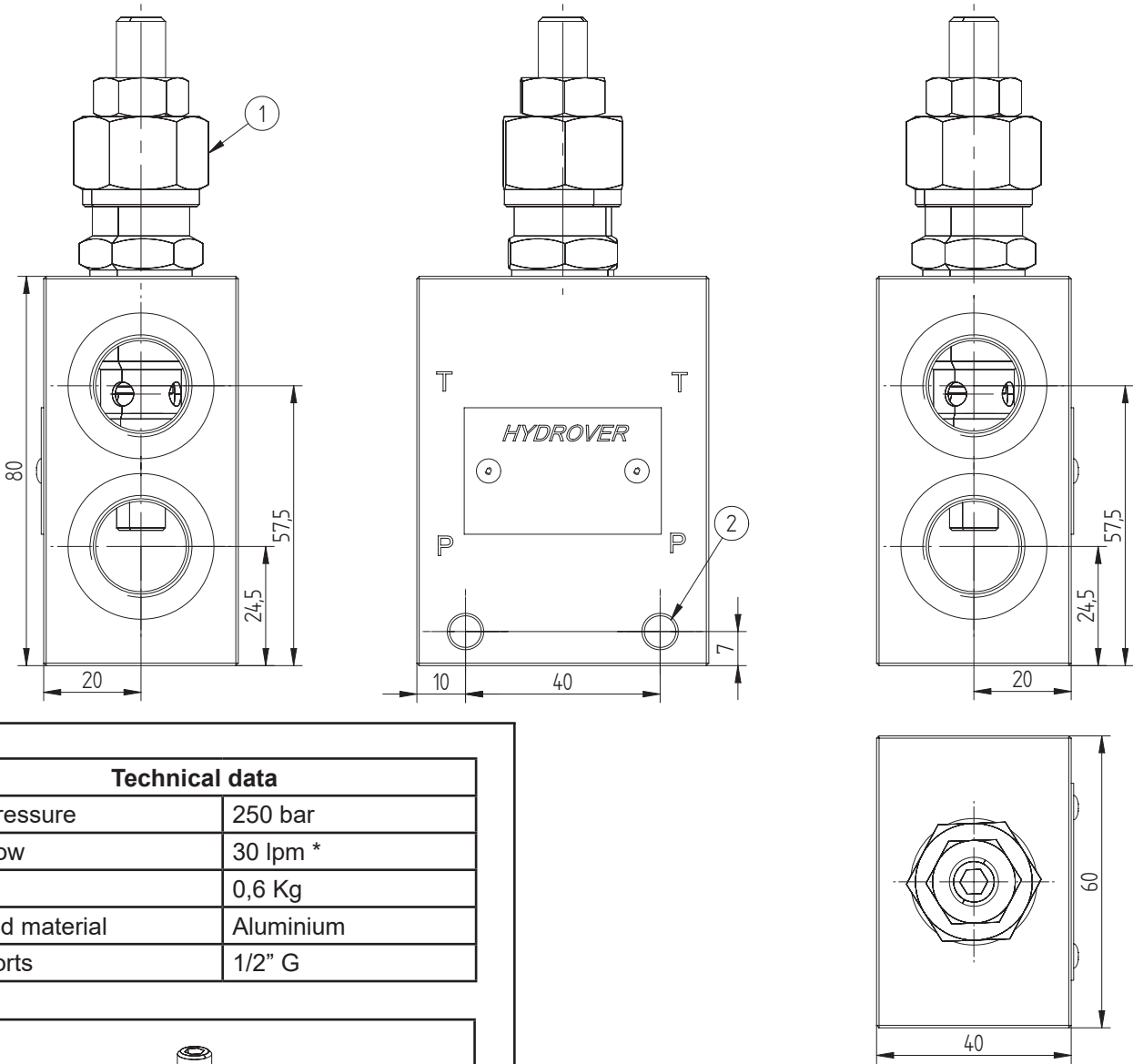
1 =	25-120 bar
2 =	40-200 bar
3 =	200-350 bar

Relief valve  
adjustment type \*

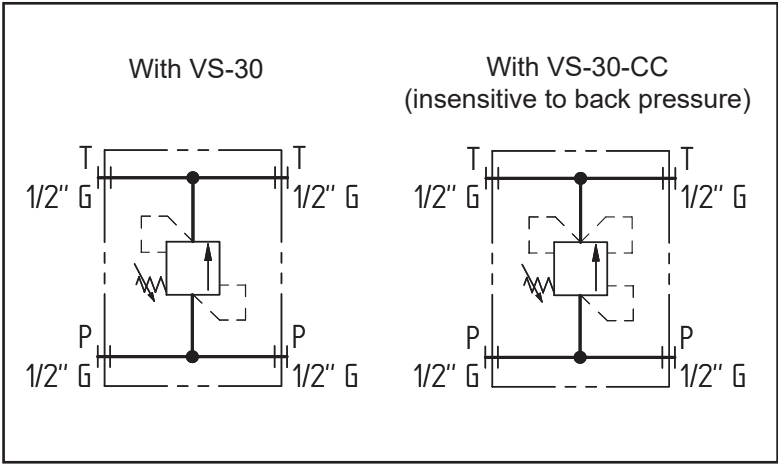
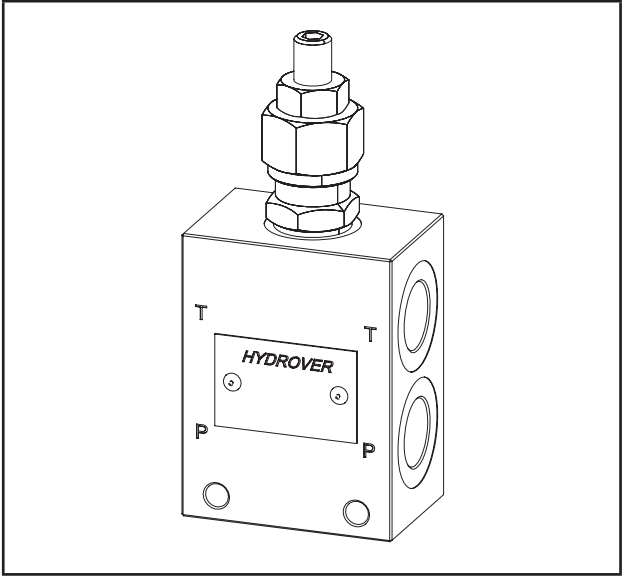
S = Screw

\* Omit if not required. To order the product without the pressure relief cartridge valve, omit the pressure range and the adjustment type options: H17053A.  
The manifold will still be provided with the corresponding cavity.

Dimensions in mm



Technical data	
Max. pressure	250 bar
Max. flow	30 lpm *
Weight	0,6 Kg
Manifold material	Aluminium
P / T ports	1/2" G



N°	Description	Q.ty
1	Bosch Rexroth relief valve <b>VS-30</b> (as depicted) or <b>VS-30-CC</b> *	1
2	Ø 6,5 through hole for mounting	2

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

Ordering code

H	1	7	0	2	1	A	-			
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Hydrover product

Product series  
17 series - Inline valves

Product ID

Manifold material  
Aluminium

Relief valve type \*

M = VS-30

S = VS-30-CC

Relief valve adjustment pressure range \*

0 = 5-50 bar

1 = 30-100 bar

2 = 50-210 bar

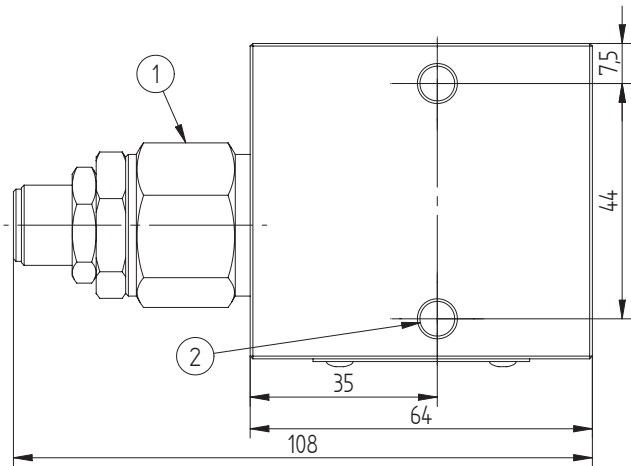
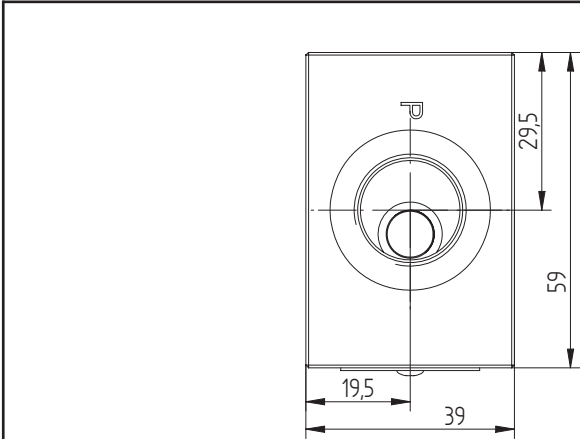
3 = 100-350 bar

Relief valve adjustment type \*

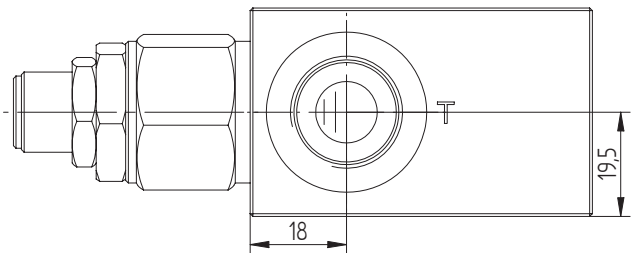
S = Screw

K = Knob (only for VS-30)

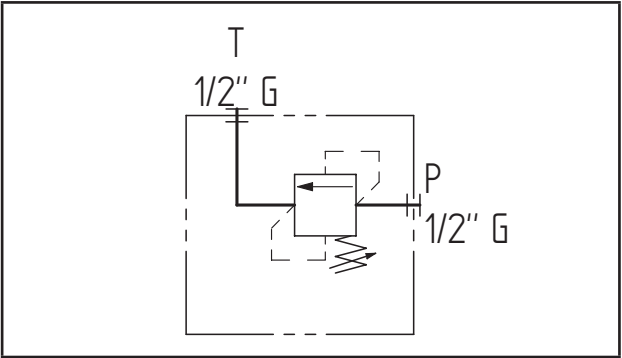
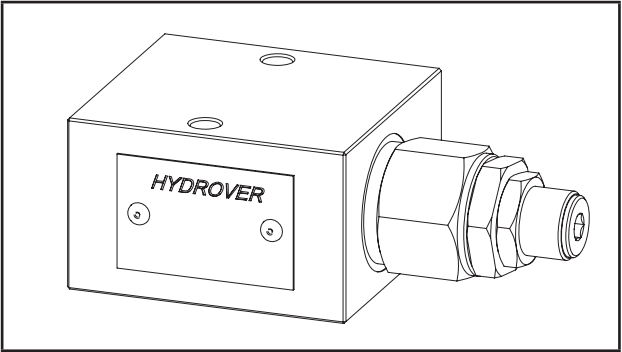
\* Omit if not required. To order the product without the pressure relief cartridge valve, omit the relief valve type, adjustment pressure range and the adjustment type options: H17021A.  
The manifold will still be provided with the corresponding cavity.



Dimensions in mm



Technical data	
Max. pressure	350 bar
Max. flow	70 lpm *
Weight	1,2 Kg
Manifold material	Steel
P / T ports	1/2" G



N°	Description	Q.ty
1	Bosch Rexroth relief valve <b>VMD1.070</b> *	1
2	Ø 6,5 through hole for mounting	2

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

Ordering code

H	1	7	0	1	8	S	-		
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Hydrover product

Product series  
17 series - Inline valves

Product ID

Manifold material  
Steel

Relief valve adjustment  
pressure range \*

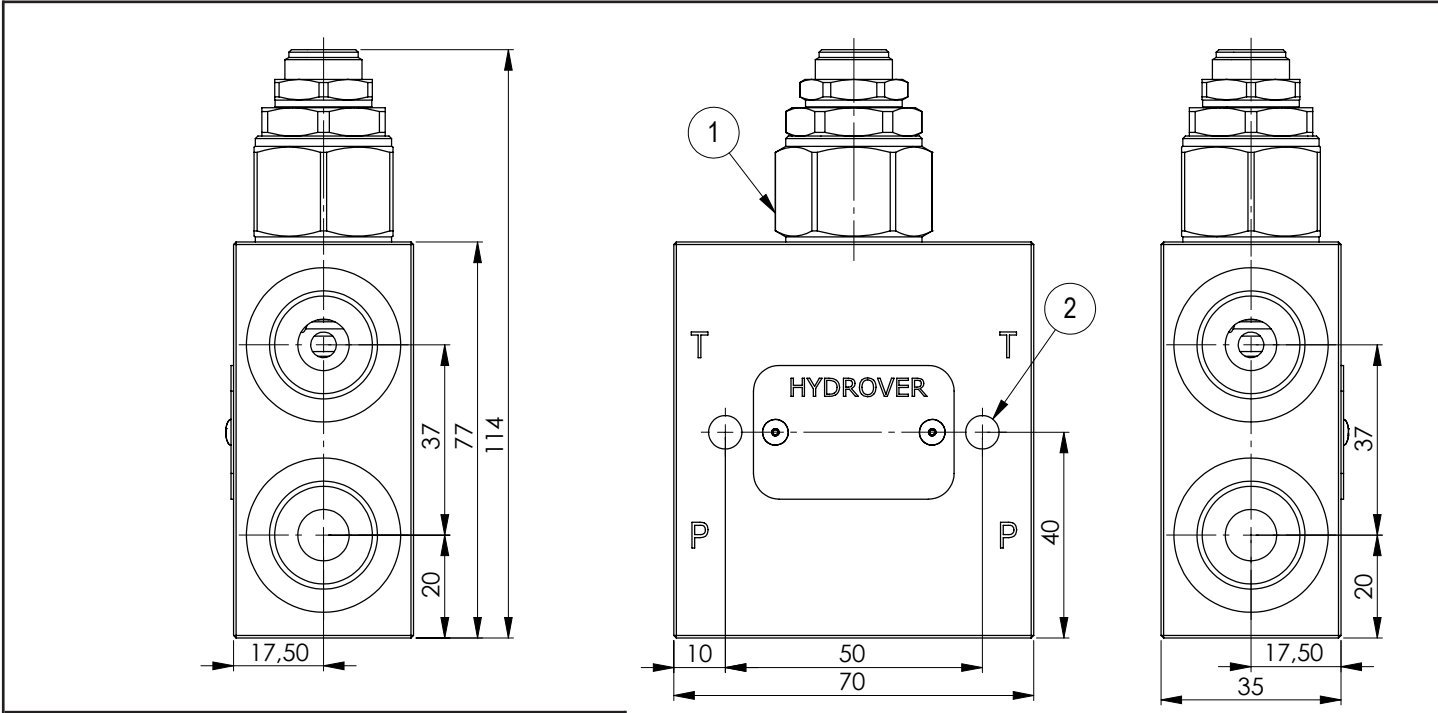
0 =	10-60 bar
1 =	40-110 bar
2 =	110-220 bar
3 =	220-260 bar

Relief valve adjustment type \*

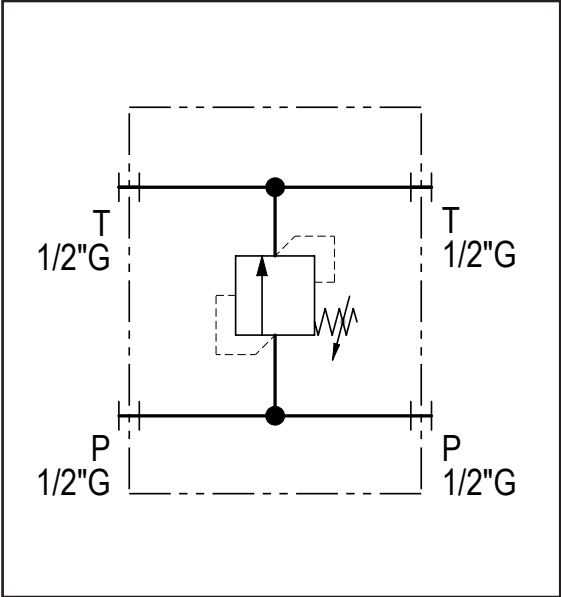
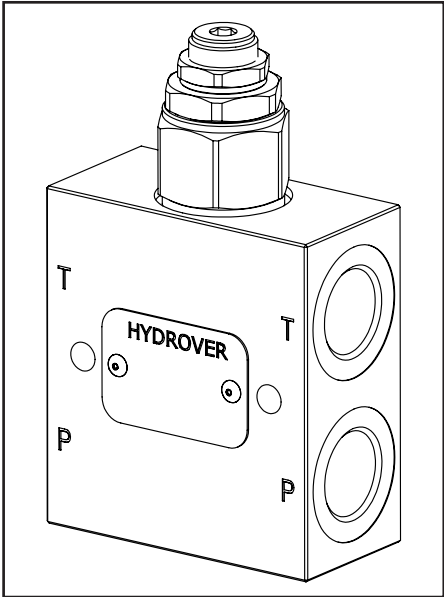
S = Screw

\* Omit if not required. To order the product without the pressure relief cartridge valve, omit the pressure range and the adjustment type options: H17018S.  
The manifold will still be provided with the corresponding cavity.

Inline relief valve / crossing P-T 1/2" G / 70 lpm **H17174**



Technical data	
Max. pressure	250 bar
Max. flow	70 lpm *
Weight	0,58 Kg
Manifold material	Aluminium
P / T ports	1/2" G



N°	Description	Q.ty
1	Bosch Rexroth relief valve <b>VMD1.070</b> *	1
2	Ø 6,5 through hole for mounting	2

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

Ordering code

H	1	7	1	7	4	A	-		
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Hydrover product

Product series  
17 series - Inline valves

Product ID

Manifold material  
Aluminium

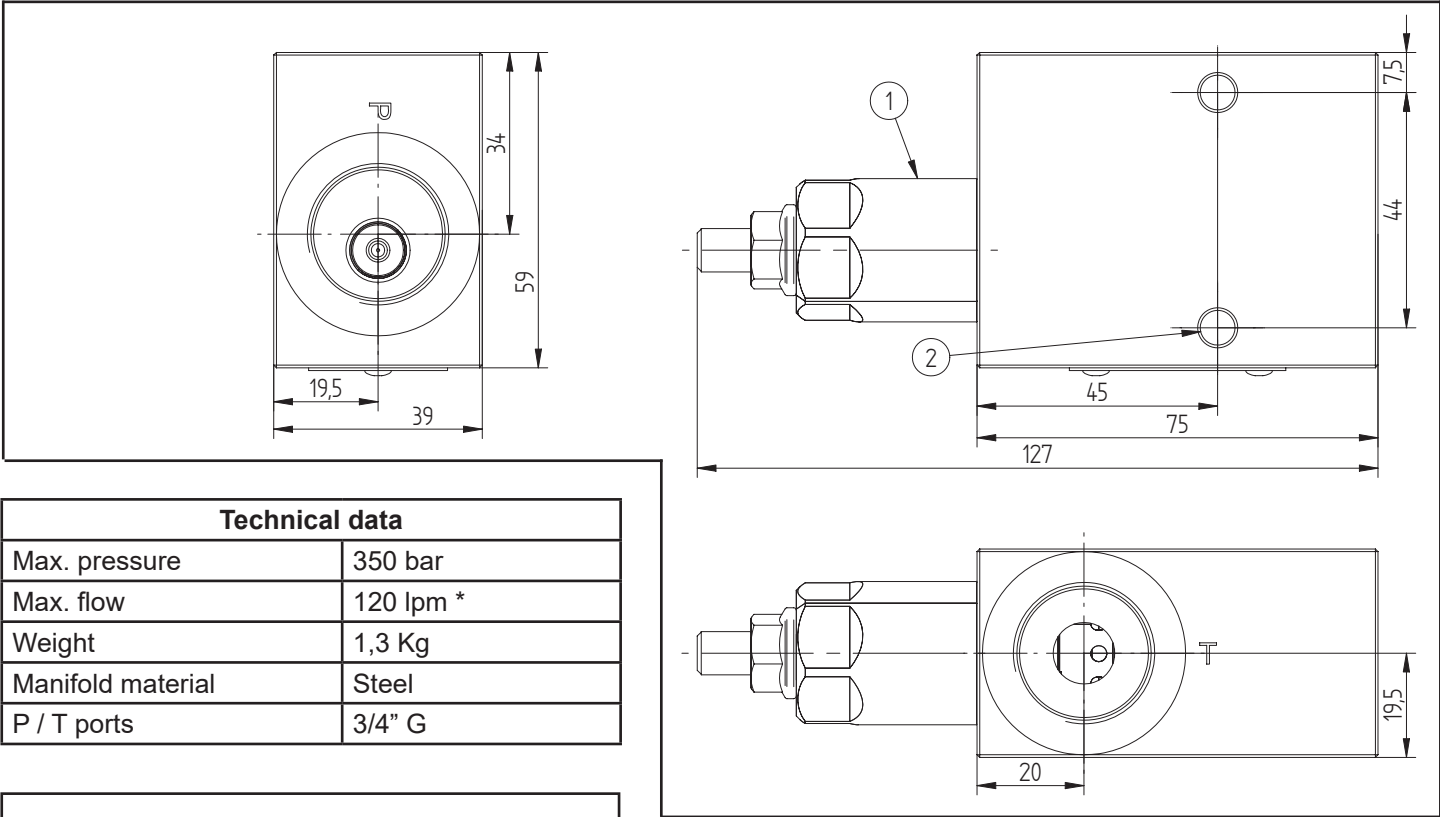
Relief valve adjustment  
pressure range \*

0 =	10-60 bar
1 =	40-110 bar
2 =	110-220 bar
3 =	220-260 bar

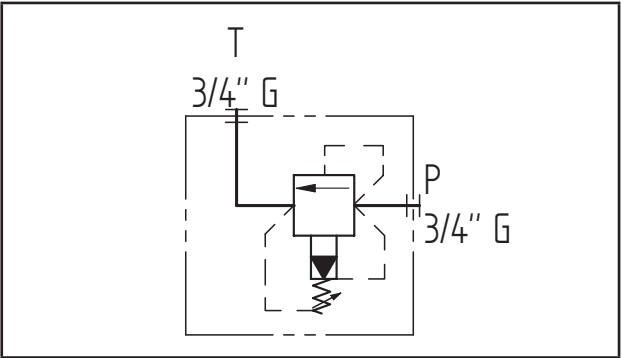
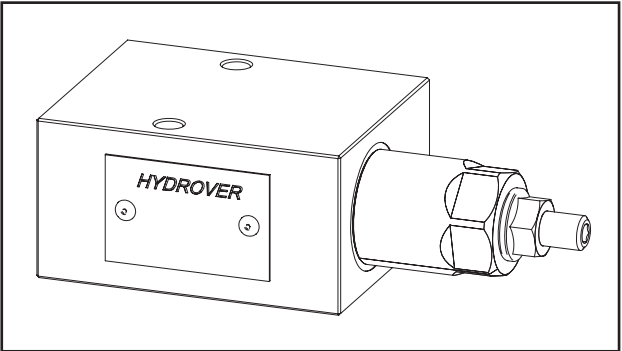
Relief valve  
adjustment type \*

S = Screw

\* Omit if not required. To order the product without the pressure relief cartridge valve, omit the pressure range and the adjustment type options: H17174A.  
The manifold will still be provided with the corresponding cavity.



Technical data	
Max. pressure	350 bar
Max. flow	120 lpm *
Weight	1,3 Kg
Manifold material	Steel
P / T ports	3/4" G



N°	Description	Q.ty
1	Bosch Rexroth relief valve <b>VSPN-10A</b> depicted with screw adjustment *	1
2	Ø 6,5 through hole for mounting	2

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue



Ordering code

H	1	7	0	1	9	S	-		
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Hydrover product

Product series  
17 series - Inline valves

Product ID

Manifold material  
Steel

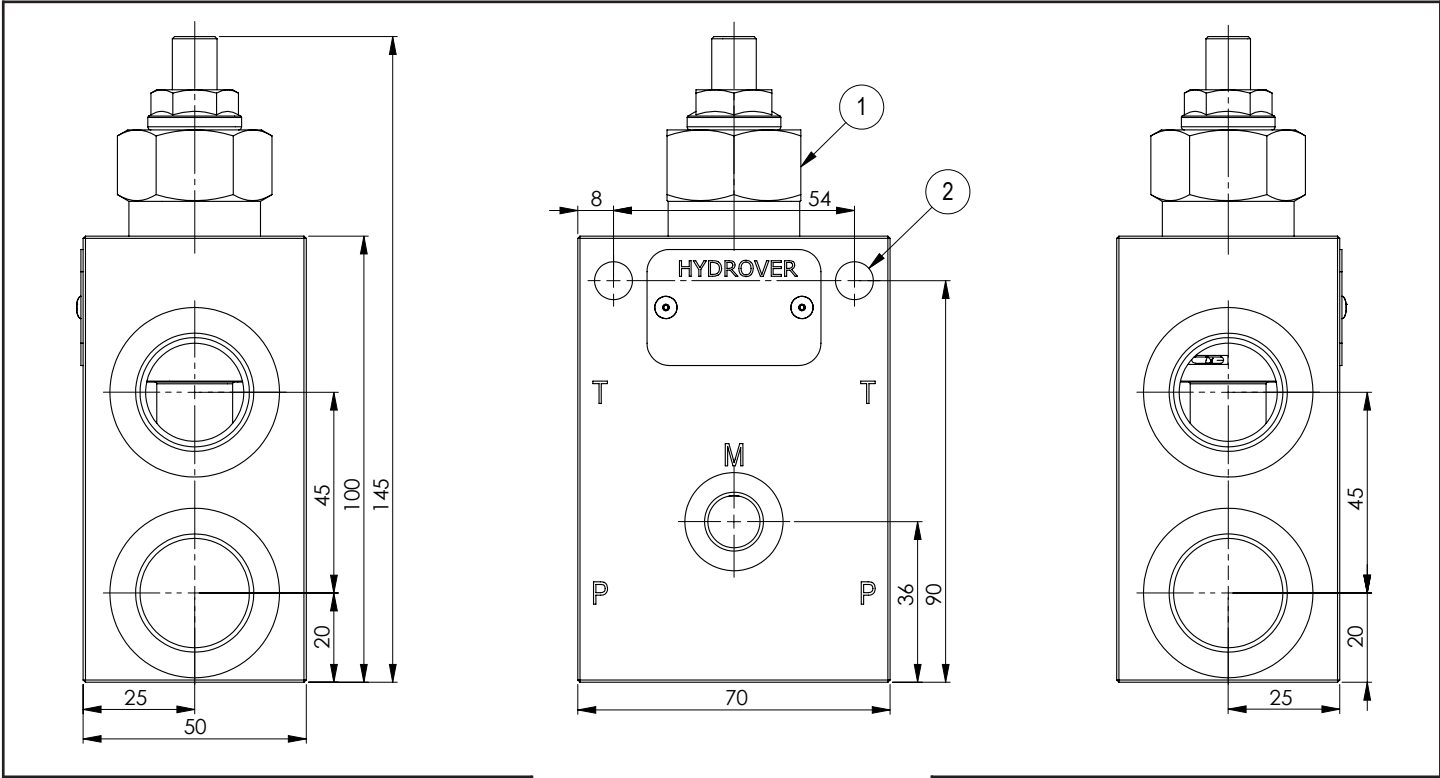
Relief valve  
adjustment pressure range \*

1 =	35-140 bar
2 =	70-280 bar
3 =	140-420 bar
3 =	35-350 bar (adj. knob)

Relief valve  
adjustment type \*

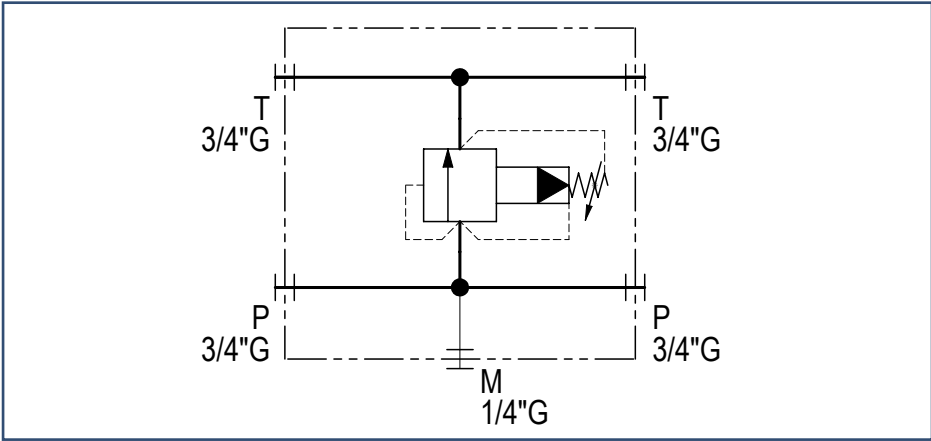
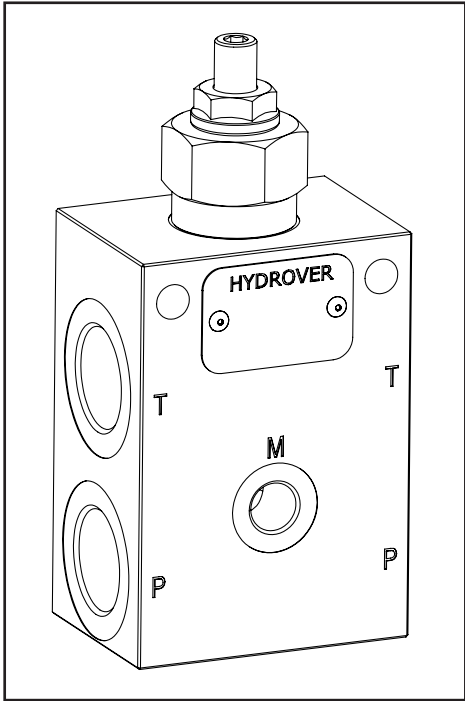
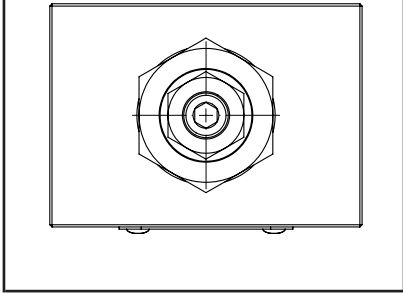
S =	Screw
K =	Knob

\* Omit if not required. To order the product without the pressure relief cartridge valve, omit the pressure range and the adjustment type options: H17019S.  
The manifold will still be provided with the corresponding cavity.



Dimensions in mm

Technical data	
Max. pressure	250 bar
Max. flow	150 lpm *
Weight	1 Kg
Manifold material	Aluminium
M port	1/4" G
P / T ports	3/4" G



N°	Description	Q.ty
1	Bosch Rexroth relief valve <b>VSP-150</b> depicted with screw adjustment *	1
2	Ø 8,5 through hole for mounting	2

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

Ordering code

H	1	7	1	2	5	A	-		
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Hydrover product

Product series  
17 series - Inline valves

Product ID

Manifold material  
Aluminium

Relief valve  
adjustment pressure range \*

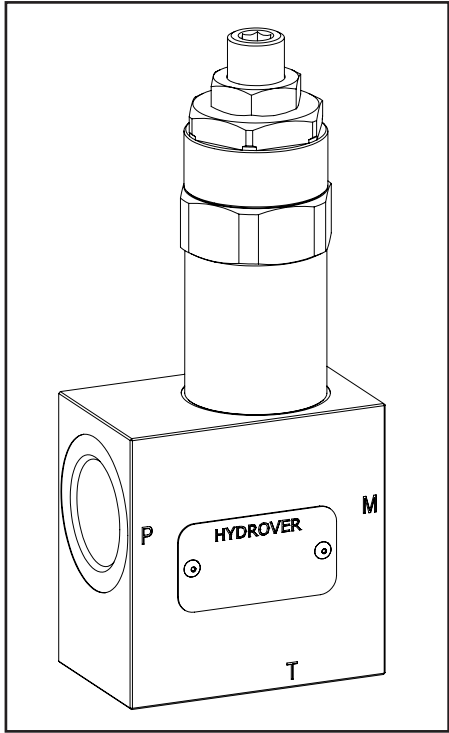
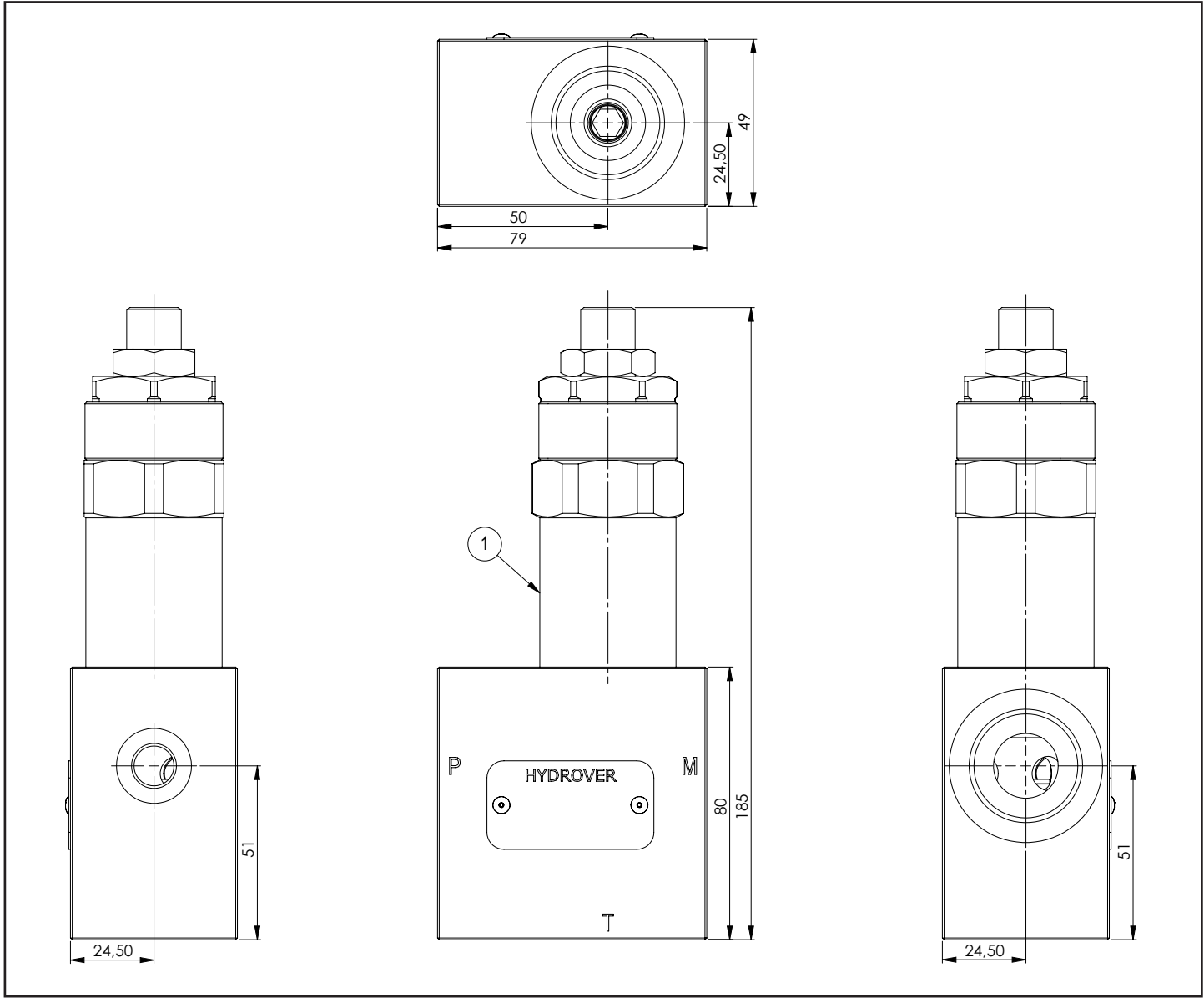
0 =	3-70 bar
1 =	7-105 bar
2 =	10-210 bar
3 =	35-420 bar

Relief valve  
adjustment type \*

S =	Screw
K =	Knob

\* Omit if not required. To order the product without the pressure relief cartridge valve, omit the pressure range and the adjustment type options: H17125A.  
The manifold will still be provided with the corresponding cavity.

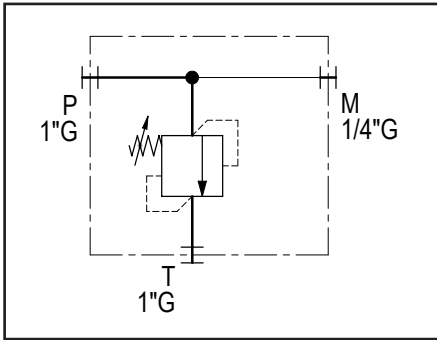
Dimensions in mm



Technical data	
Max. pressure	350 bar
Max. flow	240 lpm *
Weight	2,75 Kg
Manifold material	Steel
P / T ports	1" G
M port	1/4" G

N°	Descrizione	Q.tà
1	Bosch Rexroth relief valve <b>VSD-250</b>	1

\* for complete technical information, click on the blue link



Ordering code

H	1	7	0	8	9	S	-		
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Hydrover product

Product series

Product ID

Manifold material

17 series - Inline valves

Steel

Relief valve adjustment pressure range \*

Relief valve adjustment type \*

3 =

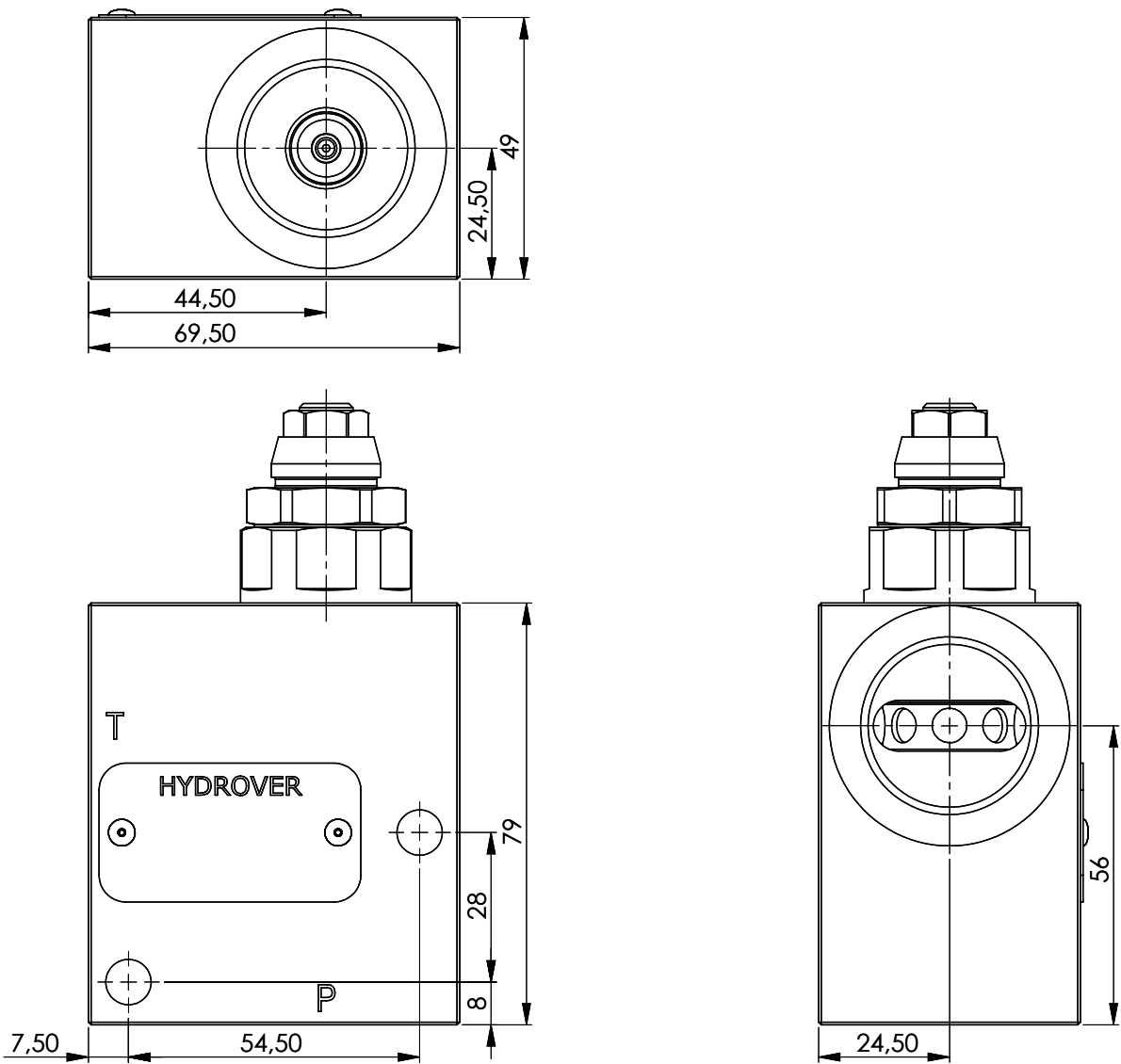
S =

120-350 bar

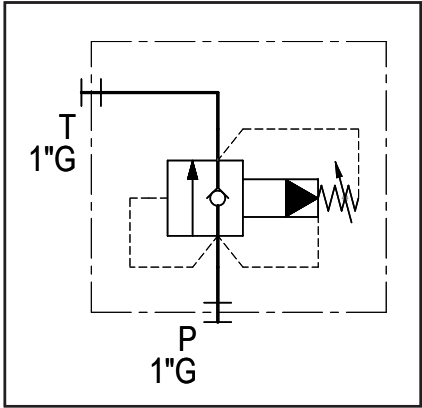
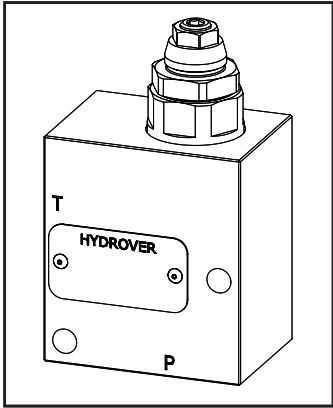
Screw

\* Omit if not required. To order the product without the pressure relief cartridge valve, omit the pressure range and the adjustment type options: H17089S.  
The manifold will still be provided with the corresponding cavity.

Dimensions in mm



Technical data	
Max. pressure	350 bar
Max. flow	200 lt/1 *
Weight	1,8 Kg
Manifold material	Steel
P / T ports	1" G



N°	Description	Q.ty
1	Bosch Rexroth relief valve and anti-cavitation VMR2.240.NG.320 100-420 bar (similar to the <b>VMR2.240.NG.000</b> but with NBR seals and zinc plated body)*	1
2	Ø 8,5 through hole for mounting	2

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

Ordering code

H	1	7	1	1	9	S
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Hydrover product

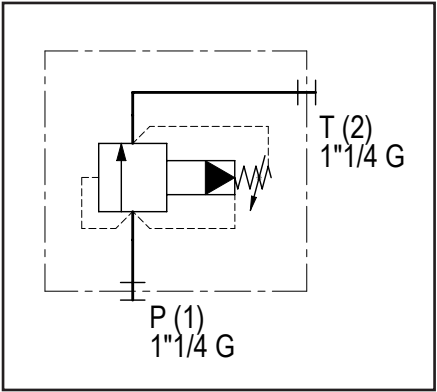
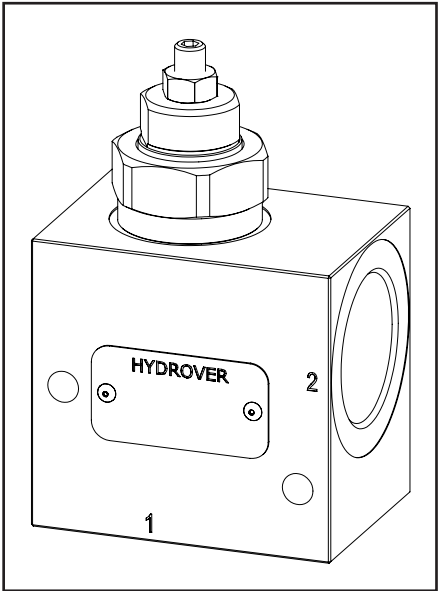
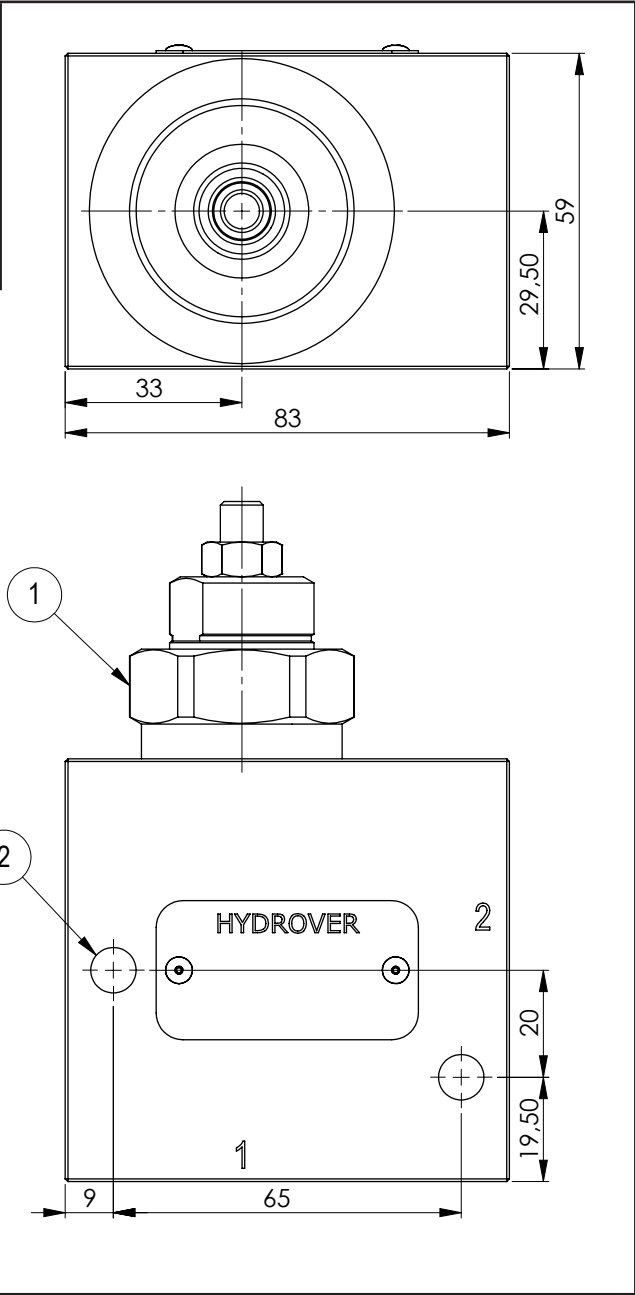
Manifold material  
Steel

Product series  
17 series - Inline valves

Product ID

Inline relief valve / P-T 1"1/4 G / 250 lpm **H17107**

Technical data	
Max. pressure	350 bar
Max. flow	250 lpm *
Weight	2,6 Kg
Manifold material	Steel
P (1) / T (2) ports	1"1/4 G



N°	Description	Q.ty
1	Bosch Rexroth relief valve <b>VSPN-16A</b> depicted with screw adjustment *	1
2	Ø 8,5 through hole for mounting	2

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue



Ordering code

H	1	7	1	0	7	S	-		
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Hydrover product

Product series  
17 series - Inline valves

Product ID

Manifold material  
Steel

Relief valve adjustment  
pressure range \*

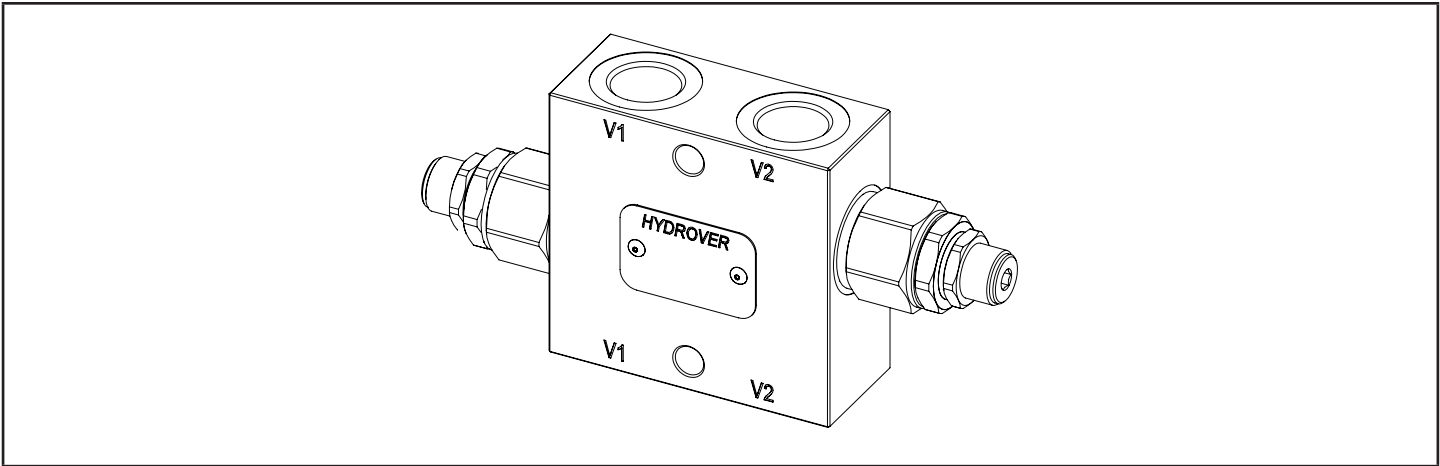
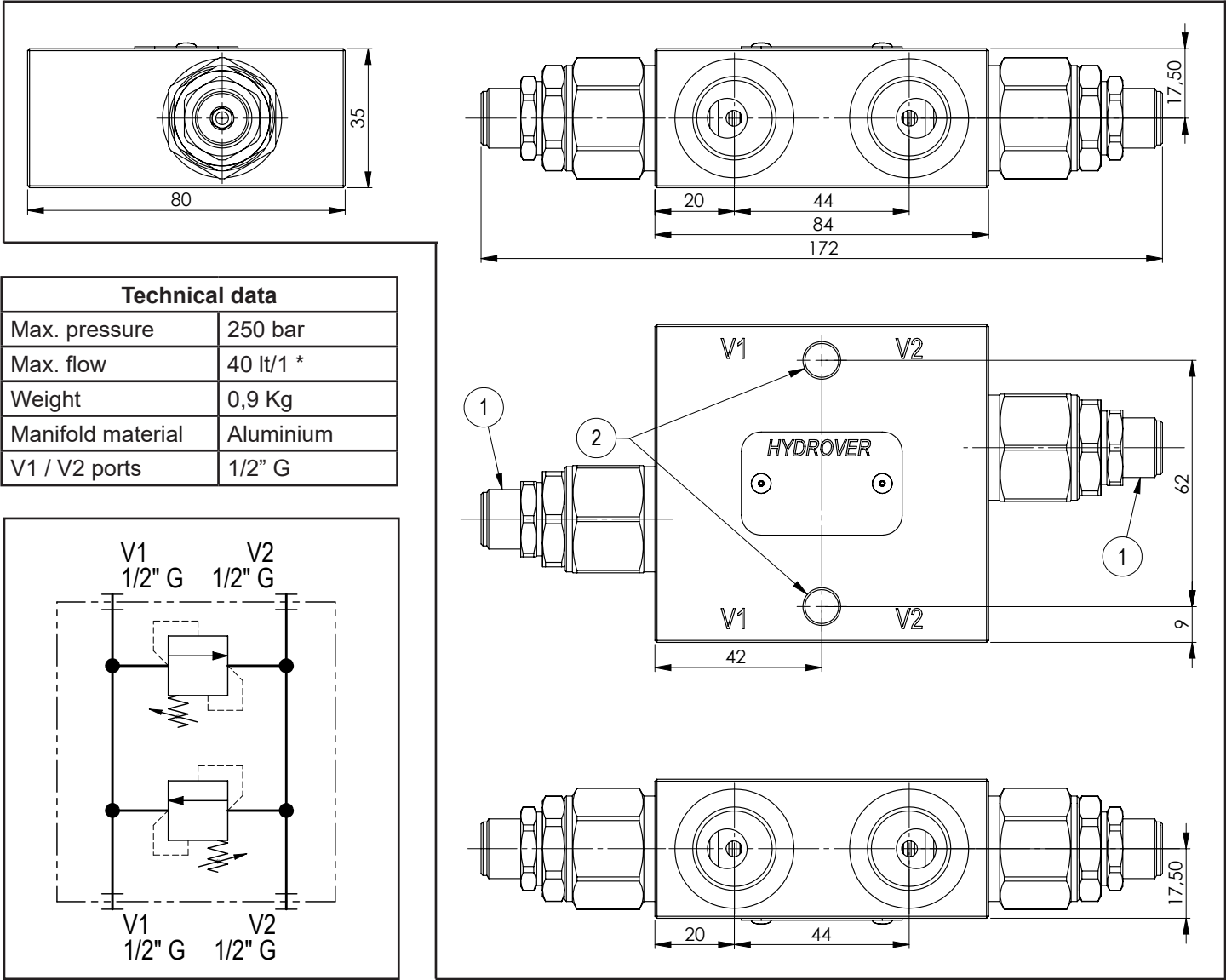
1 =	35-140 bar
2 =	70-280 bar
3 =	140-420 bar
3 =	35-350 bar (adj. knob)

Relief valve adjustment type \*

S =	Screw
K =	Knob

\* Omit if not required. To order the product without the pressure relief cartridge valve, omit the pressure range and the adjustment type options: H17107S.  
The manifold will still be provided with the corresponding cavity.

Inline relief valve double effect crossing V1 V2 ports 1/2" G / 40 lpm **H17063**



N°	Description	Q.ty
1	Bosch Rexroth relief valve <b>VMD1.040</b> *	2
2	Ø 8,5 through hole for mounting	2

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

Ordering code

H	1	7	0	6	3	A	-	-	-	-
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## Hydrover product

## Product series

## 17 series - Inline valves

Product ID

## Manifold material

Aluminium

### Relief valve adjustment type V1 \*

Screw

$$= S$$

### Relief valve adjustment pressure range V1 \*

25-120 bar

$$= 1$$

40-200 bar

$$= 2$$

200-350 bar

$$= 3$$

**Relief valve adjustment  
pressure range V2 \***

1= 25-120 bar

2= 40-200 bar

3= 200-350 bar

**Relief valve  
adjustment type V2 \***

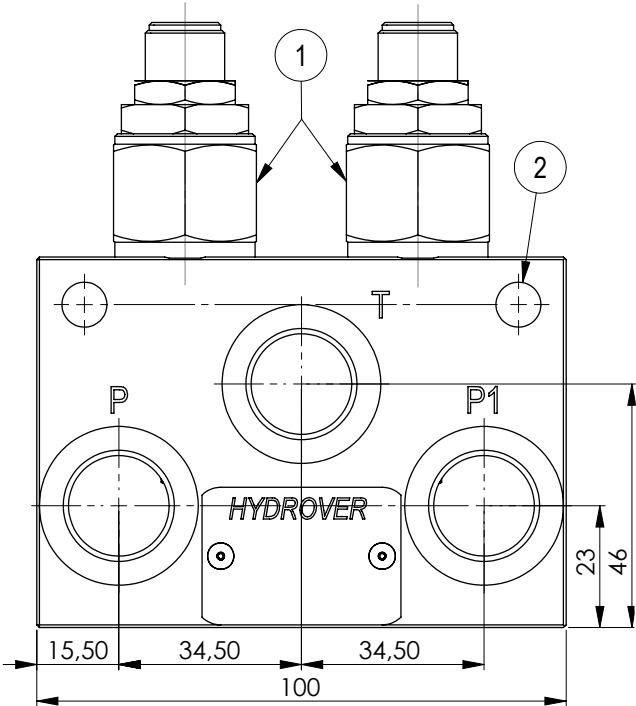
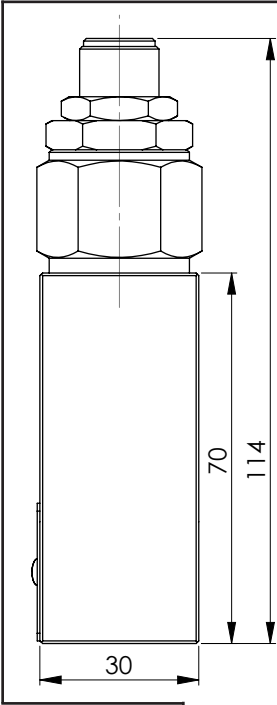
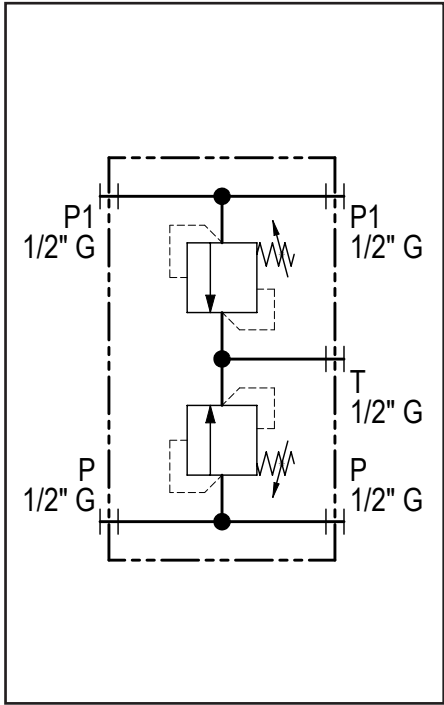
S = Screw

\* Omit if not required. To order the product without the pressure relief cartridge valves, omit the pressure range and the adjustment type options: H17063A.

The manifold will still be provided with the corresponding cavities.

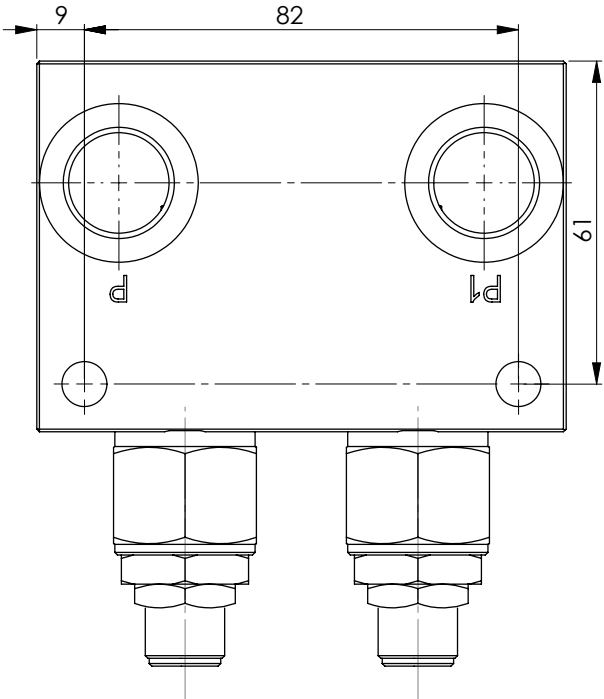
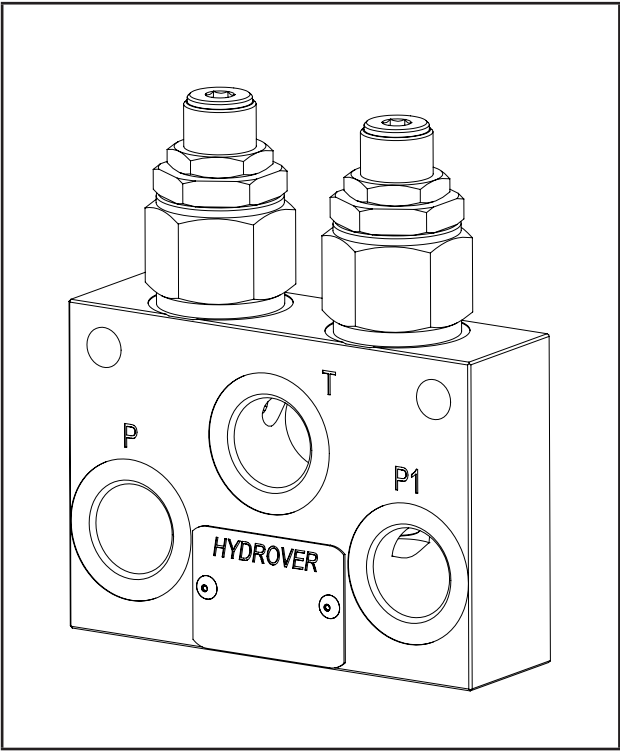
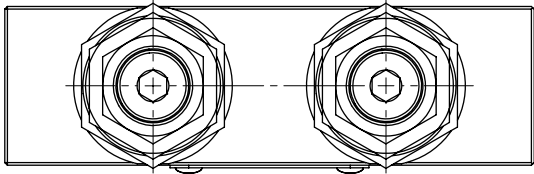
Inline relief valve double effect  
crossing P-P1 ports and T port 1/2" G / 70 lpm

H17059



Dimensions in mm

Technical data	
Max. pressure	250 bar
Max. flow	70 lpm *
Weight	0,8 Kg
Manifold material	Aluminium
P / P1 / T ports	1/2" G



N°	Description	Q.ty
1	Bosch Rexroth relief valve <b>VMD1.070</b> *	2
2	Ø 8,5 through hole for mounting	2

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

Ordering code

H	1	7	0	5	9	A	-	-	-	-	-
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Hydrover product

Product series  
17 series - Inline valves

Product ID

Manifold material  
Aluminium

Relief valve adjustment type P \*  
Screw = S

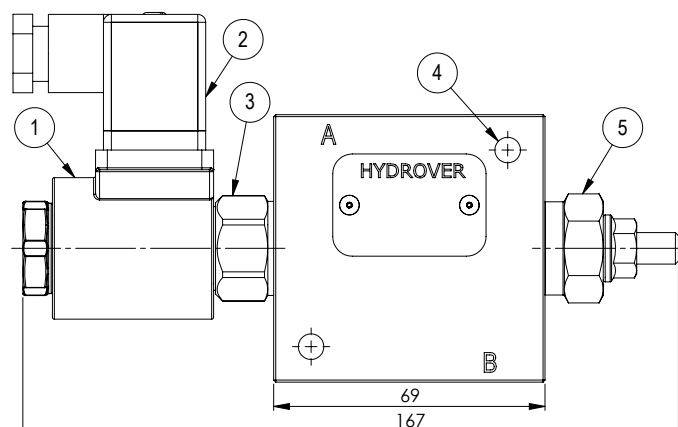
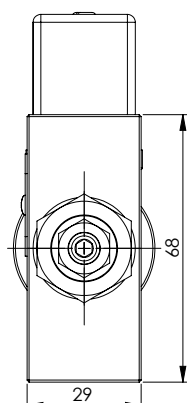
Relief valve adjustment pressure range P \*  
10-60 bar = 0  
40-110 bar = 1  
110-220 bar = 2  
220-260 bar = 3

Relief valve adjustment pressure range P1 \*  
0 = 10-60 bar  
1 = 40-110 bar  
2 = 110-220 bar  
3 = 220-260 bar

Relief valve adjustment type P1 \*  
S = Screw

\* Omit if not required. To order the product without the pressure relief cartridge valves, omit the pressure range and the adjustment type options: H17059A.  
The manifold will still be provided with the corresponding cavities.

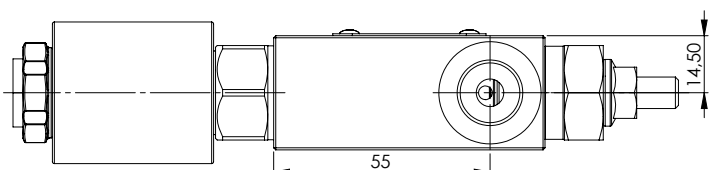
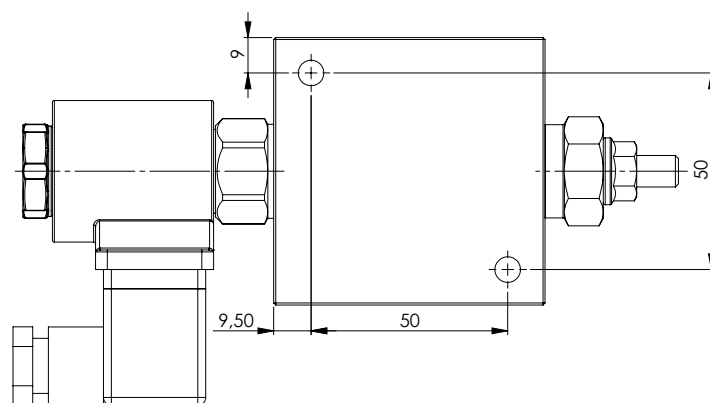
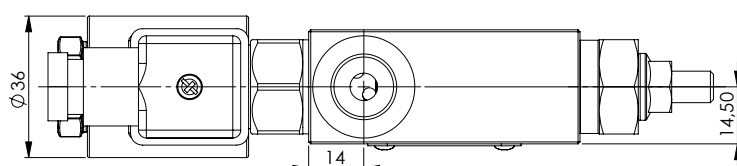
# Inline relief valve electrically enabled / A-B 3/8" G / 20 lpm **H17129**



Dimensions in mm

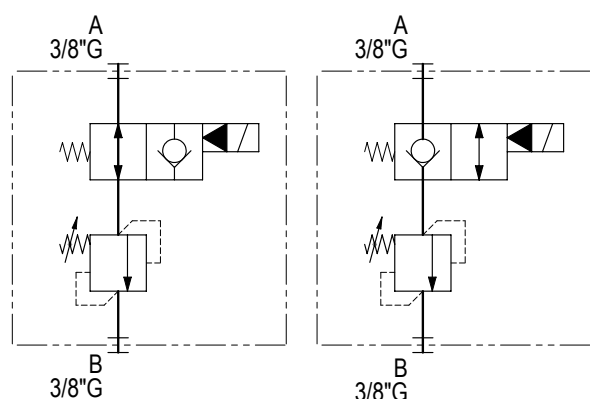
## Technical data

Max. pressure	250 bar
Max. flow	20 lpm *
Weight	0,77 Kg
Manifold material	Aluminium
A / B ports	3/8" G



Normally open

Normally closed



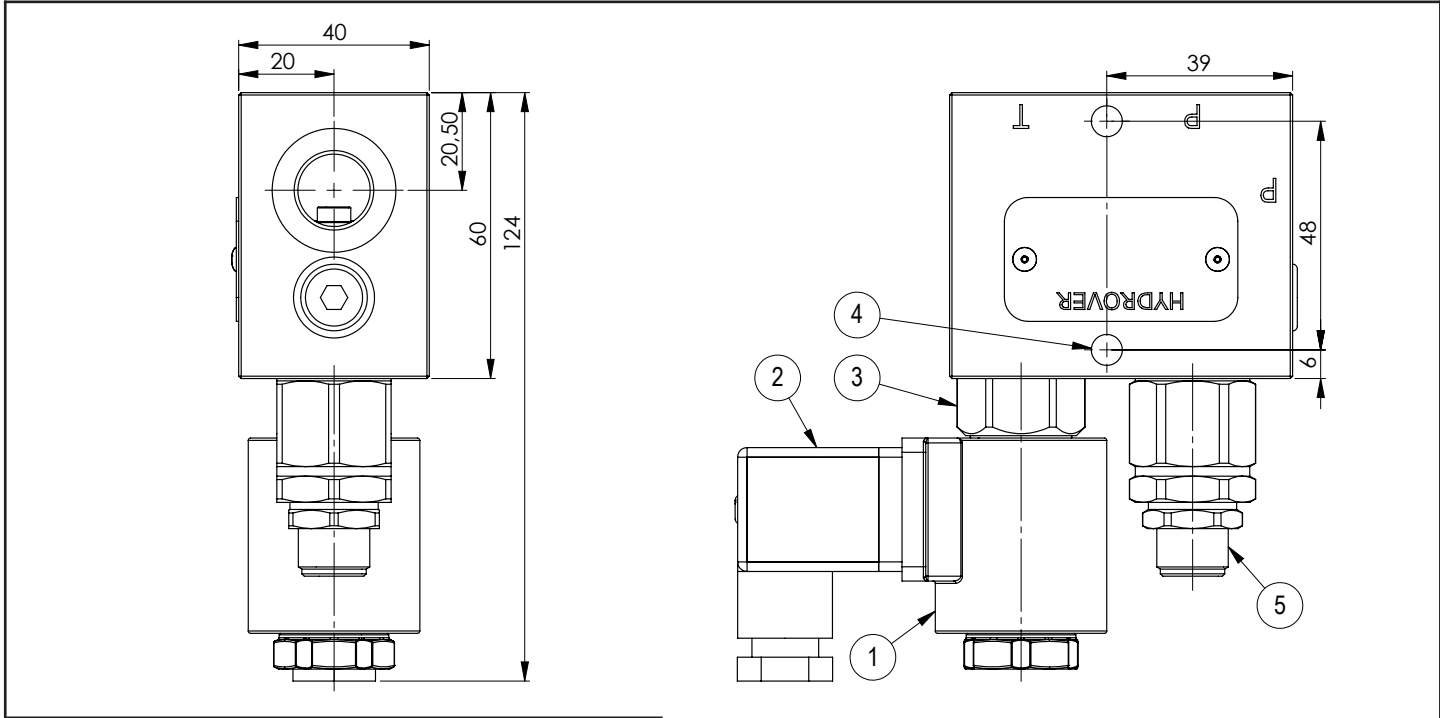
N°	Description	Q.ty
1	Bosch Rexroth coil <b>D36</b> - CLASS H DIN 43650 ISO 4400 *	1
2	Connector DIN 43650 ISO 4400	1
3	Bosch Rexroth solenoid valve <b>VEI-16 OD.15.05.18-Y-000000</b> (normally closed) o <b>VEI-16 OD.15.06.18-Y-000000</b> (normally open) depicted without manual override *	1
4	Ø 6,5 through hole for mounting	2
5	Bosch Rexroth relief valve <b>VSN-08A</b> *	1

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

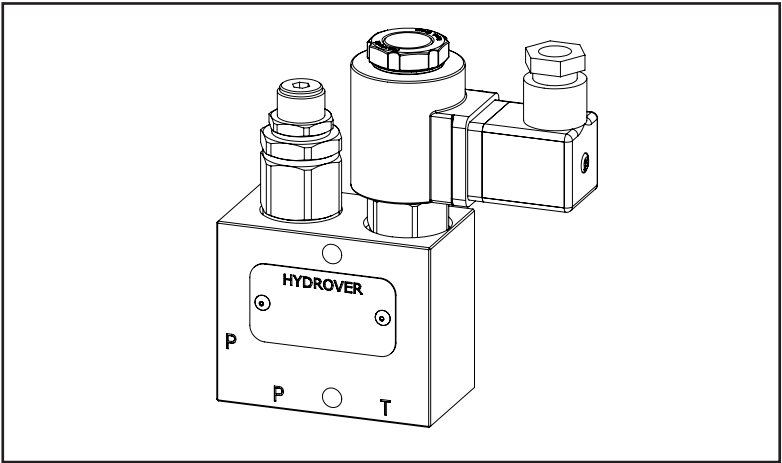
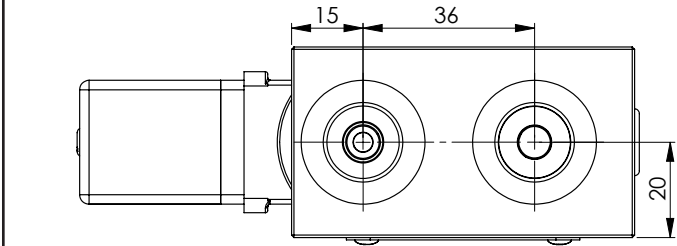
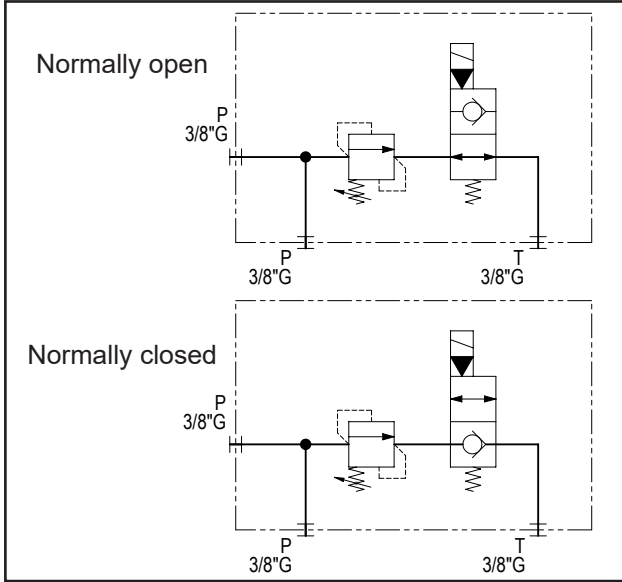
Ordering code

H17129A- - - - -													
Hydrover product		17		129		A							
Product series		17 series - Inline valves										Solenoid valve coil connection * 1 = DIN 43650 ISO 4400	
Product ID												Solenoid valve coil voltage * OB = 12V DC OC = 24V DC OD = 48V DC OU = 110V RAC AH = 230V RAC	
Manifold material		Aluminium										Solenoid valve manual override * E0 = Without EP = Push (NA) EV = Screw (NC) EG = Push and twist (NA)	
Relief valve adjustment type *		Screw = S Knob = K										Solenoid valve spool type * NA = Normally open NC = Normally closed	
Relief valve adjustment pressure range *		10-70 bar = 0 35-140 bar = 1 105-210 bar = 2 175-350 bar = 3 35-350 bar (knob reg.) = 3											

\* Omit if not required. For example, to order the product without the solenoid cartridge valve, omit the coil connection, coil voltage and manual override options: H17129A-S2.  
The manifold will still be provided with the corresponding cavity.



Technical data	
Max. pressure	250 bar
Max. flow	30 lpm *
Weight	0,86 Kg
Manifold material	Aluminium
P / T ports	3/8" G



N°	Description	Q.ty
1	Bosch Rexroth coil <b>D36</b> - CLASS H DIN 43650 ISO 4400 *	1
2	Connector DIN 43650 ISO 4400	1
3	Bosch Rexroth solenoid valve <b>VEI-16 OD.15.05.18-Y-000000</b> (normally closed) o <b>VEI-16 OD.15.06.18-Y-000000</b> (normally open) depicted without manual override *	1
4	Ø 6,5 through hole for mounting	2
5	Bosch Rexroth relief valve <b>VMD1.025</b> *	1

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

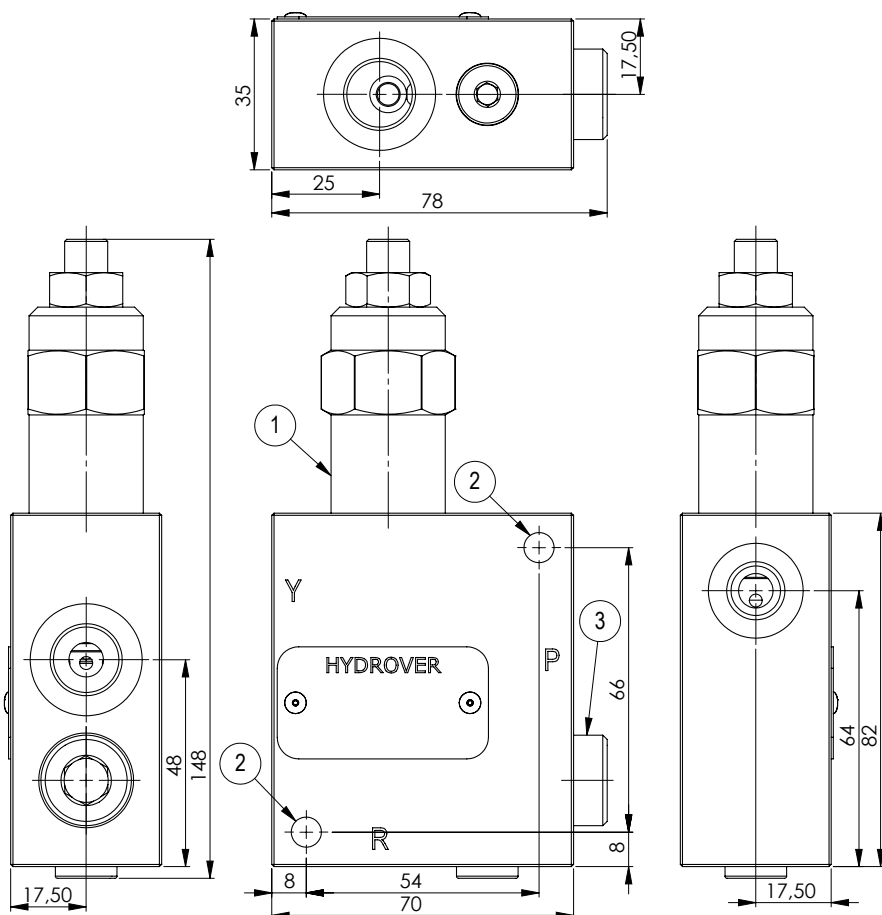
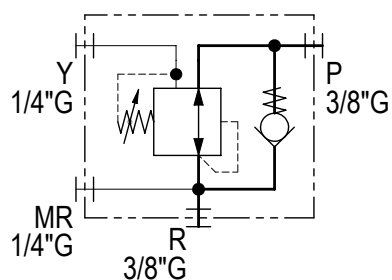
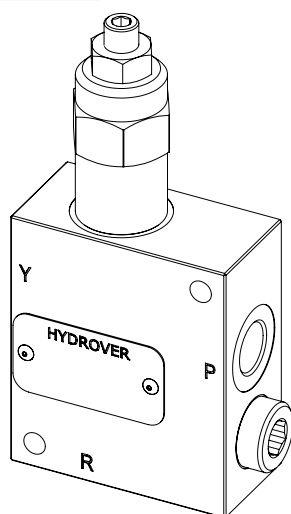


Ordering code

H	1	7	0	8	6	A	-	-	-	-	-	-	-	-	-				
Hydrover product		Product series 17 series - Inline valves		Product ID		Manifold material Aluminium		Relief valve adjustment type * Screw = S		Relief valve adjustment pressure range * 25-120 bar = 1 40-200 bar = 2 200-350 bar = 3		Solenoid valve coil connection * 1 = DIN 43650 ISO 4400		Solenoid valve coil voltage * OB = 12V DC OC = 24V DC OD = 48V DC OU = 110V RAC AH = 230V RAC		Solenoid valve manual override * E0 = Without EP = Push (NA) EV = Screw (NC) EG = Push and twist (NA)		Solenoid valve spool type * NA = Normally open NC = Normally closed	

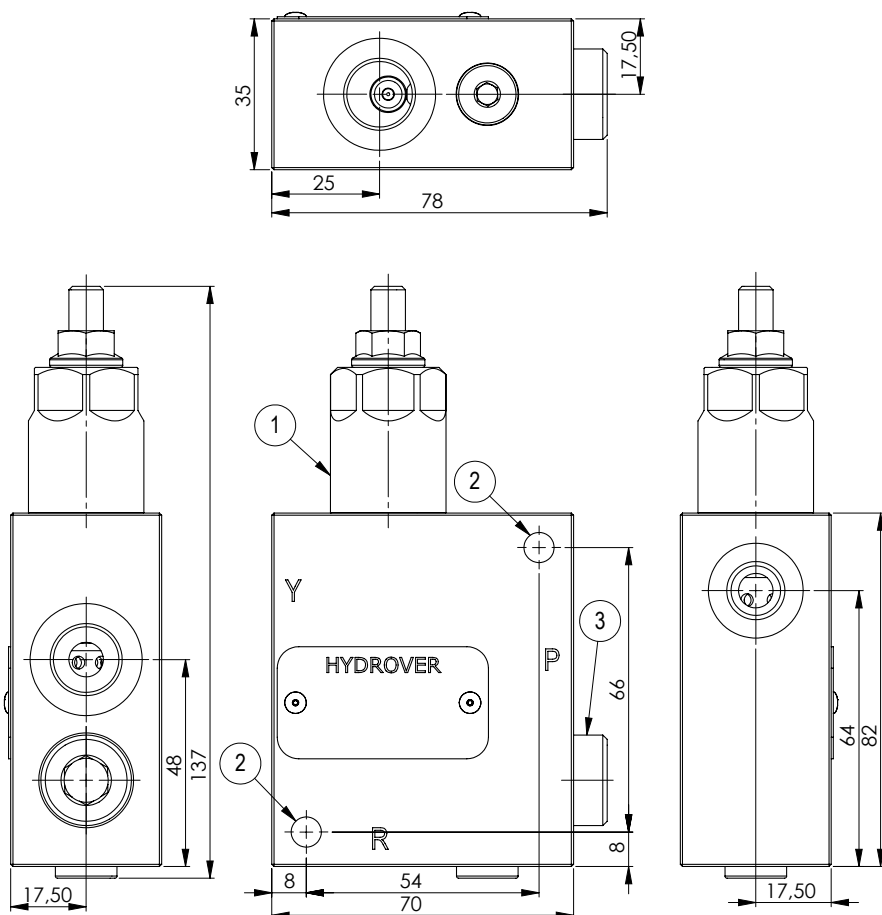
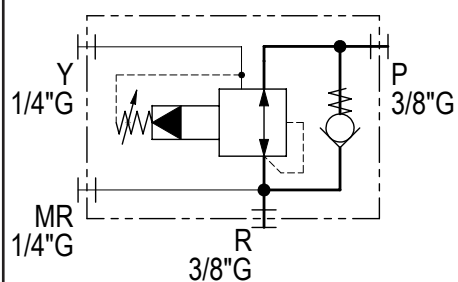
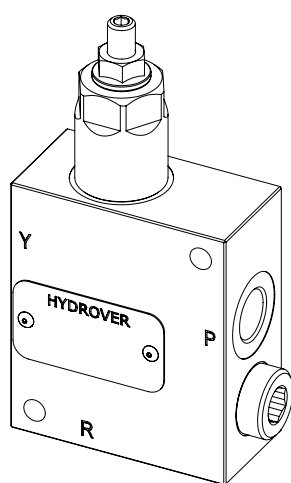
\* Omit if not required. For example, to order the product without the solenoid cartridge valve, omit the coil connection, coil voltage and manual override options: H17086A-S2.  
The manifold will still be provided with the corresponding cavity.

VRPR-10A



*Dimensions in mm*

VRPX-10A



## Ordering code

H	1	7	0	3	2	A	-	-	-
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## Hydrover product

## Product series

17 series - Inline valves

## Product ID

## Manifold material

Aluminium

## Pressure reducing valve type \*

R = VRPR-10A (direct)

X = VRPX-10A (pilot)

VRPR-10A reducing valve  
pressure range (static) \*

0 = 2-14 bar

1 = 2-25 bar

2 = 10-50 bar

3 = 28-80 bar

VRPX-10A reducing valve  
pressure range (static) \*

0 = 25-100 bar

1 = 35-140 bar

2 = 70-280 bar

3 = 35-350 bar (adj. knob)

## Reducing valve adjustment type \*

S = Screw

K = Knob

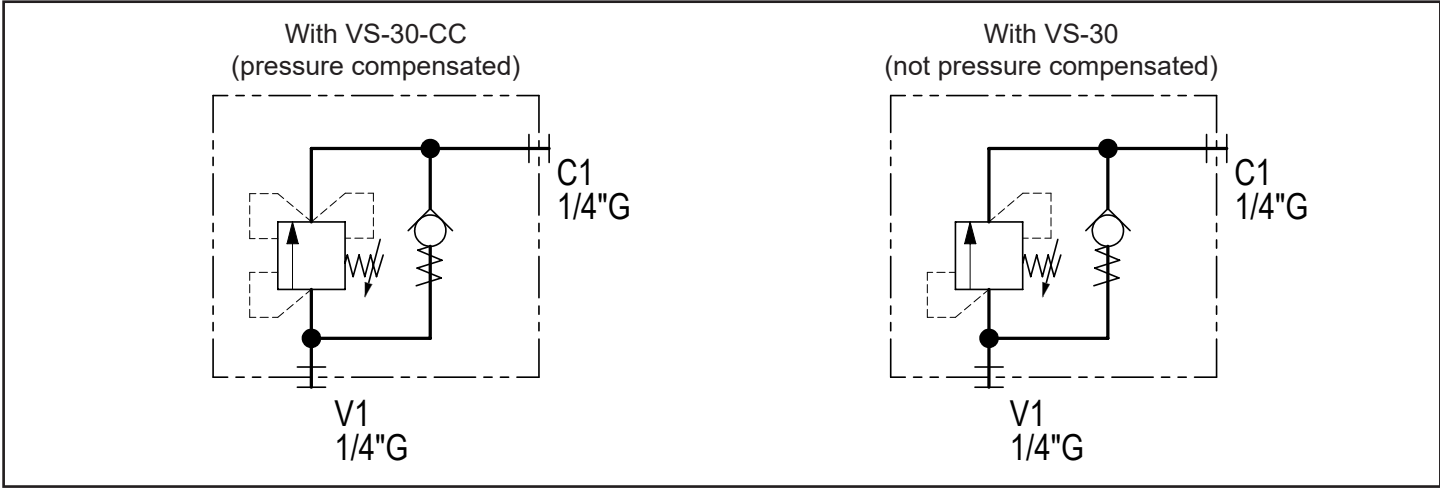
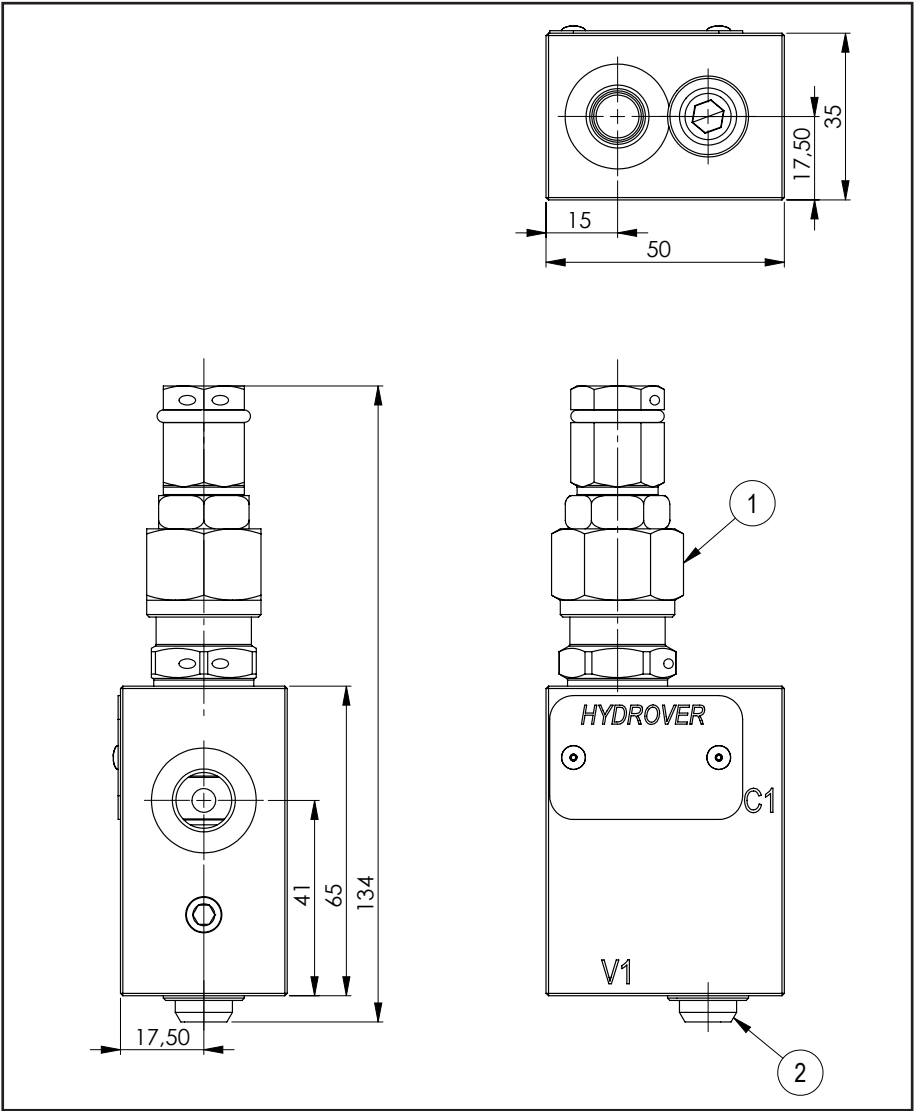
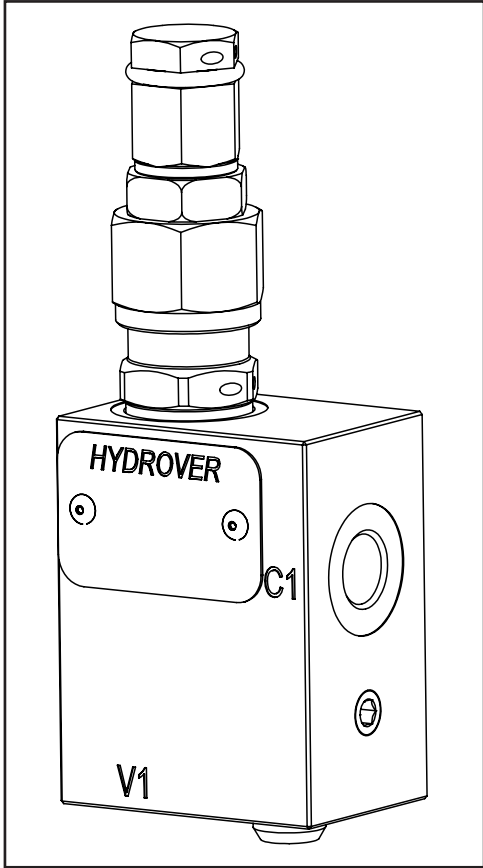
\* Omit if not required. To order the product without the pressure reducing cartridge valve, omit the valve adjustment type, valve pressure range and valve type options: H17032A.  
The manifold will still be provided with the corresponding cavity.

N°	Description	Q.ty
1	Bosch Rexroth reducing valve <b>VRPR-10A</b> o <b>VRPX-10A</b> * depicted with screw adjustment	1
2	Ø 7 through hole for mounting	2
3	Bosch Rexroth check valve <b>0TU602009900000</b>	1

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

Technical data	
Max. pressure	250 bar
Max. flow with VRPR-10A	25 lpm *
Max. flow with VRPX-10A	55 lpm *
Weight	0,75 Kg
Manifold material	Aluminium
MR / Y ports	1/4" G
P / R ports	3/8" G

Technical data	
Max. pressure	250 bar
Max. flow	30 lpm *
Weight	0,5 Kg
Manifold material	Aluminium



N°	Description	Q.ty
1	Bosch Rexroth pressure compensated valve <b>VS-30-CC</b> * (as depicted). It's possible to use a Bosch Rexroth non pressure compensated valve <b>VS-30</b> * in case it is acceptable to add to the set pressure the pressure necessary for the second branch.	1
2	Bosch Rexroth check valve	1

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

Ordering code

H	1	7	0	7	1	A	-	-	-
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Hydrover product

Product series  
17 series - Inline valves

Product ID

Manifold material  
Aluminium

Valve type \*

S = VS-30-CC

M = VS-30

Valve adjustment pressure range \*

0 = 5-50 bar

1 = 30-100 bar

2 = 50-210 bar

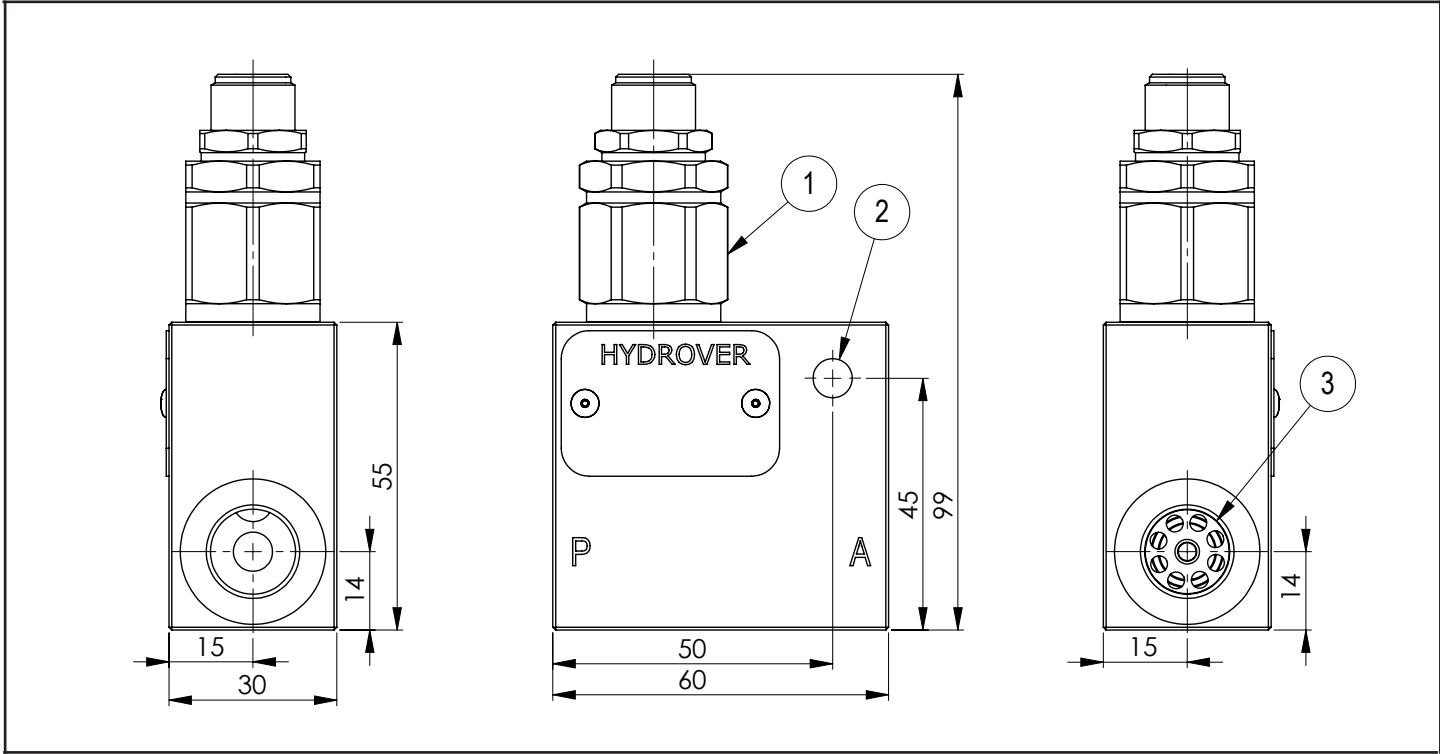
3 = 100-350 bar

Valve adjustment type \*

S = Screw

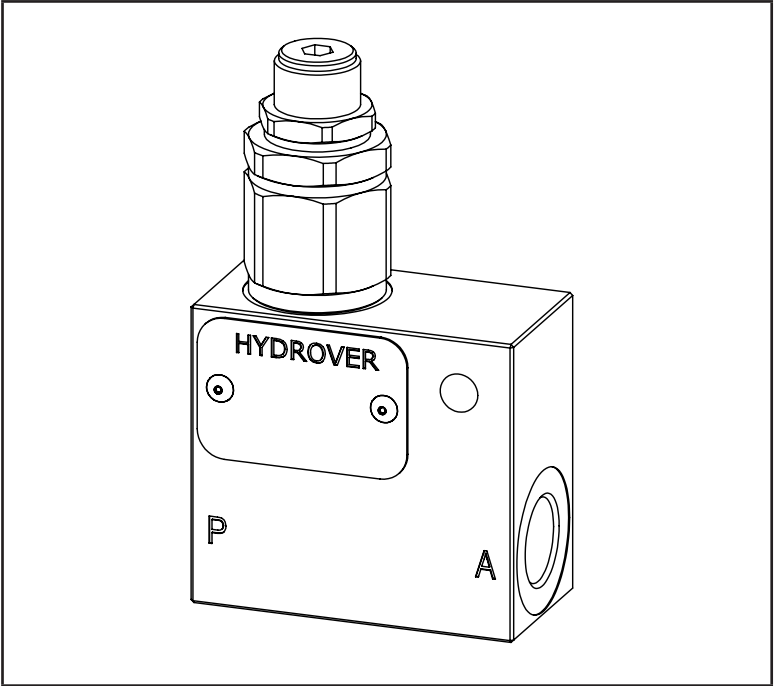
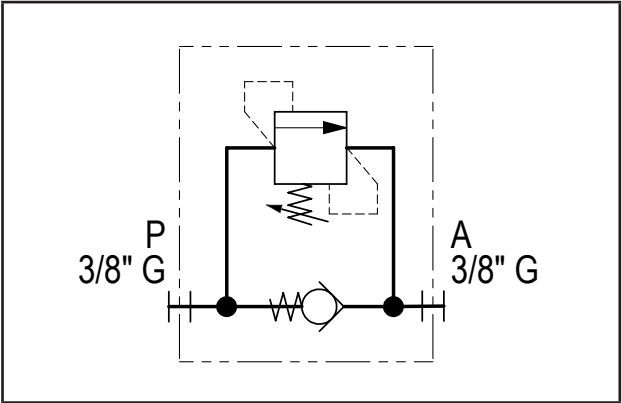
K = Knob (only for VS-30)

\* Omit if not required. To order the product without the cartridge valve, omit the adjustment type, valve pressure range and valve type options: H17071A.  
The manifold will still be provided with the corresponding cavity.



Dimensions in mm

Technical data	
Max. pressure	250 bar
Max. flow	25 lpm *
Weight	0,37 Kg
Manifold material	Aluminium
P / A ports	3/8" G



N°	Description	Q.ty
1	Bosch Rexroth relief valve <a href="#">VMD1.025</a> *	1
2	Ø 7 through hole for mounting	1
3	Check valve	1

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

Ordering code

H	1	7	1	5	8	A	-		
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Hydrover product

Product series  
17 series - Inline valves

Product ID

Manifold material  
Aluminium

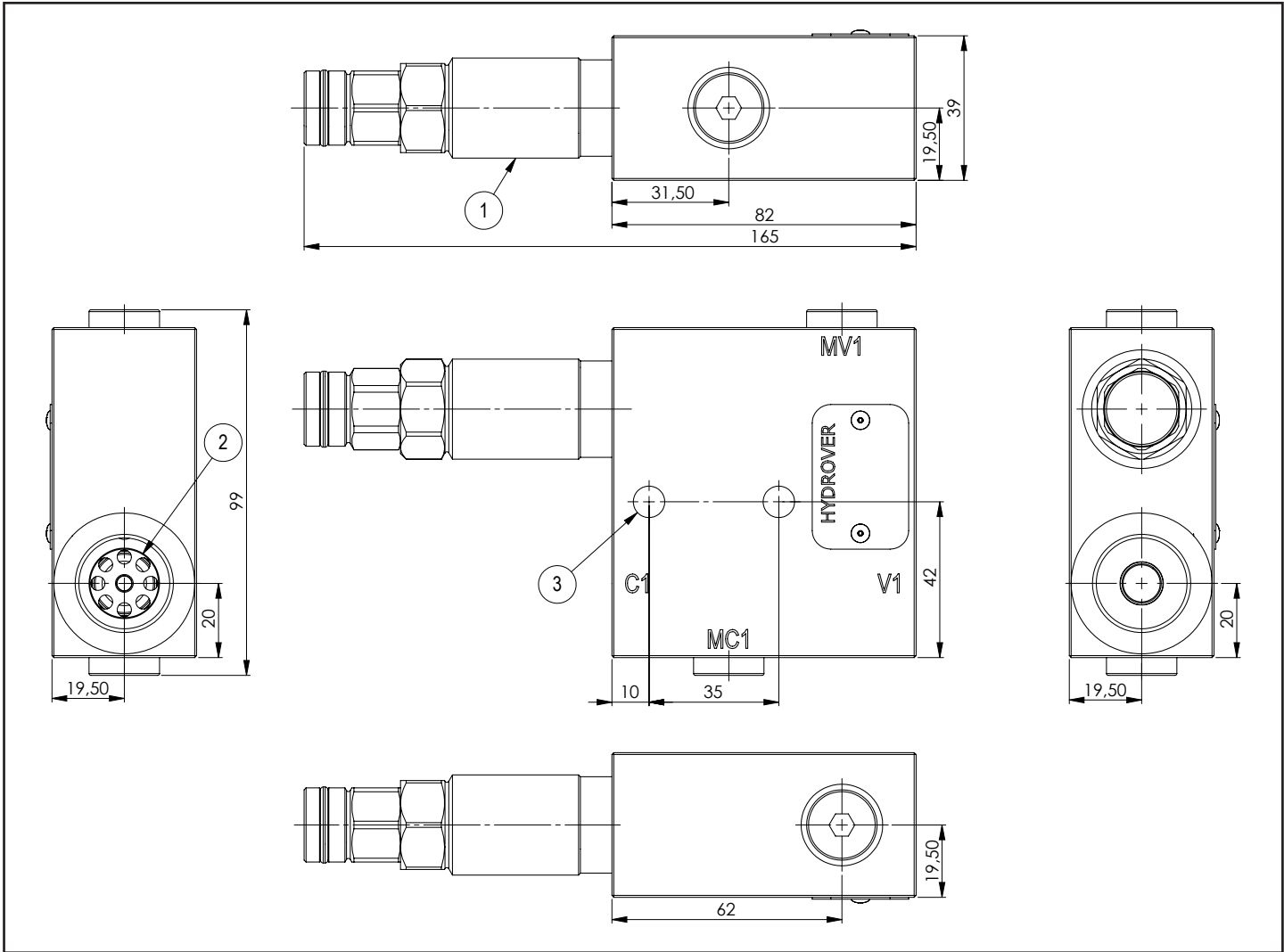
Relief valve  
pressure range \*

1 =	25-120 bar
2 =	40-200 bar
3 =	200-350 bar

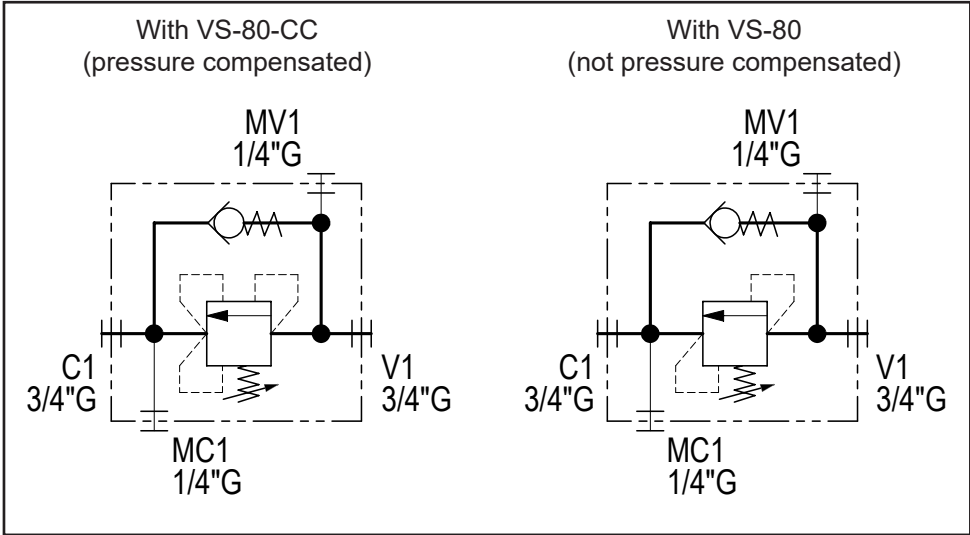
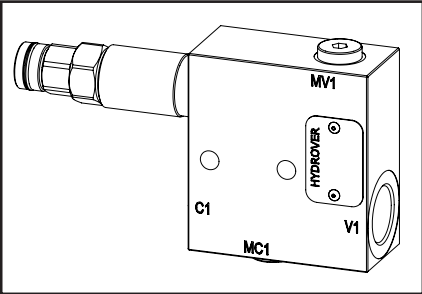
Relief valve  
adjustment type \*

S =	Screw
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\* Omit if not required. To order the product without the pressure relief cartridge valve, omit the pressure range and the adjustment type options: H17158A.  
The manifold will still be provided with the corresponding cavity.



Technical data	
Max. pressure	250 bar
Max. flow	80 lpm *
Weight	1,1 Kg
Manifold material	Aluminium



N°	Description	Q.ty
1	Pressure compensated valve VS-80-CC (depicted) or Bosch Rexroth non pressure compensated valve <b>VS-80</b> * It's possible to use a Bosch Rexroth non pressure compensated valve <b>VS-80</b> * in case it is acceptable to add to the set pressure the pressure necessary for the second branch.	1
2	Bosch Rexroth check valve	1
3	Ø 8,5 through hole for mounting	2

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue



Ordering code

H	1	7	0	5	6	A	-	-	-
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Hydrover product

Product series  
17 series - Inline valves

Product ID

Manifold material  
Aluminium

Valve type \*

S = VS-80-CC

M = VS-80

Pressure range valve adjustment \*

VS-80-CC

0 = 5-50 bar

1 = 25-100 bar

2 = 60-210 bar

3 = 100-350 bar

VS-80

0 = 5-50 bar

1 = 30-100 bar

2 = 80-250 bar

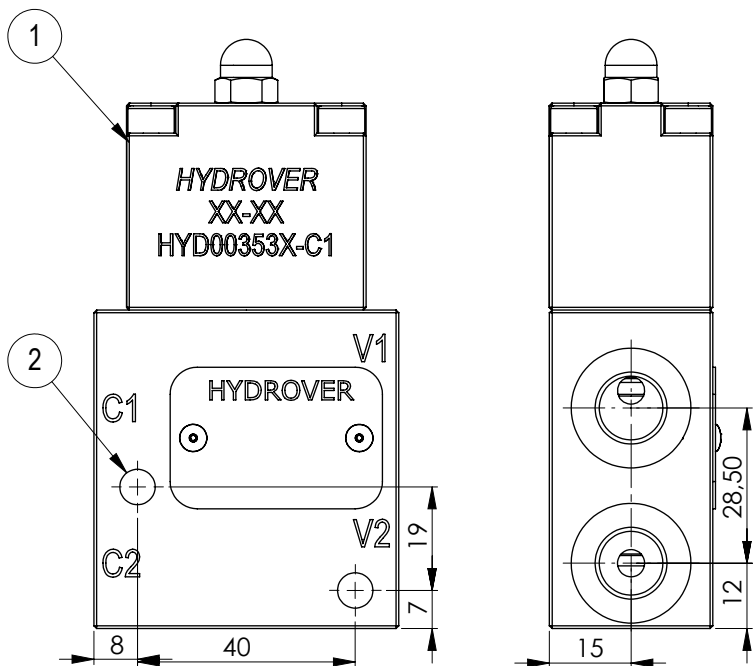
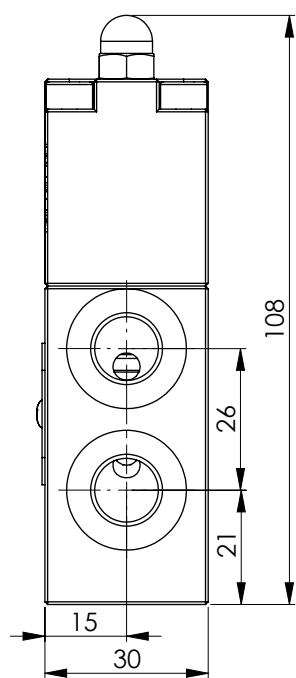
Adjustment valve type \*

S = Screw

K = Knob (only for VS-80)

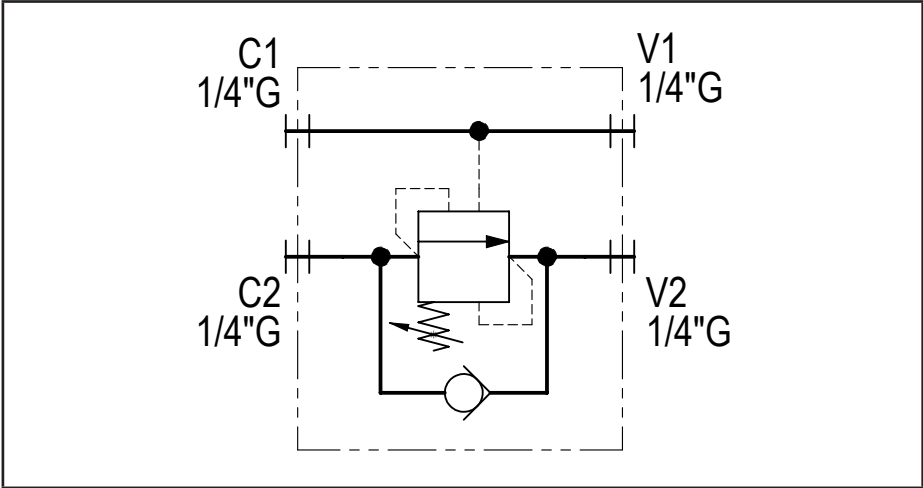
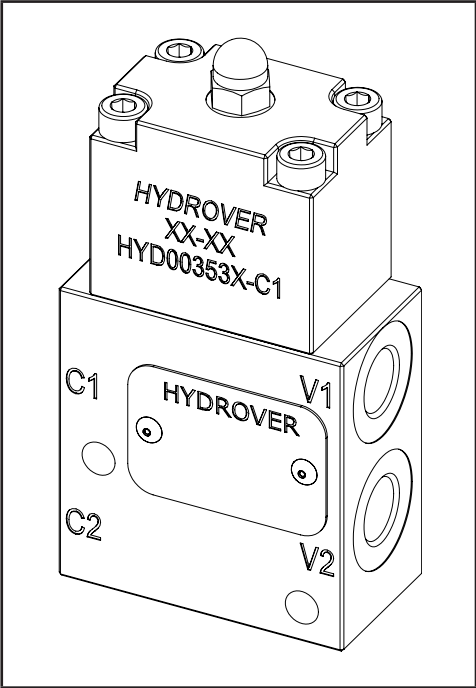
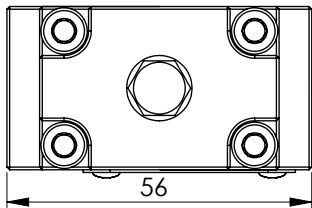
\* Omit if not required. To order the product without the cartridge valve, omit the adjustment type, valve pressure range and valve type options: H17056A.  
The manifold will still be provided with the corresponding cavity.

Inline single counterbalance valve in stainless steel / 1/4" G / 25 lpm **H17150**



Dimensions in mm

Technical data	
Max. pressure	350 bar
Max. flow	25 lpm
Weight	1,1 Kg
Manifold material	Stainless steel 316L
All ports	1/4" G



N°	Description	Q.ty
1	Counterbalance valve HCOM02-S3 100-350 bar 4:1 pilot ratio under cap	1
2	Ø 6,5 through hole for mounting	2

Ordering code

H	1	7	1	5	0	X
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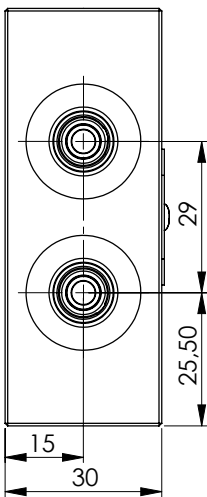
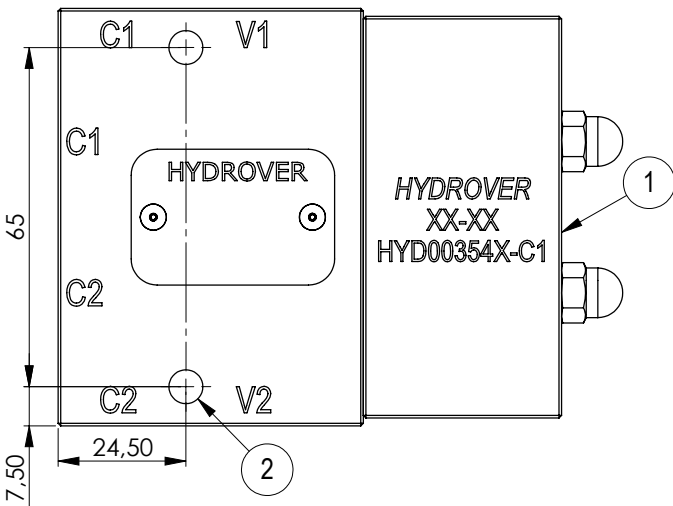
Hydrover product

Manifold material  
Stainless steel 316L

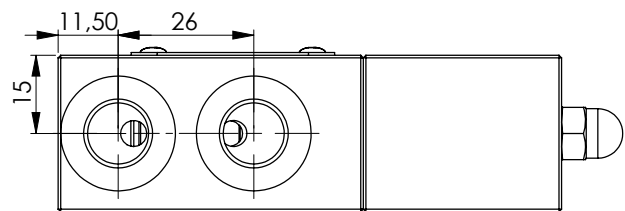
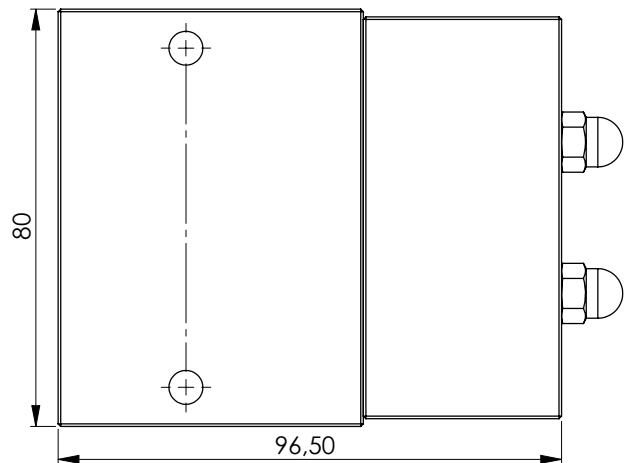
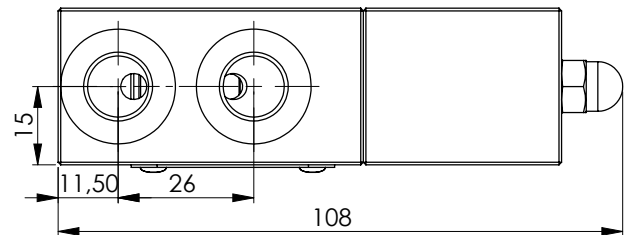
Product series  
17 series - Inline valves

Product ID

Inline dual counterbalance valve in stainless steel / 1/4" G / 25 lpm **H17151**

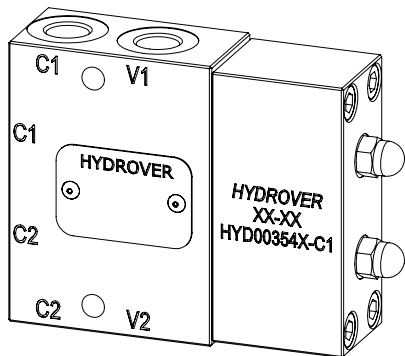
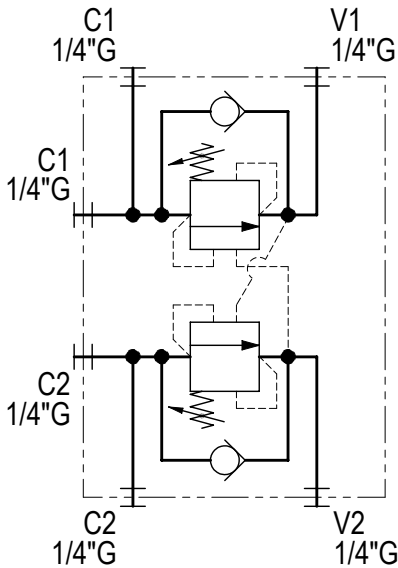


Dimensions in mm



Technical data

Max. pressure	350 bar
Max. flow	25 lpm
Weight	1,7 Kg
Manifold material	Stainless steel 316L
C1 / C2 / V1 / V2 ports	1/4" G



N°	Description	Q.ty
1	Counterbalance valve HCOM02-S3 100-350 bar 4:1 pilot ratio under cap	2
2	Ø 6,5 through hole for mounting	2

Ordering code

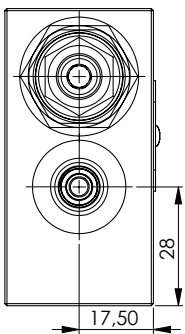
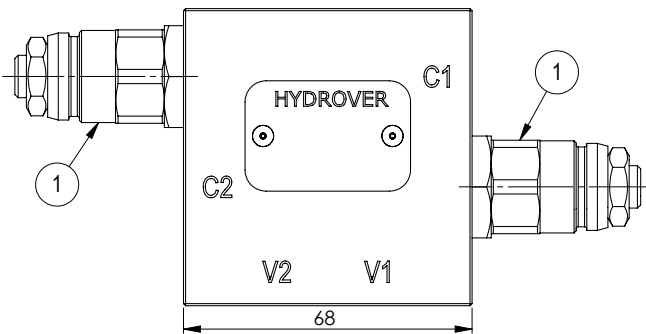
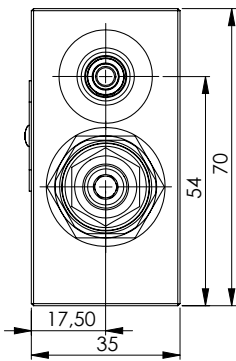
H	1	7	1	5	1	X
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Hydrover product

Manifold material  
Stainless steel 316L

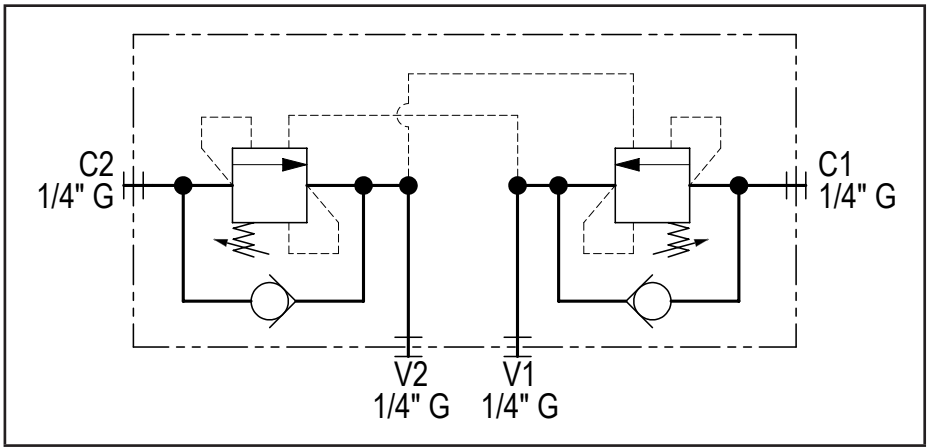
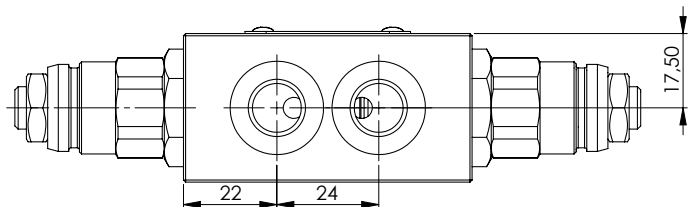
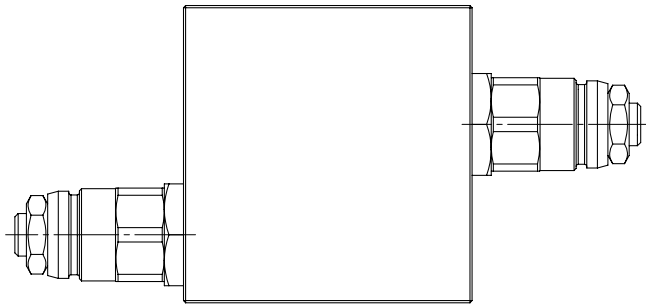
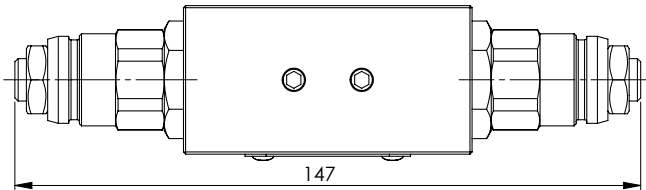
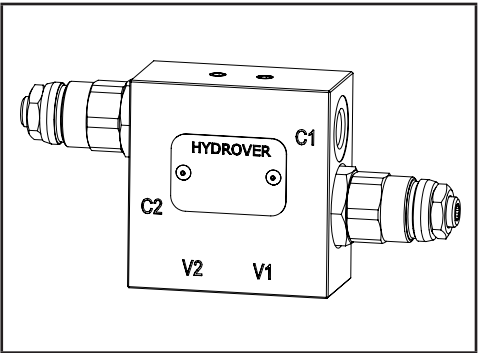
Product series  
17 series - Inline valves

Product ID



Dimensions in mm

Technical data	
Max. pressure	250 bar
Max. flow	25 lpm *
Pilot ratio	4:1
Weight	0,8 Kg
Manifold material	Aluminium
C1 / C2 / V1 / V2 ports	1/4" G



N°	Description	Q.ty
1	Bosch Rexroth counterbalance valve <b>VBSN-08AA</b> *	2

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

Ordering code

H	1	7	0	3	7	A	-		
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Hydrover product

Product series  
17 series - Inline valves

Product ID

Manifold material  
Aluminium

Counterbalance valves  
adjustment pressure range \*

2 =	100-210 bar
3 =	200-350 bar

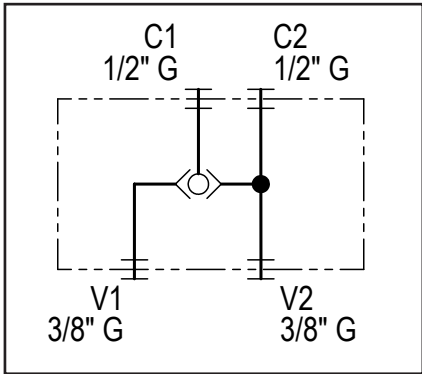
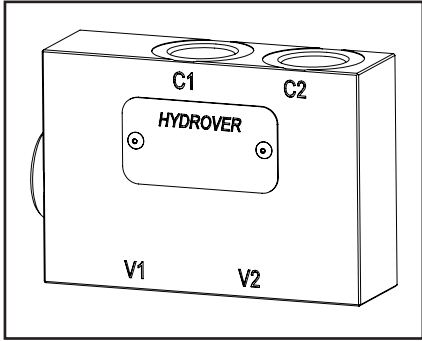
Counterbalance valves adjustment type\*

S =	Screw
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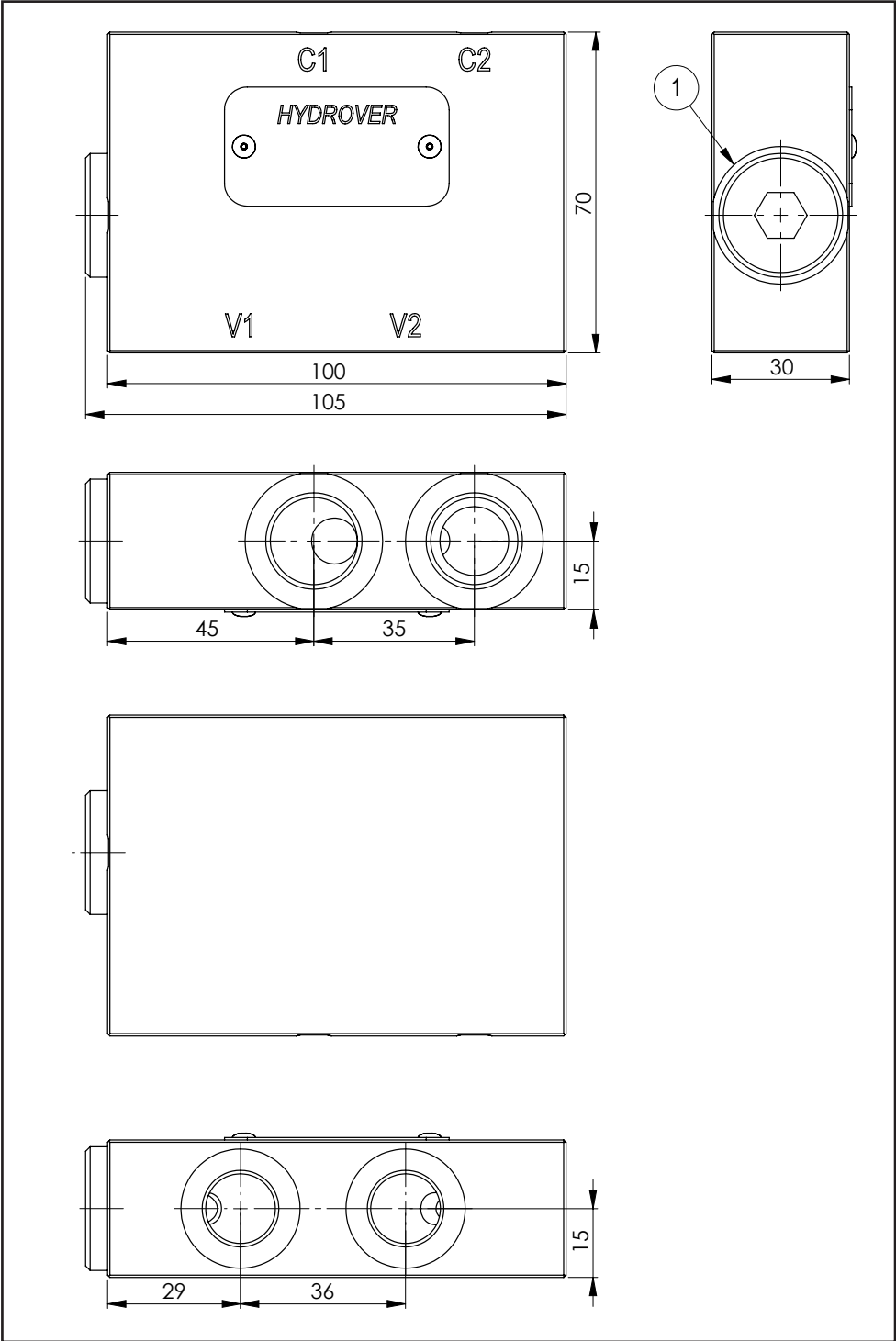
\* Omit if not required. To order the product without the counterbalance cartridge valves, omit the pressure range and the adjustment type options: H17037A.  
The manifold will still be provided with the corresponding cavities.

Inline regenerative control valve 3/8" G / 1/2" G **H17073**

Technical data	
Max. pressure	350 bar
Max. flow input	25 lpm
Max. flow regenerated	50 lpm
Weight	1,4 Kg
Manifold material	Steel
V1 / V2 / T ports	3/8" G
C1 / C2 / T ports	1/2" G



N°	Description	Q.ty
1	Shuttle valve under 1/2" G plug	1





Ordering code

H	1	7	0	7	3	S
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Hydrover product

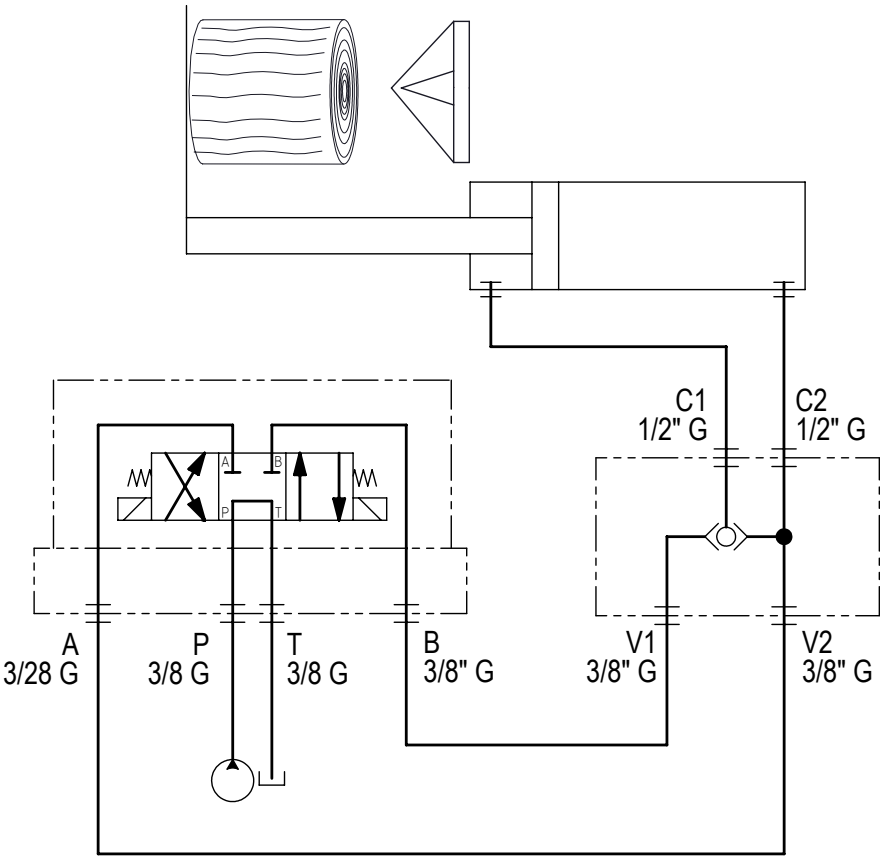
Manifold material  
Steel

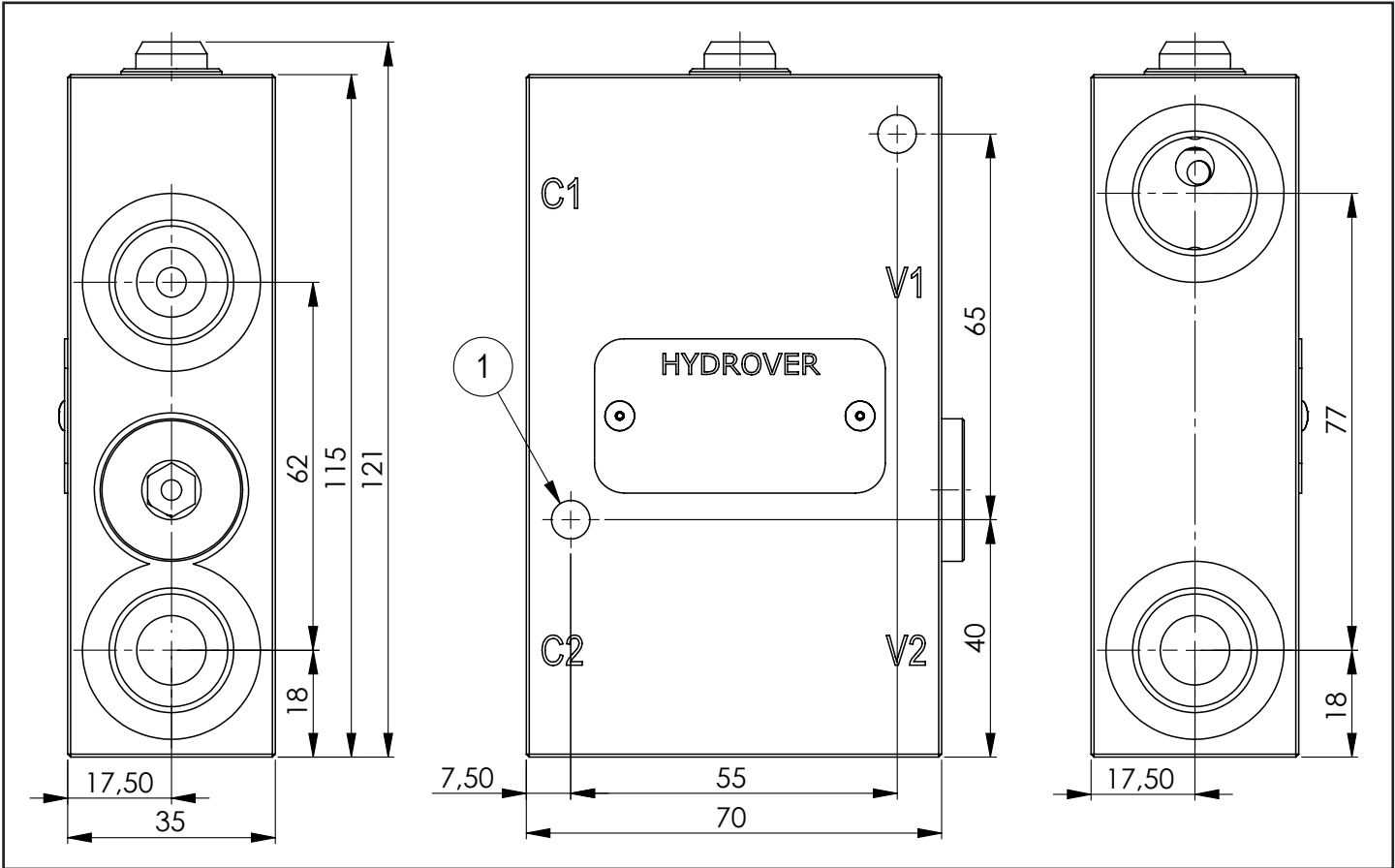
Product series  
17 series - Inline valves

Product ID

Hydraulic schematic example for pull horizontal log splitter

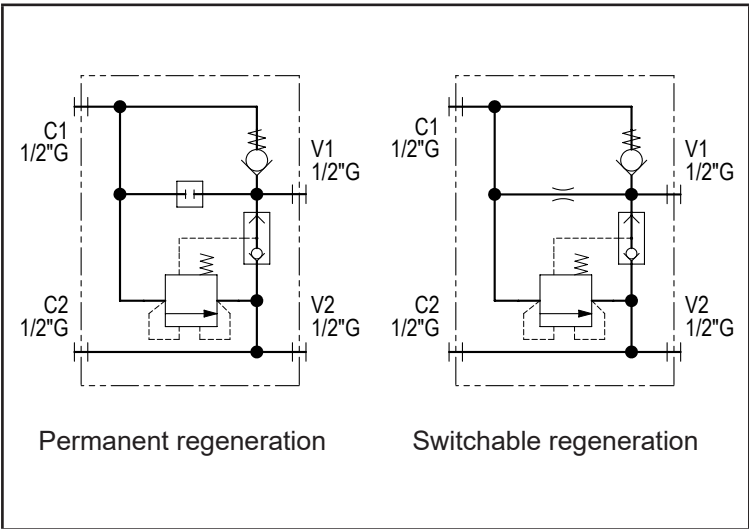
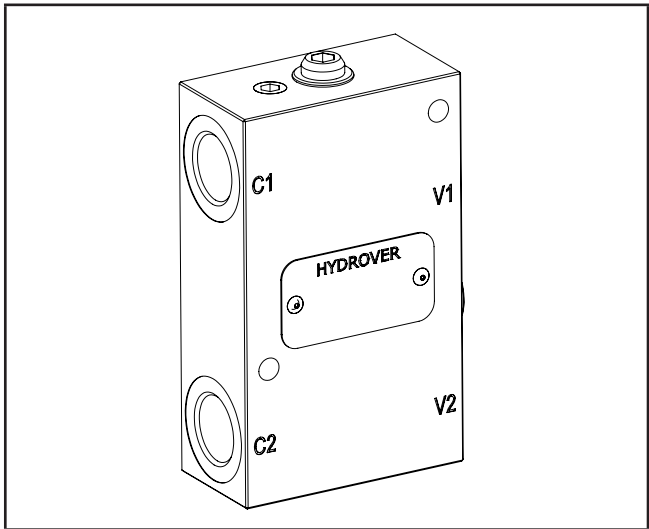
↶ Regenerative (high speed)





Technical data	
Max. pressure	250 bar
Max. flow pump	30 lpm
Max. flow regenerated oil	About 90 lpm
Weight	0,9 Kg
Manifold material	Aluminium
C1 / C2 / V1 / V2 ports	1/2" G

N°	Description	Q.ty
1	Ø 6,5 through hole for mounting	2



Ordering code

H	1	7	0	9	5	A	-		
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### Hydrover product

## Product series

## 17 series - Inline valves

**Product ID**

## Manifold material

## Aluminium

### Regeneration type

$$RP =$$

### Permanent regeneration

RE =

### Switchable regeneration

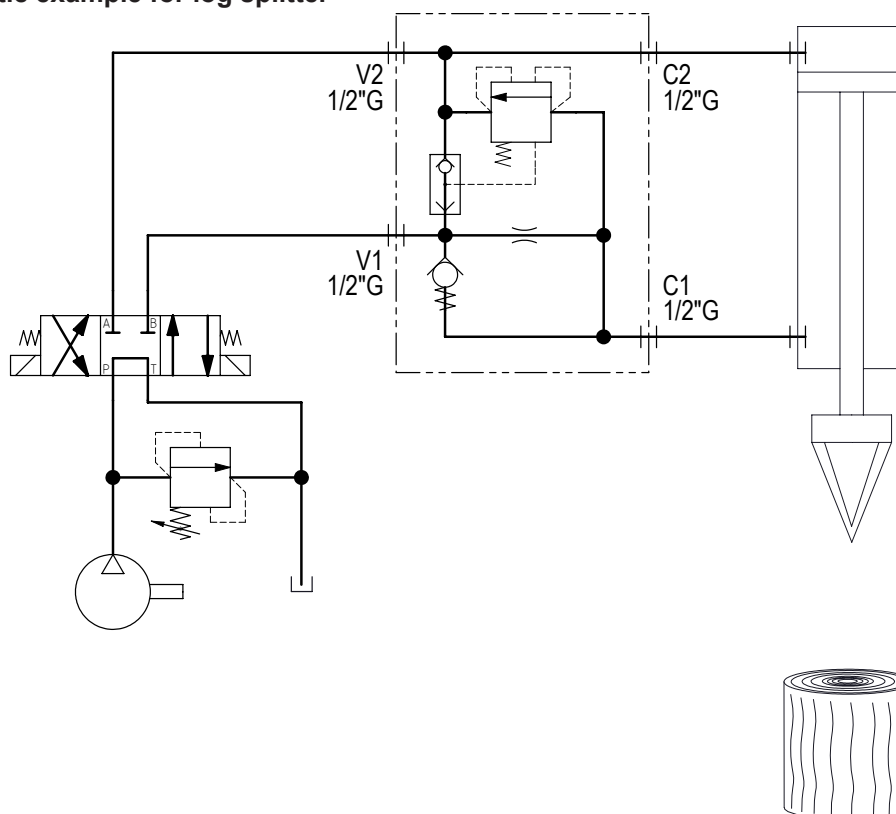
**Note:**

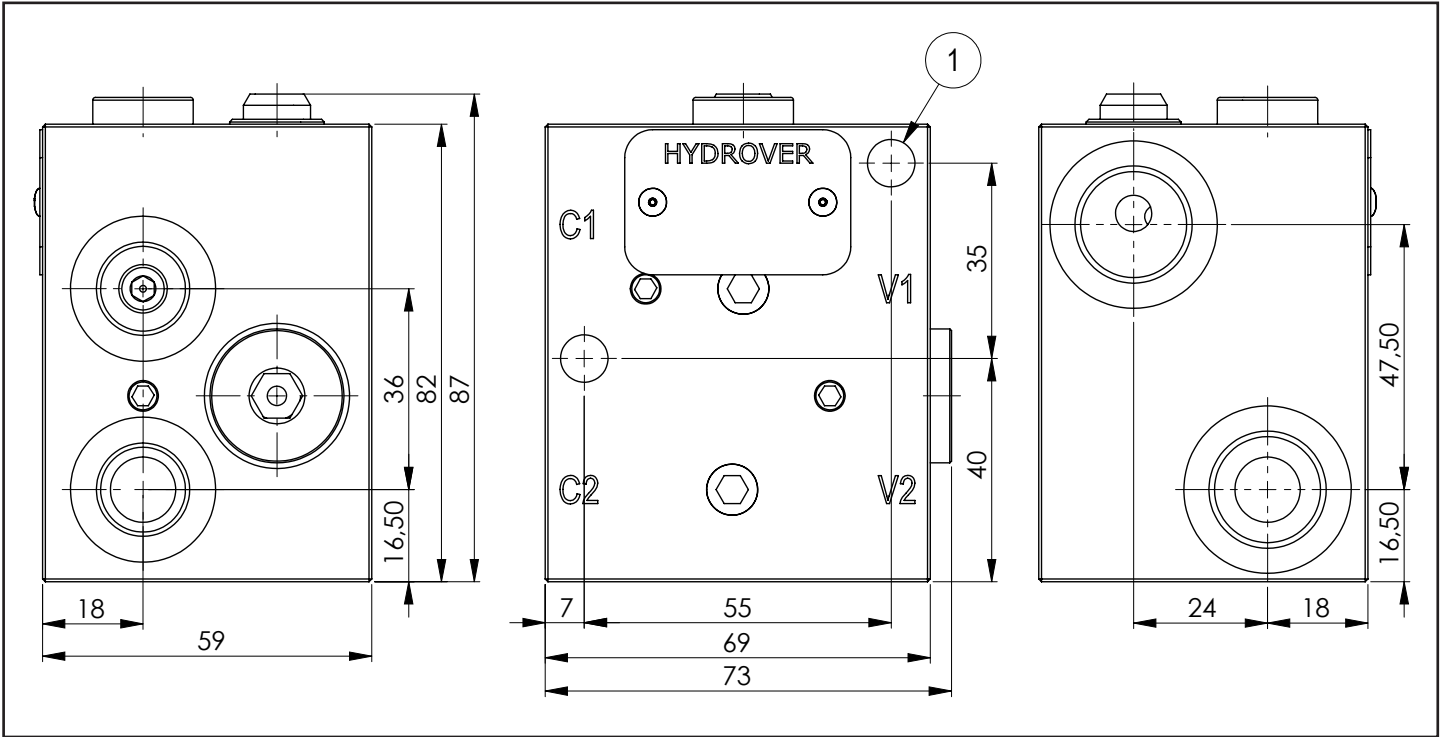
The regenerative system increases the speed but reduces the strength of the cylinder, since the oil pressure is only exerted on the rod section.

With the permanent regeneration, if the strength is insufficient, the movement will stop. With the switchable regeneration the orifice leakage will allow the piston rod chamber to relieve the pressure and then the oil pressure will be exercised on the full section of the cylinder.

Before opting for the switchable regeneration, it is recommended to check whether this increase in strength can be sustained by the machine facilities.

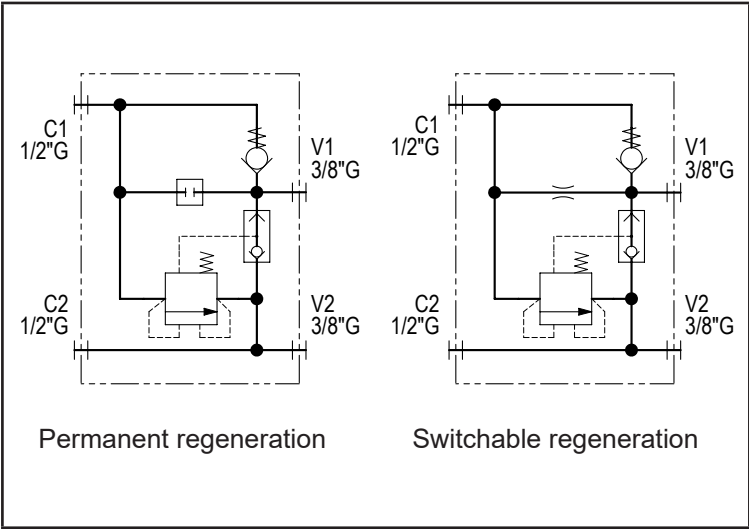
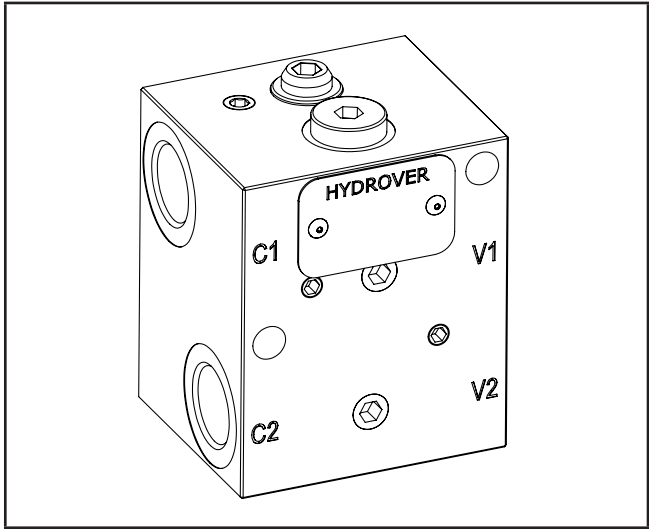
### Hydraulic schematic example for log splitter





Technical data	
Max. pressure	250 bar
Max. flow pump	30 lpm
Max. flow regenerated oil	About 90 lpm
Weight	1 Kg
Manifold material	Aluminium
V1 / V2 ports	3/8" G
C1 / C2 ports	1/2" G

N°	Description	Q.ty
1	Ø 8,5 through hole for mounting	2



Ordering code

H	1	7	0	9	6	A	-	-	-
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Hydrover product

Product series  
17 series - Inline valves

Product ID

Manifold material  
Aluminium

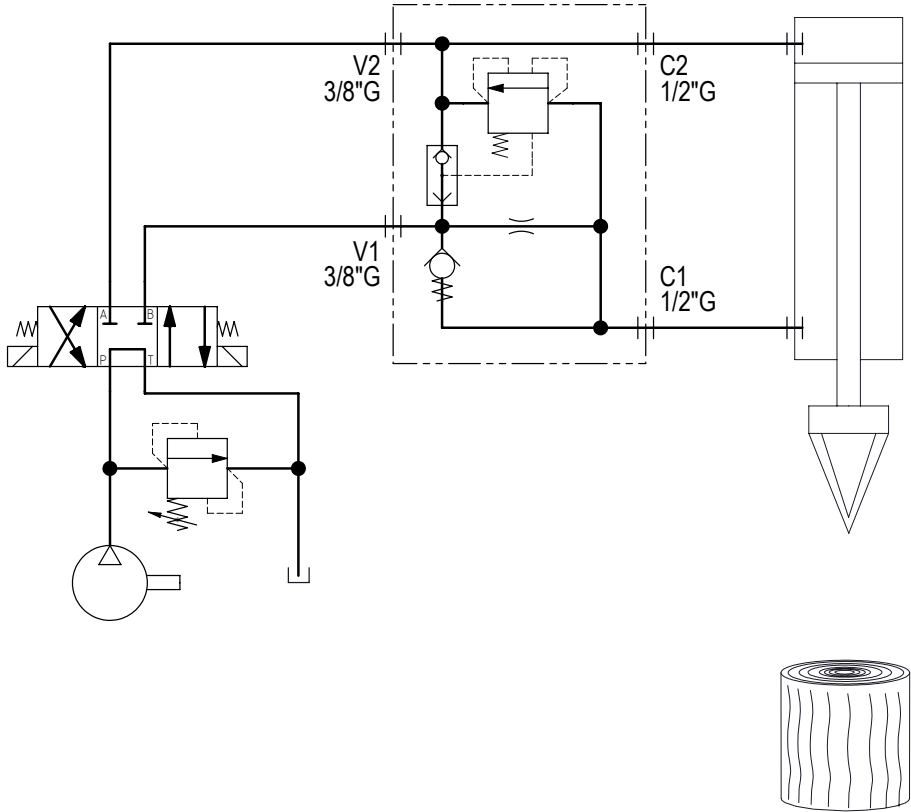
Regeneration type

RP = Permanent regeneration

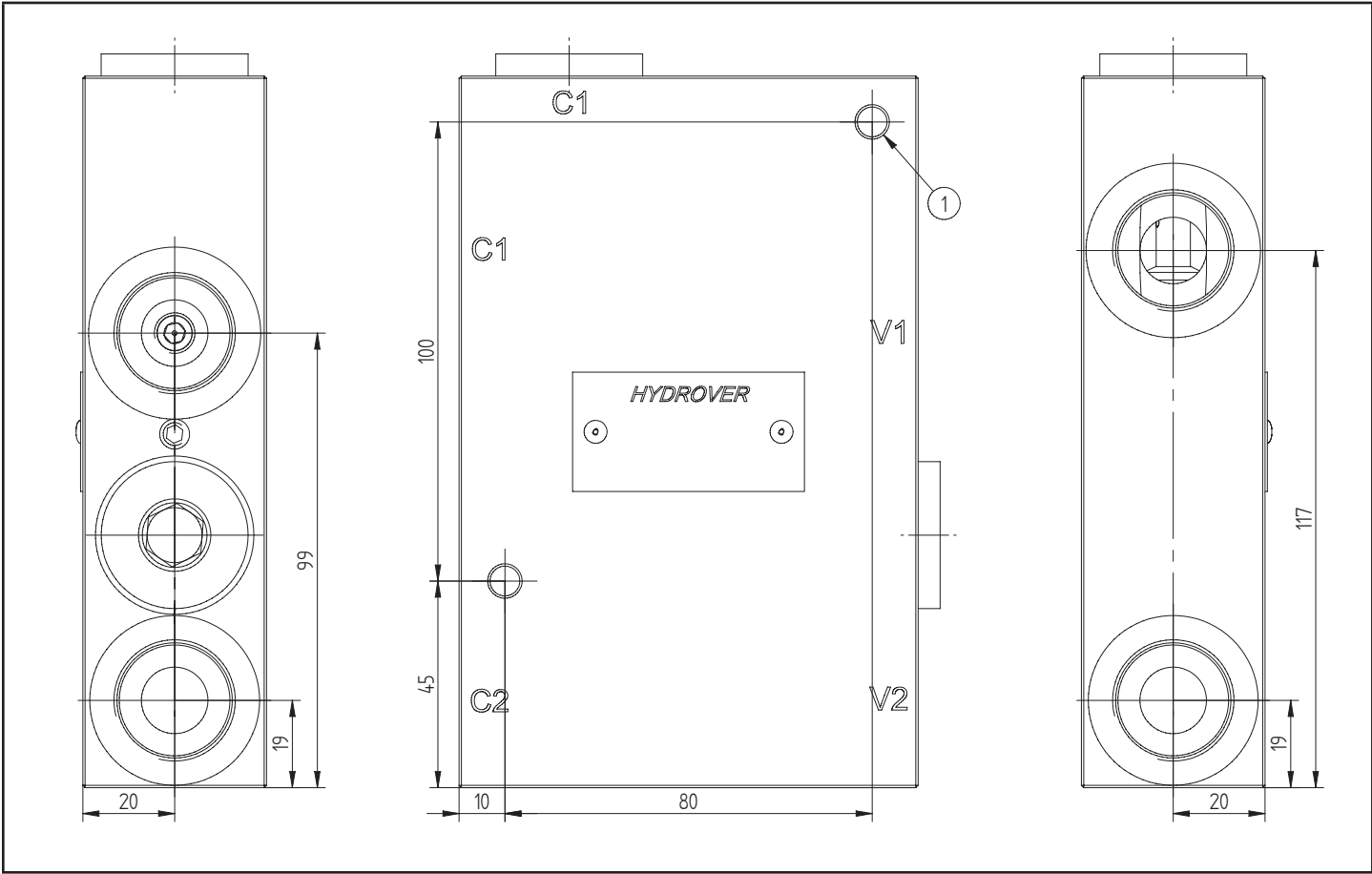
RE = Switchable regeneration

**Note:**  
The regenerative system increases the speed but reduces the strength of the cylinder, since the oil pressure is only exerted on the rod section.  
With the permanent regeneration, if the strength is insufficient, the movement will stop. With the switchable regeneration the orifice leakage will allow the piston rod chamber to relieve the pressure and then the oil pressure will be exercised on the full section of the cylinder.  
Before opting for the switchable regeneration, it is recommended to check whether this increase in strength can be sustained by the machine facilities.

Hydraulic schematic example for log splitter

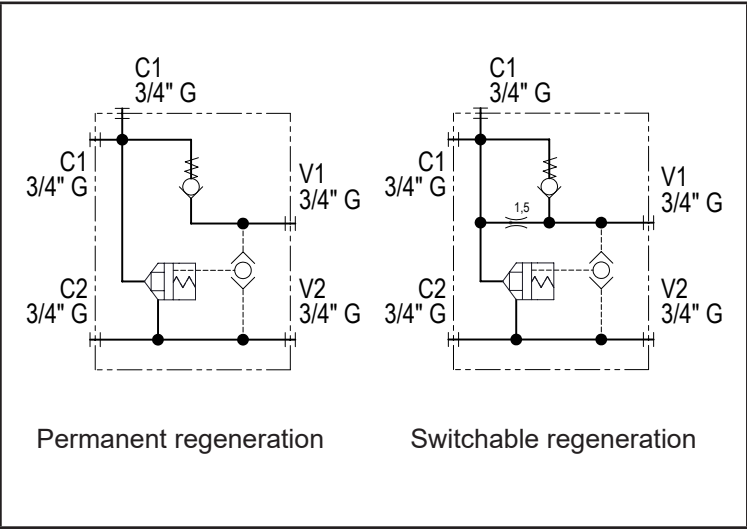
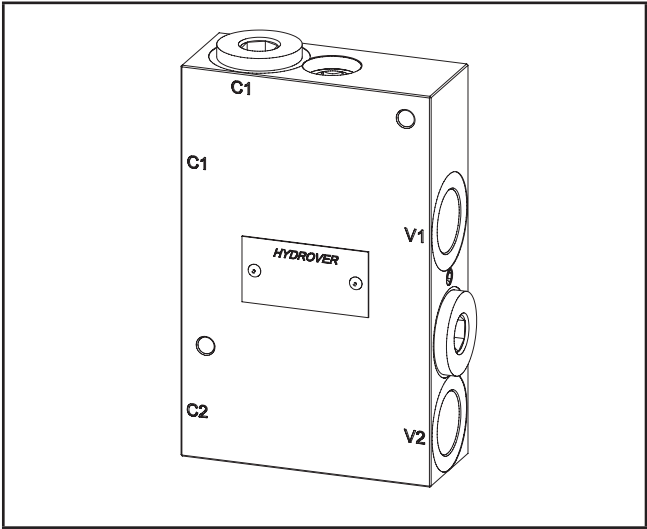


Inline permanent or switchable regenerative control valve 3/4" G **H17009**



Technical data	
Max. pressure	350 bar
Max. flow pump	80 lpm
Max. flow regenerated oil	About 150 lpm
Weight	4,1 Kg
Manifold material	Steel
C1 / C2 / V1 / V2 ports	3/4" G

N°	Description	Q.ty
1	Ø 6,5 through hole for mounting	2



Ordering code

H	1	7	0	0	9	S	-	_	_
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Hydrover product

Product series  
17 series - Inline valves

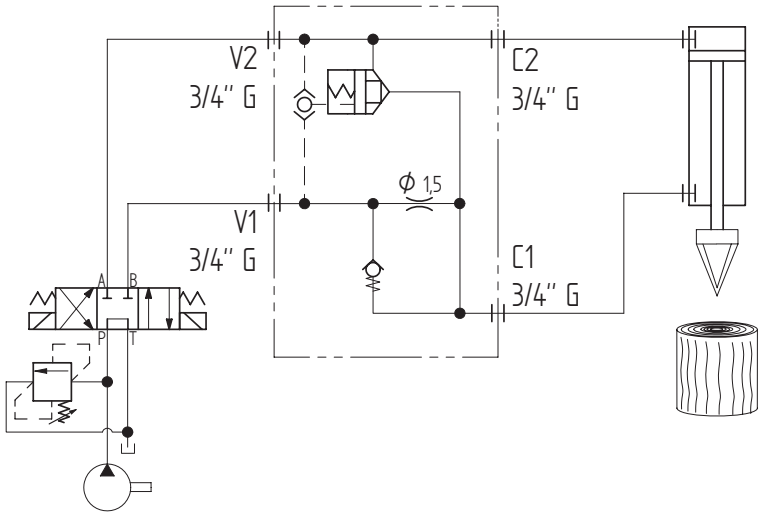
Product ID

Manifold material  
Steel

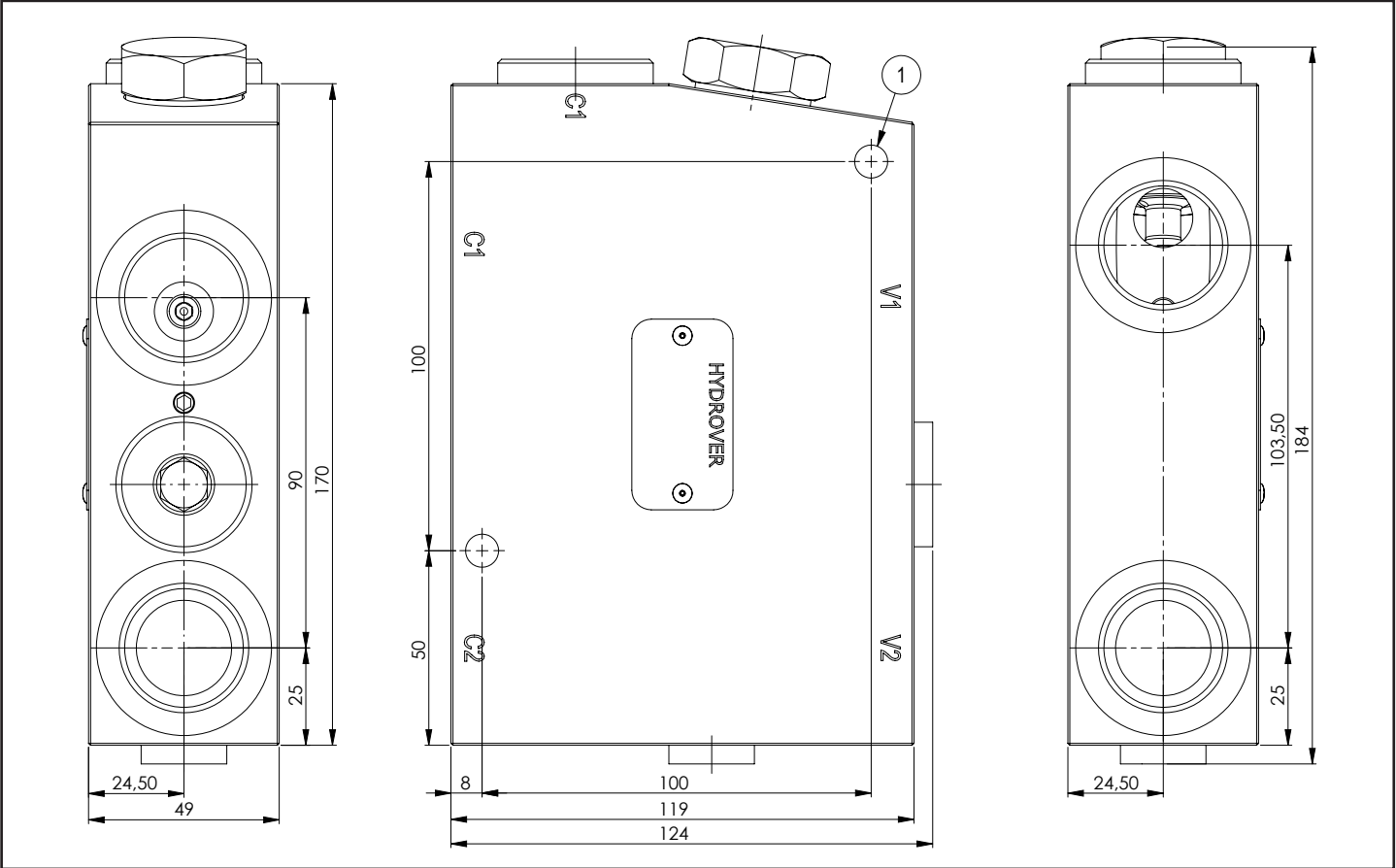
Regeneration type  
RP = Permanent regeneration  
RE = Switchable regeneration

**Note:**  
The regenerative system increases the speed but reduces the strength of the cylinder, since the oil pressure is only exerted on the rod section.  
With the permanent regeneration, if the strength is insufficient, the movement will stop. With the switchable regeneration the orifice leakage will allow the piston rod chamber to relieve the pressure and then the oil pressure will be exercised on the full section of the cylinder.  
Before opting for the switchable regeneration, it is recommended to check whether this increase in strength can be sustained by the machine facilities.

Hydraulic schematic example for log splitter



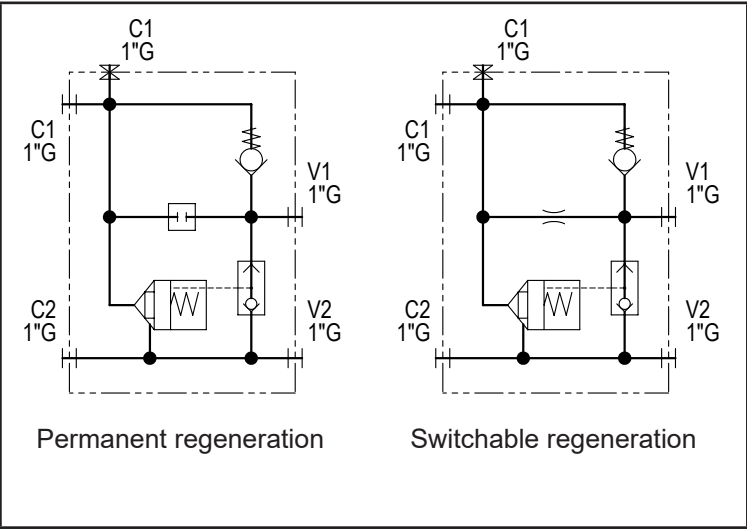
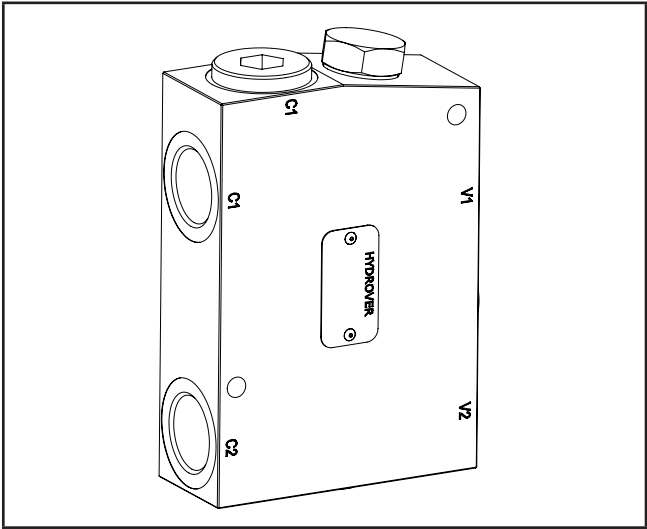
Inline permanent or switchable regenerative control valve 1" G **H17075**



Dimensions in mm

Technical data	
Max. pressure	250 bar
Max. flow pump	120 lpm
Max. flow regenerated oil	About 200 lpm
Weight	5,8 Kg
Manifold material	Steel
C1 / C2 / V1 / V2 ports	1" G

N°	Description	Q.ty
1	Ø 8,5 through hole for mounting	2





Ordering code

H	1	7	0	7	5	S	-		
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### Hydrover product

## Product series

## 17 series - Inline valves

**Product ID**

## Manifold material

## Aluminium

### Regeneration type

RP =

### Permanent regeneration

RE =

### Switchable regeneration

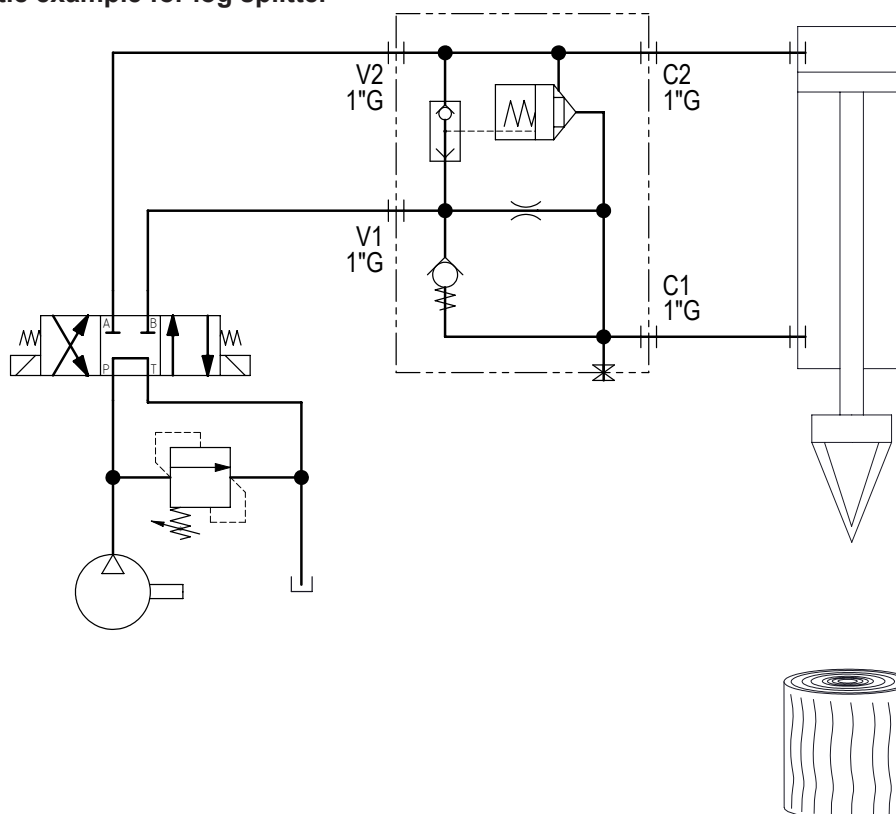
**Note:**

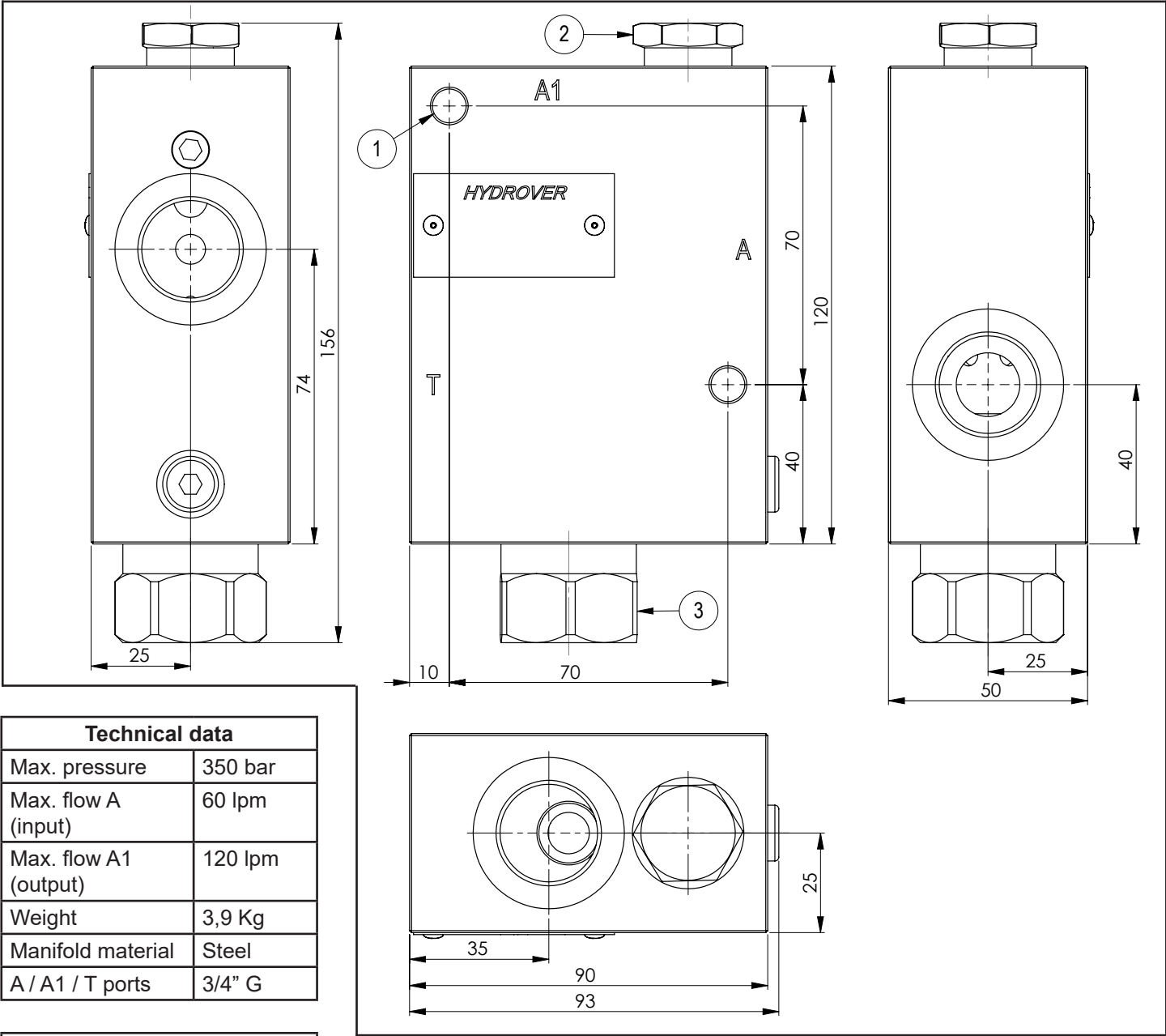
The regenerative system increases the speed but reduces the strength of the cylinder, since the oil pressure is only exerted on the rod section.

With the permanent regeneration, if the strength is insufficient, the movement will stop. With the switchable regeneration the orifice leakage will allow the piston rod chamber to relieve the pressure and then the oil pressure will be exercised on the full section of the cylinder.

Before opting for the switchable regeneration, it is recommended to check whether this increase in strength can be sustained by the machine facilities.

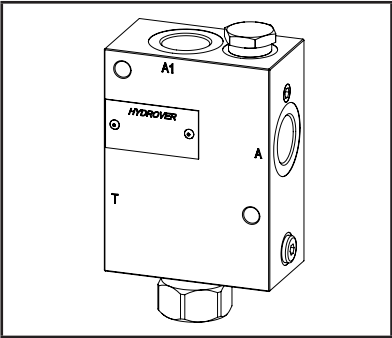
### Hydraulic schematic example for log splitter



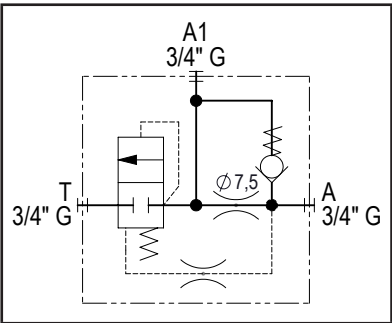


Dimensions in mm

Technical data	
Max. pressure	350 bar
Max. flow A (input)	60 lpm
Max. flow A1 (output)	120 lpm
Weight	3,9 Kg
Manifold material	Steel
A / A1 / T ports	3/4" G



N°	Description	Q.ty
1	Ø 8,5 through hole for mounting	2
2	Bosch Rexroth check valve	1
3	Pressure compensator	1



## Ordering code

H	1	7	0	2	4	S	-	D	7	5
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Hydrover product

Orifice diameter A-A1  
7,5 - Customized on request

Product series

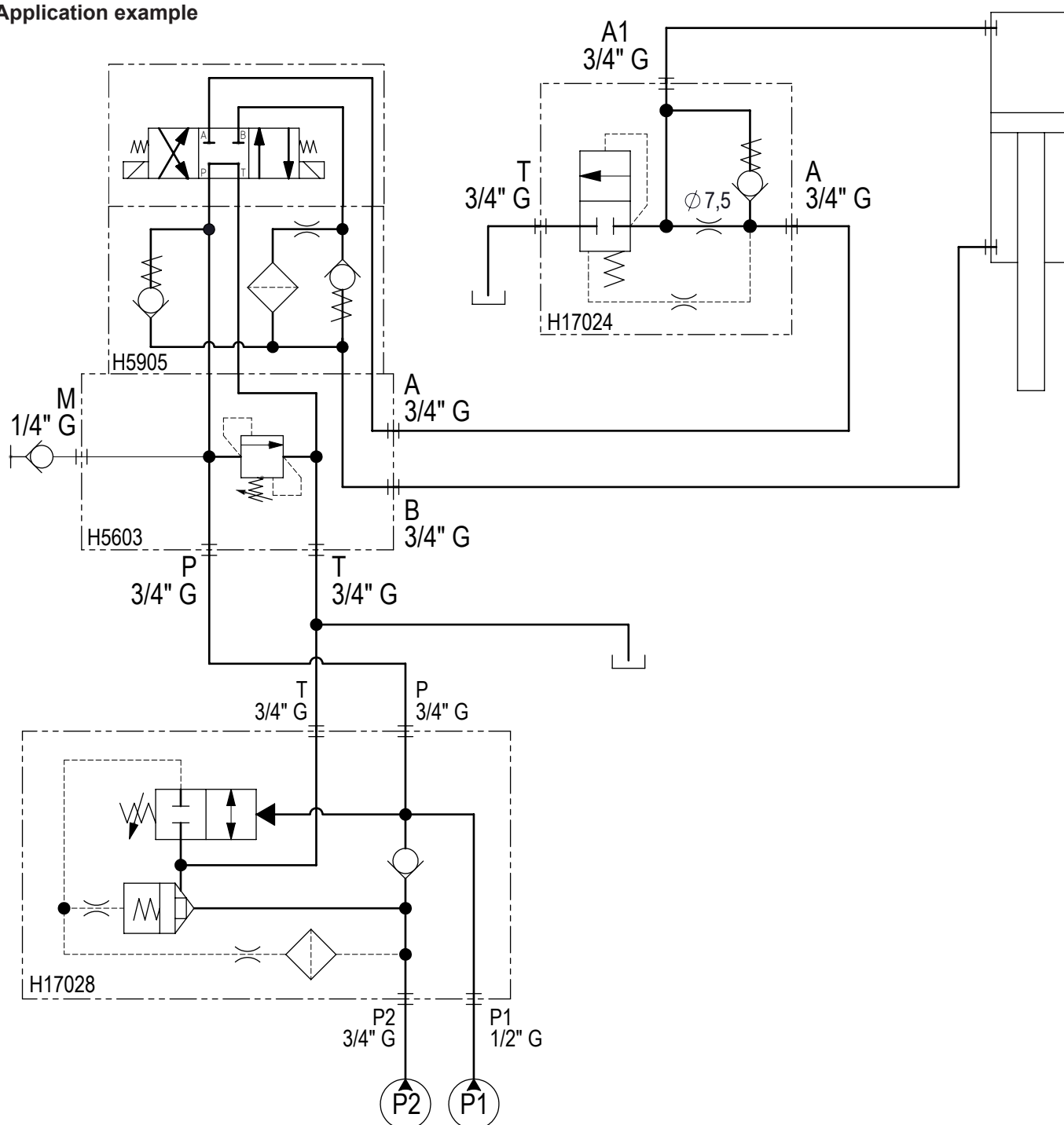
17 series - Inline valves

Manifold material

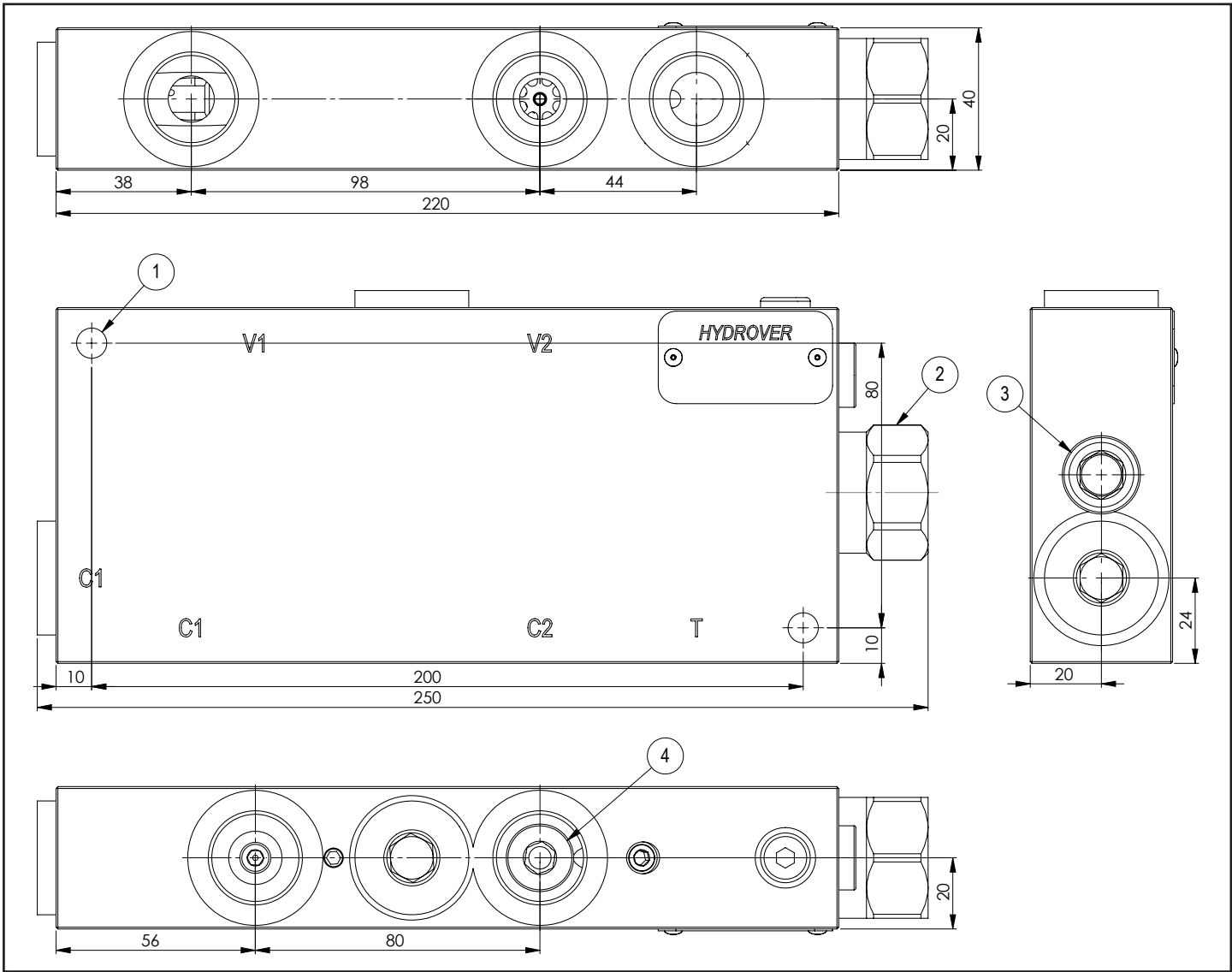
Steel

Product ID

## Application example



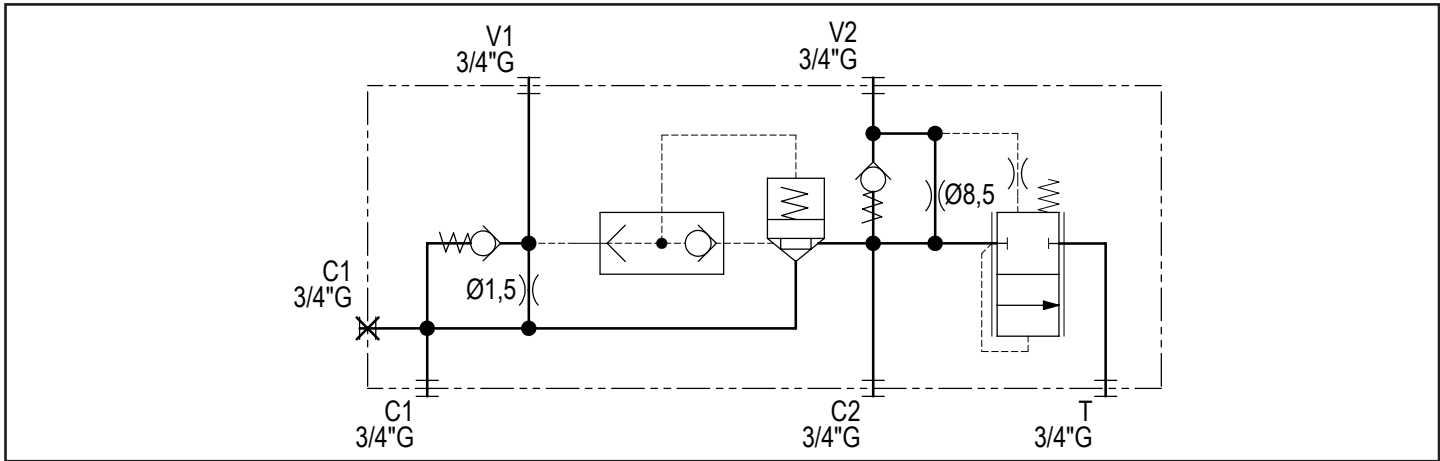
Regenerative and quick unloading inline valve H17062



Dimensions in mm

Technical data	
Max. pressure	350 bar
Max. flow input - regenerated	80 lpm - 150 lpm
Max. flow output	170 lpm
Weight	6 Kg
Manifold material	Steel
C1 / C2 / V1 / V2 / T ports	3/4" G

N°	Description	Q.ty
1	Ø 8,5 through hole for mounting	2
2	Pressure compensator	1
3	Bosch Rexroth check valve <b>VUM1.060</b>	1
4	Bosch Rexroth check valve <b>VUB1-12</b>	1



Ordering code

H	1	7	0	6	2	S
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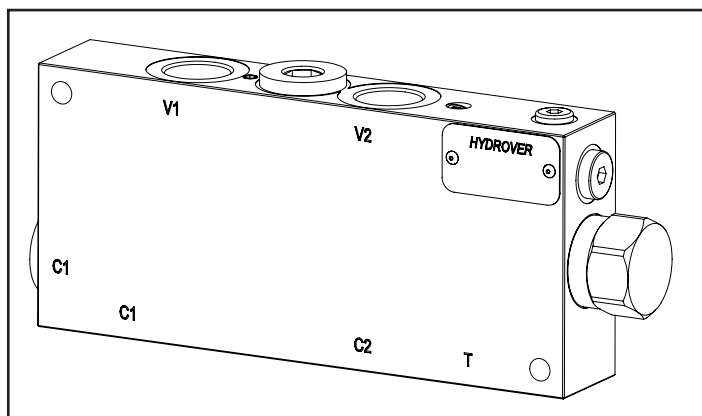
### Hydrover product

**Manifold material**  
Steel

## Product series

17 series - Inline valves

Product ID



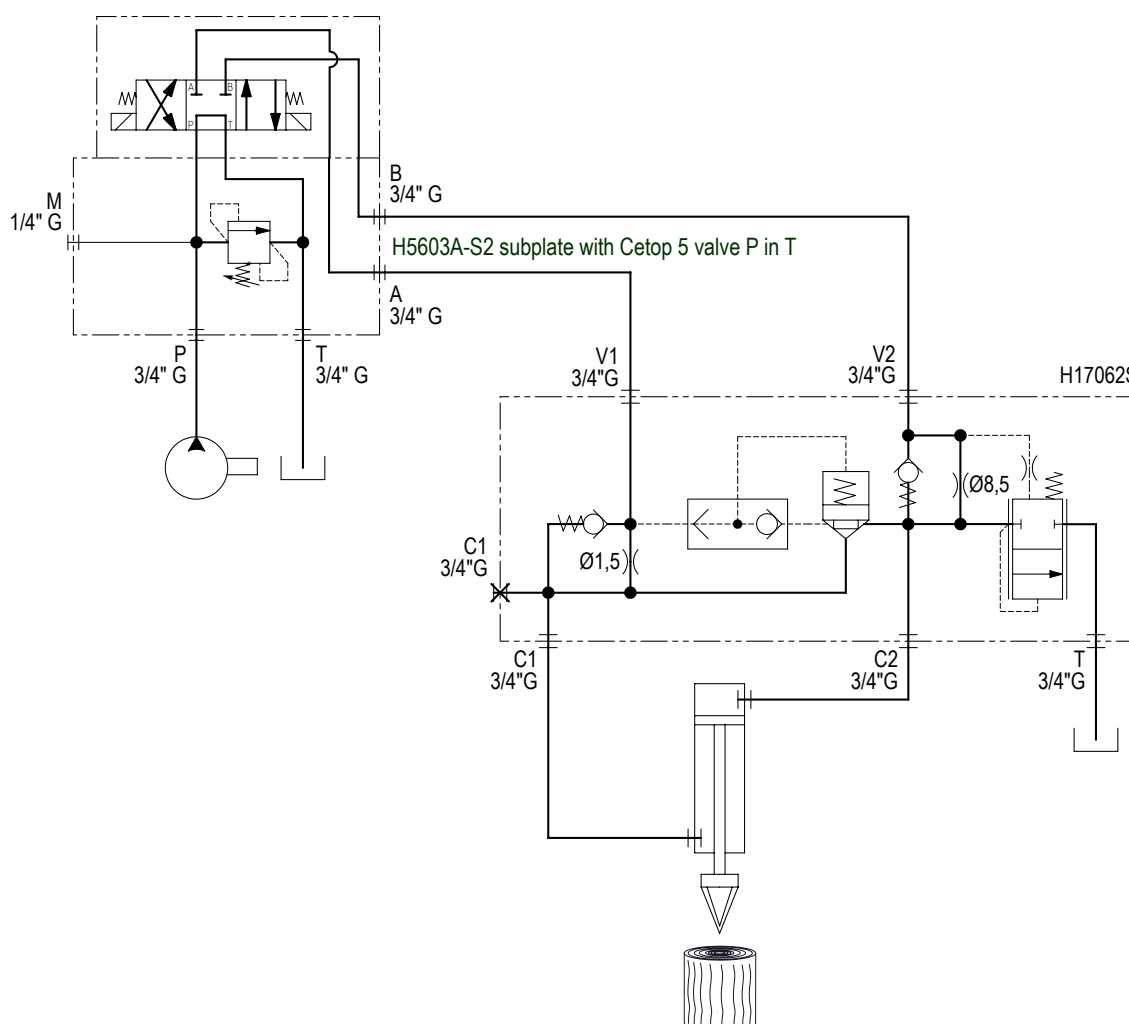
**Note:**

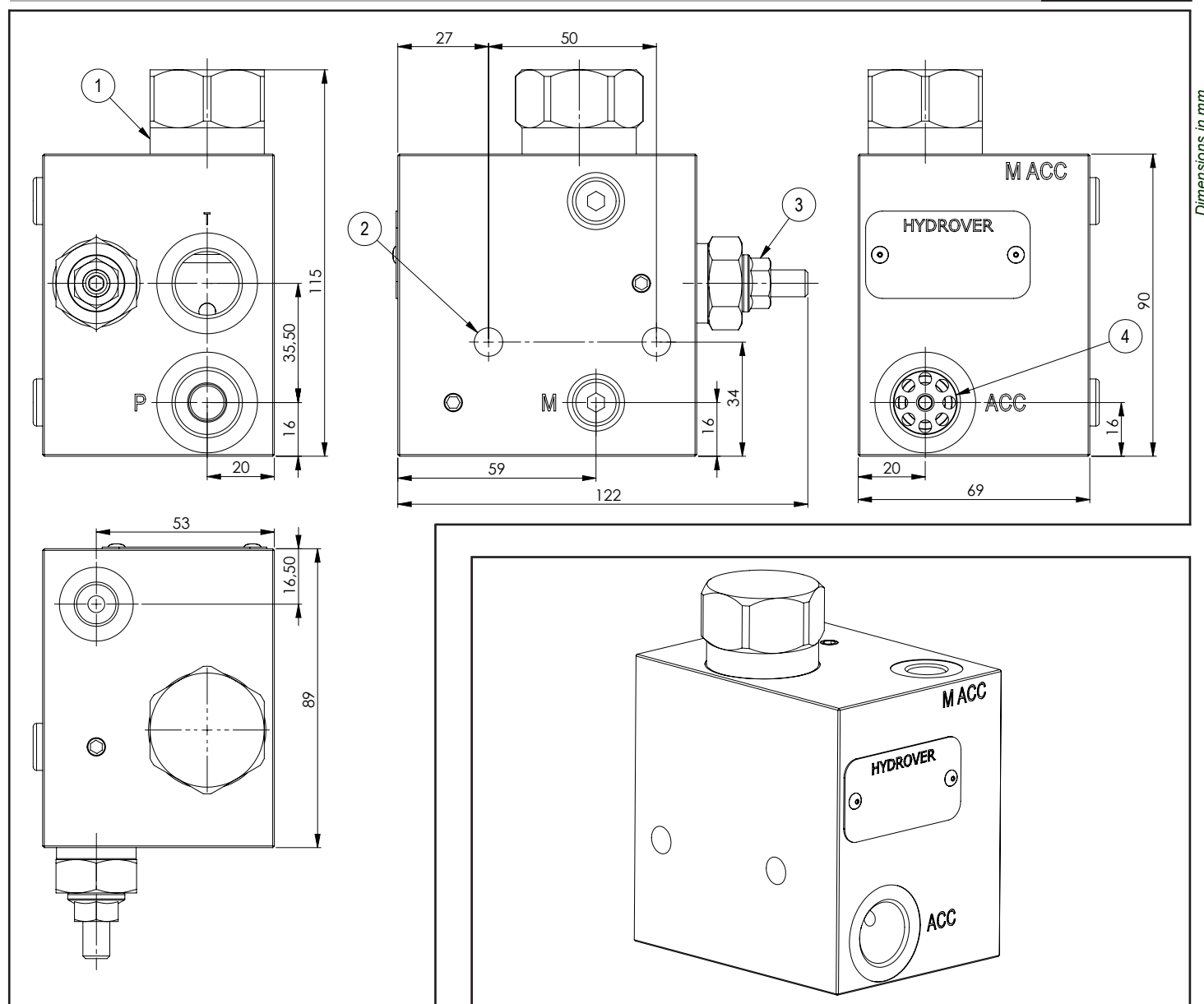
From the cylinder cap the output flow is major than the input.

For example if the input is 80 lpm and the area cylinder ratio is 1:2, the output flow will be 160 lpm.

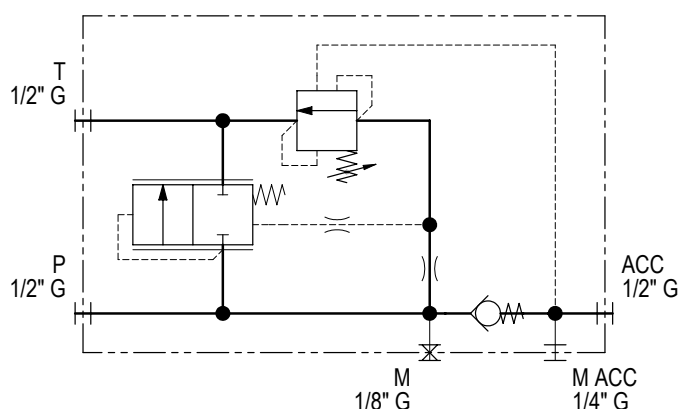
The quick unloading function from the H17062S allows you to dispose of 90 lpm in addition to those unloaded by the directional valve, for a maximum total flow rate of 170 lpm.

### Hydraulic scheme example for log splitter



Unloading inline valve for accumulator **H17093**

**Technical data**

Max. pressure	250 bar
Max. flow	60 lpm
Weight	1,8 Kg
Manifold material	Aluminium
M port	1/8" G
M ACC port	1/4" G
P / T / ACC ports	1/2" G



N°	Description	Q.ty
1	Logic element	1
2	Ø 8,5 through hole for mounting	2
3	Bosch Rexroth priority unloading pilot operated valve <b>VMSN-08A</b> *	1
4	Check valve	1

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

Ordering code

H	1	7	0	9	3	A	-	-	-	-
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Hydrover product

Product series  
17 series - Inline valves

Product ID

Manifold material  
Aluminium

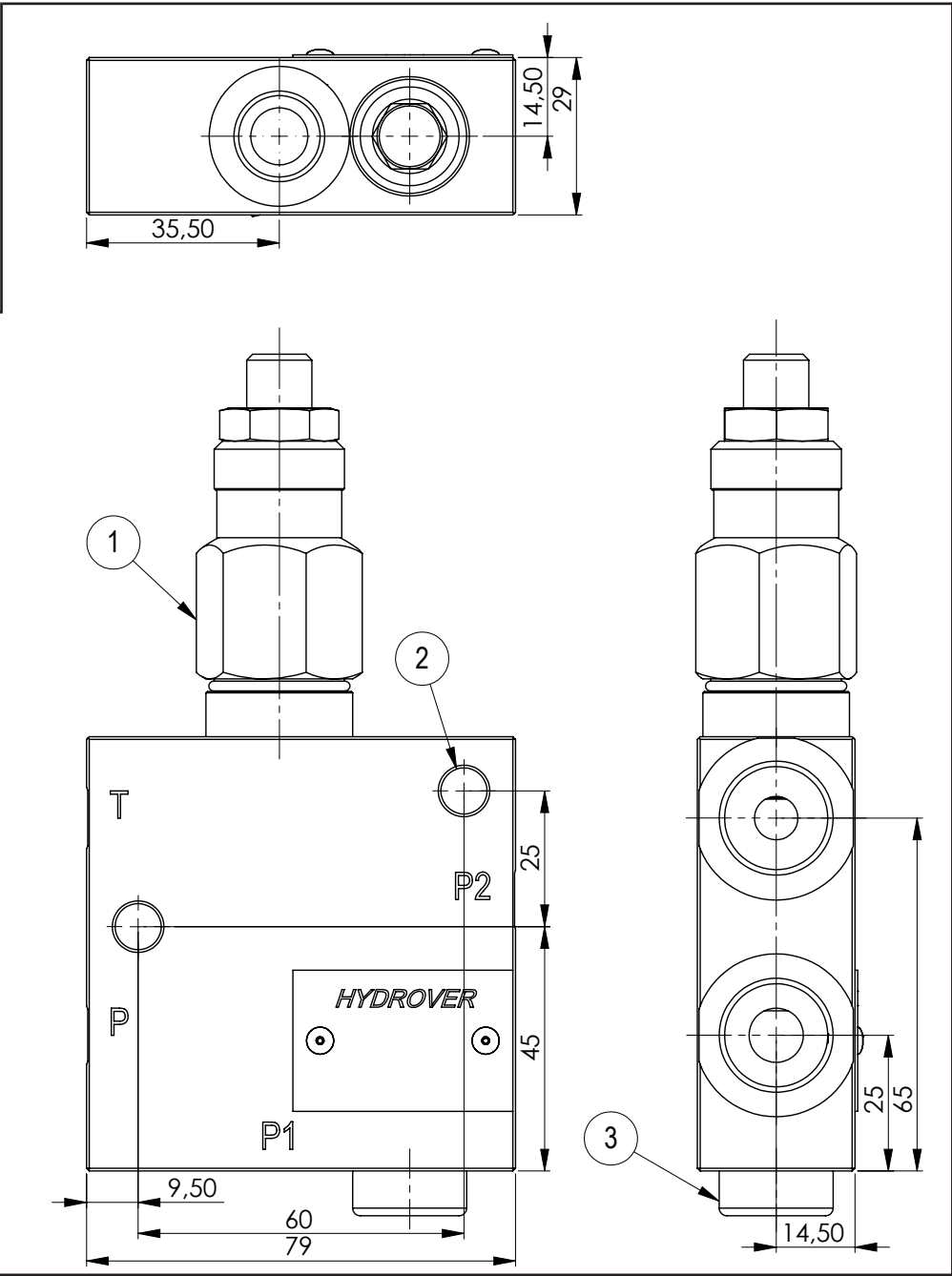
Priority unloading valve adjustment type  
Screw

= S

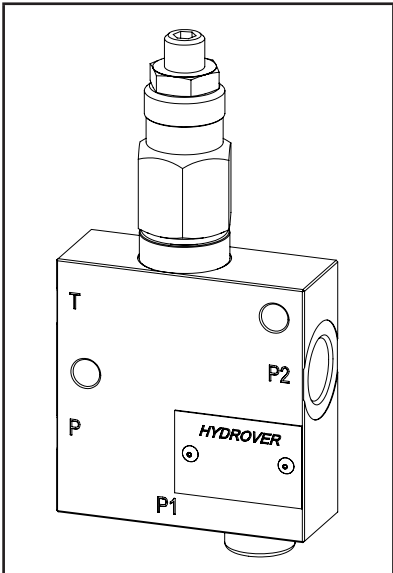
Differential unload / reload  
unloading valve  
setting re-seat  
6 = 66 ± 2,5%  
8 = 80 ± 2,5%

Priority unloading valve  
pressure range \*  
03 \* = 20-40 bar  
05 \* = 35-70 bar  
10 \* = 70-140 bar  
20 = 105-210 bar  
35 = 175-350 bar  
\* Only with 6 differential unload / reload

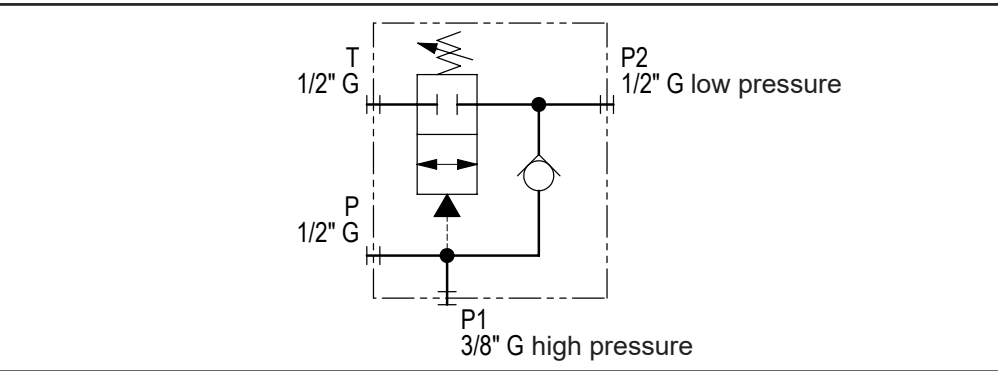
Technical data	
Max. pressure	350 bar
Max. flow	40 lpm
Weight	1,1 Kg
Manifold material	Steel
P1 port	3/8" G
P / P2 / T ports	1/2" G



Dimensions in mm



N°	Description	Q.ty
1	Directional valve normally closed	1
2	Ø 8,5 through hole for mounting	2
3	Bosch Rexroth check valve <b>VUM1.060</b>	1





Ordering code

H	1	7	0	2	7	S	-		
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Hydrover product

Product series  
17 series - Inline valves

Product ID

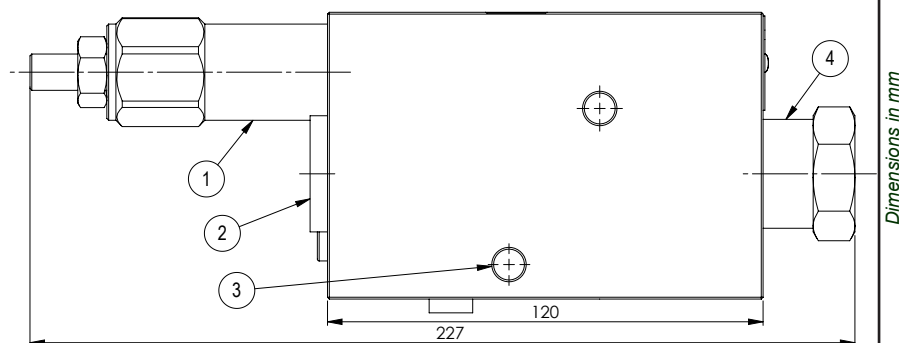
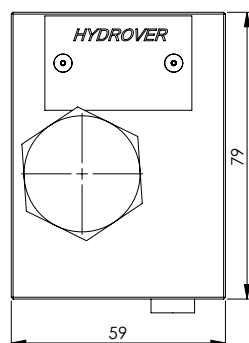
Manifold material  
Steel

Directional valve  
pressure range \*

1 =	5-35 bar
2 =	14-70 bar
3 =	35-105 bar
4 =	70-210 bar

Directional valve adjustment type \*

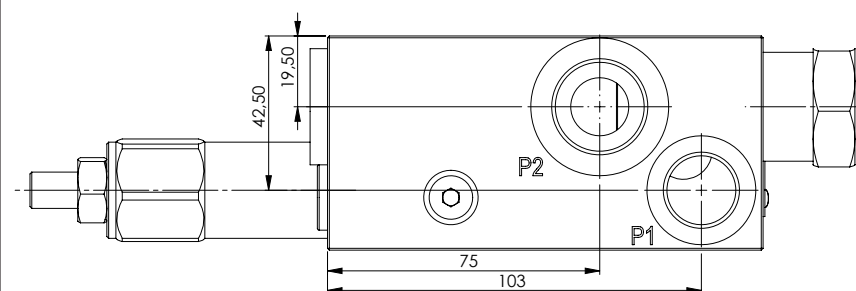
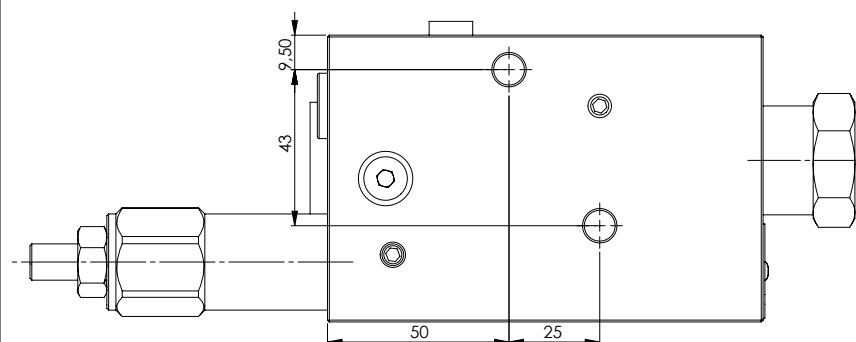
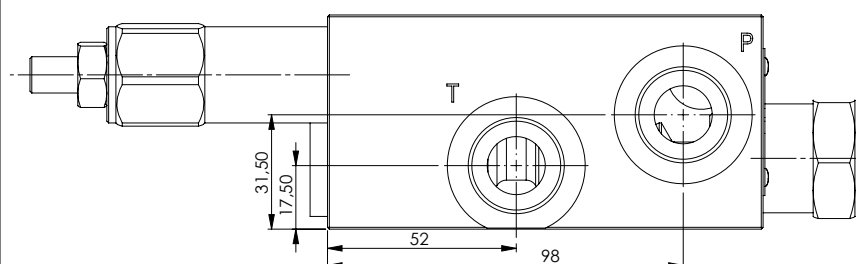
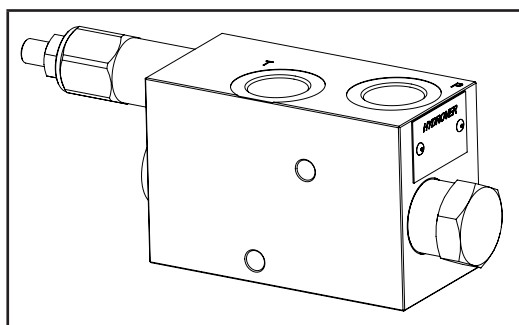
S =	Screw
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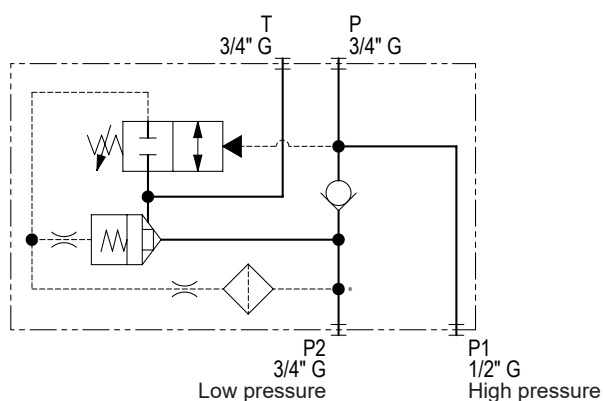
Dimensions in mm

**Technical data**

Max. pressure	350 bar
Max. flow	150 lpm
Weight	4 Kg
Manifold material	Steel
P1 port	1/2" G
P / P2 / T ports	3/4" G



N°	Description	Q.ty
1	Directional valve normally closed 20-180 bar	1
2	Hydrover logic element	1
3	Ø 8,5 through hole for mounting	2
4	Bosch Rexroth check valve	1



Ordering code

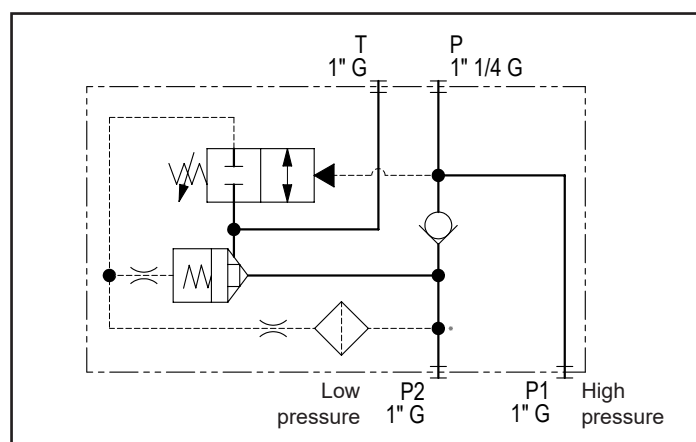
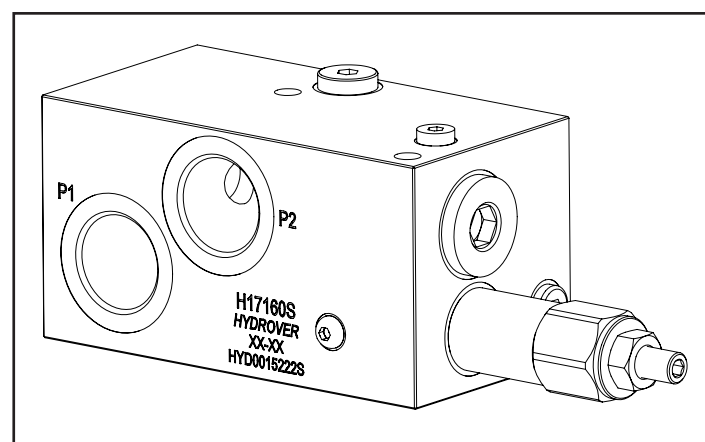
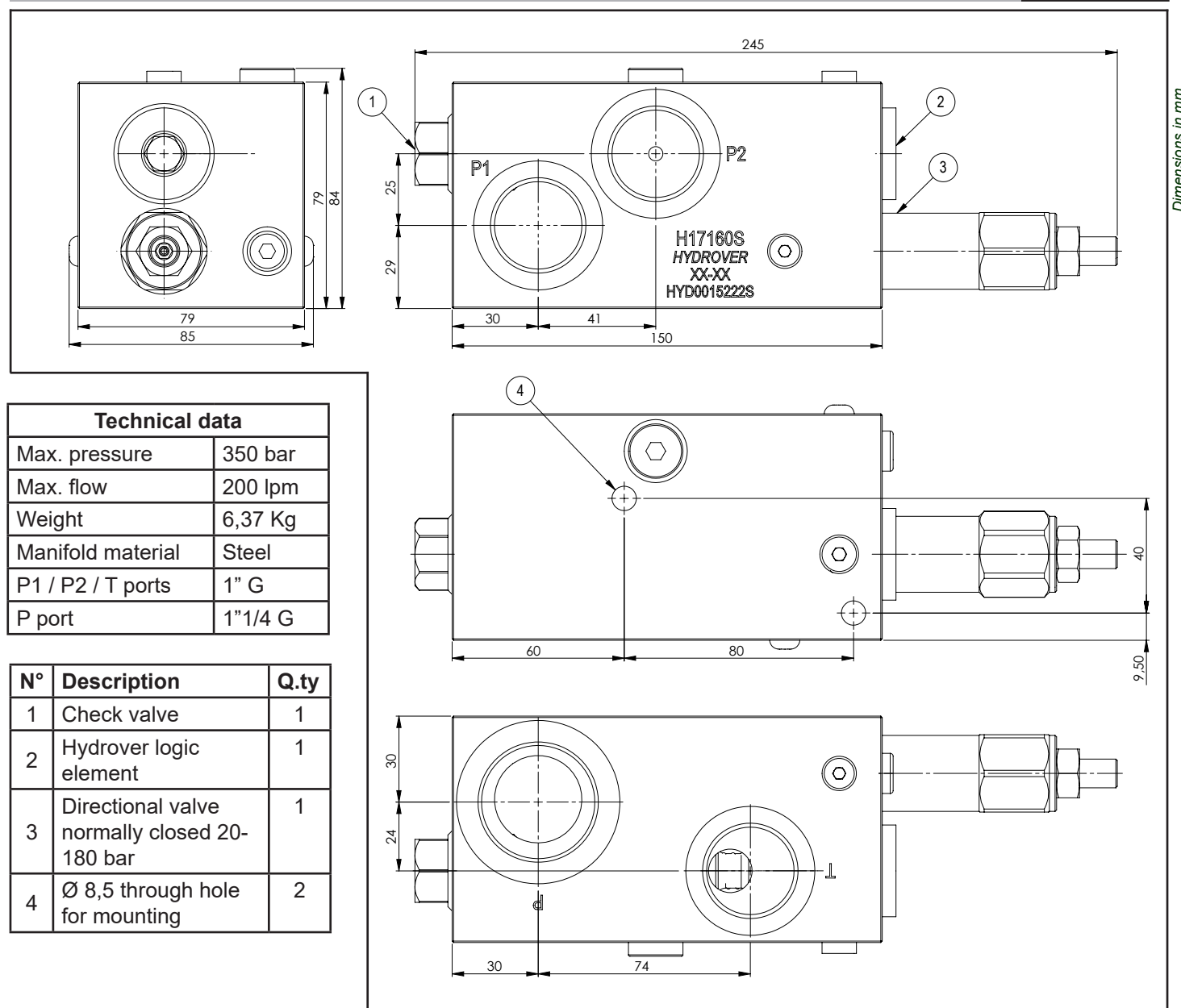
H	1	7	0	2	8	S
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Hydrover product

Manifold material  
Steel

Product series  
17 series - Inline valves

Product ID



Ordering code

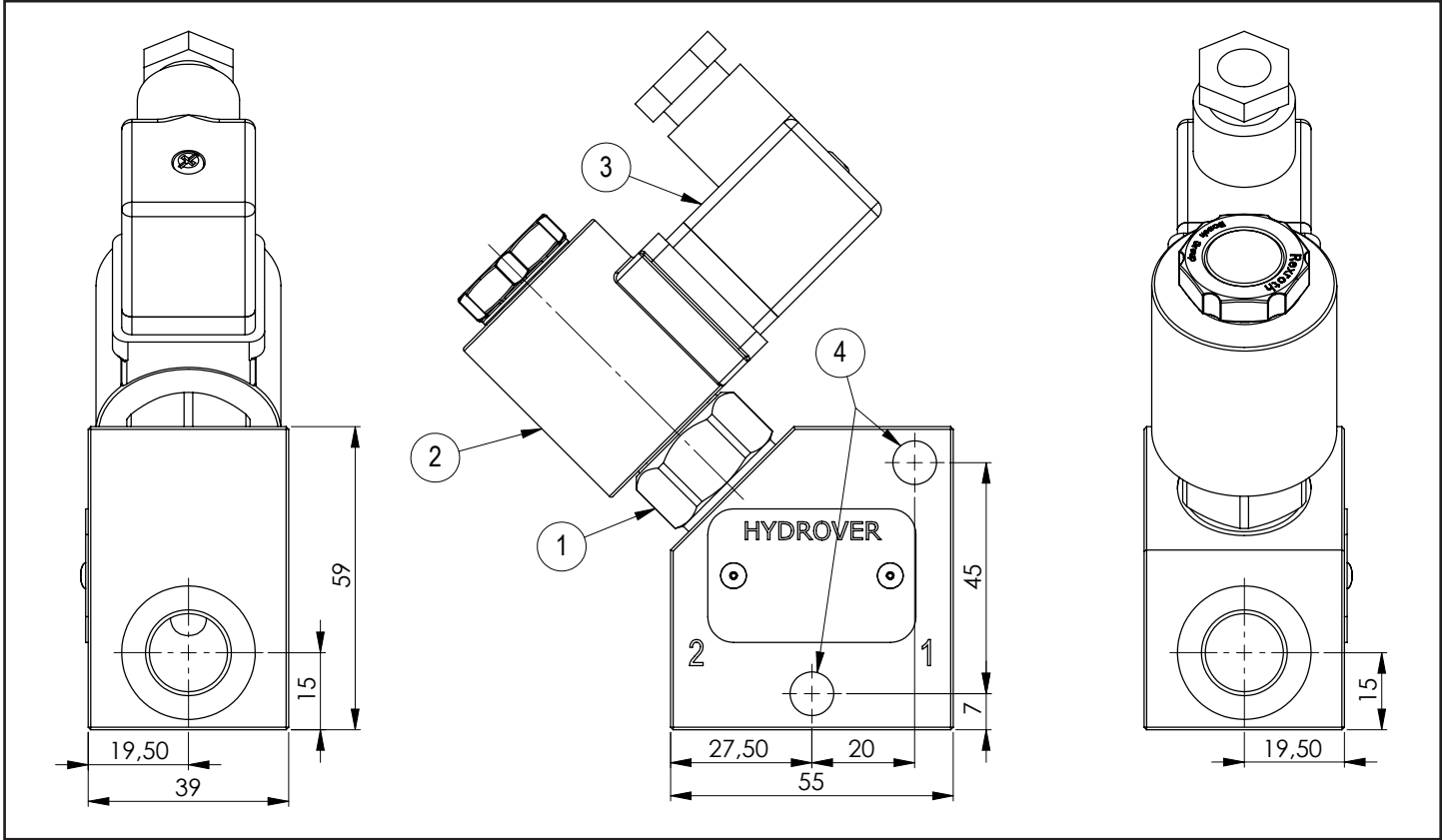
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Hydrover product

Manifold material  
Steel

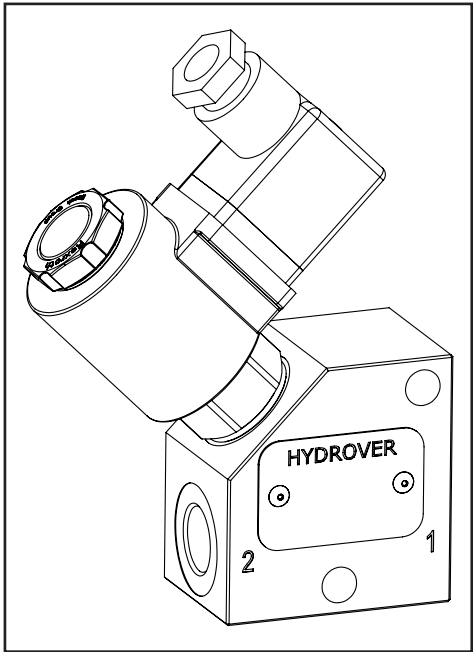
Product series  
17 series - Inline valves

Product ID



N°	Description	Q.ty
1	Bosch Rexroth solenoid valve <b>VEI-16-08A-NC OD.15-X-18-Y-000000</b> (normally closed) or <b>VEI-16-08A-NA OD.15-X-18-Y-000000</b> (normally open) depicted without manual override *	1
2	Bosch Rexroth coil <b>D36</b> - CLASS H DIN 43650 ISO 4400 *	2
3	Connector DIN 43650 ISO 4400	1
4	Ø 8,5 through hole for mounting	1

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue



Technical data		
Max. flow		40 lpm *
Ports		3/8" G
Manifold material	Aluminium	Steel
Max. pressure	250 bar	350 bar
Weight	0,65 Kg	1,1 Kg

Ordering code

H	1	7	1	1	0	-	-	-	-	-	-	-	-	-
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Hydrover product

Product series  
17 series - Inline valves

Product ID

Manifold material  
Aluminium = A  
Steel = S

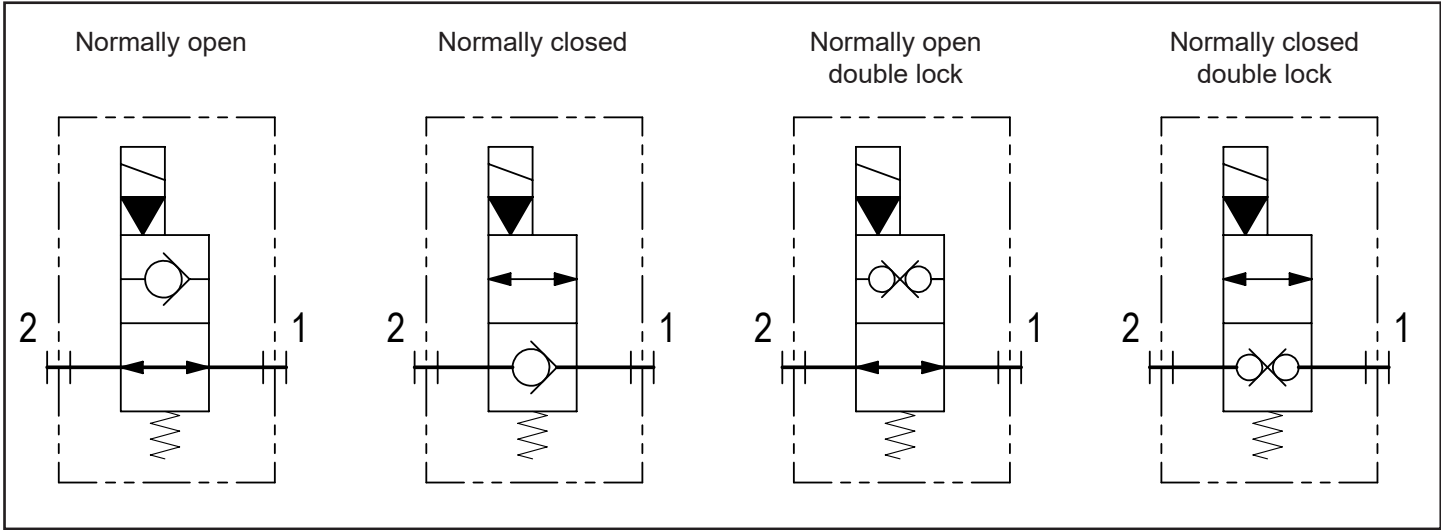
Solenoid valve spool type \*  
Normally open = NA  
Normally closed = NC  
Normally open double lock = 2A  
Normally closed double lock = 2C

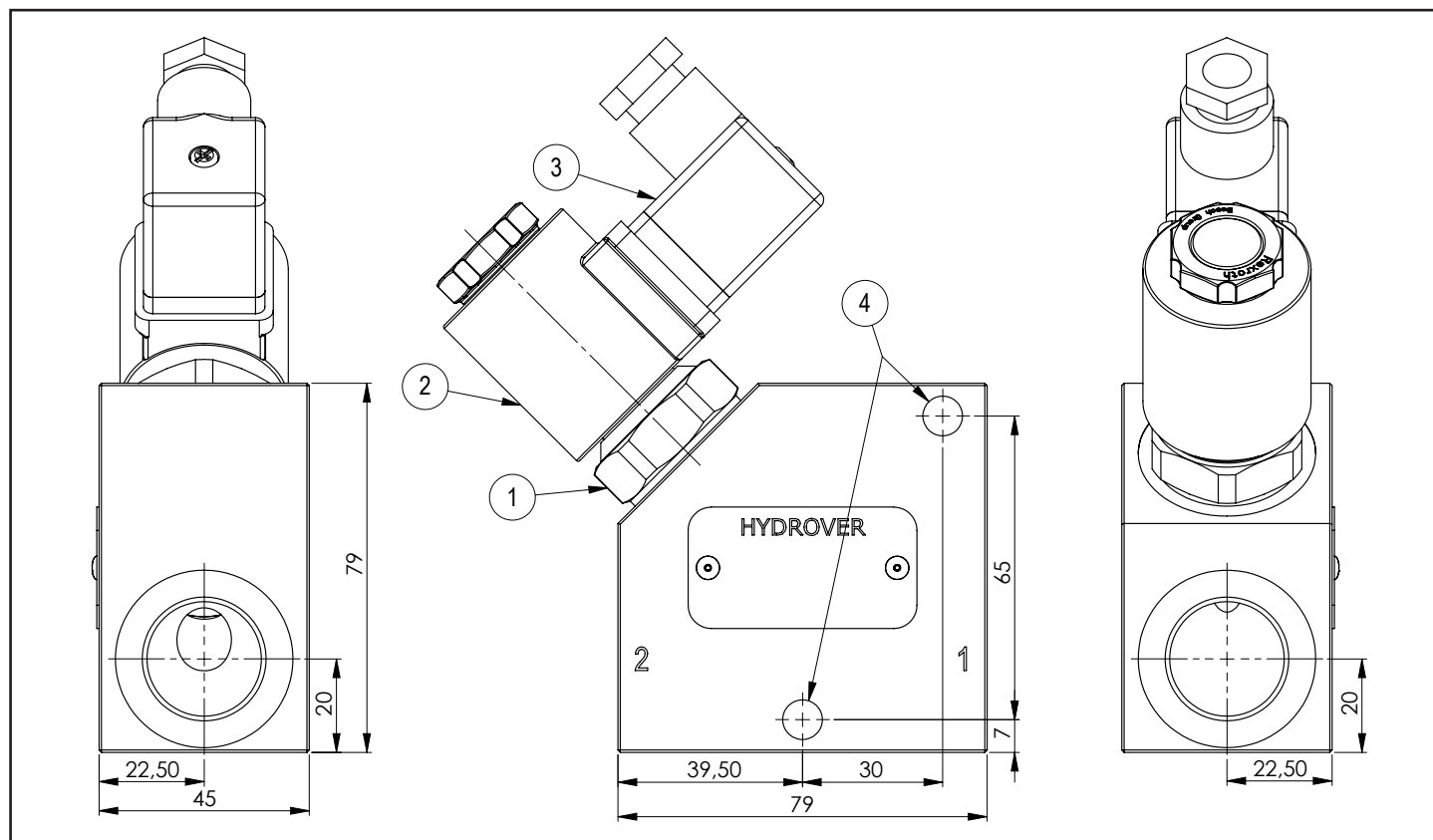
Solenoid valve coil connection \*  
1 = DIN 43650 ISO 4400

Solenoid valve coil voltage \*  
OB = 12V DC  
OC = 24V DC  
OD = 48V DC  
OU = 110V RAC  
AH = 230V RAC

Solenoid valve manual override \*  
E0 = Without  
EP = Push (NA, 2A)  
EV = Screw (NC, 2C)  
EG = Push and twist (NA, 2A)

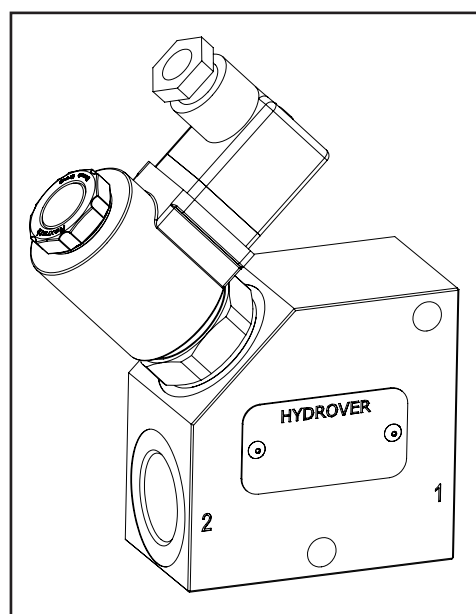
\* Omit if not required. For example, to order the product without valves, omit the solenoid valve spool type, manual override, coil connection and coil voltage options: H17110A.  
The manifold will still be provided with the corresponding cavity.





N°	Description	Q.ty
1	Bosch Rexroth solenoid valve <b>VEI-16-12G-NC OD.15-X-17-Y-000000</b> (normally closed) or <b>VEI-16-12G-NA OD.15-X-17-Y-000000</b> (normally open) depicted without manual override *	1
2	Bosch Rexroth coil <b>D36</b> - CLASS H DIN 43650 ISO 4400 *	2
3	Connector DIN 43650 ISO 4400	1
4	Ø 8,5 through hole for mounting	1

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue



Technical data		
Max. flow		70 lpm *
Ports		3/4" G
Manifold material	Aluminium	Steel
Max. pressure	250 bar	350 bar
Weight	1,05 Kg	2,1 Kg



Ordering code

H	1	7	1	1	1	-	-	-	-	-	-	-	-	-	-
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Hydrover product

Product series  
17 series - Inline valves

Product ID

Manifold material  
Aluminium = A  
Steel = S

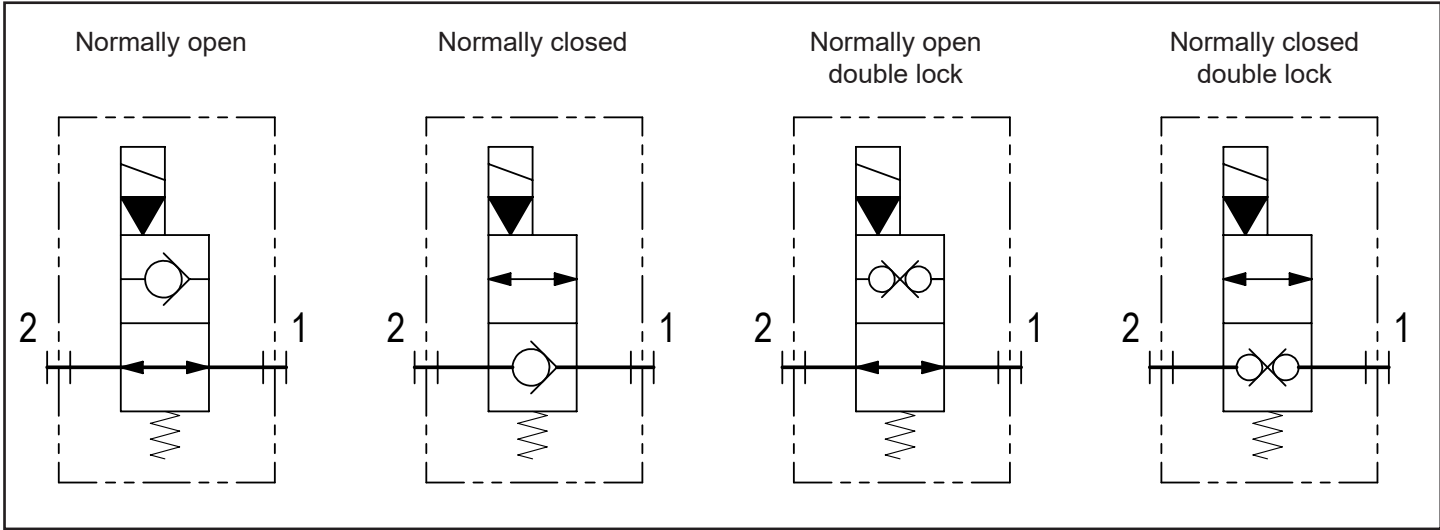
Solenoid valve spool type \*  
Normally open = NA  
Normally closed = NC  
Normally open double lock = 2A  
Normally closed double lock = 2C

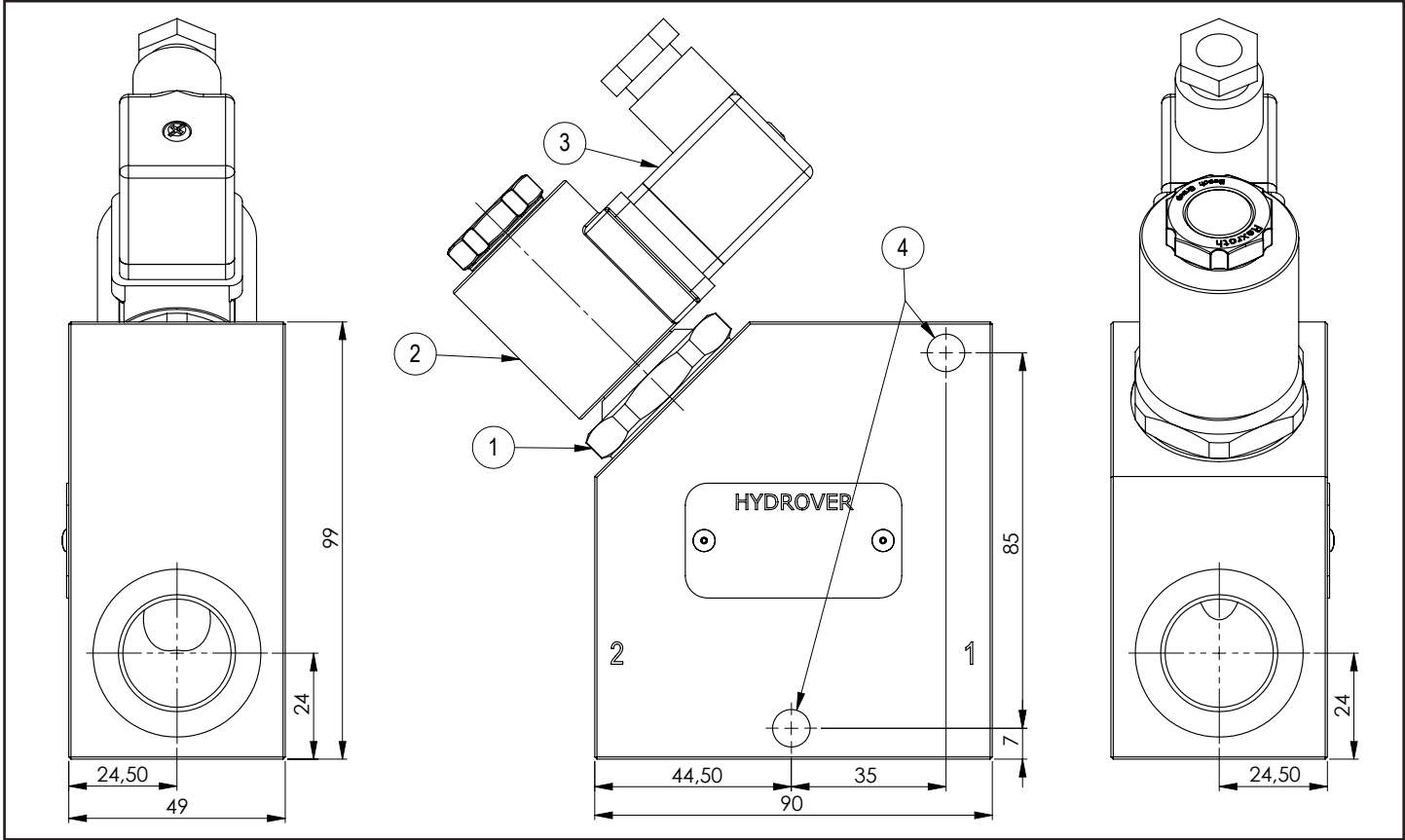
Solenoid valve coil connection \*  
1 = DIN 43650 ISO 4400

Solenoid valve coil voltage \*  
OB = 12V DC  
OC = 24V DC  
OD = 48V DC  
OU = 110V RAC  
AH = 230V RAC

Solenoid valve manual override \*  
E0 = Without  
EP = Push (NA, 2A)  
EV = Screw (NC, 2C)  
EG = Push and twist (NA, 2A)

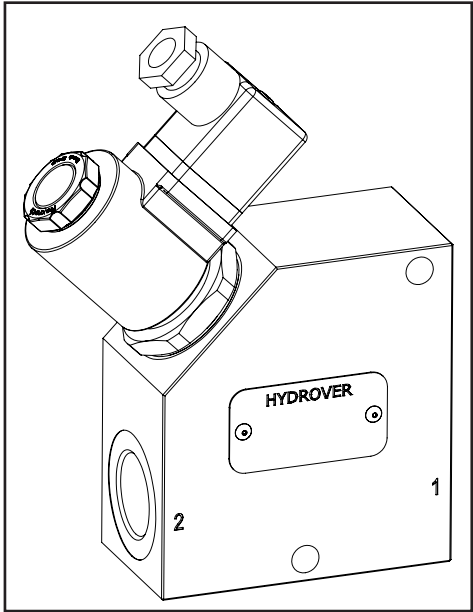
\* Omit if not required. For example, to order the product without valves, omit the solenoid valve spool type, manual override, coil connection and coil voltage options: H17111A.  
The manifold will still be provided with the corresponding cavity.





N°	Description	Q.ty
1	Bosch Rexroth solenoid valve <b>VEI-16-16G-NC OD.15-X-21-Y-000000</b> (normally closed) or <b>VEI-16-16G-NA OD.15-X-21-Y-000000</b> (normally open) depicted without manual override *	1
2	Bosch Rexroth coil <b>D36</b> - CLASS H DIN 43650 ISO 4400 *	2
3	Connector DIN 43650 ISO 4400	1
4	Ø 8,5 through hole for mounting	1

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue



Technical data		
Max. flow	100 lpm *	
Ports	3/4" G	
Manifold material	Aluminium	Steel
Max. pressure	250 bar	350 bar
Weight	1,5 Kg	3,1 Kg

Ordering code

H	1	7	1	1	3	-	-	-	-	-	-	-	-	-	-
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Hydrover product

Product series  
17 series - Inline valves

Product ID

Manifold material  
Aluminium = A  
Steel = S

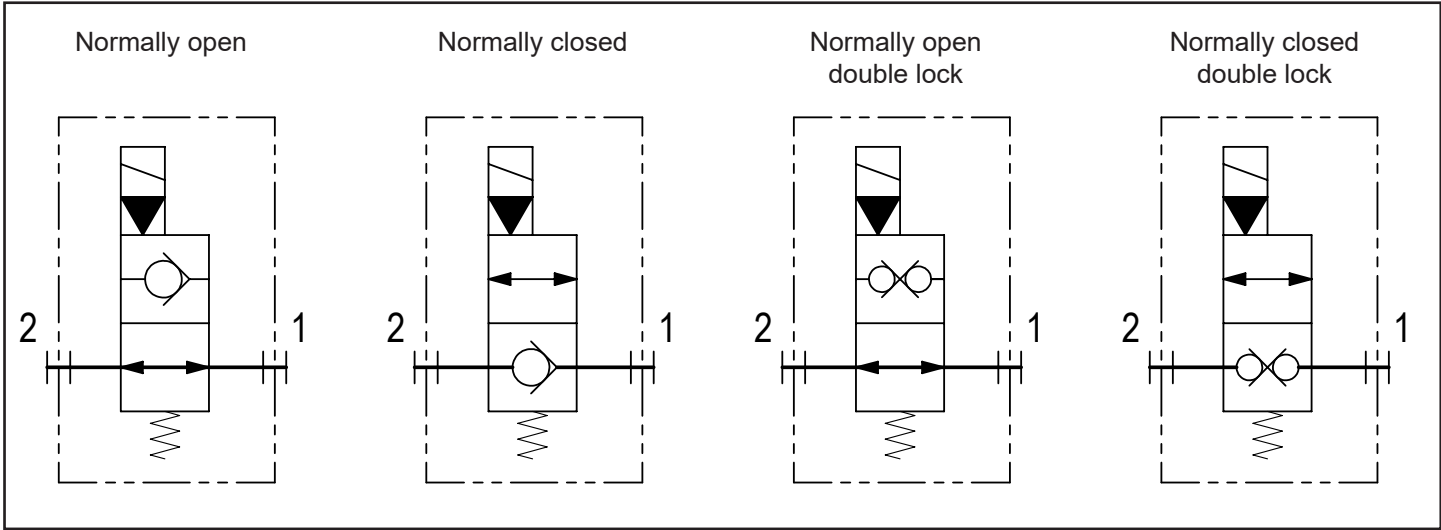
Solenoid valve spool type \*  
Normally open = NA  
Normally closed = NC  
Normally open double lock = 2A  
Normally closed double lock = 2C

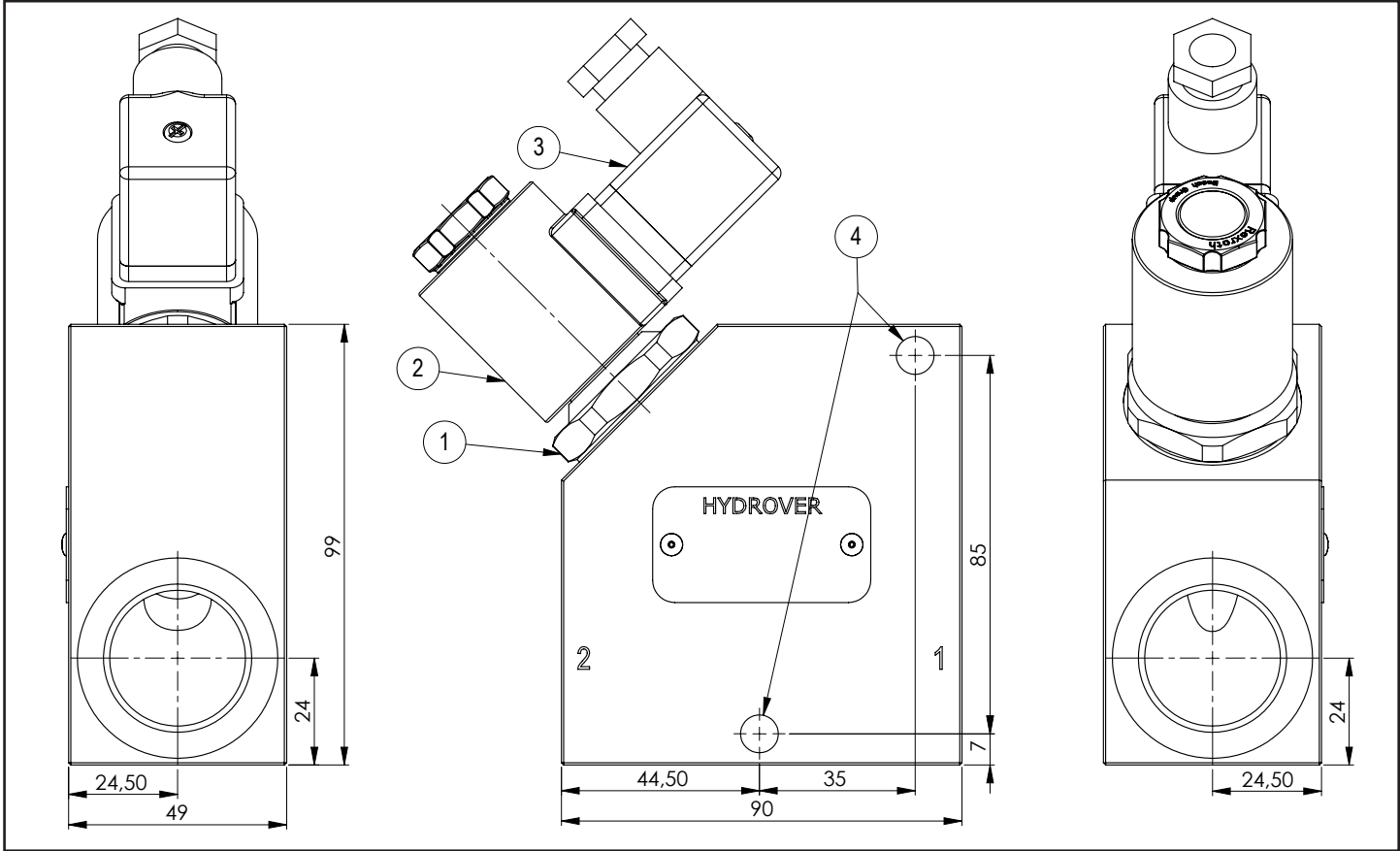
Solenoid valve coil connection \*  
1 = DIN 43650 ISO 4400

Solenoid valve coil voltage \*  
OB = 12V DC  
OC = 24V DC  
OD = 48V DC  
OU = 110V RAC  
AH = 230V RAC

Solenoid valve manual override \*  
E0 = Without  
EP = Push (NA, 2A)  
EV = Screw (NC, 2C)  
EG = Push and twist (NA, 2A)

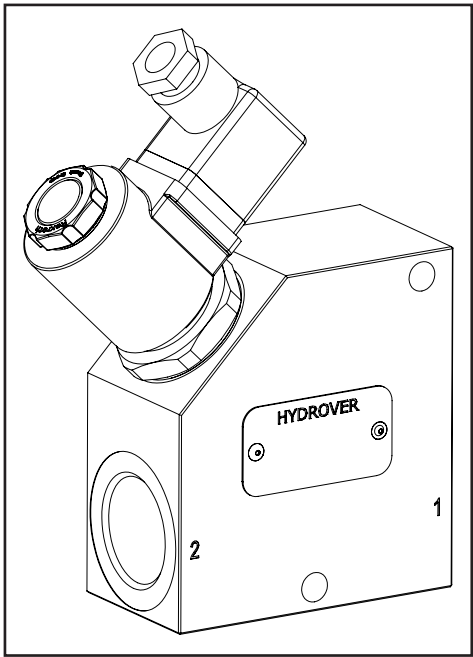
\* Omit if not required. For example, to order the product without valves, omit the solenoid valve spool type, manual override, coil connection and coil voltage options: H17113A.  
The manifold will still be provided with the corresponding cavity.





N°	Description	Q.ty
1	Bosch Rexroth solenoid valve <b>VEI-16-16G-NC OD.15-X-21-Y-000000</b> (normally closed) or <b>VEI-16-16G-NA OD.15-X-21-Y-000000</b> (normally open) depicted without manual override *	1
2	Bosch Rexroth coil <b>D36</b> - CLASS H DIN 43650 ISO 4400 *	2
3	Connector DIN 43650 ISO 4400	1
4	Ø 8,5 through hole for mounting	1

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue



Technical data		
Max. flow		150 lpm *
Ports		1" G
Manifold material	Aluminium	Steel
Max. pressure	250 bar	350 bar
Weight	1,4 Kg	3 Kg

Ordering code

H	1	7	1	1	2	-	-	-	-	-	-	-	-	-
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Hydrover product

Product series  
17 series - Inline valves

Product ID

Manifold material  
Aluminium = A  
Steel = S

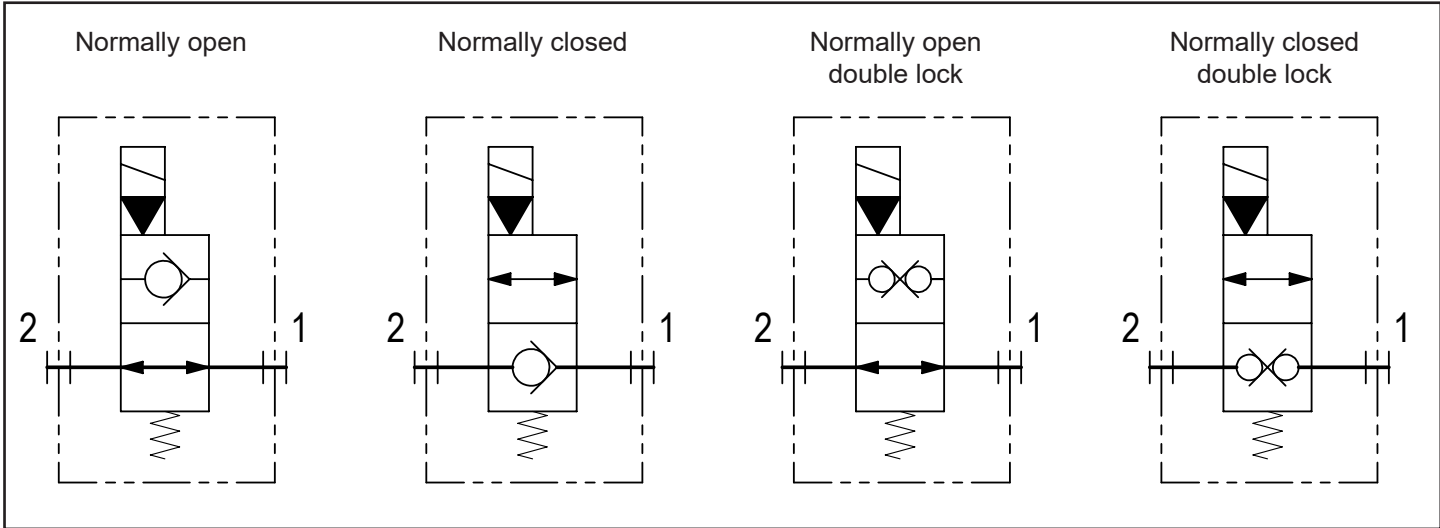
Solenoid valve spool type \*  
Normally open = NA  
Normally closed = NC  
Normally open double lock = 2A  
Normally closed double lock = 2C

Solenoid valve coil connection \*  
1 = DIN 43650 ISO 4400

Solenoid valve coil voltage \*  
OB = 12V DC  
OC = 24V DC  
OD = 48V DC  
OU = 110V RAC  
AH = 230V RAC

Solenoid valve manual override \*  
E0 = Without  
EP = Push (NA, 2A)  
EV = Screw (NC, 2C)  
EG = Push and twist (NA, 2A)

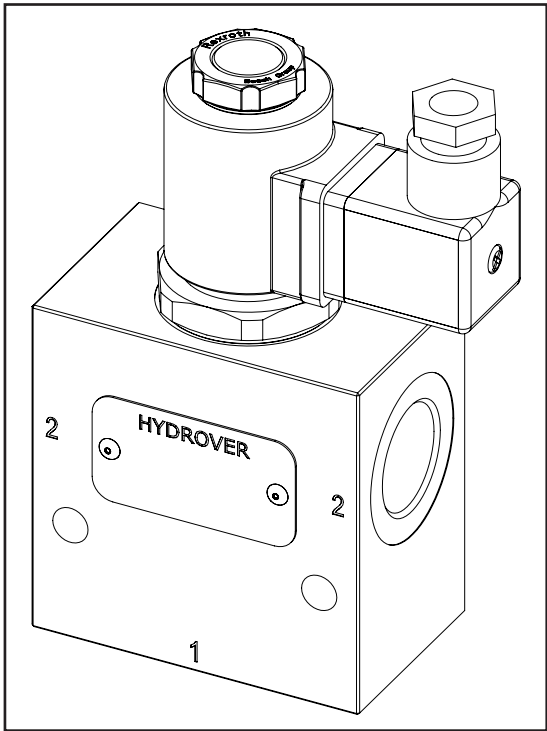
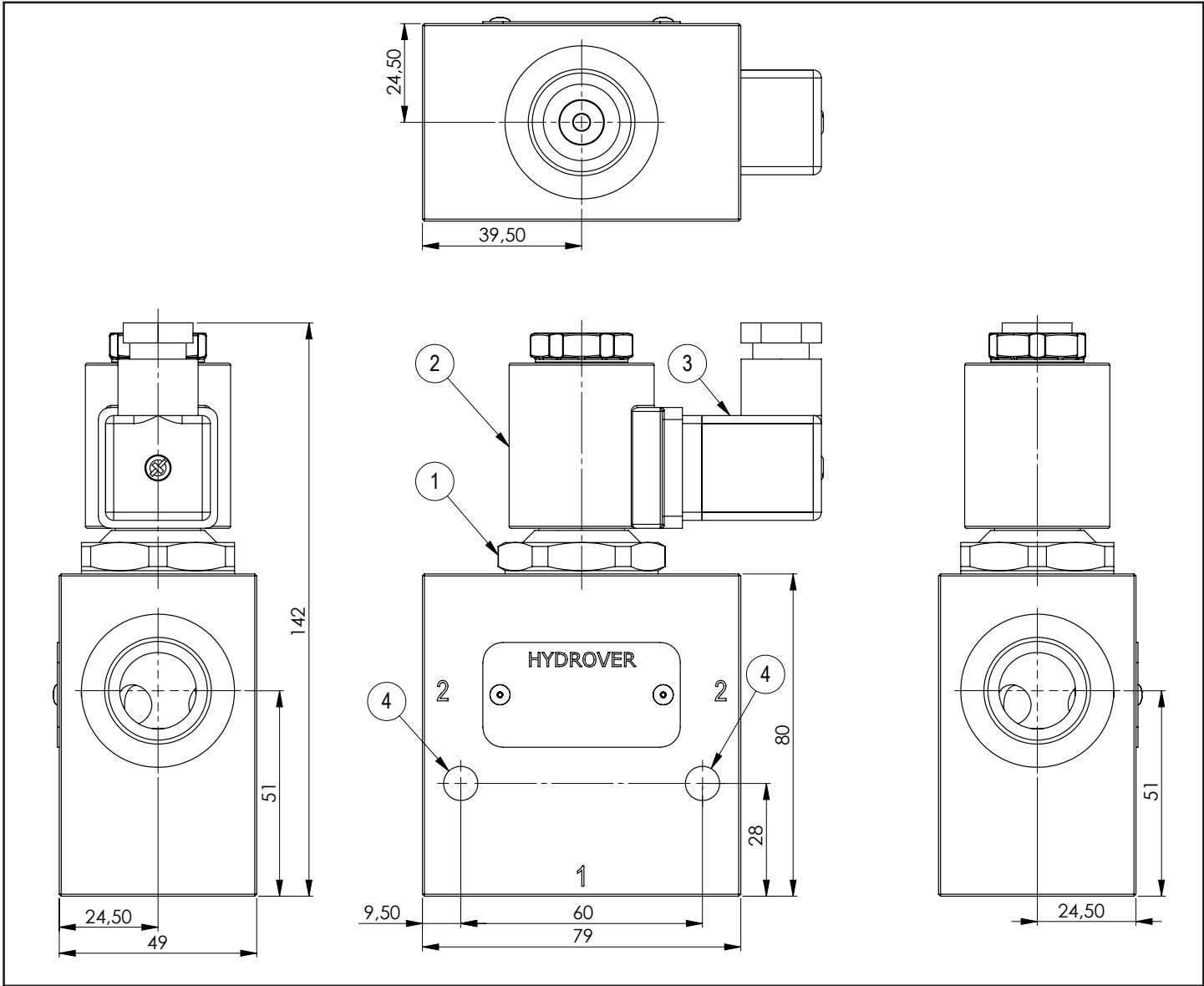
\* Omit if not required. For example, to order the product without valves, omit the solenoid valve spool type, manual override, coil connection and coil voltage options: H17112A.  
The manifold will still be provided with the corresponding cavity.



Inline valve with poppet type solenoid operated directional valve  
3/4" G ports / Through 2 port / 100 lpm

H17127

Dimensions in mm



Technical data	
Max. flow	100 lt/1 *
Max. pressure	250 bar
Weight	1,2 Kg
Manifold material	Aluminium
Ports	3/4" G

N°	Description	Q.ty
1	Bosch Rexroth solenoid valve <b>VEI-16-16G-NC OD.15-X-21-Y-000000</b> (normally closed) or <b>VEI-16-16G-NA OD.15-X-21-Y-000000</b> (normally open) depicted without manual override *	1
2	Bosch Rexroth coil <b>D36</b> - CLASS H DIN 43650 ISO 4400 *	2
3	Connector DIN 43650 ISO 4400	1
4	Ø 8,5 through hole for mounting	1

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

Ordering code

H	1	7	1	2	7	A	-	-	-	-	-	-	-	-
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

Hydrover product

Product series  
17 series - Inline valves

Product ID

Manifold material  
Aluminium

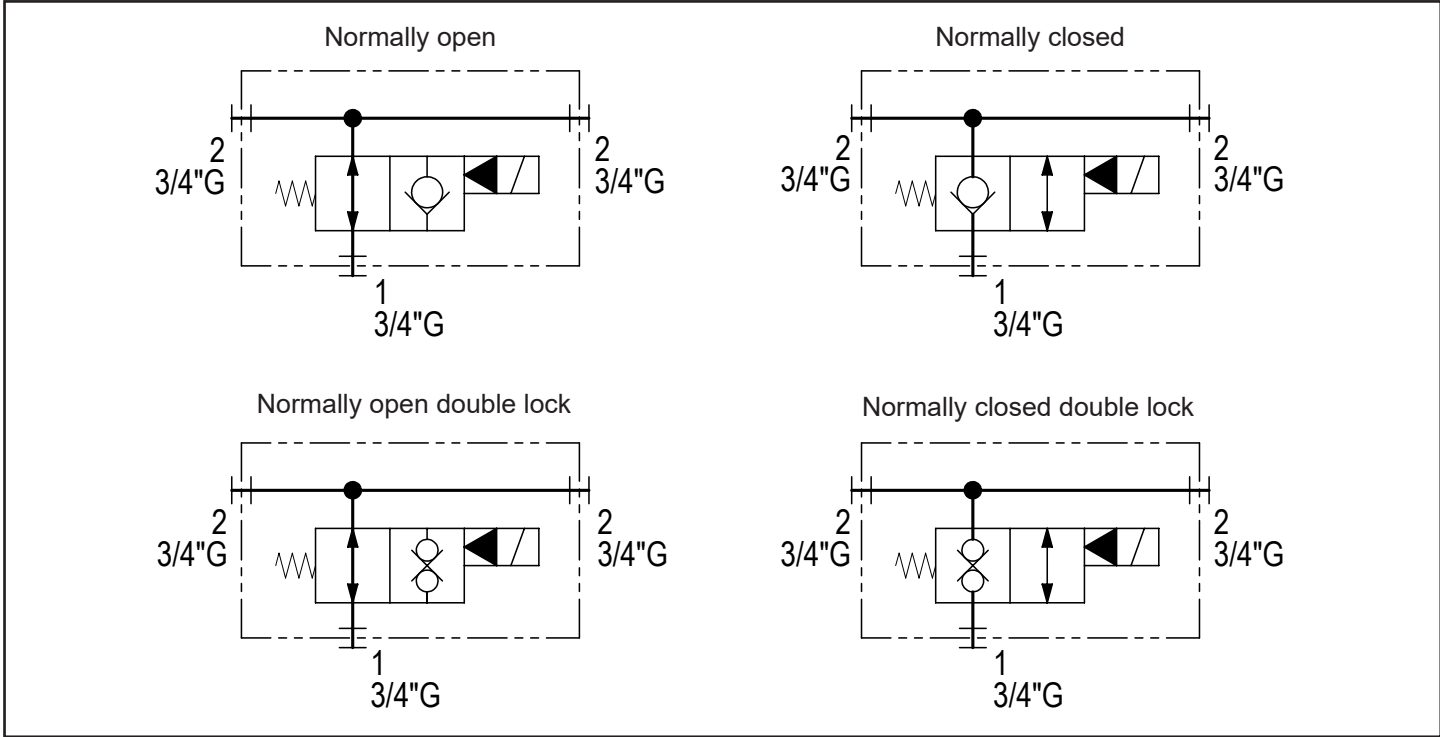
Solenoid valve spool type \*  
Normally open = NA  
Normally closed = NC  
Normally open double lock = 2A  
Normally closed double lock = 2C

Solenoid valve coil connection \*  
1 = DIN 43650 ISO 4400

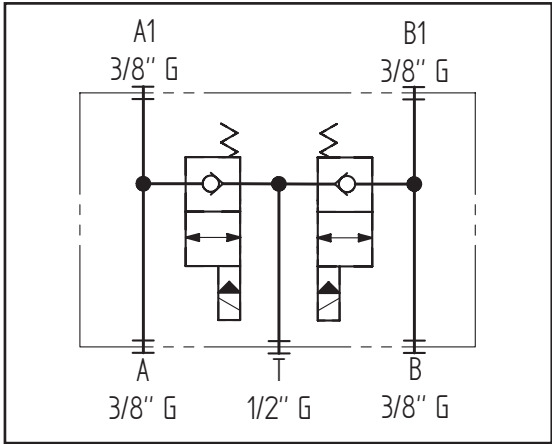
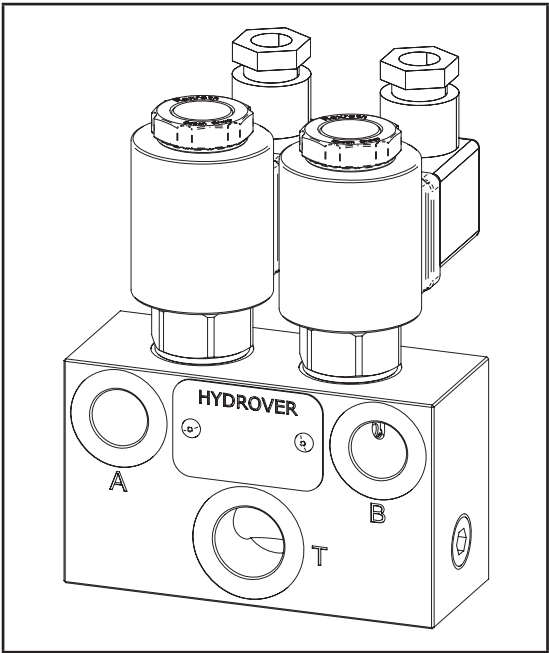
Solenoid valve coil voltage \*  
OB = 12V DC  
OC = 24V DC  
OD = 48V DC  
OU = 110V RAC  
AH = 230V RAC

Solenoid valve manual override \*  
E0 = Without  
EP = Push (NA, 2A)  
EV = Screw (NC, 2C)  
EG = Push and twist (NA, 2A)

\* Omit if not required. For example, to order the product without valves, omit the solenoid valve spool type, manual override, coil connection and coil voltage options: H17112A.  
The manifold will still be provided with the corresponding cavity.

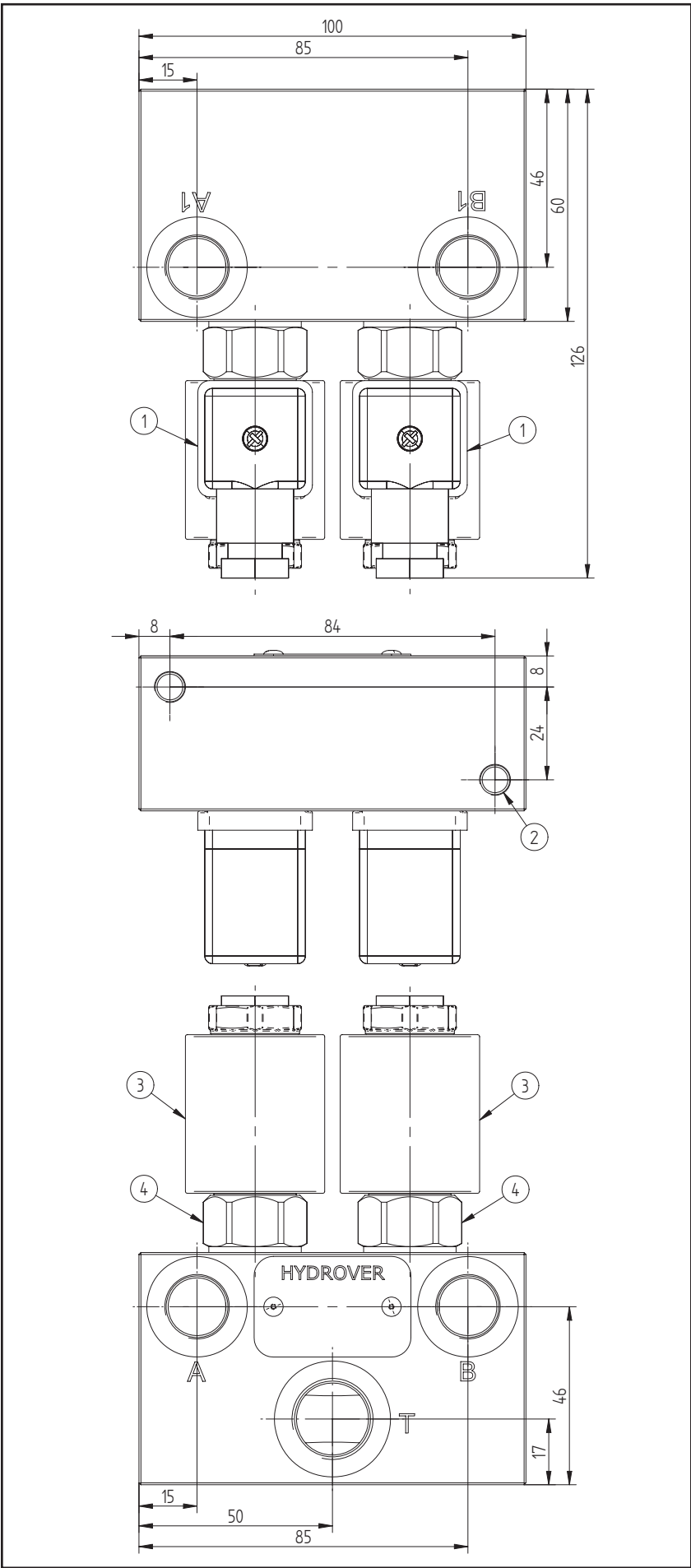


Technical data	
Max. pressure	250 bar
Max. flow	40 lpm *
Weight	1,3 Kg
Manifold material	Aluminium
A / B / A1 / B1 ports	3/8" G
T port	1/2" G



N°	Description	Q.ty
1	Connector DIN 43650 ISO 4400	2
2	M8x15 thread for mounting	2
3	Bosch Rexroth coil <b>D36</b> CLASS H DIN 43650 ISO 4400 *	2
4	Bosch Rexroth solenoid valve <b>VEI-16-08A-NC</b> <b>OD.15.05.18-Y-000000</b> depicted without manual override *	2

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue



Dimensions in mm



Ordering code

H	1	7	0	1	2	A	-	-	-	-	-
---	---	---	---	---	---	---	---	---	---	---	---

Hydrover product

Product series

Product ID

Manifold material

17 series - Inline valves

Aluminium

Solenoid valves coil connection \*

Solenoid valves coil voltage \*

Solenoid valves manual override \*

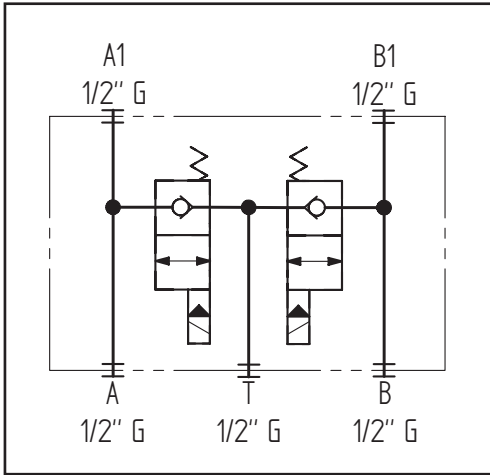
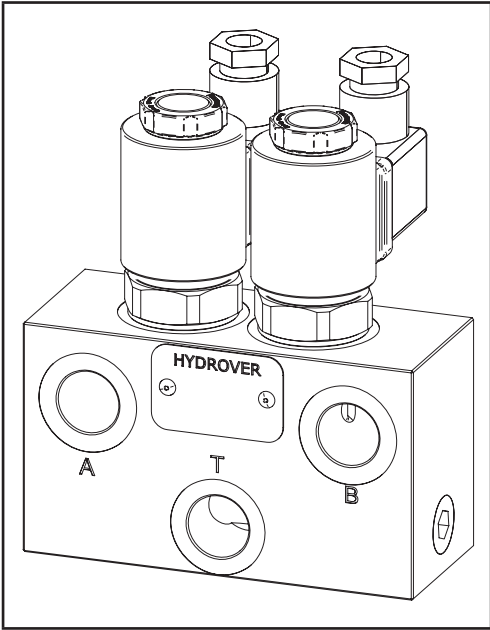
1 = DIN 43650 ISO 4400

OB = 12V DC  
OC = 24V DC  
OD = 48V DC  
OU = 110V RAC  
AH = 230V RAC

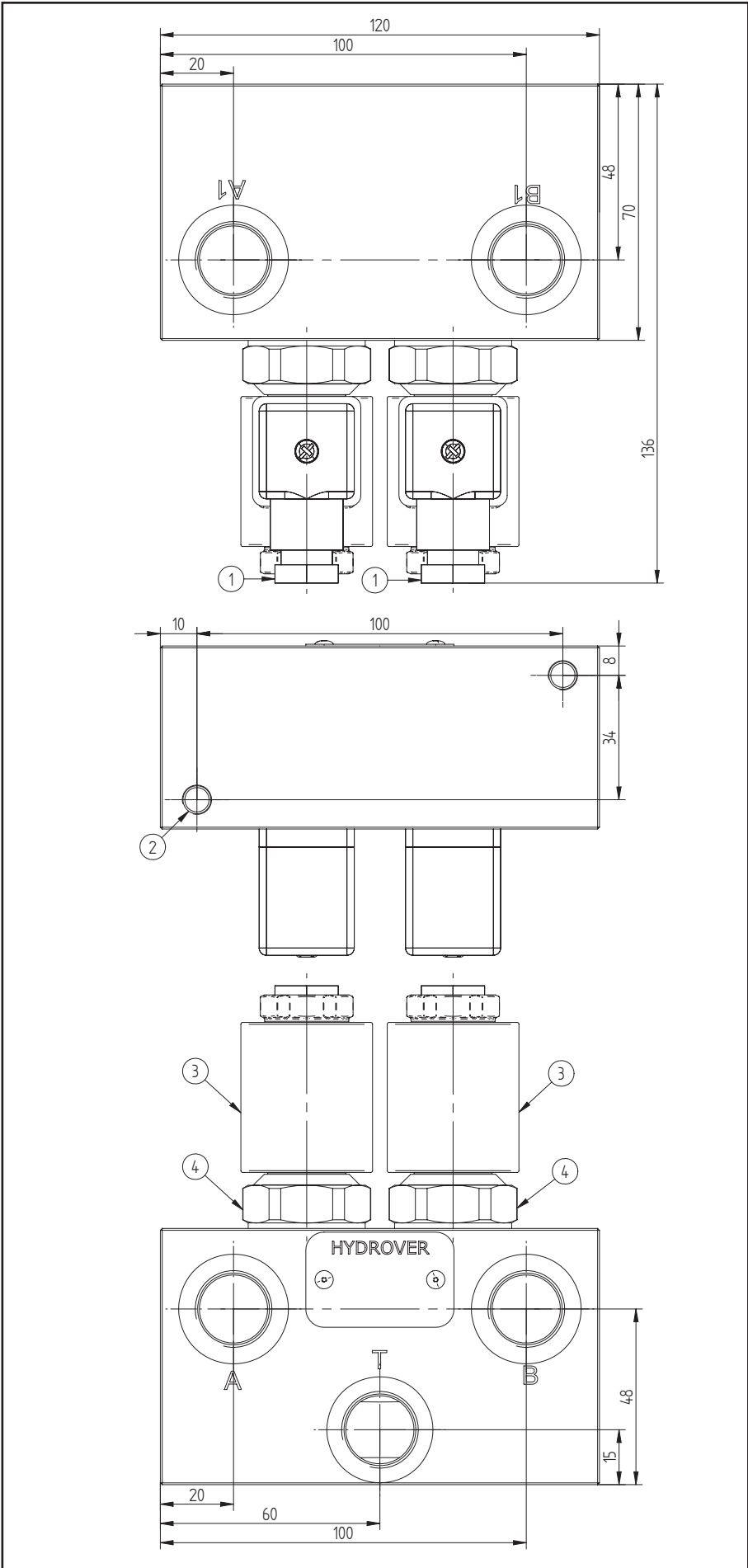
E0 = Without  
EV = Screw

\* Omit if not required. For example, to order the product without the solenoid cartridge valves, omit the coil connection, coil voltage, max. flow and manual override options: H17012A.  
The manifold will still be provided with the corresponding cavities.

Technical data	
Max. pressure	250 bar
Max. flow	70 lpm *
Weight	1,9 Kg
Manifold material	Aluminium
A / B / A1 / B1 / T ports	1/2" G



N°	Description	Q.ty
1	Connector DIN 43650 ISO 4400	2
2	M8x15 thread for mounting	2
3	Bosch Rexroth coil <b>D36</b> CLASS H DIN 43650 ISO 4400 *	2
4	Bosch Rexroth solenoid valve <b>OD.15.05.17-Y-000000</b> depicted without manual override.	2



\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

Ordering code

H	1	7	0	1	3	A	-	-	-	-	-
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Hydrover product

Product series  
17 series - Inline valves

Product ID

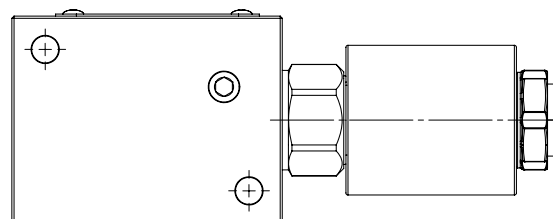
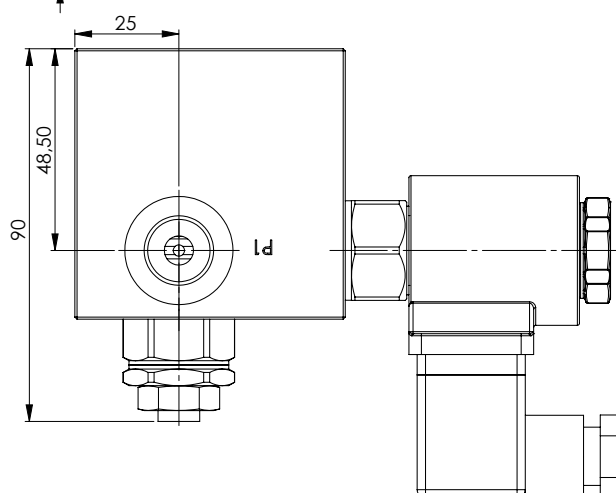
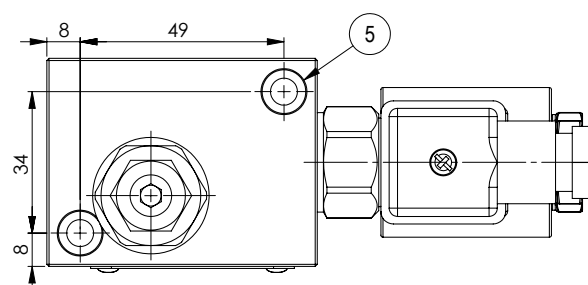
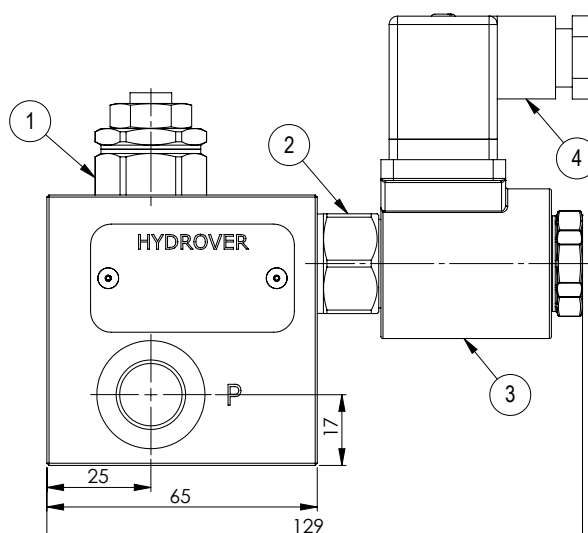
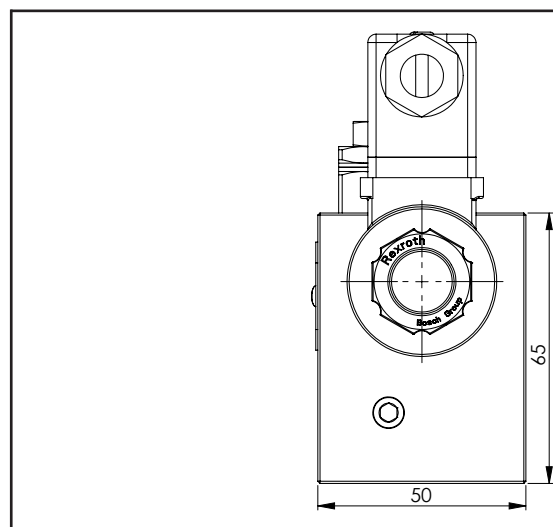
Manifold material  
Aluminium

Solenoid valves coil connection \*  
1 = DIN 43650 ISO 4400

Solenoid valves coil voltage \*  
OB = 12V DC  
OC = 24V DC  
OD = 48V DC  
OU = 110V RAC  
AH = 230V RAC

Solenoid valves manual override \*  
E0 = Without  
EV = Screw

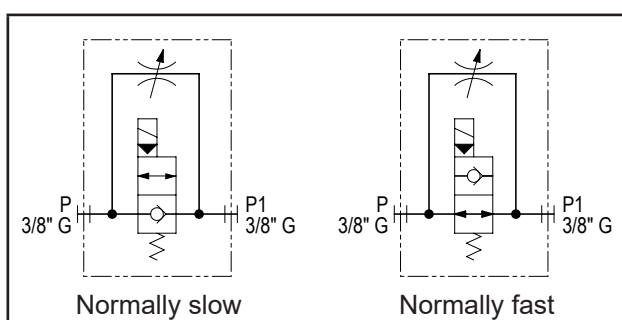
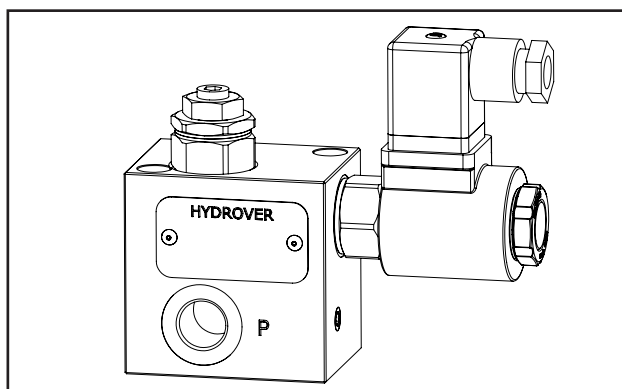
\* Omit if not required. For example, to order the product without the solenoid cartridge valves, omit the coil connection, coil voltage, max. flow and manual override options: H17013A.  
The manifold will still be provided with the corresponding cavities.

2 way fast slow speed inline valve / 30 lpm **H17034**

Dimensions in mm

**Technical data**

Max. pressure	250 bar
Max. flow	30 lpm *
Weight	1 Kg
Manifold material	Aluminium
P / P1 ports	3/8" G



N°	Description	Q.ty
1	Bosch Rexroth bidirectional flow restrictor <b>OD.21.01-X-56</b> * depicted with screw adjustment	1
2	Bosch Rexroth solenoid valve for fast slow function <b>VEI-16-08A-NC OD.15.05.18-Y-000000</b> (normally slow) or <b>VEI-16-08A-NA OD.15.06.18-Y-000000</b> (normally fast) depicted without manual override *	1
3	Bosch Rexroth coil <b>D36</b> - CLASS H DIN 43650 ISO 4400 *	1
4	Connector DIN 43650 ISO 4400	1
5	M8x15 with Ø 6,5 through hole for mounting with M6 screw	2

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

Ordering code

H	1	7	0	3	4	A	-		Q	-			-			-			
---	---	---	---	---	---	---	---	--	---	---	--	--	---	--	--	---	--	--	--

### Hydrover product

## Product series

### 17 series - Inline valves

Product ID

## Manifold material

Aluminium

### Restrictor adjustment type

Screw

$$= S$$

Knob

$$= K$$

**Slow or fast in normal position \***

Normally slow

$$= NL$$

Normally fast

= NR

**Fast slow  
solenoid valve  
coil connection \***

1 = DIN 43650  
ISO 4400

**Solenoid valve  
coil voltage \***

OB = 12V DC

OC = 24V DC

OD = 48V DC

OU = 110V RAC

AH = 230V RAC

**Fast slow solenoid valve manual  
override \***

E0 =	Without
------	---------

EP =	Push (NR)
------	-----------

EV = Screw (NL)

EG = Push and twist (NR)

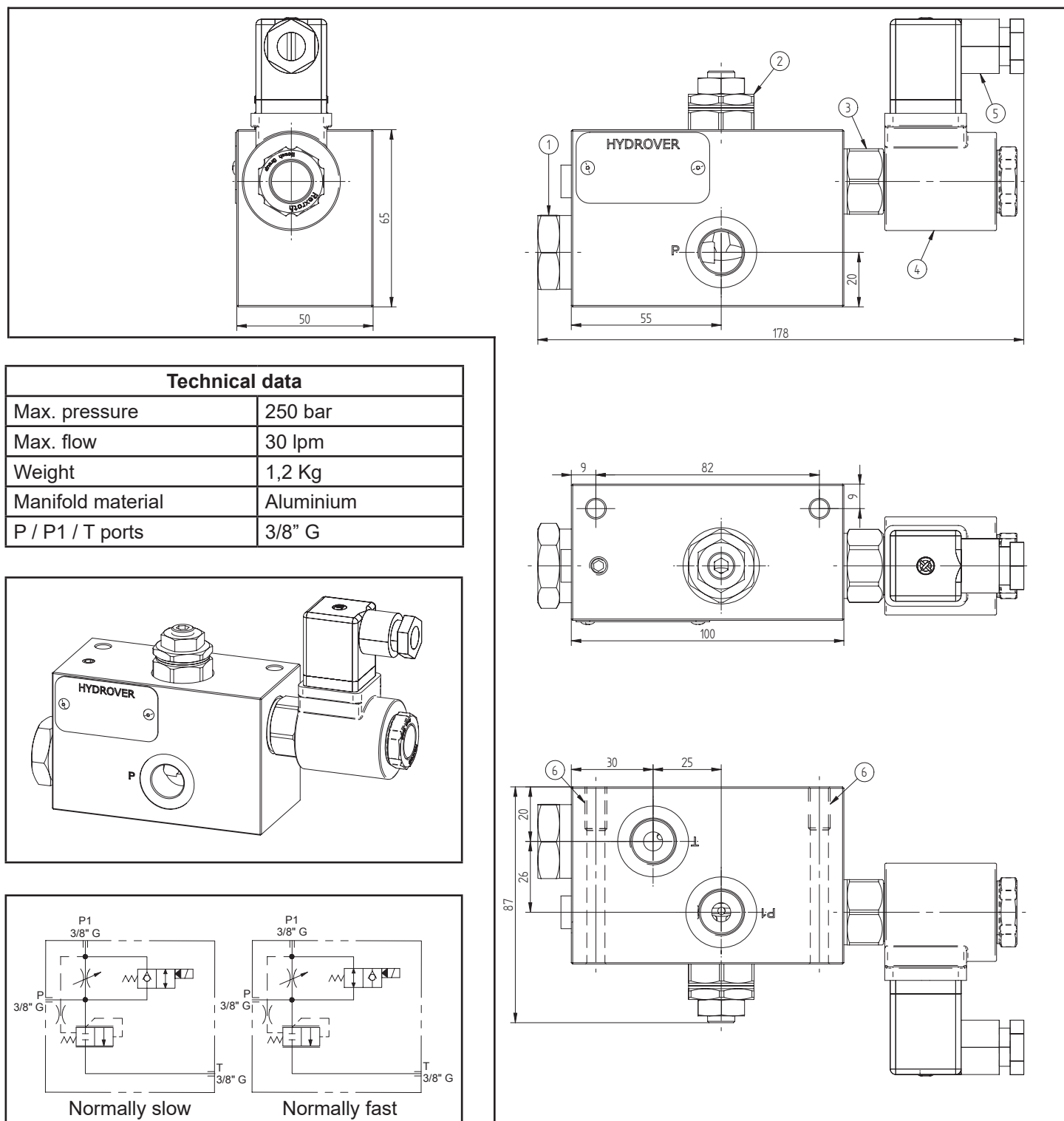
\* Omit if not required. For example, to order the product without the fast slow solenoid cartridge valve, omit the fast slow coil connection, coil voltage and manual override options: H17034A-SQ

The manifold will still be provided with the corresponding cavity.

To inhibit a function, replace the related valve options with TL: eg H17034A-SQ-TL.

In the cavity it will be mounted a long plug.

Valve	Cavity	Long plug code
Solenoid valve VEI-16-08A-NC OD.15.05.18-Y-000000 or VEI-16 08A-NA OD.15.06.18-Y-000000	CA-08A-2N	<b>0489A2005600000</b>

3 way compensated fast slow speed inline valve / 30 lpm **H17001**

N°	Description	Q.ty
1	Pressure compensator	1
2	Bosch Rexroth bidirectional flow restrictor <b>OD.21.01-X-56</b> * depicted with screw adjustment	1
3	Bosch Rexroth solenoid valve for fast slow function <b>VEI-16-08A-NC OD.15.05.18-Y-000000</b> (normally slow) o <b>VEI-16-08A-NA OD.15.06.18-Y-000000</b> (normally fast) depicted without manual override *	1
4	Bosch Rexroth coil <b>D36</b> - CLASS H DIN 43650 ISO 4400 *	1
5	Connector DIN 43650 ISO 4400	1
6	M8x15 with Ø 6,5 through hole for mounting with M6 screw	2

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

Ordering code

H	1	7	0	0	1	A	-	-	Q	-	-	-	-	-	-	-
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

Hydrover product

Product series  
17 series - Inline valves

Product ID

Manifold material  
Aluminium

Compensator spring  
6 bar (standard) = 6  
12 bar = 1

Restrictor adjustment type  
Screw = S  
Knob = K

Fast slow  
solenoid valve  
coil connection \*  
1 = DIN 43650  
ISO 4400

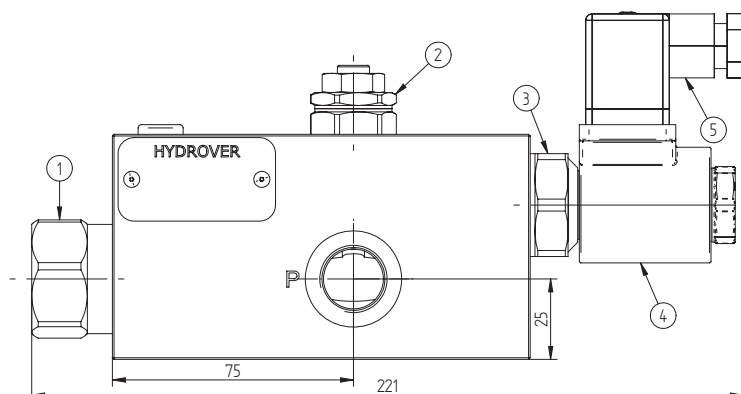
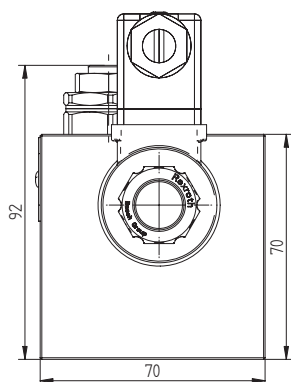
Solenoid valve  
coil voltage \*  
OB = 12V DC  
OC = 24V DC  
OD = 48V DC  
OU = 110V RAC  
AH = 230V RAC

Fast slow solenoid valve manual  
override \*  
E0 = Without  
EP = Push (NR)  
EV = Screw (NL)  
EG = Push and twist (NR)

Slow or fast in normal position \*  
NL = Normally slow  
NR = Normally fast

\* Omit if not required. For example, to order the product without the fast slow solenoid cartridge valve, omit the fast slow coil connection, coil voltage and manual override options: H17001A4SQ.  
The manifold will still be provided with the corresponding cavity.  
To inhibit a function, replace the related valve options with TL: eg H17001A4SQ-TL.  
In the cavity it will be mounted a long plug.

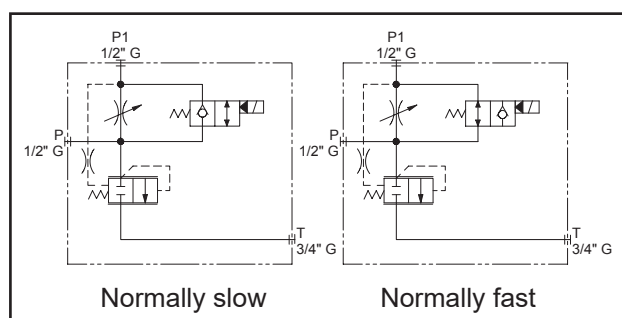
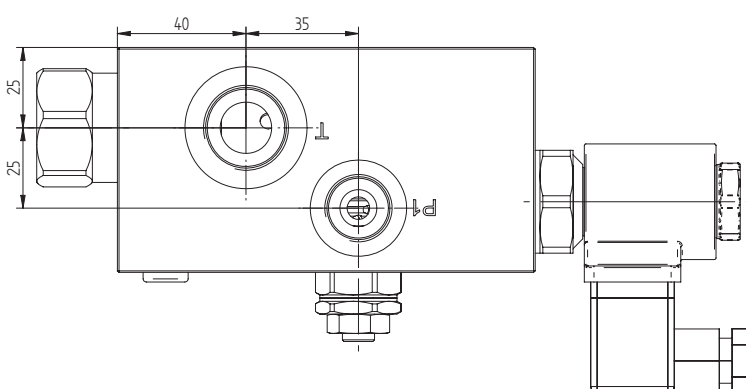
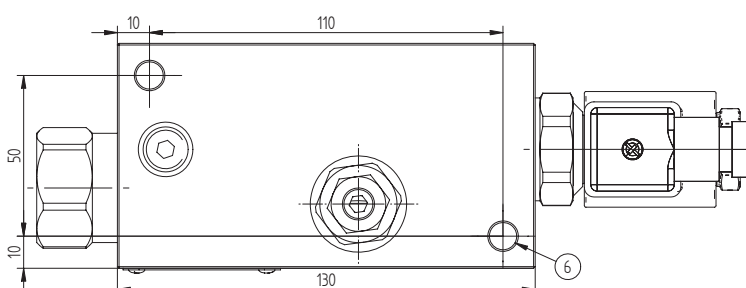
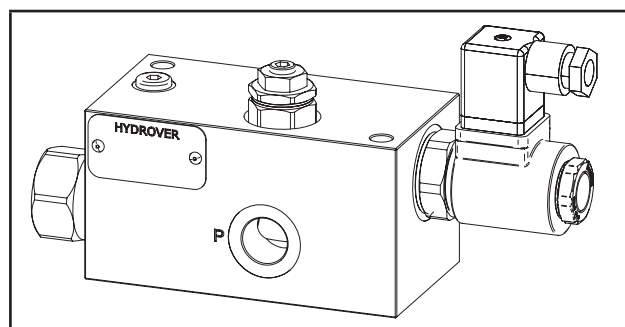
Valve	Cavity	Long plug code
Solenoid valve VEI-16-08A-NC OD.15.05.18-Y-000000 or VEI-16-08A- NA OD.15.06.18-Y-000000	CA-08A-2N	0489A2005600000

3 way compensated fast slow speed inline valve / 60 lpm **H17015**

Dimensions in mm

**Technical data**

Max. pressure	250 bar
Max. flow	60 lpm
Weight	2,3 Kg
Manifold material	Aluminium
P / P1 ports	1/2" G
T port	3/4" G



N°	Description	Q.ty
1	Pressure compensator	1
2	Bosch Rexroth bidirectional flow restrictor <b>OD.21.01-X-56</b> * depicted with screw adjustment	1
3	Bosch Rexroth solenoid valve for fast slow function <b>OD.15.05.17-Y-000000</b> * (normally slow) o <b>OD.15.06.17-Y-000000</b> (normally fast)	1
4	Bosch Rexroth coil <b>D36</b> - CLASS H DIN 43650 ISO 4400 *	1
5	Connector DIN 43650 ISO 4400	1
6	Ø 8,5 through hole for mounting	2

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue



Ordering code

H	1	7	0	1	5	A	-	-	Q	-	-	-	-	-	-	-
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Hydrover product

Product series  
17 series - Inline valves

Product ID

Manifold material  
Aluminium

Compensator spring  
5.5 bar (standard) = 6  
12.5 bar = 1  
19 bar = 2

Restrictor adjustment type  
Screw = S  
Knob = K

Fast slow solenoid valve coil connection \*  
1 = DIN 43650  
ISO 4400

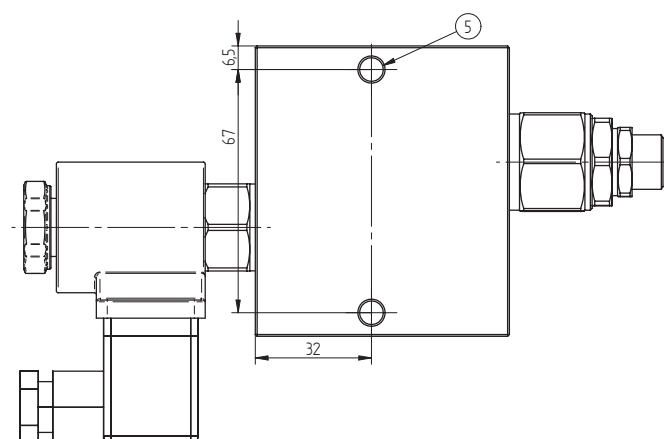
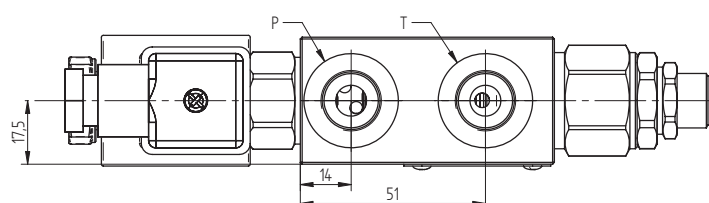
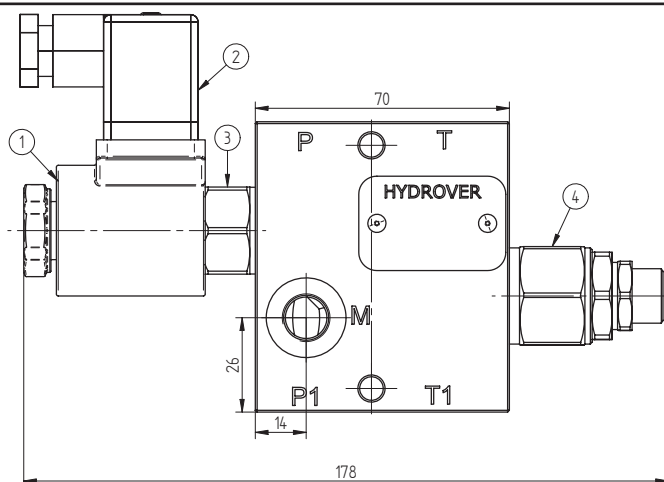
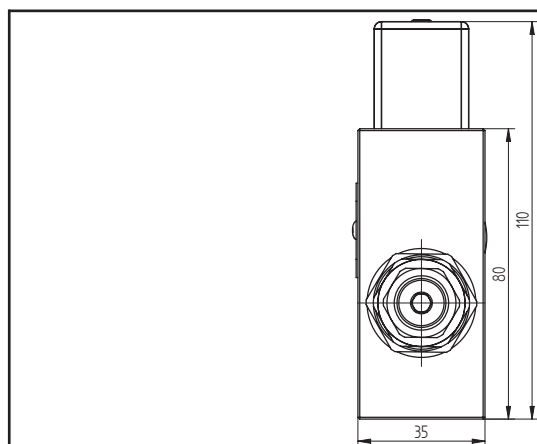
Solenoid valve coil voltage \*  
OB = 12V DC  
OC = 24V DC  
OD = 48V DC  
OU = 110V RAC  
AH = 230V RAC

Fast slow solenoid valve manual override \*  
E0 = Without  
EP = Push (NR)  
EV = Screw (NL)  
EG = Push and twist (NR)

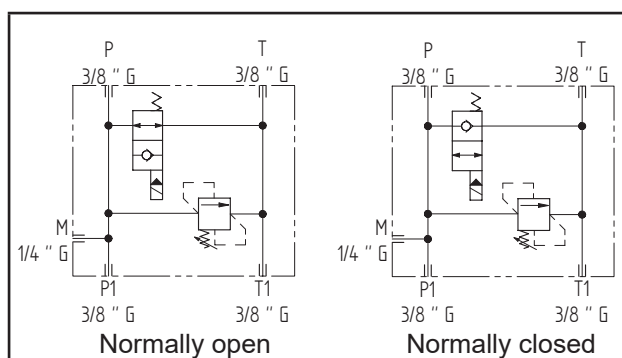
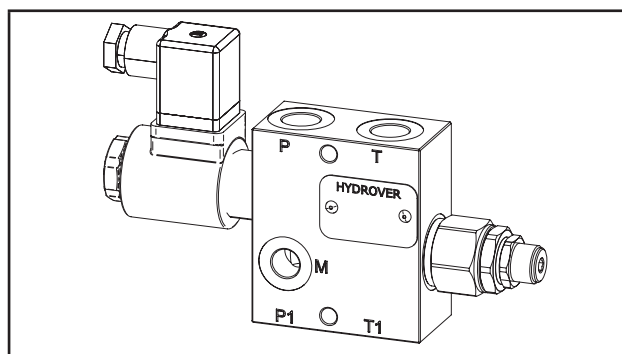
Slow or fast in normal position \*  
NL = Normally slow  
NR = Normally fast

\* Omit if not required. For example, to order the product without the fast slow solenoid cartridge valve, omit the fast slow coil connection, coil voltage and manual override options: H17015A6SQ.  
The manifold will still be provided with the corresponding cavity.  
To inhibit a function, replace the related valve options with TL: eg H17015A6SQ-TL.  
In the cavity it will be mounted a long plug.

Valve	Cavity	Long plug code
Solenoid valve OD.15.05.17-Y-000000 / OD.15.06.17-Y-000000	017-E	R-800-014

Inline valve with bypass and relief / 35 lpm **H17005**

Technical data	
Max. pressure	250 bar
Max. flow	35 lpm *
Weight	1 Kg
Manifold material	Aluminium
M port	1/4" G
P / P1 / T / T1 ports	3/8" G



N°	Description	Q.ty
1	Bosch Rexroth coil <b>D36</b> - CLASS H DIN 43650 ISO 4400 *	1
2	Connector DIN 43650 ISO 4400	1
3	Bosch Rexroth solenoid valve <b>VEI-16 OD.15.05.18-Y-000000</b> (normally closed) o <b>VEI-16 OD.15.06.18-Y-000000</b> (normally open) depicted without manual override *	1
4	Bosch Rexroth relief valve <b>VMD1.040</b> *	1
5	Ø 6,5 through hole for mounting	2

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

Ordering code

H	1	7	0	0	5	A	-	-	-	-	-	-	-	-	-
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Hydrover product

Product series  
17 series - Inline valves

Product ID

Manifold material  
Aluminium

Relief valve adjustment type \*  
Screw = S

Relief valve adjustment pressure range \*  
25-120 bar = 1  
40-200 bar = 2  
200-350 bar = 3

Solenoid valve  
coil connection \*  
1 = DIN 43650  
ISO 4400

Solenoid valve  
coil voltage \*  
OB = 12V DC  
OC = 24V DC  
OD = 48V DC  
OU = 110V RAC  
AH = 230V RAC

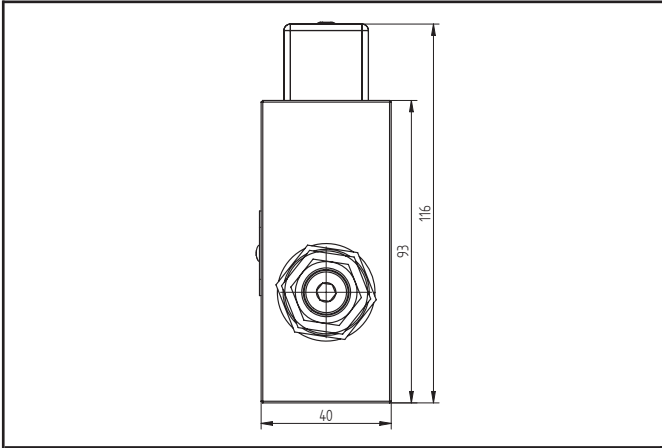
Solenoid valve  
manual override \*  
E0 = Without  
EP = Push (NA)  
EV = Screw (NC)  
EG = Push and twist (NA)

Solenoid valve spool type \*  
NA = Normally open  
NC = Normally closed

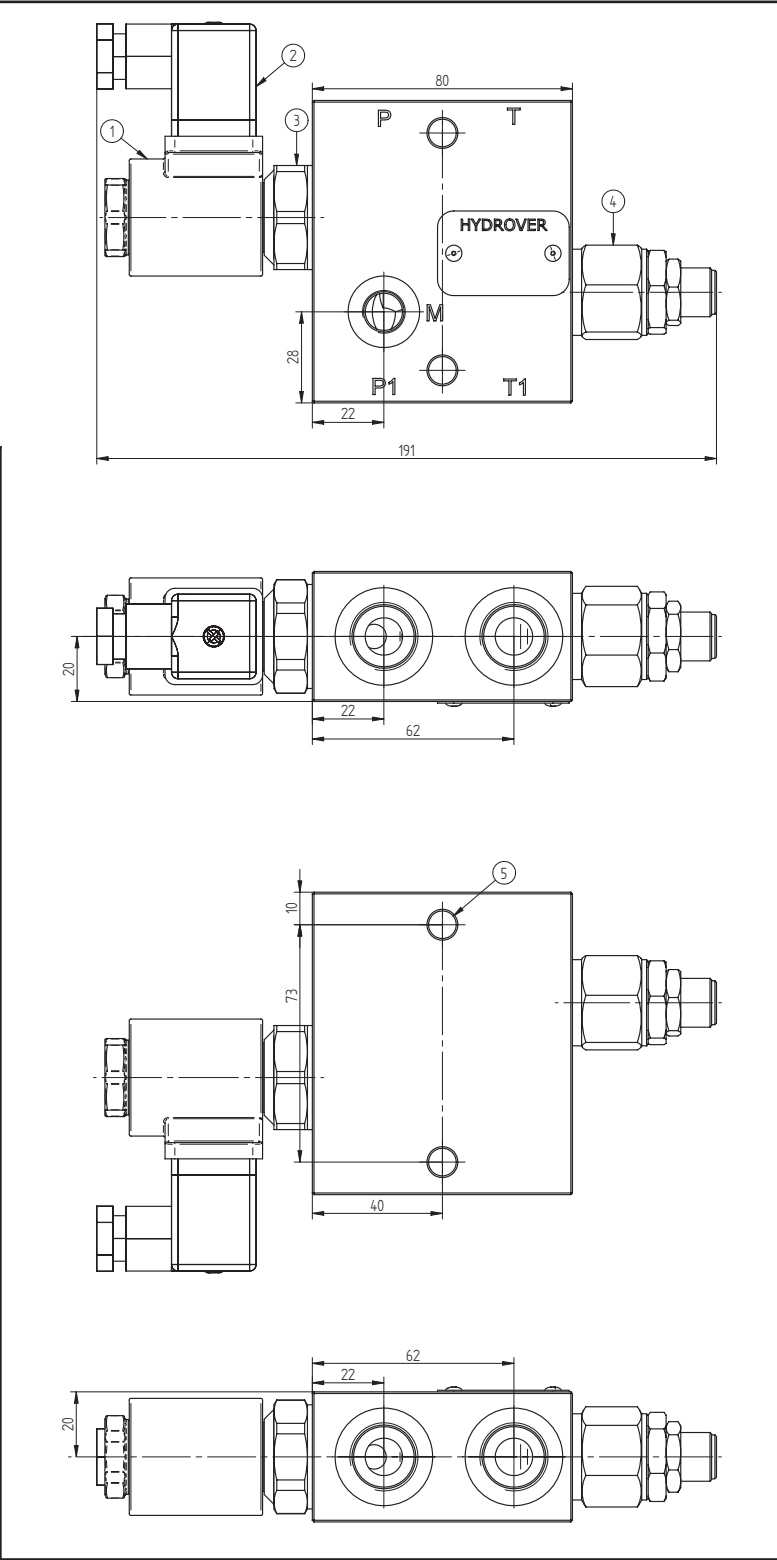
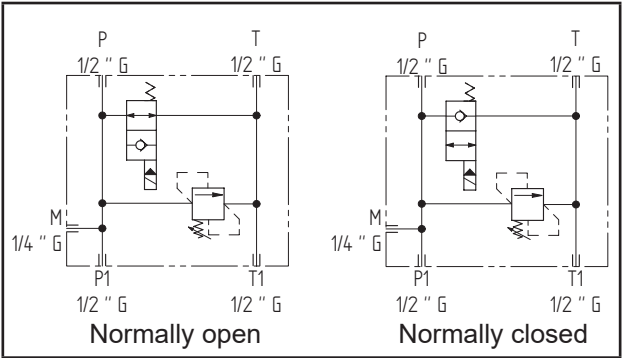
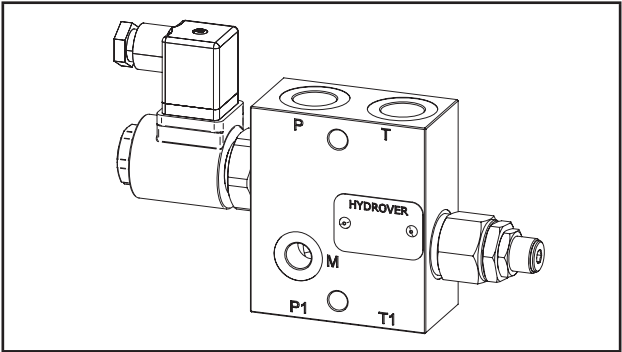
\* Omit if not required. For example, to order the product without the solenoid cartridge valve, omit the coil connection, coil voltage and manual override options: H17005A-S2.  
The manifold will still be provided with the corresponding cavity.  
To inhibit a function, replace the related valve options with TL: eg H17005A-S2-TL.  
In the cavity it will be mounted a long plug.

Valve	Cavity	Long plug code
Solenoid valve VEI-16 OD.15.05.18-Y-000000 or VEI-16 OD.15.06.18-Y-000000	CA-08A-2N	0489A2005600000
Pressure relief valve VMD1.040	CA-10A-2N	0489A2008500000

Inline valve with bypass and relief / 60 lpm **H17006**



Technical data	
Max. pressure	250 bar
Max. flow	60 lpm *
Weight	Aluminium 1,3 Kg Steel 2,4 Kg
Manifold material	Aluminium or steel
M port	1/4" G
P / P1 / T / T1 ports	1/2" G



Dimensions in mm

N°	Description	Q.ty
1	Bosch Rexroth coil <b>D36</b> - CLASS H DIN 43650 ISO 4400 *	1
2	Connector DIN 43650 ISO 4400	1
3	Bosch Rexroth solenoid valve <b>OD.15.05.17-Y-000000</b> (normally closed) o <b>OD.15.06.17-Y-000000</b> (normally open) depicted without manual override *	1
4	Bosch Rexroth relief valve <b>VMD1.070</b> *	1
5	Ø 8,5 through hole for mounting	2

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

Ordering code

H	1	7	0	0	6	-	-	-	-	-	-	-	-	-	-
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Hydrover product

Product series  
17 series - Inline valves

Product ID

Manifold material  
Aluminium = A  
Steel = S

Relief valve adjustment type \*  
Screw = S

Relief valve adjustment pressure range \*  
10-60 bar = 0  
40-110 bar = 1  
110-220 bar = 2  
220-260 bar = 3

Solenoid valve  
coil connection \*  
1 = DIN 43650  
ISO 4400

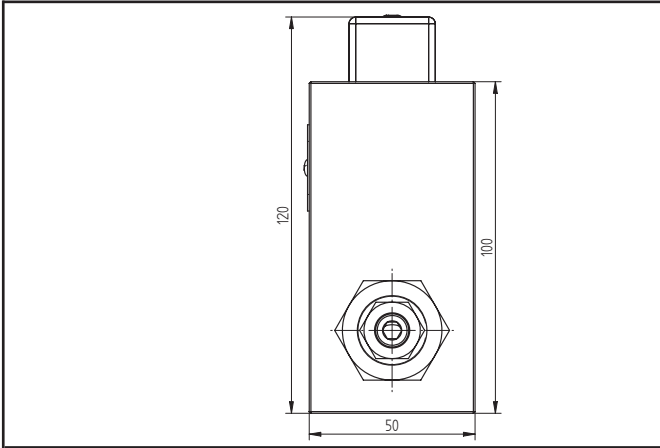
Solenoid valve  
coil voltage \*  
OB = 12V DC  
OC = 24V DC  
OD = 48V DC  
OU = 110V RAC  
AH = 230V RAC

Solenoid valve  
manual override \*  
E0 = Without  
EP = Push (NA)  
EV = Screw (NC)  
EG = Push and twist (NA)

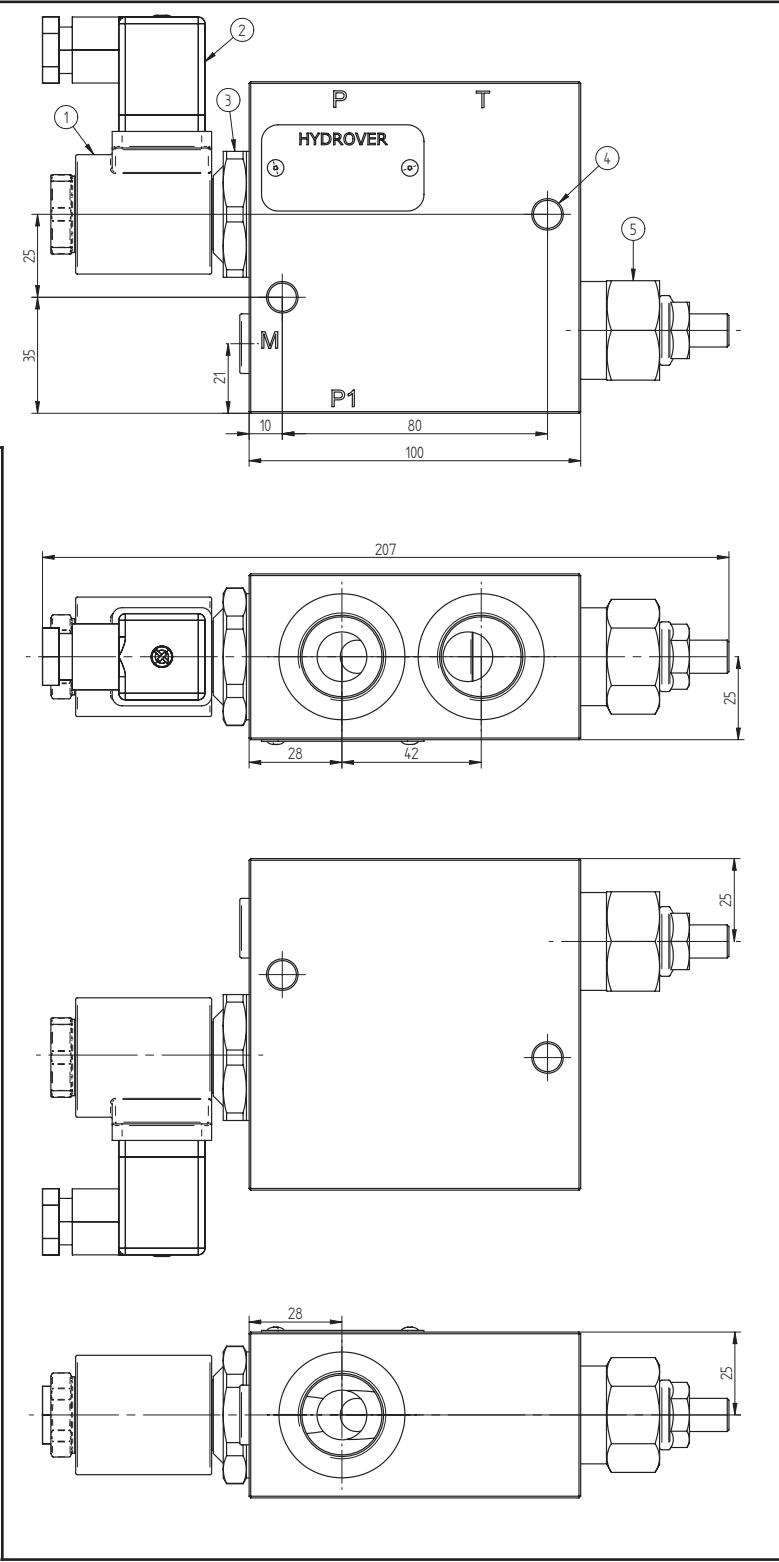
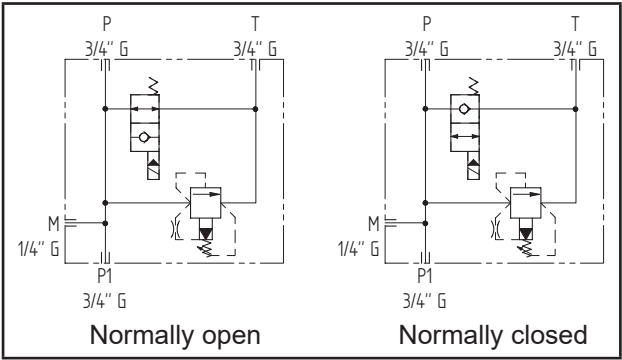
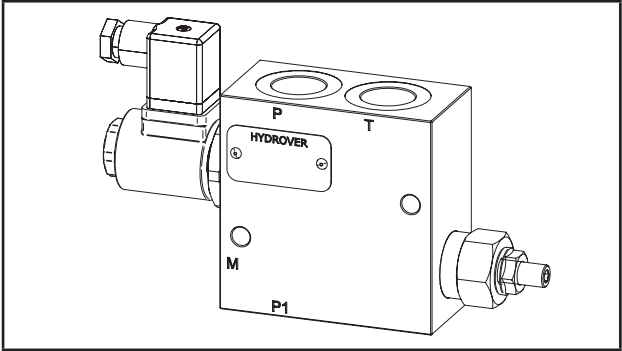
Solenoid valve spool type \*  
NA = Normally open  
NC = Normally closed

\* Omit if not required. For example, to order the product without the solenoid cartridge valve, omit the coil connection, coil voltage and manual override options: H17006A-S2.  
The manifold will still be provided with the corresponding cavity.  
To inhibit a function, replace the related valve options with TL: eg H17006A-S2-TL.  
In the cavity it will be mounted a long plug.

Valve	Cavity	Long plug code
Solenoid valve OD.15.05.17-Y-000000 / OD.15.06.17-Y-000000	017-E	R-800-014
Pressure relief valve VMD1.070	CA-10A-2N	0489A2008500000



Technical data	
Max. pressure	250 bar
Max. flow	120 lpm *
Weight	2,1 Kg
Manifold material	Aluminium
M port	1/4" G
P / P1 / T ports	3/4" G



Dimensions in mm

N°	Description	Q.ty
1	Bosch Rexroth coil <b>D36</b> - CLASS H DIN 43650 ISO 4400 *	1
2	Connector DIN 43650 ISO 4400	1
3	Bosch Rexroth solenoid valve <b>OD.15.05.21-Y-00000</b> (normally closed) o <b>OD.15.06.21-Y-00000</b> (normally open) depicted without manual override *	1
4	Ø 8,5 through hole for mounting	1
5	Bosch Rexroth relief valve <b>VSP-150</b> *	2

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

Ordering code

H	1	7	0	0	3	A	-	-	-	-	-	-	-	-	-
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Hydrover product

Product series  
17 series - Inline valves

Product ID

Manifold material  
Aluminium

Relief valve adjustment type \*  
Screw = S  
Knob = K

Relief valve adjustment pressure range \*  
3-70 bar = 0  
7-105 bar = 1  
10-210 bar = 2  
35-420 bar = 3

Solenoid valve  
coil connection \*  
1 = DIN 43650  
ISO 4400

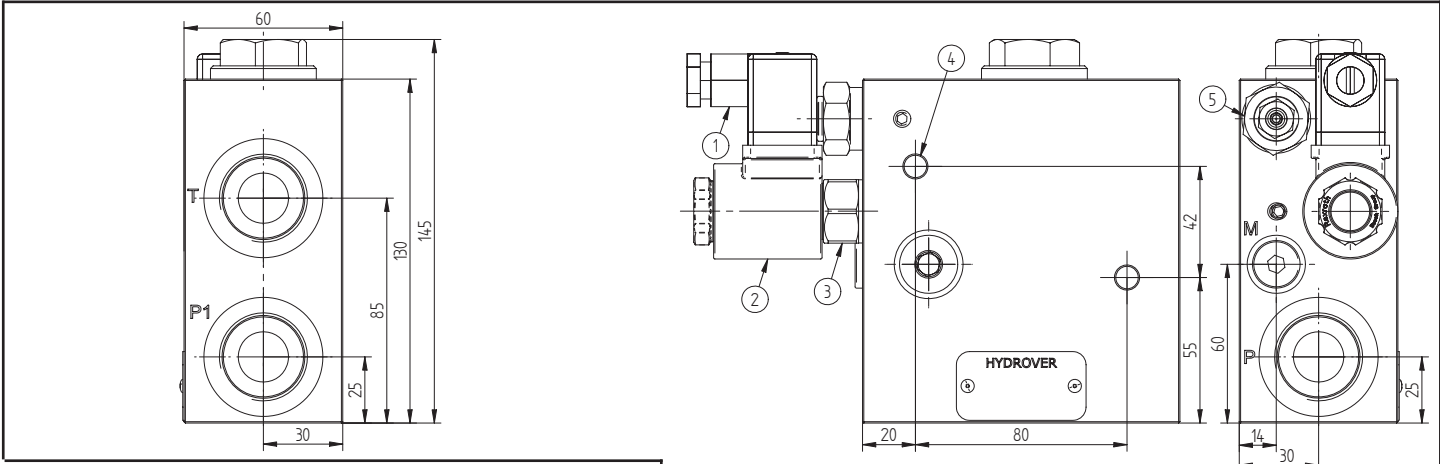
Solenoid valve  
coil voltage \*  
OB = 12V DC  
OC = 24V DC  
OD = 48V DC  
OU = 110V RAC  
AH = 230V RAC

Solenoid valve  
manual override \*  
E0 = Without  
EP = Push (NA)  
EV = Screw (NC)  
EG = Push and twist (NA)

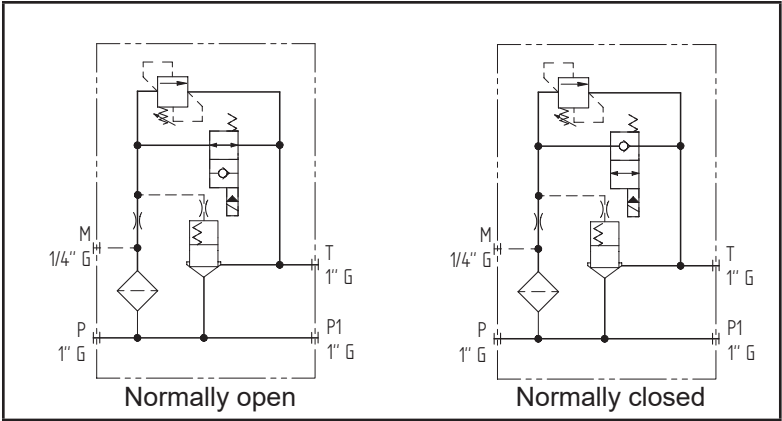
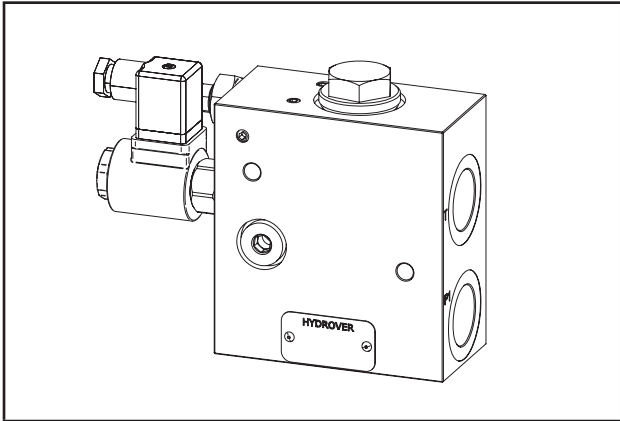
Solenoid valve spool type \*  
NA = Normally open  
NC = Normally closed

\* Omit if not required. For example, to order the product without the solenoid cartridge valve, omit the coil connection, coil voltage and manual override options: H17006A-S2.  
The manifold will still be provided with the corresponding cavity.  
To inhibit a function, replace the related valve options with TL: eg H17003A-TL-NA-E0-OC1.  
In the cavity it will be mounted a long plug.

Valve	Cavity	Long plug code
Solenoid valve OD.15.05.21-Y-00000 / OD.15.06.21-Y-00000	021-E	R-800-015
Pressure relief valve VSP-150	065	Contact Hydrover



Technical data	
Max. pressure	350 bar
Max. flow	200 lpm
Weight	6,9 Kg
Manifold material	Steel
M port	1/4" G
P / P1 / T ports	1" G



N°	Description	Q.ty
1	Connector DIN 43650 ISO 4400	1
2	Bosch Rexroth coil <b>D36</b> - CLASS H DIN 43650 ISO 4400 *	1
3	Bosch Rexroth solenoid valve <b>VEI-16-08A-NC OD.15.05.18-Y-000000</b> (normally closed) o <b>VEI-16-08A-NA OD.15.06.18-Y-000000</b> (normally open) depicted without manual override *	1
4	Ø 8,5 through hole for mounting	2
5	Bosch Rexroth relief valve <b>VSN-08A</b> depicted with screw regulation*	1

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue



Ordering code

H	1	7	0	0	4	S	-	-	-	-	-	-	-	-	-
<b>Hydrover product</b>						<b>Solenoid valve coil connection *</b> 1 = DIN 43650 ISO 4400									
<b>Product series</b> 17 series - Inline valves						<b>Solenoid valve coil voltage *</b> OB = 12V DC OC = 24V DC OD = 48V DC OU = 110V RAC AH = 230V RAC									
<b>Product ID</b>						<b>Solenoid valve manual override *</b> E0 = Without EP = Push (NA) EV = Screw (NC) EG = Push and twist (NA)									
<b>Manifold material</b> Steel						<b>Solenoid valve spool type *</b> NA = Normally open NC = Normally closed									
<b>Relief valve adjustment type *</b> Screw = S Knob = K															
<b>Relief valve adjustment pressure range *</b> 10-70 bar = 0 35-140 bar = 1 105-210 bar = 2 175-350 bar = 3 35-350 bar (adj. knob) = 3															

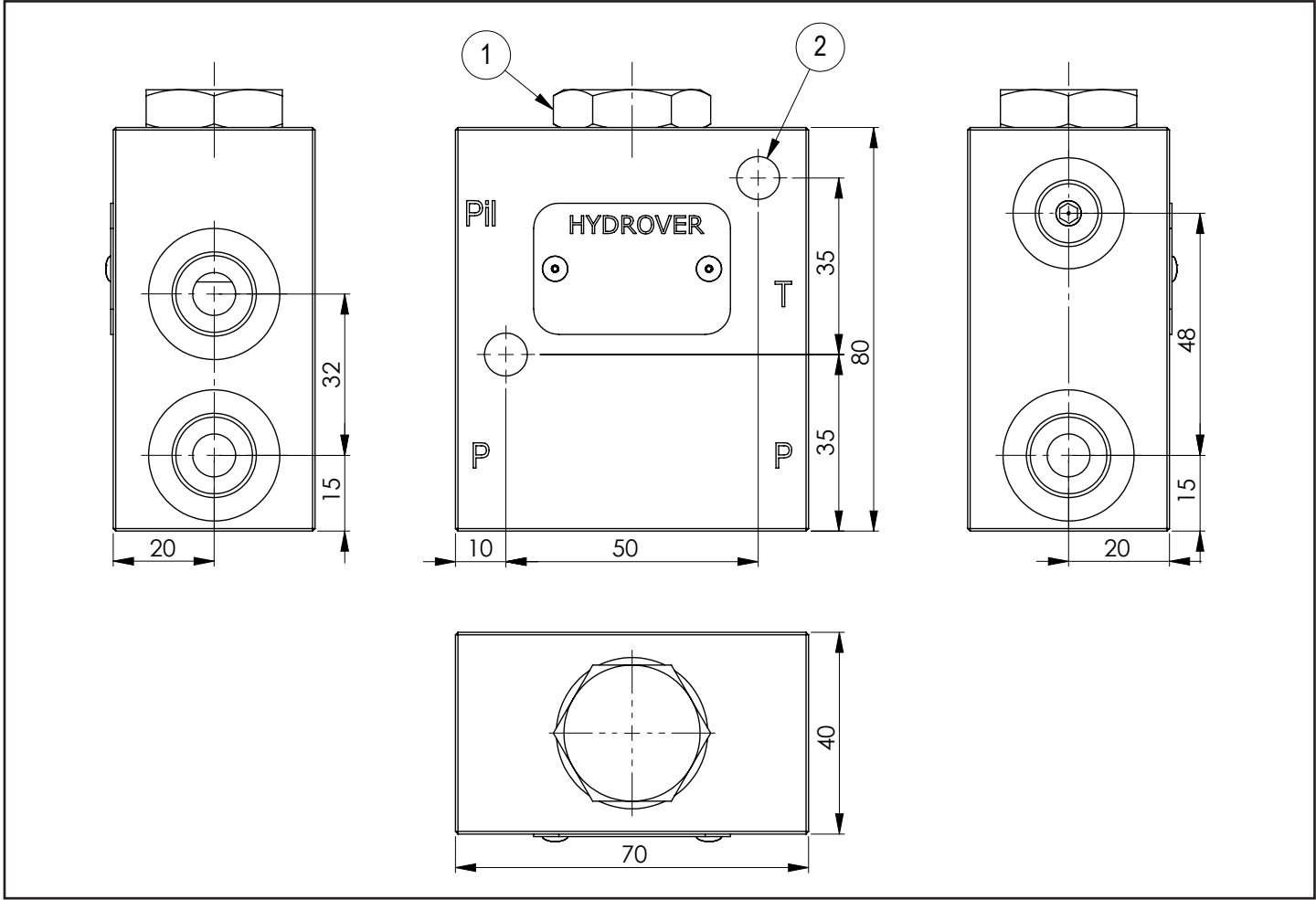
\* Omit if not required. For example, to order the product without the solenoid cartridge valve, omit the coil connection, coil voltage and manual override options: H17004S-S2.

The manifold will still be provided with the corresponding cavity.

To inhibit a function, replace the related valve options with TL: eg H17004S-TL-NA-E0-OC1.

In the cavity it will be mounted a long plug.

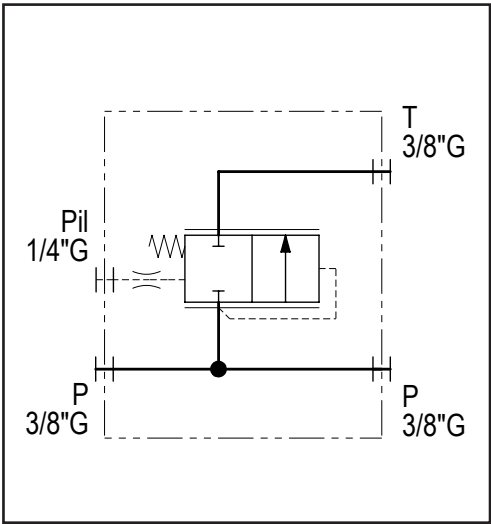
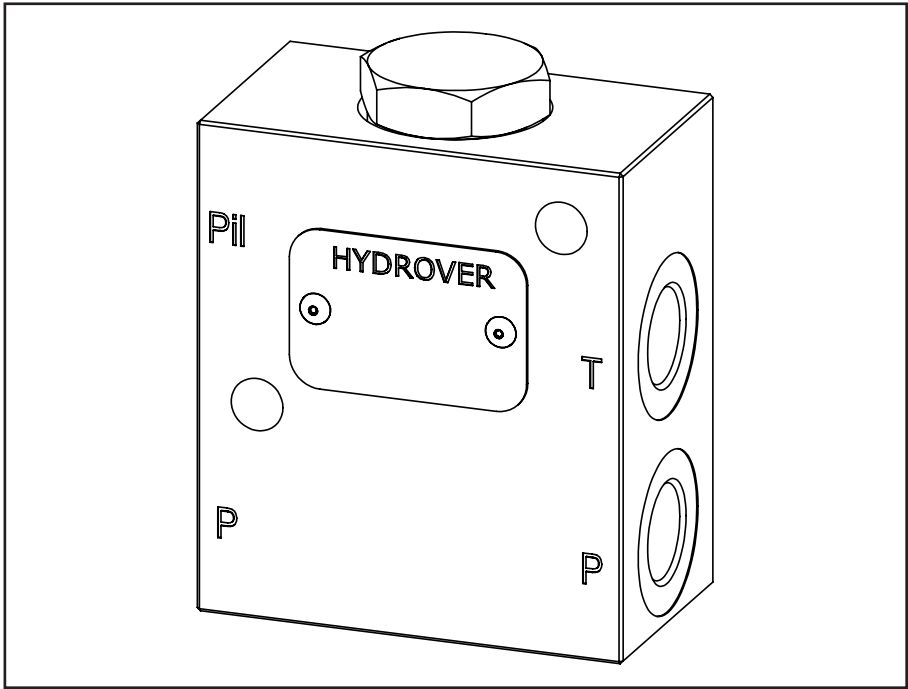
Valve	Cavity	Long plug code
Solenoid valve VEI-16-08A-NC OD.15.05.18-Y-000000 or VEI-16 08A-NA OD.15.06.18-Y-000000	CA-08A-2N	0489A2005600000
Pressure relief valve VSBN-08A	CA-08A-2N	0489A2005600000

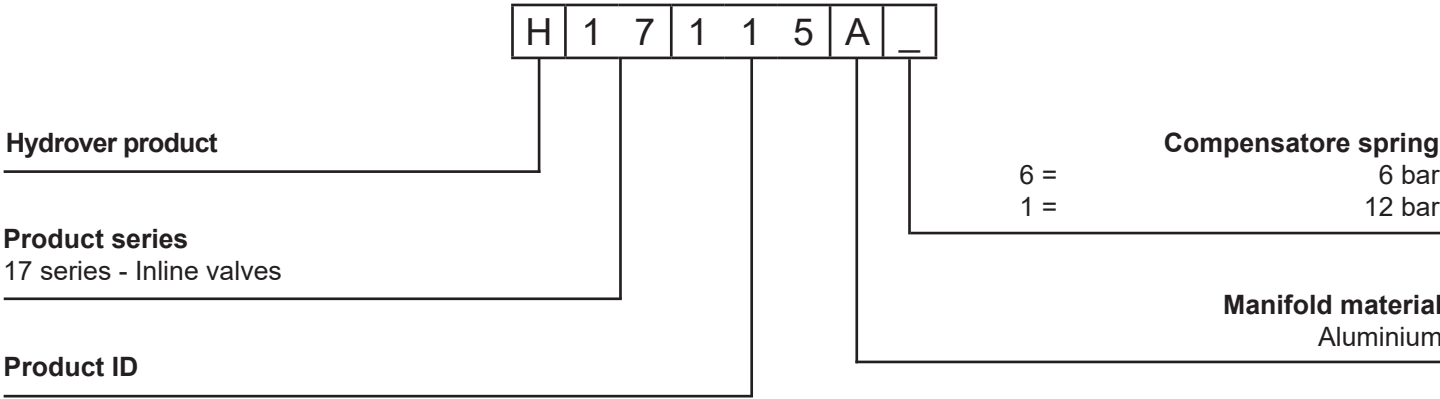


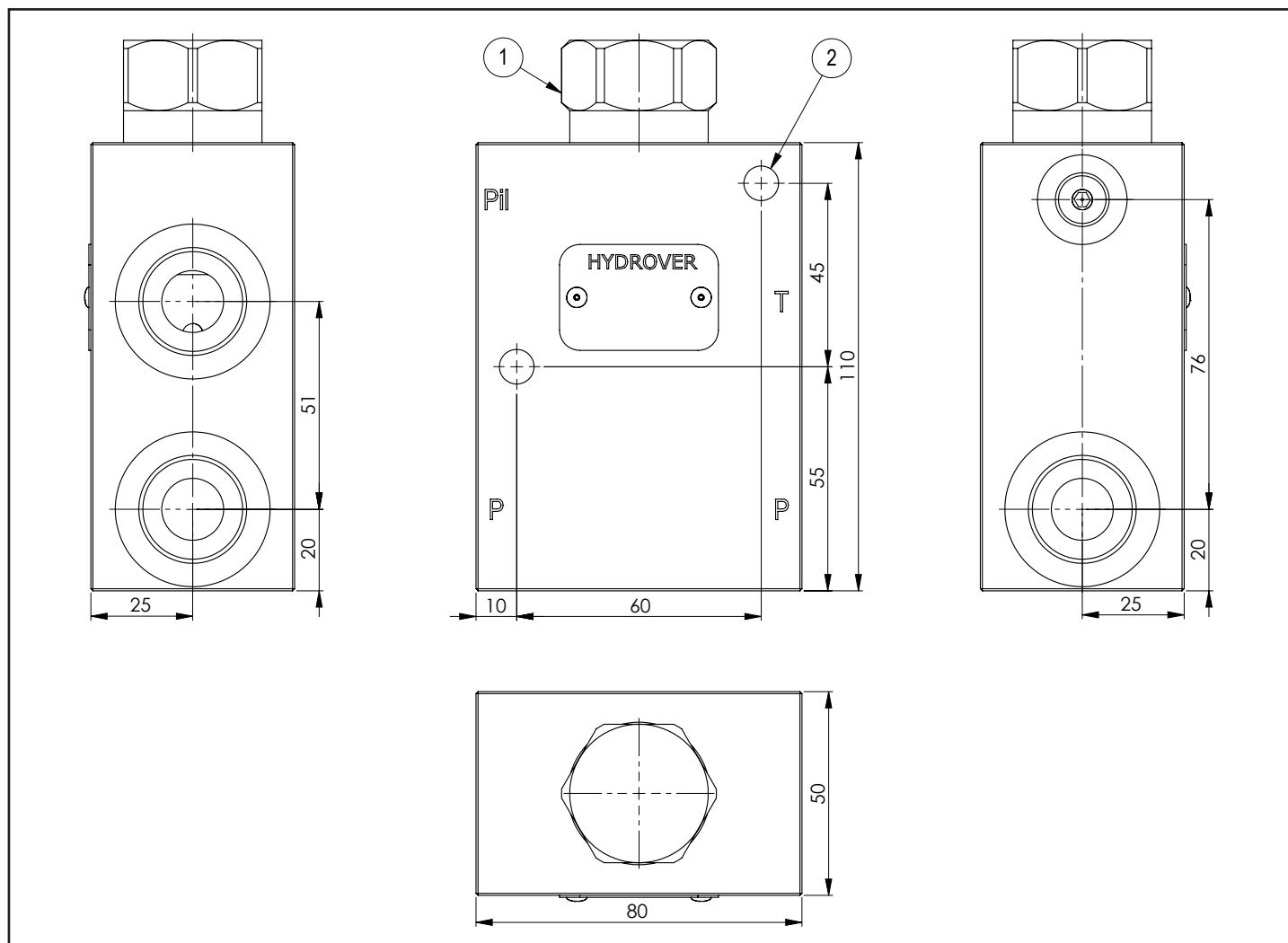
Dimensions in mm

N°	Description	Q.ty
1	Compensator	1
2	Ø 8,5 through hole for mounting	2

Technical data	
Max. pressure	250 bar
Max. flow	40 lpm
Weight	0,66 Kg
Manifold material	Aluminium
Pil port	1/4" G
P / T ports	3/8" G

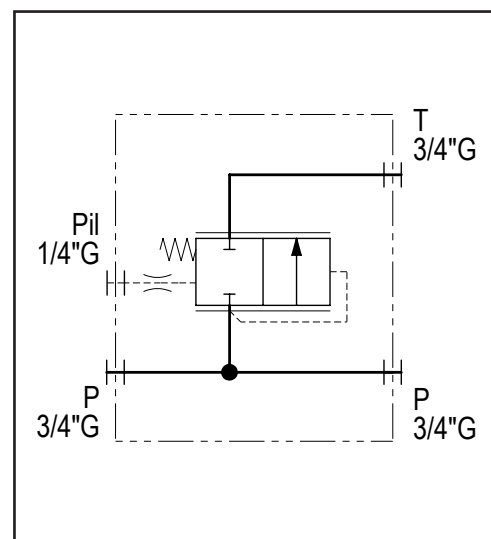
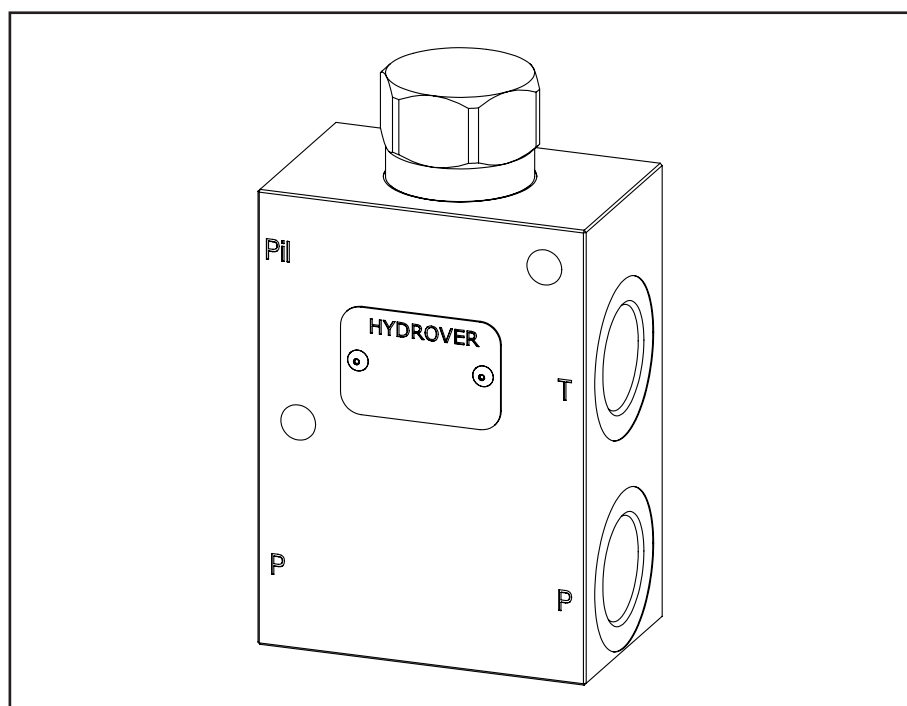


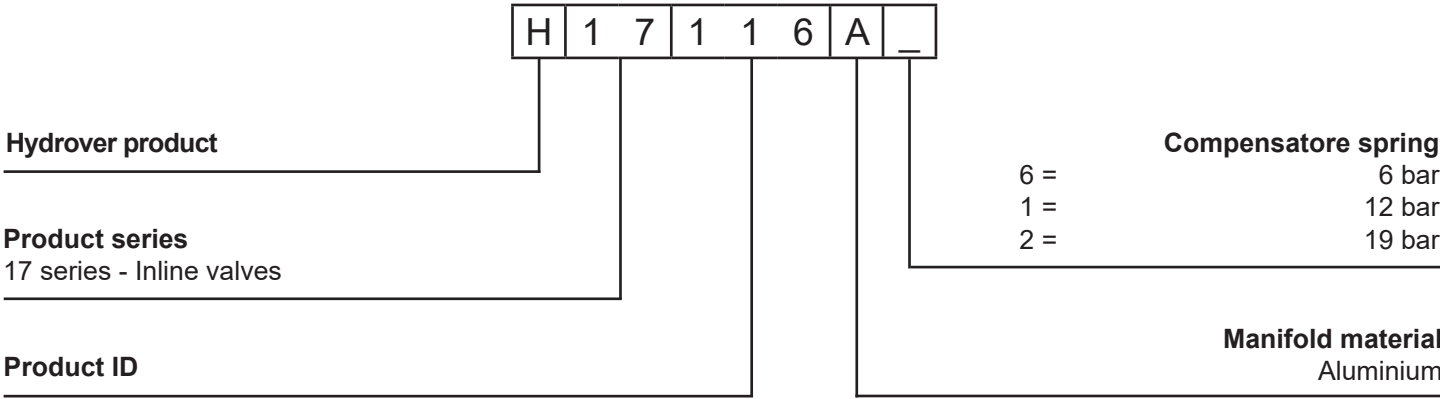




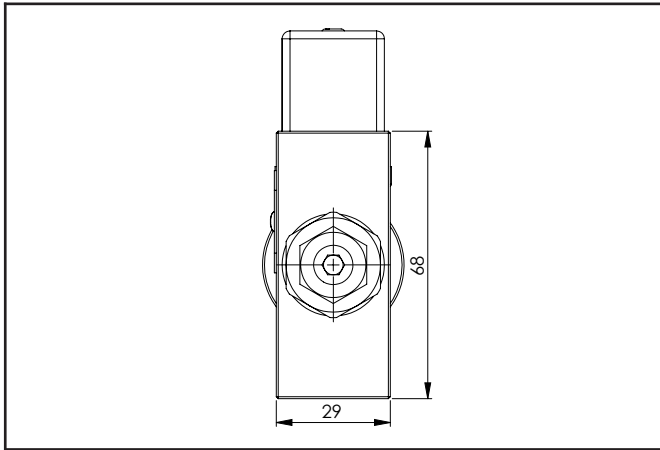
N°	Description	Q.ty
1	Compensator	1
2	Ø 8,5 through hole for mounting	2

Technical data	
Max. pressure	250 bar
Max. flow	160 lpm
Weight	1,35 Kg
Manifold material	Aluminium
Pil port	1/4" G
P / T ports	3/4" G

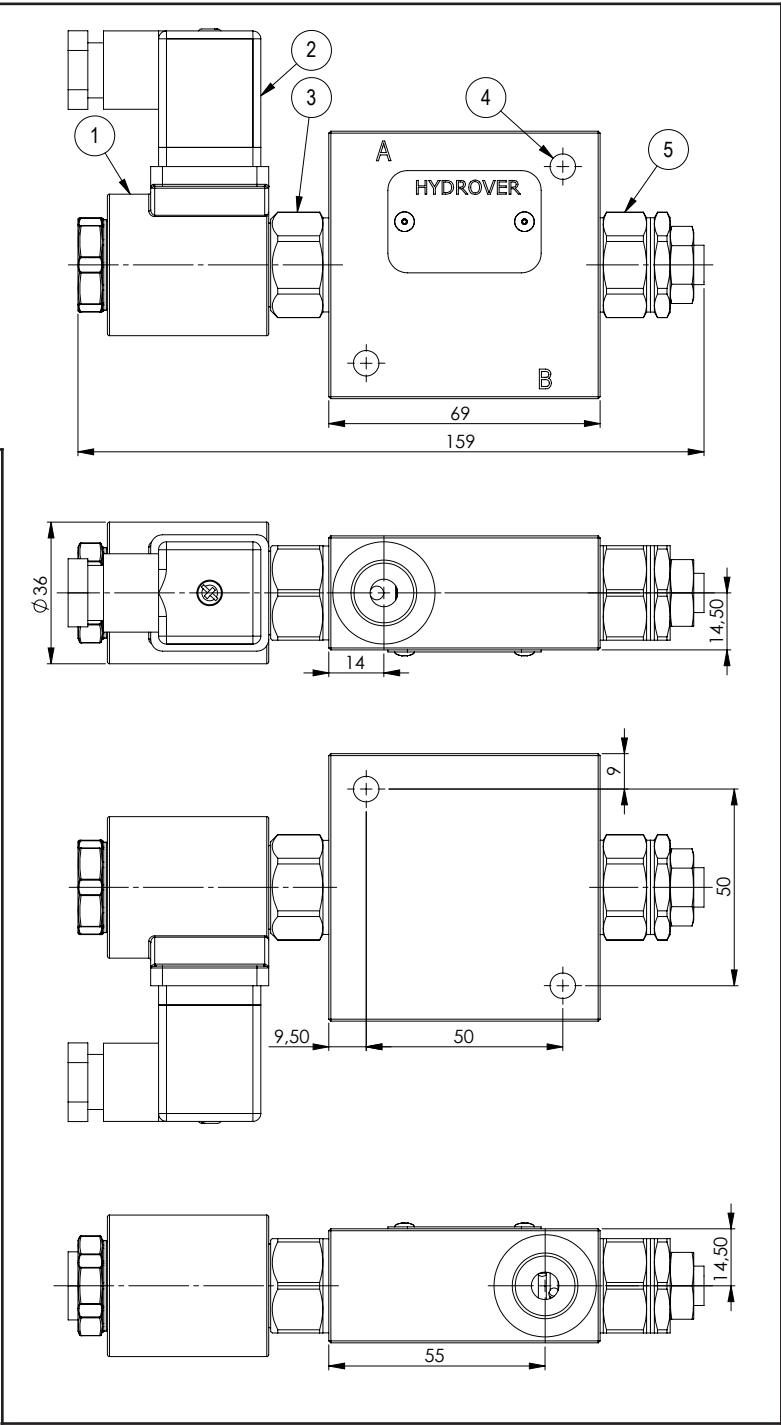
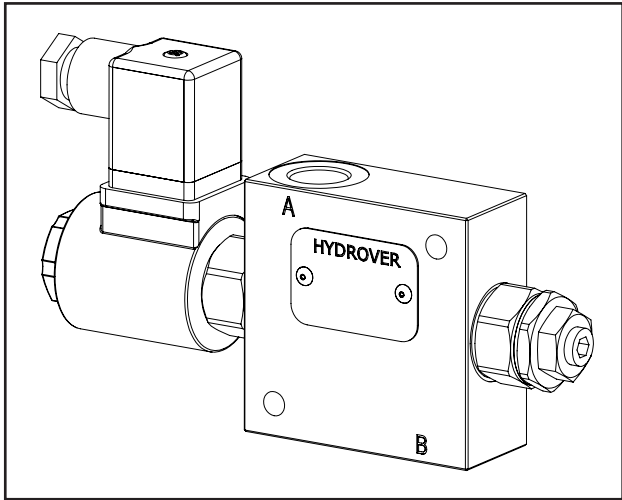




Inline flow restrictor electrically enabled - A-B 3/8" G **H17130**



Technical data	
Max. pressure	250 bar
Max. flow	40 lpm *
Weight	0,77 Kg
Manifold material	Aluminium
A / B ports	3/8" G



Dimensions in mm

N°	Description	Q.ty
1	Bosch Rexroth coil <b>D36</b> - CLASS H DIN 43650 ISO 4400 *	1
2	Connector DIN 43650 ISO 4400	1
3	Bosch Rexroth solenoid valve <b>VEI-16-08A-NC OD.15.05.18-Y-000000</b> (normally closed) o <b>VEI-16-08A-NA OD.15.06.18-Y-000000</b> (normally open) depicted without manual override *	1
4	Ø 6,5 through hole for mounting	2
5	Bosch Rexroth bidirectional flow restrictor <b>OD.21.01-X-56</b> * depicted with screw adjustment	1

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

Ordering code

H	1	7	1	3	0	A	-	-	Q	-	-	-	-	-	-	-	-
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Hydrover product

Product series  
17 series - Inline valves

Product ID

Manifold material  
Aluminium

Flow restrictor  
adjustment type \*  
Screw = S

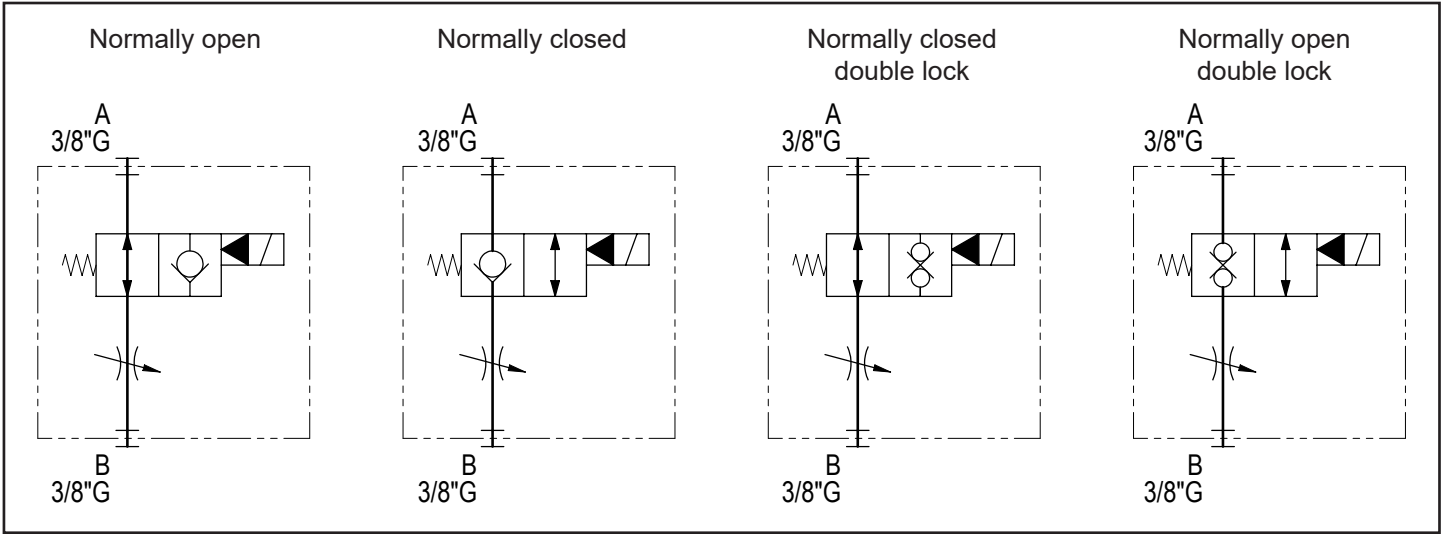
Solenoid valve spool type \*  
Normally open = NA  
Normally closed = NC  
Normally open double lock = 2A  
Normally closed double lock = 2C

Solenoid valve  
coil connection \*  
1 = DIN 43650  
ISO 4400

Solenoid valve  
coil voltage \*  
OB = 12V DC  
OC = 24V DC  
OD = 48V DC  
OU = 110V RAC  
AH = 230V RAC

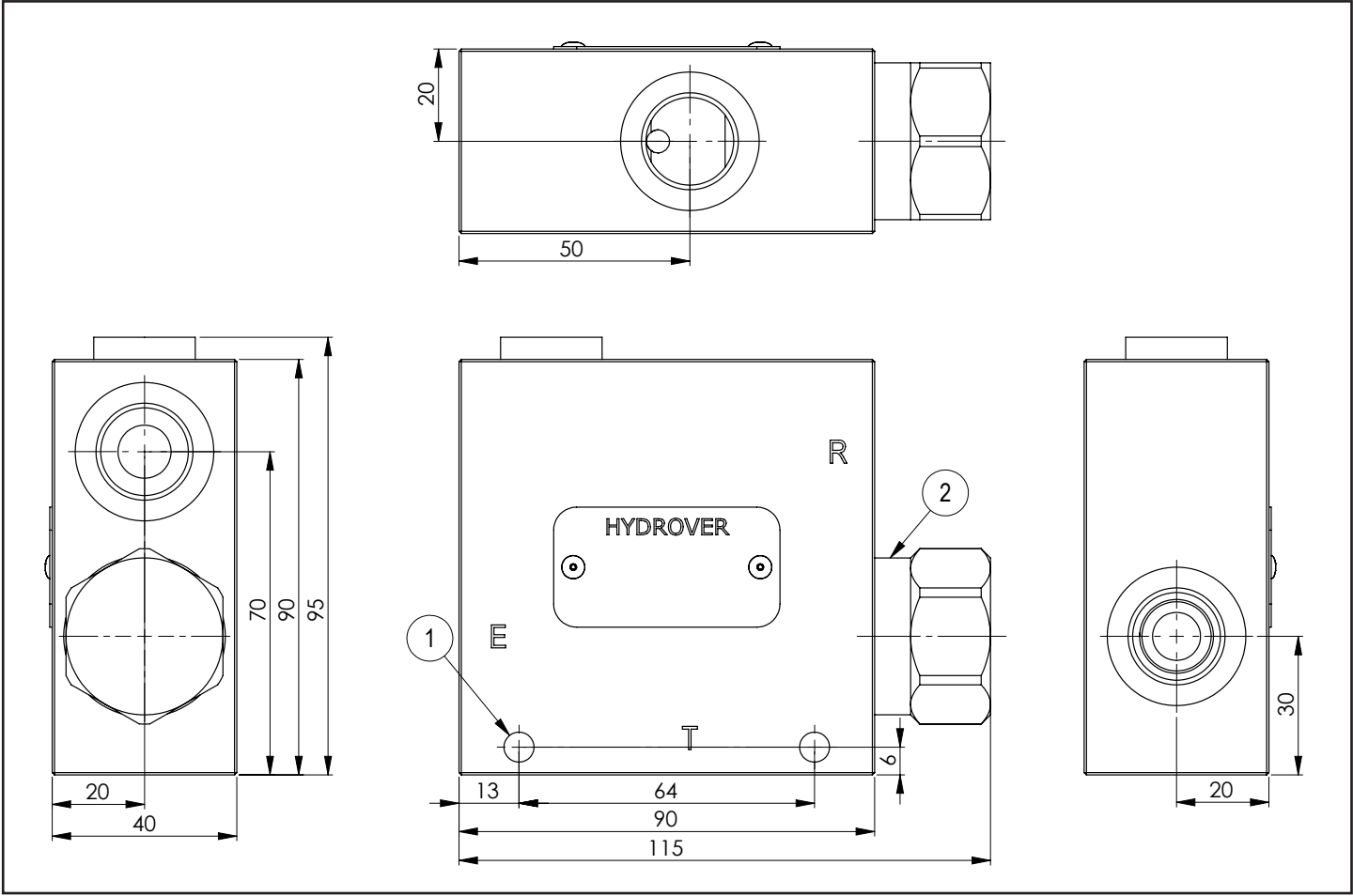
Solenoid valve  
manual override \*  
E0 = Without  
EP = Push (NA, 2A)  
EV = Screw (NC, 2C)  
EG = Push and twist (NA, 2A)

\* Omit if not required. For example, to order the product without the solenoid cartridge valve, omit the coil connection, coil voltage and manual override options: H17129A-SQ.  
The manifold will still be provided with the corresponding cavity.



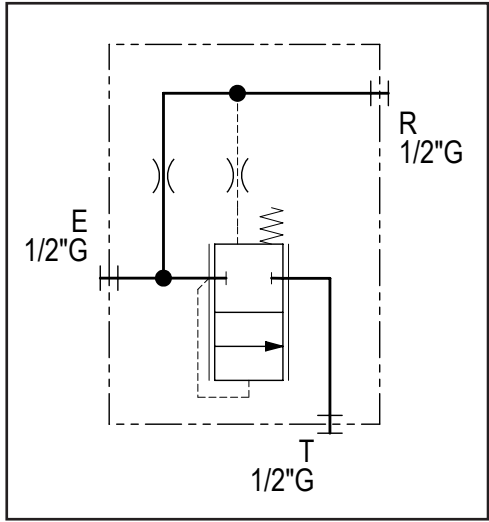
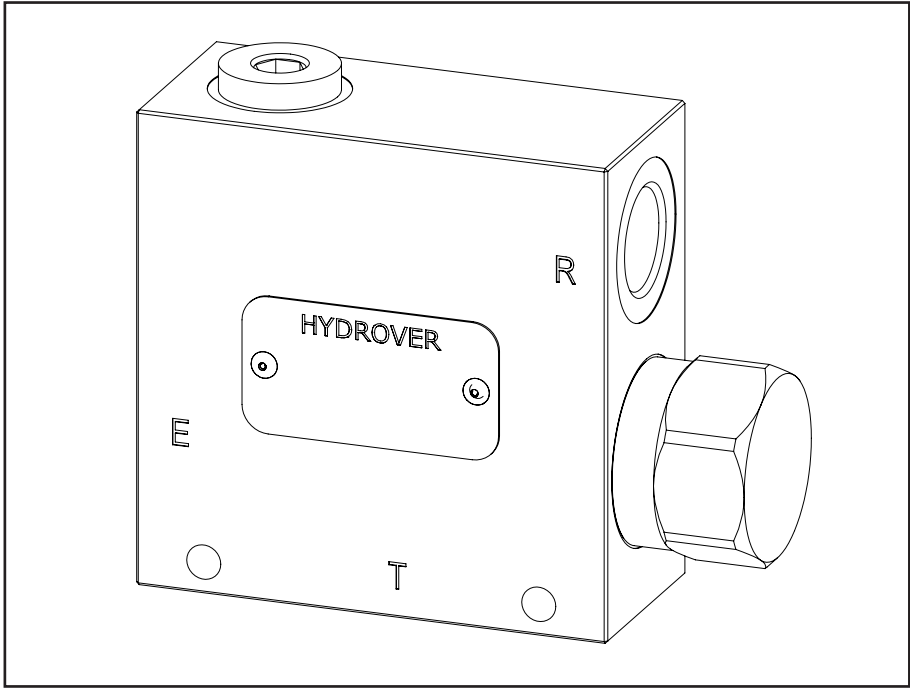
Fixed setting flow regulator 3 way compensated inline valve **H17002**

Dimensions in mm

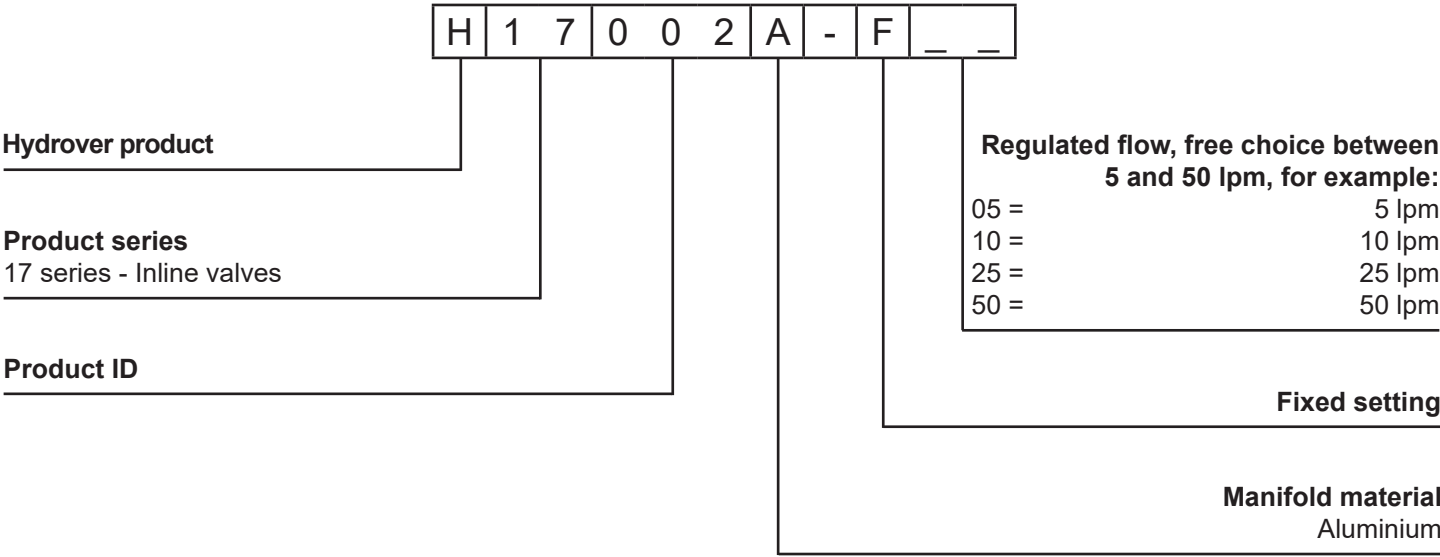


N°	Description	Q.ty
1	Ø 6,5 through hole for mounting	2
2	Compensator	1

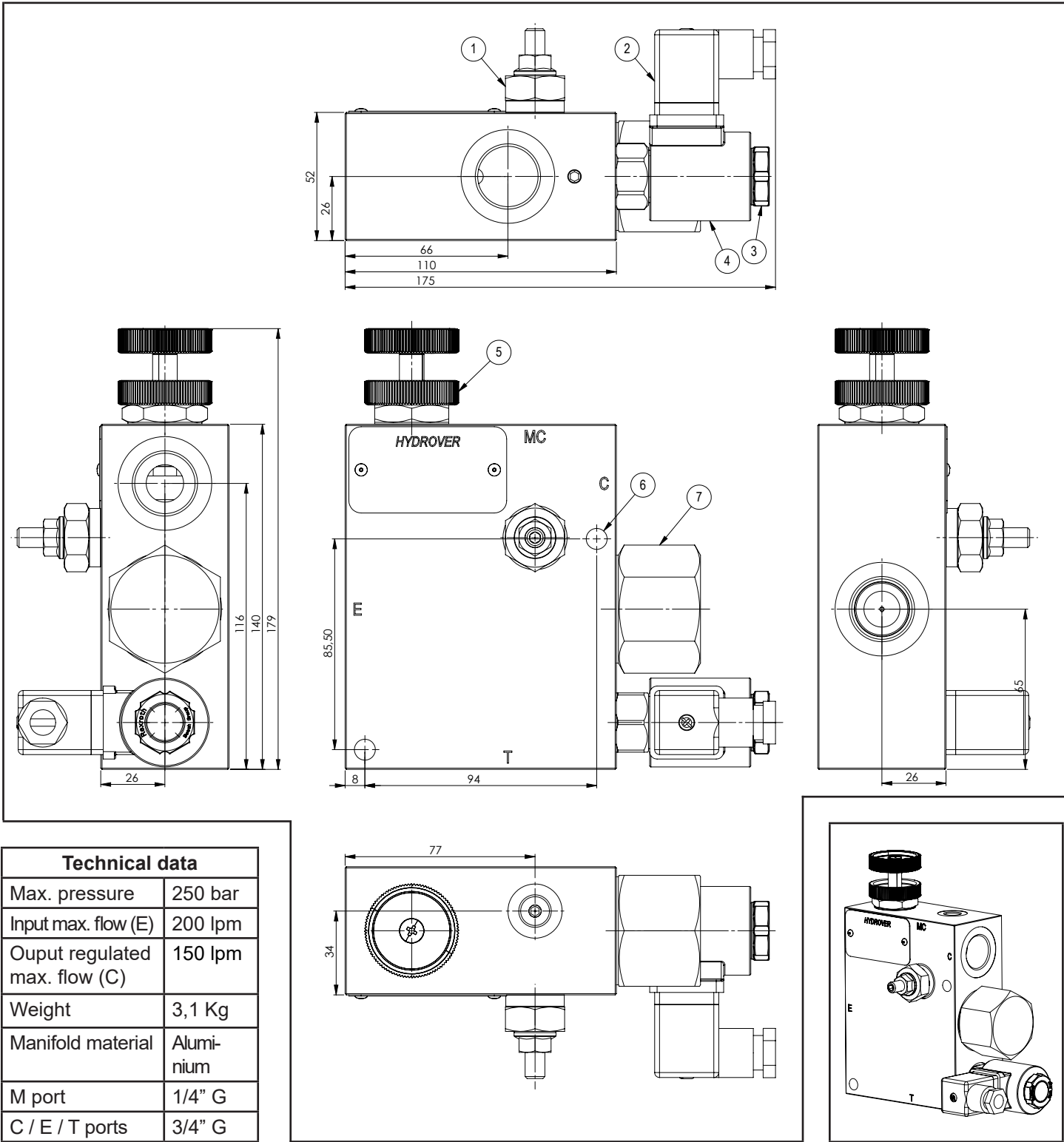
Technical data	
Max. pressure	250 bar
Max. inlet flow (E)	70 lpm
Max. regulated flow (R)	50 lpm
Weight	1,1 Kg
Manifold material	Aluminium
E / T / R ports	1/2" G







Flow regulator 3 way compensated inline valve with bypass and relief **H17045**



Dimensions in mm

Technical data	
Max. pressure	250 bar
Input max. flow (E)	200 lpm
Ouput regulated max. flow (C)	150 lpm
Weight	3,1 Kg
Manifold material	Alumi-nium
M port	1/4" G
C / E / T ports	3/4" G

N°	Description	Q.ty
1	Bosch Rexroth relief valve <b>VSN-08A</b> *	1
2	Connector DIN 43650 ISO 4400	1
3	Bosch Rexroth solenoid valve <b>VEI-16-08A-NC OD.15.05.18-Y-000000</b> (normally closed) o <b>VEI-16-08A-NA OD.15.06.18-Y-000000</b> (normally open) depicted without manual override *	1
4	Bosch Rexroth coil <b>D36</b> - CLASS H DIN 43650 ISO 4400 *	1
5	Restrictor Bosch Rexroth	1
6	Ø 8,5 through hole for mounting	2
7	Compensator Bosch Rexroth	1

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

Ordering code

H	1	7	0	4	5	A	-			-			-			-			
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### Hydrover product

## Product series

### 17 series - Inline valves

Product ID

## Manifold material

Aluminium

### Relief valve adjustment type \*

Screw

$$= S$$

Knob

$$= K$$

**Relief valve adjustment pressure range \***

10-70 bar  $\sigma_{\text{max}} = 0$

35-140 bar = 1

105-210 bar = 2

175-350 bar = 3

35-350 bar (adj. knob) = 3

**Solenoid valve  
coil connection \***

1 = DIN 43650

ISO 4400

**Solenoid valve  
coil voltage \***

OB = 12V DC

OC = 24V DC

OD = 48V DC

OU = 110V RAC

AH = 230V RAC

**Solenoid valve  
manual override \***

E0 = Without

EP = Push (NA)

EV = Screw (NC)

EG = Push and twist (NA)

### Solenoid valve spool type \*

NA = Normally open

NC = Normally closed

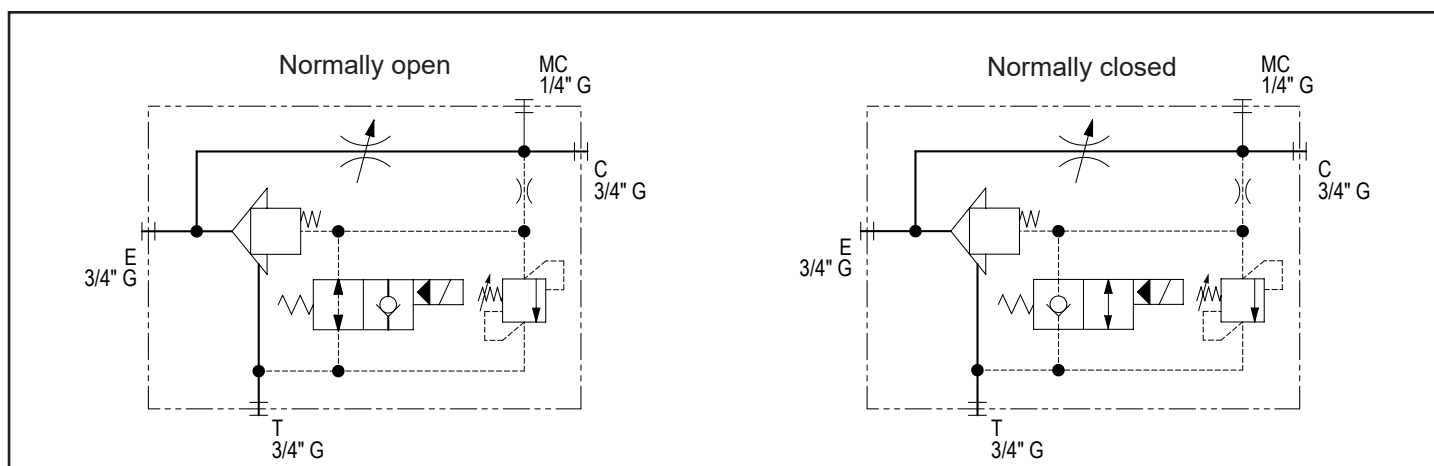
\* Omit if not required. For example, to order the product without the solenoid cartridge valve, omit the coil connection, coil voltage and manual override options: H17045A-S2.

The manifold will still be provided with the corresponding cavity.

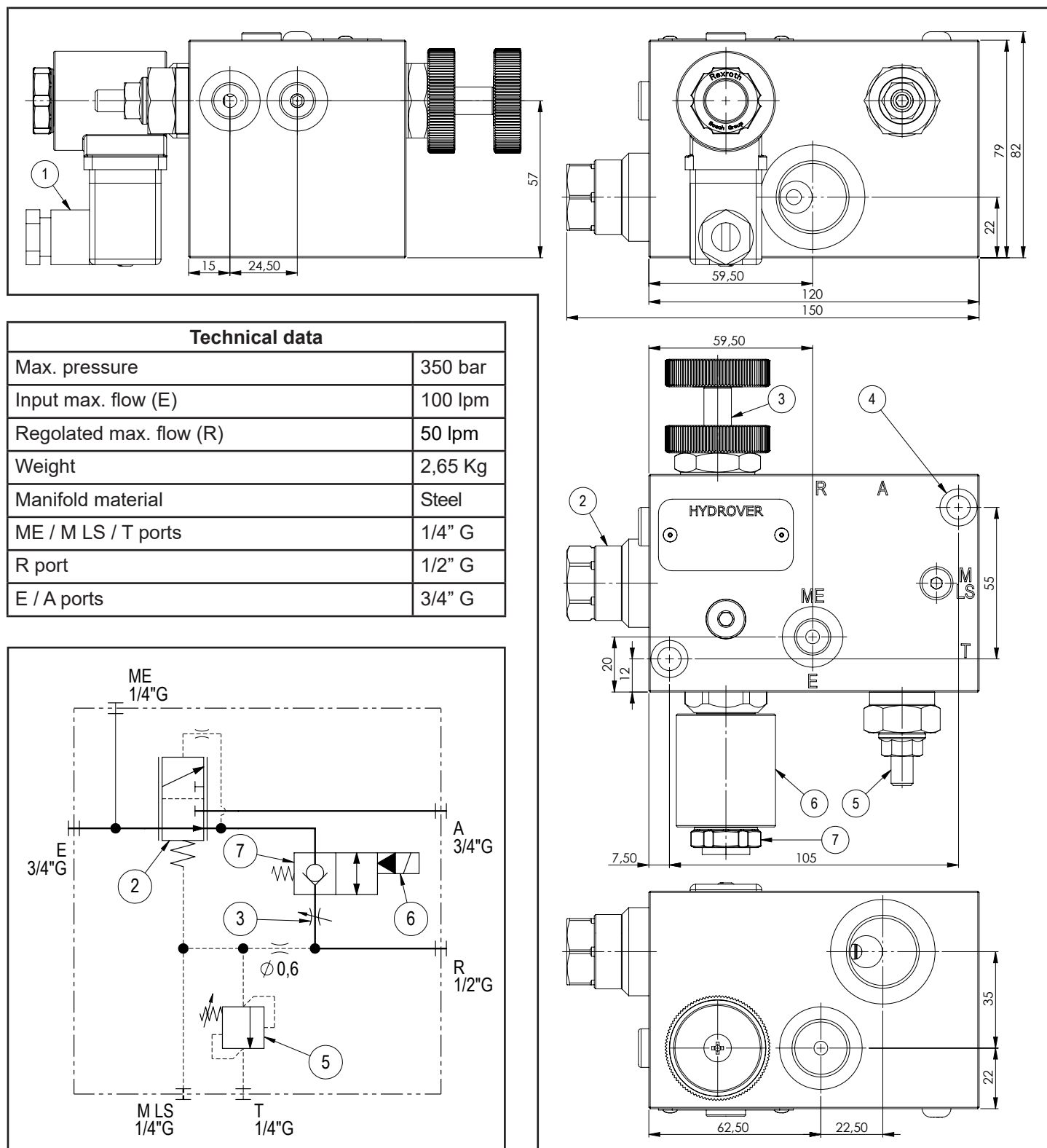
To inhibit a function, replace the related valve options with TL: eg H17045A-TL-NA-E0-OC1.

In the cavity it will be mounted a long plug.

Valve	Cavity	Long plug code
Solenoid valve VEI-16-08A-NC OD.15.05.18-Y-000000 or VEI-16 08A-NA OD.15.06.18-Y-000000	CA-08A-2N	<b>0489A2005600000</b>
Pressure relief valve VSBN-08A	CA-08A-2N	<b>0489A2005600000</b>



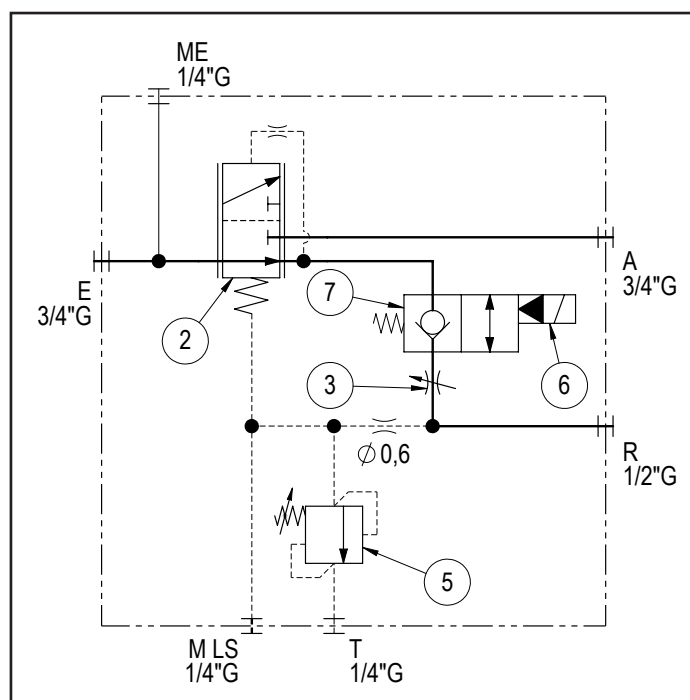
In-line valve with 3 way compensated flow control  
 priority way electrically enabled and relief

**H17175**


Dimensions in mm

**Technical data**

Max. pressure	350 bar
Input max. flow (E)	100 lpm
Regulated max. flow (R)	50 lpm
Weight	2,65 Kg
Manifold material	Steel
ME / MLS / T ports	1/4" G
R port	1/2" G
E / A ports	3/4" G



N°	Description	Q.ty
1	Connector DIN 43650 ISO 4400	1
2	Bosch Rexroth logic element <b>VRLA-12A-10-S</b>	1
3	Bosch Rexroth flow restrictor	1
4	Ø 8,5 through hole for mounting	2
5	Bosch Rexroth relief valve <b>VSNB-08A *</b>	1
6	Bosch Rexroth coil <b>S5-356 - CLASS H DIN 43650 ISO 4400 *</b>	1
7	Bosch Rexroth solenoid valve <b>VEI-16-10A-NA OD.15.06.36-Y-000000 *</b>	1

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

Ordering code

H	1	7	1	7	5	S	-	-	-	-	-	-	-	-	-
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Hydrover product

Product series  
17 series - Inline valves

Product ID

Manifold material  
Aluminium

Relief valve adjustment type \*  
Screw = S  
Knob (only with a 35-350 bar pressure range) = K

Relief valve adjustment pressure range \*  
10-70 bar = 0  
35-140 bar = 1  
105-210 bar = 2  
175-350 bar = 3  
35-350 bar = 4

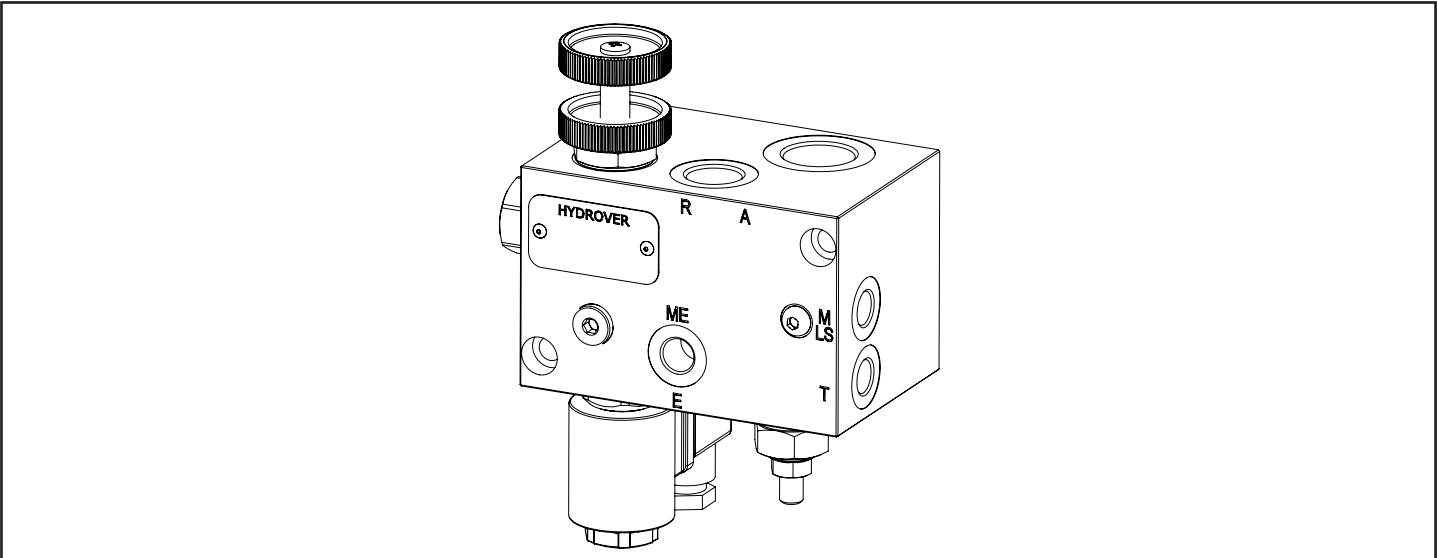
Solenoid valve  
coil connection \*  
1 = DIN 43650  
ISO 4400

Solenoid valve  
coil voltage \*  
OB = 12V DC  
OC = 24V DC  
OD = 48V DC  
OU = 110V RAC  
AH = 230V RAC

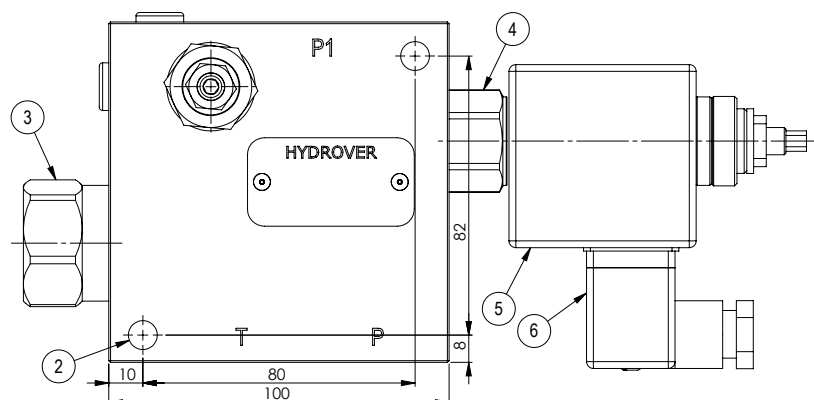
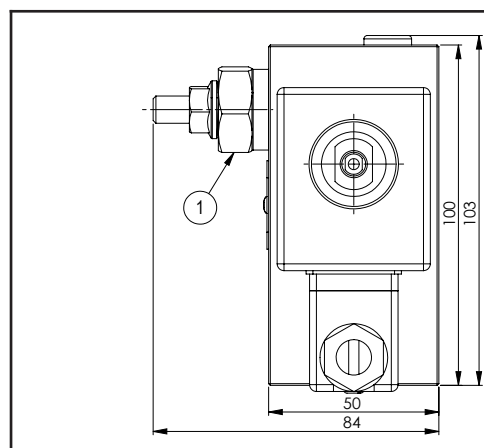
Solenoid valve  
manual override \*  
E0 = Senza comando  
EV = Comando a vite

\* Omit if not required. For example, to order the product without the solenoid cartridge valve, omit the coil connection, coil voltage and manual override options: H17175S-S2  
The manifold will still be provided with the corresponding cavity.  
To inhibit a function, replace the relevant valve variables with TL for the relief valve (example H17175S-TL-E0-OC1), and TC for the solenoid valve (example H17175S-S2-TC).  
The corresponding plug will be mounted in the cavity.

Valve	Cavity	Plug type	Plug code
Solenoid valve VEI-16 08A-NA OD.15.06.36-Y-000000	CA-10A-2N	Short	207505-7/8UNF
Pressure relief valve VSBN-08A	CA-08A-2N	Long	0489A2005600000



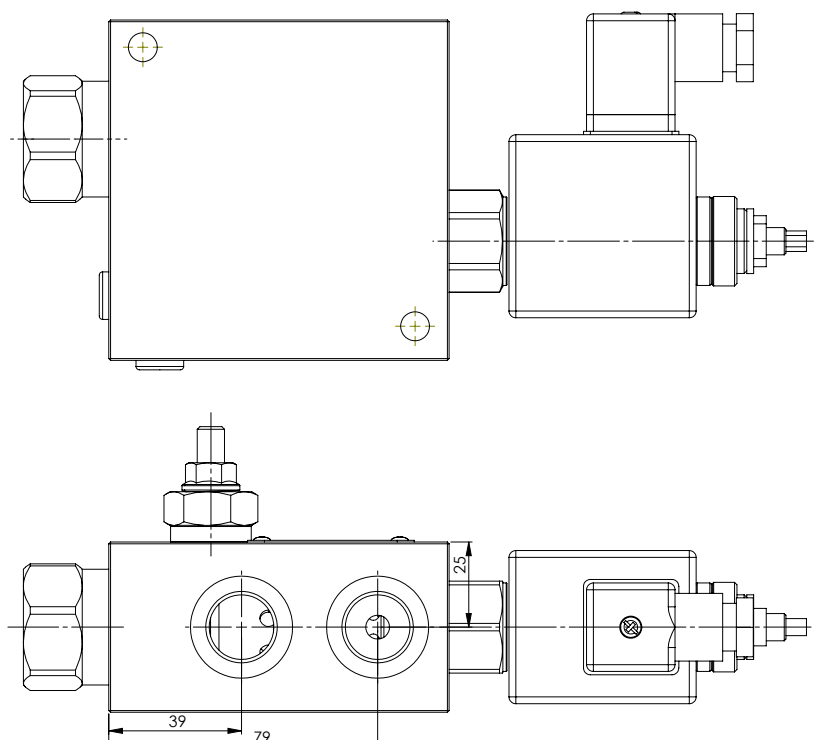
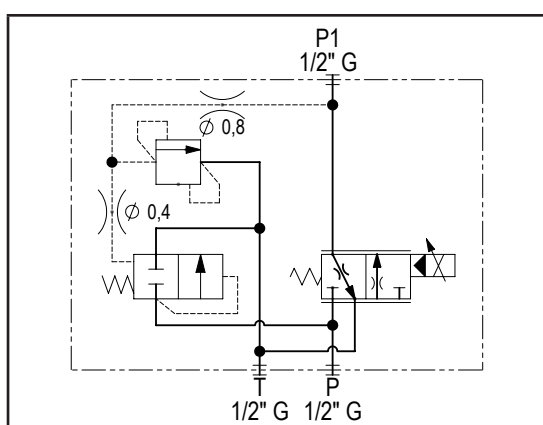
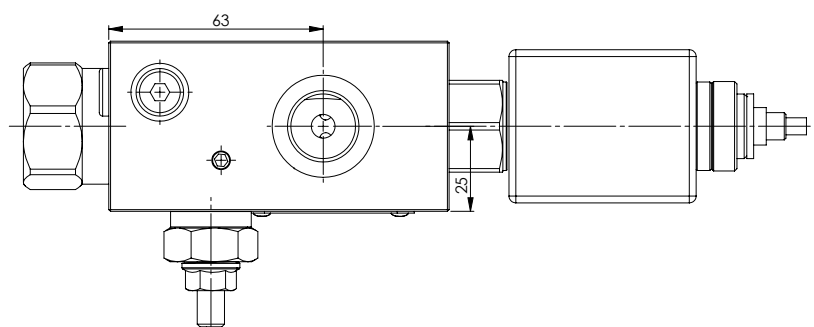
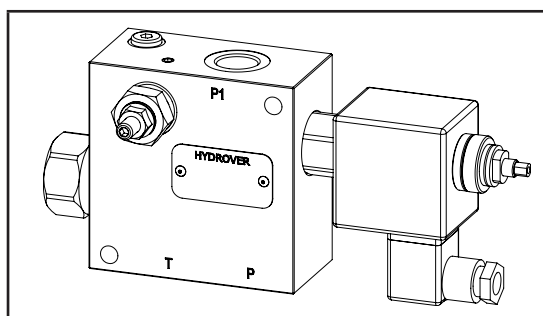
# Inline valve with proportional 3 way compensated flow regulation and relief **H17020**



Dimensions in mm

## Technical data

Max. pressure	210 bar
Input max. flow	65 lpm
Weight	Aluminium 2,3 Kg Steel 4,4 Kg
Manifold material	Aluminium or steel
P / P1 / T ports	1/2" G



N°	Description	Q.ty
1	Bosch Rexroth relief valve <b>VSBN-08A</b> *	1
2	Ø 8,5 through hole for mounting	2
3	Pressure compensator	1
4	Bosch Rexroth proportional solenoid valve <b>VEP-5A-2Q-09 / OD.92.05.77-Y-Z</b> *	1
5	Bosch Rexroth coil <b>S5-356</b> - CLASS H DIN 43650 ISO 4400 *	1
6	Connector DIN 43650 ISO 4400	1

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

## Ordering code

H	1	7	0	2	0	_	_	_	_	-	_	_	_	-	_	_	_
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## Hydrover product

## Product series

17 series - Inline valves

## Product ID

## Manifold material

Aluminium

= A

Steel

= S

## Compensator spring

5.5 bar (standard)

= 6

12.5 bar

= 1

19 bar

= 2

## Relief valve adjustment type \*

Screw

= S

Knob

= K

## Relief valve adjustment pressure range \*

10-70 bar

= 0

35-140 bar

= 1

105-210 bar

= 2

175-350 bar

= 3

35-350 bar (adj. knob)

= 3

## Proportional solenoid valve coil connection \*

1 = DIN 43650 ISO 4400

## Proportional solenoid valve coil voltage \*

OB = 12V DC

OC = 24V DC

## Proportional solenoid valve max. flow \*

1 = 20 lpm

2 = 30 lpm

3 = 40 lpm

To evaluate the max. flow refer to  
[VEP-5A-2Q-09 / OD.92.05.77-Y-Z](#)  
 proportional solenoid valve catalogue  
 and to the compensator spring.

## Proportional solenoid valve manual override \*

E0 = Without

EV = Screw

\* Omit if not required. For example, to order the product without the proportional solenoid cartridge valve, omit the coil connection, coil voltage, max. flow and manual override options: H17020A6S2.

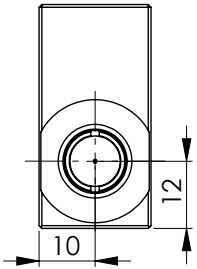
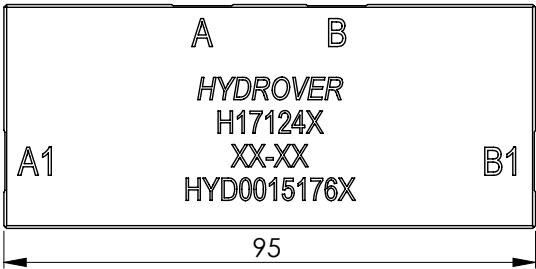
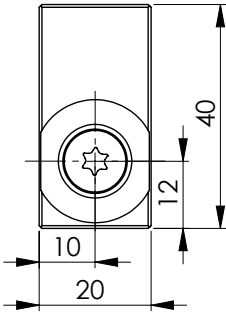
The manifold will still be provided with the corresponding cavity.

To inhibit a function, replace the related valve options with TL: eg H17020A6TL-EV2-OC1.

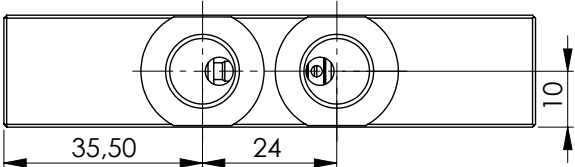
In the cavity it will be mounted a long plug.

Valve	Cavity	Long plug code
Bosch Rexroth relief valve VSBN-08A	CA-08A-2N	<b>0489A2005600000</b>

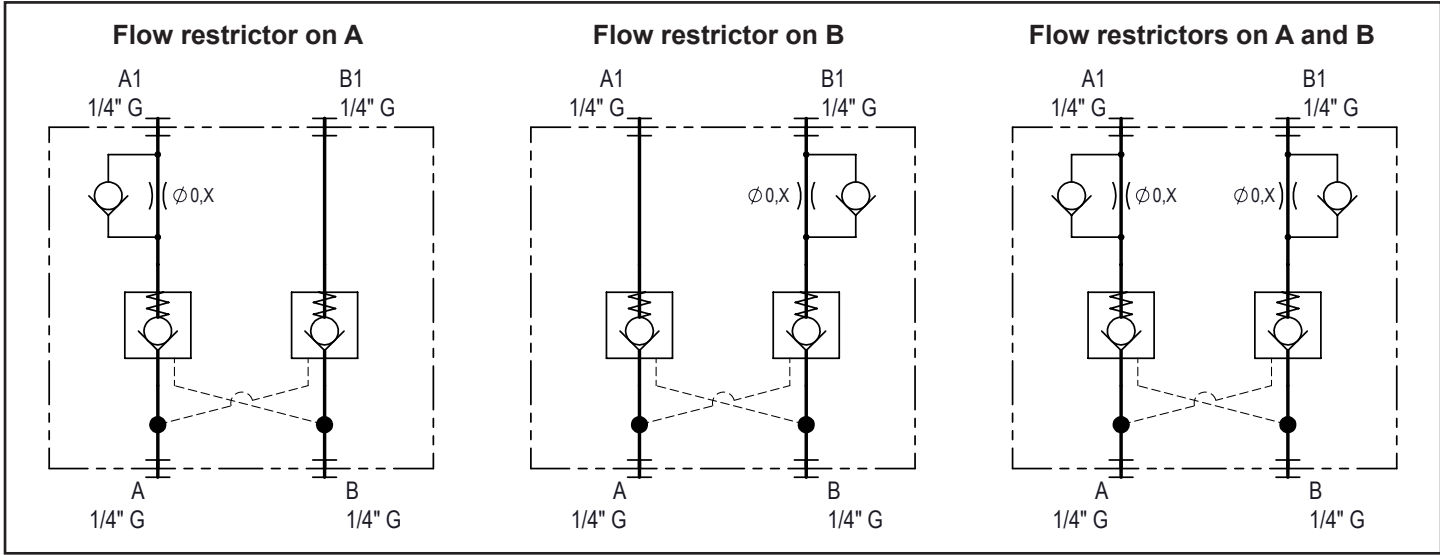
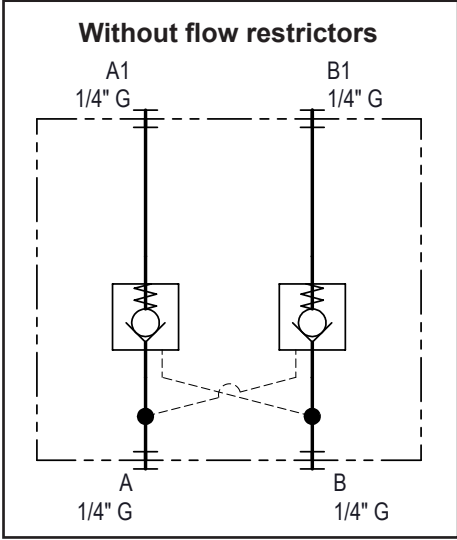
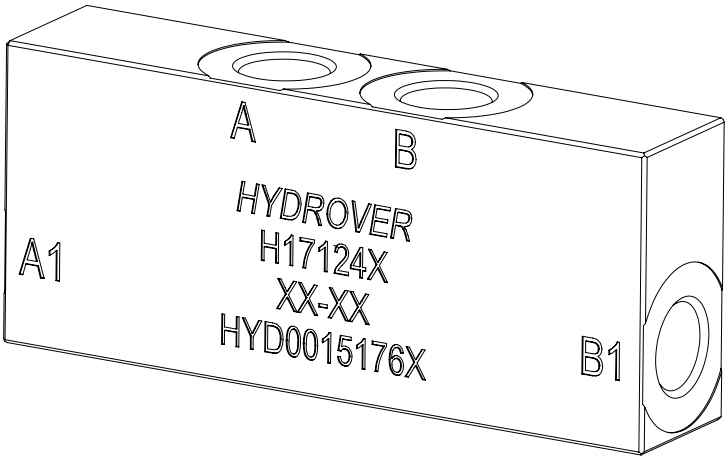
Inline double pilot operated check valve in stainless steel 1/4" G **H17124**



Dimensions in mm



Technical data	
Max. pressure	350 bar
Max. flow	20 lt/1
Weight	0,7 Kg
Manifold material	Stainless steel 316L
All ports	1/4" G





Ordering code

H	1	7	1	2	4	X	-	-	-	-	-
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Hydrover product

Product series  
17 series - Inline valves

Product ID

Manifold material  
Stainless steel 316L

Flow restrictor on B

- 00 = Without
- NF With flow restrictor to drill
- 03 = 0,3 mm
- 04 = 0,4 mm
- 05 = 0,5 mm
- 06 = 0,6 mm
- 07 = 0,7 mm

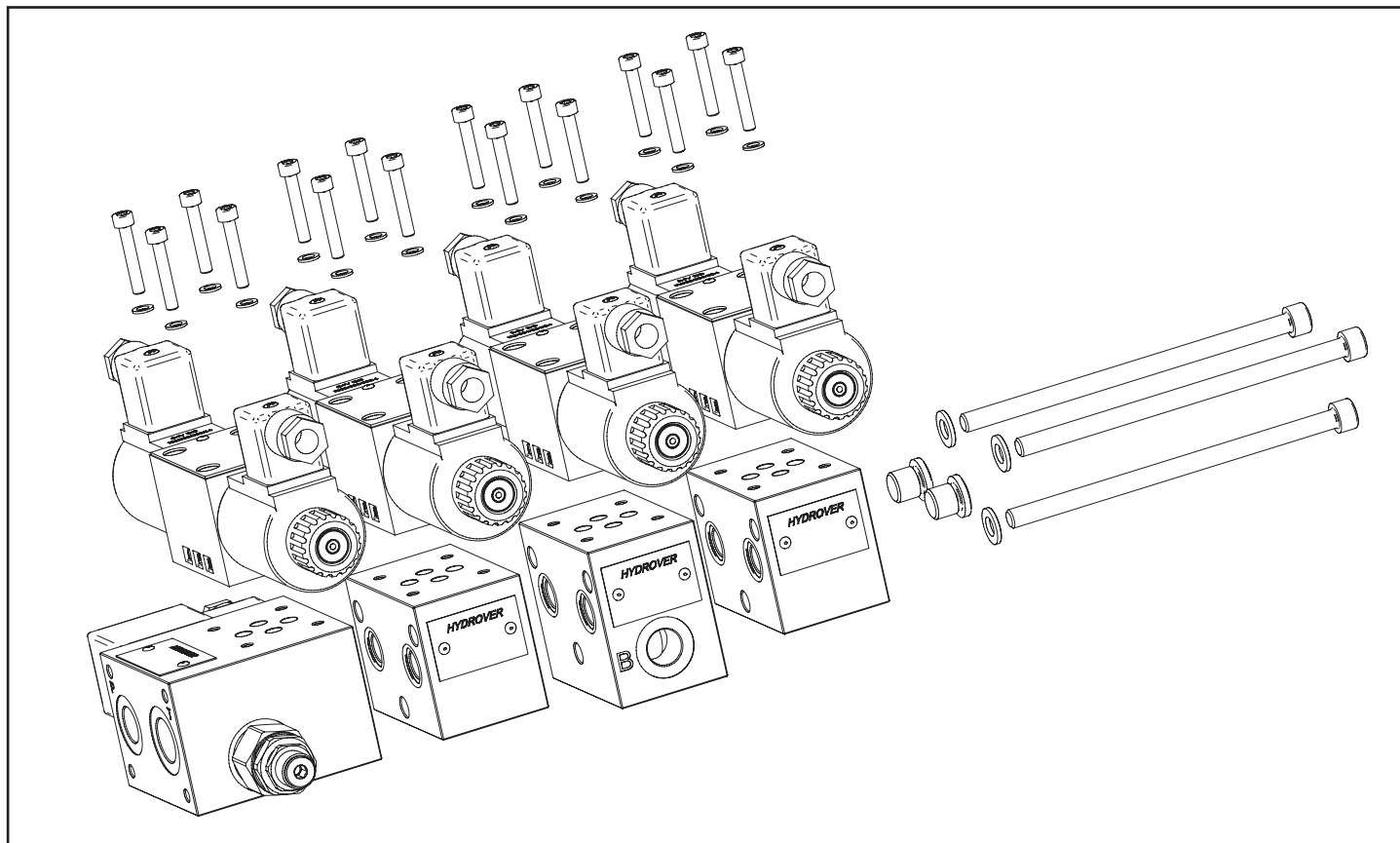
Flow restrictor on A

- 00 = Without
- NF With flow restrictor to drill
- 03 = 0,3 mm
- 04 = 0,4 mm
- 05 = 0,5 mm
- 06 = 0,6 mm
- 07 = 0,7 mm



# 31 SERIES

## Modular Cetop 3 subplates for parallel circuits

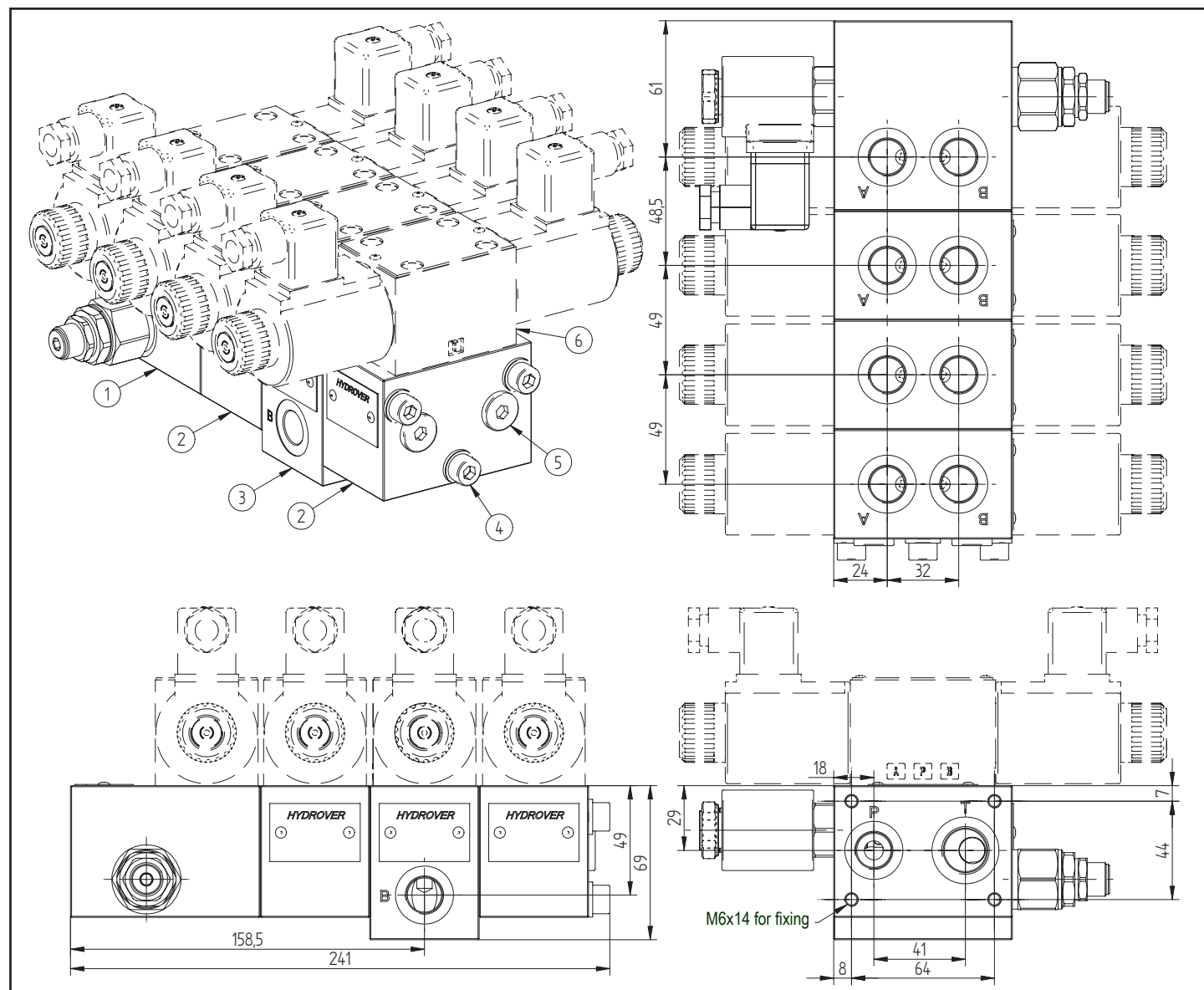


**31 SERIES** is suitable for assembling multi-purposes Cetop 3 modular systems with parallel circuit. It's divided into 2 families with compatible flanges.

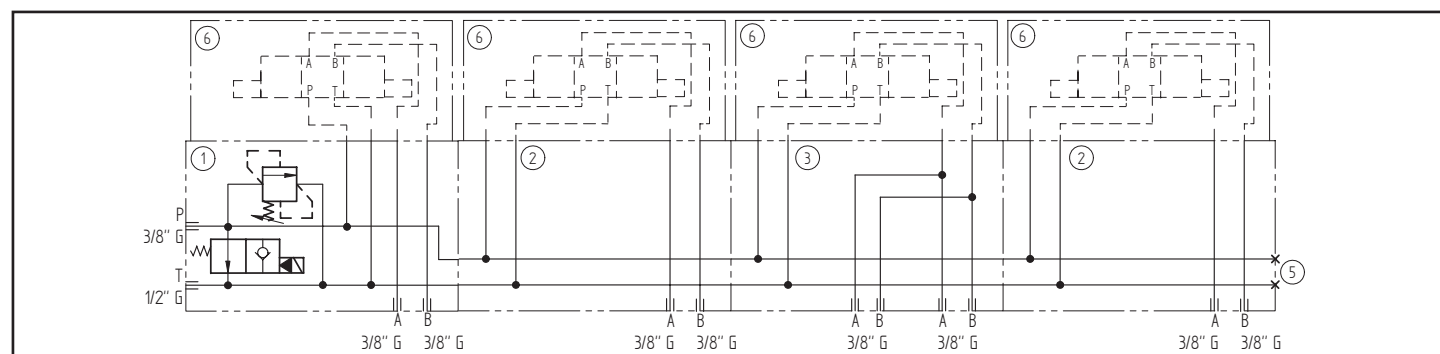
**Standard 31 SERIES** - It has A / B / P 3/8" G and T 1/2" G ports threads. 1/4" G P T ports threads on all inlet and intermediate subplates allow in the last element to close easily P and T with 2 caps without using a terminal element. You can also replace the P with a pressure gauge.

**Hi flow 31 SERIES** - It has A / B / P 1/2" G and T 1/2" G ports threads. It's build for having a flow input up to 70 lpm. It has mounting holes both front and rear ports.

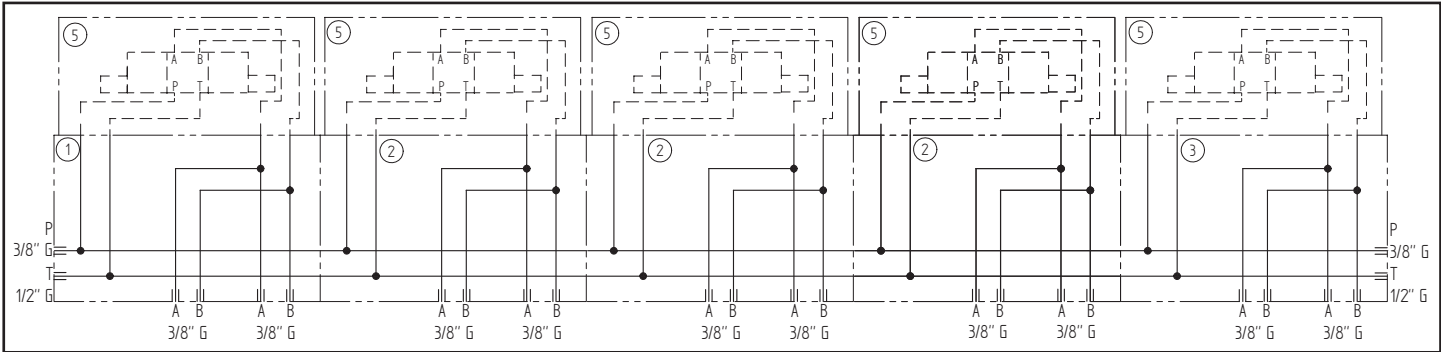
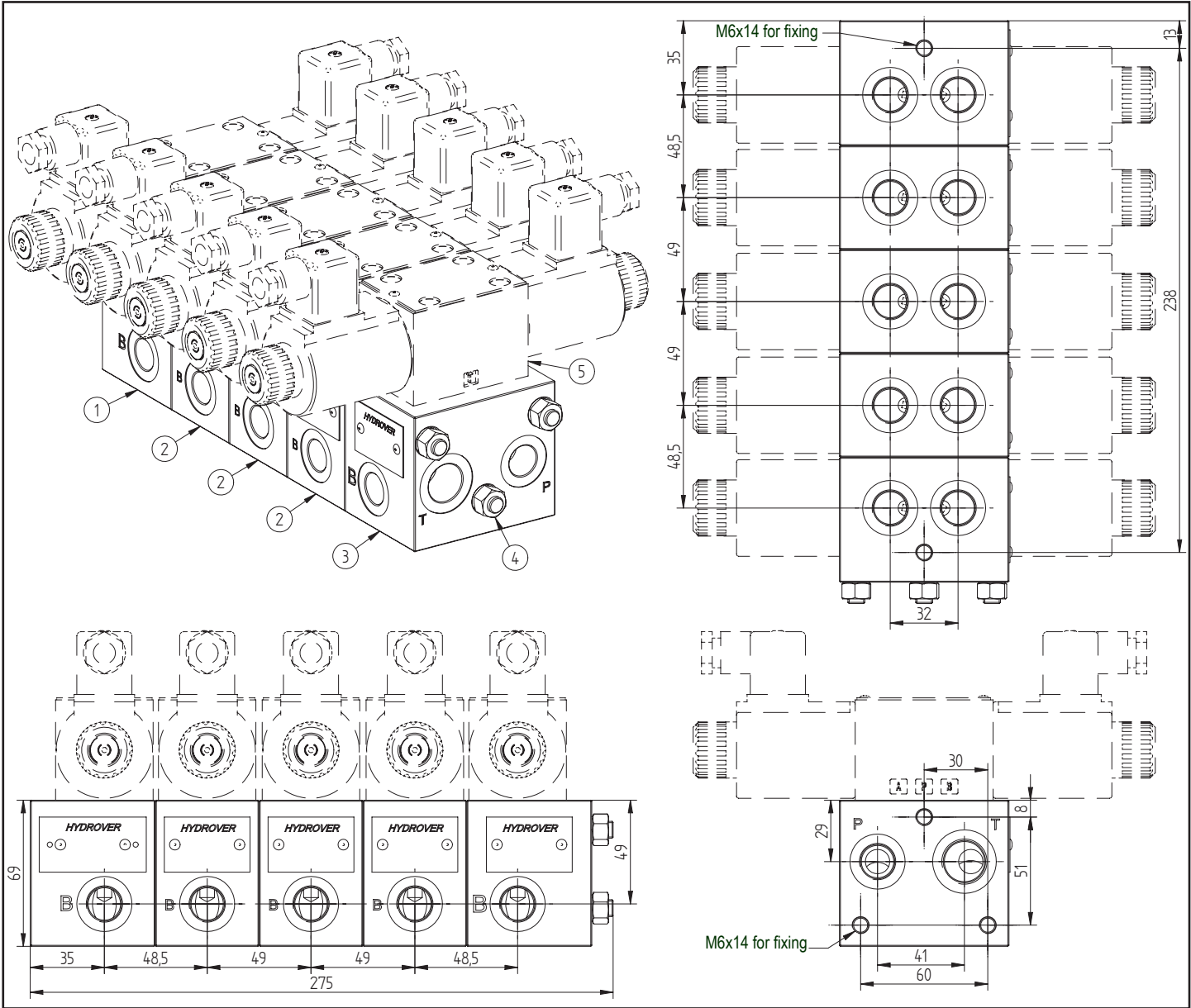
N°	Ordering code	Description	Q.ty
1	H3104A1P-S2-E0-OC1	Subplate with one Cetop 3 station / 40-200 bar relief valve / bypass valve / back A-B 3/8" G / crossing P 3/8" G - T 1/2" G / 24V DC DIN	1
2	H3105A	Intermediate / closing module with 1 Cetop 3 station / side A-B ports	2
3	H3101A	Intermediate / closing module with 1 Cetop 3 station / side A-B ports	1
4	HKVM8X160-3	Assembling kit HKVM8X160-3	1
5	TPCLG 1/4	Plug DIN908 1/4"G	2
6	Cetop 3 valve 4/3	Cetop 3 4/3 valve	4



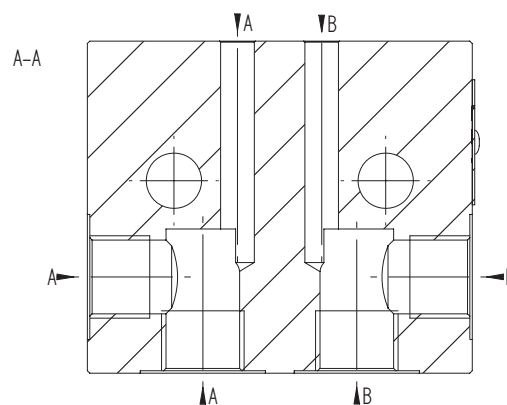
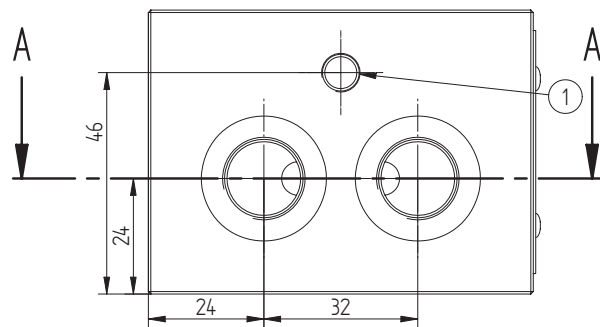
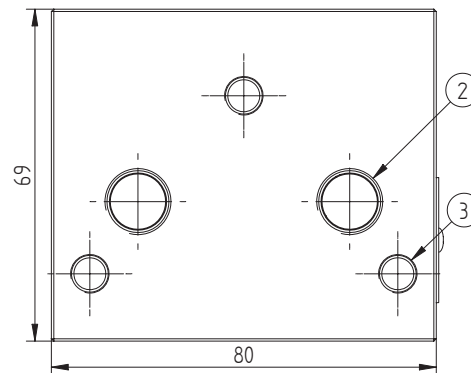
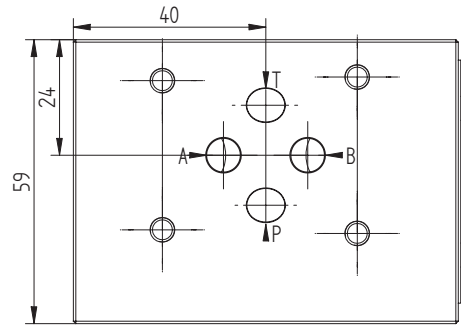
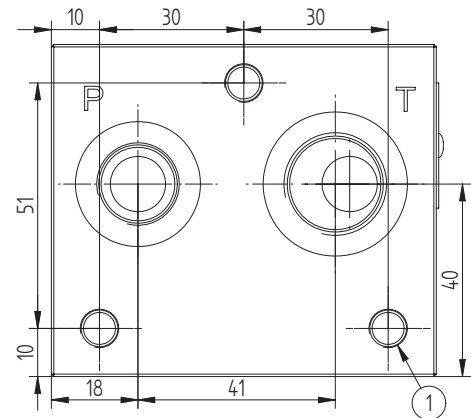
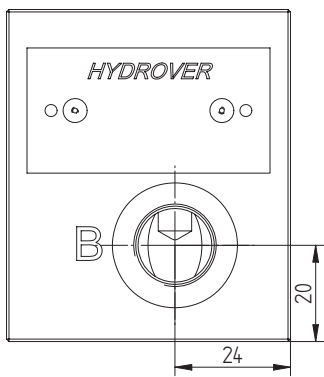
Dimensions in mm



N°	Ordering code	Description	Q.ty
1	H3100A1P	Subplate with one Cetop 3 station / Back and side A-B 3/8" G ports / crossing P 3/8" G - T 1/2" G	1
2	H3101A	Intermediate / closing module with 1 Cetop 3 station / side A-B ports	3
3	H3102A	Closing module with one Cetop 3 station / Back and side A-B 3/8" G ports / crossing P 3/8" G - T 3/8" G	1
4	HKTM8X225DL-3	Assembling kit HKTM8X225DL-3	1
5	Cetop 3 valve 4/3	Cetop 3 4/3 valve	4

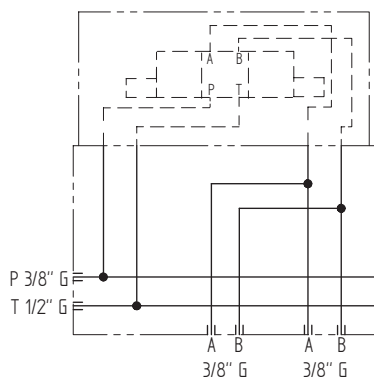
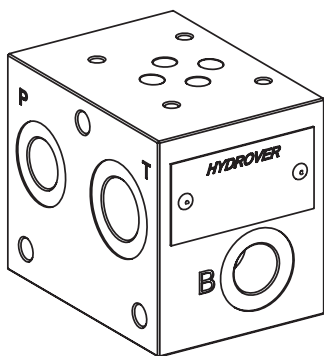


Inlet subplate with 1 station / side and back A-B ports / crossing P-T ports **H3100**



Technical data

Max. pressure	250 bar
Weight	0,8 Kg
Manifold material	Aluminium
A / B / P ports	3/8" G
T port	1/2" G



N°	Description	Q.ty
1	M8x15 thread for mounting	4
2	Ø 11,5 through hole with 1/4" G thread (P-T)	2
3	M8x15 for tie rod	3

Dimensions in mm

Ordering code

H	3	1	0	0	A	1	P
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Hydrover product

Number of Cetop 3 stations  
1 station

Product series

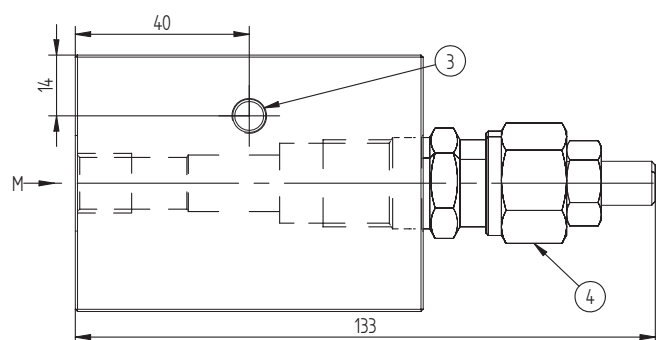
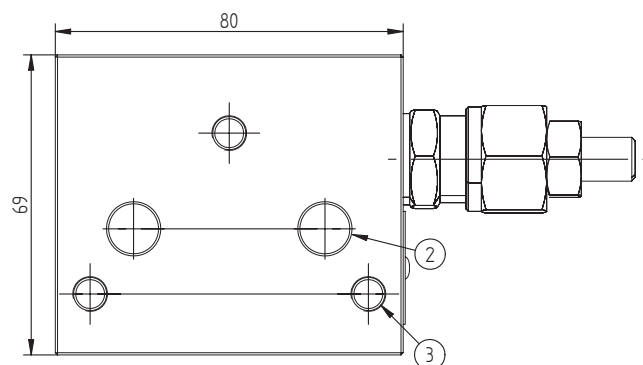
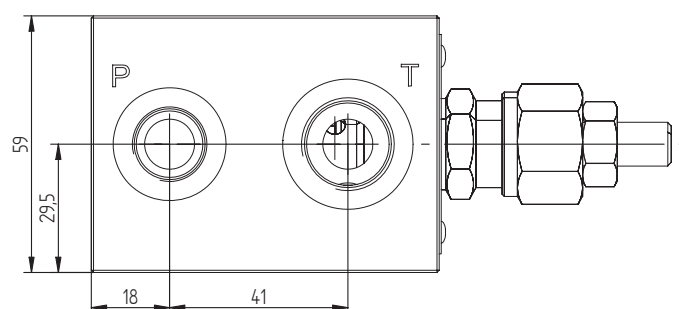
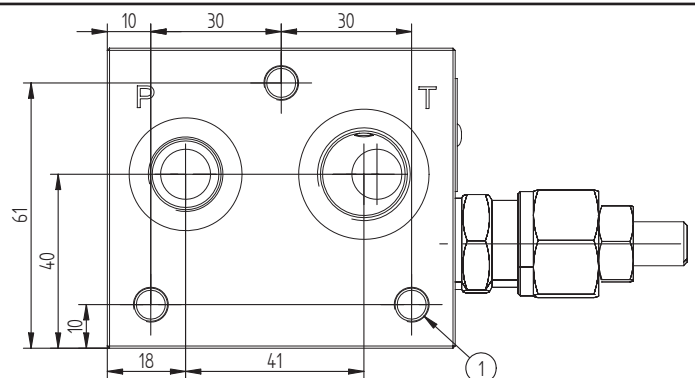
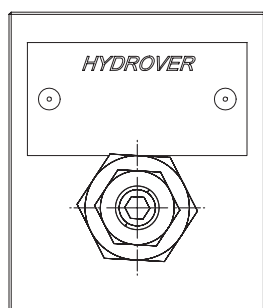
31 series - Modular Cetop 3 subplates for parallel circuits

Manifold material

Aluminium

Product ID

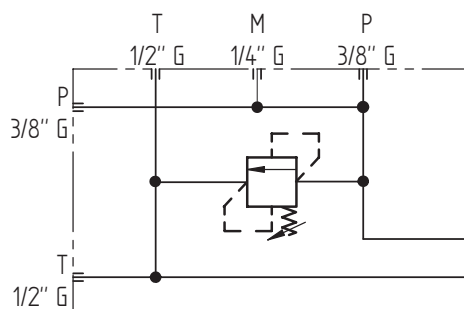
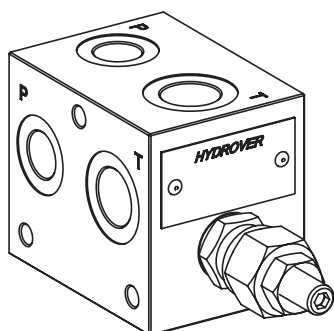
Note: to add stations use the subplates [H3101](#), [H3105](#) and [H3102](#).

Inlet plate with relief valve / crossing and top P-T ports **H3103**

Dimensions in mm

**Technical data**

Max. pressure	250 bar
Max. flow	30 lpm *
Weight	1 Kg
Manifold material	Aluminium
M port	1/4" G
P port	3/8" G
T port	1/2" G



N°	Description	Q.ty
1	M8x15 thread for mounting	4
2	Ø 11,5 through hole with 1/4" G thread (P-T)	2
3	M8x15 for tie rod	3
4	Bosch Rexroth relief valve <b>VS-30</b> * depicted with screw adjustment	1

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue



Ordering code

H	3	1	0	3	A	-	-	-
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Hydrover product

Product series  
31 series - Modular Cetop 3 subplates  
for parallel circuits

Product ID

Relief valve adjustment  
pressure range \*

0 =	5-50 bar
1 =	30-100 bar
2 =	50-210 bar
3 =	100-350 bar

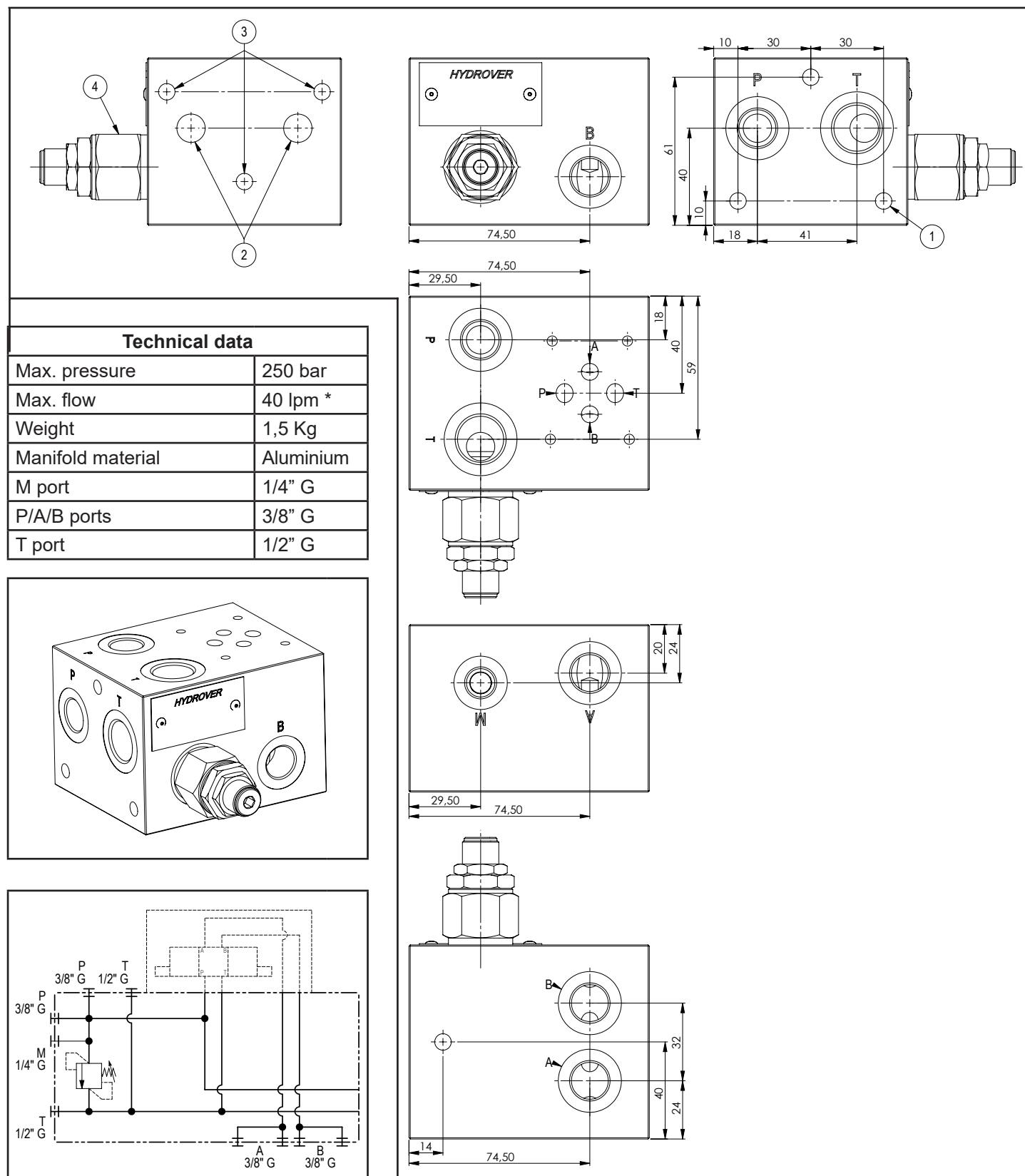
Relief valve  
adjustment type \*

S =	Screw
K =	Knob

Manifold material  
Aluminium

\* Omit if not required. To order the product without the pressure relief cartridge valve, omit the pressure range and the adjustment type options: H3103A.  
The manifold will still be provided with the corresponding cavity.

Note: to add stations use the subplates [H3101](#), [H3105](#) and [H3102](#).



Dimensions in mm

N°	Description	Q.ty
1	M8x15 thread for mounting	4
2	Ø 11,5 through hole with 1/4" G thread (P-T)	2
3	M8x15 for tie rod	3
4	Bosch Rexroth relief valve <b>VMD1.070</b> *	1

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

Ordering code

H	3	1	1	2	A	-	-	-
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Hydrover product

Product series

31 series - Modular Cetop 3 subplates for parallel circuits

Product ID

Relief valve adjustment pressure range \*

0 =	10-60 bar
1 =	40-110 bar
2 =	110-220 bar
3 =	220-260 bar

Relief valve adjustment type \*

S =	Screw
-----	-------

Manifold material  
Aluminium

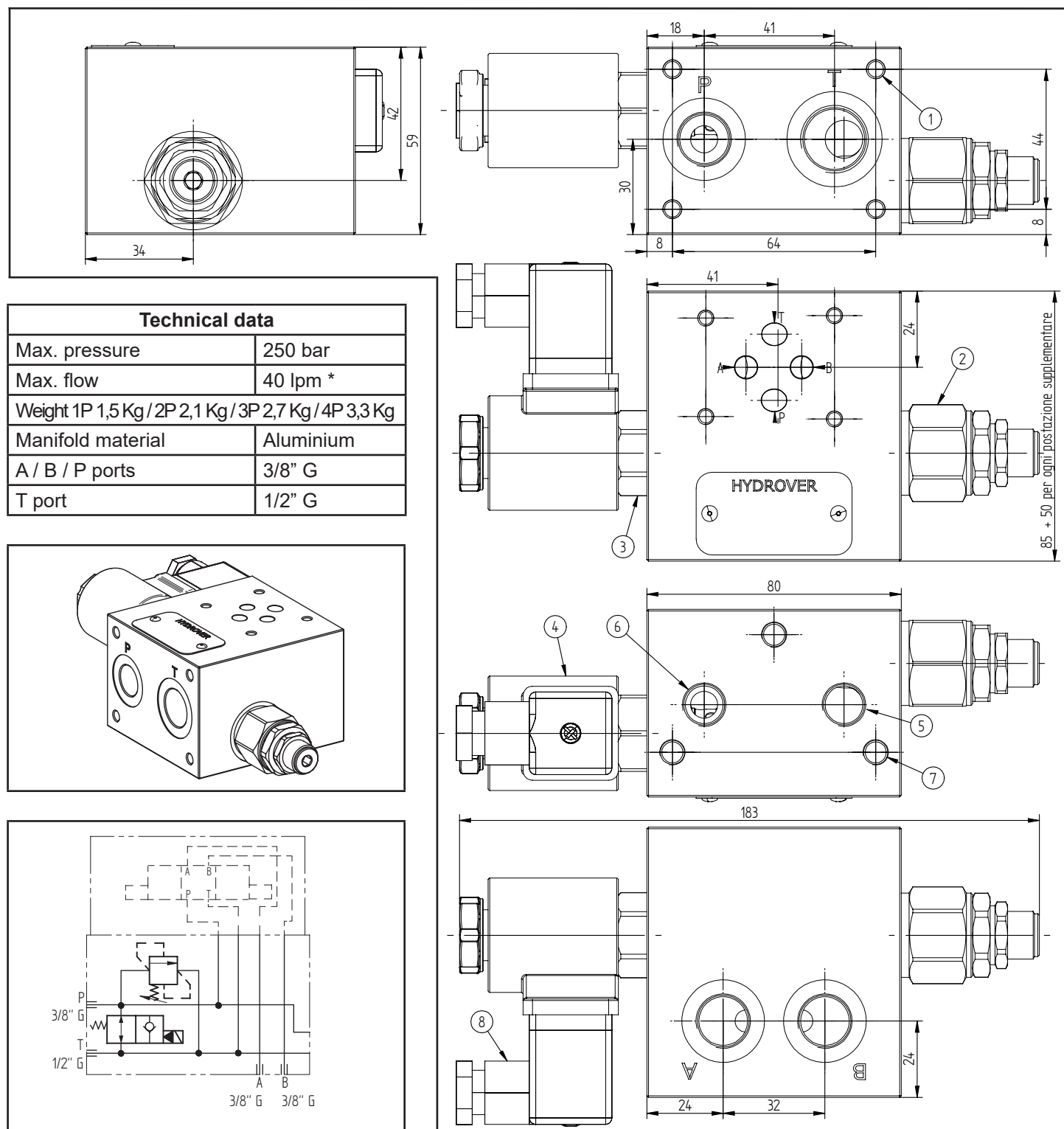
\* Omit if not required. To order the product without the pressure relief cartridge valve, omit the pressure range and the adjustment type options: H3112A.  
The manifold will still be provided with the corresponding cavity.  
To inhibit the relief valve, replace the valve options with TL: H3112A-TL.  
In the cavity it will be mounted a long plug.

Valve	Cavity	Long plug code
Pressure relief valve VMD1.070	CA-10A-2N	0489A2008500000

Note: to add stations use the subplates H3101, H3105 and H3102.

Inlet monoblock subplate from 1 to 4 stations / extensible  
relief and bypass valve / back A-B ports / crossing P-T ports

**H3104**



Dimensions in mm

#### Technical data

Max. pressure	250 bar
Max. flow	40 lpm *
Weight 1P 1,5 Kg / 2P 2,1 Kg / 3P 2,7 Kg / 4P 3,3 Kg	
Manifold material	Aluminium
A / B / P ports	3/8" G
T port	1/2" G

N°	Description	Q.ty
1	M6x14 thread for mounting	4
2	Bosch Rexroth relief valve <b>VMD1.040</b> *	1
3	Bosch Rexroth bypass solenoid valve <b>VEI-16-08A-NA OD.15.06.18-Y-000000</b> depicted without manual override *	1
4	Bosch Rexroth coil <b>D36</b> - CLASS H DIN 43650 ISO 4400 *	1
5	Ø 11,5 through hole with 1/4" G thread (T)	1
6	Ø 8,5 through hole with 1/4" G thread (P)	1
7	M8x15 for tie rod	3
8	Connector DIN 43650 ISO 4400	1

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

Ordering code

H	3	1	0	4	A	_	P	-	_	_	-	_	_	-	_	_	_
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Hydrover product

Product series  
31 series - Modular Cetop 3 subplates for parallel circuits

Product ID

Manifold material  
Aluminium

Number of Cetop 3 stations

1 station	= 1P
2 stations	= 2P
3 stations	= 3P
4 stations	= 4P

Bypass solenoid valve coil connection \*  
1 = DIN 43650  
ISO 4400

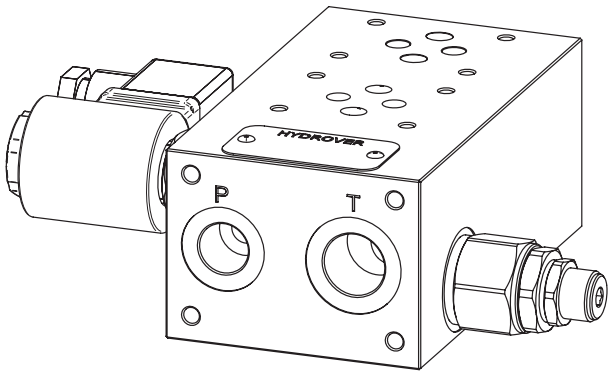
Solenoid valve coil voltage \*  
OB = 12V DC  
OC = 24V DC  
OD = 48V DC  
OU = 110V RAC  
AH = 230V RAC

Bypass solenoid valve manual override \*  
E0 = Without  
EP = Push  
EG = Push and twist

Relief valve adjustment pressure range \*  
1= 25-120 bar  
2= 40-200 bar  
3= 200-350 bar

Relief valve adjustment type \*  
S = Screw

2 stations configuration (2P)



\* Omit if not required. For example, to order the product without the bypass solenoid cartridge valve, omit the coil connection, coil voltage and manual override options: H3104A3P-S2.  
The manifold will still be provided with the corresponding cavity.  
To inhibit a function, replace the related valve options with TL: eg H3104A2P-S2-TL.  
In the cavity it will be mounted a long plug.

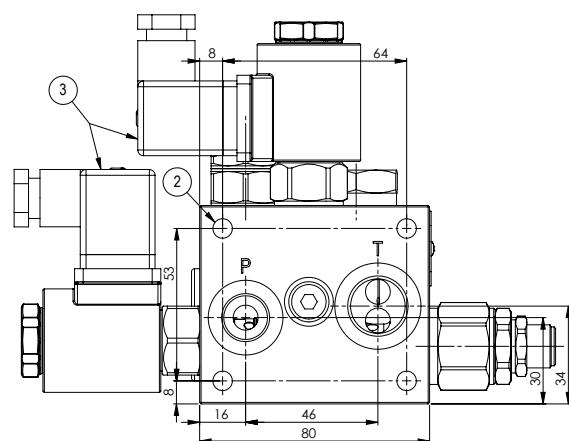
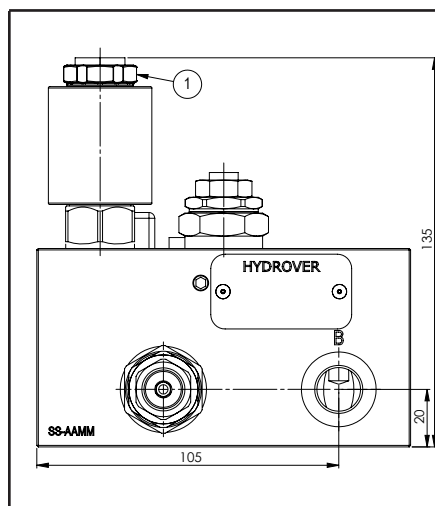
Valve	Cavity	Long plug code
Solenoid valve VEI-16-08A-NA OD.15.06.18-Y-000000	CA-08A-2N	0489A2005600000
Pressure relief valve VMD1.040	CA-10A-2N	0489A2008500000

Note: to add stations use the subplates H3101, H3105 and H3102.

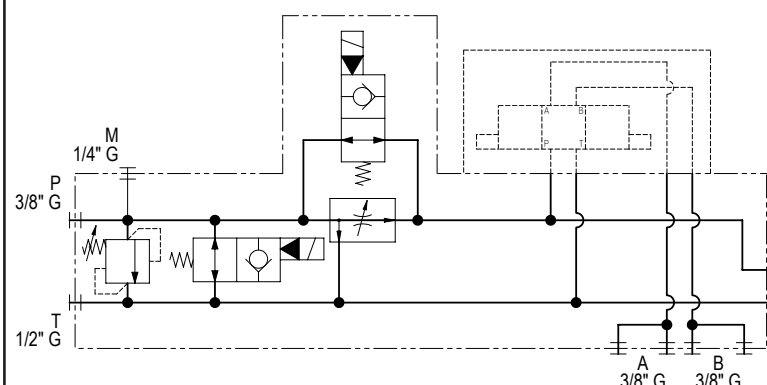
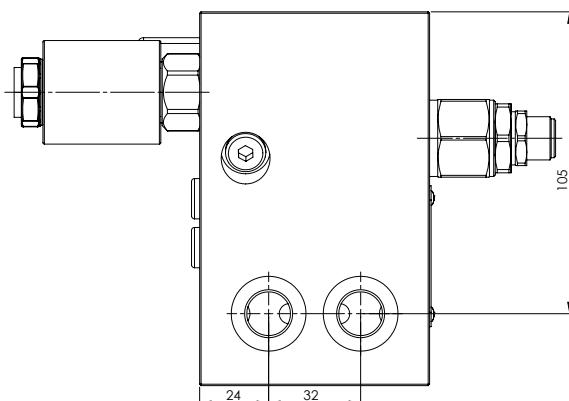
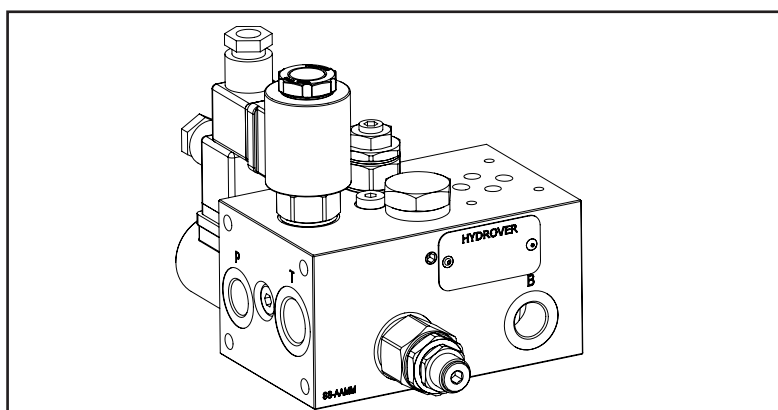
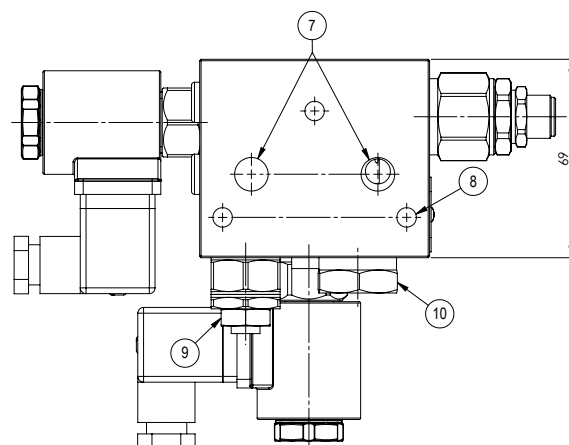
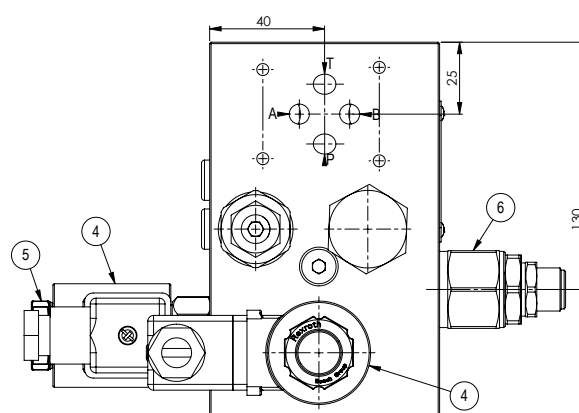
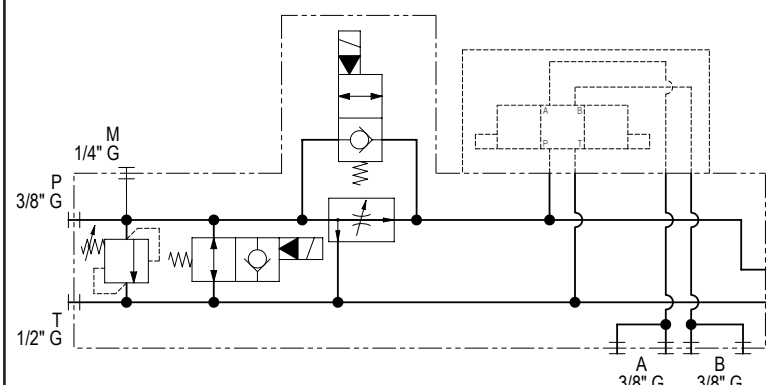
Inlet subplate with 1 Cetop 3 station / extensible / relief and bypass valve  
3 way flow regulation / fast slow speed / side and back A-B ports / crossing P-T ports

**H3113**
**Technical data**

Max. pressure	250 bar
Inlet max. flow	40 lt/1
Reg. max. flow	30 lt/1
Manifold material	Aluminium
M port	1/8" G
T port	1/2" G
A / B / P ports	3/8" G
Weight	2,4 Kg



Dimensions in mm

**Normally fast**

**Normally slow**


## Ordering code

<b>Hydrover product</b>	H	3	1	1	3	A	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Product series</b> 31 series - Modular Cetop 3 subplates for parallel circuits																			
<b>Product ID</b>																			
<b>Manifold material</b> Aluminium																			
<b>Compensator spring</b> 6 bar (standard) = 6 12 bar = 1																			
<b>Restrictor adjustment type *</b> Screw = S Knob = K																			
<b>Relief valve adjustment type *</b> Screw = S																			
<b>Solenoid valves coil connection *</b> 1 = DIN 43650 ISO 4400																			
<b>Solenoid valve coil voltage *</b> OB = 12V DC OC = 24V DC OD = 48V DC OU = 110V RAC AH = 230V RAC																			
<b>Bypass solenoid valve manual override *</b> E0 = Without EP = Push EG = Push and twist																			
<b>Slow or fast in normal position *</b> NL = Normally slow NR = Normally fast																			
<b>Relief valve adjustment pressure range *</b> 1 = 25-120 bar 2 = 40-200 bar 3 = 200-350 bar																			

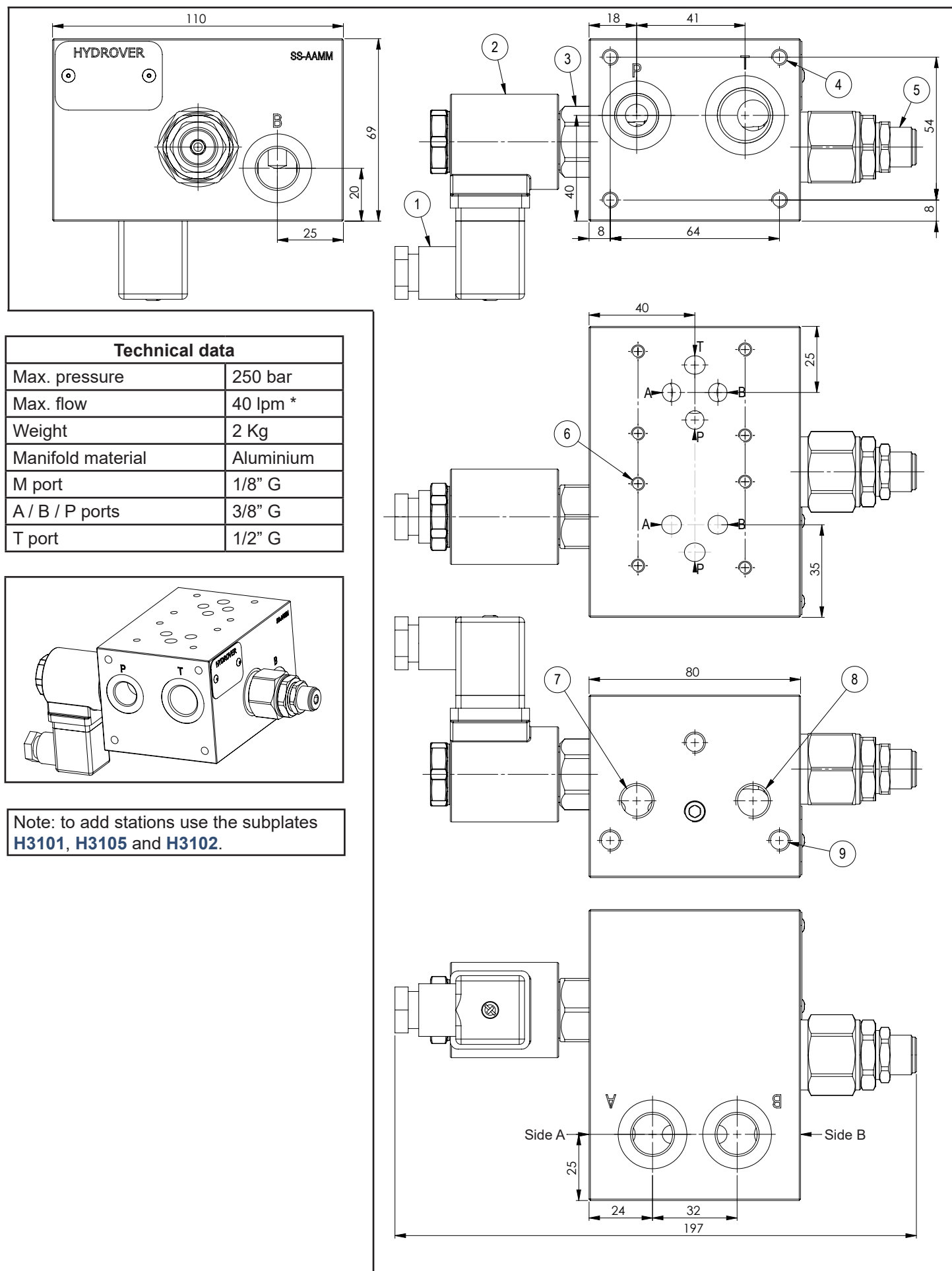
N°	Description	Q.ty
1	Bosch Rexroth solenoid valve for fast slow function <b>VEI-16-08A-NC OD.15.05.18-Y-000000</b> (normally slow) or <b>VEI-16-08A-NA OD.15.06.18.A.000000</b> (normally fast) **	1
2	M8x12 thread for mounting	4
3	Connector DIN 43650 ISO 4400	2
4	Bosch Rexroth coil <b>D36</b> - CLASS H DIN 43650 ISO 4400 **	2
5	Bosch Rexroth bypass solenoid valve <b>VEI-16-08A-NA OD.15.06.18-Y-000000</b> **	1
6	Bosch Rexroth relief valve <b>VMD1.040</b> **	1
7	Ø 11,5 through hole with 1/4" G thread (P-T)	2
8	M8x15 for tie rod	3
9	Bosch Rexroth flow restrictor <b>OD.21.01-X-56</b> ** depicted with screw adjustment	2
10	Compensator	1

\*\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

\* Omit if not required. For example, to order the product without the fast slow solenoid valve, omit the variable "Slow or fast in normal position": H3113A4SS2-E0-OC1. The manifold will still be provided with the corresponding cavity. Valves for fast slow and bypass use CA-08A-2N cavity (long plug code **0489A2005600000**), and relief CA-10A-2N cavity (long plug code **0489A2008500000**). To inhibit a function, replace the related valve options with TL: eg H3106A3-S2-TL-TL.

Note: to add stations use the subplates **H3101**, **H3105** and **H3102**.

Inlet subplate with 1 Cetop 3 station for 2 or 3 ways flow regulator, 1 Cetop 3 station for directional valve / relief and bypass valves / side and back A-B ports / crossing P-T ports

**H3110**


Dimensions in mm



Ordering code

H	3	1	1	0	A	-	-	-	-	-	-	-
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### Hydrover product

## Product series

### 31 series - Modular Cetop 3 subplates for parallel circuits

## Product ID

## Manifold material

Aluminium

### Relief valve adjustment type \*

Screw

$$= S$$

**Relief valve adjustment pressure range \***

25-120 bar

$$= 1$$

40-200 bar

$$= 2$$

200-350 bar

$$= 3$$

**Bypass  
solenoid valve**

**coil connection \***

1 = DIN 43650 ISO 4400

**Solenoid valve  
coil voltage \***

OB = 12V DC

OC = 24V DC

OD = 48V DC

OU = 110V RAC

CS = 110V RAC  
 AH = 230V RAC

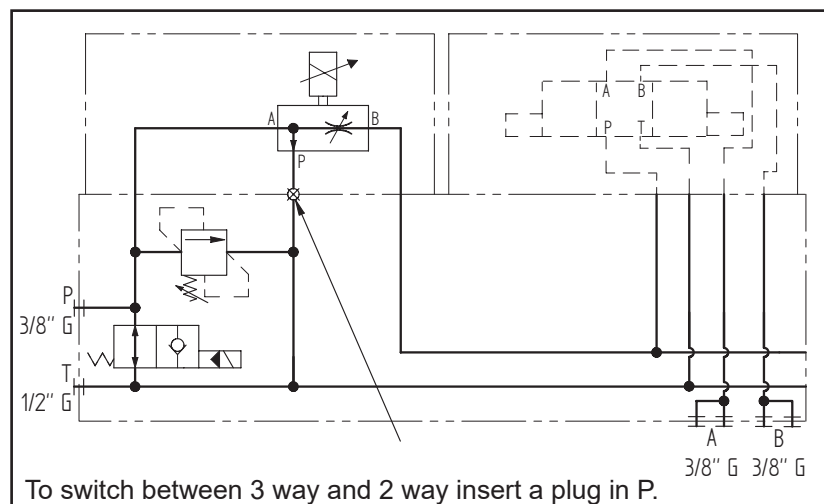
### Bypass solenoid valve

**manual override \***

Without

## Push

### Push and twist

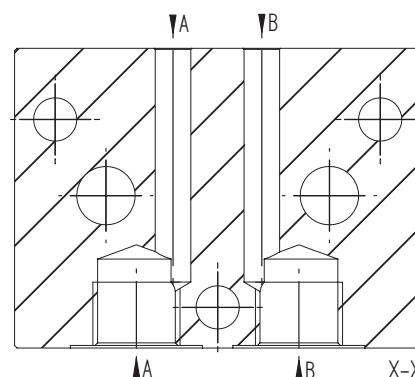
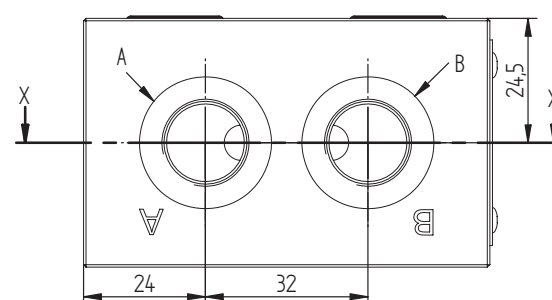
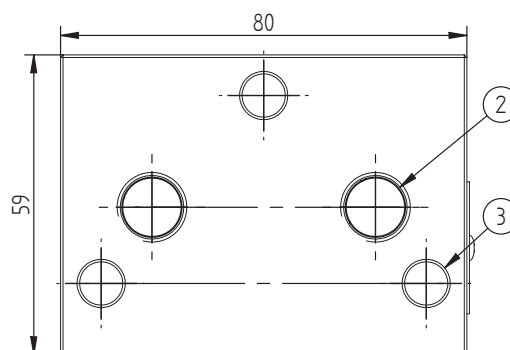
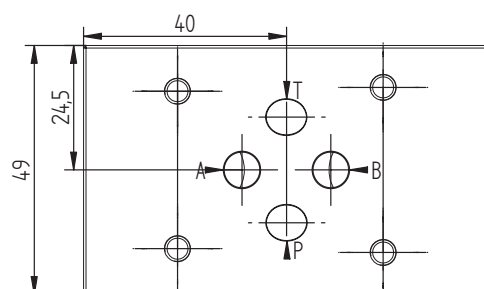
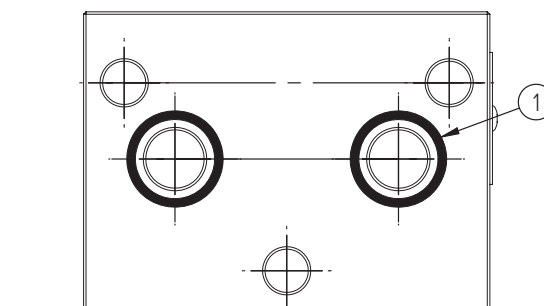
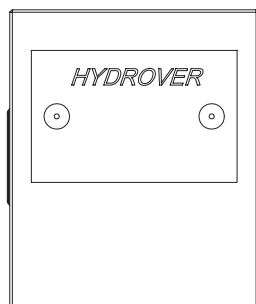
$$E0 =$$
$$EP =$$
$$EG =$$


\* Omit if not required. For example, to order the product without the bypass solenoid cartridge valve, omit the coil connection, coil voltage and manual override options: H3110A-S2. The manifold will still be provided with the corresponding cavity.

To inhibit a function, replace the related valve options with TL: eg H3110A-S2-TL.  
In the cavity it will be mounted a long plug.

N°	Description	Q.ty
1	Connector DIN 43650 ISO 4400	1
2	Bosch Rexroth coil <b>D36</b> - CLASS H DIN 43650 ISO 4400 **	1
3	Bosch Rexroth bypass solenoid valve <b>VEI-16-08A-NA OD.15.06.18-Y-000000</b> **	1
4	M6x14 thread for mounting	4
5	Bosch Rexroth relief valve <b>VMD1.040</b> **	1
6	Station for Cetop 3 proportional flow regulator A in B unload in P - To order separatly	1
7	Ø 8,5 through hole with 1/4" G thread (P)	1
8	Ø 11,5 through hole with 1/4" G thread (T)	1
9	M8x15 for tie rod	3

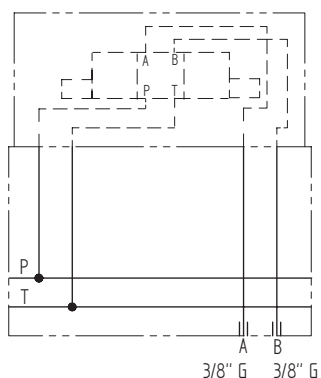
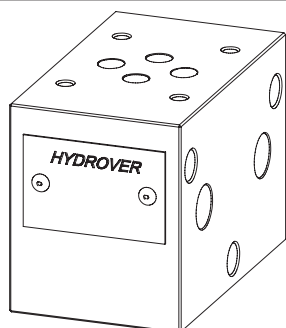
**\*\*** for complete technical information, click on the blue link or go to the components section at the end of the catalogue



Dimensions in mm

**Technical data**

Max. pressure	250 bar
Weight	0,6 Kg
Manifold material	Aluminium
A / B ports	3/8" G



N°	Description	Q.ty
1	OR 2062 i. Ø 15,60 cross section 1,78 (P-T)	2
2	Ø 11,5 through hole with 1/4" G thread (P-T)	2
3	Ø 8,5 through hole for tie rod	3

Ordering code

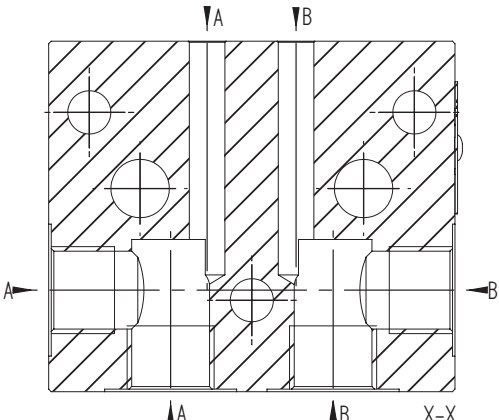
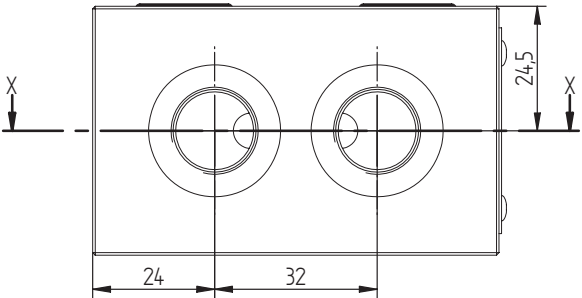
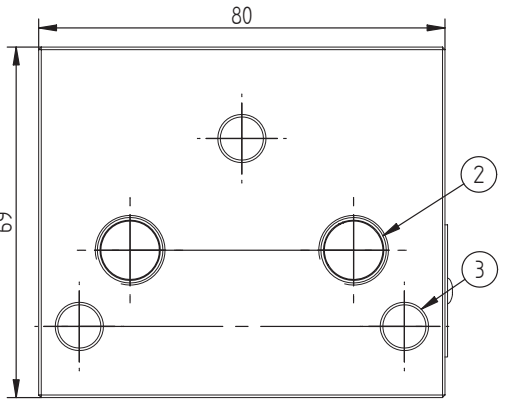
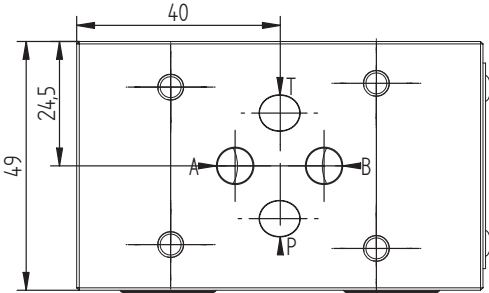
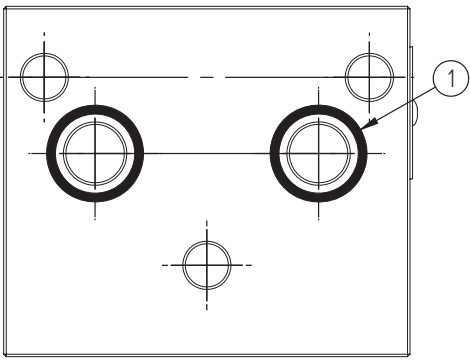
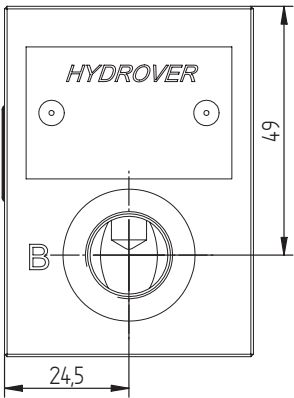
H	3	1	0	5	A
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Hydrover product

Manifold material  
Aluminium

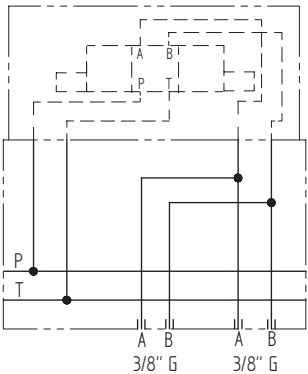
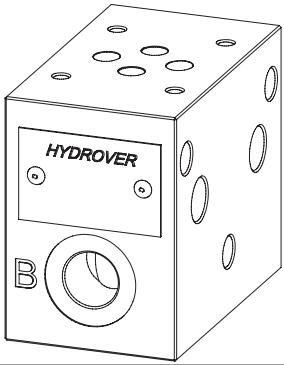
Product series  
31 series - Modular Cetop 3 subplates for parallel circuits

Product ID



Technical data

Max. pressure	250 bar
Weight	0,7 Kg
Manifold material	Aluminium
A / B ports	3/8" G



N°	Description	Q.ty
1	OR 2062 i. Ø 15,60 cross section 1,78 (P-T)	2
2	Ø 11,5 through hole with 1/4" G thread (P-T)	2
3	Ø 8,5 through hole for tie rod	3

Dimensions in mm

Ordering code

H	3	1	0	1	A
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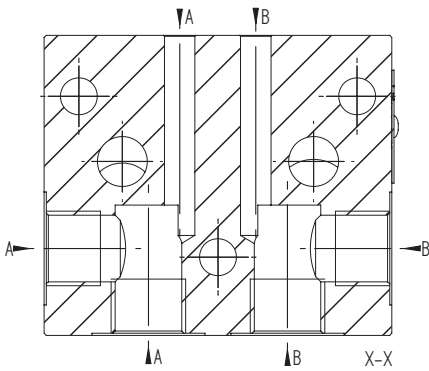
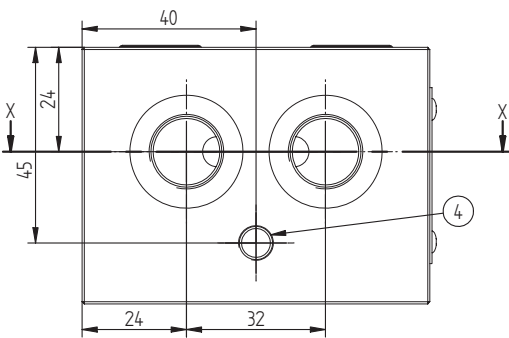
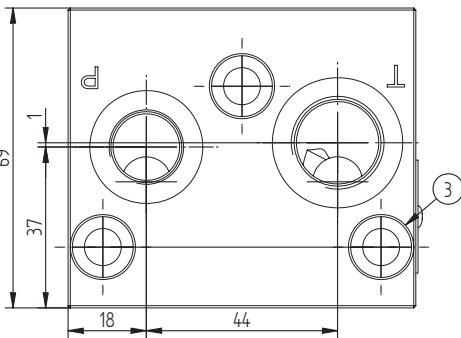
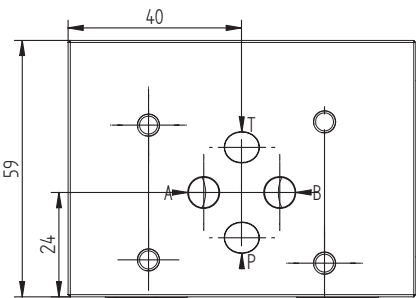
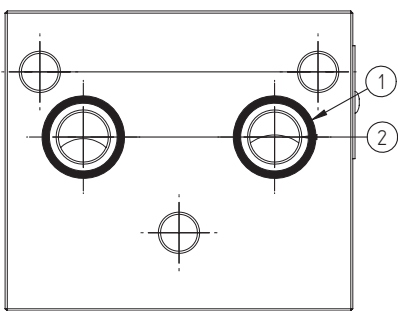
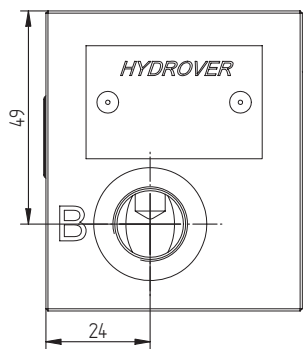
Hydrover product

Manifold material  
Aluminium

Product series

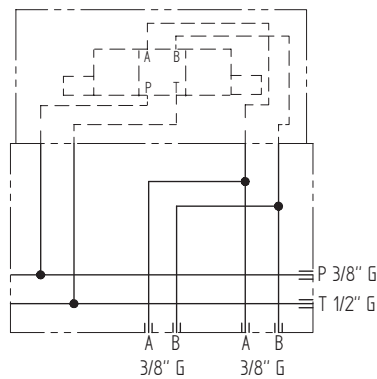
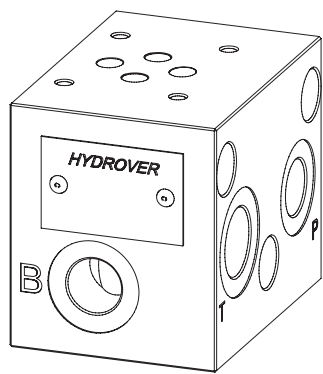
31 series - Modular Cetop 3 subplates for parallel circuits

Product ID



Technical data

Max. pressure	250 bar
Weight	0,8 Kg
Manifold material	Aluminium
A / B / P ports	3/8" G
T port	1/2" G



N°	Description	Q.ty
1	OR 2062 i. Ø 15,60 cross section 1,78 (P-T)	2
2	Ø 11,5 through hole (P-T)	2
3	Ø 8,5 through hole with counterbore for tie rod	3
4	M8x15 thread for mounting	1

Dimensions in mm

Ordering code

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Hydrover product

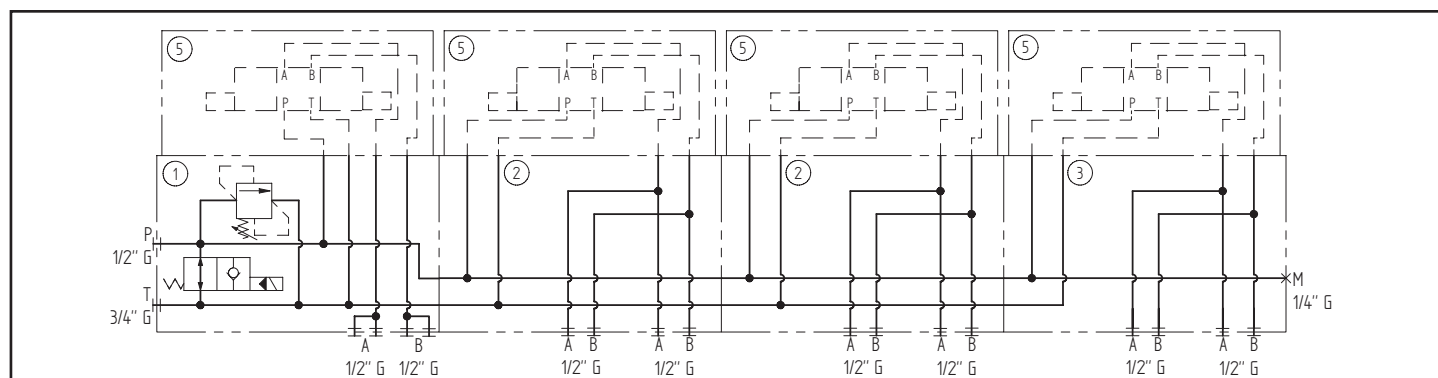
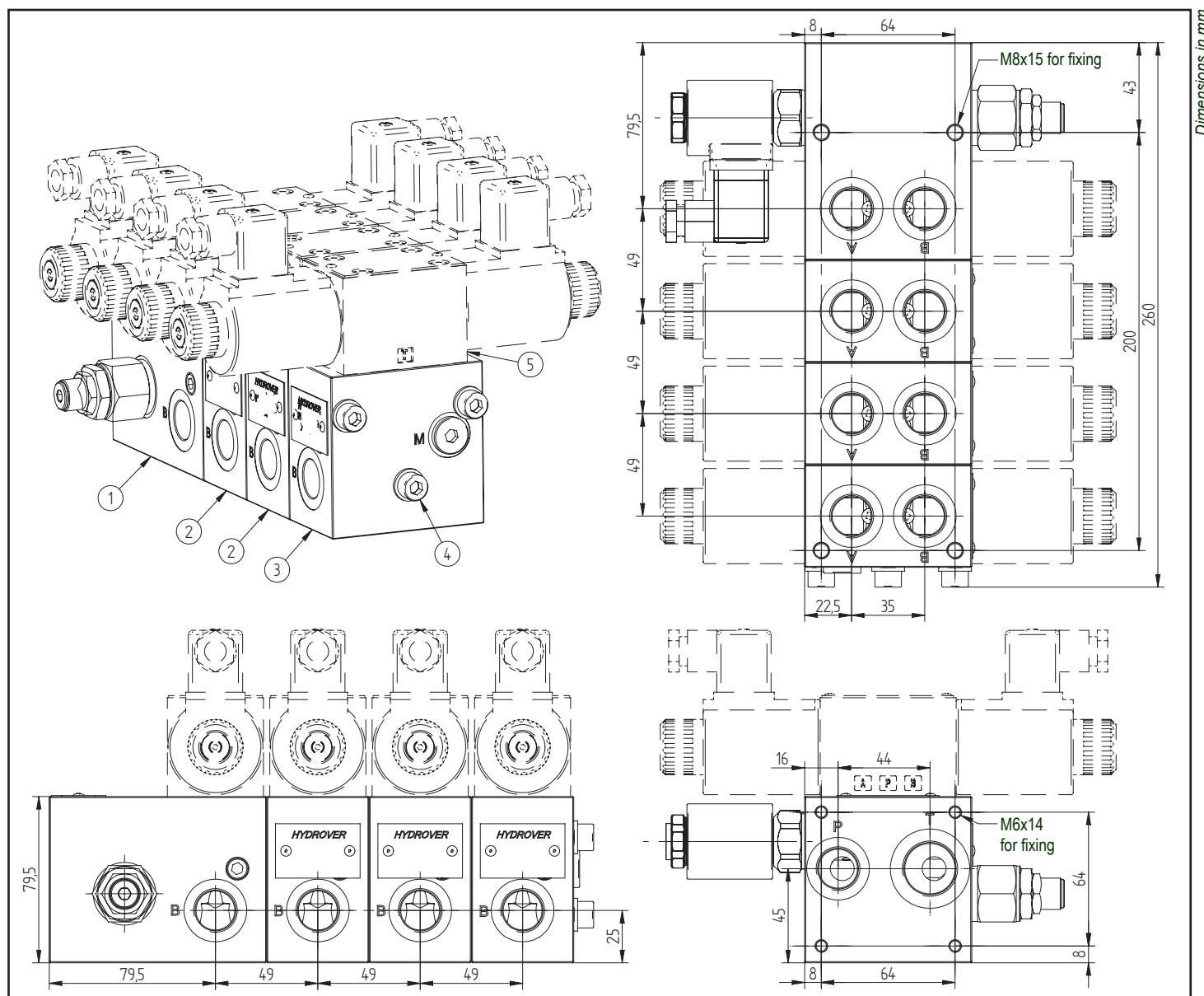
Manifold material  
Aluminium

Product series

31 series - Modular Cetop 3 subplates for parallel circuits

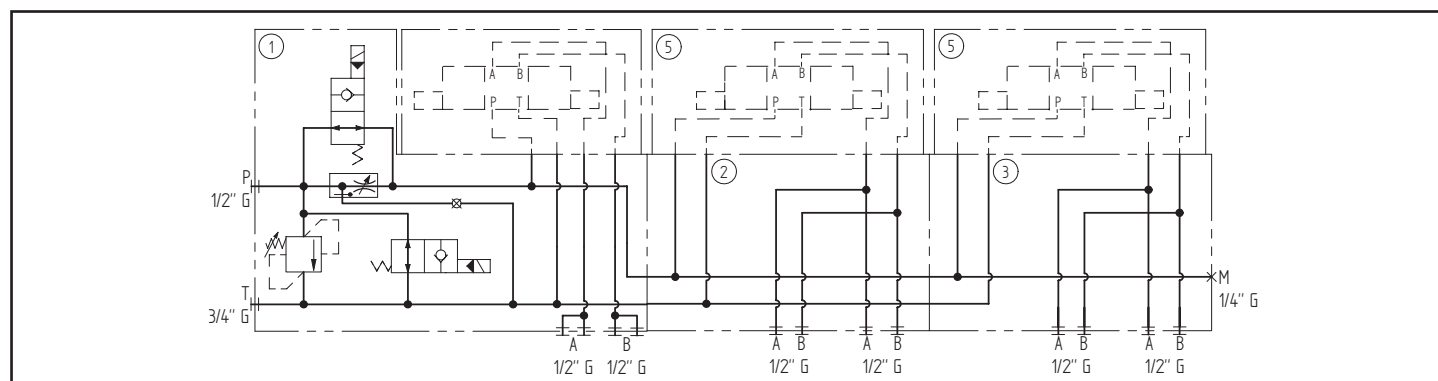
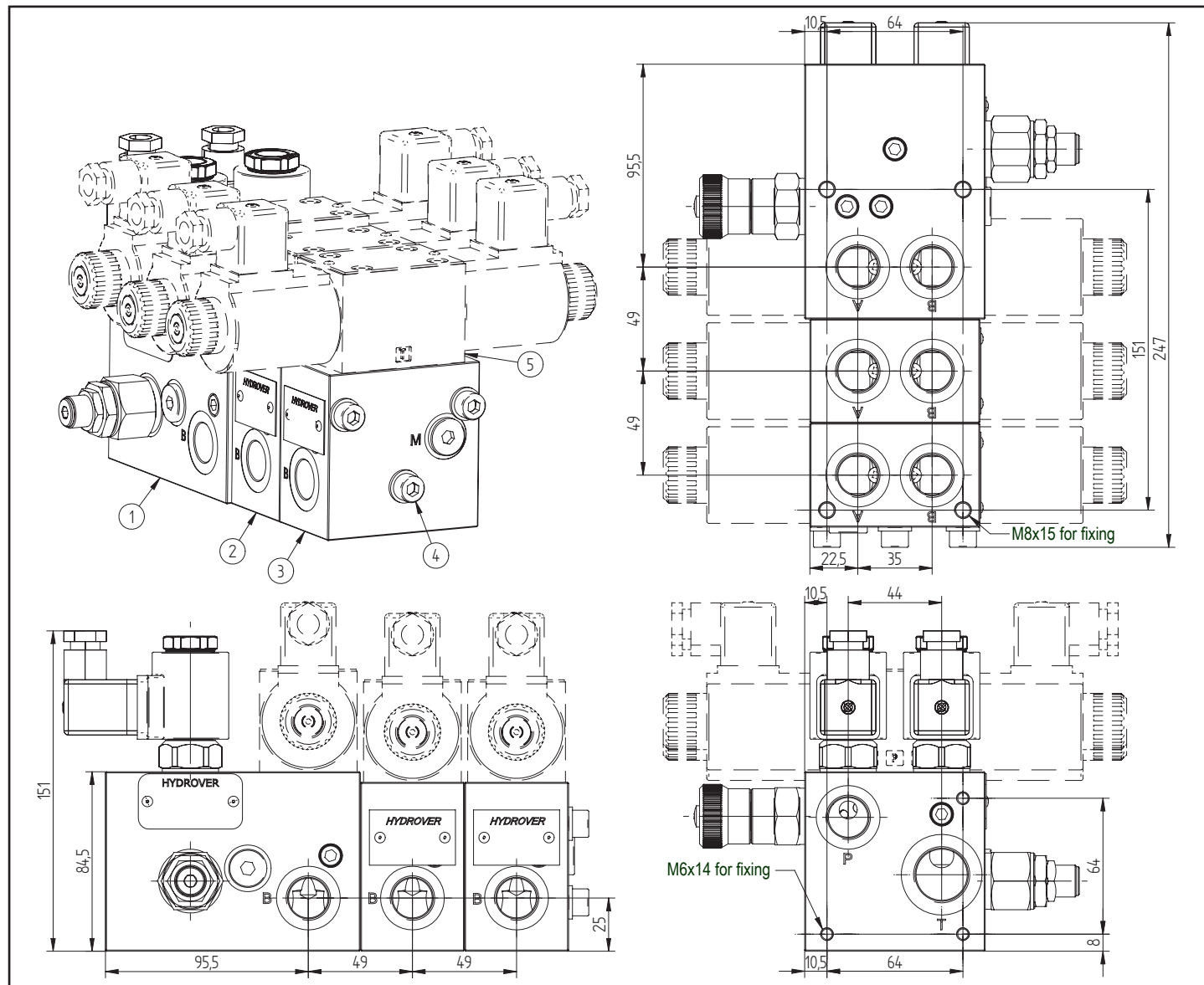
Product ID

N°	Ordering code	Description	Q.ty
1	H3107A-S2-E0-OC1	High flow rate inlet subplate with 1 Cetop 3 station, extensible / 110-220 bar relief valve / bypass valve / Side and back A-B ports / Crossing P-T ports / 24V DC DIN	1
2	H3108A	High flow rate intermediate subplate with 1 Cetop 3 station / Side and back A-B ports	2
3	H3109A	High flow rate closing subplate with 1 Cetop 3 station / Side and back A-B ports	1
4	HKVM8X160-3	Assembling kit HKVM8X160-3	1
5	Cetop 3 valve 4/3	Cetop 3 4/3 valve	4



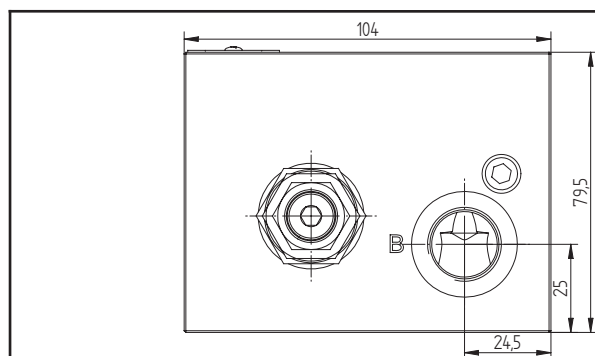


N°	Ordering code	Description	Q.ty
1	H3106A3NR-S2-E0-OC1	High flow rate inlet subplate with 1 Cetop 3 station, extensible / 110-220 bar relief valve / bypass valve / 2 or 3 way flow regulation normally slow fast slow speed / Side and back A-B ports / Crossing P-T ports / 24V DC DIN	1
2	H3108A	High flow rate intermediate subplate with 1 Cetop 3 station / Side and back A-B ports.	1
3	H3109A	High flow rate closing subplate with 1 Cetop 3 station / Side and back A-B ports	1
4	HKVM8X160-3	Assembling kit HKVM8X160-3	1
5	Cetop 3 valve 4/3	Cetop 3 4/3 valve	4

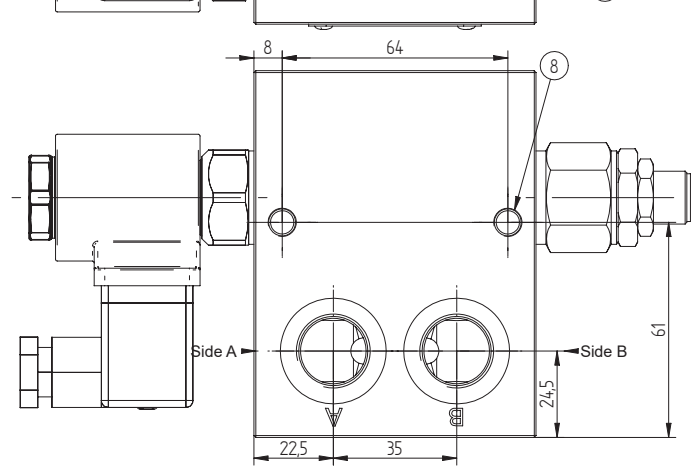
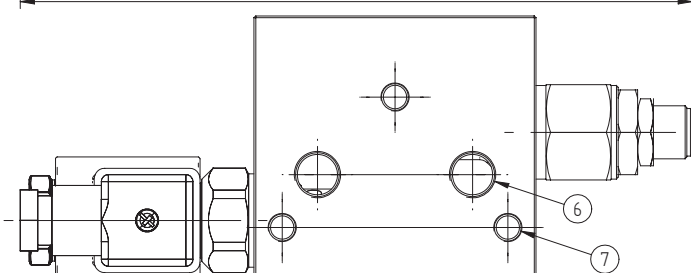
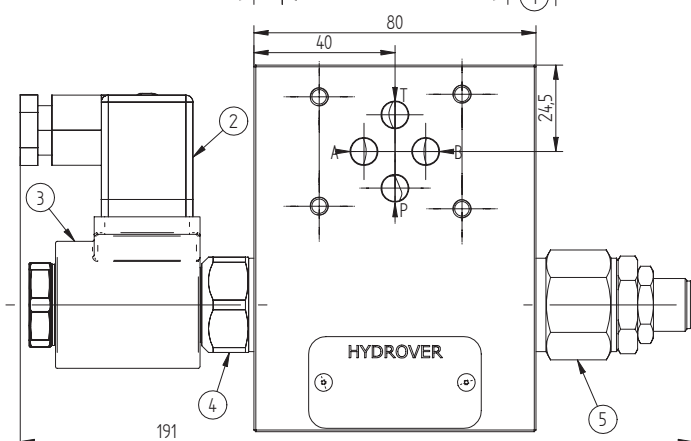
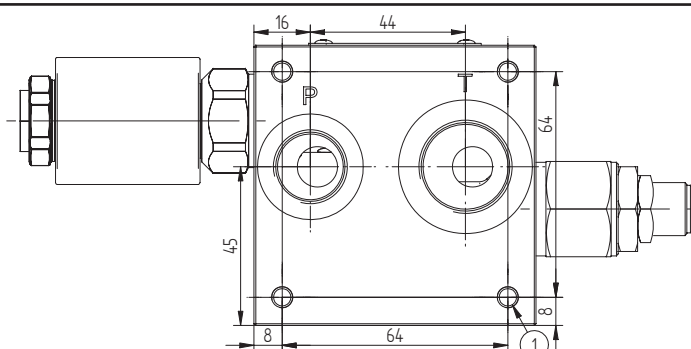
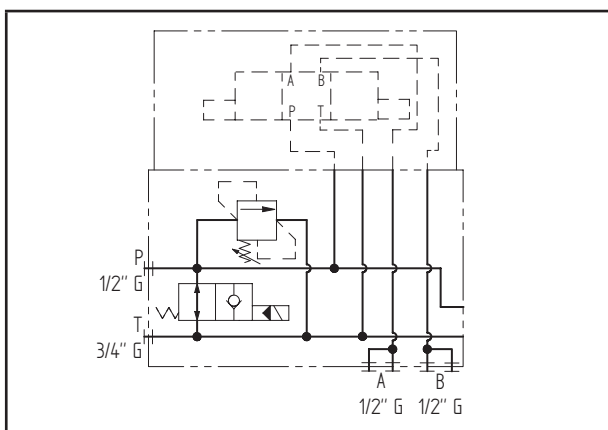
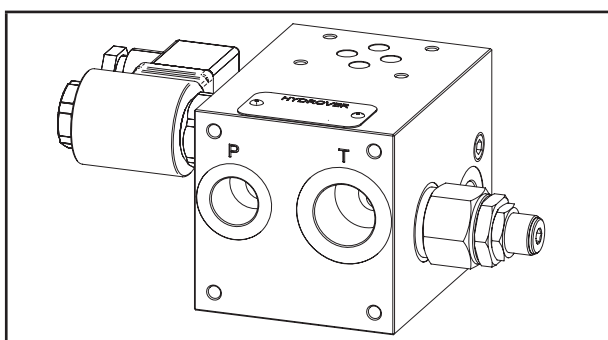


High flow rate inlet subplate with 1 Cetop 3 station / extensible relief and bypass valve / side and back A-B ports / crossing P-T ports

**H3107**



Technical data	
Max. pressure	250 bar
Max. flow	70 lpm *
Weight	2,1 Kg
Manifold material	Aluminium
A / B / P ports	1/2" G
T port	3/4" G



Dimensions in mm

N°	Description	Q.ty
1	M6x14 thread for mounting	4
2	Connector DIN 43650 ISO 4400	1
3	Bosch Rexroth coil <b>D36</b> - CLASS H DIN 43650 ISO 4400 *	1
4	Bosch Rexroth bypass solenoid valve <b>VEI-16-10A-NA OD.15.06.36-Y-000000</b> *	1
5	Bosch Rexroth relief valve <b>VMD1.070</b> *	1
6	Ø 11,5 through hole with 1/4" G thread (P-T)	2
7	M8x15 for tie rod	3
8	M8x15 thread for mounting	2

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

Ordering code

H	3	1	0	7	A	-		-		-	
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### Hydrover product

## Product series

### 31 series - Modular Cetop 3 subplates for parallel circuits

## Product ID

## Manifold material

Aluminium

### Relief valve adjustment type \*

Screw

$$= S$$

**Relief valve adjustment pressure range \***

10-60 bar = 0

40-110 bar = 1

110-220 bar = 2

220-260 bar = 3

**Bypass  
solenoid valve**

**coil connection \***

1 = DIN 43650 ISO 4400

**Solenoid valve  
coil voltage \***

OB = 12V DC

OC = 24V DC

OD = 48V DC

OU = 110V RAC

AH = 230V RAC

### Bypass solenoid valve

**manual override \***

Without

## Push

### Push and twist

$$E0 =$$
$$EP =$$

EG =

\* Omit if not required. For example, to order the product without the bypass solenoid cartridge valve, omit the coil connection, coil voltage and manual override options: H3107A-S2.

The manifold will still be provided with the corresponding cavity.

To inhibit a function, replace the related valve options with TL: eg H3107A-S2-TL.

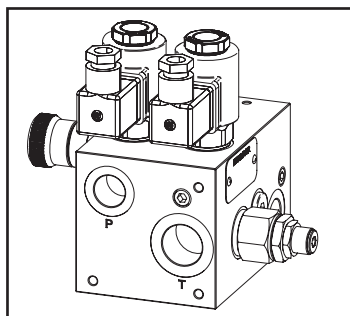
In the cavity it will be mounted a long plug.

Valve	Cavity	Long plug code
Solenoid valve VEI-16-10A-NA OD.15.06.36-Y-000000	CA-10A-2N	<b>0489A2008500000</b>
Pressure relief valve VMD1.070	CA-10A-2N	<b>0489A2008500000</b>

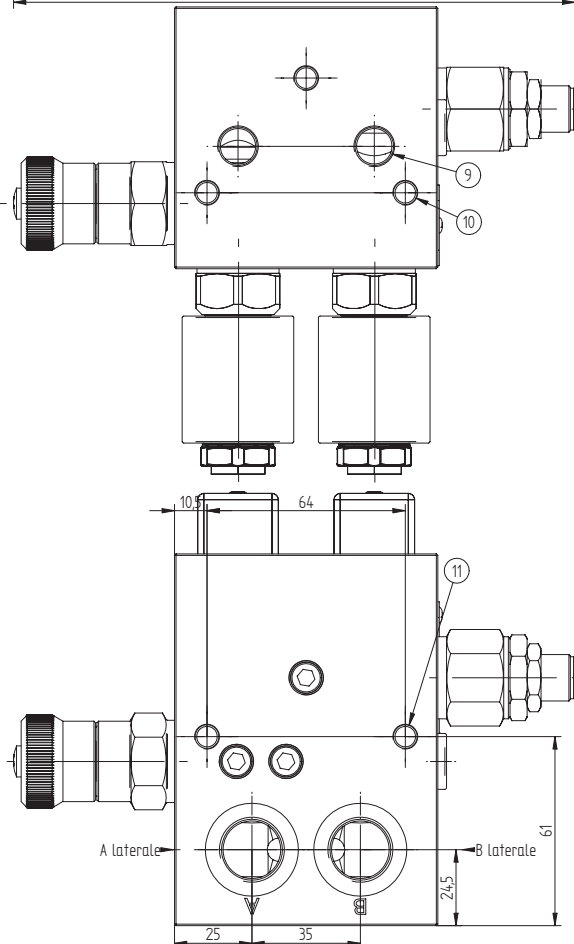
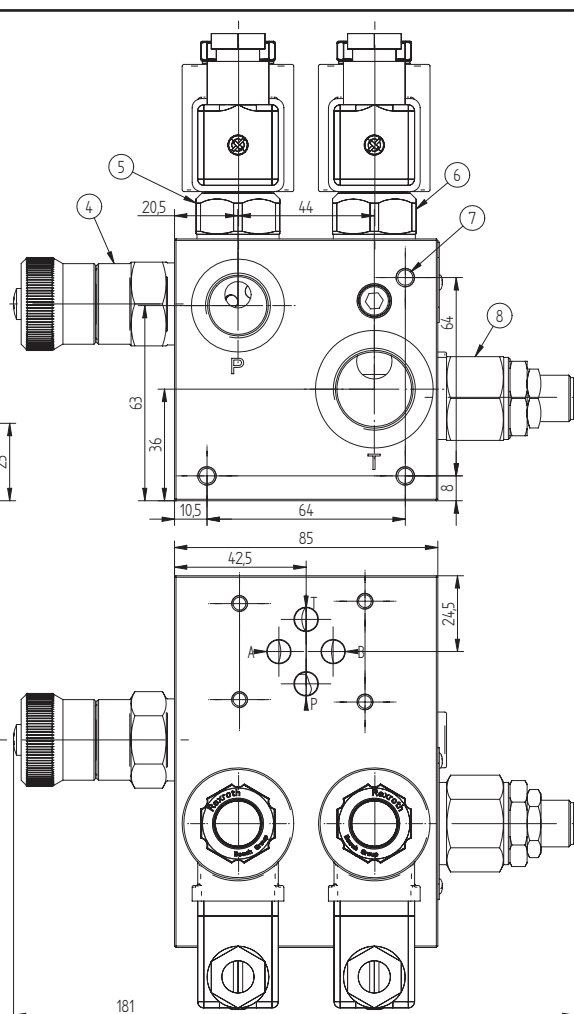
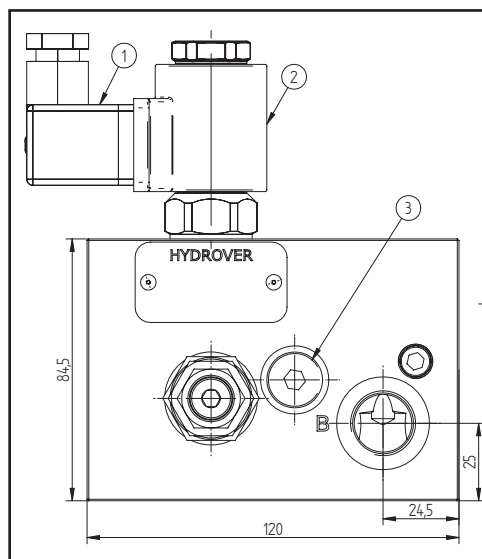
Note: to add stations use the subplates **H3108** and **H3109**.

High flow rate inlet subplate with 1 Cetop 3 station / extensible / relief and bypass valve  
2 or 3 way flow regulation / fast slow speed / side and back A-B ports / crossing P-T ports

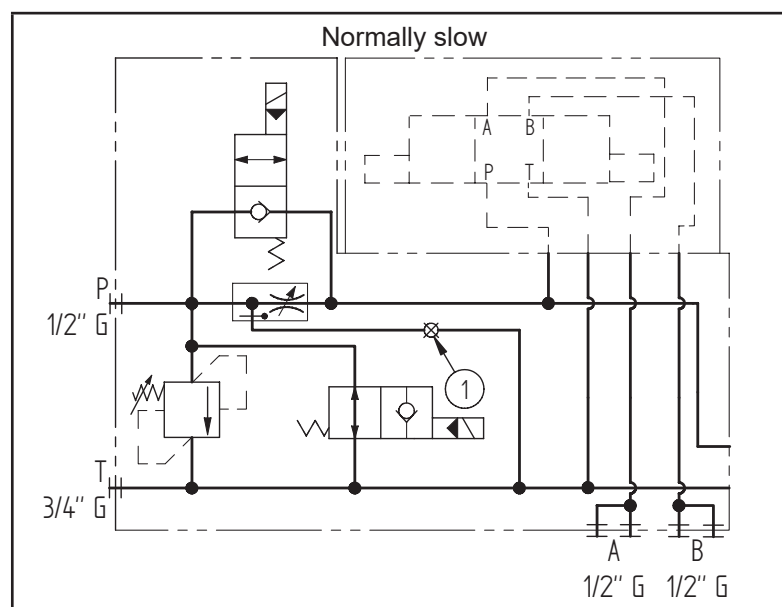
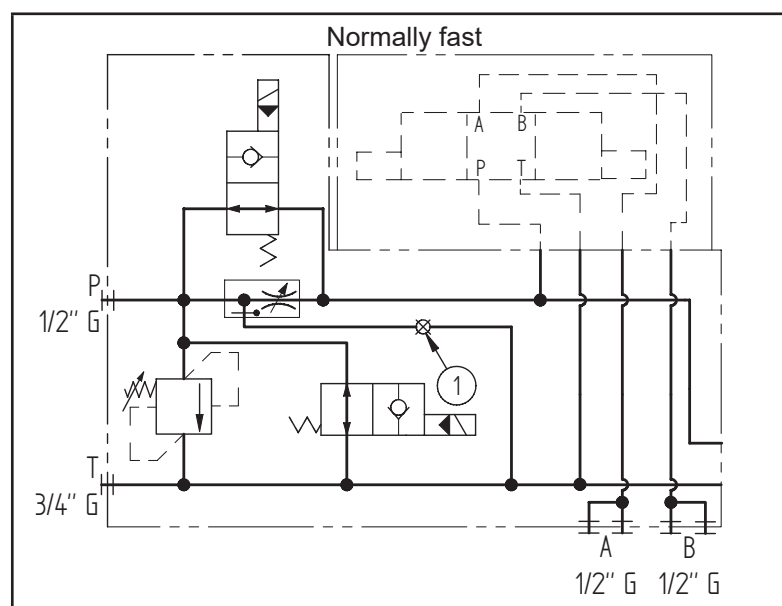
# H3106



Technical data	
Max. pressure	250 bar
Inlet max. flow	60 lt/1 *
Reg. max. flow	30 lt/1 *
Manifold material	Aluminium
T port	3/4" G
A / B / P ports	1/2" G
Weight	3,1 Kg



Dimensions in mm



## Ordering code

H	3	1	0	6	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-
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Hydrover  
product

## Product series

31 series - Modular  
Cetop 3 subplates for  
parallel circuits

## Product ID

## Manifold material

Aluminium

2 or 3 way compensated  
flow regulation2 way = 2  
3 way = 3

## Relief valve adjustment type \*

Screw = S

## Relief valve adjustment pressure range \*

0 = 10-60 bar  
1 = 40-110 bar  
2 = 110-220 bar  
3 = 220-260 barSolenoid  
valves coil  
connection \*1 = DIN 43650  
ISO 4400Solenoid valve  
coil voltage \*OB = 12V DC  
OC = 24V DC  
OD = 48V DC  
OU = 110V RAC  
AH = 230V RACBypass solenoid valve  
manual override \*E0 = Without  
EP = Push  
EG = Push and twist

## Slow or fast in normal position \*

NL = Normally slow  
NR = Normally fast

N°	Description	Q.ty
1	Connector DIN 43650 ISO 4400	2
2	Bosch Rexroth coil <b>D36</b> - CLASS H DIN 43650 ISO 4400 **	2
3	1/4" G cylindrical plug - For the cavity where there is the 1/8" DIN 906 conical plug to switch from 2 to 3 way	1
4	Compensated flow regulator <b>04.04.02.40.85.40 - VRFD-10A-M-40</b> **	1
5	Bosch Rexroth solenoid valve for fast slow function <b>OD.15.05.36.A.000000</b> * (normally slow) or <b>OD.15.06.36.A.000000</b> * (normally fast)	1
6	Bosch Rexroth bypass solenoid valve <b>OD.15.06.36-Y-000000</b> **	1
7	M6x14 thread for mounting	3
8	Bosch Rexroth relief valve <b>VMD1.070</b> **	1
9	Ø 11,5 through hole with 1/4" G thread (P-T)	2
10	M8x15 for tie rod	3
11	M8x15 thread for mounting	2

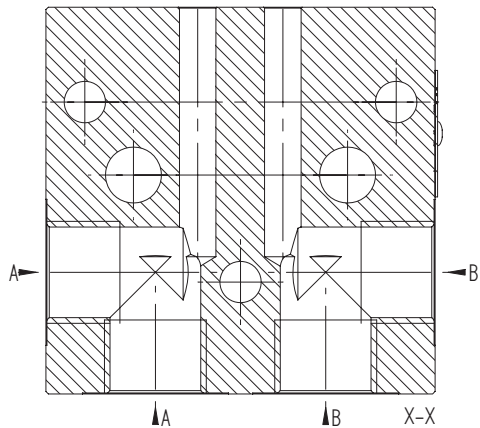
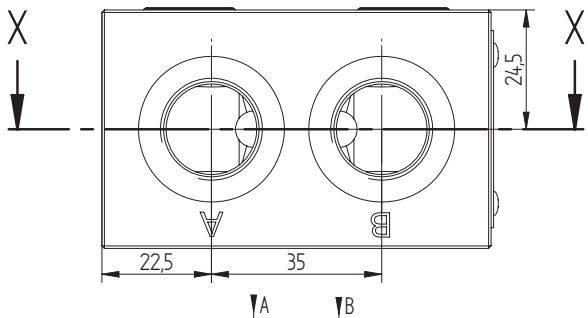
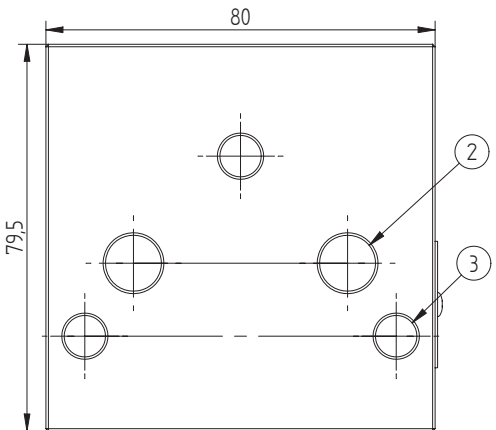
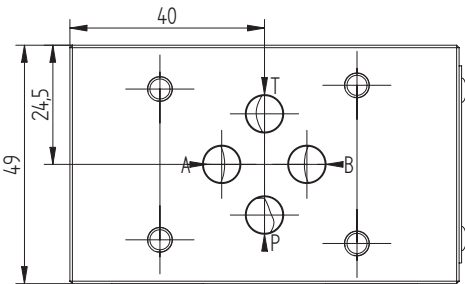
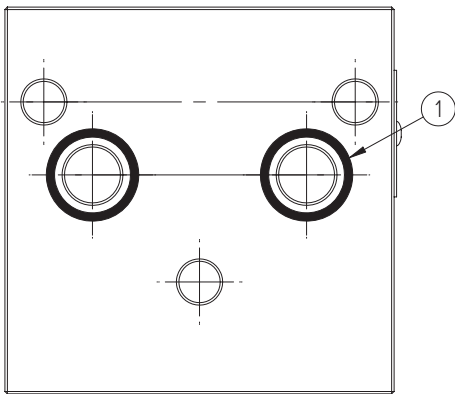
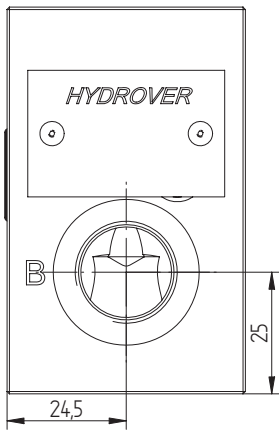
\*\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

\* Omit if not required. For example, to order the product without the fast slow solenoid valve, omit the variable "Slow or fast in normal position": H3106A3-S2-E0-OC1. The manifold will still be provided with the corresponding cavity. Valves for fast slow, bypass and relief use the CA-10A-2N cavity (long plug code **0489A2008500000**). To inhibit a function, replace the related valve options with TL: eg H3106A3-S2-TL-TL.

Note: to add stations use the subplates **H3108** and **H3109**.

High flow rate intermediate subplate with 1 Cetop 3 station  
side and back A-B ports

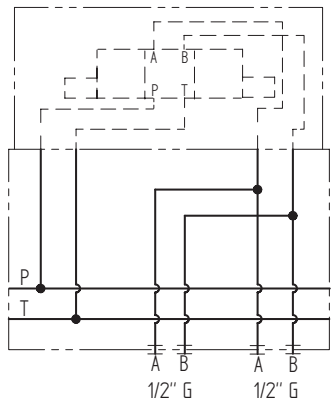
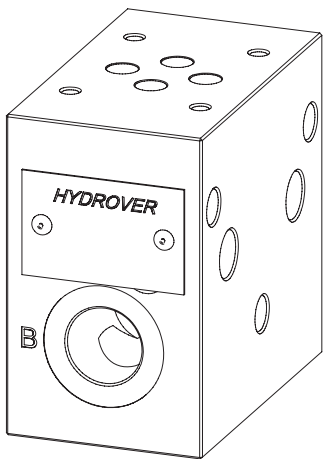
H3108



Dimensions in mm

Technical data

Max. pressure	250 bar
Weight	0,8 Kg
Manifold material	Aluminium
A / B ports	1/2" G



N°	Description	Q.ty
1	OR 2062 i. Ø 15,60 cross section 1,78 (P-T)	2
2	Ø 11,5 through hole (P-T)	2
3	Ø 8,5 through hole for tie rod	3

Ordering code

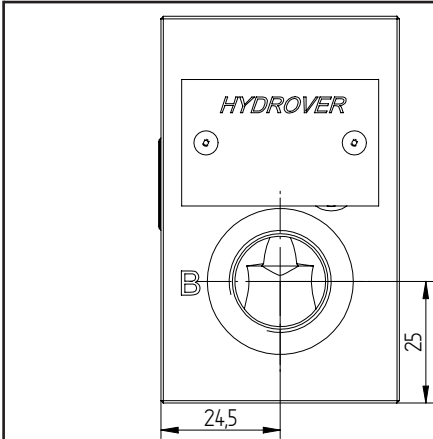
H	3	1	0	8	A
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Hydrover product

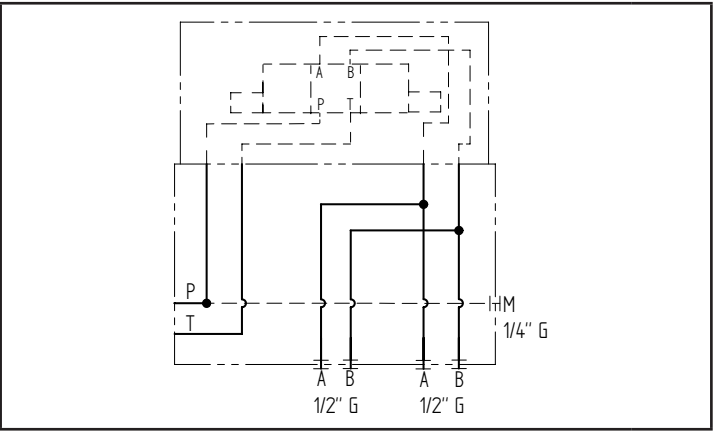
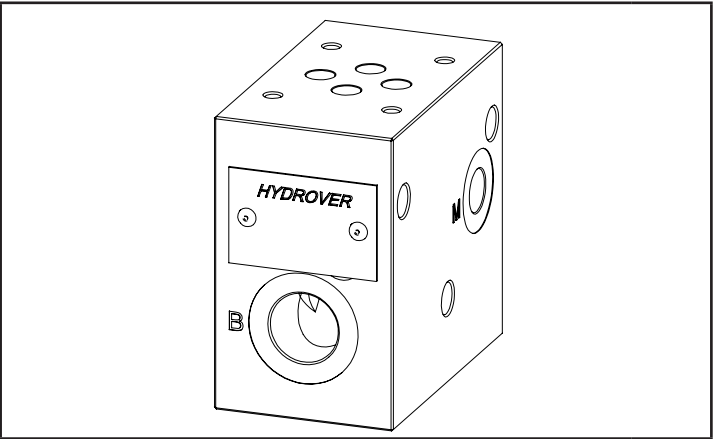
Manifold material  
Aluminium

Product series  
31 series - Modular Cetop 3 subplates  
for parallel circuits

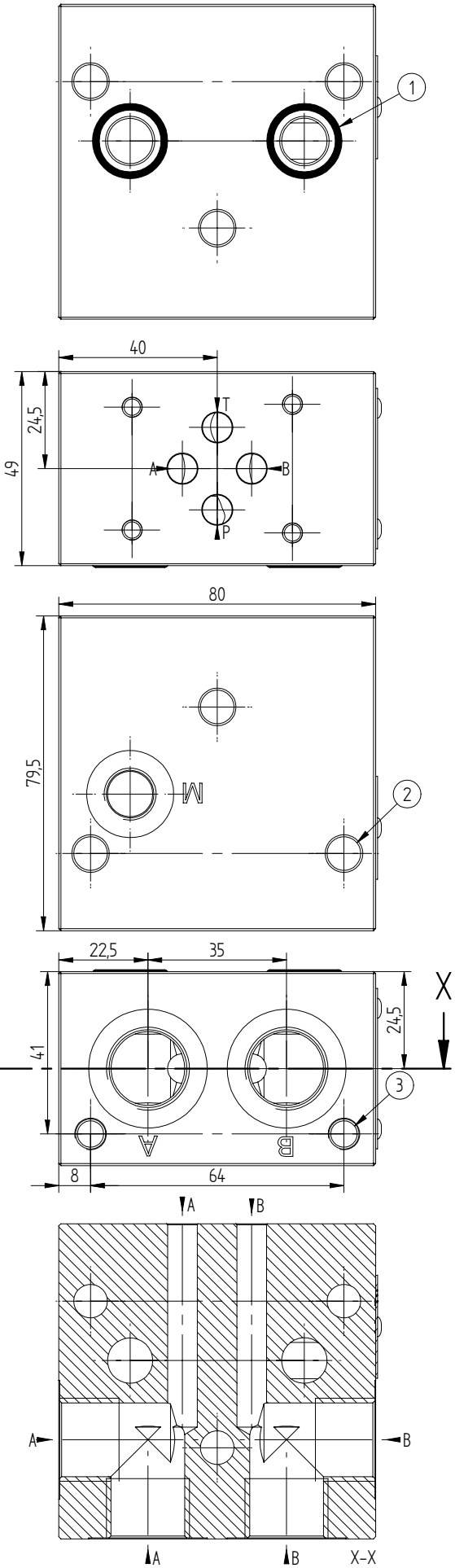
Product ID



Technical data	
Max. pressure	250 bar
Weight	0,8 Kg
Manifold material	Aluminium
M port	1/4" G
A / B ports	1/2" G



N°	Description	Q.ty
1	OR 2062 i. Ø 15,60 cross section 1,78 (P-T)	2
2	Ø 8,5 through hole for tie rod	3
3	M8x15 thread for mounting	2



Dimensions in mm



Ordering code

H	3	1	0	9	A
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Hydrover product

Manifold material  
Aluminium

Product series  
31 series - Modular Cetop 3 subplates  
for parallel circuits

Product ID

Ordering code for assemblies with 1 to 3 intermediate/closing subplates

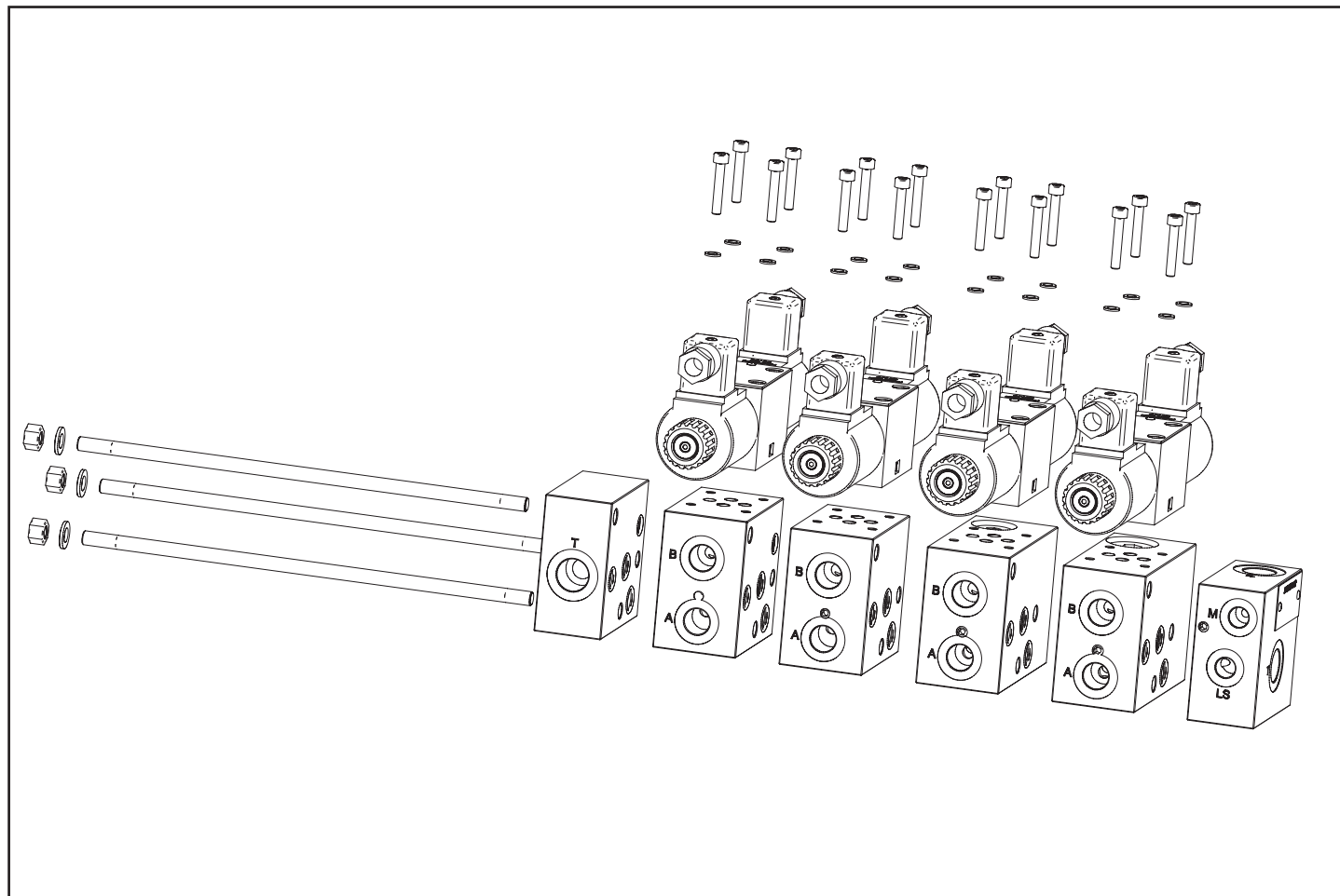
	H	K	V	M	8	X	_	_	_	-	3	
Hydrover product											Screw quantity	3
Product type Kit											Screw length for intermediate/closing subplates quantity	Dimensions in mm 060 = 1 subplate 110 = 2 subplates 160 = 3 subplates
Kit type Viti												
Thread M8												

Ordering code for assemblies with 4 to 9 intermediate/closing subplates

	H	K	T	M	8	X	_	_	_	_	-	3	
Hydrover product											Tie rods quantity	3	
Product type Kit											Nut type *	standard nut long nut (only for H3102)	
Kit type Tie rods											DS =		
Thread M8											DL =	Tie rods length for intermediate/closing subplates quantity	225 = 4 subplates 268 = 5 subplates 318 = 6 subplates 366 = 7 subplates 415 = 8 subplates 465 = 9 subplates

# 32 SERIES

## Load sensing modular Cetop 3 subplates for parallel circuits



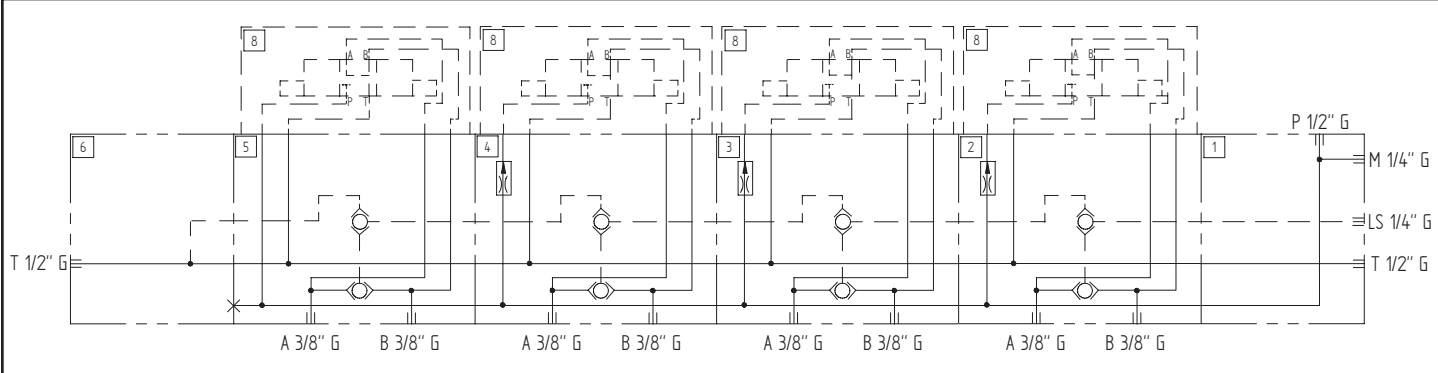
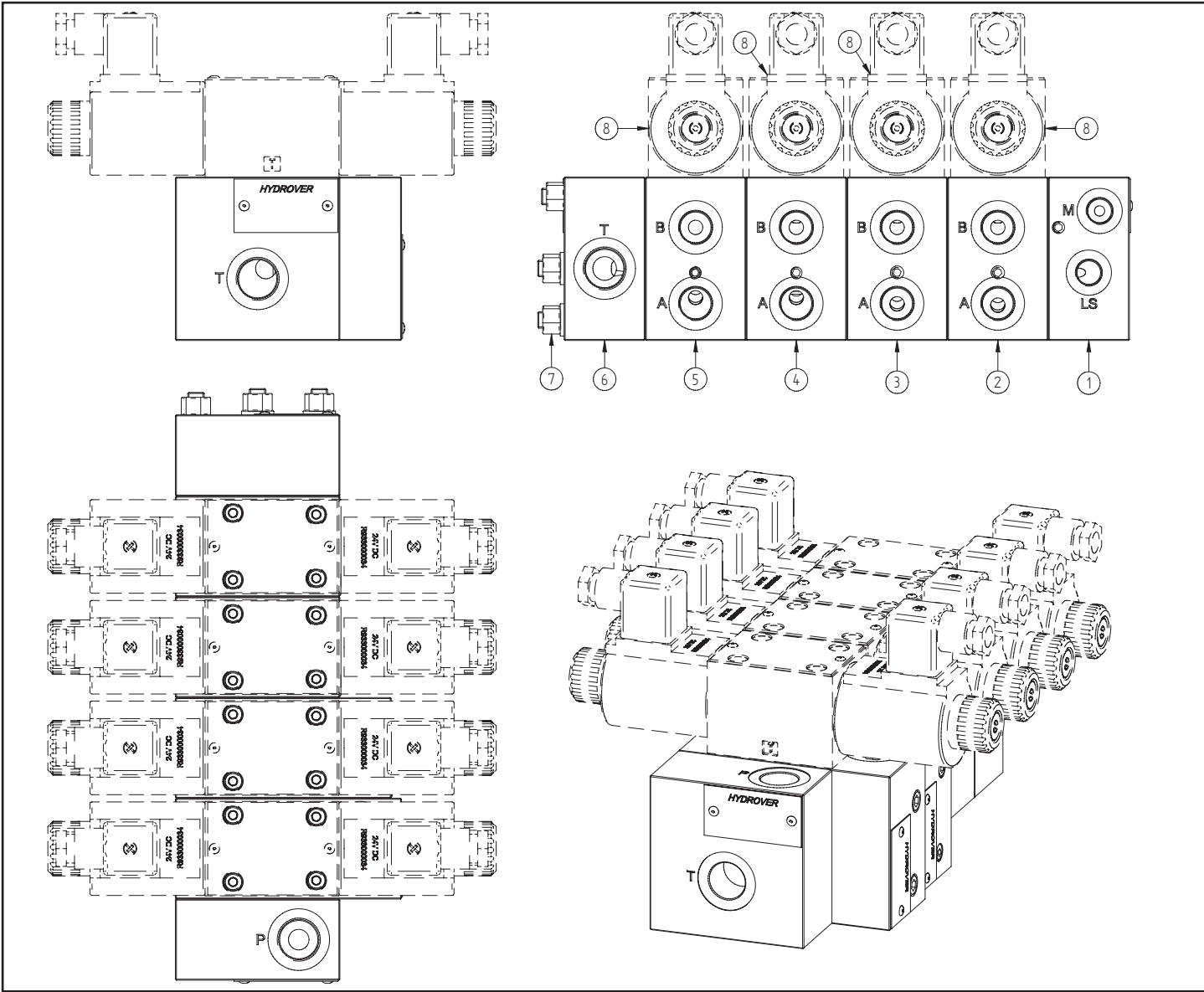
32 SERIES products give you the possibility to build Cetop 3 load sensing systems for variable displacement pumps or gear pumps.

Intermediate subplates could have a 2 ways compensated flow regulation.

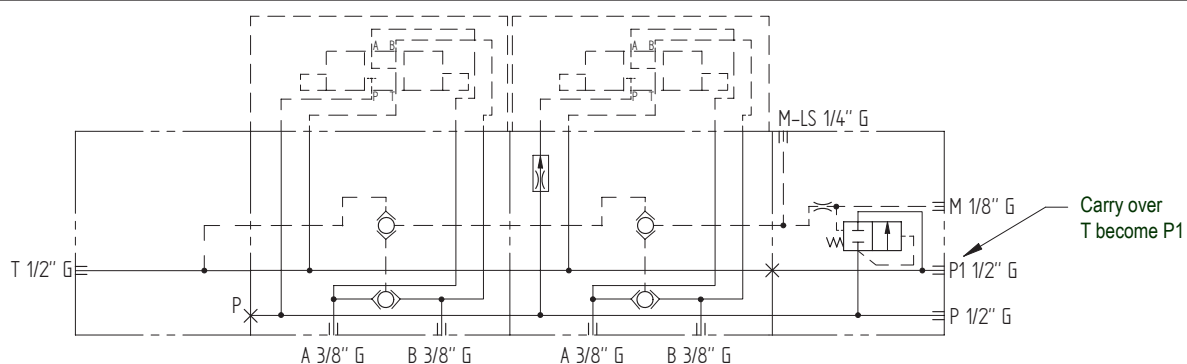
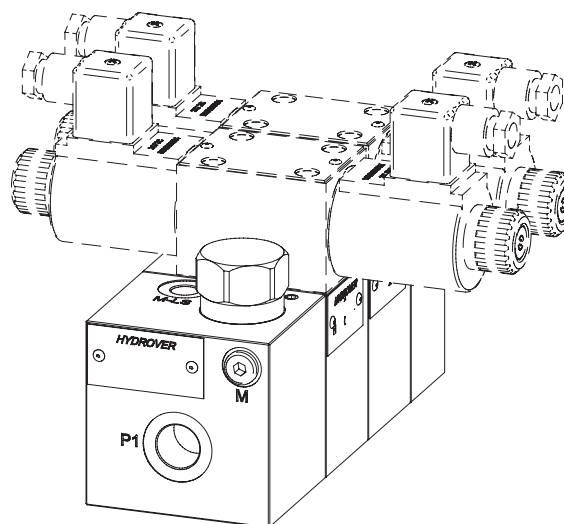
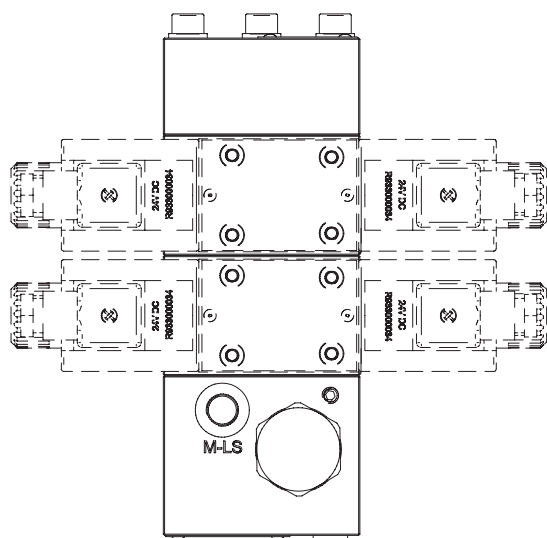
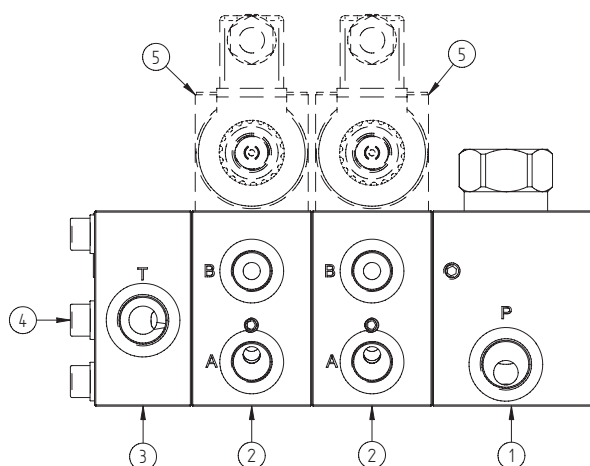
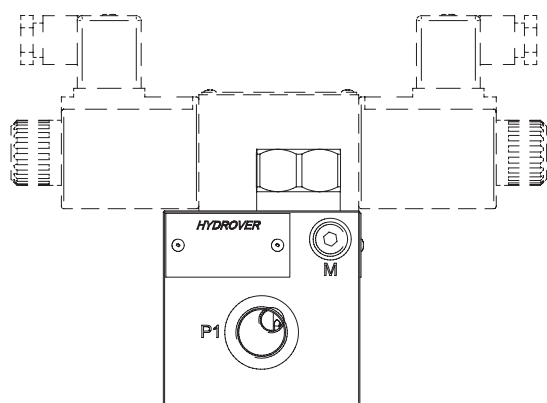
The optional "Carry Over" function let you sending the extra oil to another system. 32 SERIES need Cetop 3 valves with A/B in T in neutral position. So if there is a load to sustain, you will have to add check valves or counterbalance valves. Maximum inlet flow is 90 lpm, maximum operating pressure 250 bar (Aluminium manifolds). We can build on request steel manifolds for a maximum operating pressure of 350 bar.

Mounted group sample H32-G1 H32-G1

N°	Ordering code	Description	Q.ty
1	H3203A	Inlet plate for variable displacement pump	1
2	H3207A-20	Intermediate subplate with 2 way compensated flow regulator 20 lpm fixed flow rate	1
3	H3205A-14	Intermediate subplate with 2 way compensated flow regulator 14 lpm fixed flow rate	1
4	H3201A-05	Intermediate subplate with 2 way compensated flow regulator 5 lpm fixed flow rate	1
5	H3206A	Intermediate subplate with 1 Cetop 3 station / Side A-B ports	1
6	H3202A	Closing plate with T port	1
7	HKTM8X268-3	Assembling kit HKTM8X268-3	1
8	Cetop 3 valve 4/3	Cetop 3 valve 4/3	4

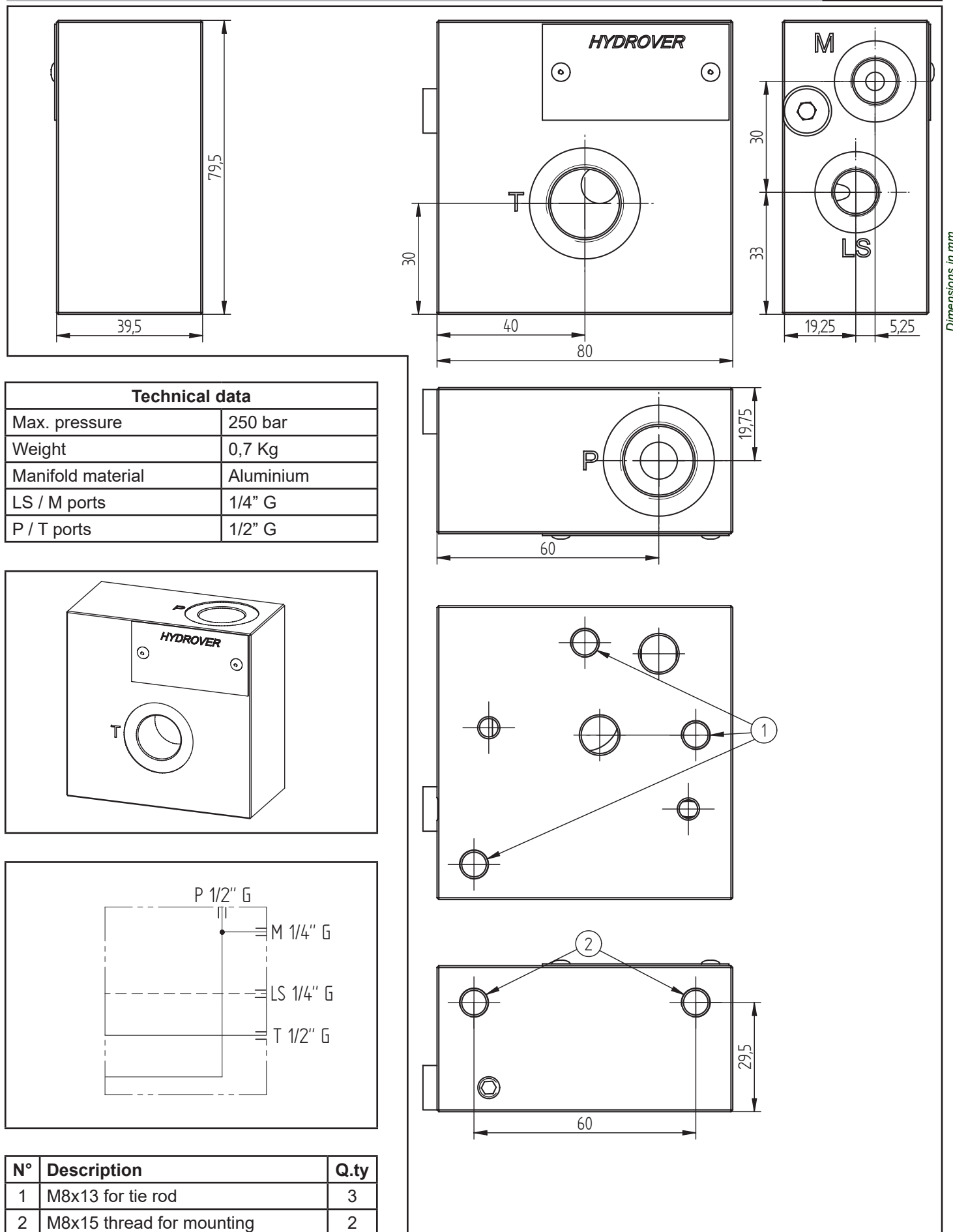


N°	Ordering code	Description	Q.ty
1	H3204A6-CO	Inlet plate 3 way compensated for fixed displacement pump with carry over	1
2	H3206A	Intermediate subplate with 1 Cetop 3 station / Side A-B ports	2
3	H3202A	Closing plate with T port	1
4	HKVM8X150-3	Assembling kit HKVM8X150-3	1
5	Cetop 3 valve 4/3	Cetop 3 valve 4/3	2



## Inlet plate for variable displacement pump

## H3203



Ordering code

H	3	2	0	3	A
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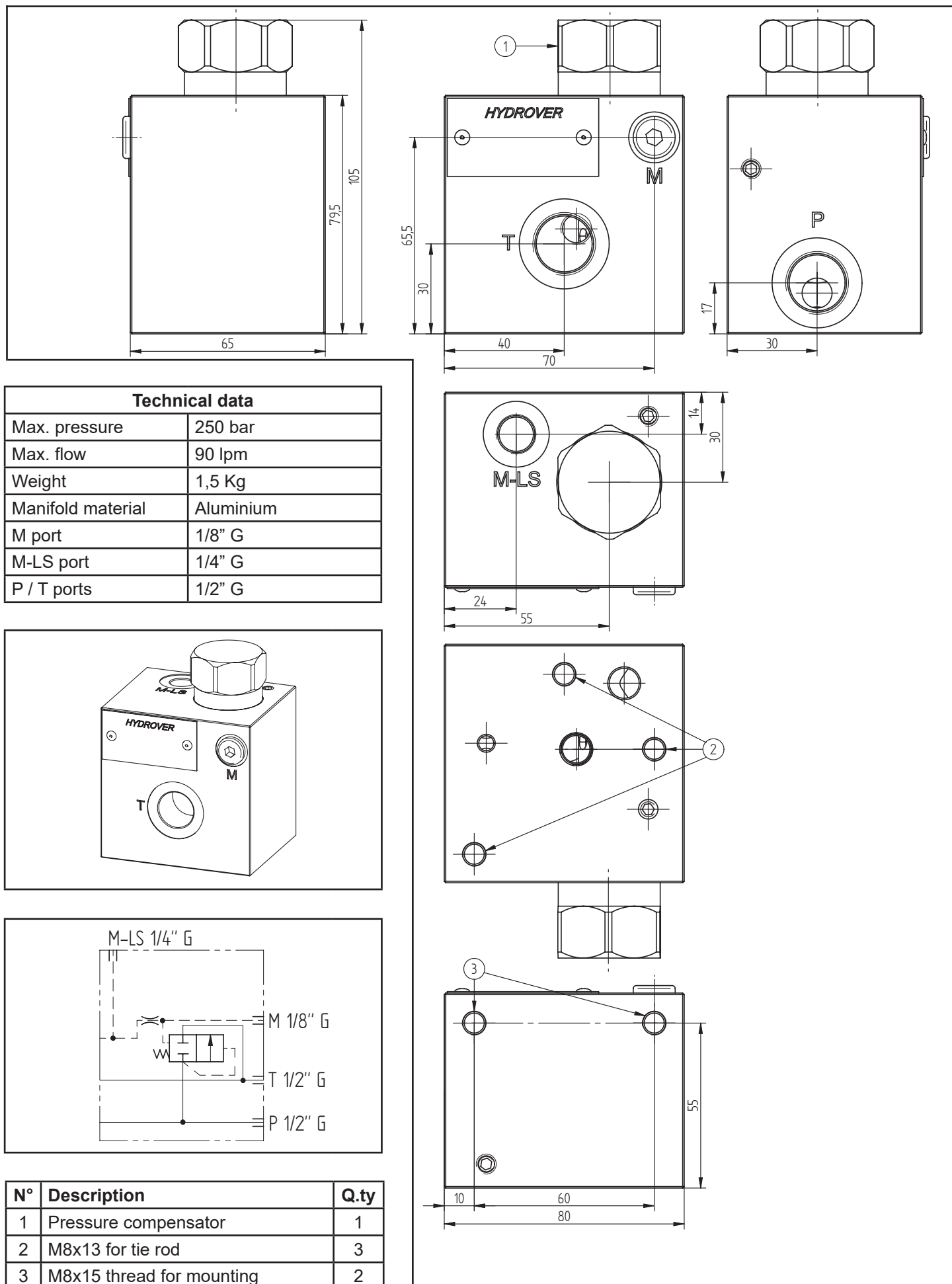
Hydrover product

Manifold material  
Aluminium

Product series  
32 series - Load sensing modular Cetop 3 subplates  
for parallel circuits

Product ID

## Inlet plate 3 way compensated for fixed displacement pump

**H3204**




Ordering code

H	3	2	0	4	A		-	
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### Hydrover product

## Product series

32 series - Load sensing modular Cetop 3 subplates for parallel circuits

Product ID

**Carry over\***

Standard

T as carry over

### Compensator spring

5.5 bar (standard)

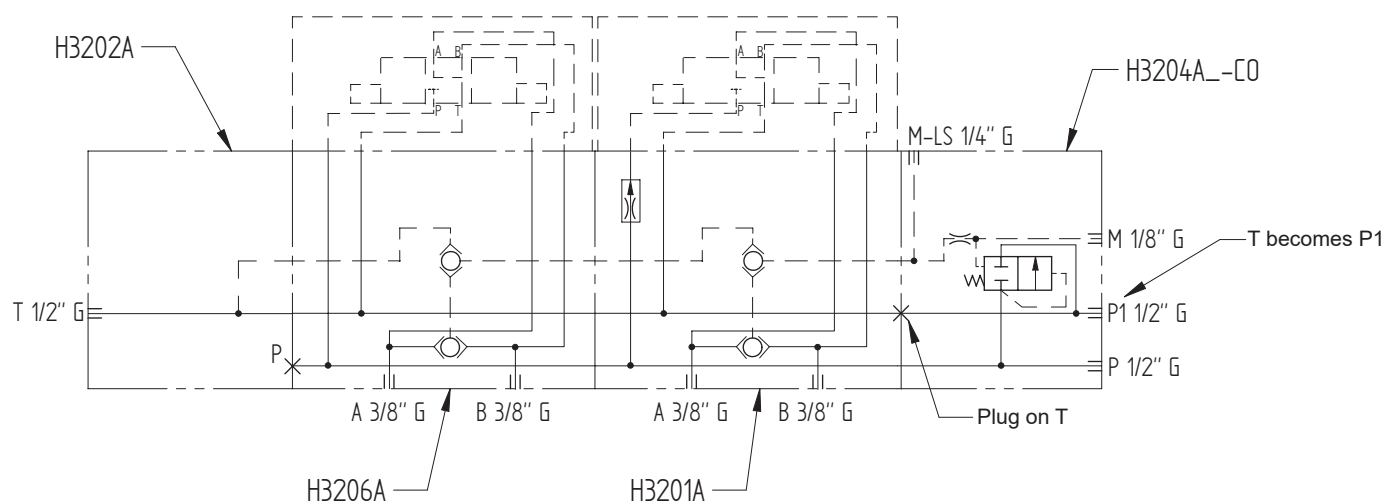
12.5 bar

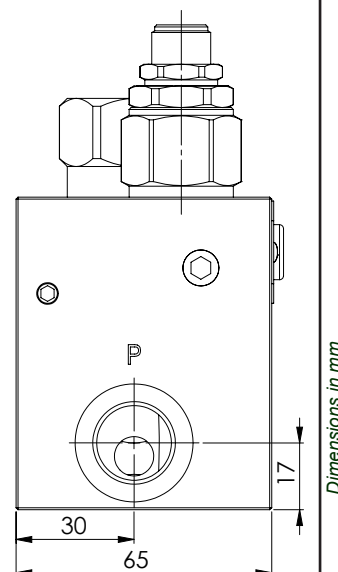
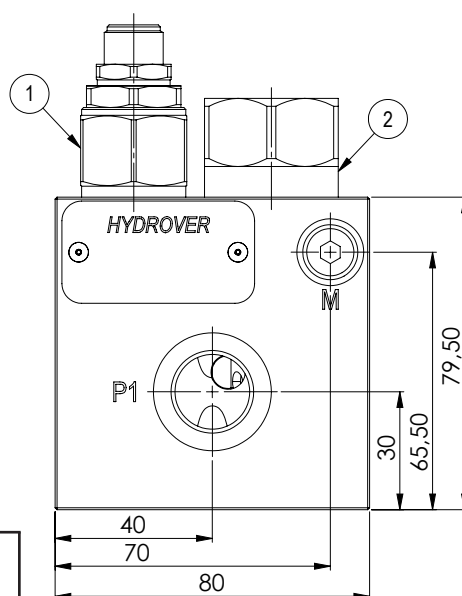
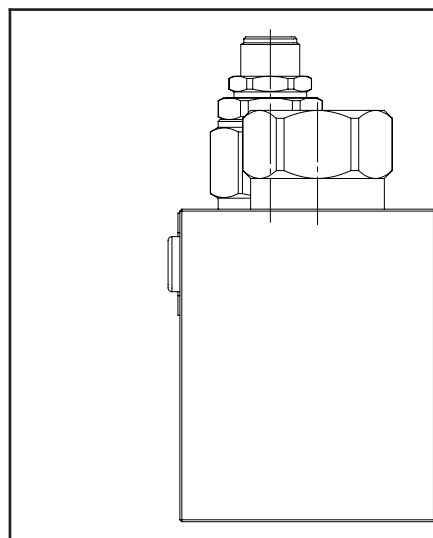
19 bar

## Manifold material

Aluminium

\* The Carry over version have a plug on T. Authorizes the use of the flow in excess. T becomes P1.

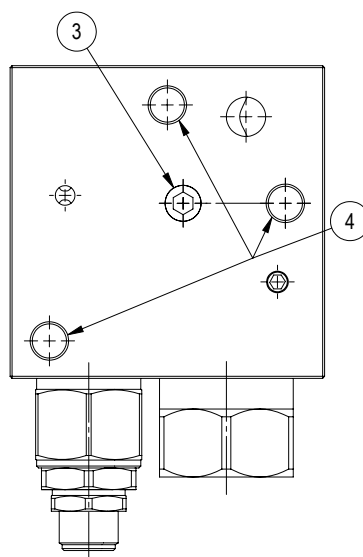
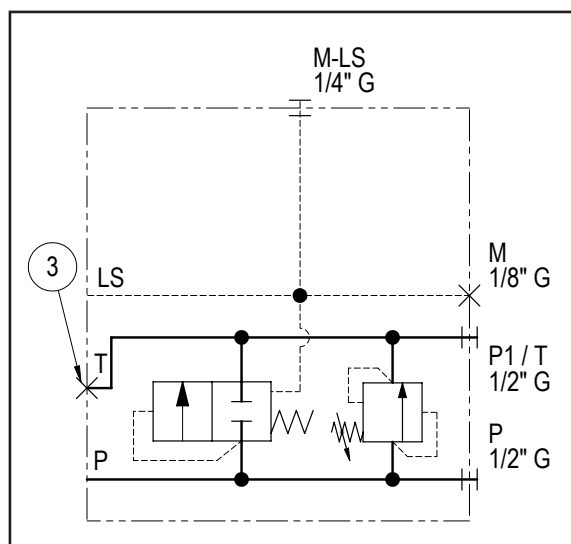
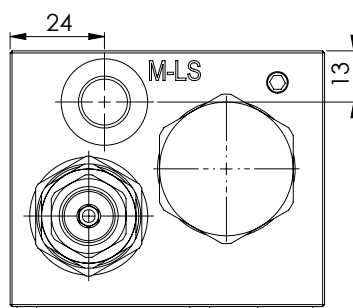




Dimensions in mm

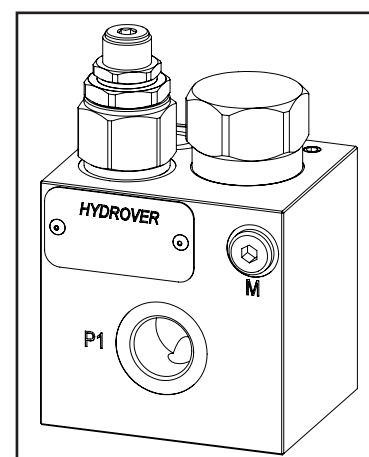
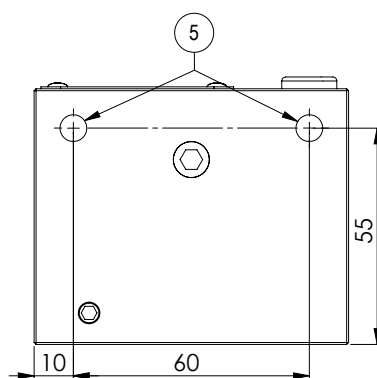
**Technical data**

Max. pressure	250 bar
Max. flow	70 lpm
Weight	1,6 Kg
Manifold material	Aluminium
M port	1/8" G
M-LS port	1/4" G
P / T (P1) ports	1/2" G



Valve depicted in carry over version

N°	Description	Q.ty
1	Bosch Rexroth relief valve <b>VMD1.070 *</b>	1
2	Pressure compensator	1
3	Plug on T for carry over versions	1
4	M8x13 for tie rod	3
5	M8x15 thread for mounting	2



## Ordering code

H	3	2	1	9	A	-	-	-	-	-	-
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## Hydrover product

## Product series

32 series - Load sensing modular Cetop 3 subplates for parallel circuits

## Product ID

## Manifold material

Aluminium

## Compensator spring

5,5 bar (standard)

12,5 bar

19 bar

= 6

= 1

= 2

- =  
CO =

## Carry over \*

Standard

T as carry over

Relief valve  
adjustment pressure range \*

0 = 10-60 bar

1 = 40-110 bar

2 = 110-220 bar

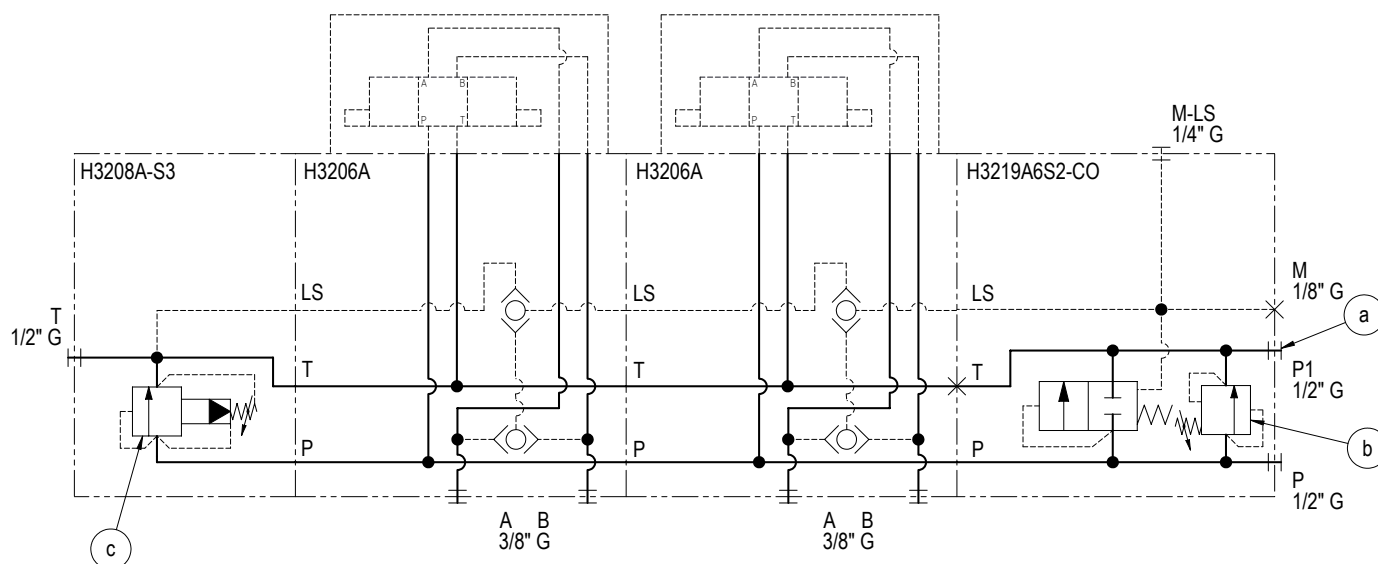
3 = 220-260 bar

S =

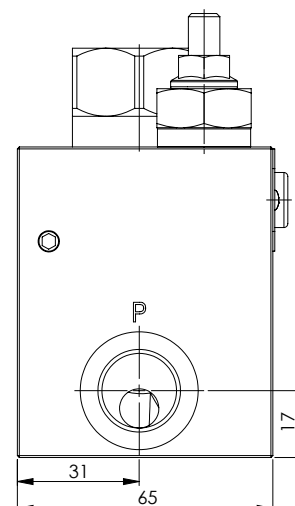
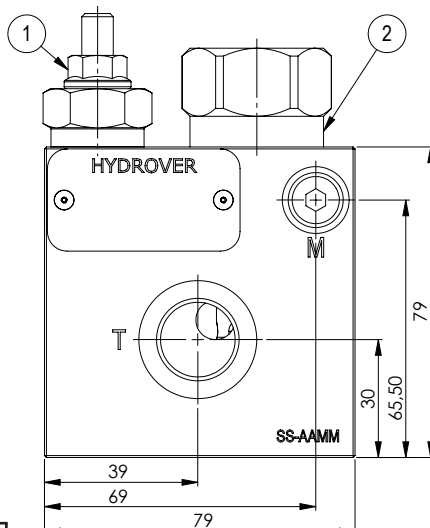
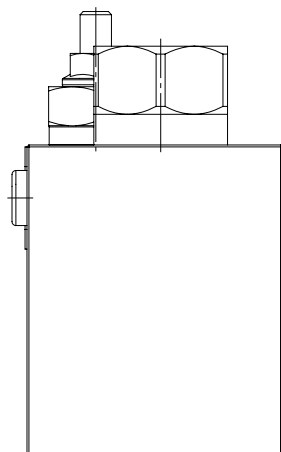
Relief valve  
adjustment type \*

Screw

Assembly example with carry over. There is a plug on the T of the flange.  
Authorizes the use of the flow in excess. T becomes P1.



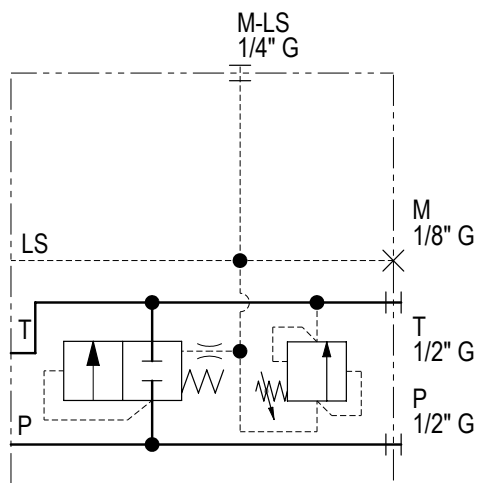
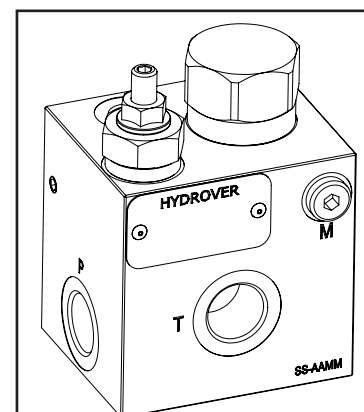
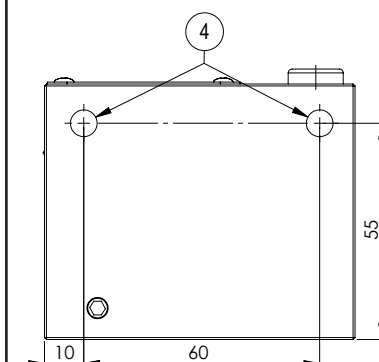
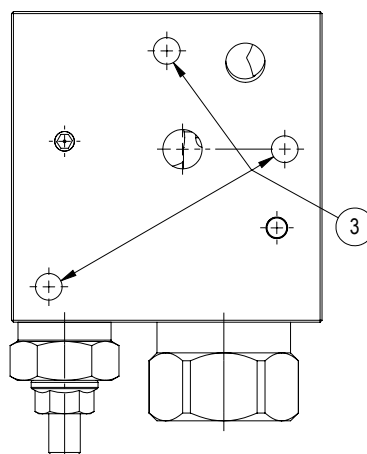
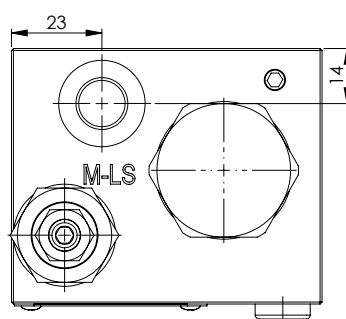
- T becomes P1. The hydraulic system powered by P1 must be able to send the oil to the tank (for example a bypass).
- The main block relief valve is active when the hydraulic system supplied by P1 send the oil to the tank.
- This relief valve is active for the main block and P1 if the hydraulic system supplied by P1 don't send the oil to the tank. The pressure setting of this relief valve must be higher than the b relief valve.



Dimensions in mm

**Technical data**

Max. pressure	250 bar
Max. flow	90 lpm
Weight	1,4 Kg
Manifold material	Aluminium
M port	1/8" G
M-LS port	1/4" G
P / T ports	1/2" G



N°	Description	Q.ty
1	Bosch Rexroth relief valve <b>VSN-08A</b> *	1
2	Pressure compensator	1
3	M8x13 for tie rod	3
4	M8x15 thread for mounting	2

Ordering code

H	3	2	2	3	A	-	-	-	-
---	---	---	---	---	---	---	---	---	---

Hydrover product

Product series

32 series - Load sensing modular Cetop 3 subplates for parallel circuits

Product ID

Manifold material

Aluminium

Compensator spring

5,5 bar (standard) = 6  
12,5 bar = 1  
19 bar = 2

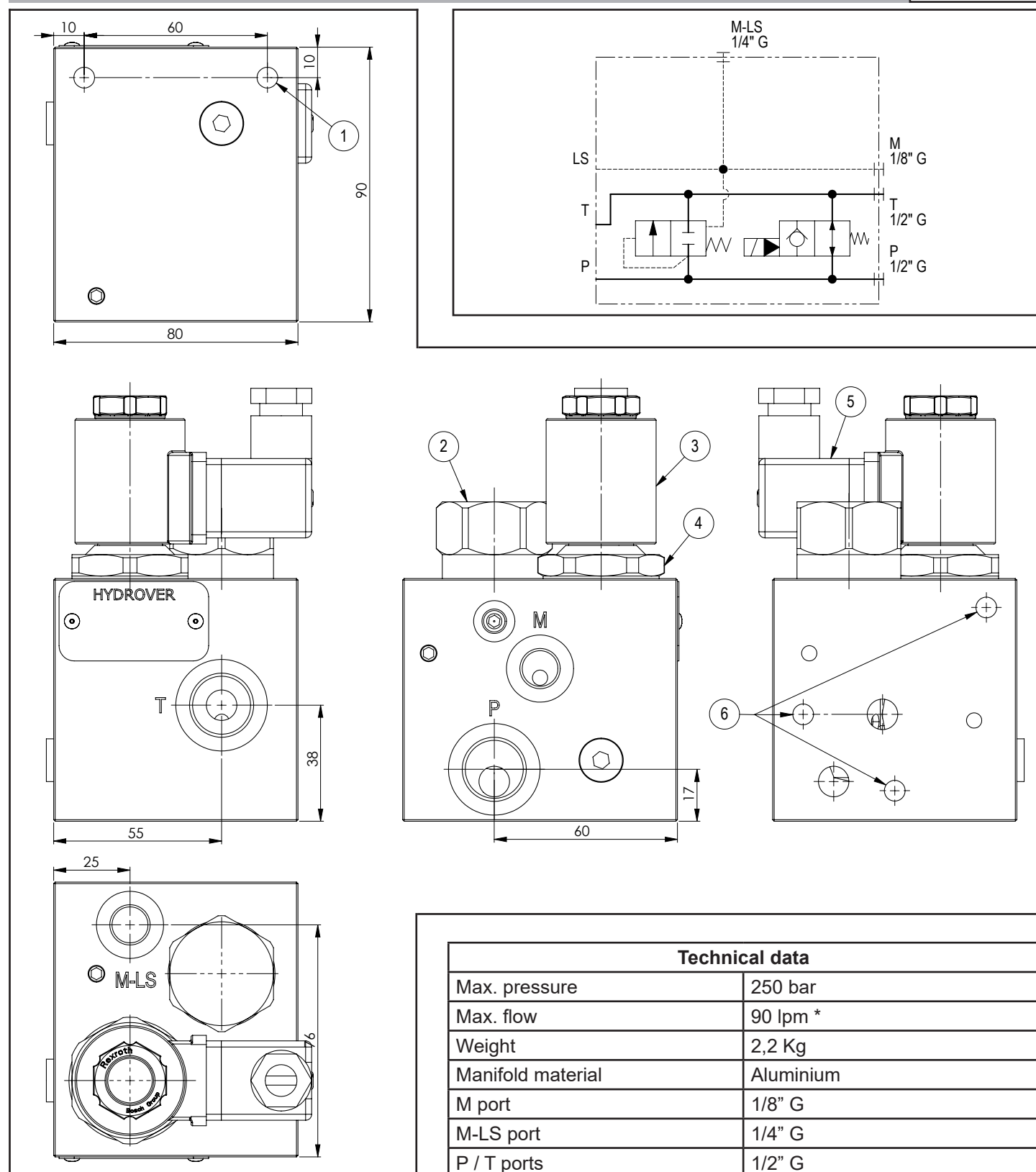
Relief valve  
adjustment pressure range \*

0 = 10-70 bar  
1 = 35-140 bar  
2 = 105-210 bar  
3 = 175-350 bar  
3 = 35-350 bar (adj. knob)

Relief valve  
adjustment type \*

S = Screw  
K = Knob

## Inlet plate 3 way compensated with bypass valve for fixed displacement pump

**H3213**


N°	Description	Q.ty
1	M8x15 thread for mounting	2
2	Pressure compensator	1
3	Bosch Rexroth coil <b>D36</b> - CLASS H DIN 43650 ISO 4400 *	1
4	Bosch Rexroth solenoid valve <b>OD.15.06.21-Y-00000</b>	1
5	Connector DIN 43650 ISO 4400	1
6	M8x15 for tie rod	3

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

Ordering code

H	3	2	1	3	A	-	-	-	-	-	-	-
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Hydrover product

Product series  
32 series - Load sensing modular  
Cetop 3 subplates for parallel  
circuits

Product ID

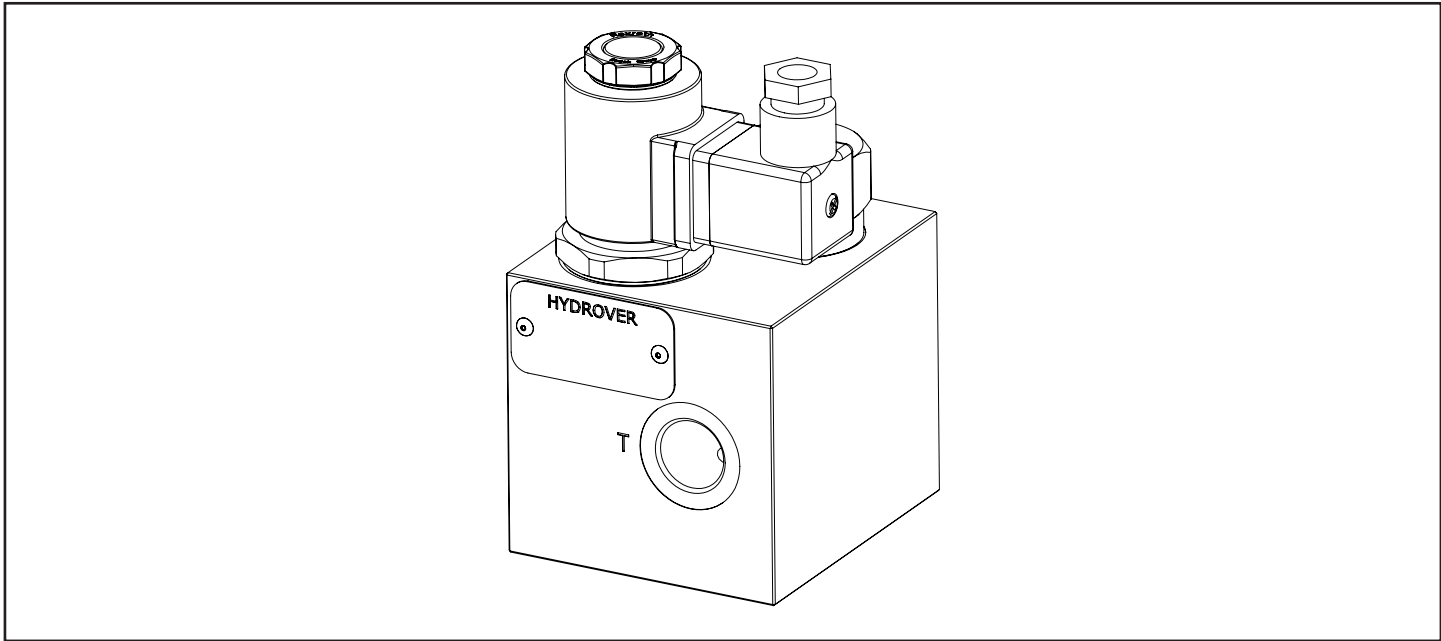
Manifold material  
Aluminium

Compensator spring  
5.5 bar (standard) = 6  
12.5 bar = 1  
19 bar = 2

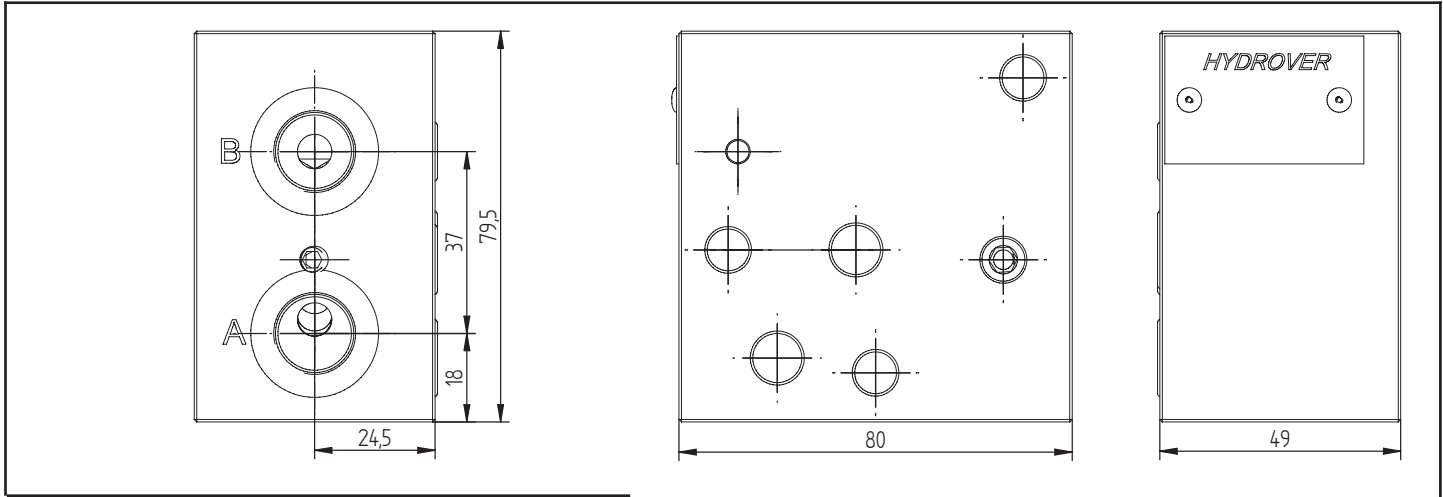
Solenoid valve  
coil connection \*  
1 = DIN 43650 ISO 4400

Solenoid valve  
coil voltage \*  
OB = 12V DC  
OC = 24V DC  
OD = 48V DC  
OU = 110V RAC  
AH = 230V RAC

Solenoid valve  
manual override \*  
E0 = Without  
EP = Push (NA, 2A)  
EG = Push and twist (NA, 2A)

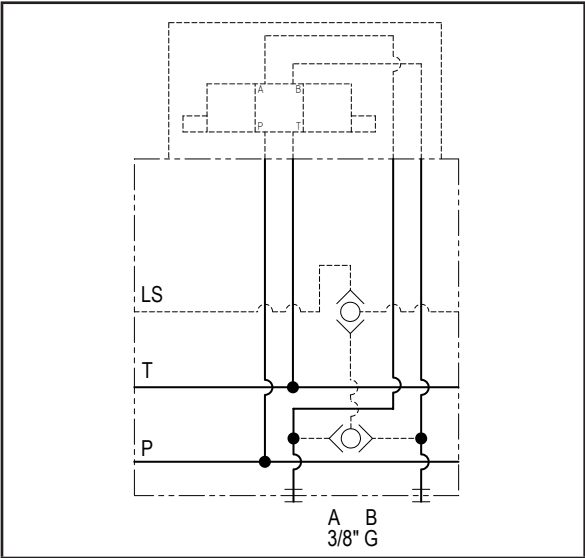
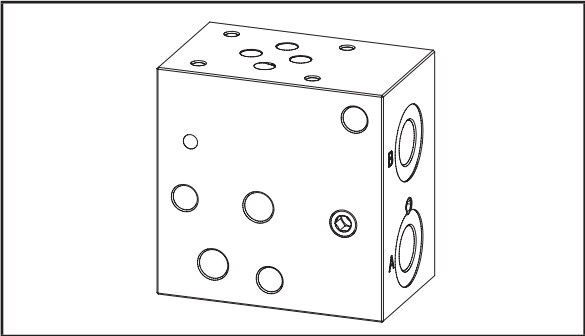


Intermediate subplate with 1 Cetop 3 station / side A-B ports **H3206**

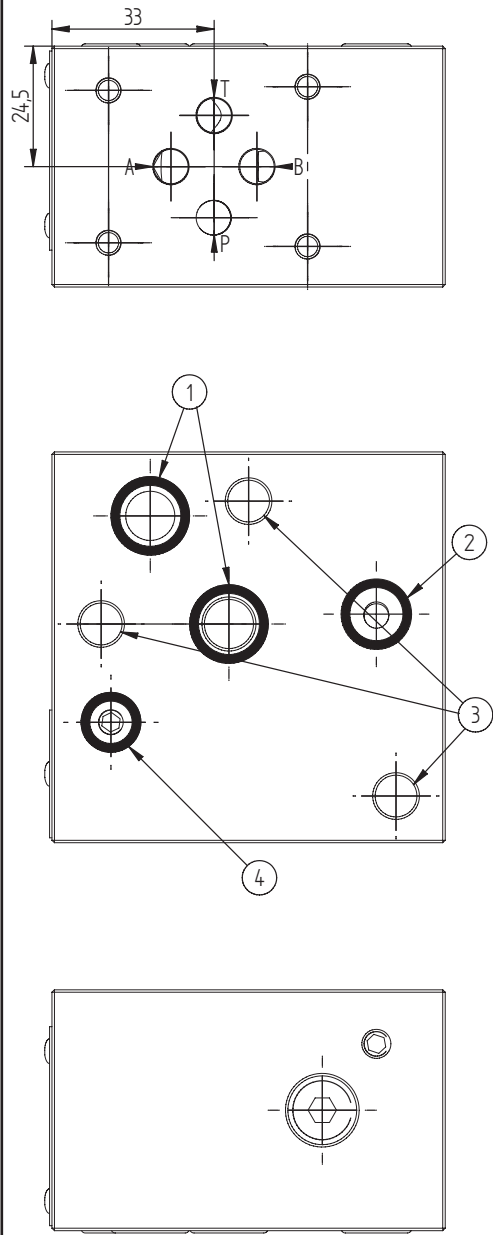


Dimensions in mm

Technical data	
Max. pressure	250 bar
Weight	0,8 Kg
Manifold material	Aluminium
A / B ports	3/8" G



N°	Description	Q.ty
1	OR 2050 i. Ø 12,42 c. s. 1,78 (P-T)	2
2	OR 2043 i. Ø 10,82 c. s. 1,78 (LS-FS)	1
3	Ø 8,5 through hole for tie rod	3
4	OR 108 i. Ø 8,73 c. s. 1,78	1





Ordering code

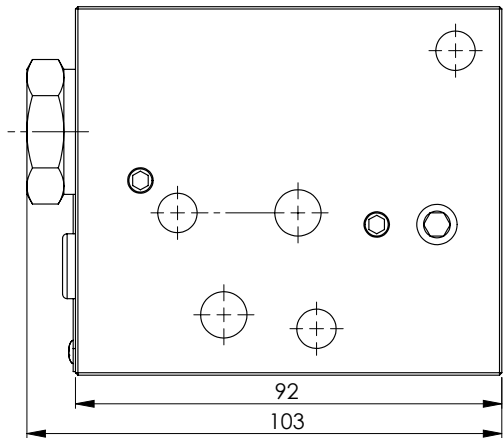
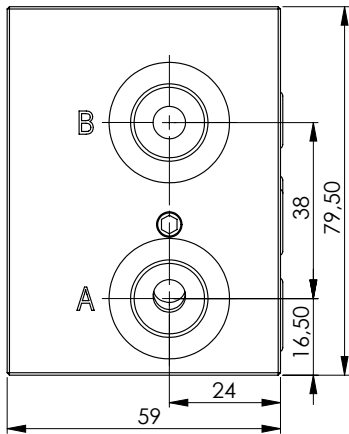
H	3	2	0	6	A
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Hydrover product

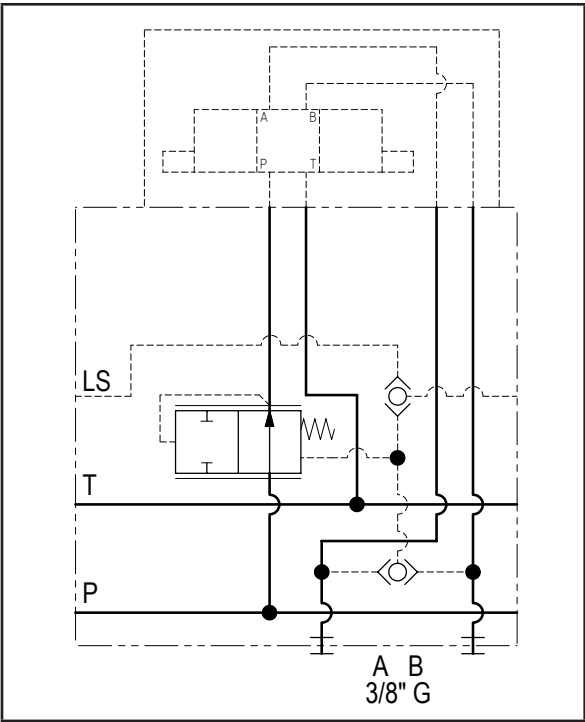
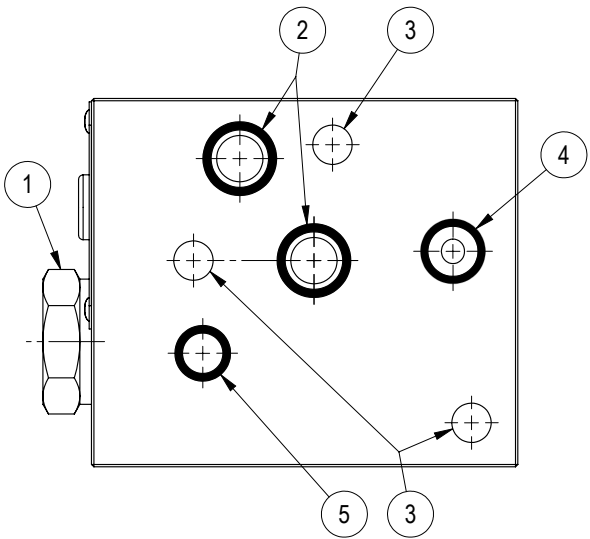
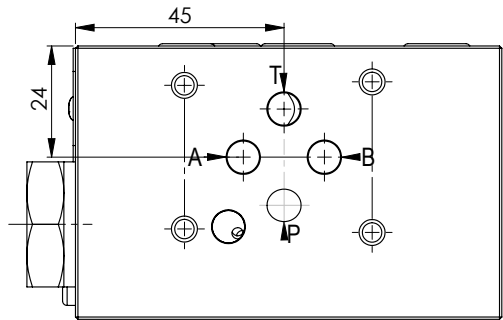
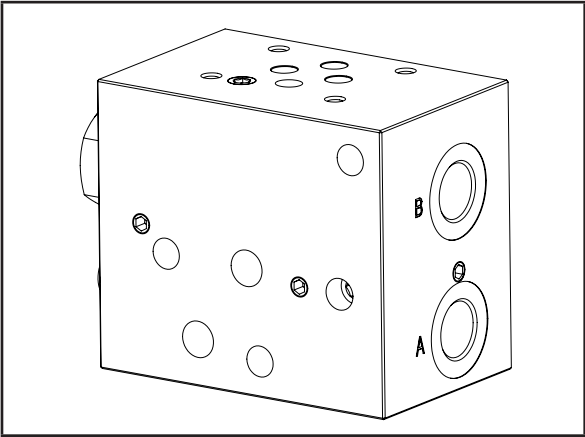
Manifold material  
Aluminium

Product series  
32 series - Load sensing modular Cetop 3 subplates  
for parallel circuits

Product ID



Technical data	
Max. pressure	250 bar
Weight	1,2 Kg
Manifold material	Aluminium
A / B ports	3/8" G



N°	Description	Q.ty
1	Pressure compensator	1
2	OR 2050 i. Ø 12,42 c. s. 1,78 (P-T)	2
3	Ø 8,5 through hole for tie rod	3
4	OR 2043 i. Ø 10,82 c. s. 1,78 (LS-FS)	1
5	OR 108 i. Ø 8,73 c. s. 1,78	1

Ordering code

H	3	2	2	2	A
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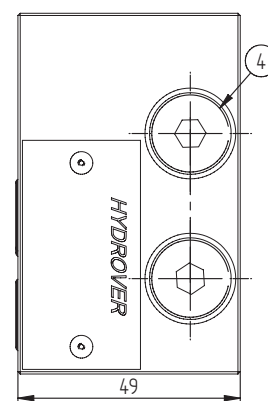
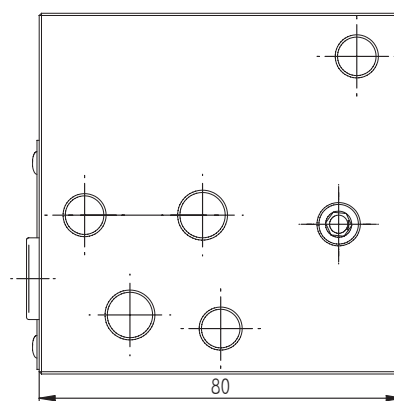
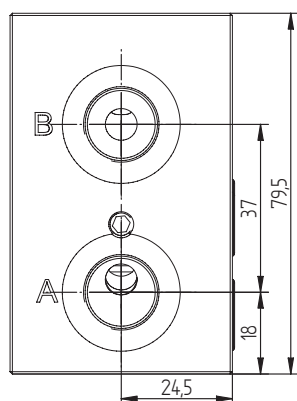
Hydrover product

Manifold material  
Aluminium

Product series  
32 series - Load sensing modular Cetop 3 subplates  
for parallel circuits

Product ID

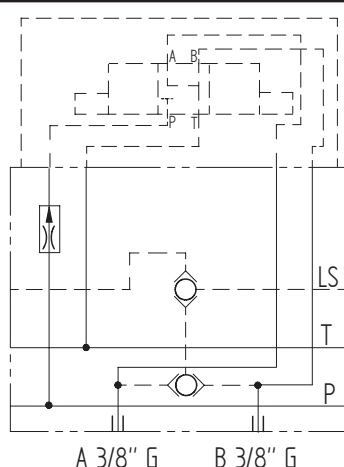
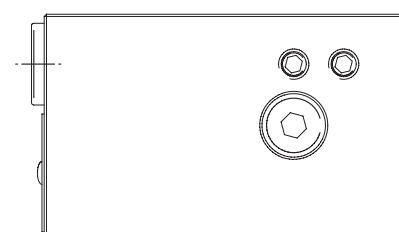
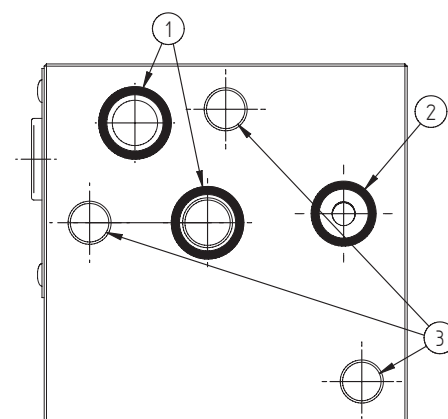
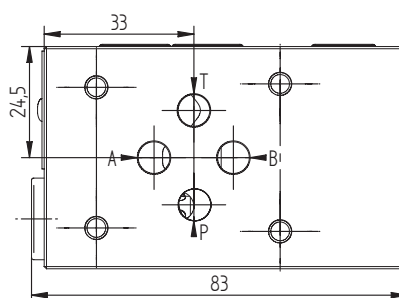
Intermediate subplate with 2 way compensated flow regulator  
 fixed flow rate from 1 to 10 lpm and 1 Cetop 3 station / side A-B ports

**H3201**


Dimensions in mm

**Technical data**

Max. pressure	210 bar
Weight	0,9 Kg
Manifold material	Aluminium
A / B ports	3/8" G



N°	Description	Q.ty
1	OR 2050 i. Ø 12,42 cross section 1,78 (P-T)	2
2	OR 2043 i. Ø 10,82 cross section 1,78 (LS)	1
3	Ø 8,5 through hole for tie rod	3
4	2 way compensated flow regulator Bosch Rexroth <b>0T.F1.00.09-Z *</b>	1

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

Ordering code

H	3	2	0	1	A	-	-	-
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Hydrover product

Product series

32 series - Load sensing modular Cetop 3 subplates for parallel circuits

Product ID

Regulated flow ± 10% at 100 bar

With regulator to drill

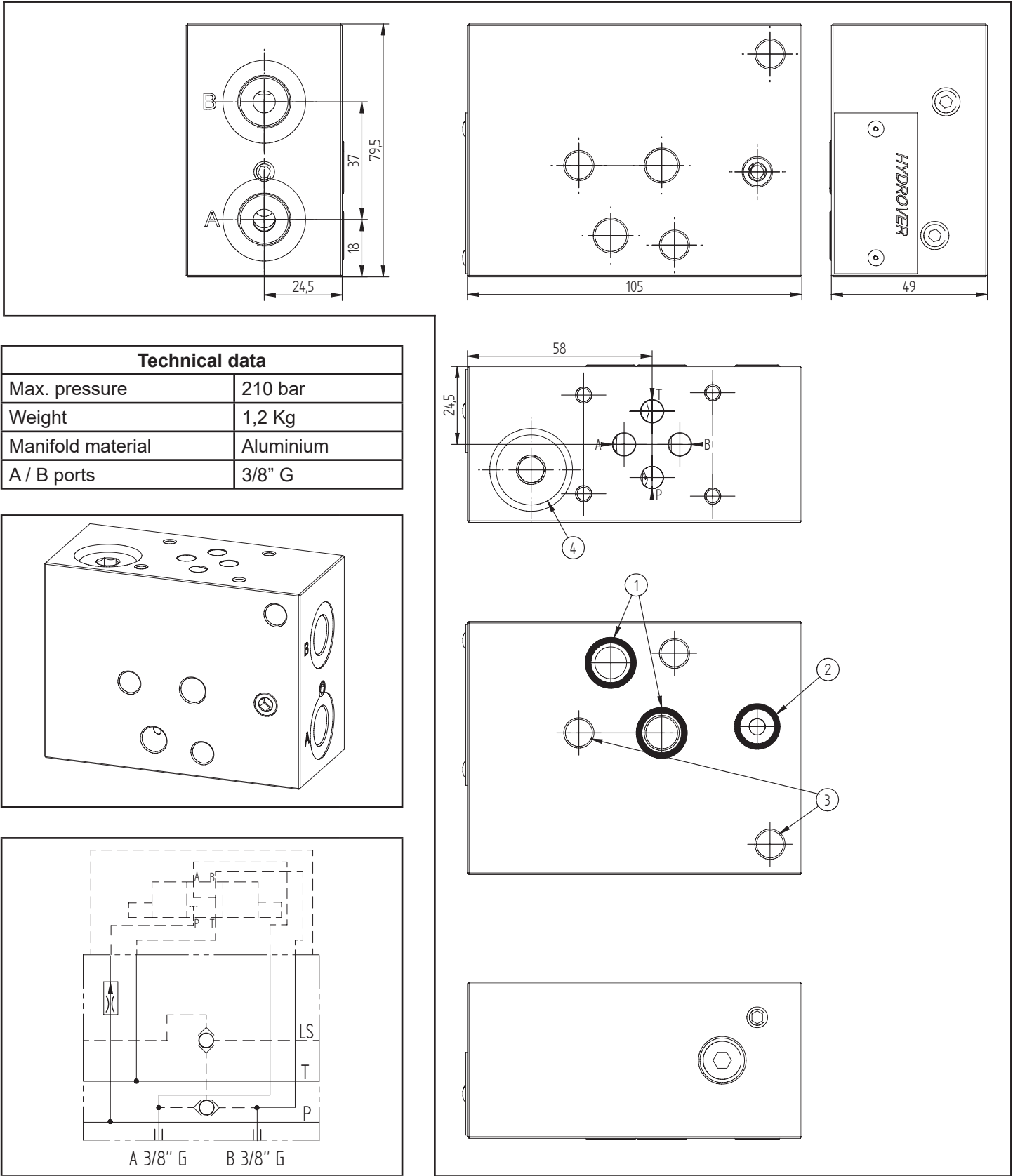
00 =	
01 =	1 lpm
02 =	2 lpm
03 =	3 lpm
04 =	4 lpm
05 =	5 lpm
06 =	6 lpm
07 =	7 lpm
08 =	8 lpm
09 =	9 lpm
10 =	10 lpm

Manifold material

Aluminium

Intermediate subplate with 2 way compensated flow regulator  
fixed flow rate from 4 to 16 lpm and 1 Cetop 3 station / side A-B ports

**H3205**



N°	Description	Q.ty
1	OR 2050 i. Ø 12,42 cross section 1,78 (P-T)	2
2	OR 2043 i. Ø 10,82 cross section 1,78 (LS)	1
3	Ø 8,5 through hole for tie rod	3
4	2 way compensated flow regulator Bosch Rexroth <b>0T.F1.00.02-Z *</b>	1

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

Ordering code

H	3	2	0	5	A	-	-	-
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Hydrover product

Product series

32 series - Load sensing modular Cetop 3 subplates for parallel circuits

Product ID

Regulated flow ± 10% at 100 bar

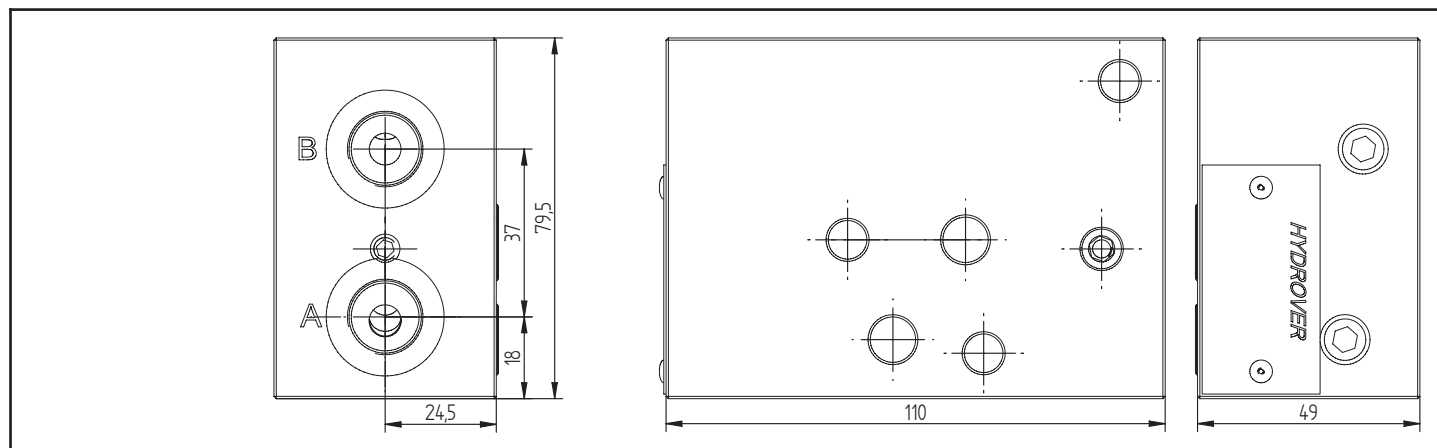
With regulator to drill (4-10 lpm)

00 =	
04 =	4 lpm
05 =	5 lpm
06 =	6 lpm
08 =	8 lpm
10 =	10 lpm
12 =	12 lpm
14 =	14 lpm
16 =	16 lpm

Manifold material

Aluminium

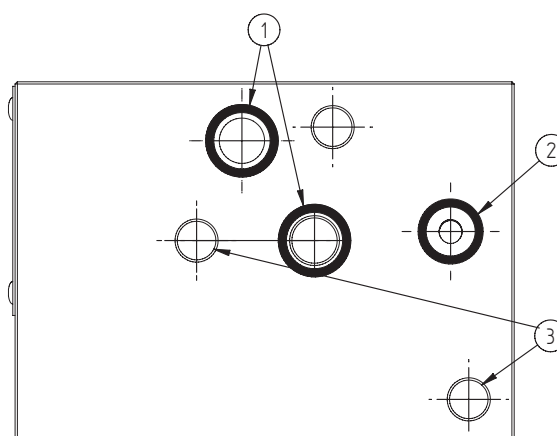
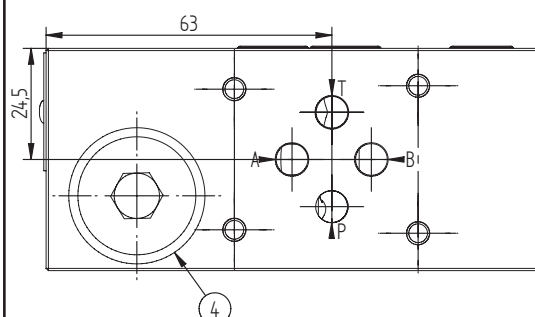
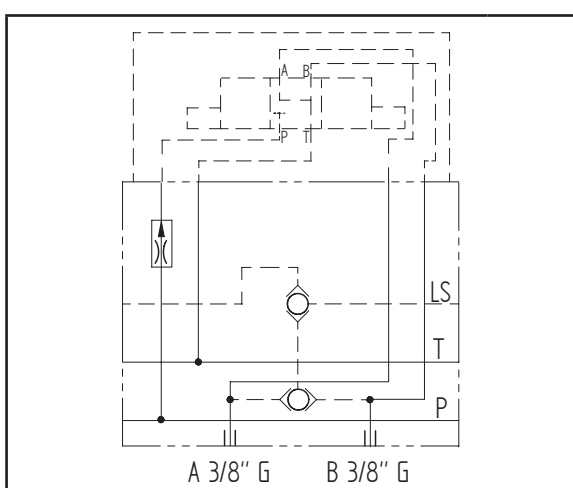
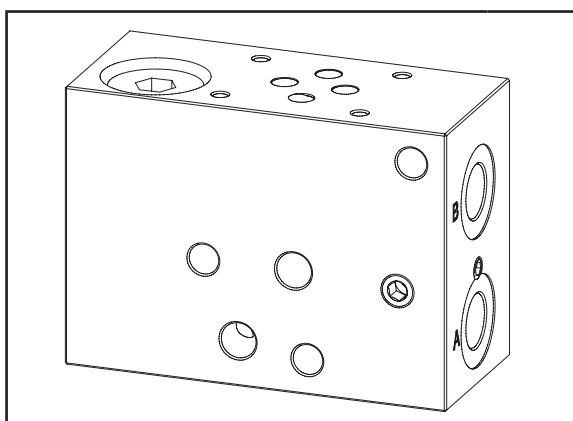
Intermediate subplate with 2 way compensated flow regulator  
 fixed flow rate from 12 to 30 lpm and 1 Cetop 3 station / side A-B ports

**H3207**


Dimensions in mm

**Technical data**

Max. pressure	210 bar
Weight	1,1 Kg
Manifold material	Aluminium
A / B ports	3/8" G



N°	Description	Q.ty
1	OR 2050 i. Ø 12,42 cross section 1,78 (P-T)	2
2	OR 2043 i. Ø 10,82 cross section 1,78 (LS)	1
3	Ø 8,5 through hole for tie rod	3
4	2 way compensated flow regulator Bosch Rexroth <b>0T.F1.00.0-Z *</b>	1

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue



Ordering code

H	3	2	0	7	A	-	-	-
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Hydrover product

Product series

32 series - Load sensing modular Cetop 3 subplates for parallel circuits

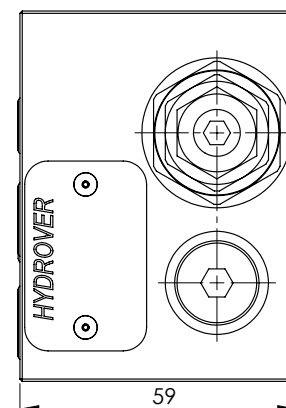
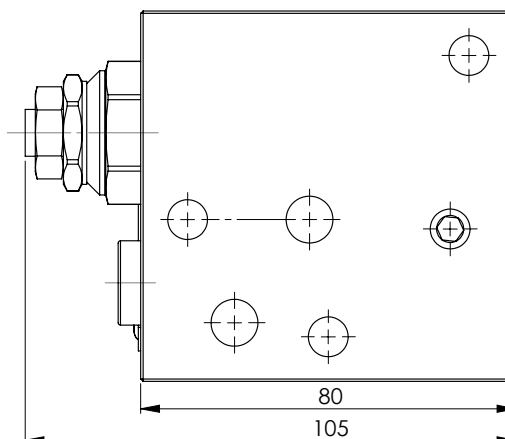
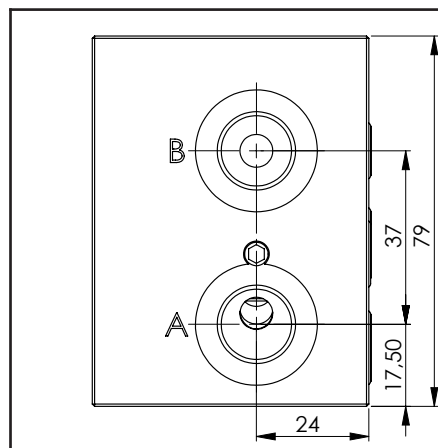
Product ID

Regulated flow ± 10% at 100 bar

	With regulator to drill
00 =	
12 =	12 lpm
16 =	16 lpm
20 =	20 lpm
25 =	25 lpm
30 =	30 lpm

Manifold material

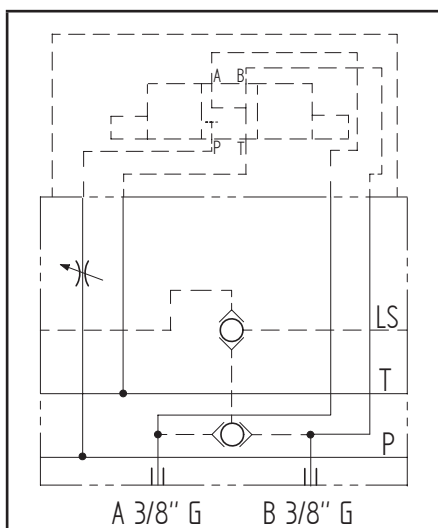
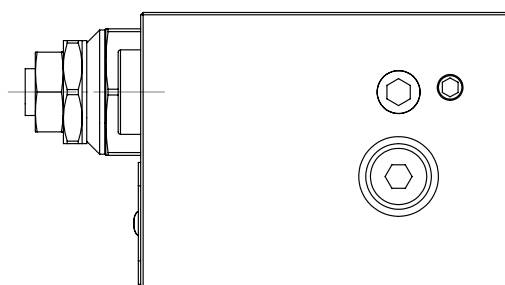
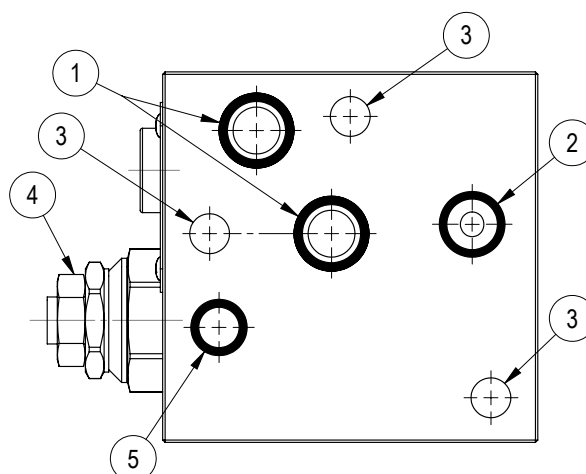
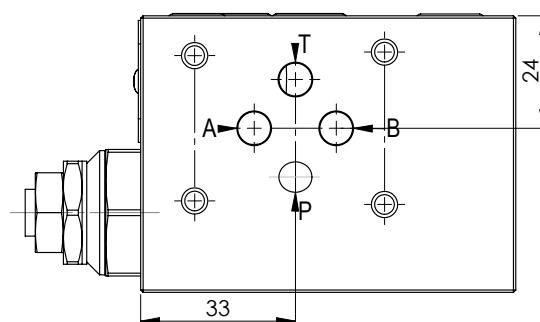
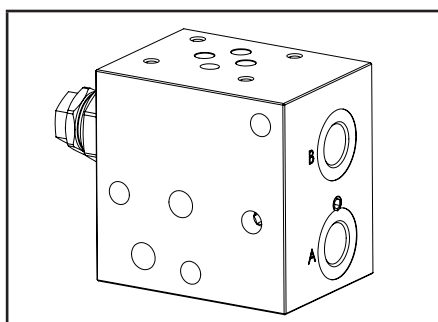
Aluminium



Dimensions in mm

**Technical data**

Max. pressure	210 bar
Weight	1,1 Kg
Max. flow	40 lpm *
Manifold material	Aluminium
A / B ports	3/8" G



N°	Description	Q.ty
1	OR 2050 i. Ø 12,42 cross section 1,78 (P-T)	2
2	OR 2043 i. Ø 10,82 cross section 1,78 (LS)	1
3	Ø 8,5 through hole for tie rod	3
4	Bosch Rexroth bidirectional flow restrictor <b>OD.21.01-X-36</b> * depicted with screw adjustment	1
5	OR 108 i. Ø 8,73 cross section 1,78	1

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

Ordering code

H	3	2	1	5	A	-	-	-
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Hydrover product

Product series

32 series - Load sensing modular Cetop 3 subplates for parallel circuits

Product ID

Restrictor adjustment type\*

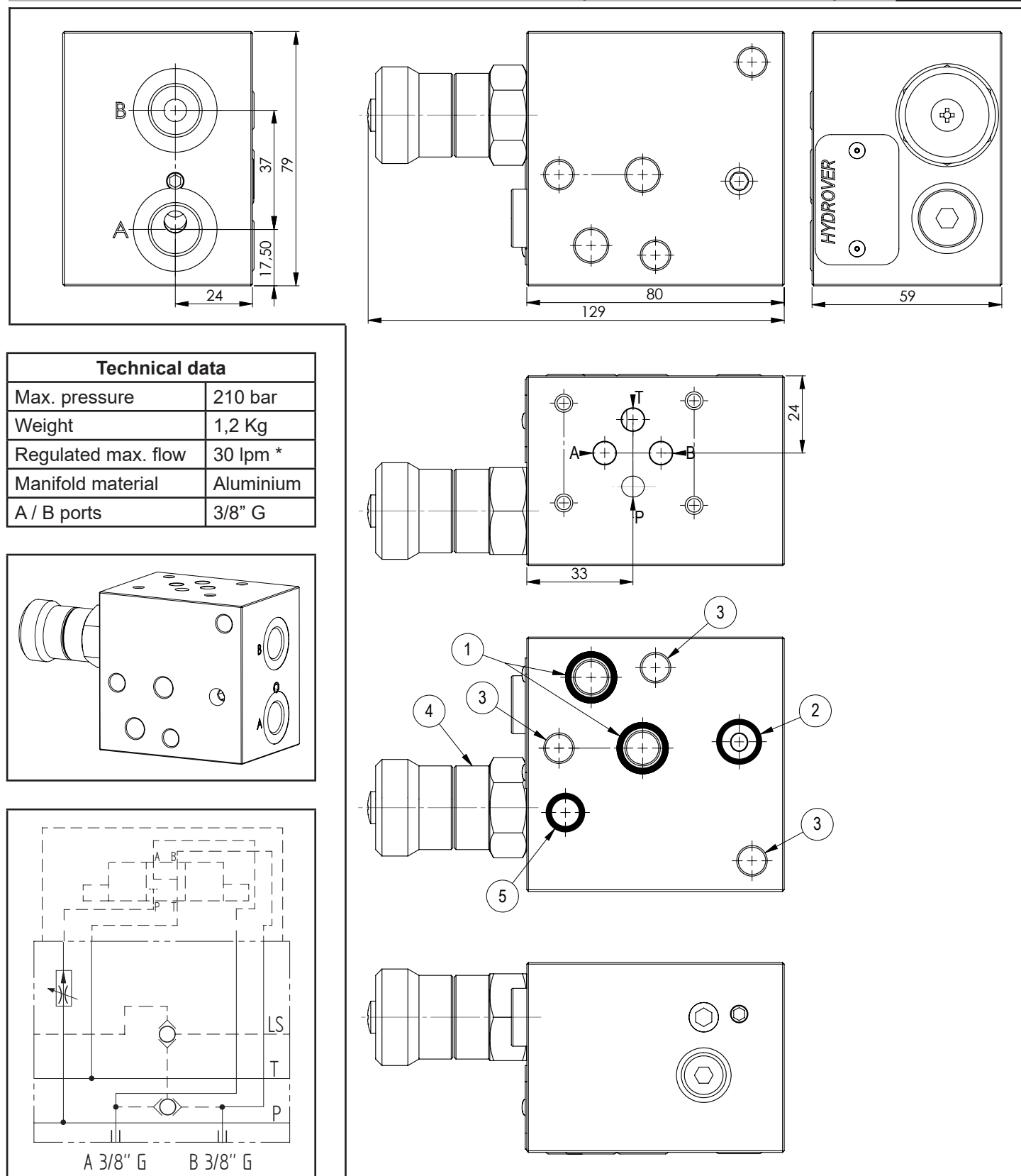
SQ = Screw  
KQ = Knob

Manifold material

Aluminium

\* Omit if not required. To order the product without restrictor cartridge valve, omit the restrictor adjustment type variable: H3215A.  
The manifold will still be provided with the corresponding cavity.

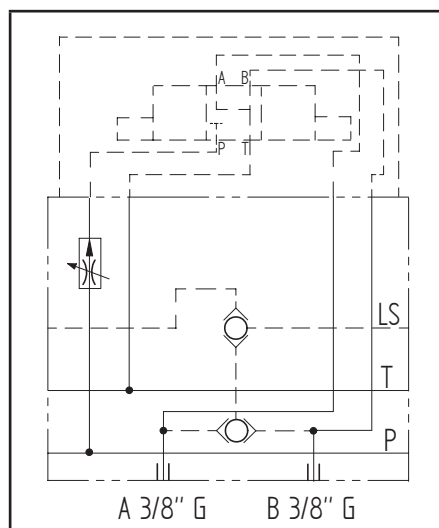
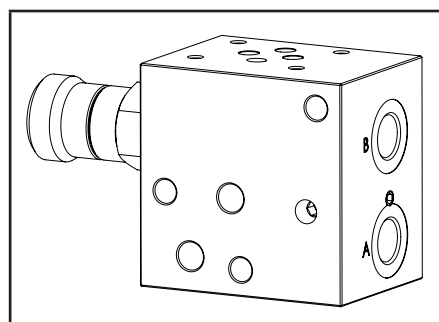
Intermediate subplate with 2 way compensated flow regulator up to 30 lpm  
and 1 Cetop 3 station / side A-B ports

**H3209**


Dimensions in mm

**Technical data**

Max. pressure	210 bar
Weight	1,2 Kg
Regulated max. flow	30 lpm *
Manifold material	Aluminium
A / B ports	3/8" G



N°	Description	Q.ty
1	OR 2050 i. Ø 12,42 cross section 1,78 (P-T)	2
2	OR 2043 i. Ø 10,82 cross section 1,78 (LS)	1
3	Ø 8,5 through hole for tie rod	3
4	Bosch Rexroth 2 way compensated flow regulator <b>04.02.02.40.85-Z *</b>	1
5	OR 108 i. Ø 8,73 cross section 1,78	1

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

Ordering code

H	3	2	0	9	A	-	C	_
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Hydrover product

Product series  
32 series - Load sensing modular Cetop 3  
subplates for parallel circuits

Product ID

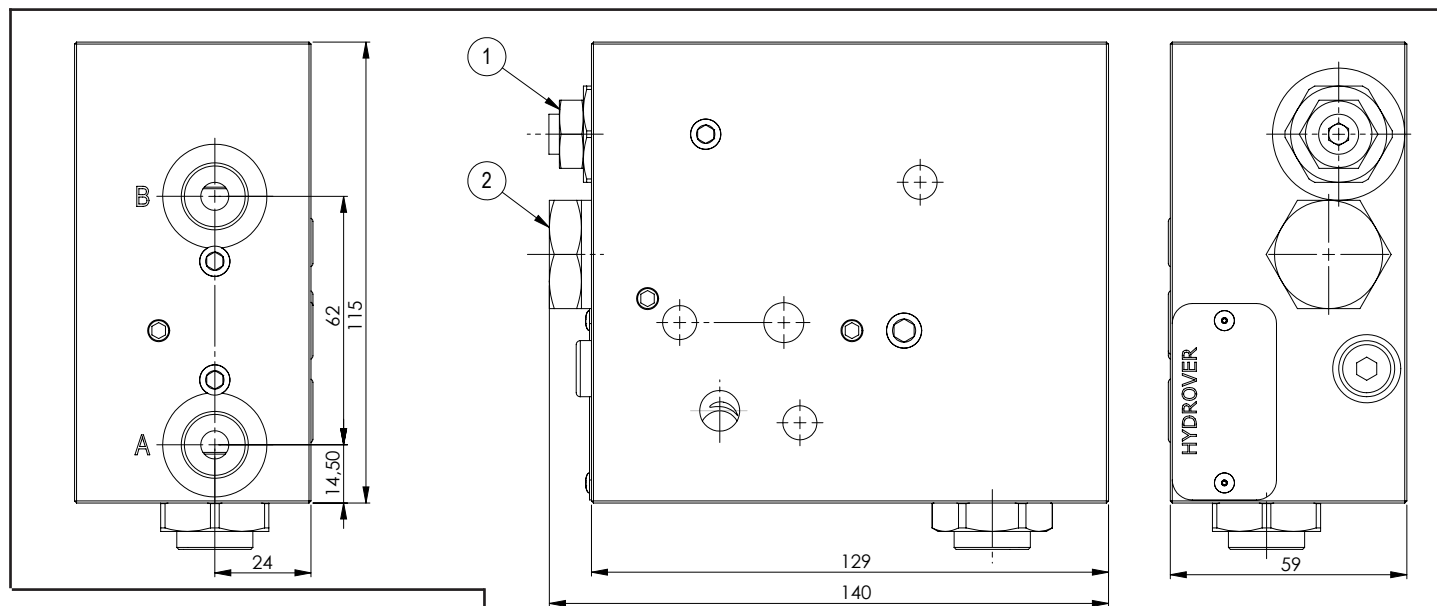
Flow regulator range  
2= 0,1 - 20 lpm  
3= 0,2 - 30 lpm

Flow regulator adjustment type  
Calibrated knob

Manifold material  
Aluminium

Intermediate subplate with 2 way compensated flow regulator  
pilot operated check valves on A and B / 1 Cetop 3 station / side A-B ports

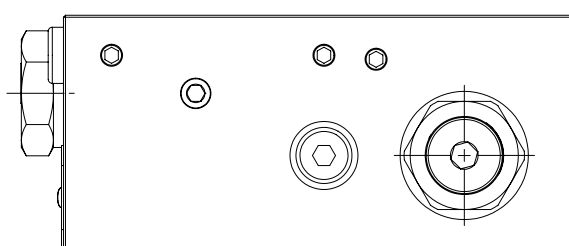
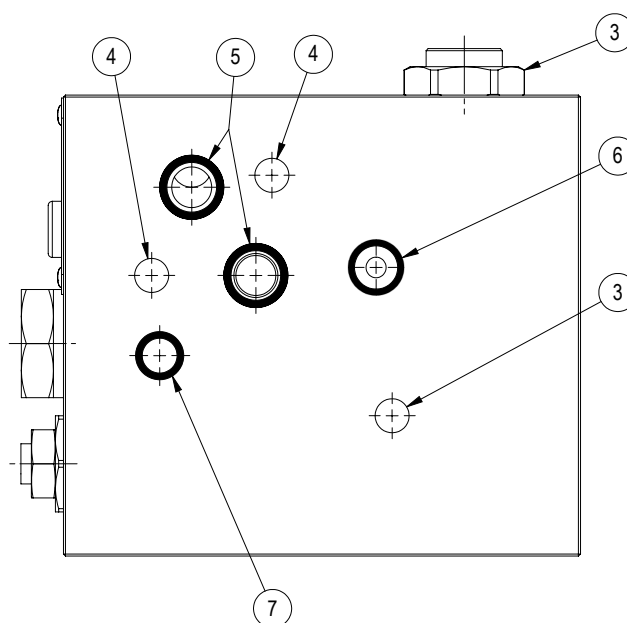
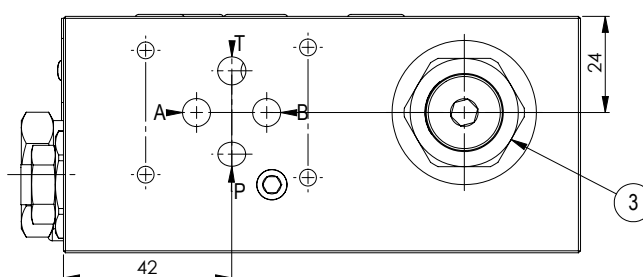
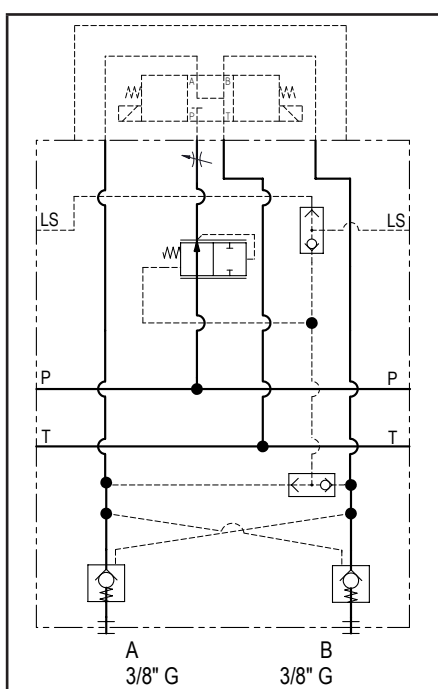
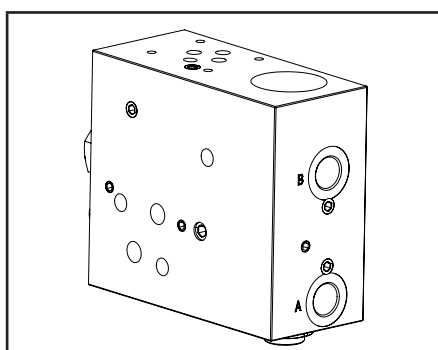
# H3226



**Dimensions in mm**

## Technical data

Max. pressure	250 bar
Weight	2,6 Kg
Regulated max. flow	25 lpm
Manifold material	Aluminium
A / B ports	3/8" G



Ordering code

H	3	2	2	6	A
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Hydrover product

Manifold material  
Aluminium

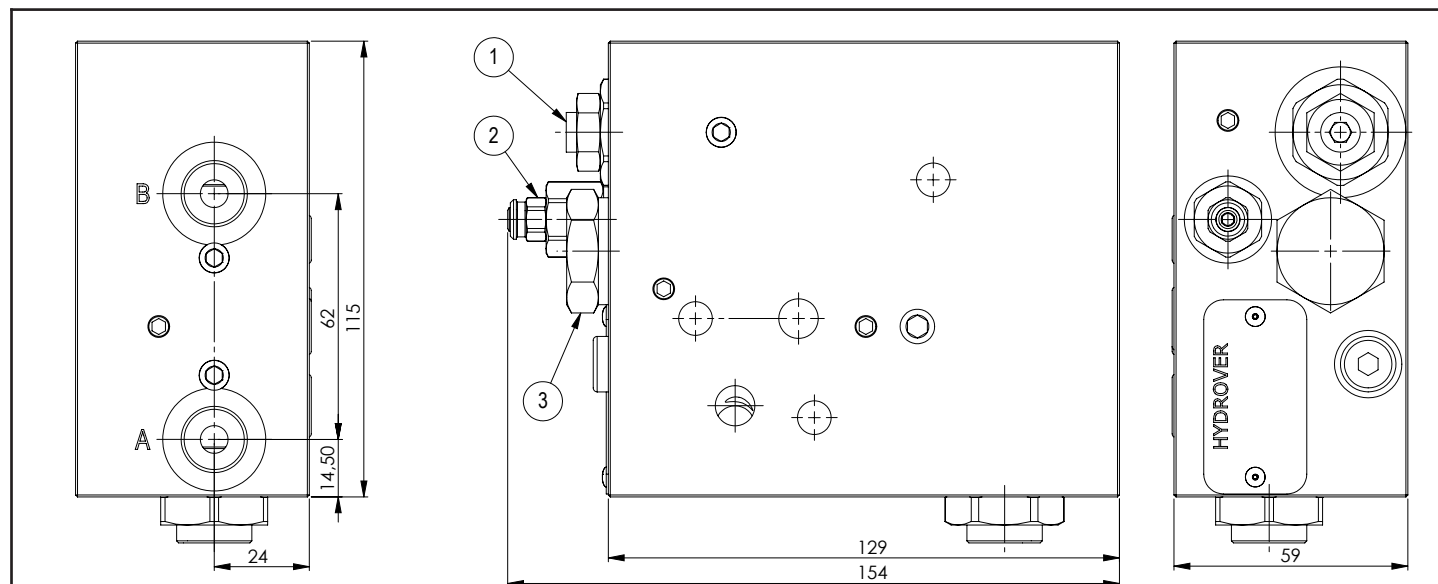
Product series  
32 series - Load sensing modular Cetop 3 subplates  
for parallel circuits

Product ID

N°	Description	Q.ty
1	Flow restrictor	1
2	Pressure compensator	1
3	Bosch Rexroth check valve <a href="#">VU-38</a> *	2
4	Ø 8,5 through hole for tie rod	3
5	OR 2050 i. Ø 12,42 cross section 1,78 (P-T)	2
6	OR 2043 i. Ø 10,82 cross section 1,78 (LS)	1
7	OR 108 i. Ø 8,73 cross section 1,78	1

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

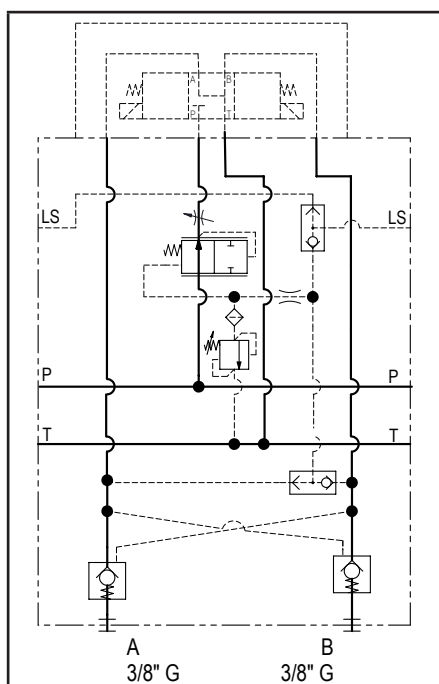
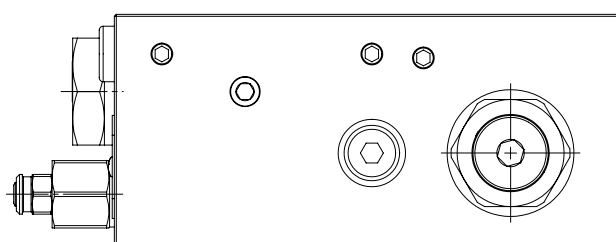
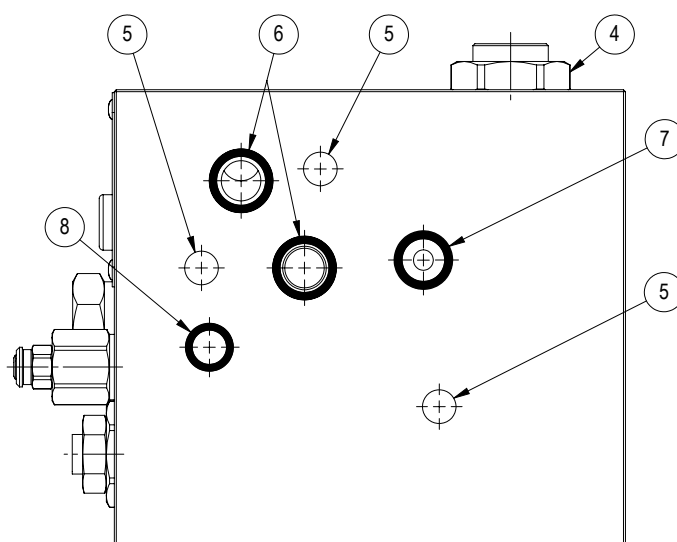
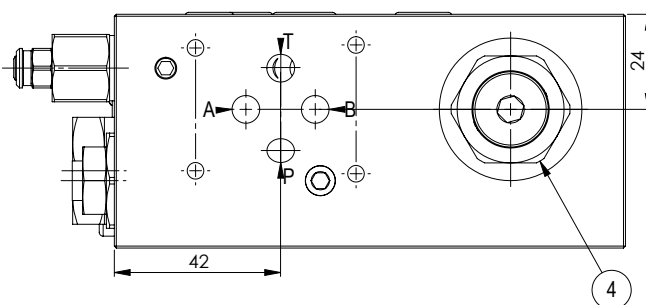
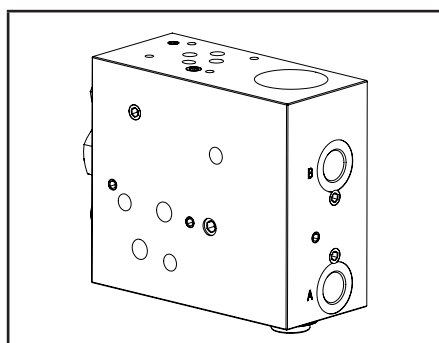
Intermediate subplate with 2 way compensated flow regulator / relief valve on P  
 pilot operated check valves on A and B / 1 Cetop 3 station / side A-B ports

**H3231**


Dimensions in mm

**Technical data**

Max. pressure	250 bar
Weight	2,6 Kg
Regulated max. flow	25 lpm
Manifold material	Aluminium
A / B ports	3/8" G





Ordering code

H	3	2	3	1	A	-	S	_
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Hydrover product

Product series

32 series - Load sensing modular Cetop 3 subplates for parallel circuits

Product ID

Manifold material

Aluminium

Relief valve  
adjustment pressure range

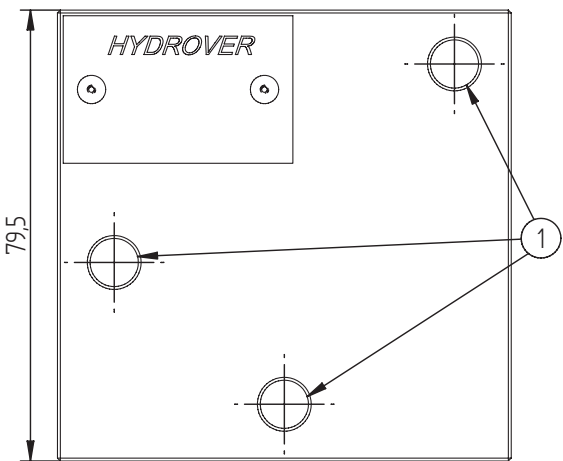
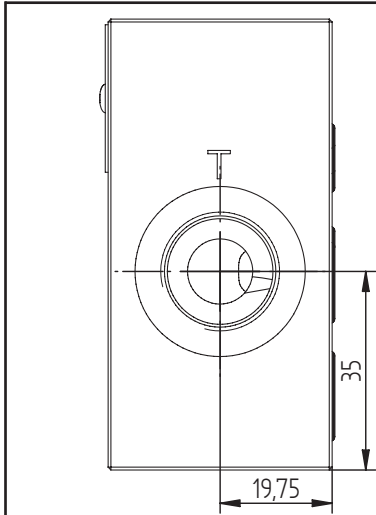
1 = 30-100 bar  
2 = 100-250 bar

Relief valve adjustment type

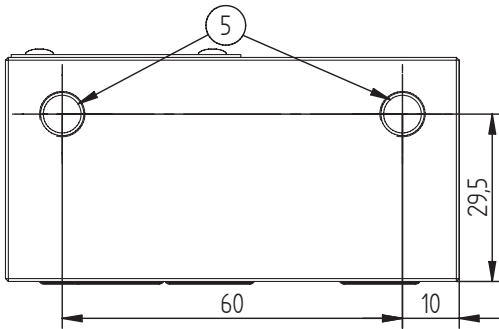
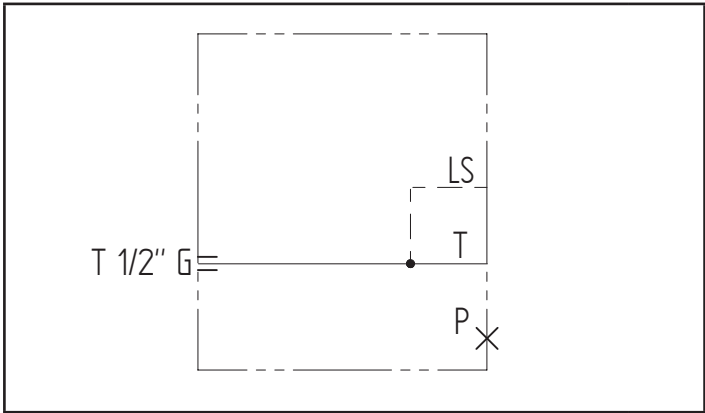
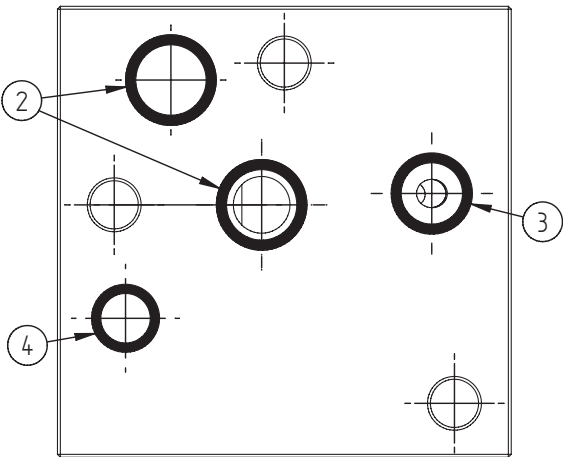
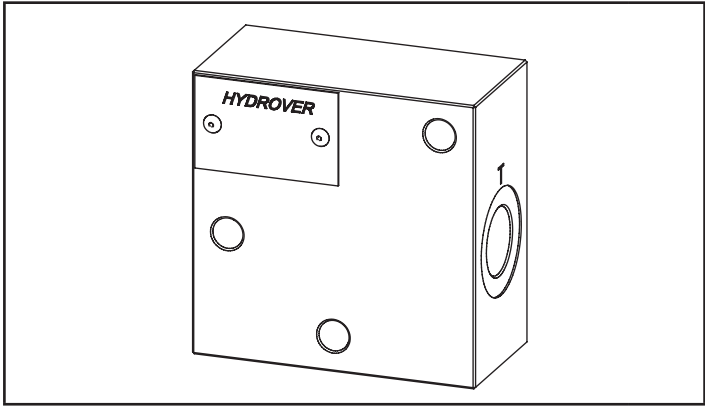
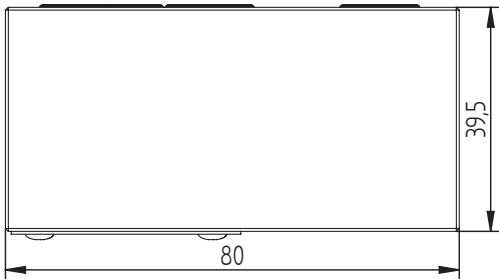
S = Screw

N°	Description	Q.ty
1	Flow restrictor	1
2	Relief valve with filter	1
3	Pressure compensator	1
4	Bosch Rexroth check valve <b>VU-38</b> *	2
5	Ø 8,5 through hole for tie rod	3
6	OR 2050 i. Ø 12,42 cross section 1,78 (P-T)	2
7	OR 2043 i. Ø 10,82 cross section 1,78 (LS)	1
8	OR 108 i. Ø 8,73 cross section 1,78	1

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue



Technical data	
Max. pressure	250 bar
Weight	0,7 Kg
Manifold material	Aluminium
T port	1/2" G



N°	Description	Q.ty
1	Ø 8,5 through hole for tie rod	3
2	OR 2050 i. Ø 12,42 cross section 1,78 (P-T)	2
3	OR 2043 i. Ø 10,82 cross section 1,78 (LS-FS)	1
4	OR 108 i. Ø 8,73 cross section 1,78	1
5	M8x13 for mounting	2

Dimensions in mm

Ordering code

H	3	2	0	2	A
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Hydrover product

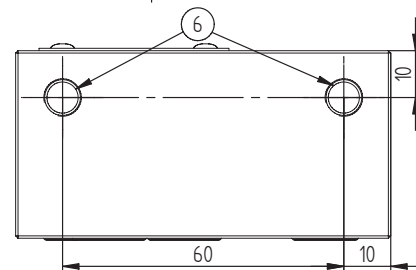
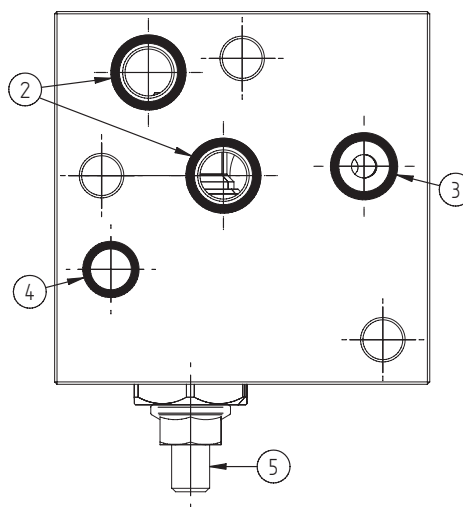
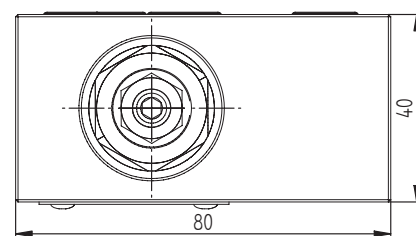
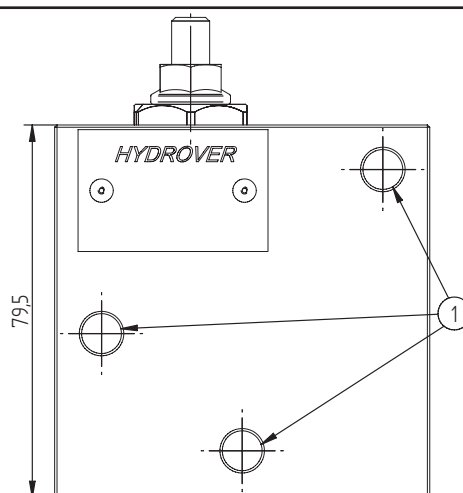
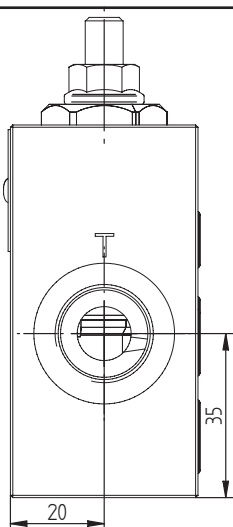
Manifold material  
Aluminium

Product series  
32 series - Load sensing modular Cetop 3 subplates  
for parallel circuits

Product ID

Note: this closing plate can be used as a blind closing plate. Just add in T a 1/2" G plug.

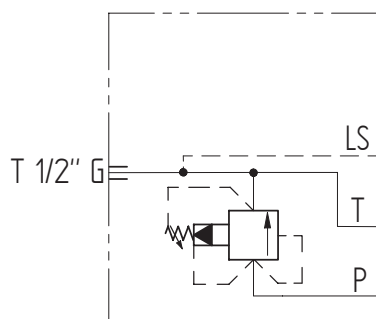
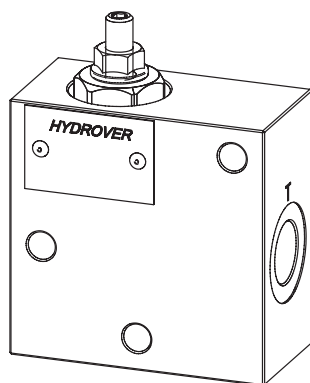
## Closing plate with T port and relief valve

**H3208**

Dimensions in mm

**Technical data**

Max. pressure	250 bar
Max. flow	90 lpm *
Weight	0,8 Kg
Manifold material	Aluminium
T port	1/2" G



N°	Description	Q.ty
1	Ø 8,5 through hole for tie rod	3
2	OR 2050 i. Ø 12,42 cross section 1,78 (P-T)	2
3	OR 2043 i. Ø 10,82 cross section 1,78 (LS)	1
4	OR 108 i. Ø 8,73 cross section 1,78	1

N°	Description	Q.ty
5	Bosch Rexroth relief valve <b>VSPN-10A</b> * depicted with screw adjustment	1
6	M8x13 for mounting	2

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

Ordering code

H	3	2	0	8	A	-	-	-
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Hydrover product

Product series

32 series - Load sensing modular  
Cetop 3 subplates for parallel circuits

Product ID

Manifold material

Aluminium

Relief valve  
adjustment pressure range \*

1 =	35-140 bar
2 =	70-280 bar
3 =	140-420 bar
3 =	35-350 bar (adj. knob)

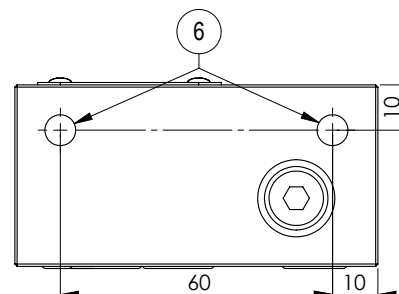
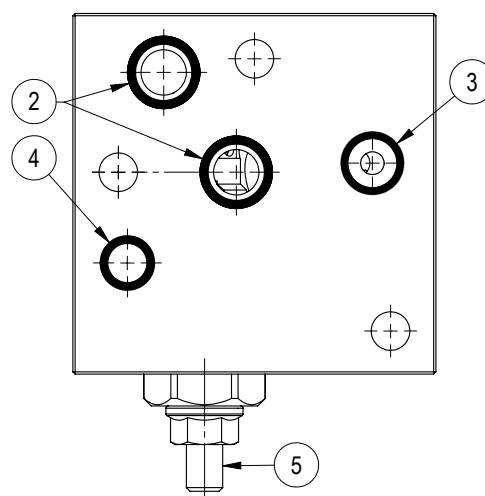
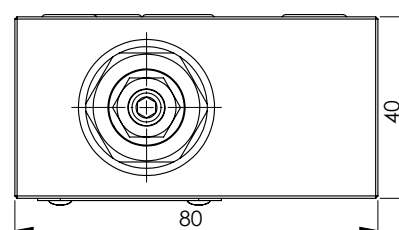
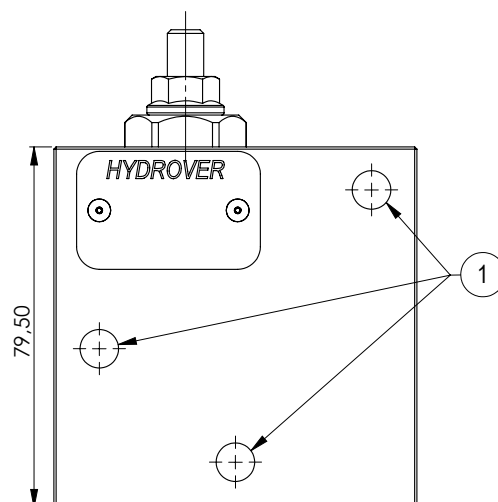
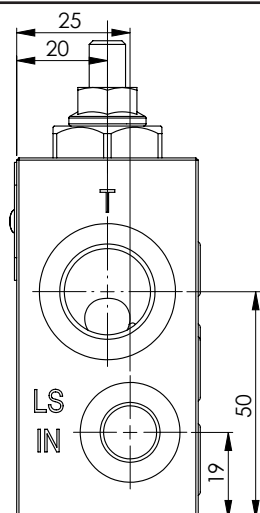
Relief valve  
adjustment type \*

S =	Screw
K =	Knob

\* Omit if not required. For example, to order the product without the relief cartridge valve, omit the pressure range and adjustment type options: H3208A.  
The manifold will still be provided with the corresponding cavity.  
To inhibit the relief valve, replace the related options with TL: H3208A-TL).  
In the cavity it will be mounted a long plug.

Valve	Cavity	Long plug code
Pressure relief valve VSPN-10A	CA-10A-2N	0489A2008500000

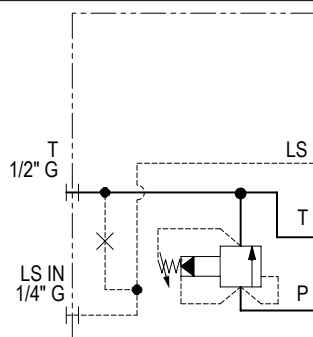
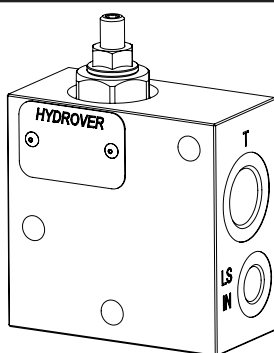
## Closing plate with T port / relief valve / LS IN

**H3214**

Dimensions in mm

**Technical data**

Max. pressure	250 bar
Max. flow	90 lpm *
Weight	0,7 Kg
Manifold material	Aluminium
LS IN port	1/4" G
T port	1/2" G



N°	Description	Q.ty
1	Ø 8,5 through hole for tie rod	3
2	OR 2050 i. Ø 12,42 cross section 1,78 (P-T)	2
3	OR 2043 i. Ø 10,82 cross section 1,78 (LS)	1
4	OR 108 i. Ø 8,73 cross section 1,78	1

N°	Description	Q.ty
5	Bosch Rexroth relief valve <b>VSPN-10A</b> * depicted with screw adjustment	1
6	M8x13 for mounting	2

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

Ordering code

H	3	2	1	4	A	-	-	-
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Hydrover product

Product series

32 series - Load sensing modular  
Cetop 3 subplates for parallel circuits

Product ID

Manifold material  
Aluminium

Relief valve  
adjustment pressure range \*

1 =	35-140 bar
2 =	70-280 bar
3 =	140-420 bar
3 =	35-350 bar (adj. knob)

Relief valve  
adjustment type \*

S =	Screw
K =	Knob

Ordering code for assemblies with 1 to 3 intermediate subplates

	H	K	V	M	8	X	_	_	_	-	3	
Hydrover product												Screw quantity
												3
Product type												Screw length
Kit												for intermediate subplates quantity
Kit type												100 =
Screw kit												150 =
												200 =
Thread												Dimensions in mm
M8												1 subplate
												2 subplates
												3 subplates

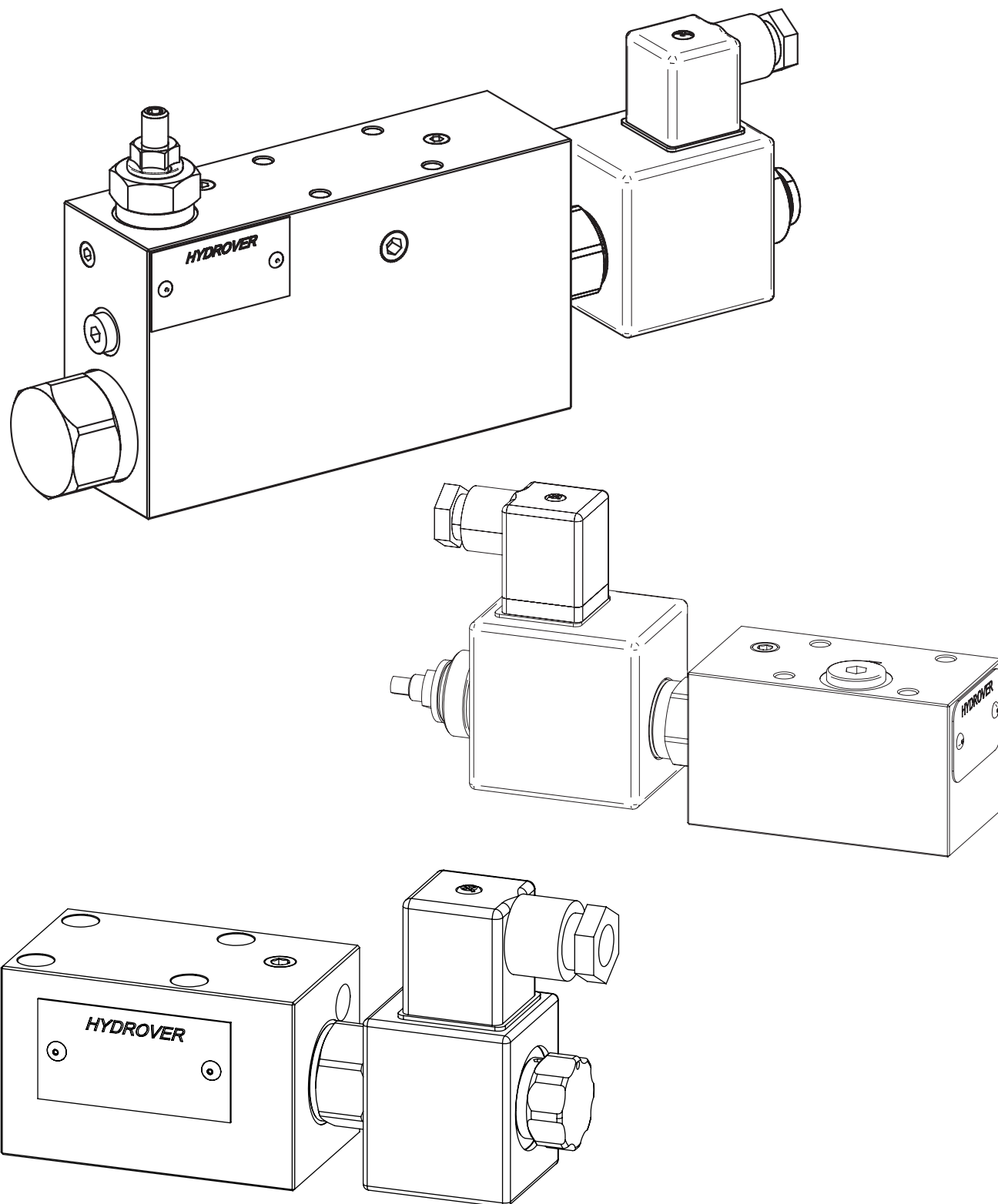
Ordering code for assemblies with 4 to 9 intermediate subplates

	H	K	T	M	8	X	_	_	_	D	S	-	3	
Hydrover product													Tie rods quantity	
													3	
Product type													Nut type	
Kit													Standard	
Kit type													Tie rod length for intermediate subplates quantity	
Tie rods													268 =	
													318 =	
													366 =	
													415 =	
													465 =	
													510 =	
Thread														
M8														



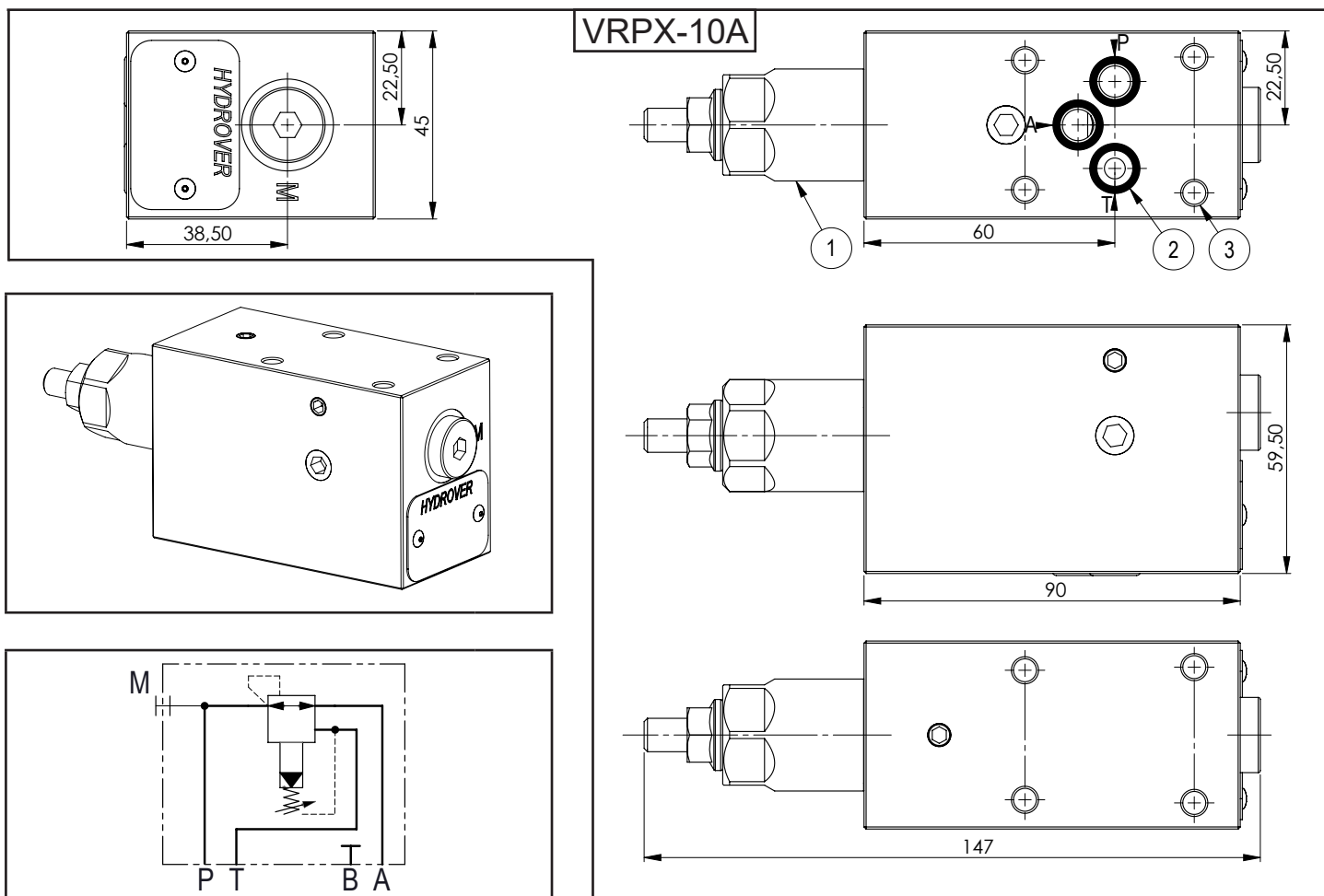
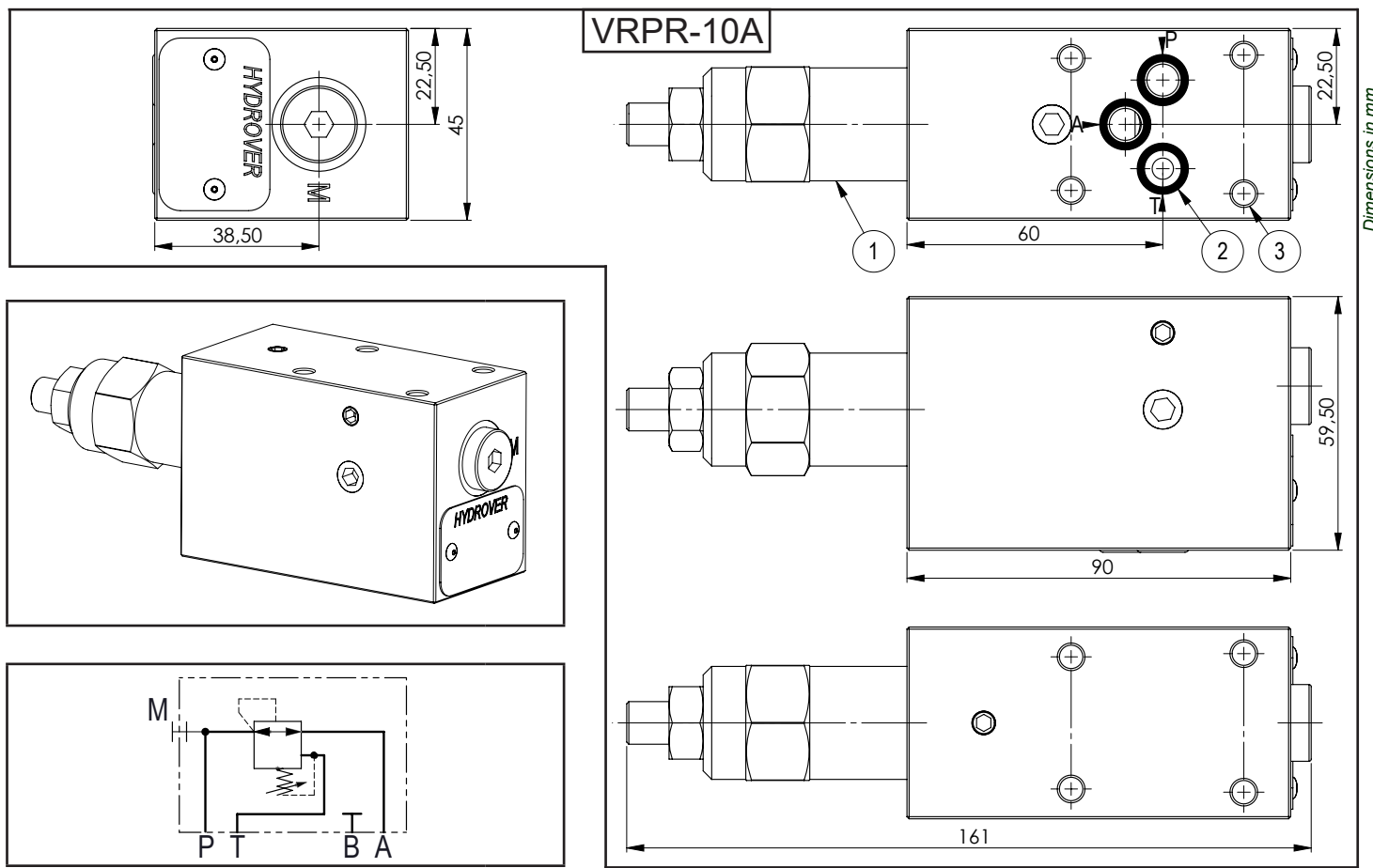
# 35 SERIES

## Cetop 3 valves



Cetop 3 pressure reducing valve inlet in A outlet to P

**H3505**



## Ordering code

H	3	5	0	5	A	-	-	-
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## Hydrover product

## Product series

35 series - Cetop 3 valves

## Product ID

## Manifold material

Aluminium

## Pressure reducing valve type \*

R = VRPR-10A (direct)

X = VRPX-10A (pilot)

VRPR-10A reducing valve  
pressure range (static) \*

0 = 2-14 bar

1 = 2-25 bar

2 = 10-50 bar

3 = 28-80 bar

VRPX-10A reducing valve  
pressure range (static) \*

0 = 25-100 bar

1 = 35-140 bar

2 = 70-280 bar

3 = 35-350 bar (adj. knob)

## Reducing valve adjustment type \*

S = Screw

K = Knob

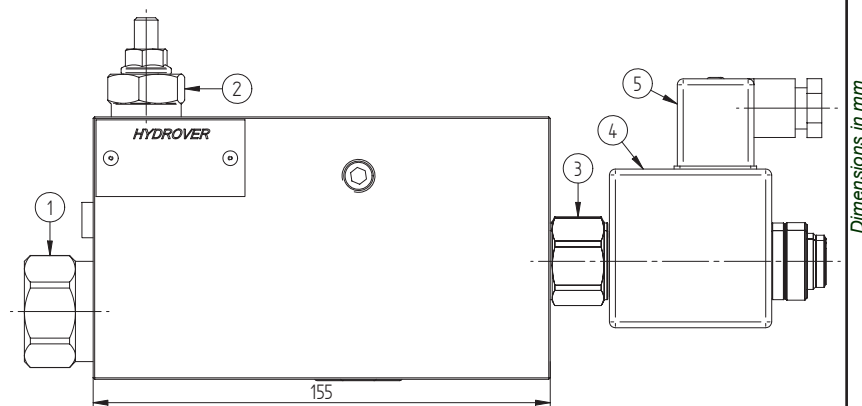
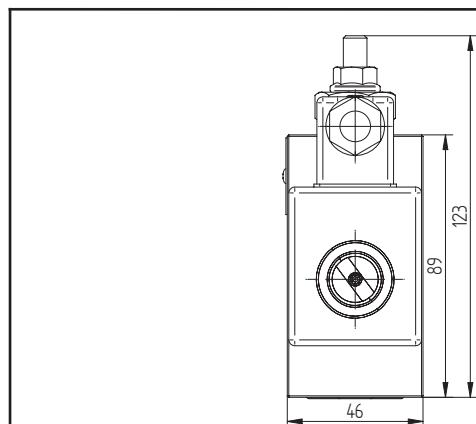
\* Omit if not required. For example, to order the product without the pressure reducing cartridge valve, omit the valve type, pressure range and adjustment type options: H3505A.  
The manifold will still be provided with the corresponding cavity.

N°	Description	Q.ty
1	Ø 5,5 through hole for mounting	4
2	OR 108 i. Ø 8,73 cross section 1,78	3
3	Bosch Rexroth reducing valve <b>VRPR-10A</b> o <b>VRPX-10A</b> * depicted with screw adjustment	1

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

Technical data	
Max. pressure	250 bar
Max. flow with VRPR-10A	25 lpm *
Max. flow with VRPX-10A	55 lpm *
Weight	0,9 Kg
Manifold material	Aluminium

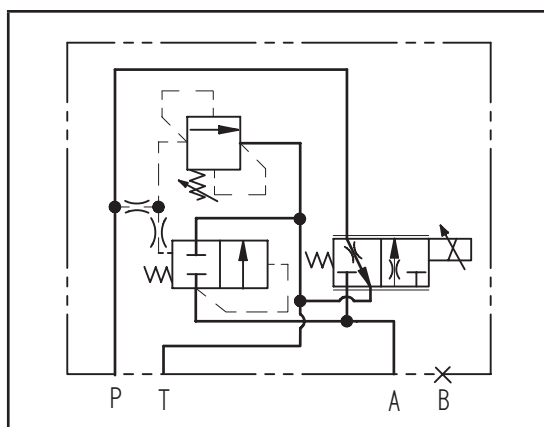
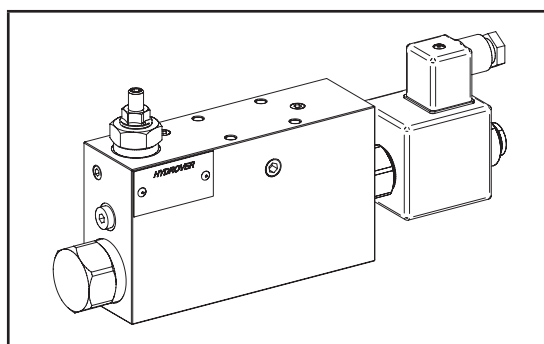
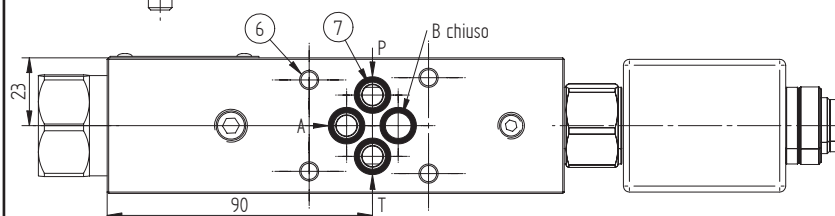
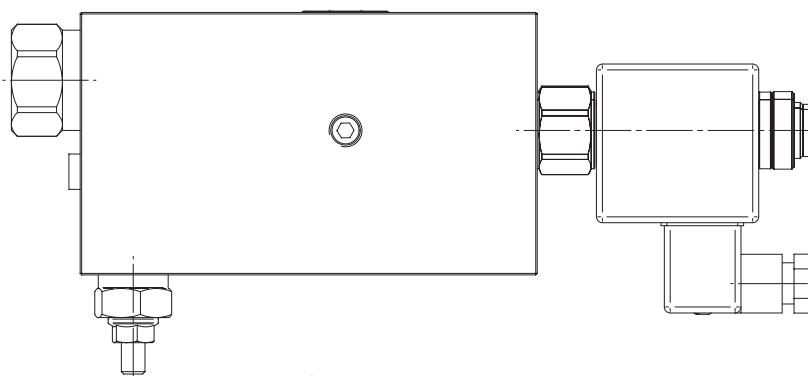
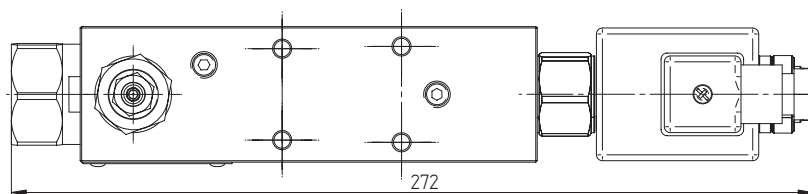
3 way compensated Cetop 3 flow regulator / relief valve / inlet in A  
 regulated outlet on P / discharge in T

**H3501**


Dimensions in mm

**Technical data**

Max. pressure	210 bar
Input max. flow	65 lpm
Weight	2,5 Kg
Manifold material	Aluminium



N°	Description	Q.ty
1	Pressure compensator	1
2	Bosch Rexroth relief valve <b>VSBN-08A</b> *	1
3	Bosch Rexroth proportional solenoid valve <b>VEP-5A-2Q-09 / OD.92.05.77-Y-Z</b> *	1
4	Bosch Rexroth coil <b>S5-356</b> - CLASS H DIN 43650 ISO 4400 *	1
5	Connector DIN 43650 ISO 4400	1
6	Ø 5,5 through hole for mounting	4
7	OR 108 i. Ø 8,73 cross section 1,78	4

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

Ordering code

H	3	5	0	1	A	-	-	-	-	-	-	-	-	-	-
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Hydrover product

Product series  
35 series - Cetop 3 valves

Product ID

Manifold material  
Aluminium

Compensator spring  
5.5 bar (standard) = 6  
12.5 bar = 1  
19 bar = 2

Relief valve adjustment type \*  
Screw = S  
Knob = K

Relief valve adjustment pressure range \*  
10-70 bar = 0  
35-140 bar = 1  
105-210 bar = 2  
175-350 bar = 3  
35-350 bar (adj. knob) = 3

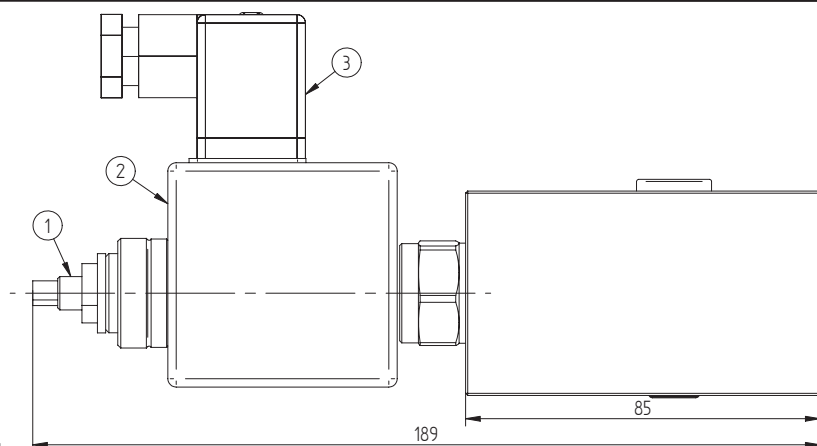
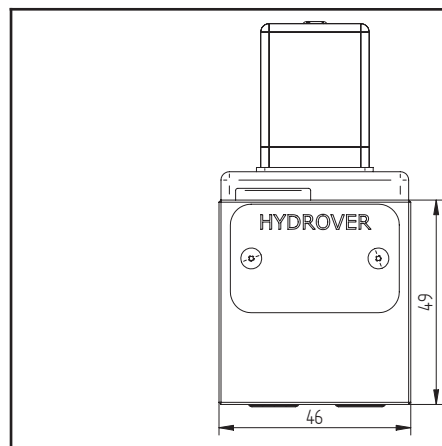
Proportional solenoid valve  
coil connection \*  
1 = DIN 43650  
ISO 4400

Proportional solenoid valve  
coil voltage \*  
OB = 12V DC  
OC = 24V DC

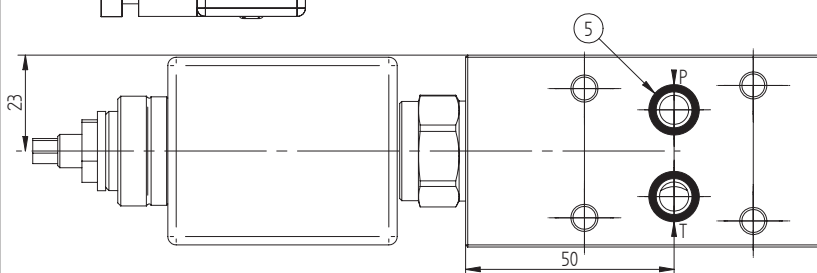
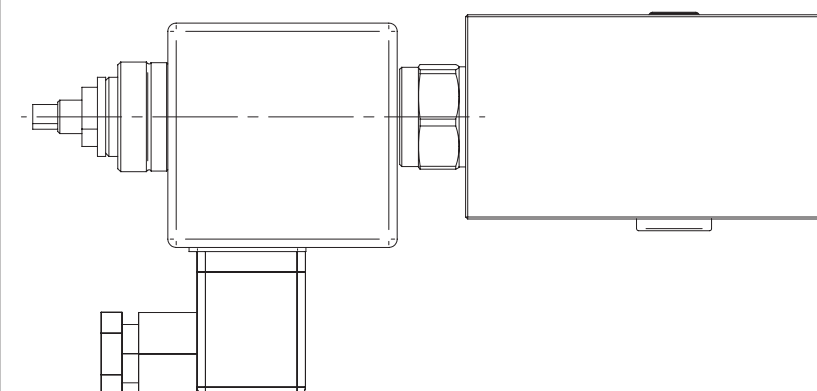
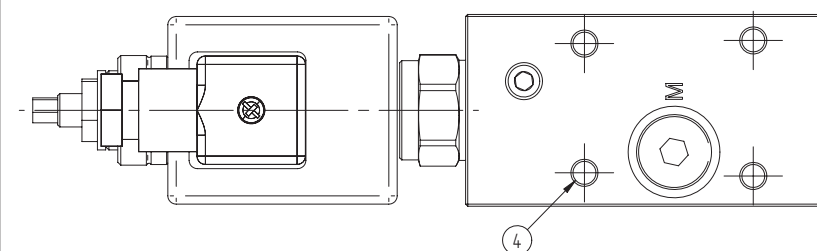
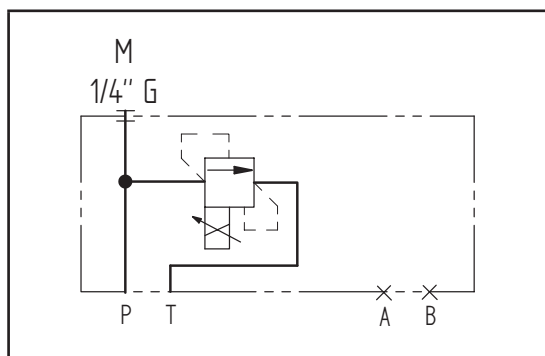
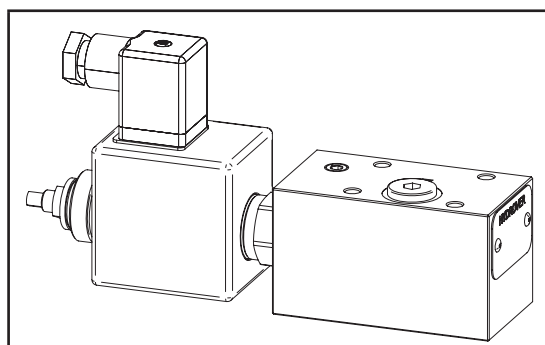
Proportional solenoid valve  
max. flow \*  
1 = 20 lpm  
2 = 30 lpm  
3 = 40 lpm  
  
To evaluate the max. flow refer to  
**VEP-5A-2Q-09 / OD.92.05.77-Y-Z**  
proportional solenoid valve catalogue and  
to the compensator spring.

Proportional solenoid valve  
manual override \*  
E0 = Without  
EV = Screw

\* Omit if not required. For example, to order the product without the proportional solenoid cartridge valve, omit the manual override, max. flow, coil voltage and coil connection options: H3501A6S2.  
The manifold will still be provided with the corresponding cavity.



Technical data	
Max. pressure	350 bar
Input max. flow	2 lpm *
Weight	1,7 Kg
Manifold material	Steel
M port	1/4" G



N°	Description	Q.ty
1	Bosch Rexroth proportional solenoid valve VEP-5B-2S-D / <b>OD.94.01.18-Y-Z</b> * as depicted with screw manual override	1
2	Bosch Rexroth coil <b>S5-356</b> - CLASS H DIN 43650 ISO 4400 *	1
3	Connector DIN 43650 ISO 4400	1
4	Ø 5,5 through hole for mounting	4
5	OR 108 i. Ø 8,73 cross section 1,78	2

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

Ordering code

H	3	5	0	2	S	-	-	-	-	-	-
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Hydrover product

Product series  
35 series - Cetop 3 valves

Product ID

Manifold material  
Steel

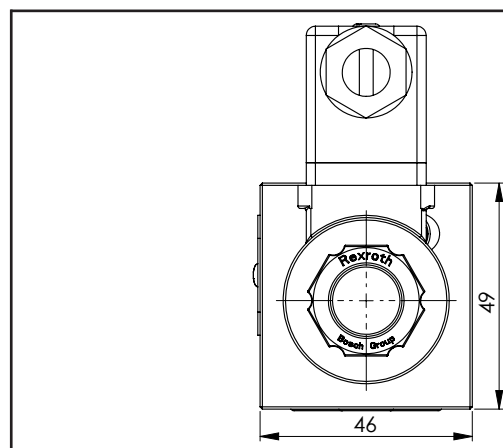
Proportional solenoid valve  
manual override \*  
Without = E0  
Screw (standard) = EV

Proportional solenoid valve  
coil connection \*  
1 = DIN 43650 ISO 4400

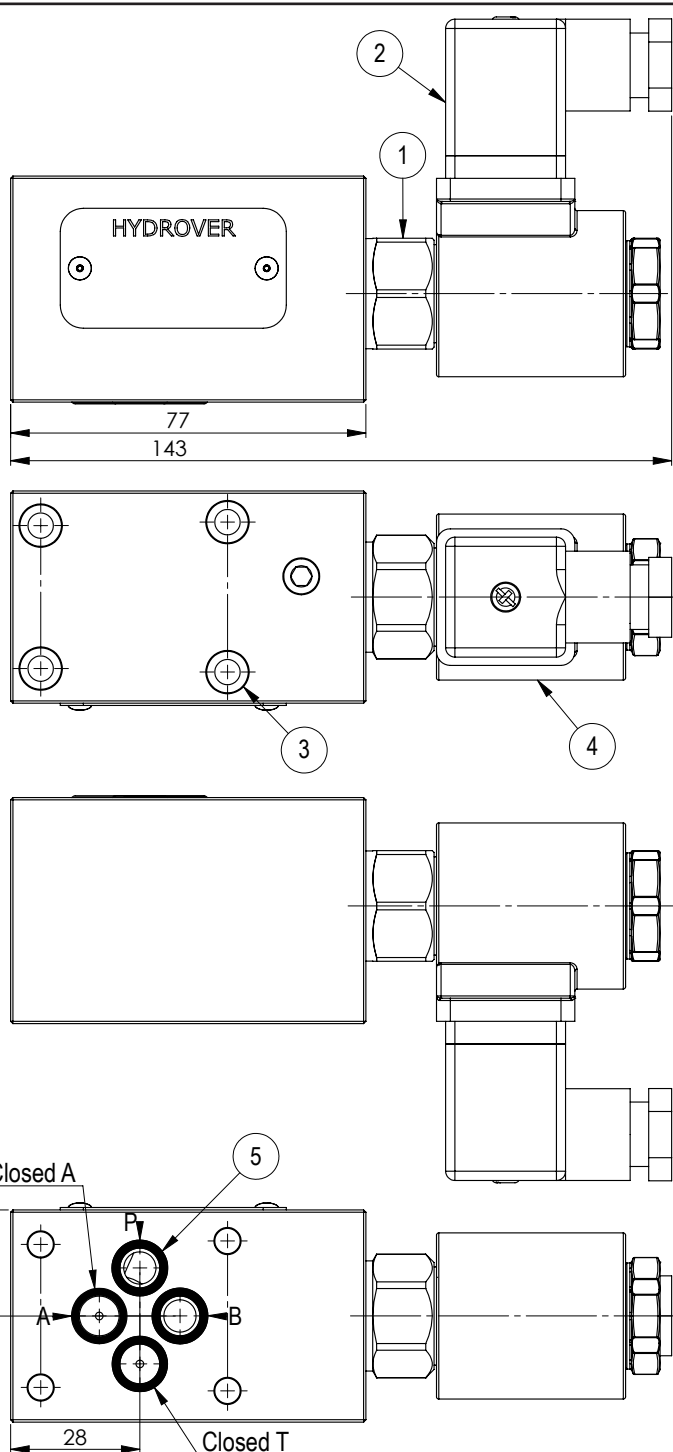
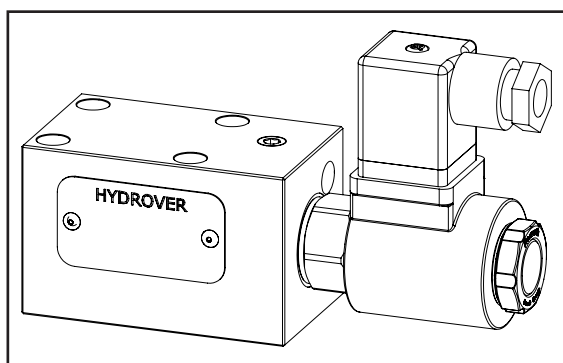
Proportional solenoid valve  
coil voltage \*  
OB = 12V DC  
OC = 24V DC

Proportional solenoid valve  
pressure adjustment range \*  
1 = 15-140 bar  
2 = 30-250 bar  
3 = 30-350 bar

\* Omit if not required. For example, to order the product without the proportional solenoid cartridge valve, omit the manual override, pressure range, coil voltage and coil connection options: H3502S.  
The manifold will still be provided with the corresponding cavity.



Technical data		
Max. pressure	Aluminium	250 bar
	Steel	350 bar
Max. flow	40 lpm *	
Weight	Aluminium	0,8 Kg
	Steel	1,6 Kg
Manifold material	Aluminium or steel	



P in B version depicted

N°	Description	Q.ty
1	Bosch Rexroth solenoid valve <b>VEI-16-08A-NC OD.15-X-18-Y-000000</b> (normally closed) or <b>VEI-16-08A-NA OD.15-X-18-Y-000000</b> (normally open) depicted without manual override *	1
2	Connector DIN 43650 ISO 4400	1
3	Ø 5,5 through hole with counterbore for mounting	4
4	Bosch Rexroth coil <b>D36</b> - CLASS H DIN 43650 ISO 4400 *	1
5	OR 108 i. Ø 8,73 cross section 1,78	4

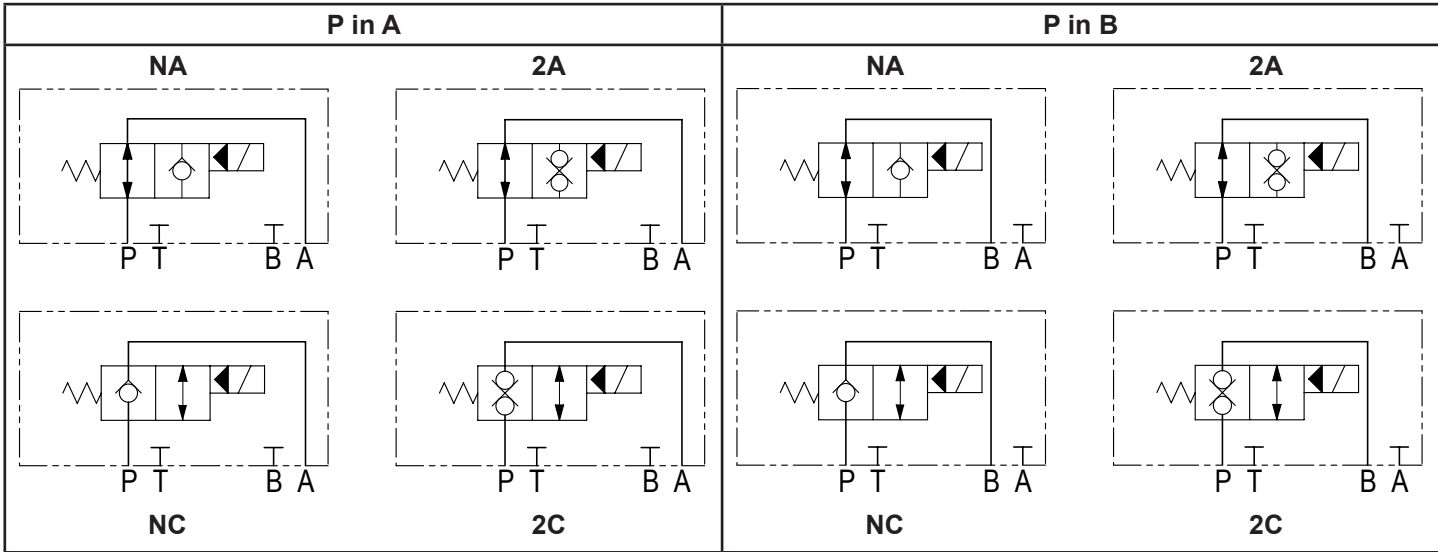
*\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue*



Ordering code

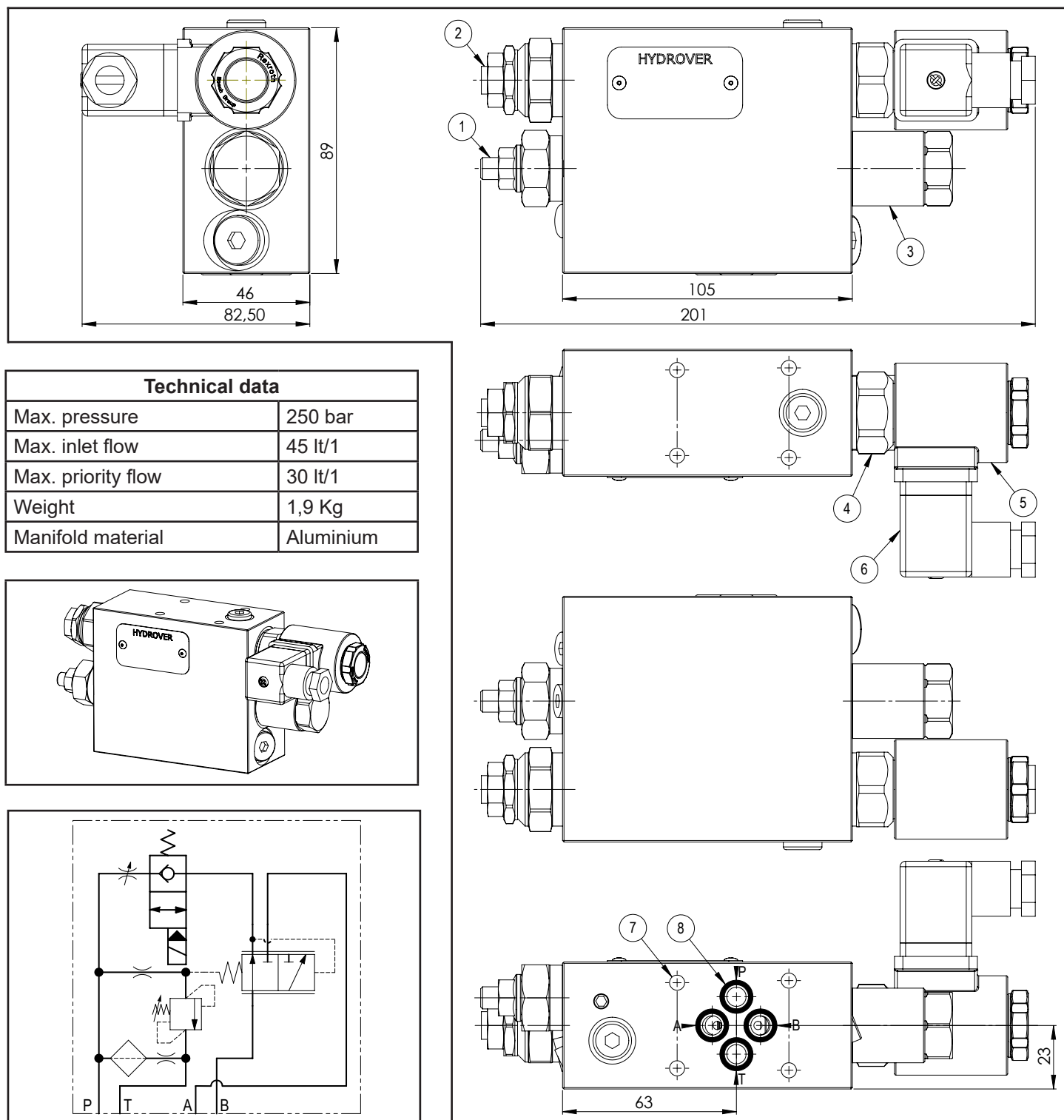
H 3 5 0 3 _ - _ - _ - _ - _ - _ -															
Hydrover product														Solenoid valve coil connection * 1 = DIN 43650 ISO 4400	
Product series 35 series - Cetop 3 valves															
Product ID															
Manifold material Aluminium = A Steel = S														Solenoid valve coil voltage * OB = 12V DC OC = 24V DC OD = 48V DC OU = 110V RAC AH = 230V RAC	
In A or B In A = A In B = B														Solenoid valve manual override * E0 = Without EP = Push (_A) EV = Screw (_C) EG = Push and twist (_A)	
Solenoid valve spool type * Normally open = NA Normally closed = NC Normally open double lock = 2A Normally closed double lock = 2C															

\* Omit if not required. For example, to order the product without the solenoid cartridge valve coil, omit the coil voltage and coil connection options: H3503A-A-NC-E0.



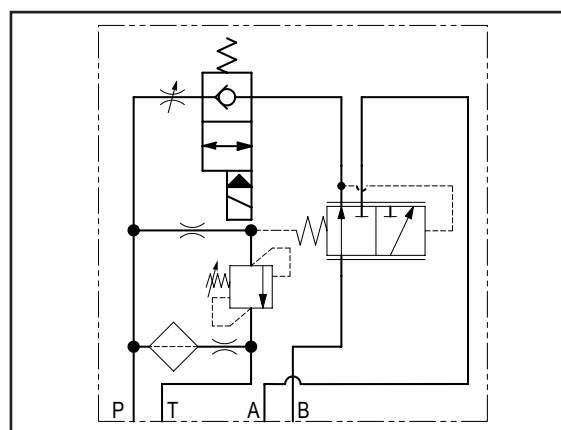
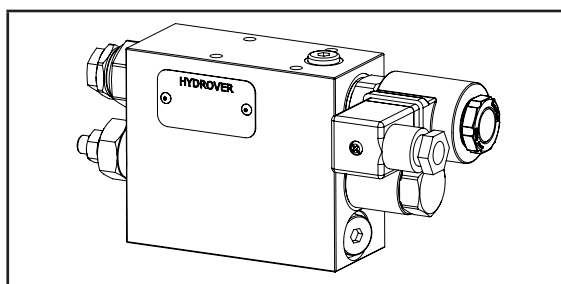
Valve with priority flow function  
inlet in B / non priority output in A with relief valve

H3506



### Technical data

Max. pressure	250 bar
Max. inlet flow	45 lt/1
Max. priority flow	30 lt/1
Weight	1,9 Kg
Manifold material	Aluminium



N°	Description	Q.ty
1	Bosch Rexroth bidirectional flow restrictor <b>OD.21.01-X-36</b> depicted with screw adjustment *	1
2	Bosch Rexroth relief valve <b>VSN-08A</b> *	1
3	Logic element Bosch Rexroth <b>VRLA-10A-S</b> *	1
4	Bosch Rexroth solenoid valve <b>OD.15.05.36-Y-000000</b> depicted without manual override *	1
5	Bosch Rexroth coil <b>D36</b> - CLASS H DIN 43650 ISO 4400 *	1
6	Connector DIN 43650 ISO 4400	1
7	Ø 5,5 through hole with counterbore for mounting	4
8	OR 108 i. Ø 8,73 cross section 1,78	4

\* per caratteristiche tecniche complete cliccare sul collegamento blu o consultare a fine catalogo la sezione componenti

Ordering code

H	3	5	0	6	A	_	_	Q	_	_	-	_	_	-	_	_	_
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### Hydrover product

## Product series

### 35 series - Cetop 3 valves

Product ID

## Manifold material

Aluminium

## Logic element spring

5,5 bar

$$= 5$$

10 bar

$$= 1$$

### Restrictor adjustment type

Screw

$$= S$$

Knob

$$= K$$

### Relief valve adjustment type \*

Screw

$$= S$$

Knob

$$= K$$

**Solenoid valve  
coil connection \***

1 = DIN 43650 ISO  
4400

**Solenoid valve  
coil voltage \***

OB = 12V DC

OC = 24V DC

OD = 48V DC

OU = 110V RAC

AH = 230V RAC

**Solenoid valve  
manual override \***

E0 = Without

EV = Screw

**Relief valve adjustment pressure range \***

0 = 10-70 bar

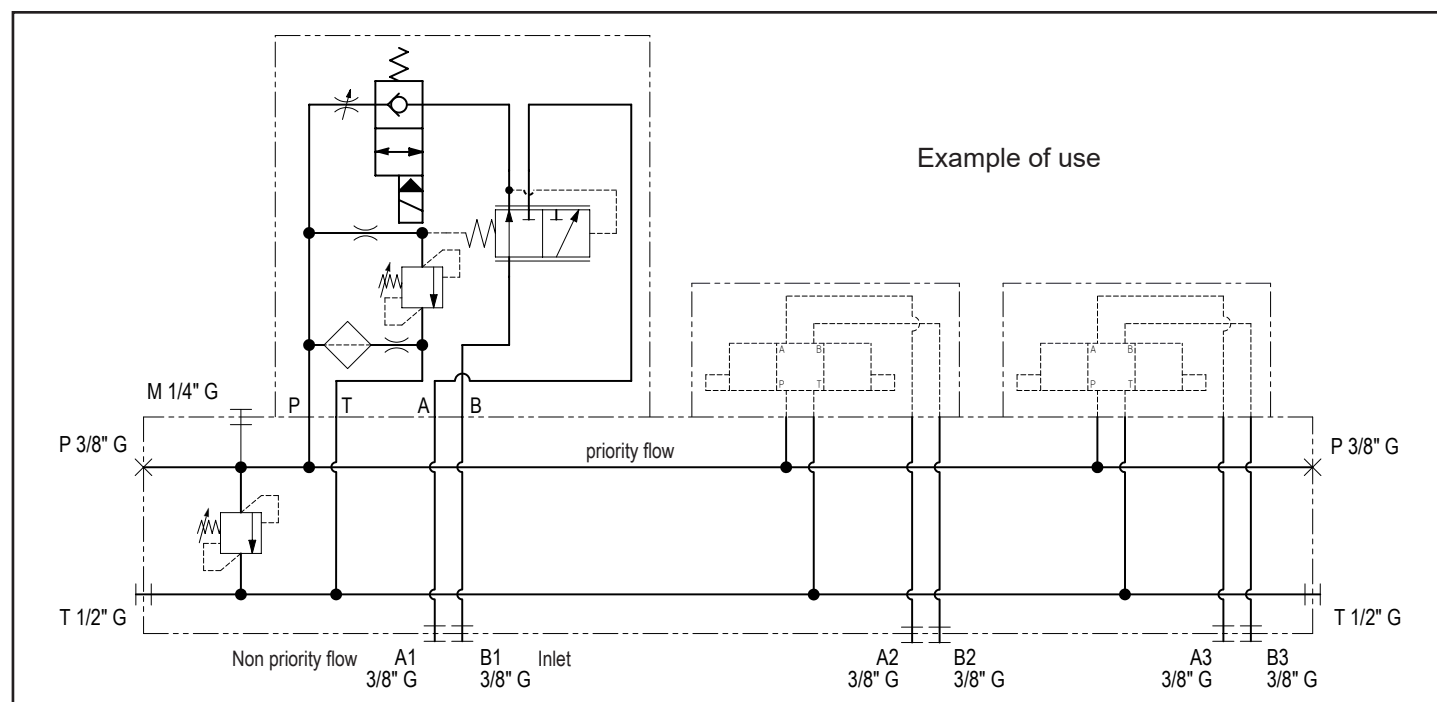
1 = 35-140 bar

2 = 105-210 bar

3 = 175-350 bar

3 = 35-350 bar (knob req.)

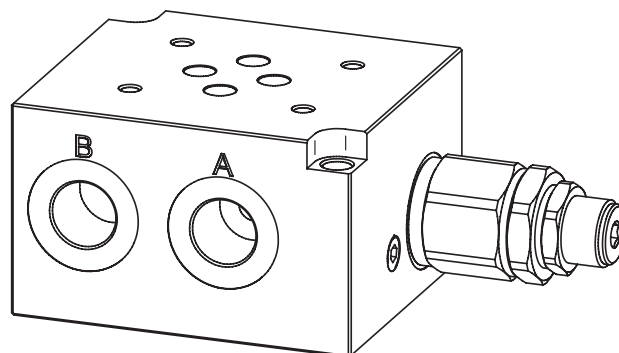
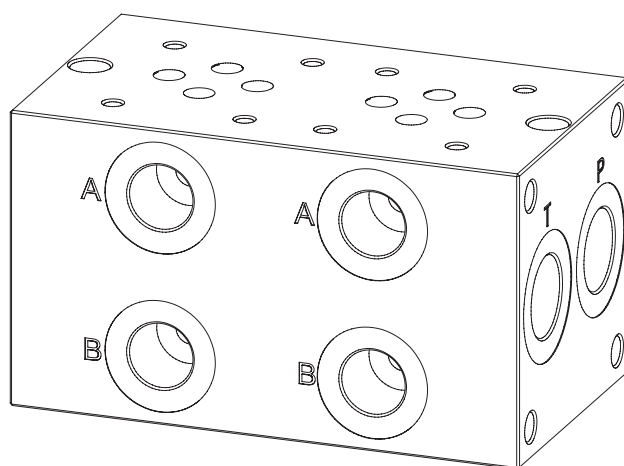
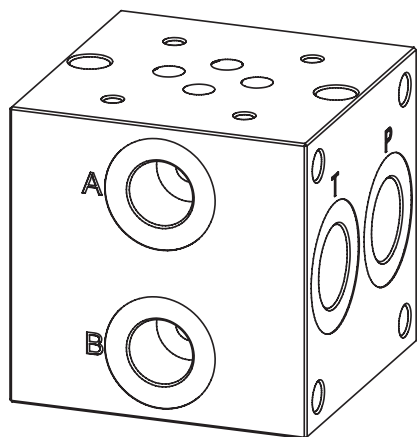
\* Omit if not required. For example, to order the product without the solenoid cartridge valve coil, omit the coil voltage and coil connection options: H3506A5SQ-S2-E0.

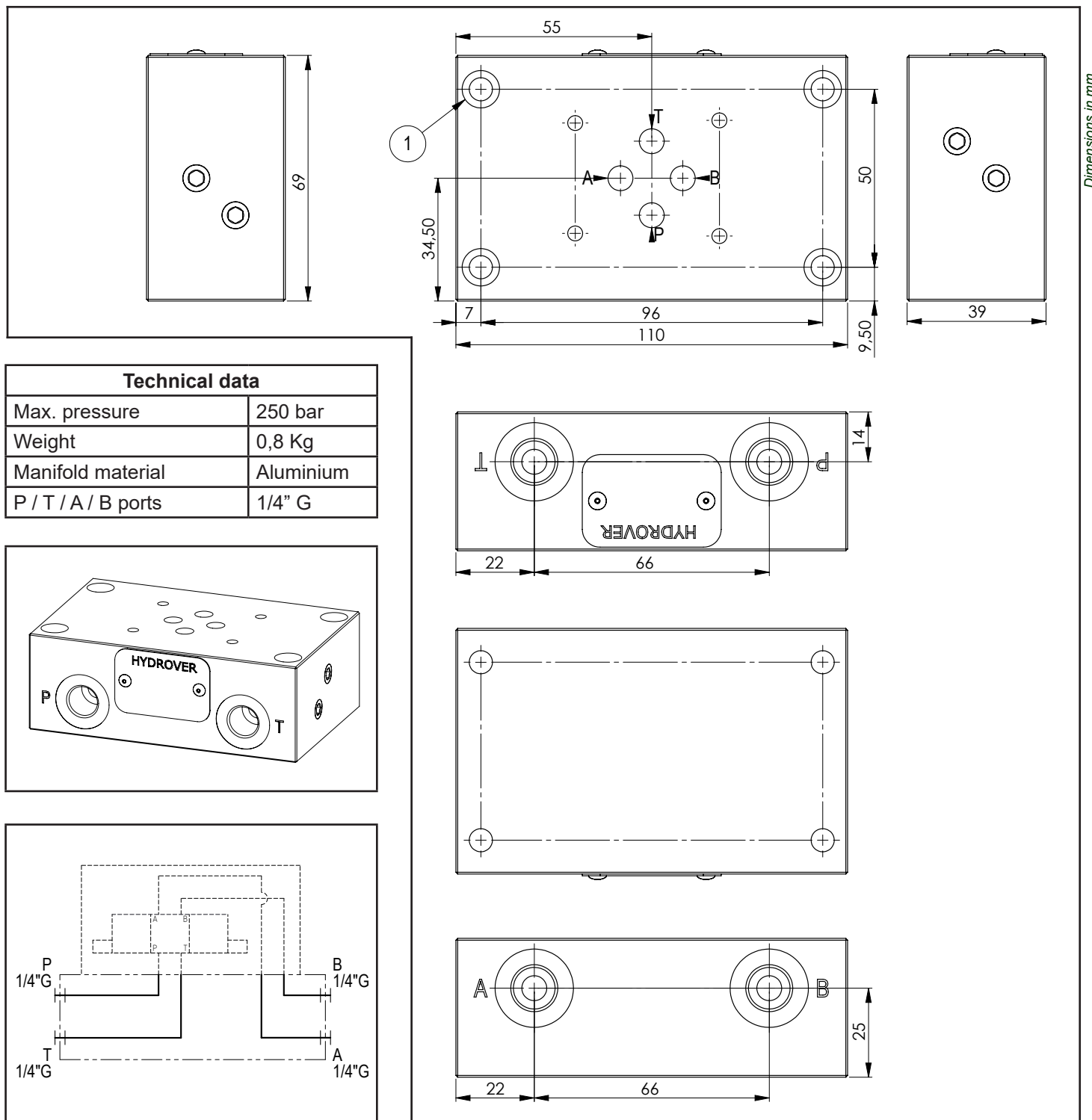




# SERIE 36

## Cetop 3 subplates





N°	Description	Q.ty
1	Ø 6,5 through hole for mounting with counterbore	4

Ordering code

H	3	6	3	6	A
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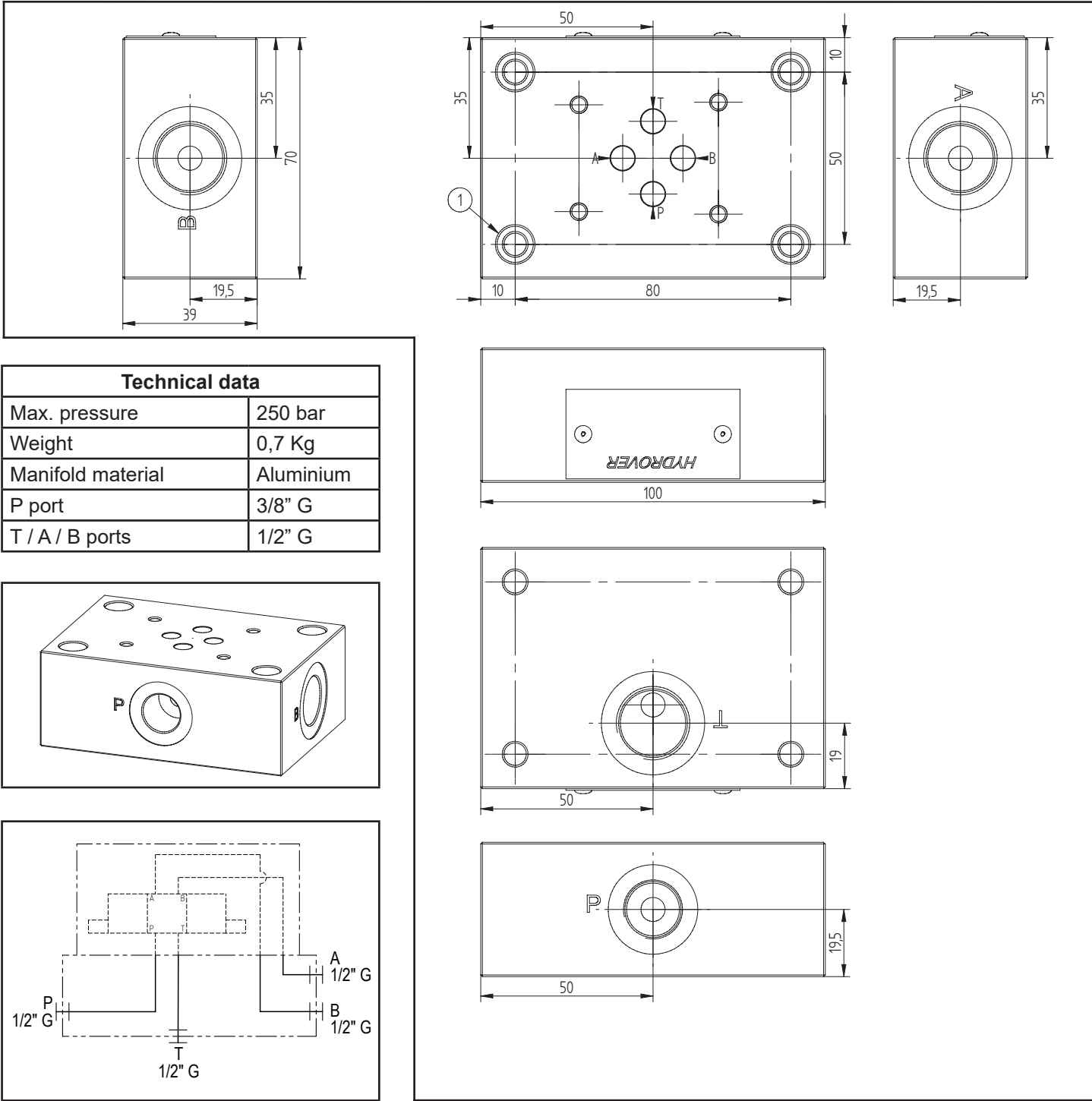
Hydrover product

Manifold material  
Aluminium

Product series  
36 series - Cetop 3 subplates

Product ID

Cetop 3 single station subplate / side P-A-B ports / back T port **H3607**



N°	Description	Q.ty
1	Ø 6,5 through hole for mounting with counterbore	4



Ordering code

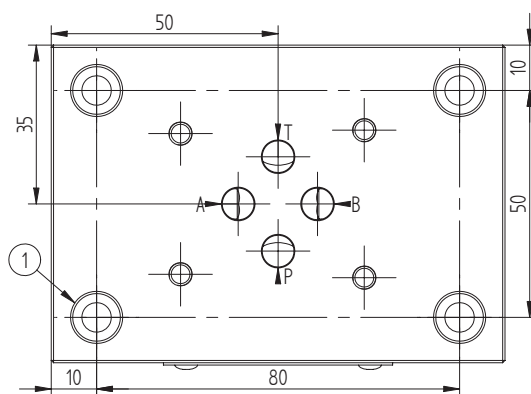
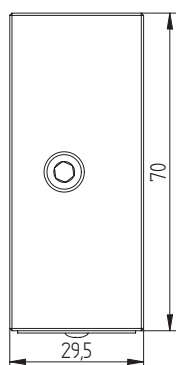
H	3	6	0	7	A
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Hydrover product

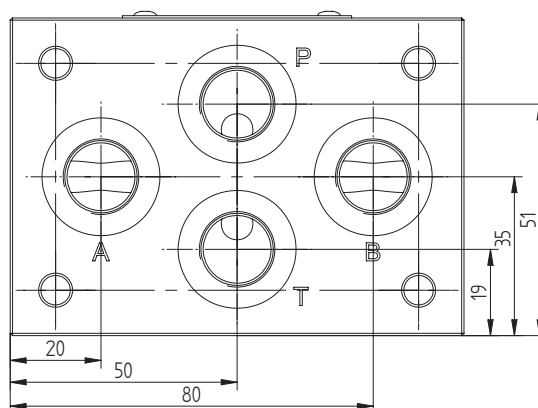
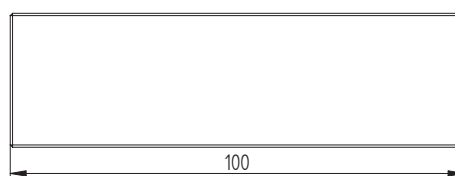
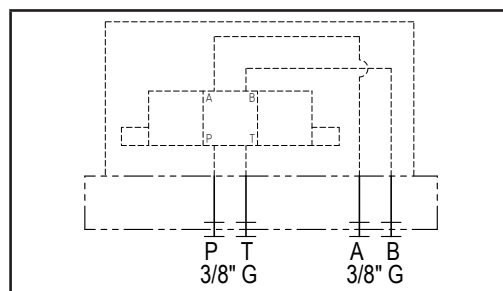
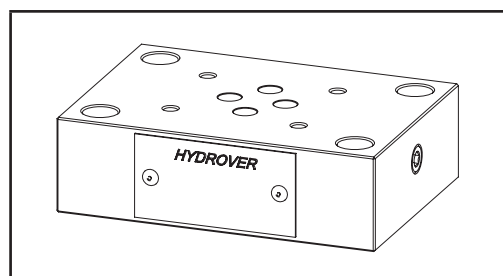
Manifold material  
Aluminium

Product series  
36 series - Cetop 3 subplates

Product ID



Technical data	
Max. pressure	250 bar
Weight	0,6 Kg
Manifold material	Aluminium
P / T / A / B ports	3/8" G



N°	Description	Q.ty
1	Ø 6,5 through hole for mounting with counterbore	4

Ordering code

H	3	6	0	9	A
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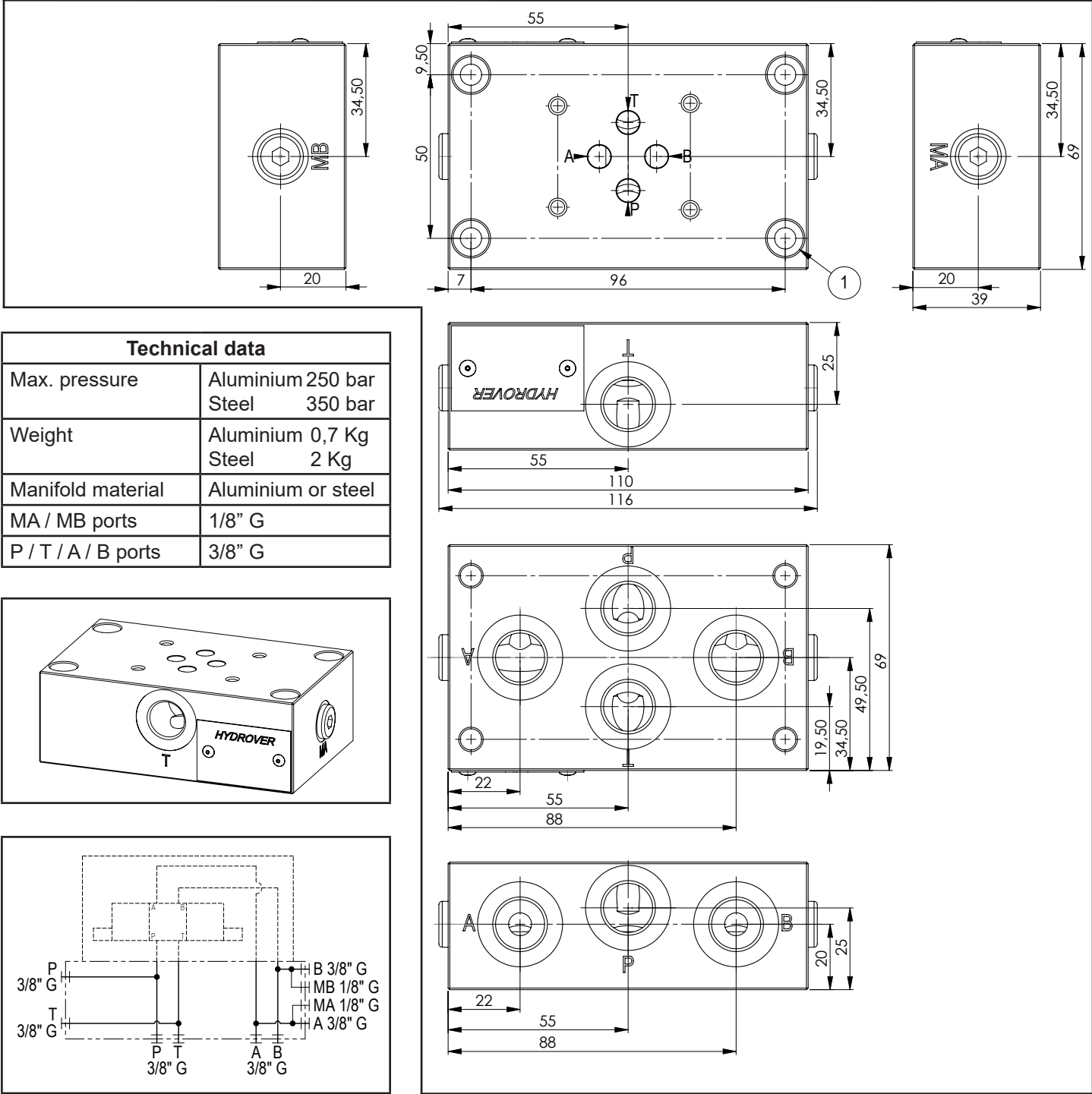
Hydrover product

Manifold material  
Aluminium

Product series  
36 series - Cetop 3 subplates

Product ID

Cetop 3 single station subplate / side and back P-T-A-B ports **H3611**



N°	Description	Q.ty
1	Ø 6,5 through hole for mounting with counterbore	4

H3611

Ordering code

H	3	6	1	1	-
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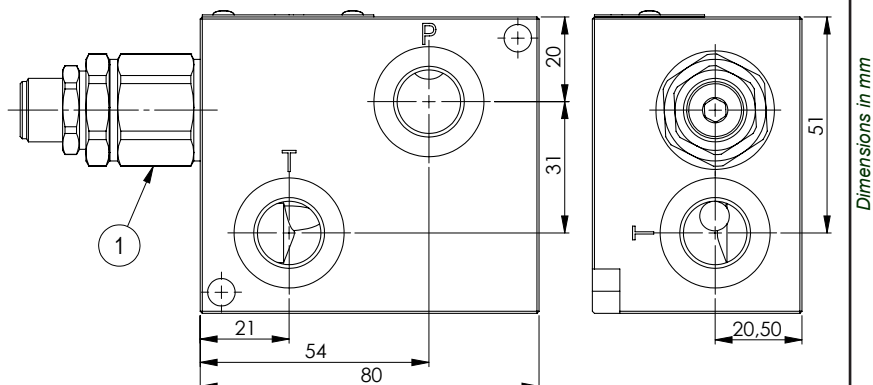
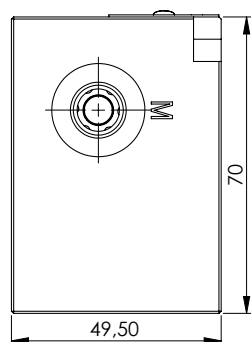
Hydrover product

Product series  
36 series - Cetop 3 subplates

Product ID

A=  
S=

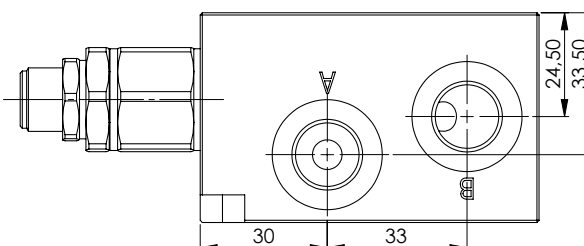
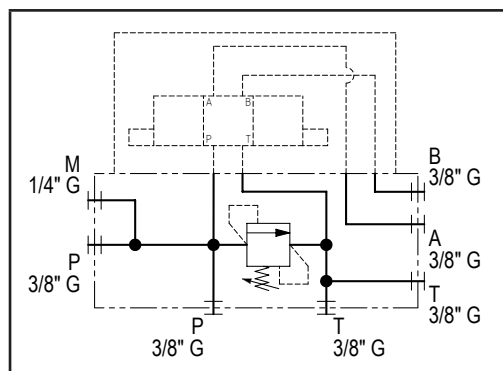
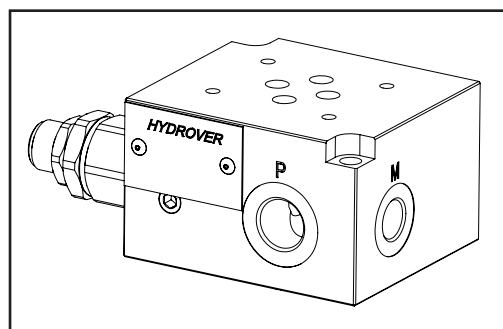
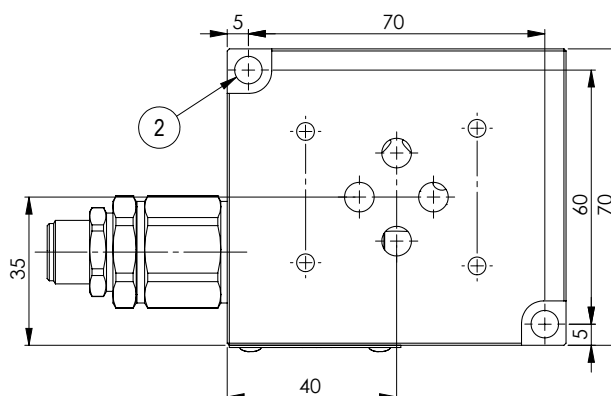
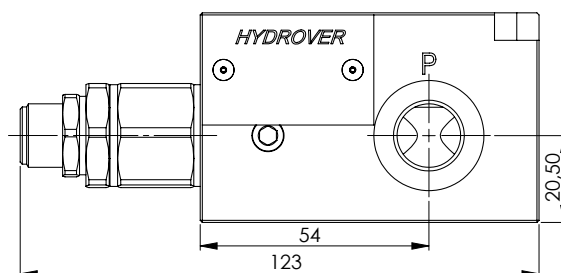
Manifold material  
Aluminium  
Steel

Cetop 3 single station subplate / relief valve  
back and side P-T ports / side A-B ports / 25 lpm**H3602**

Dimensions in mm

**Technical data**

Max. pressure	250 bar
Max. flow	25 lpm *
Weight	0,9 Kg
Manifold material	Aluminium
M port	1/4" G
P / T / A / B ports	3/8" G



N°	Description	Q.ty
1	Bosch Rexroth relief valve <b>VMD1.025</b> *	1
2	Ø 6,5 through hole for mounting blocco	2

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

H3602

Ordering code

H	3	6	0	2	A	-	-	-
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Hydrover product

Product series  
36 series - Cetop 3 subplates

Product ID

Relief valve  
adjustment pressure range \*  
1= 25-120 bar  
2= 40-200 bar  
3= 200-350 bar

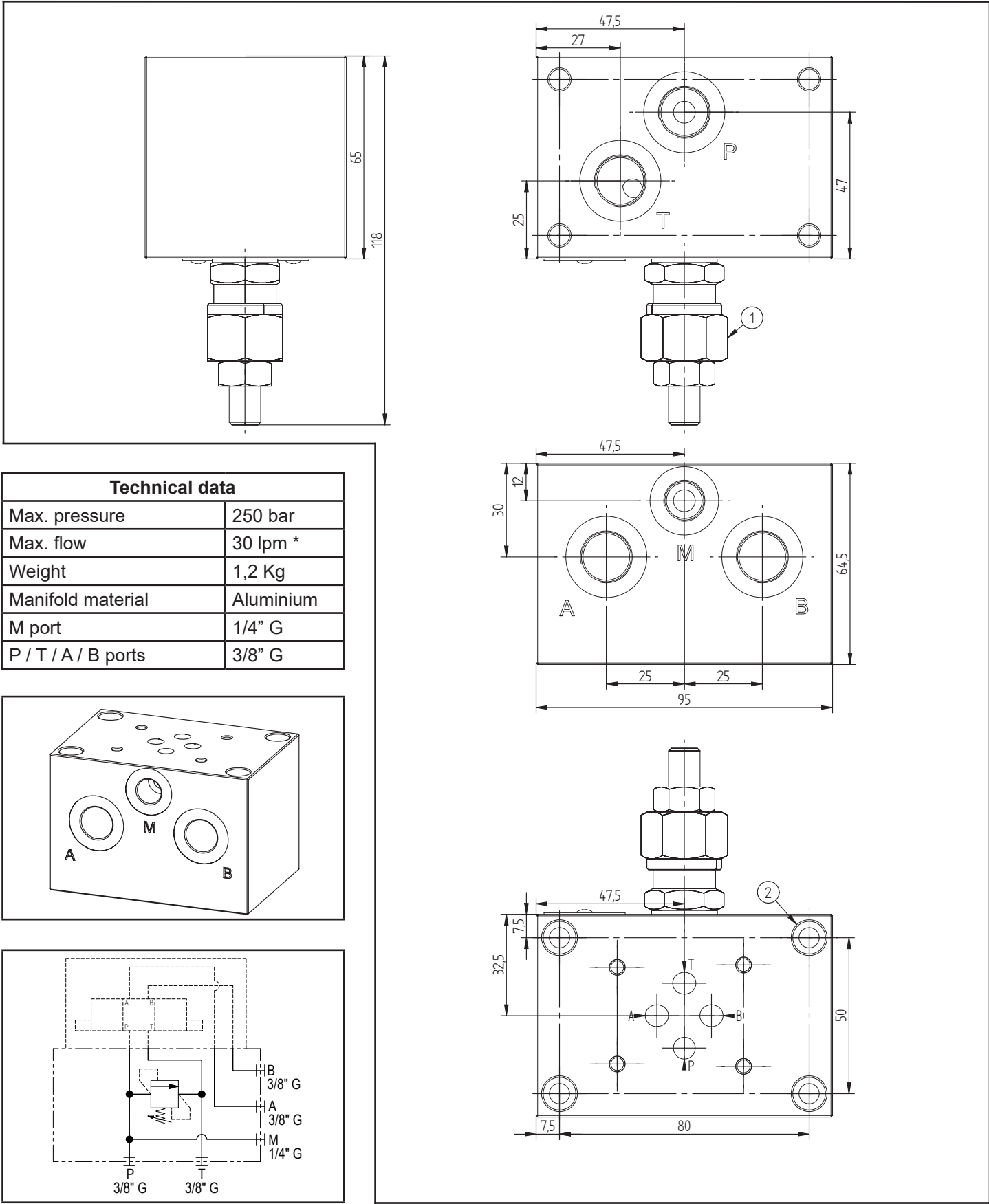
Relief valve  
adjustment type \*  
S = Screw

Manifold material  
Aluminium

* Omit if not required. For example, to order the product without the relief cartridge valve, omit the pressure range and adjustment type options: H3602A. The manifold will still be provided with the corresponding cavity. To inhibit the relief valve, replace the related options with TL: H3602A-TL. In the cavity it will be mounted a long plug.		
Valve	Cavity	Long plug code
Pressure relief valve VMD1.025	VMD1.025	R-800-016

Cetop 3 single station subplate / relief valve  
back P-T ports / side A-B ports / 30 lpm

H3606



Dimensions in mm

N°	Description	Q.ty
1	Bosch Rexroth relief valve <b>VS-30</b> *	1
2	Ø 6,5 through hole for mounting with counterbore	4

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue



H3606

Ordering code

H	3	6	0	6	A	-	-	-
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Hydrover product

Product series  
36 series - Cetop 3 subplates

Product ID

Relief valve  
adjustment pressure range \*

0 = 5-50 bar  
1 = 30-100 bar  
2 = 50-210 bar  
3 = 100-350 bar

Relief valve  
adjustment type \*

S = Screw  
K = Knob

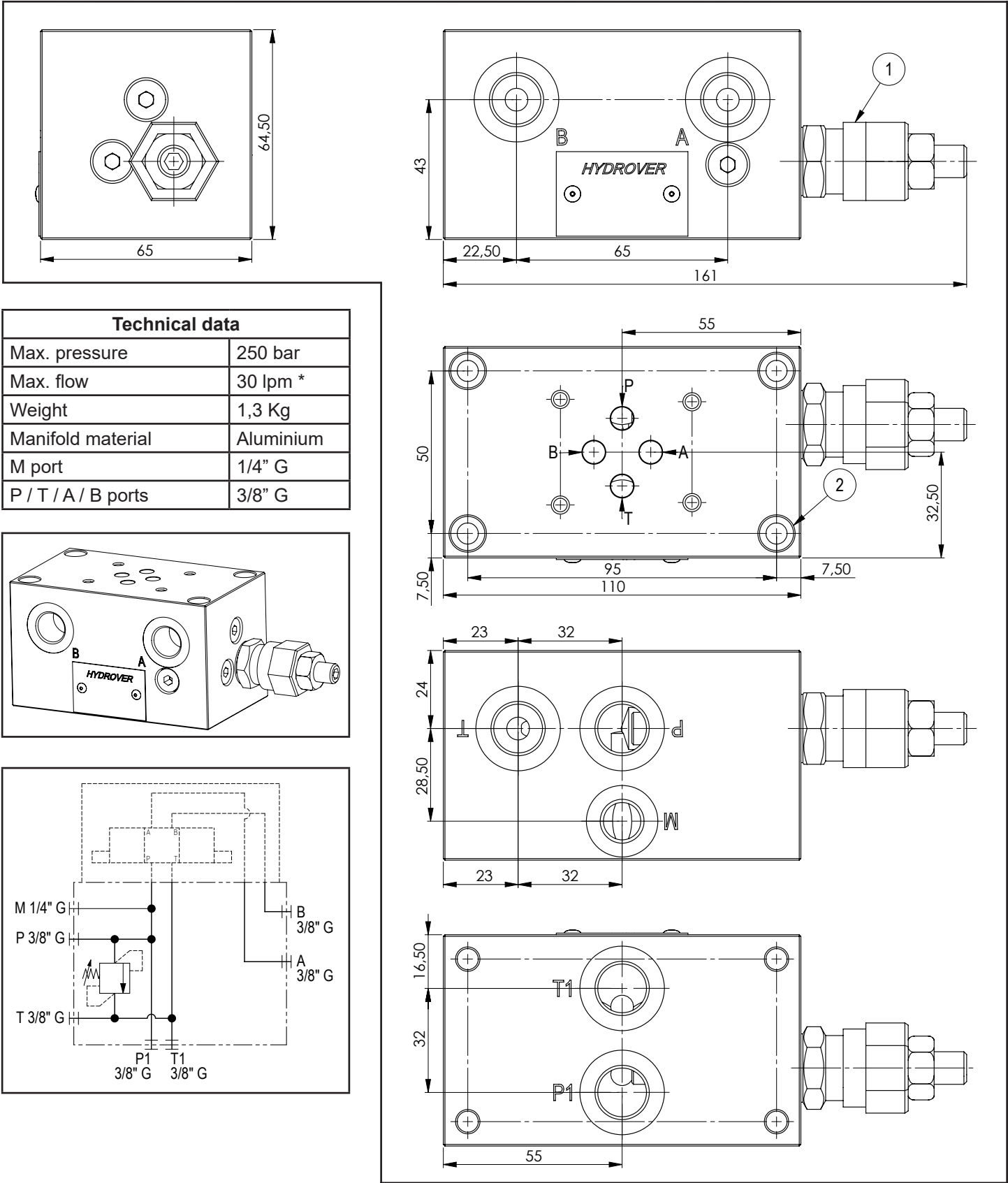
Manifold material  
Aluminium

\* Omit if not required. For example, to order the product without the relief cartridge valve, omit the pressure range and adjustment type options: H3606A.  
The manifold will still be provided with the corresponding cavity.  
To inhibit the relief valve, replace the related options with TL: H3606A-TL.  
In the cavity it will be mounted a long plug.

Valve	Cavity	Long plug code
Pressure relief valve VS-30	008	D8TVMDC

Cetop 3 single station subplate / relief valve  
back and side P-T ports / side A-B ports / 30 lpm

H3619



N°	Description	Q.ty
1	Bosch Rexroth relief valve <b>VS-30</b> *	1
2	Ø 6,5 through hole for mounting with counterbore	4

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

H3619

Ordering code

H	3	6	1	9	A	-	-	-
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Hydrover product

Product series  
36 series - Cetop 3 subplates

Product ID

Relief valve  
adjustment pressure range \*

0 =	5-50 bar
1 =	30-100 bar
2 =	50-210 bar
3 =	100-350 bar

Relief valve  
adjustment type \*

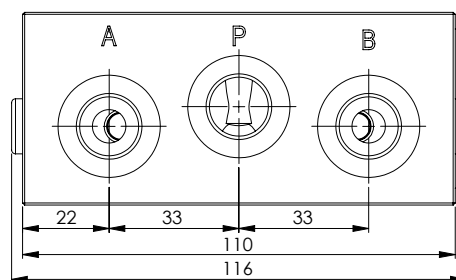
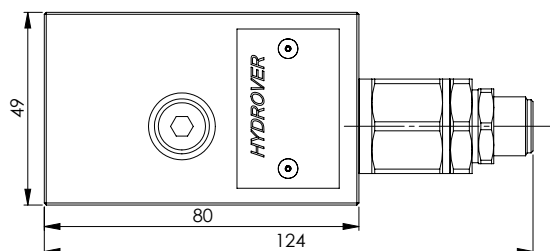
S =	Screw
K =	Knob

Manifold material  
Aluminium

\* Omit if not required. For example, to order the product without the relief cartridge valve, omit the pressure range and adjustment type options: H3619A.  
The manifold will still be provided with the corresponding cavity.  
To inhibit the relief valve, replace the related options with TL: H3619A-TL.  
In the cavity it will be mounted a long plug.

Valve	Cavity	Long plug code
Pressure relief valve VS-30	008	D8TVMDC

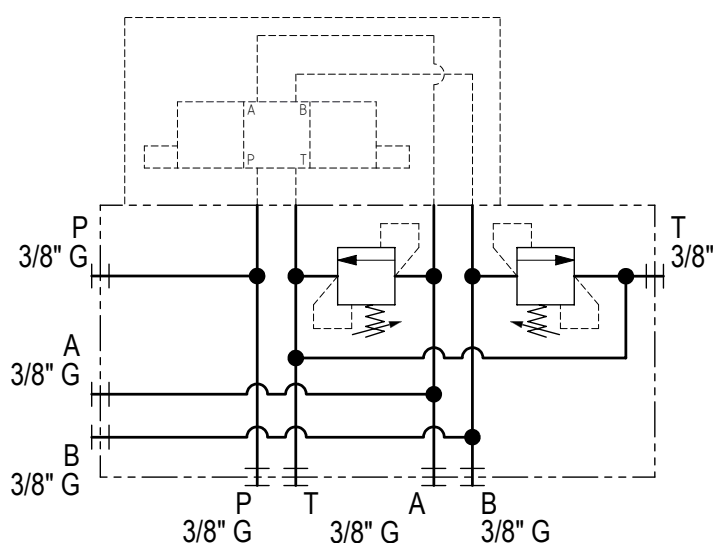
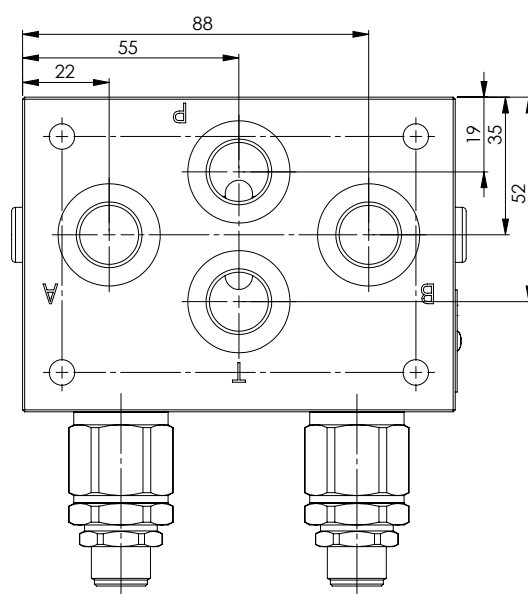
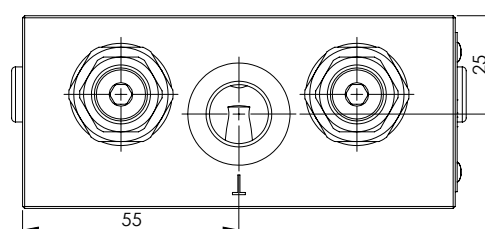
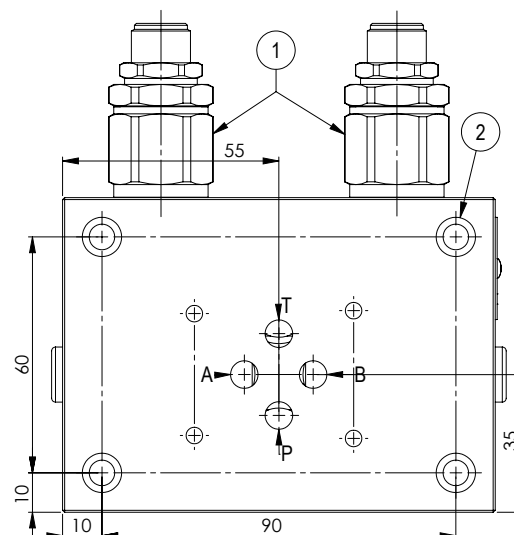
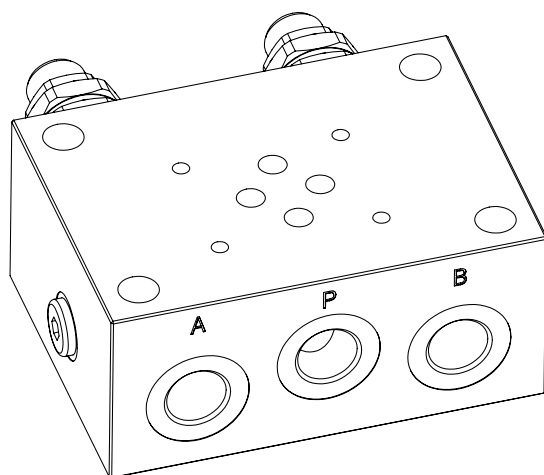
# Cetop 3 single station subplate / relief valve on A and B back and side P-T-A-B ports / 25 lpm

**H3623**

Dimensions in mm

**Technical data**

Max. pressure	350 bar
Max. flow	25 lpm *
Weight	3,2 Kg
Manifold material	Steel
P / T / A / B back and side ports	3/8" G



N°	Description	Q.ty
1	Bosch Rexroth relief valve <b>VMD1.025</b> *	2
2	Ø 6,5 through hole for mounting blocco	2

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

Ordering code

H	3	6	2	3	A	-	-	-	-	-
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Hydrover product

Product series  
36 series - Cetop 3 subplates

Product ID

Manifold material  
Aluminium

Relief valve adjustment  
pressure range on B \*

1= 25-120 bar  
2= 40-200 bar  
3= 200-350 bar

Relief valve  
adjustment type on B \*

S = Screw

Relief valve  
adjustment pressure range on A \*

1= 25-120 bar  
2= 40-200 bar  
3= 200-350 bar

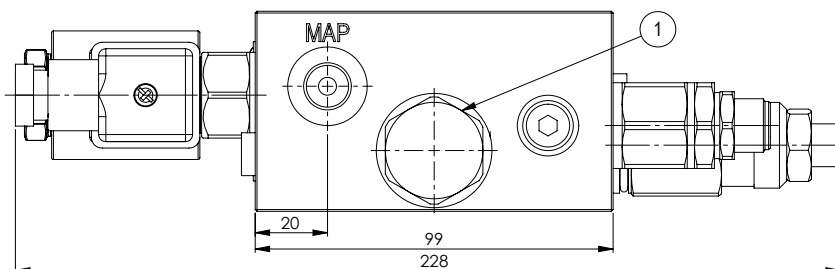
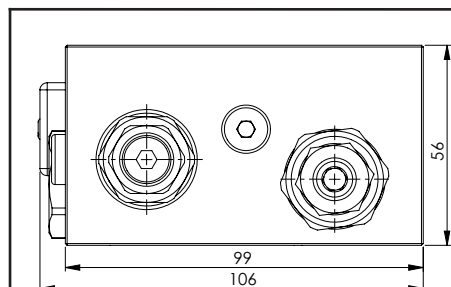
Relief valve  
adjustment type on A \*

S = Screw

\* Omit if not required. For example, to order the product without the relief cartridge valves, omit the pressure range and adjustment type options: H3623A.  
The manifold will still be provided with the corresponding cavities.  
To inhibit a relief valve, replace the related options with TL: eg. H3623A-TL-S2.  
In the cavity it will be mounted a long plug.

Valve	Cavity	Long plug code
Pressure relief valve VMD1.025	VMD1.025	R-800-016

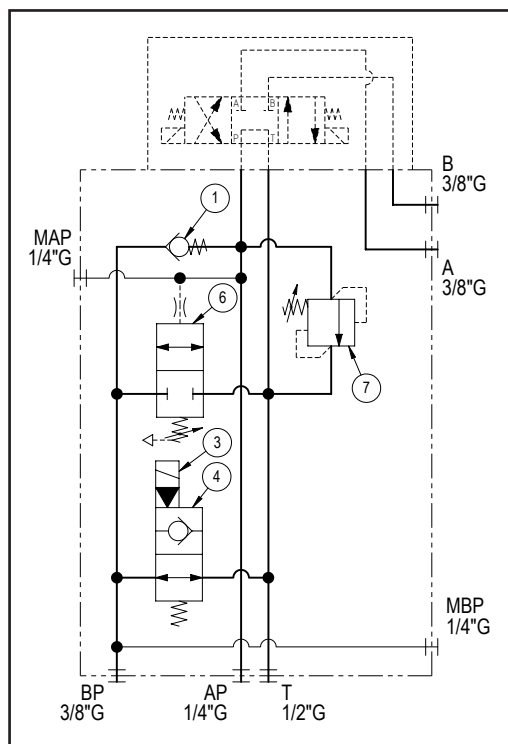
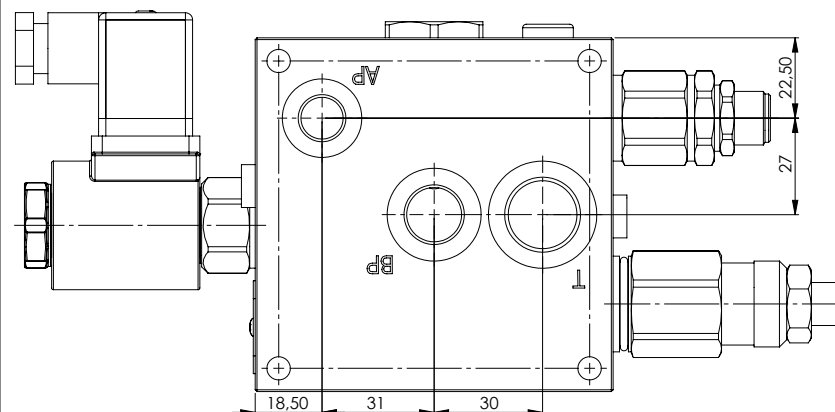
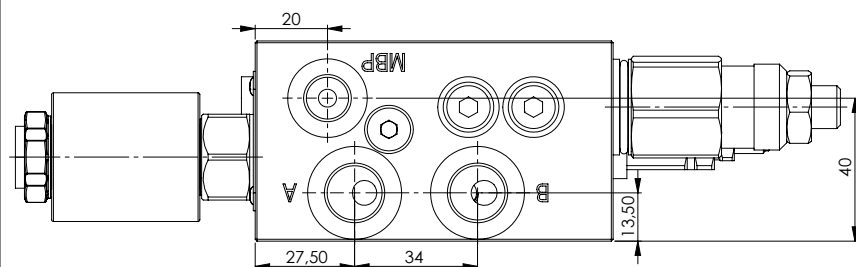
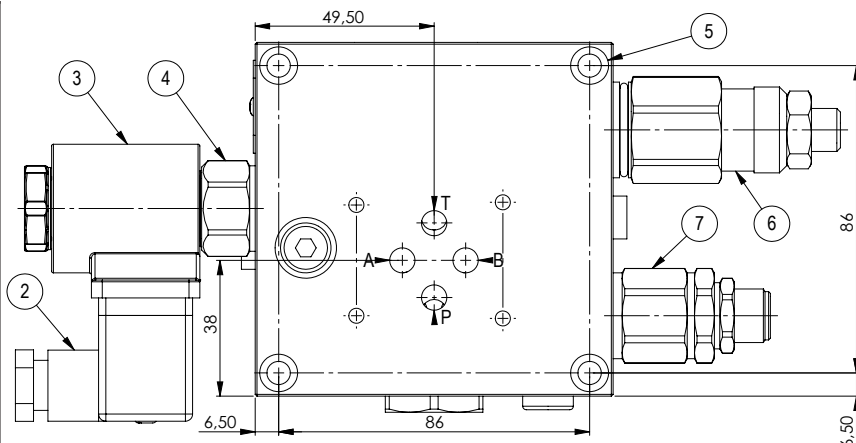
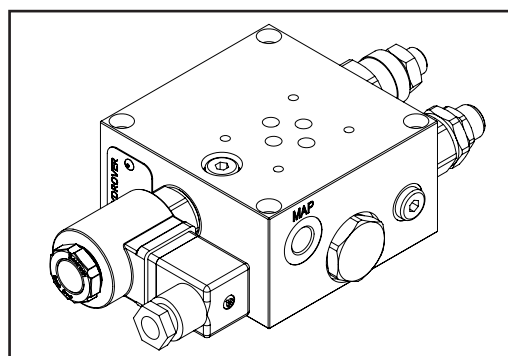
Cetop 3 single station subplate / pump unloading / relief valve **H3640**



Dimensions in mm

**Technical data**

Max. pressure	350 bar
Low pressure max. flow	30 lpm
High pressure max. flow	10 lpm
Weight	4,27 Kg
Manifold material	Steel
AP / MAP / MBP ports	1/4" G
BP / A / B ports	3/8" G
T port	1/2" G



Ordering code

H	3	6	4	0	S	-		-		-		-	
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**Hydrover  
product**

## Product series

36 series - Cetop 3  
subplates

## Product ID

**Manifold material**  
Steel

### Directional valve adjustment type

Screw = S

### Directional valve adjustment pressure range

5-35 bar	= 1
14-70 bar	= 2
35-105 bar	= 3
70-210 bar	= 4

### Relief valve adjustment type

Screw = S

**Solenoid  
valve coil  
connection \***

1 = DIN 43650  
ISO 4400

**Solenoid valve  
coil voltage \***

OB =	12V DC
OC =	24V DC
OD =	48V DC
OU =	110V RAC
AH =	230V RAC

**Solenoid valve  
manual override \***

E0 =	Without
EP =	Push (NA)
EG =	Push and twist (NA)

**Relief valve  
adjustment pressure range \***

1=	25-120 bar
2=	40-200 bar
3=	200-350 bar

\* Omit if not required. For example, to order the product without coil, omit the coil voltage and connection options: eg. H3640S-S2-S3-E0.

To inhibit the low-pressure release solenoid valve, replace the related options with TL: eg. H3640S-S2-S3-TL.

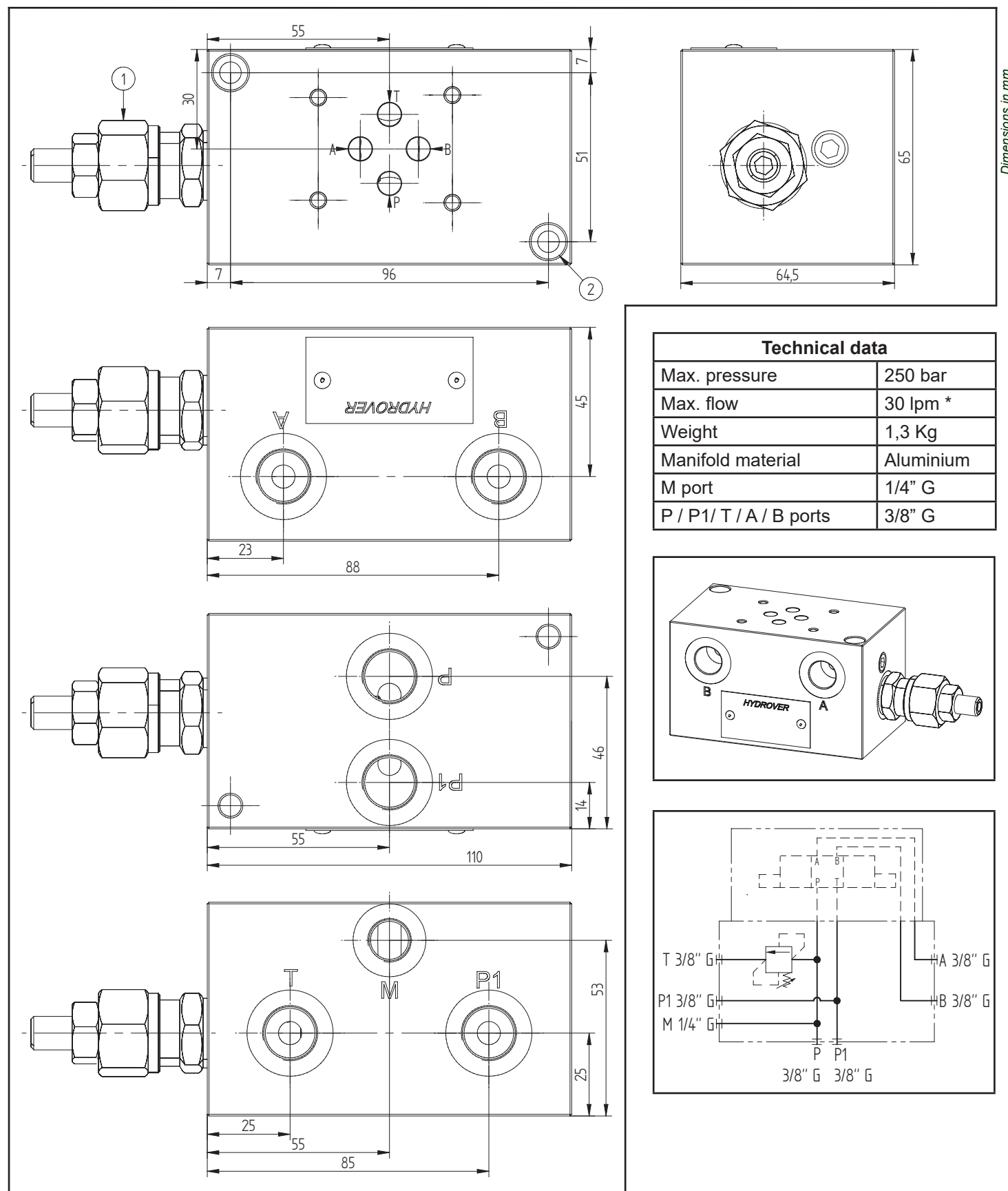
In the cavity it will be mounted a long plug.

Valve	Cavity	Long plug code
Bosch Rexroth solenoid valve VEI-16-08A-NA OD.15.06.18-Y-000000	CA-08A-2N	<b>0489A2005600000</b>

N°	Description	Q.ty
1	Bosch Rexroth check valve	1
2	Connector DIN 43650 ISO 4400	1
3	Bosch Rexroth coil <b>D36</b> - CLASS H DIN 43650 ISO 4400 **	1
4	Bosch Rexroth solenoid valve <b>VEI-16-08A-NA OD.15.06.18-Y-000000</b> depicted without manual override **	1
5	Ø 6,5 through hole with counterbore for mounting	4
6	Directional valve normally closed	1
7	Bosch Rexroth relief valve <b>VMD1.025</b> **	1

**\*\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue**

Cetop 3 single station subplate for serial circuit  
 relief valve with separated discharged port / 30 lpm

**H3608**


N°	Description	Q.ty
1	Bosch Rexroth relief valve <b>VS-30</b> *	1
2	Ø 6,5 through hole for mounting with counterbore	2

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue



H3608

Ordering code

H	3	6	0	8	A	-	-	-
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Hydrover product

Product series  
36 series - Cetop 3 subplates

Product ID

Relief valve  
adjustment pressure range \*

0 =	5-50 bar
1 =	30-100 bar
2 =	50-210 bar
3 =	100-350 bar

Relief valve  
adjustment type \*

S =	Screw
K =	Knob

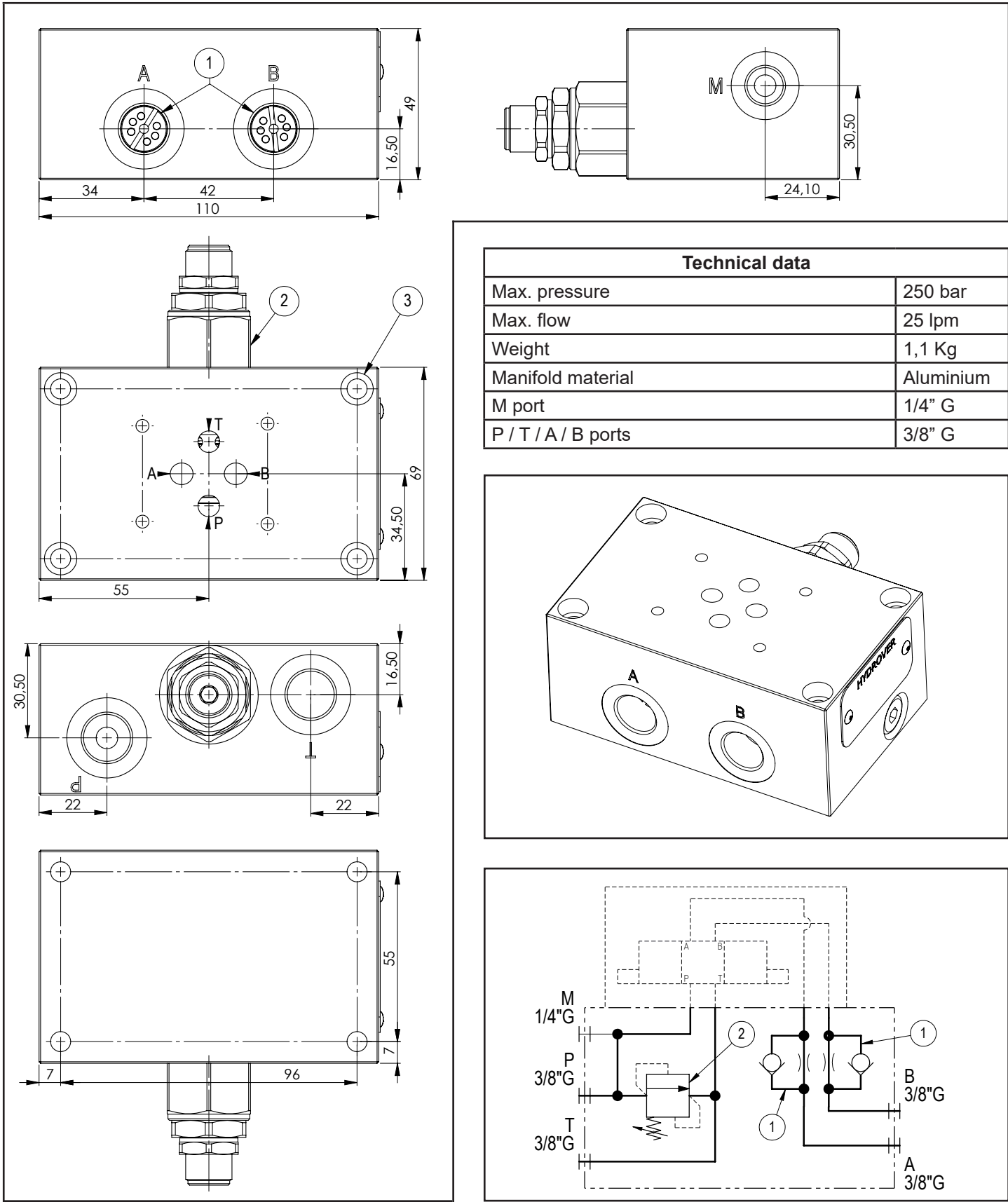
Manifold material  
Aluminium

\* Omit if not required. For example, to order the product without the relief cartridge valve, omit the pressure range and adjustment type options: H3608A.  
The manifold will still be provided with the corresponding cavity.  
To inhibit a relief valve, replace the related options with TL: eg. H3608A-TL.  
In the cavity it will be mounted a long plug.

Valve	Cavity	Long plug code
Pressure relief valve VS-30	008	D8TVMDC

Cetop 3 single station subplate / relief valve  
fixed setting flow regulators on A and/or B

H3641



N°	Description	Q.ty
1	Bosch Rexroth unidirectional flow restrictor <a href="#">GSU1.38</a> *	2
2	Bosch Rexroth relief valve <a href="#">VMD1.025</a> *	1
3	Ø 6,5 through hole for mounting with counterbore	4

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

Ordering code

H	3	6	4	1	A	-	-	-	-	-	-	-
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Hydrover product

Product series  
36 series - Cetop 3 subplates

Product ID

Manifold material  
Aluminium

Relief valve  
adjustment type  
Screw = S

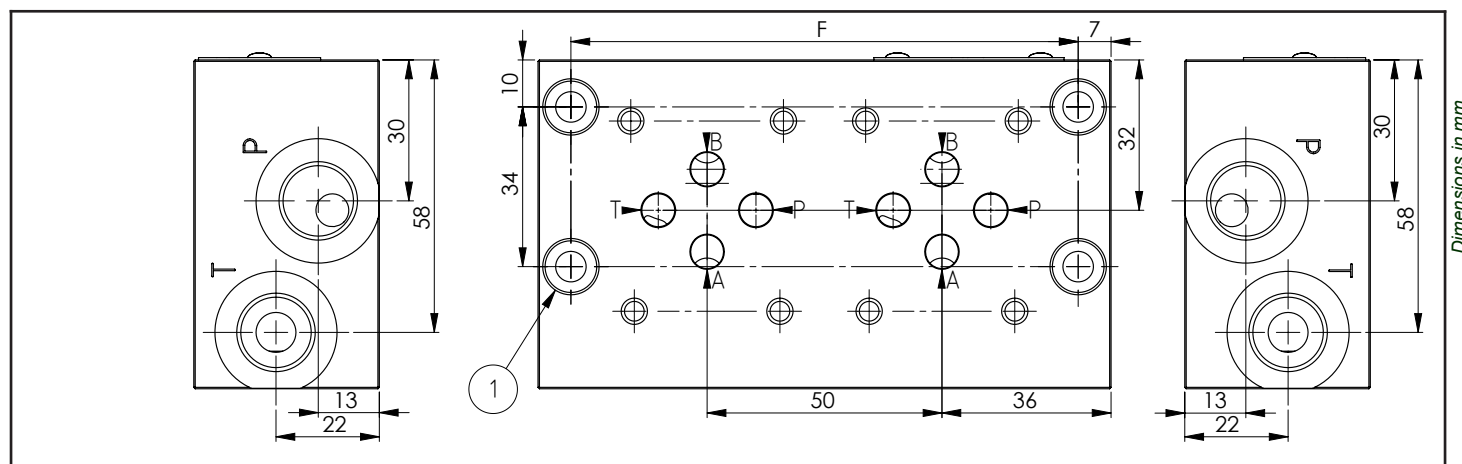
Relief valve  
pressure range  
1 = 25-120 bar  
2 = 40-200 bar  
3 = 200-350 bar

Flow restrictor on B

- 00 = Without
- 01 = Ø 0,1 mm
- 02 = Ø 0,2 mm
- ...
- 24 = Ø 2,4 mm
- 25 = Ø 2,5 mm

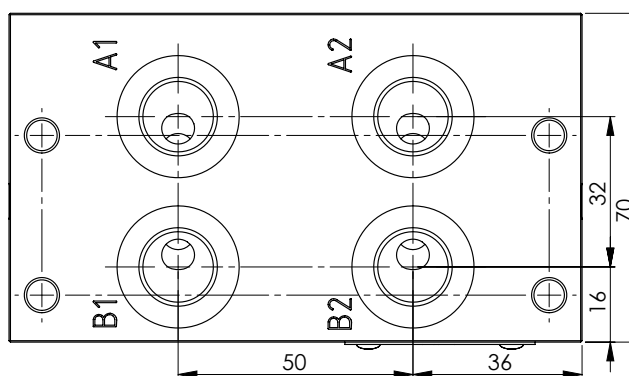
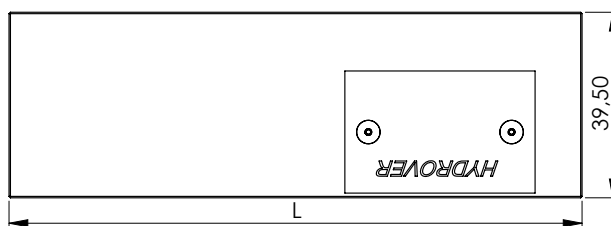
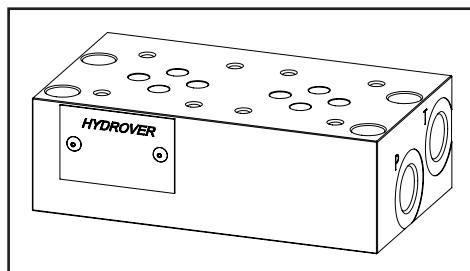
Flow restrictor on A

- 00 = Without
- 01 = Ø 0,1 mm
- 02 = Ø 0,2 mm
- ...
- 24 = Ø 2,4 mm
- 25 = Ø 2,5 mm



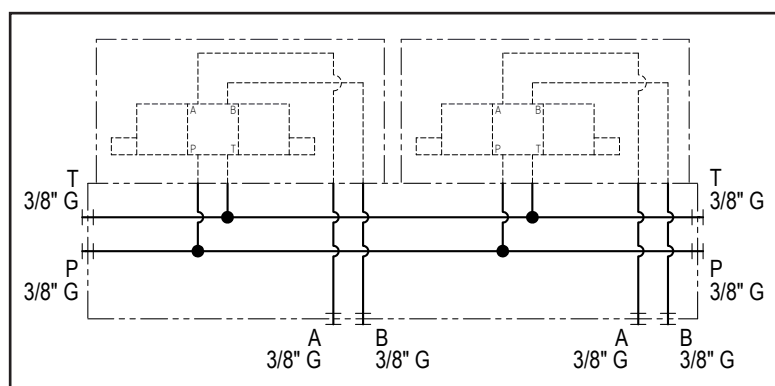
## Technical data

Max. pressure	250 bar
Max. pressure su T	25 bar
2 stations weight	0,83 Kg
3 stations weight	1,18 Kg
4 stations weight	1,53 Kg
5 stations weight	1,88 Kg
6 stations weight	2,23 Kg
7 stations weight	2,58 Kg
8 stations weight	2,93 Kg
9 stations weight	3,28 Kg
Manifold material	Aluminium
P / T / A / B ports	3/8" G



N°	Description	Q.ty
1	Ø 6,5 through hole for mounting	4

Stat.	2	3	4	5	6	7	8	9
F	108	158	208	258	308	358	408	458
L	122	172	222	272	322	372	422	472



H3612

Ordering code

H	3	6	1	2	A	_	_
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Hydrover product

Product series

36 series - Cetop 3 subplates

Product ID

Manifold material

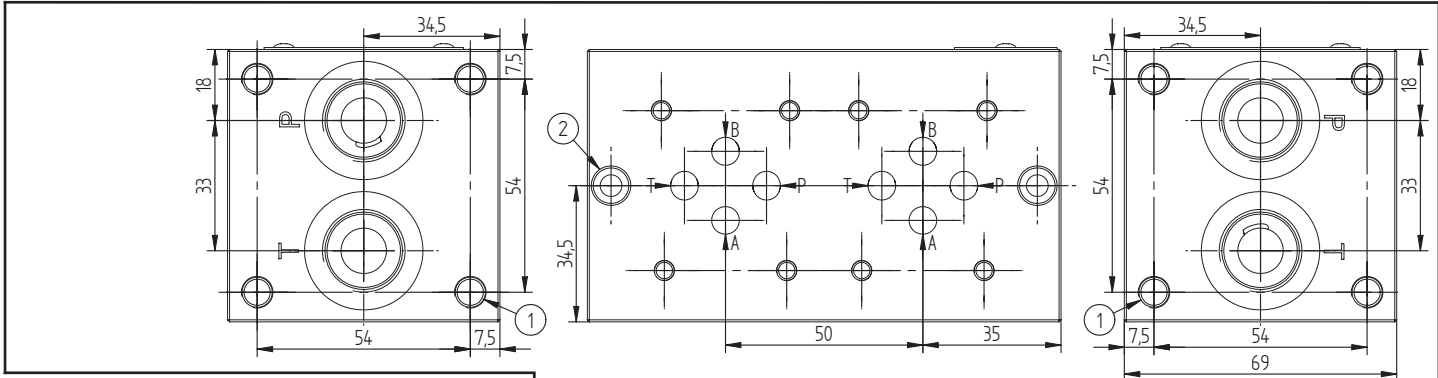
Aluminium

Number of Cetop 3 stations

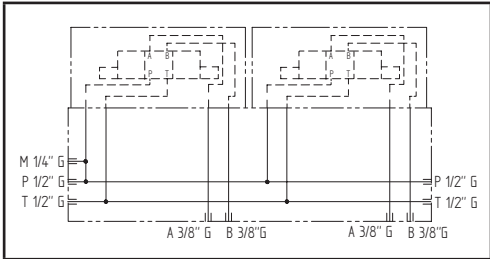
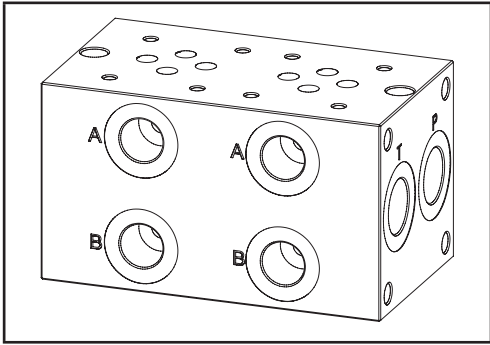
2P =	2 stations
3P =	3 stations
4P =	4 stations
5P =	5 stations
6P =	6 stations
7P =	7 stations
8P =	8 stations
9P =	9 stations

Cetop 3 subplate from 1 to 7 stations  
crossing P-T ports 1/2" G / side A-B ports 3/8" G

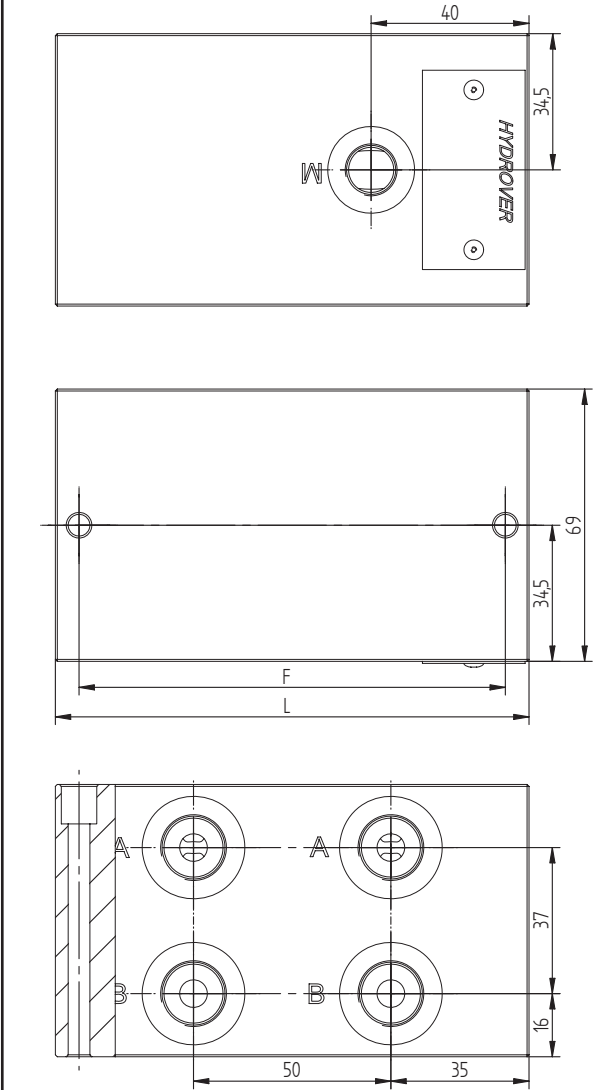
H3601



Technical data		
	Aluminium	Steel
Press. max.	250 bar	350 bar
1 stat. weight	0,8 Kg	2,2 Kg
2 stat. weight	1,4 Kg	3,9 Kg
3 stat. weight	2 Kg	5,5 Kg
4 stat weight	2,6 Kg	7,2 Kg
5 stat. weight	3,2 Kg	8,8 Kg
6 stat. weight	3,8 Kg	10,5 Kg
7 stat. weight	4,4 Kg	12,1 Kg
M port	1/4" G	
A / B ports	3/8" G	
P / T ports	1/2" G	



N°	Description	Q.ty
1	M8x15 thread for mounting	8
2	Ø 5,5 through hole for mounting	2



Stat.	1	2	3	4	5	6	7
F	58	108	158	208	258	308	358
L	70	120	170	220	270	320	370

Ordering code

H	3	6	0	1	_	_	_
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Hydrover product

Product series

36 series - Cetop 3 subplates

Product ID

Manifold material

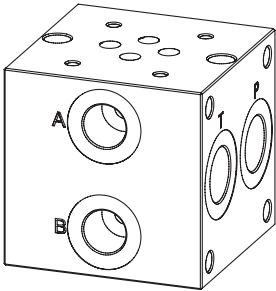
Aluminium  
Steel

= A  
= S

Number of Cetop 3 stations

- |      |            |
|------|------------|
| 1P = | 1 station  |
| 2P = | 2 stations |
| 3P = | 3 stations |
| 4P = | 4 stations |
| 5P = | 5 stations |
| 6P = | 6 stations |
| 7P = | 7 stations |

1 station version (1P)

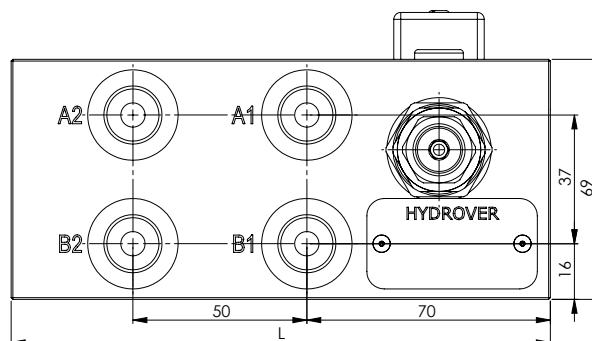


Cetop 3 subplate from 2 to 7 stations / bypass and relief valves  
crossing P-T ports 1/2" G / side A-B ports 3/8" G / 40 lpm

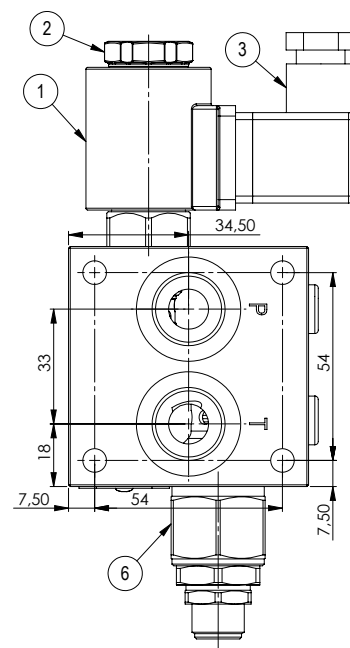
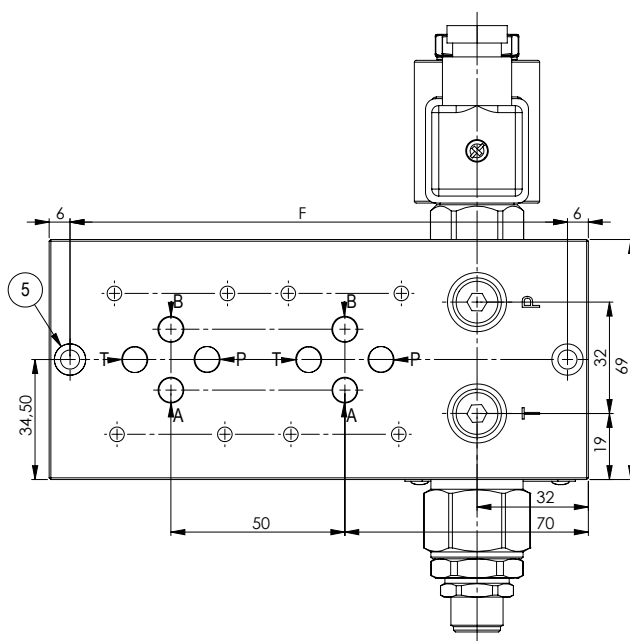
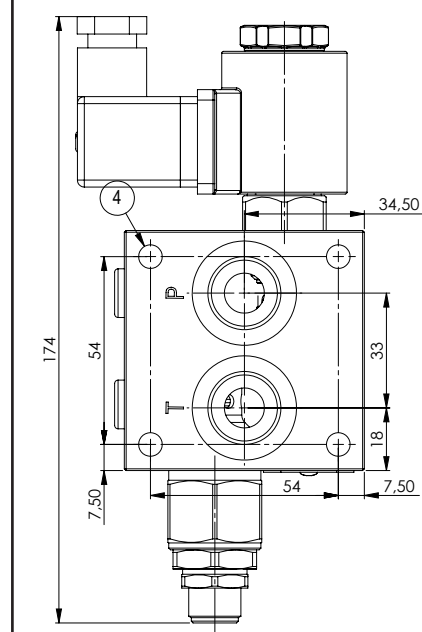
## H3626

### Technical data

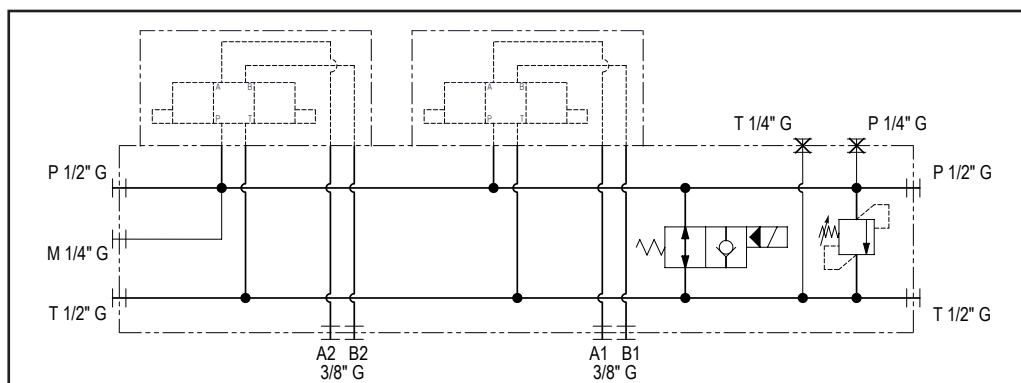
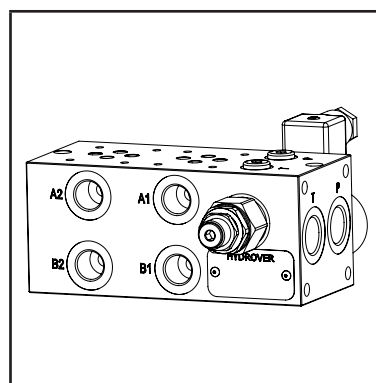
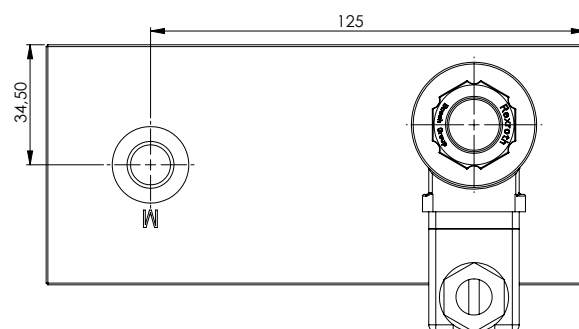
Max. pressure	250 bar
Max. flow	40 lpm *
Manifold material	Aluminium
M / P / T ports	1/4" G
A / B ports	3/8" G
P / T ports	1/2" G



Dimensions in mm



Stat.	F	L	Weight
2	143	155	1,7 Kg
3	193	205	2,3 Kg
4	243	255	2,9 Kg
5	293	305	3,5 Kg
6	343	355	4,2 Kg
7	393	405	4,8 Kg





## Ordering code

H	3	6	2	6	A	_	_	-	_	_	-	_	_	-	_	_	_
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**Hydrover product****Product series**

36 series - Cetop 3 subplates

**Product ID****Manifold material**

Aluminium

**Number of Cetop 3 stations**

2 stations	= 2P
3 stations	= 3P
4 stations	= 4P
5 stations	= 5P
6 stations	= 6P
7 stations	= 7P

**Relief valve adjustment type \***

Screw = S

**Relief valve adjustment pressure range \***

25-120 bar	= 1
40-200 bar	= 2
200-350 bar	= 3

**Solenoid valve coil connection \***1 = DIN 43650  
ISO 4400**Solenoid valve coil voltage \***

OB =	12V DC
OC =	24V DC
OD =	48V DC
OU =	110V RAC
AH =	230V RAC

**Solenoid valve manual override \***

E0 =	Without
EP =	Push
EG =	Push and twist

\* Omit if not required. For example, to order the product without coil, omit the coil voltage and connection options: eg. H3626A3P-S2-E0.

To inhibit the relief valve, replace the related options with TL: eg. H3626A3P-TL-E0-OC1.

In the cavity it will be mounted a long plug.

Valve	Cavity	Long plug code
Bosch Rexroth solenoid valve VEI-16-08A-NA OD.15.06.18-Y-000000	CA-08A-2N	<b>0489A2005600000</b>
Pressure relief valve VMD1.040	CA-10A-2N	<b>0489A2008500000</b>

N°	Description	Q.ty
1	Bosch Rexroth coil <b>D36</b> - CLASS H DIN 43650 ISO 4400 **	1
2	Bosch Rexroth solenoid valve <b>VEI-16-08A-NA OD.15.06.18-Y-000000</b> depicted without manual override **	1
3	Connector DIN 43650 ISO 4400	1
4	Foro M8x15 thread for mounting	8
5	Ø 5,5 through hole with counterbore for mounting	2
6	Bosch Rexroth relief valve <b>VMD1.040</b> **	1

\*\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

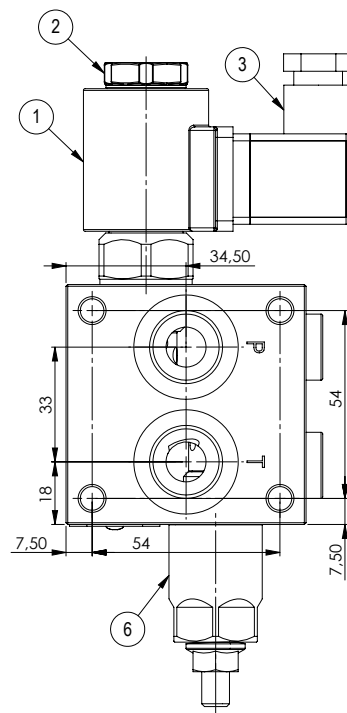
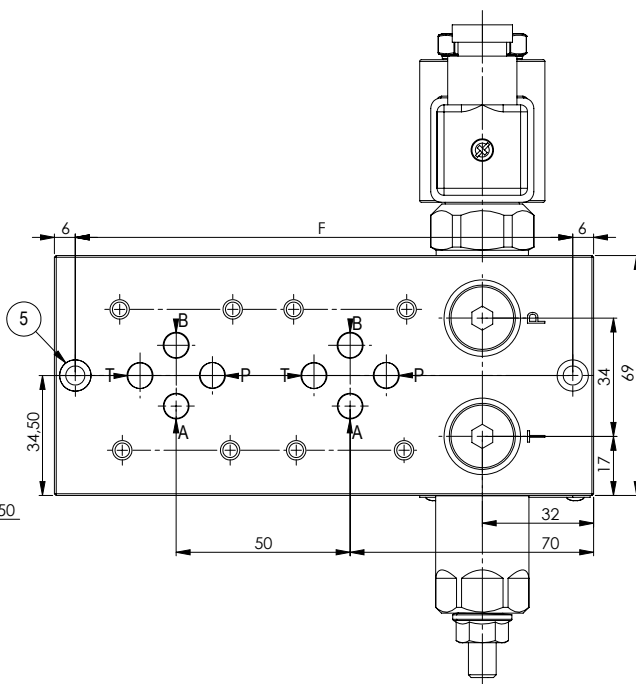
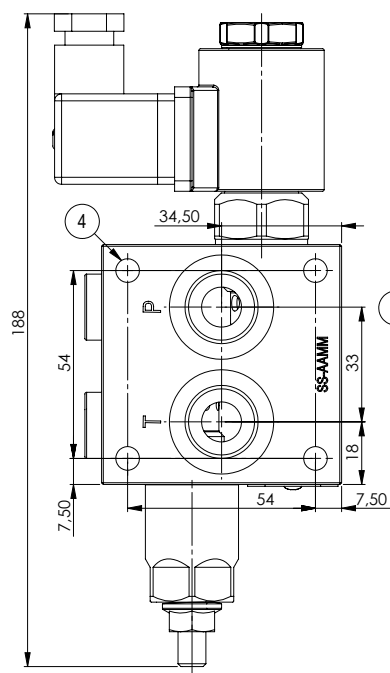
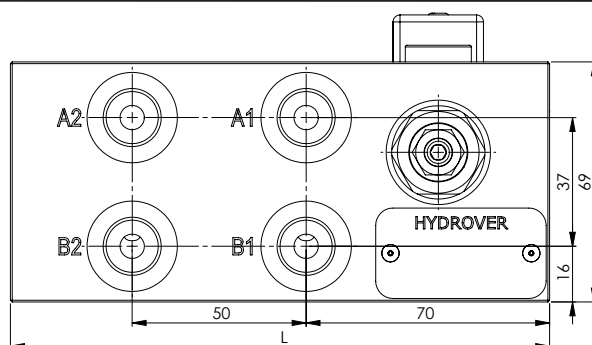
Cetop 3 subplate from 2 to 7 stations / bypass and relief valves  
 crossing P-T ports 1/2" G / side A-B ports 3/8" G / 60 lpm

**H3615**

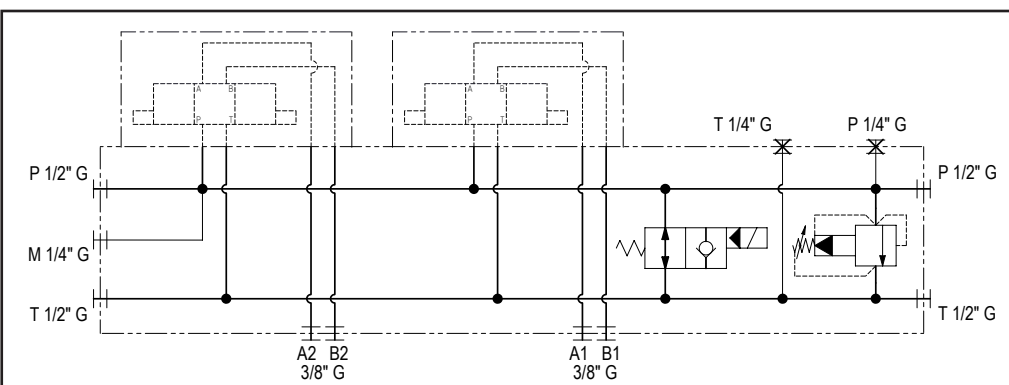
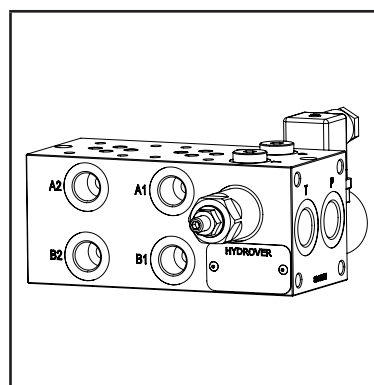
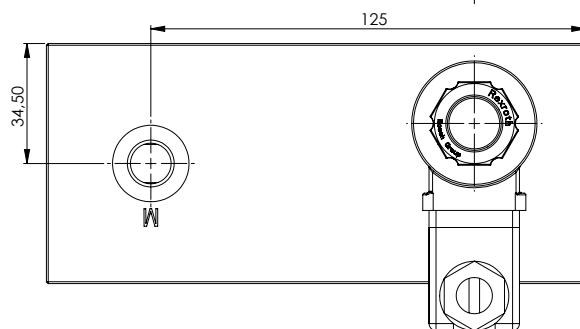
Dimensions in mm

**Technical data**

Max. pressure	250 bar
Max. flow	60 lpm *
Manifold material	Aluminium
M / P / T ports	1/4" G
A / B ports	3/8" G
P / T ports	1/2" G



Stat.	F	L	Weight
2	143	155	1,8 Kg
3	193	205	2,4 Kg
4	243	255	3,0 Kg
5	293	305	3,6 Kg
6	343	355	4,3 Kg
7	393	405	4,9 Kg



## Ordering code

H	3	6	1	5	A	_	_	-	_	_	-	_	_	-	_	_	_
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**Hydrover product****Product series**

36 series - Cetop 3 subplates

**Product ID****Manifold material**

Aluminium

**Number of Cetop 3 stations**

2 stations	= 2P
3 stations	= 3P
4 stations	= 4P
5 stations	= 5P
6 stations	= 6P
7 stations	= 7P

**Relief valve adjustment type \***

Screw	= S
Knob	= K

**Relief valve adjustment pressure range\***

35-140 bar	= 1
70-280 bar	= 2
140-420 bar	= 3
35-350 bar (adj. knob)	= 3

**Solenoid valve coil connection \***

1 =	DIN 43650
	ISO 4400

**Solenoid valve coil voltage \***

OB =	12V DC
OC =	24V DC
OD =	48V DC
OU =	110V RAC
AH =	230V RAC

**Solenoid valve manual override \***

E0 =	Without
EP =	Push
EG =	Push and twist

\* Omit if not required. For example, to order the product without coil, omit the coil voltage and connection options: eg. H3626A3P-S2-E0.

To inhibit the relief valve, replace the related options with TL: eg. H3626A3P-TL-E0-OC1.

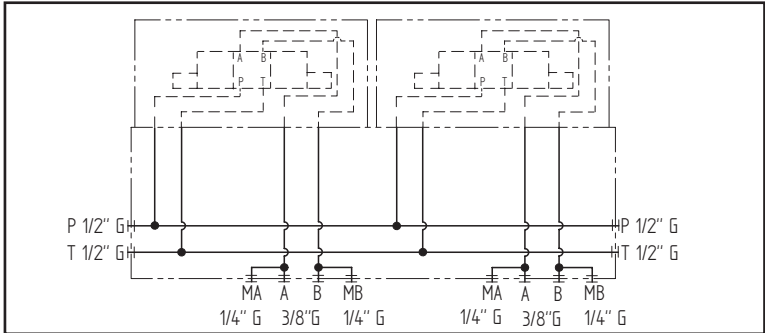
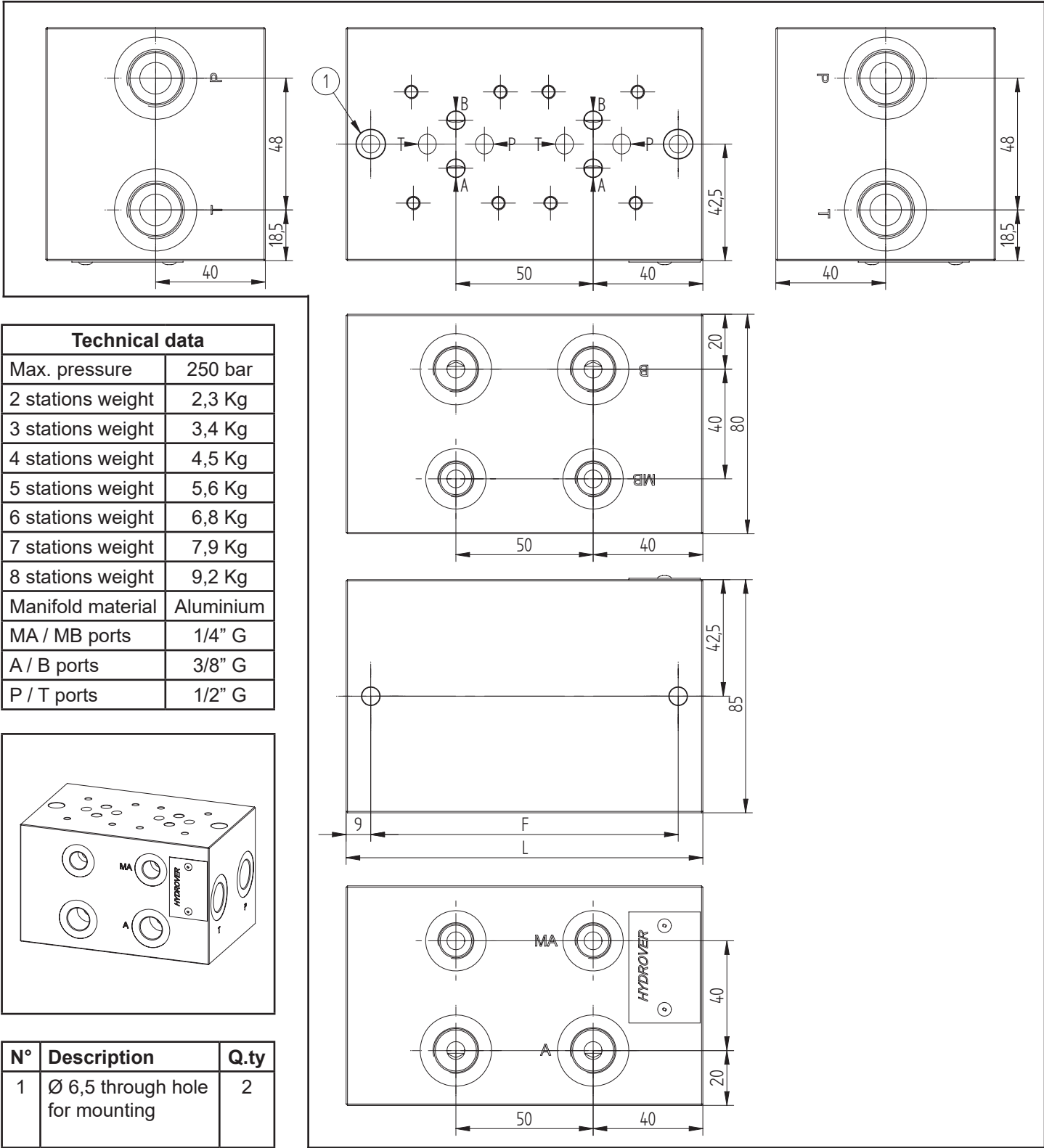
In the cavity it will be mounted a long plug.

Valve	Cavity	Long plug code
Bosch Rexroth solenoid valve VEI-16-10A-NA OD.15.06.36-Y-000000	CA-10A-2N	<b>0489A2008500000</b>
Pressure relief valve VSPN-10A	CA-10A-2N	<b>0489A2008500000</b>

N°	Description	Q.ty
1	Bosch Rexroth coil <b>D36</b> - CLASS H DIN 43650 ISO 4400 *	1
2	Bosch Rexroth solenoid valve <b>VEI-16-10A-NA OD.15.06.36-Y-000000</b> depicted without manual override *	1
3	Connector DIN 43650 ISO 4400	1
4	M8x15 thread for mounting	8
5	Ø 5,5 through hole with counterbore for mounting	2
6	Bosch Rexroth relief valve <b>VSPN-10A</b> * depicted with screw adjustment	1

Cetop 3 subplate from 2 to 8 stations / crossing P-T ports 1/2" G  
side A-B ports 3/8" G / side MA-MB ports 1/4" G

H3610



H3610

Ordering code

H	3	6	1	0	_	_	_
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Hydrover product

Product series

36 series - Cetop 3 subplates

Product ID

Manifold material

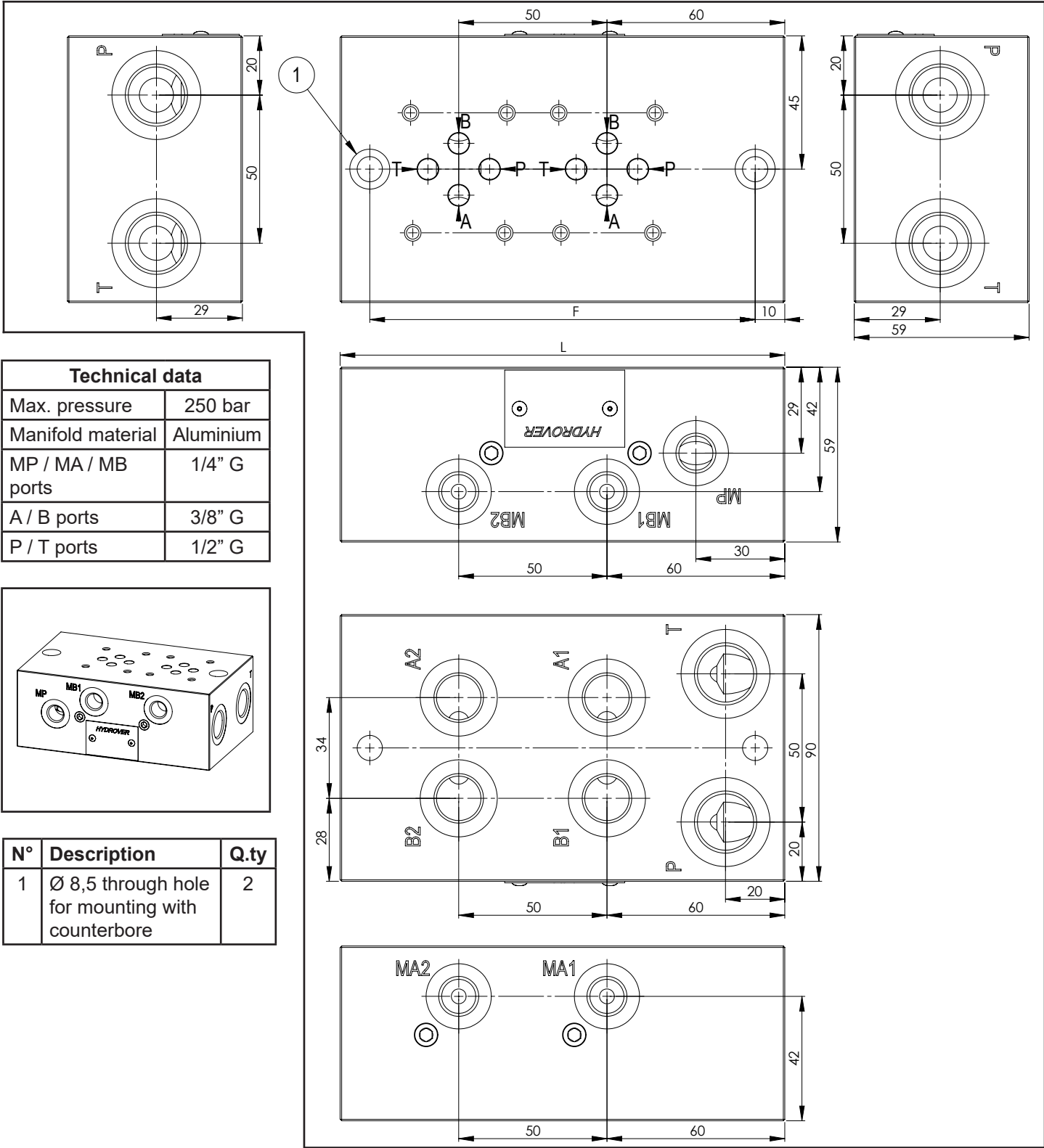
Aluminium

Number of Cetop 3 stations

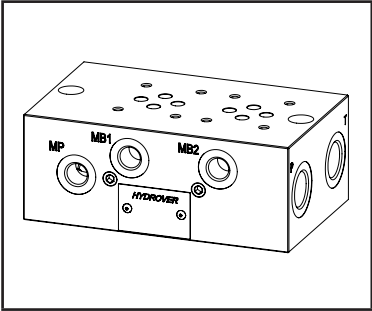
2P =	2 stations
3P =	3 stations
4P =	4 stations
5P =	5 stations
6P =	6 stations
7P =	7 stations
8P =	8 stations

Cetop 3 subplate from 2 to 8 stations / crossing P-T ports 1/2" G  
back A-B ports 3/8" G / side MA-MB ports 1/4" G

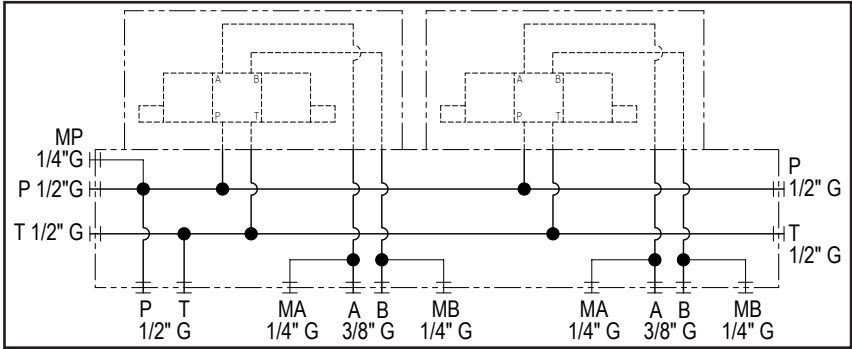
H3613



Technical data	
Max. pressure	250 bar
Manifold material	Aluminium
MP / MA / MB ports	1/4" G
A / B ports	3/8" G
P / T ports	1/2" G



N°	Description	Q.ty
1	Ø 8,5 through hole for mounting with counterbore	2



Stat.	2	3	4	5	6	7	8
F	130	180	230	280	330	380	430
L	150	200	250	300	350	400	450
W. Kg	2	2,7	3,4	4,1	4,8	5,5	6,2

Ordering code

H	3	6	1	3	A	_	_
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Hydrover product

Product series  
36 series - Cetop 3 subplates

Product ID

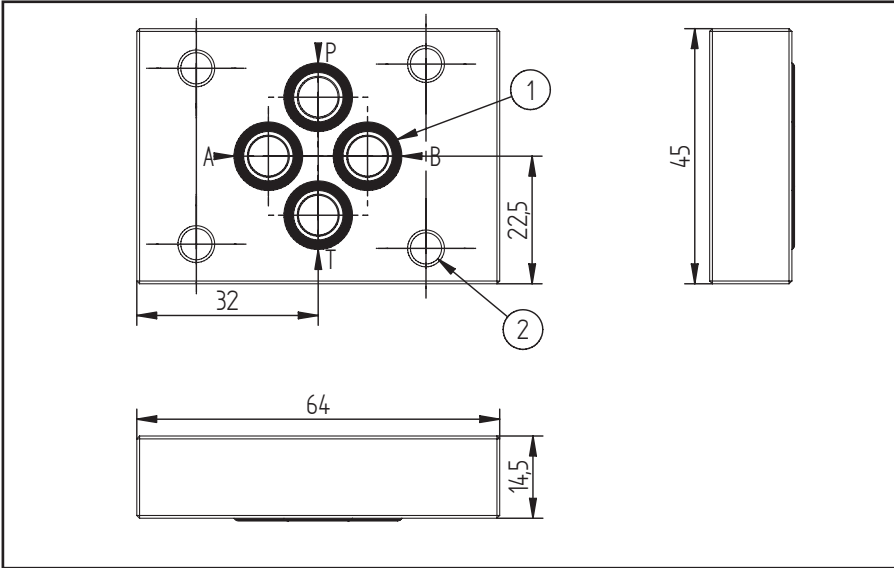
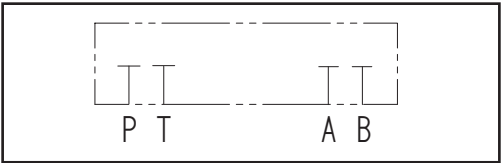
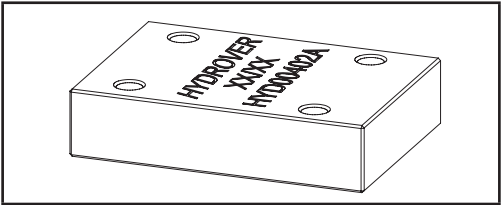
Manifold material  
Aluminium

Number of Cetop 3 stations

2P =	2 stations
3P =	3 stations
4P =	4 stations
5P =	5 stations
6P =	6 stations
7P =	7 stations
8P =	8 stations

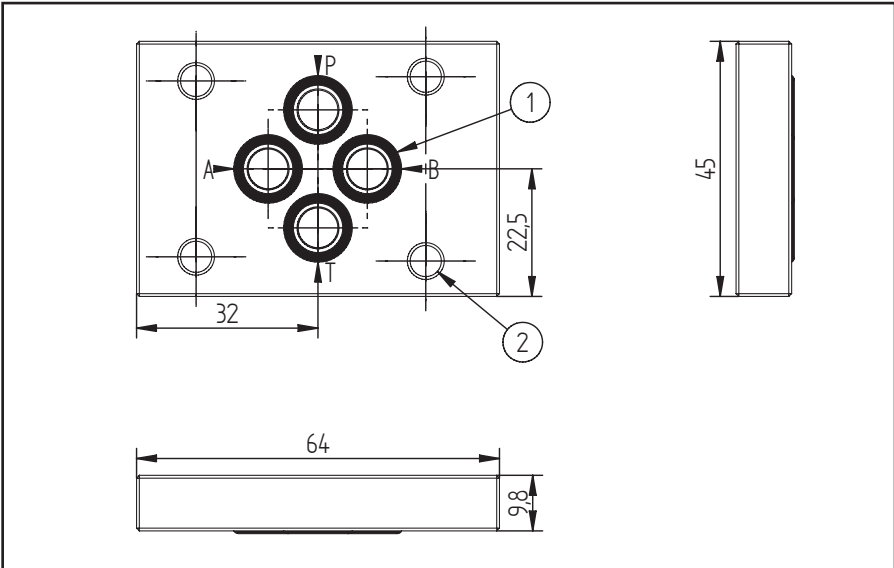
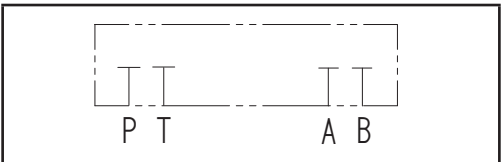
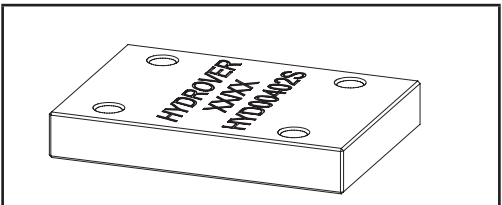
Aluminium version

Technical data	
Max. pressure	250 bar
Weight	0,1 Kg



Steel version

Technical data	
Max. pressure	350 bar
Weight	0,2 Kg



N°	Description	Q.ty
1	OR 108 i. Ø 8,73 cross section 1,78	4
2	Ø 5,5 through hole for mounting	4



H3603

Ordering code

H	3	6	0	3	-
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Hydrover product

Product series  
36 series - Cetop 3 subplates

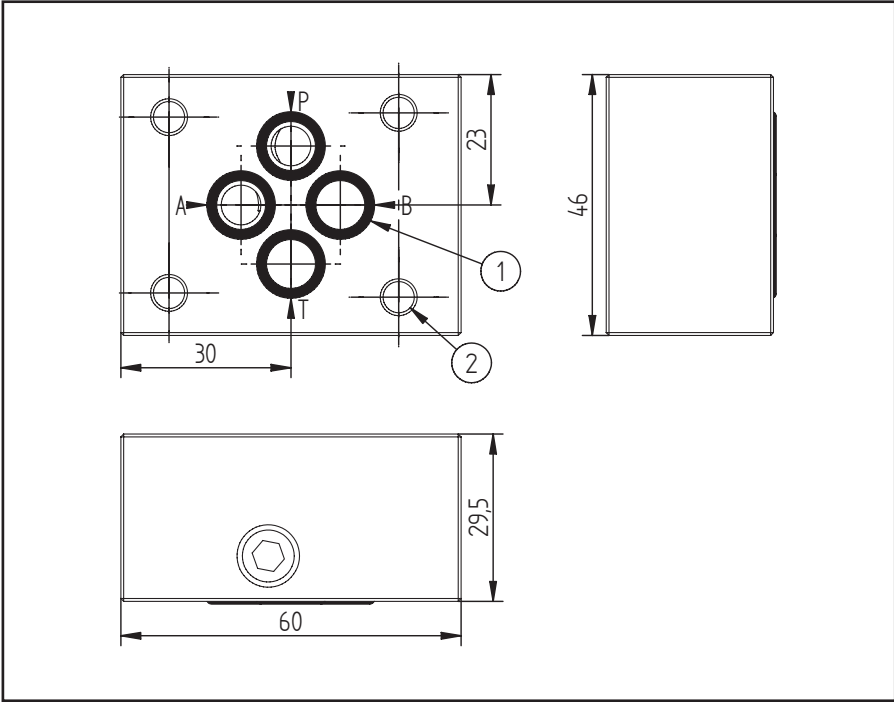
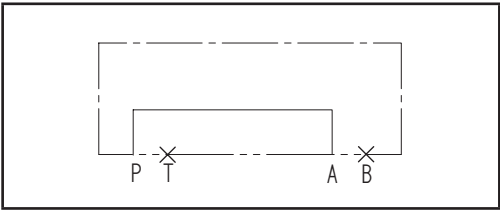
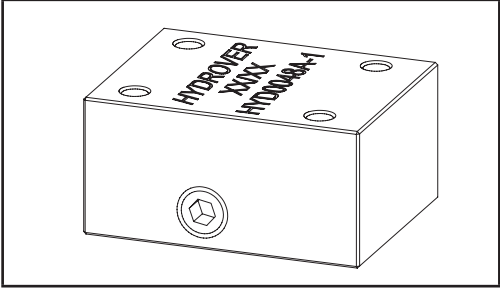
Product ID

Manifold material  
Aluminium  
Steel

A=  
S=

Cetop 3 station blanking plate / P in A H3604

Technical data	
Max. pressure	250 bar
Weight	0,2 Kg



N°	Description	Q.ty
1	OR 108 i. Ø 8,73 cross section 1,78	4
2	Ø 5,5 through hole for mounting	4

Ordering code

H	3	6	0	4	A
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Hydrover product

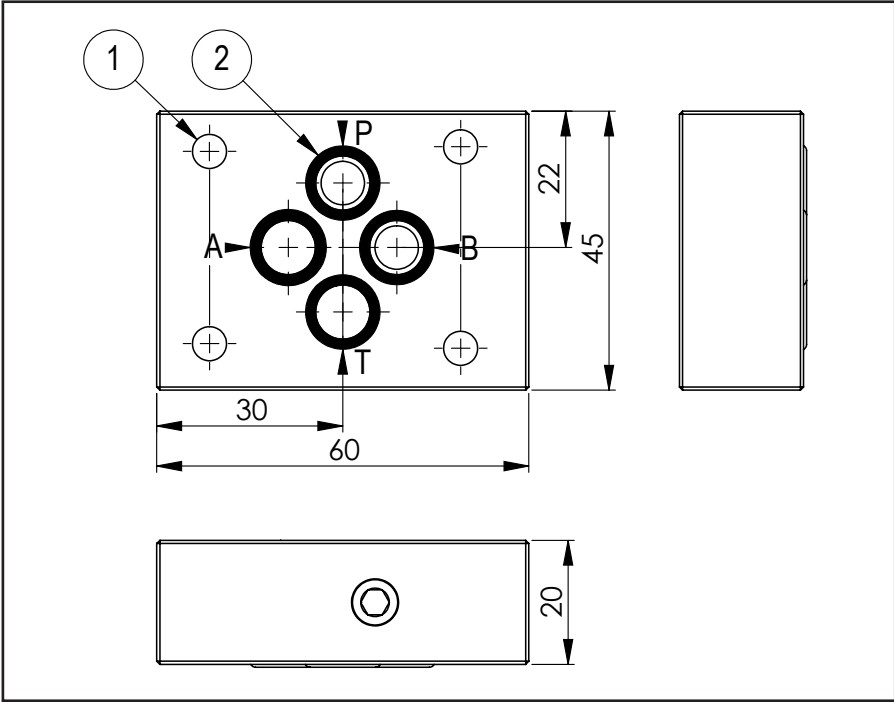
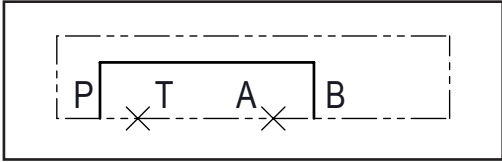
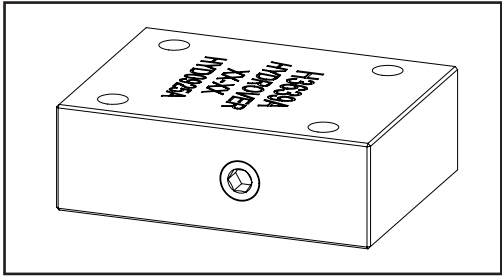
Manifold material  
Aluminium

Product series  
36 series - Cetop 3 subplates

Product ID

Cetop 3 station blanking plate / P in B H3639

Technical data	
Max. pressure	250 bar
Weight	0,15 Kg



N°	Description	Q.ty
1	Ø 5,5 through hole for mounting	4
2	OR 108 i. Ø 8,73 cross section 1,78	4

Ordering code

H	3	6	3	9	A
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Hydrover product

Manifold material  
Aluminium

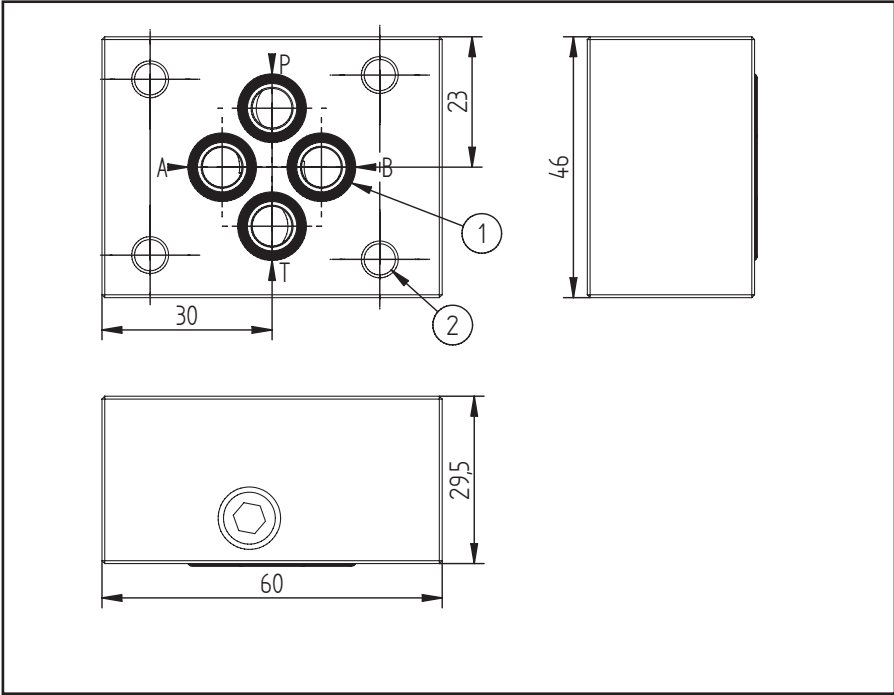
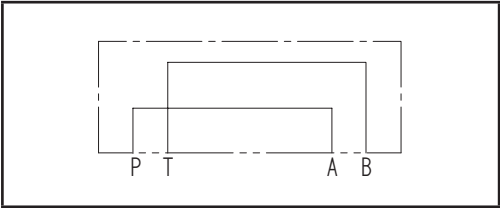
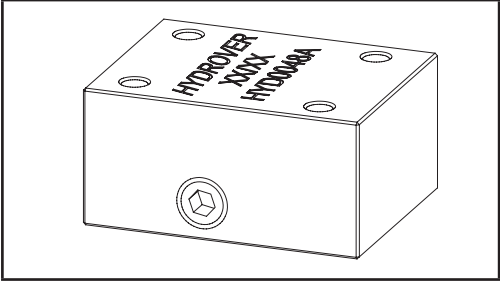
Product series  
36 series - Cetop 3 subplates

Product ID

Cetop 3 station blanking plate / P in A / B in T

H3605

Technical data	
Max. pressure	250 bar
Weight	0,2 Kg



Dimensions in mm

N°	Description	Q.ty
1	OR 108 i. Ø 8,73 cross section 1,78	4
2	Ø 5,5 through hole for mounting	4

Ordering code

H	3	6	0	5	A
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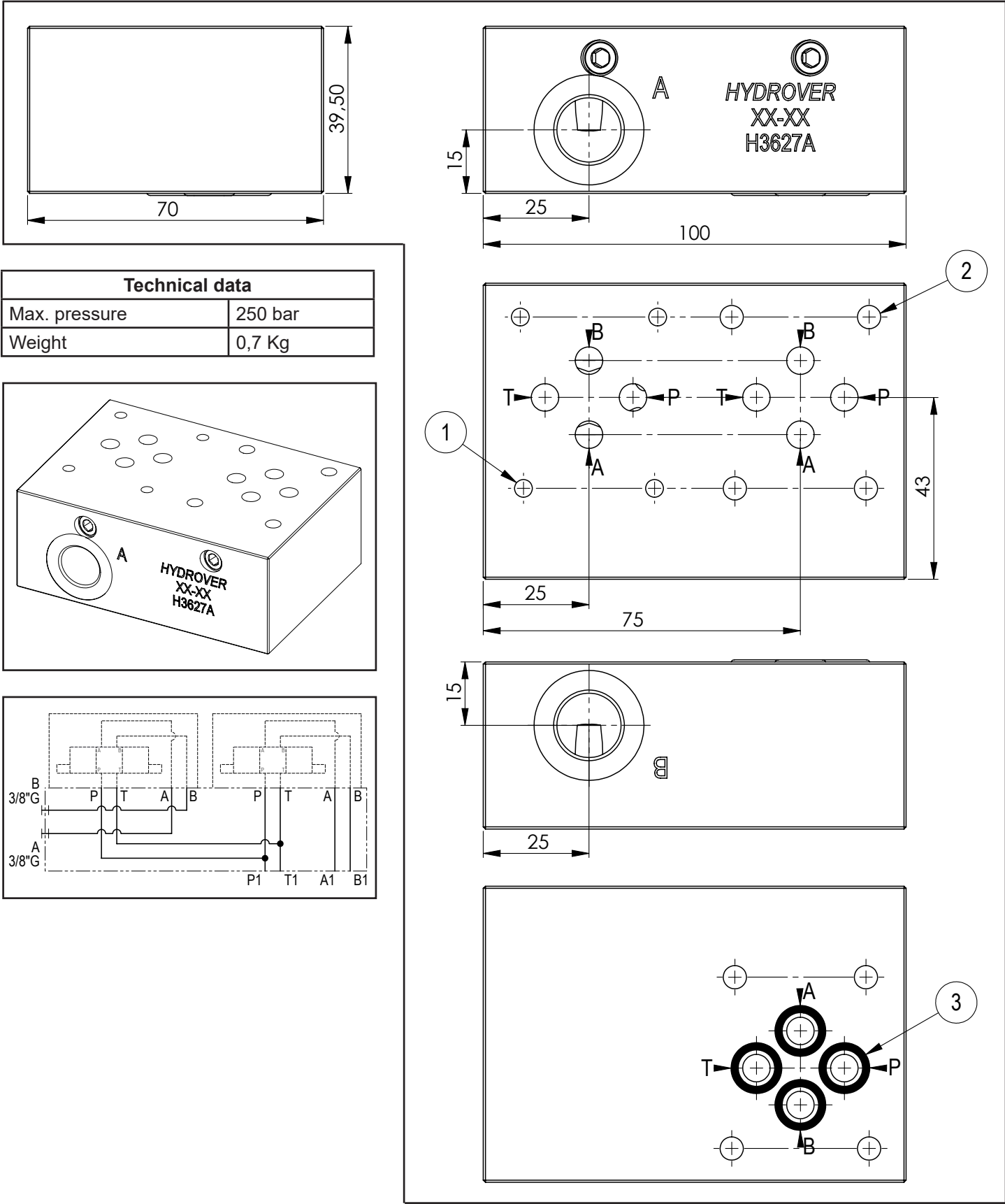
Hydrover product

Manifold material  
Aluminium

Product series  
36 series - Cetop 3 subplates

Product ID

Plate for adding a Cetop 3 station / side A-B ports 3/8" G H3627



N°	Description	Q.ty
1	M5x10 for mounting	4
2	Ø 5,5 through hole for mounting	4
3	OR 108 i. Ø 8,73 cross section 1,78	4



Ordering code

H	3	6	2	7	A
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Hydrover product

Manifold material  
Aluminium

Product series  
36 series - Cetop 3 subplates

Product ID

Example assembly

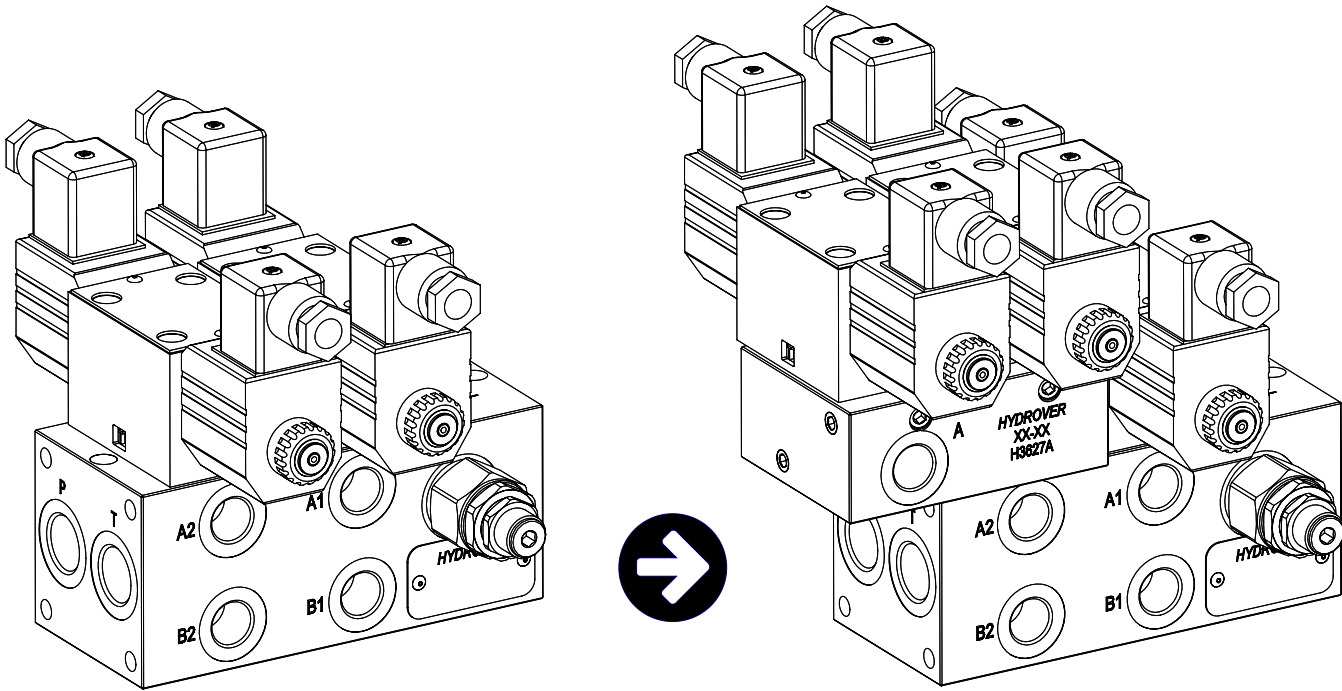
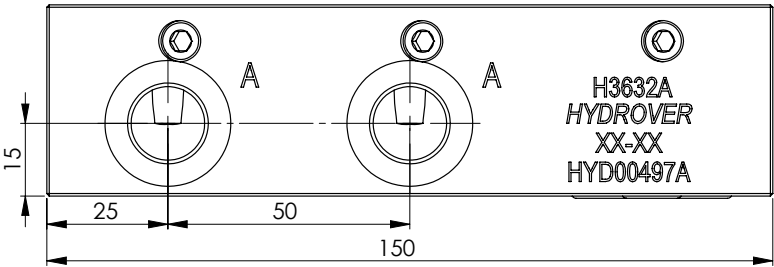
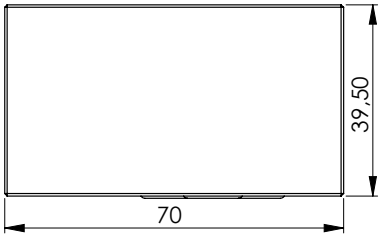


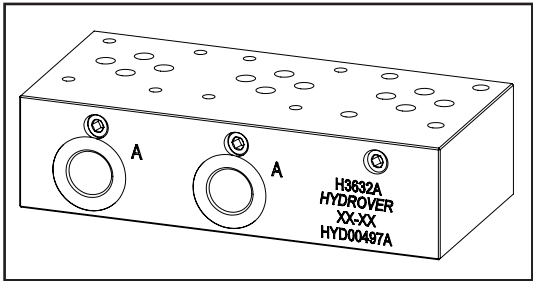
Plate for adding two Cetop 3 stations / side A-B ports 3/8" G **H3632**



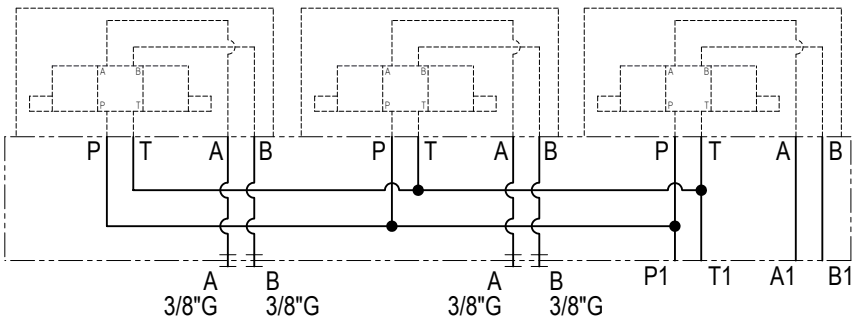
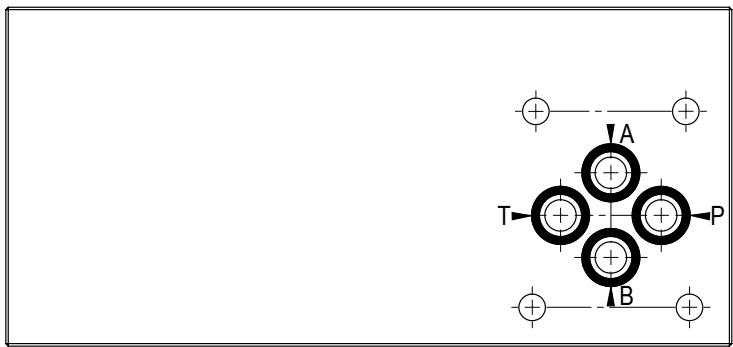
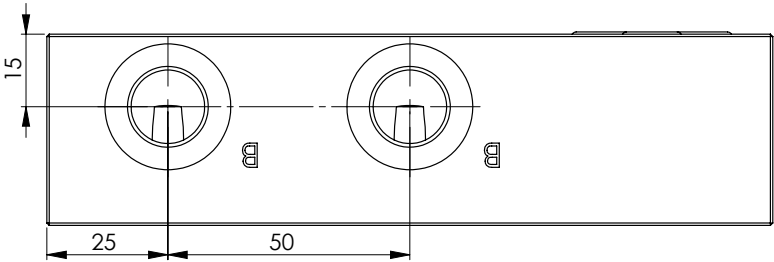
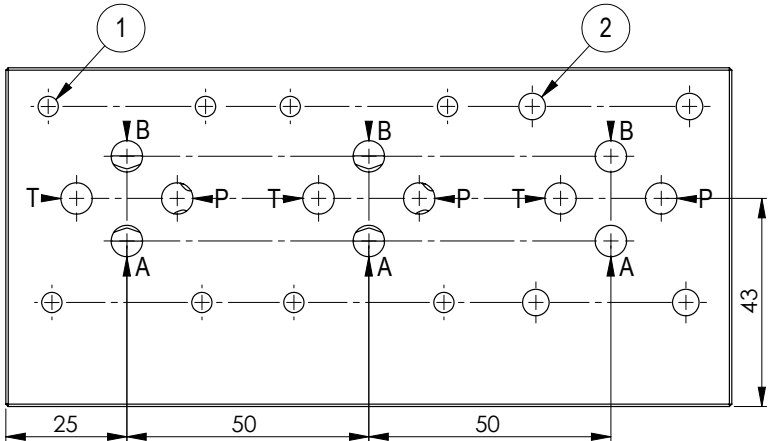
Dimensions in mm

Technical data

Max. pressure	250 bar
Weight	1,05 Kg



N°	Description	Q.ty
1	M5x10 for mounting	8
2	Ø 5,5 through hole for mounting	4
3	OR 108 i. Ø 8,73 cross section 1,78	4



Ordering code

H	3	6	3	2	A
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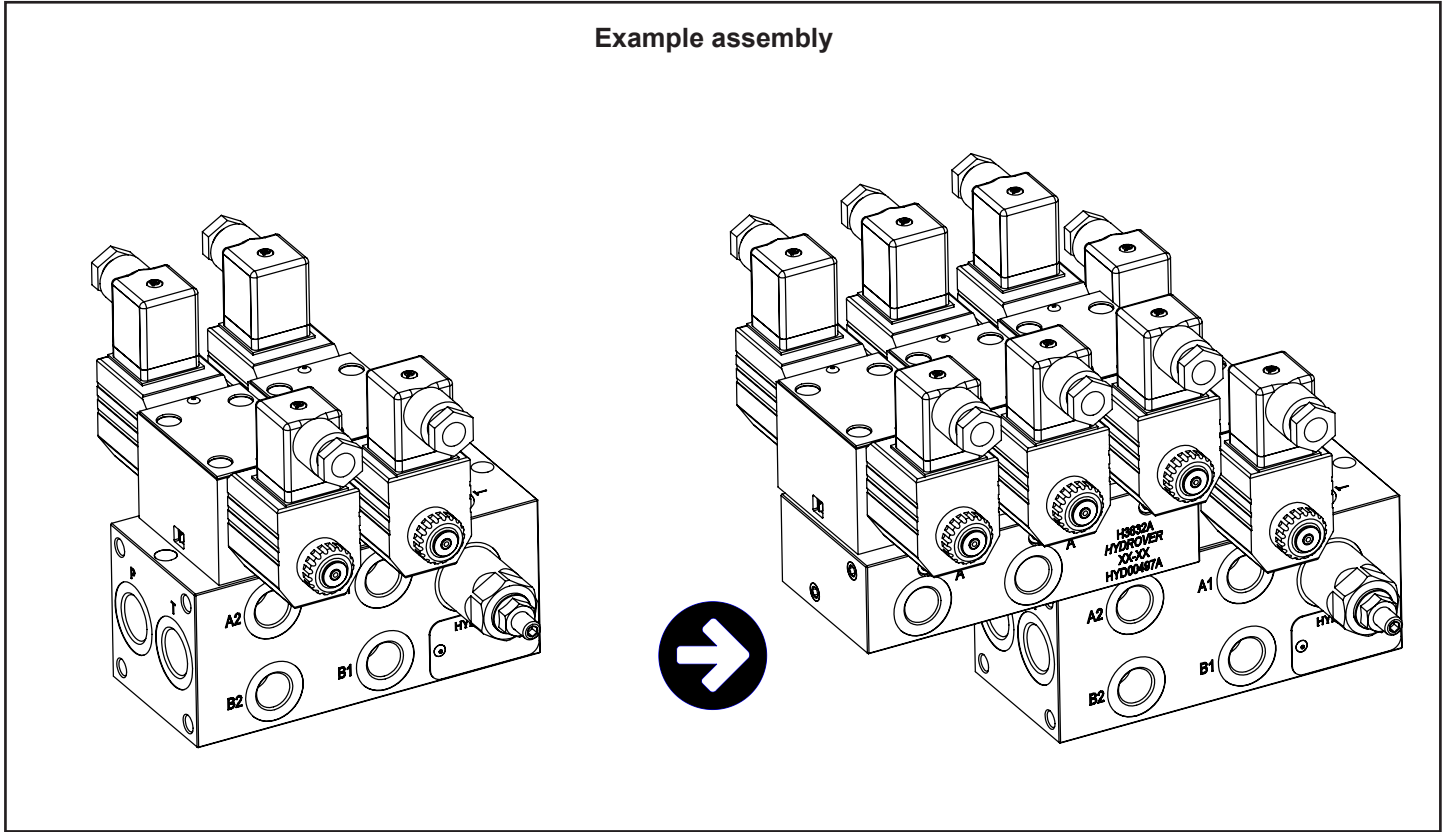
Hydrover product

Manifold material  
Aluminium

Product series  
36 series - Cetop 3 subplates

Product ID

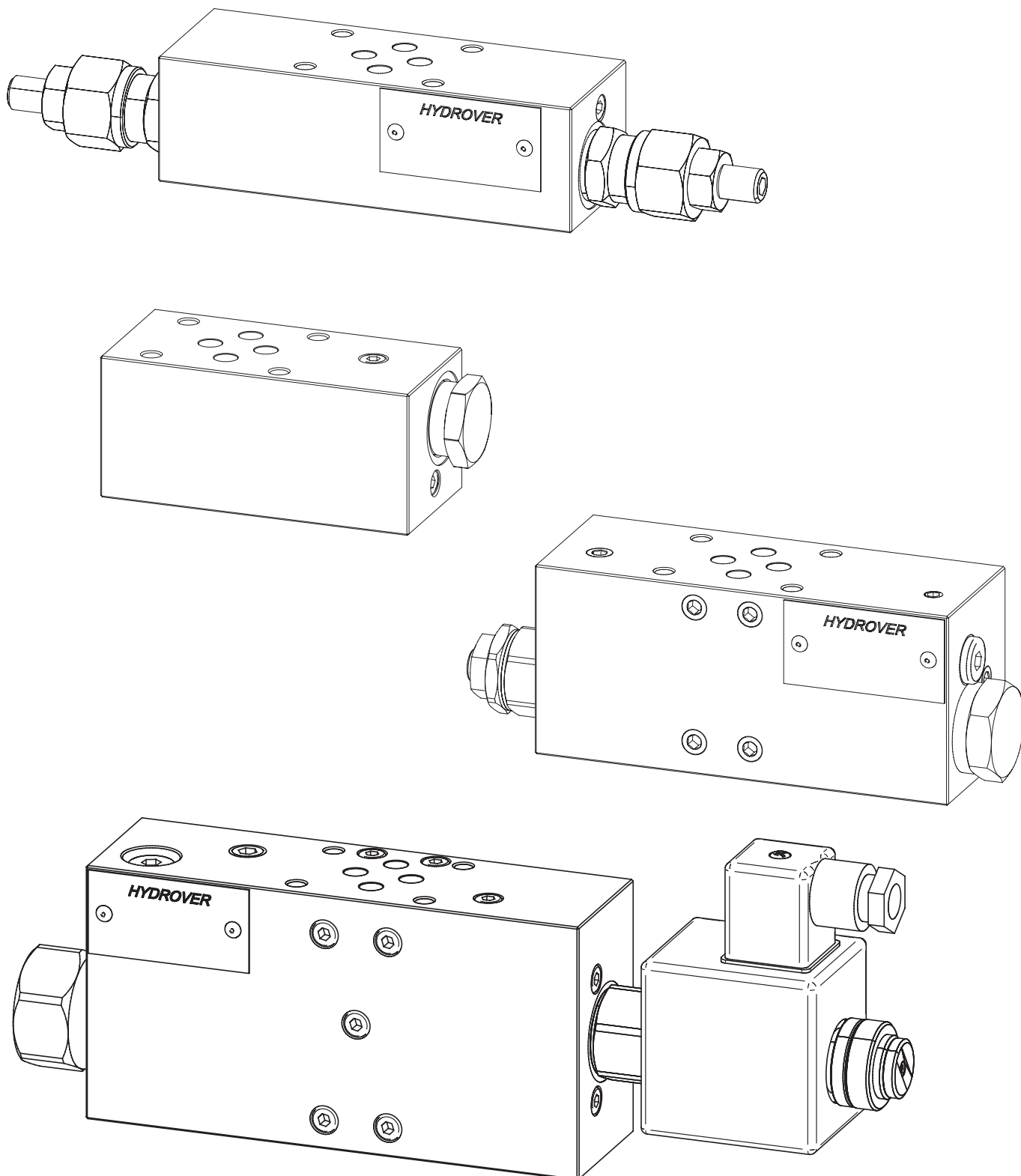
Example assembly





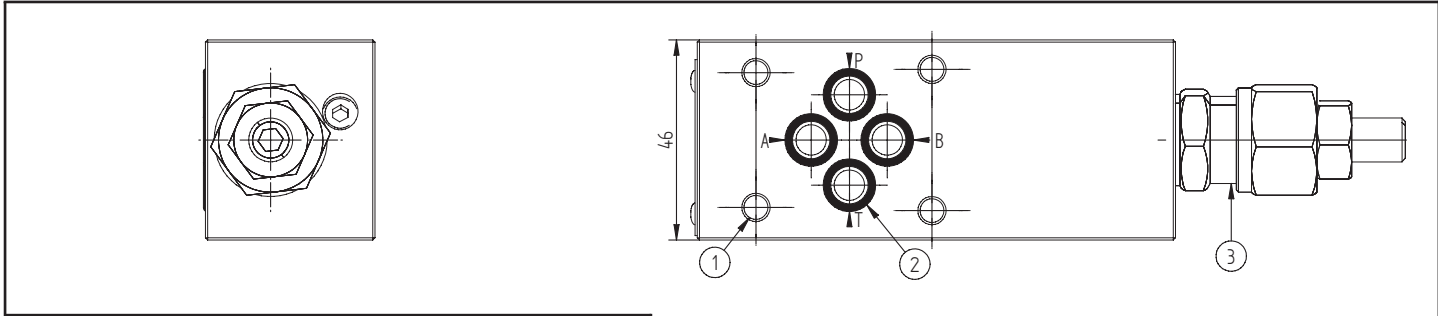
# 39 SERIES

## 39 series - Cetop 3 modular valves



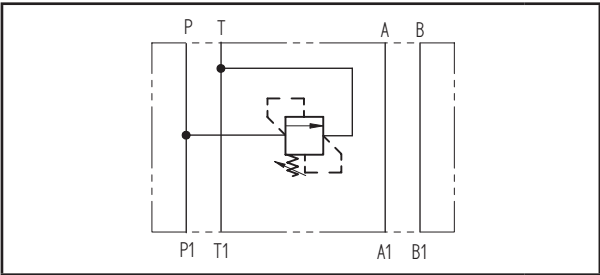
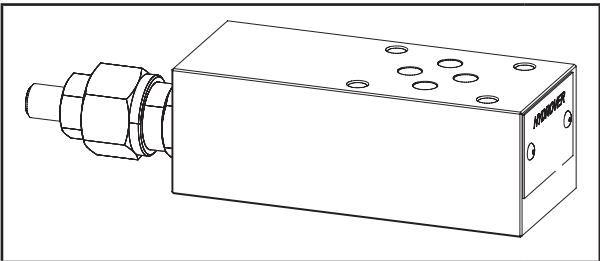
Cetop 3 modular relief valve on P / 30 lpm

H3901



Dimensions in mm

Technical data	
Max. pressure	250 bar
Max. flow	30 lpm *
Weight	0,7 Kg
Manifold material	Aluminium



N°	Description	Q.ty
1	Ø 5,5 through hole for mounting	4
2	OR 108 i. Ø 8,73 cross section 1,78	4
3	Bosch Rexroth relief valve <b>VS-30</b> * depicted with screw adjustment	1

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

H3901

Ordering code

H	3	9	0	1	A	-	-	-
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Hydrover product

Product series  
39 series - Cetop 3 modular valves

Product ID

Relief valve  
adjustment pressure range \*

0 =	5-50 bar
1 =	30-100 bar
2 =	50-210 bar
3 =	100-350 bar

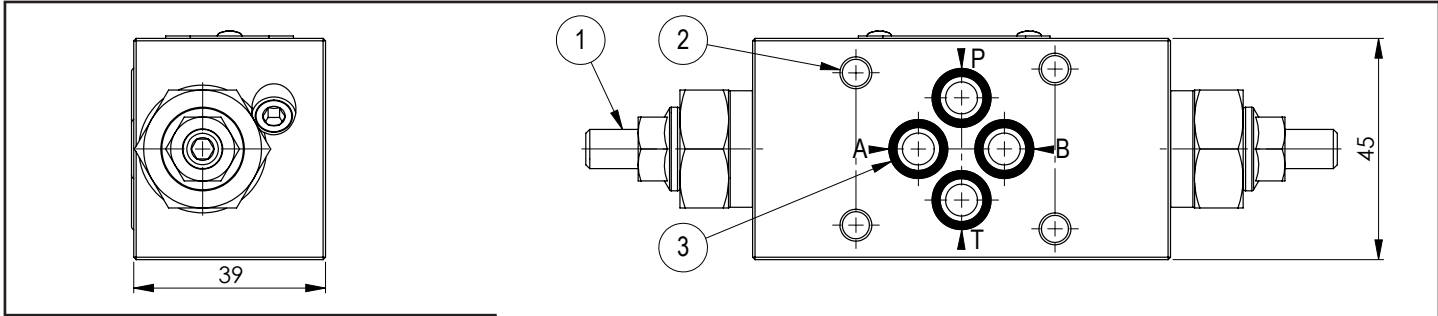
Relief valve  
adjustment type \*

S =	Screw
K =	Knob

Manifold material  
Aluminium

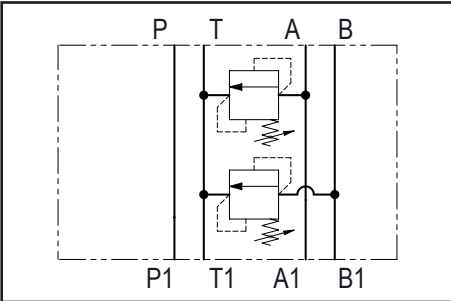
\* Omit if not required. To order the product without the pressure relief cartridge valve, omit the pressure range and the adjustment type options: H3901A.  
The manifold will still be provided with the corresponding cavity.

Cetop 3 modular relief valve on A and B / 20 lpm **H3946**



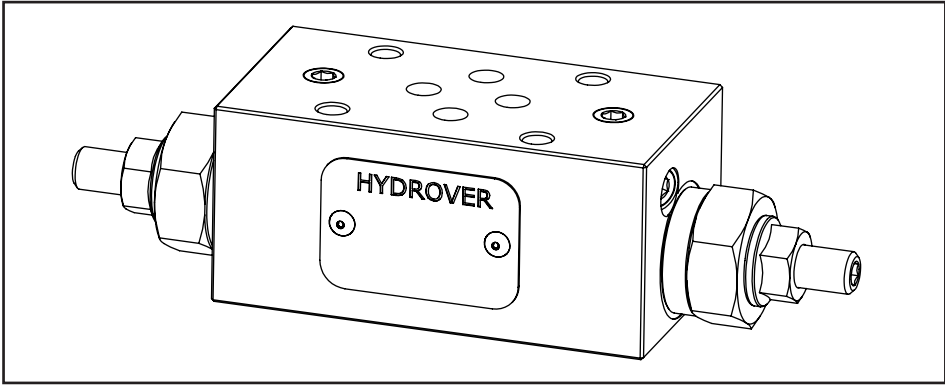
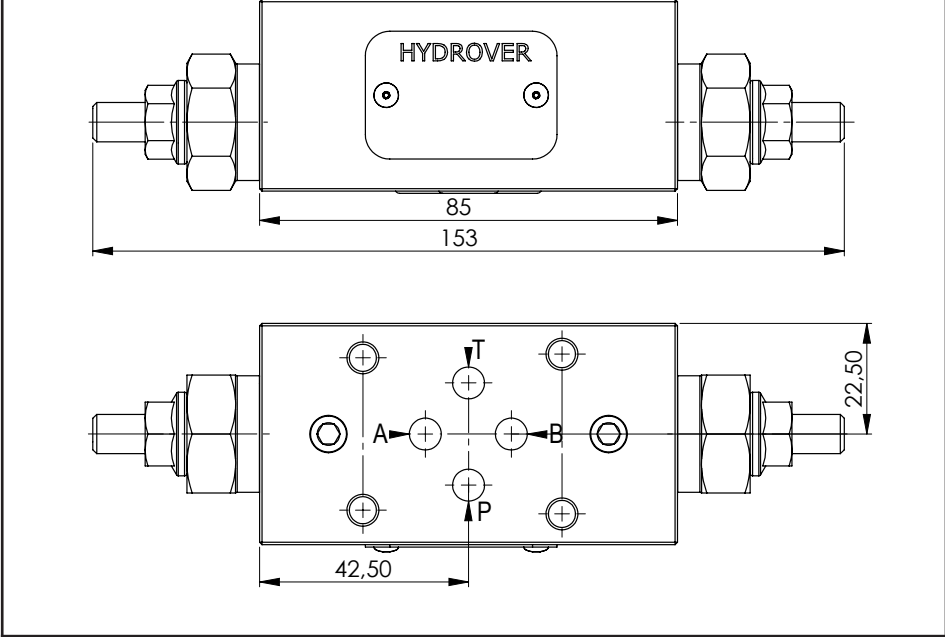
Dimensions in mm

Technical data	
Max. pressure	250 bar
Max. flow	20 lpm *
Weight	0,55 Kg
Manifold material	Aluminium



N°	Description	Q.ty
1	Bosch Rexroth relief valve <b>VSBN-08A</b> depicted depicted with screw adjustment *	2
2	Ø 5,5 through hole for mounting	4
3	OR 108 i. Ø 8,73 cross section 1,78	4

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue





Ordering code

H	3	9	4	6	A	-	-	-	-	-
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Hydrover product

Product series  
39 series - Cetop 3 modular valves

Product ID

Manifold material  
Aluminium

Relief valve  
adjustment pressure range  
on B \*

- 0 = 10-70 bar
- 1 = 35-140 bar
- 2 = 105-210 bar
- 3 = 175-350 bar
- 3 = 35-350 bar (knob reg.)

Relief valve  
adjustment type on B \*

- S = Screw
- K = Knob

Relief valve  
adjustment pressure range on A \*

- 0 = 10-70 bar
- 1 = 35-140 bar
- 2 = 105-210 bar
- 3 = 175-350 bar
- 3 = 35-350 bar (knob reg.)

Relief valve  
adjustment type on A \*

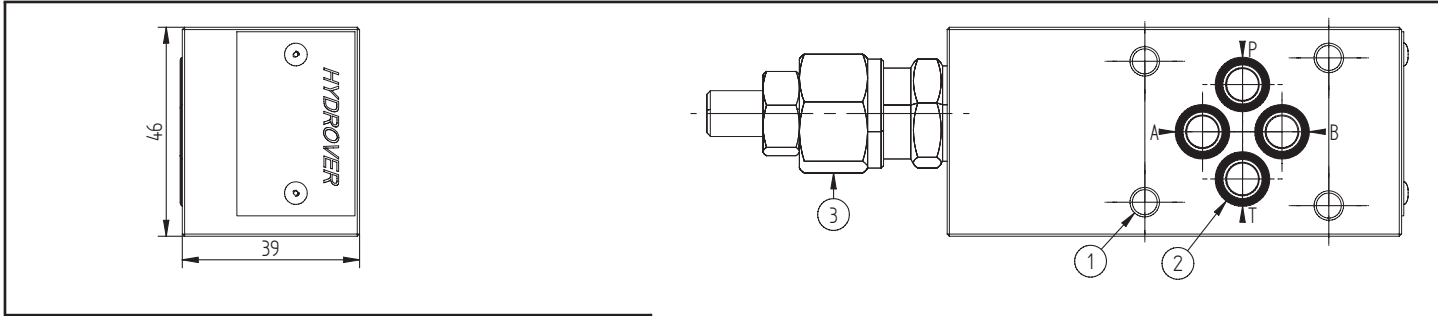
- S = Screw
- K = Knob

\* Omit if not required. To order the product without the pressure relief cartridge valves, omit the pressure range and the adjustment type options for A and B: H3946A.  
The manifold will still be provided with the corresponding cavities.  
To inhibit a function, replace the related valve options with TL: eg H3946A-S2-TL.  
In the cavity it will be mounted a long plug.

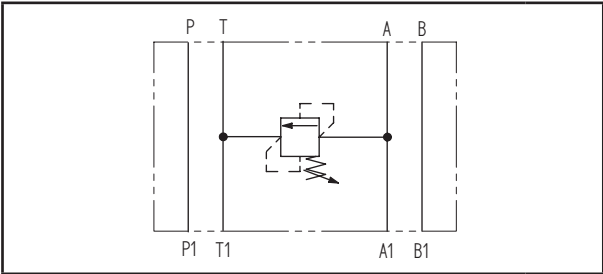
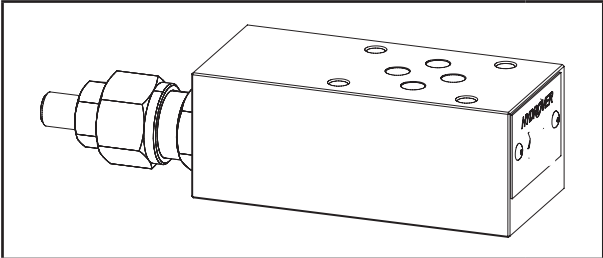
Valve	Cavity	Long plug code
Pressure relief valve VSBN-08A	CA-08A-2N	0489A2005600000

Cetop 3 modular relief valve on A / 30 lpm

H3906



Technical data	
Max. pressure	250 bar
Max. flow	30 lpm *
Weight	0,6 Kg
Manifold material	Aluminium



N°	Description	Q.ty
1	Ø 5,5 through hole for mounting	4
2	OR 108 i. Ø 8,73 cross section 1,78	4
3	Bosch Rexroth relief valve <b>VS-30</b> * depicted with screw adjustment	1

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

Ordering code

H	3	9	0	6	A	-	-	-
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Hydrover product

Product series

39 series - Cetop 3 modular valves

Product ID

Relief valve  
adjustment pressure range \*

0 =	5-50 bar
1 =	30-100 bar
2 =	50-210 bar
3 =	100-350 bar

Relief valve  
adjustment type \*

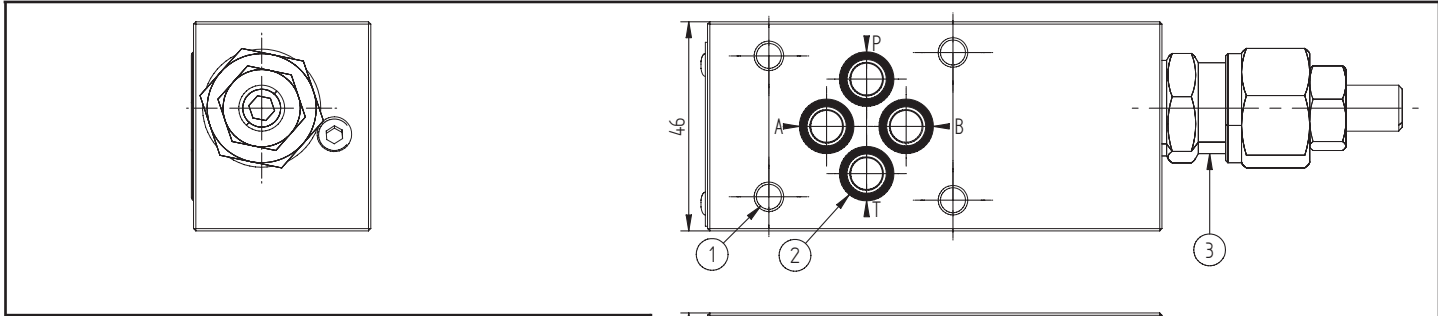
S =	Screw
K =	Knob

Manifold material  
Aluminium

\* Omit if not required. To order the product without the pressure relief cartridge valve, omit the pressure range and the adjustment type options: H3906A.  
The manifold will still be provided with the corresponding cavity.

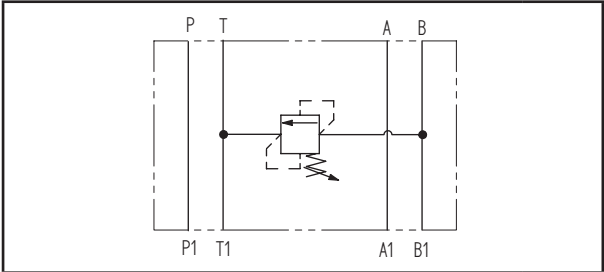
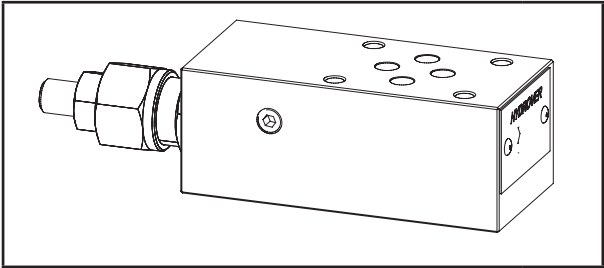
Cetop 3 modular relief valve on B / 30 lpm

H3905



Dimensions in mm

Technical data	
Max. pressure	250 bar
Max. flow	30 lpm *
Weight	Aluminium 0,6 Kg Steel 1,4 Kg
Manifold material	Aluminium or steel



N°	Description	Q.ty
1	Ø 5,5 through hole for mounting	4
2	OR 108 i. Ø 8,73 cross section 1,78	4
3	Bosch Rexroth relief valve <b>VS-30</b> * depicted with screw adjustment	1

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

H3905

Ordering code

H	3	9	0	5	-	-	-
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Hydrover product

Product series  
39 series - Cetop 3 modular valves

Product ID

Relief valve  
adjustment pressure range \*

0 =	5-50 bar
1 =	30-100 bar
2 =	50-210 bar
3 =	100-350 bar

Relief valve  
adjustment type \*

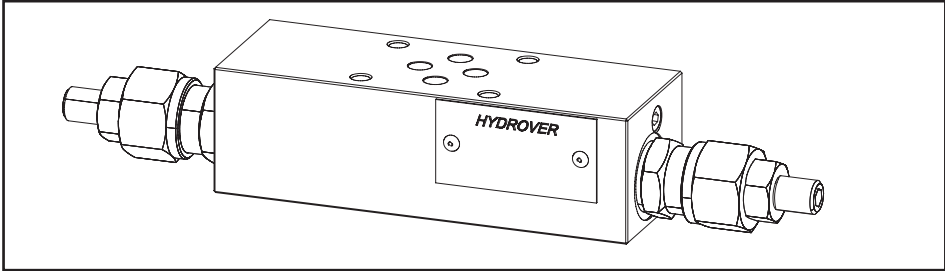
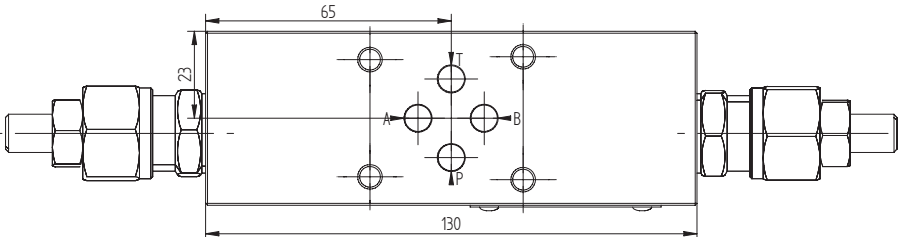
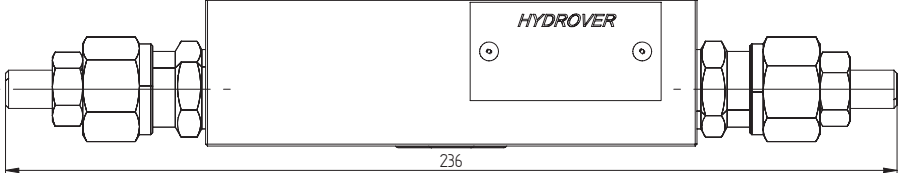
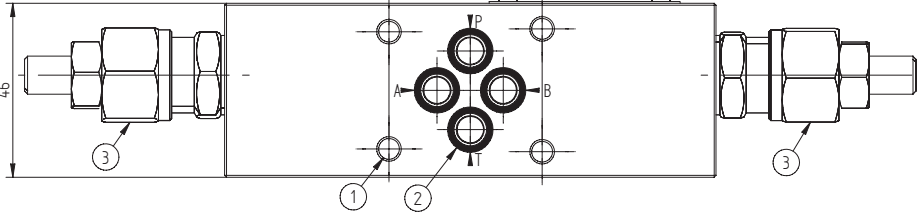
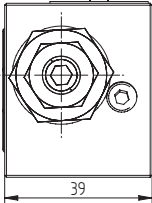
S =	Screw
K =	Knob

Manifold material

A =	Aluminium
S =	Steel

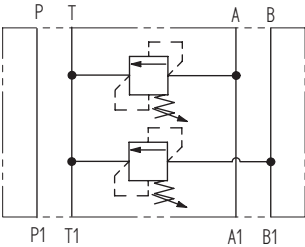
\* Omit if not required. To order the product without the pressure relief cartridge valve, omit the pressure range and the adjustment type options: H3905A.  
The manifold will still be provided with the corresponding cavity.

Cetop 3 modular relief valve on A and B / 30 lpm **H3904**



Dimensions in mm

Technical data	
Max. pressure	250 bar
Max. flow	30 lpm *
Weight	0,9 Kg
Manifold material	Aluminium



N°	Description	Q.ty
1	Ø 5,5 through hole for mounting	4
2	OR 108 i. Ø 8,73 cross section 1,78	4
3	Bosch Rexroth relief valve <b>VS-30</b> * depicted with screw adjustment	2

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

H3904

Ordering code

H	3	9	0	4	A	-	-	-	-	-
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Hydrover product

Product series

39 series - Cetop 3 modular valves

Product ID

Manifold material

Aluminium

Relief valve  
adjustment pressure range  
on B \*

0 =	5-50 bar
1 =	30-100 bar
2 =	50-210 bar
3 =	100-350 bar

Relief valve  
adjustment type on B \*

S =	Screw
K =	Knob

Relief valve  
adjustment pressure range on A \*

0 =	5-50 bar
1 =	30-100 bar
2 =	50-210 bar
3 =	100-350 bar

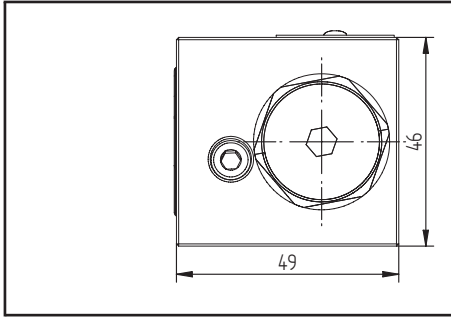
Relief valve  
adjustment type on A \*

S =	Screw
K =	Knob

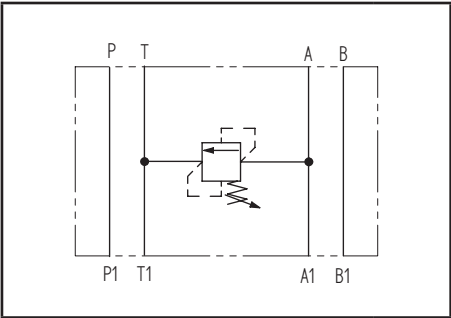
\* Omit if not required. To order the product without the pressure relief cartridge valves, omit the pressure range and the adjustment type options for A and B: H3904A.  
The manifold will still be provided with the corresponding cavities.

Cetop 3 modular relief valve on A / 70 lpm

H3918

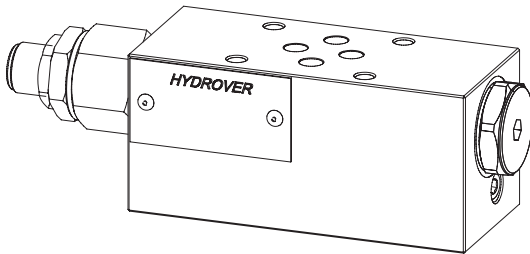
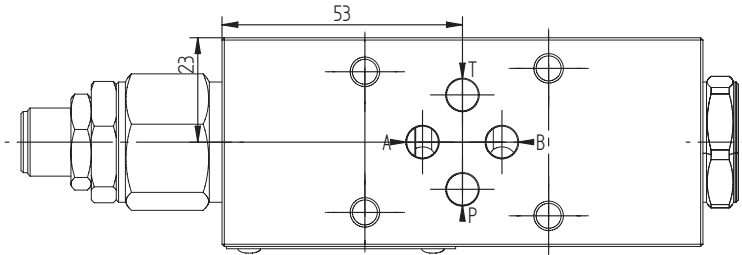
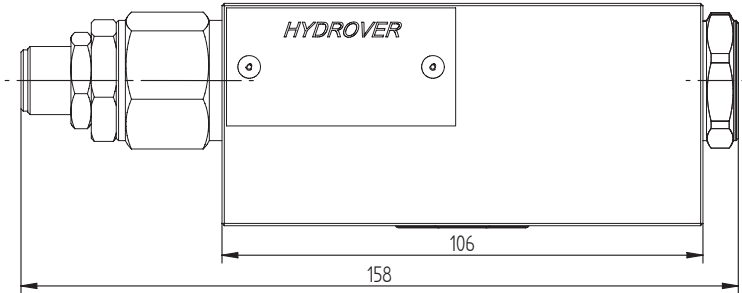
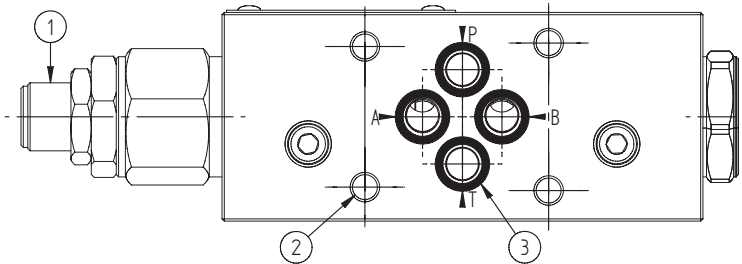


Technical data	
Max. pressure	250 bar
Max. flow	70 lpm *
Weight	0,9 Kg
Manifold material	Aluminium



N°	Description	Q.ty
1	Bosch Rexroth relief valve <b>VMD1.070</b> *	1
2	Ø 5,5 through hole for mounting	4
3	OR 108 i. Ø 8,73 cross section 1,78	4

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue



Dimensions in mm



Ordering code

H	3	9	1	8	A	-	-	-
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Hydrover product

Product series

39 series - Cetop 3 modular valves

Product ID

Relief valve  
adjustment pressure range \*

0 =	10-60 bar
1 =	40-110 bar
2 =	110-220 bar
3 =	220-260 bar

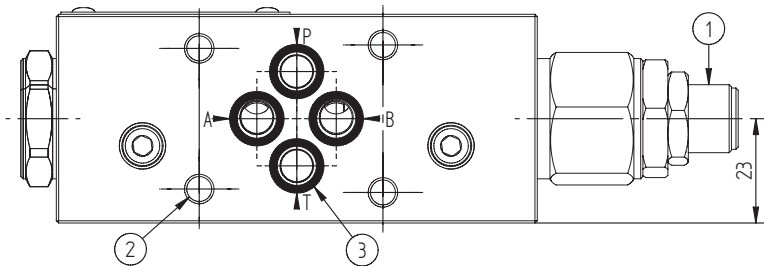
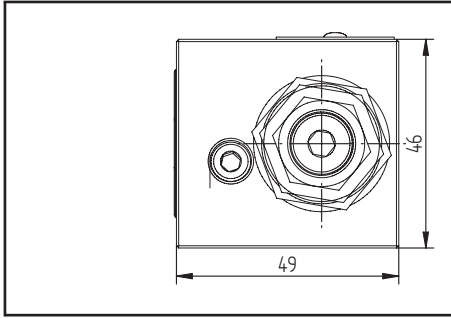
Relief valve  
adjustment type \*

S =	Screw
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Manifold material  
Aluminium

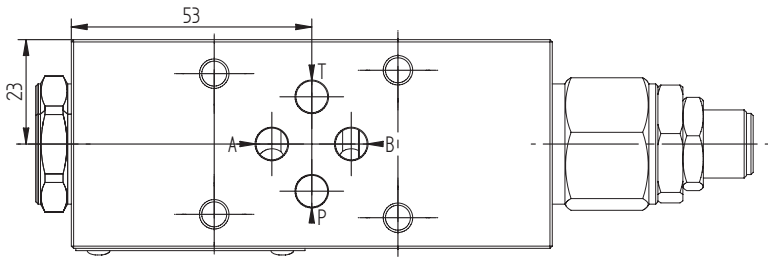
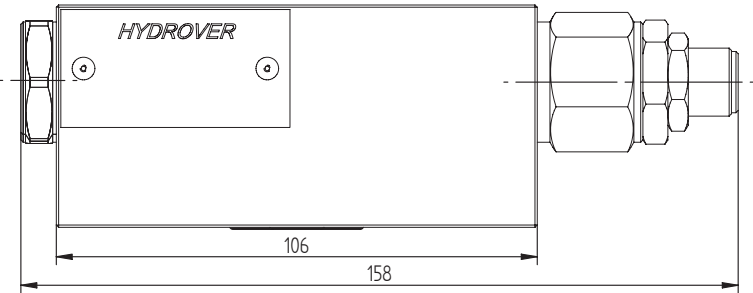
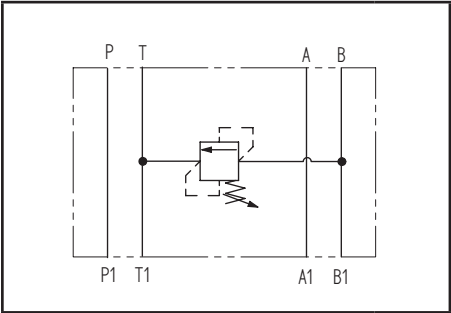
\* Omit if not required. To order the product without the pressure relief cartridge valve, omit the pressure range and the adjustment type options: H3918A.  
The manifold will still be provided with the corresponding cavity.

Cetop 3 modular relief valve on B / 70 lpm **H3919**



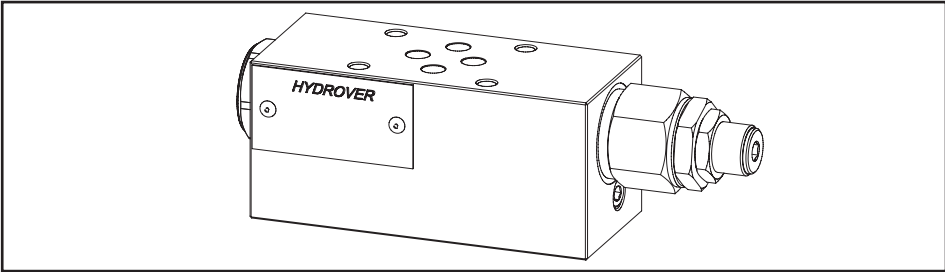
Dimensions in mm

Technical data	
Max. pressure	250 bar
Max. flow	70 lpm *
Weight	0,9 Kg
Manifold material	Aluminium



N°	Description	Q.ty
1	Bosch Rexroth relief valve <b>VMD1.070</b> *	1
2	Ø 5,5 through hole for mounting	4
3	OR 108 i. Ø 8,73 cross section 1,78	4

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue



H3919

Ordering code

H	3	9	1	9	A	-	-	-
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Hydrover product

Product series  
39 series - Cetop 3 modular valves

Product ID

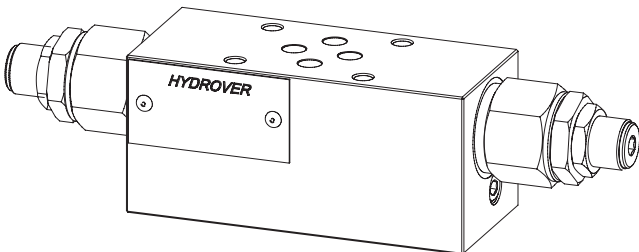
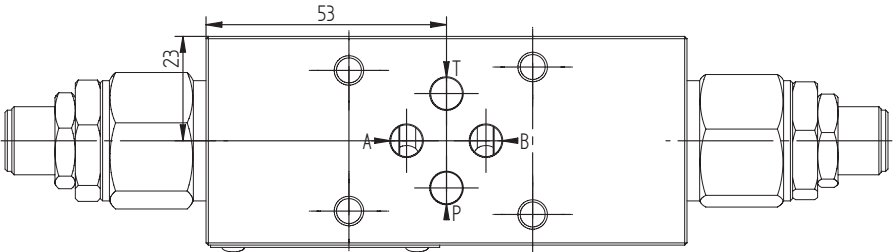
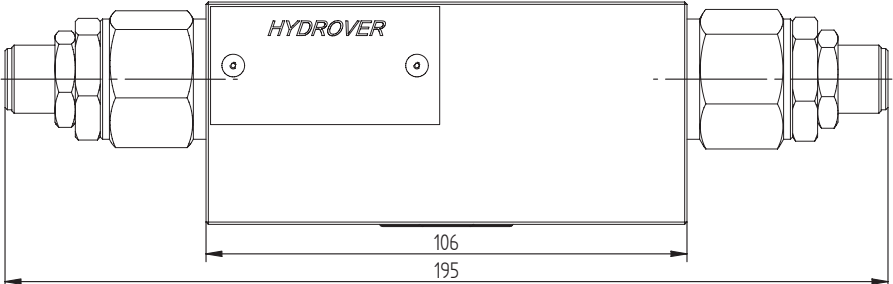
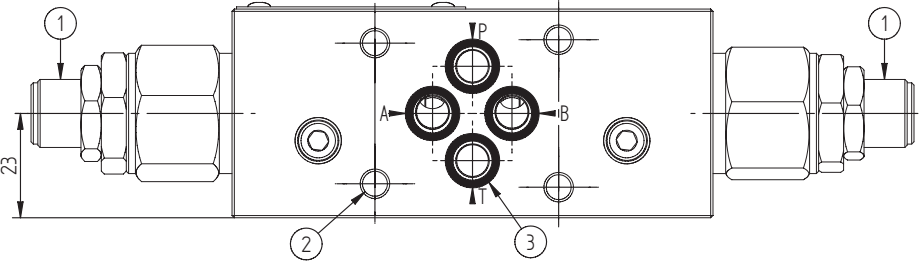
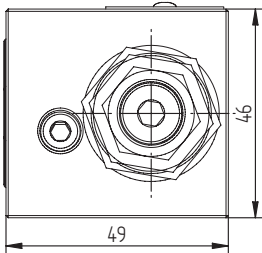
Relief valve  
adjustment pressure range \*  
0 = 10-60 bar  
1 = 40-110 bar  
2 = 110-220 bar  
3 = 220-260 bar

Relief valve  
adjustment type \*  
S = Screw

Manifold material  
Aluminium

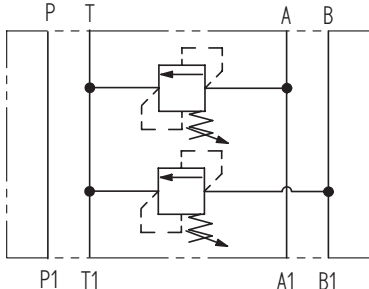
\* Omit if not required. To order the product without the pressure relief cartridge valve, omit the pressure range and the adjustment type options: H3919A.  
The manifold will still be provided with the corresponding cavity.

Cetop 3 modular relief valve on A and B / 70 lpm **H3920**



Dimensions in mm

Technical data	
Max. pressure	250 bar
Max. flow	70 lpm *
Weight	1 Kg
Manifold material	Aluminium



N°	Description	Q.ty
1	Bosch Rexroth relief valve <b>VMD1.070</b> *	2
2	Ø 5,5 through hole for mounting	4
3	OR 108 i. Ø 8,73 cross section 1,78	4

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

H3920

Ordering code

H	3	9	2	0	A	-	-	-	-	-
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Hydrover product

Product series

39 series - Cetop 3 modular valves

Product ID

Manifold material

Aluminium

Relief valve  
adjustment pressure range  
on B \*

- 0 = 10-60 bar
- 1 = 40-110 bar
- 2 = 110-220 bar
- 3 = 220-260 bar

Relief valve  
adjustment type on B \*

S = Screw

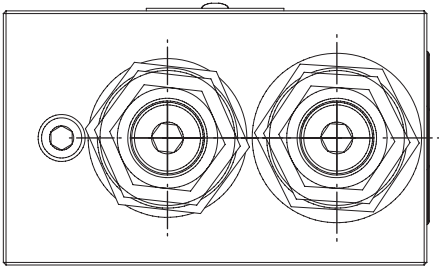
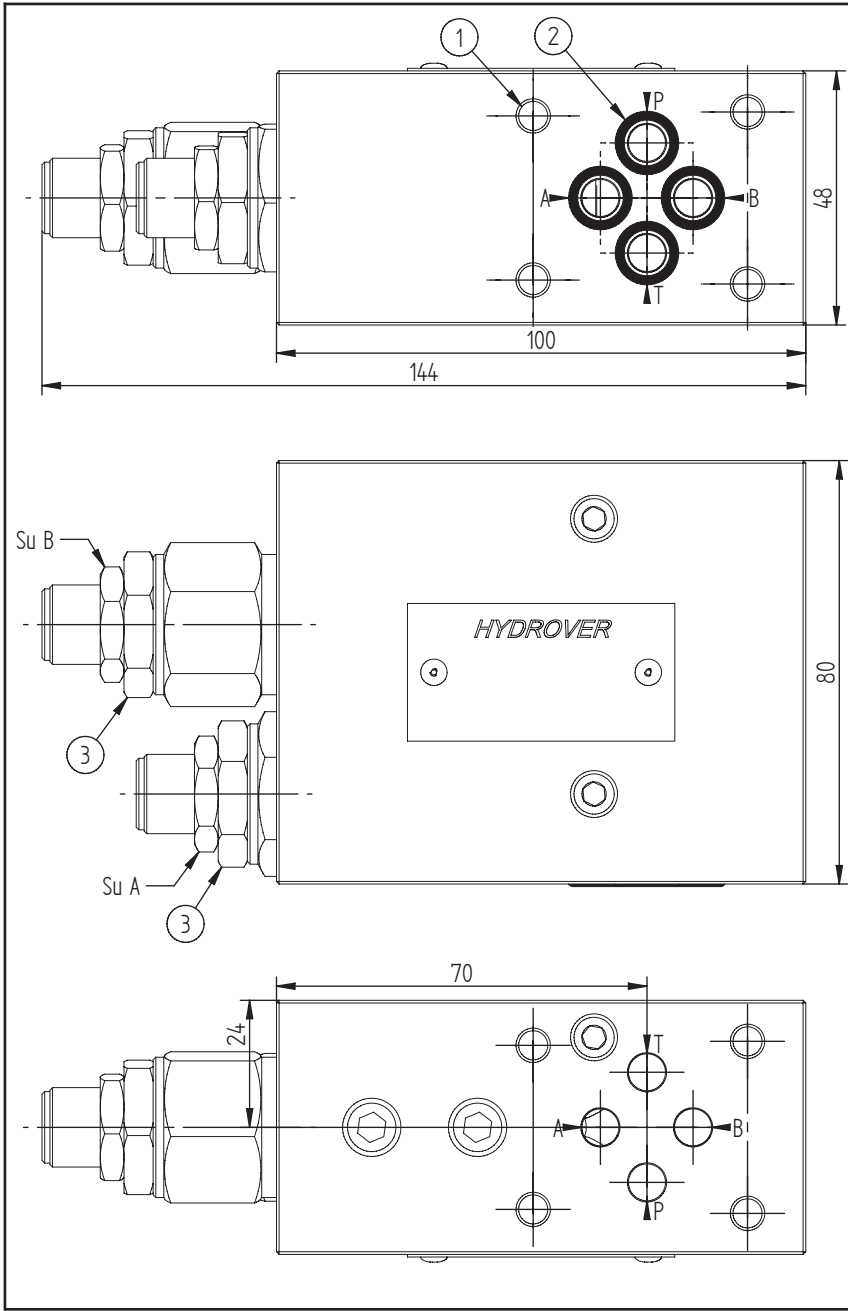
Relief valve  
adjustment pressure range on A \*

- 0 = 10-60 bar
- 1 = 40-110 bar
- 2 = 110-220 bar
- 3 = 220-260 bar

Relief valve  
adjustment type on A \*

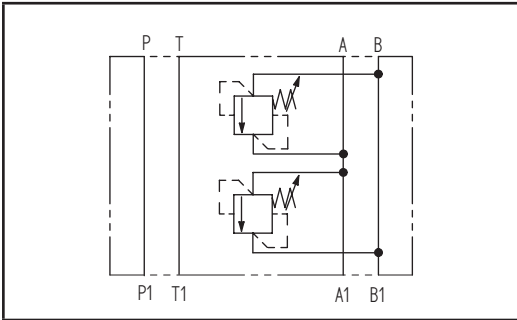
S = Screw

\* Omit if not required. To order the product without the pressure relief cartridge valves, omit the pressure range and the adjustment type options for A and B: H3920A.  
The manifold will still be provided with the corresponding cavities.



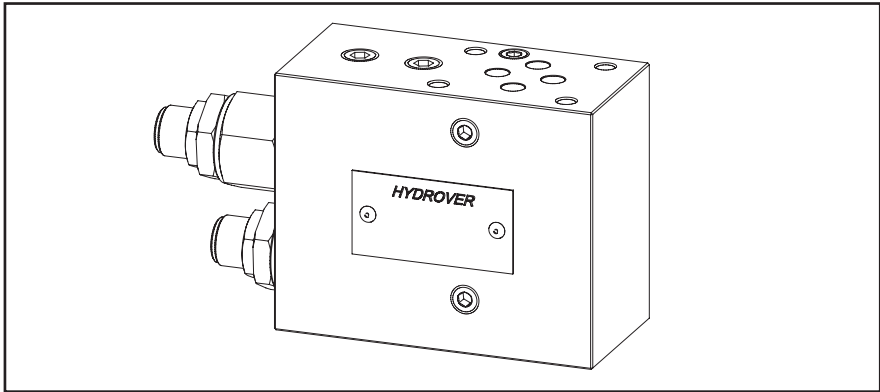
Dimensions in mm

Technical data	
Max. pressure	250 bar
Max. flow	50 lpm *
Weight	1,3 Kg
Manifold material	Aluminium



N°	Description	Q.ty
1	Ø 5,5 through hole for mounting	4
2	OR 108 i. Ø 8,73 cross section 1,78	4
3	Bosch Rexroth relief valve <b>VMD1.070</b> *	2

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue



H3917

Ordering code

H	3	9	1	7	A	-	-	-	-	-
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Hydrover product

Product series  
39 series - Cetop 3 modular valves

Product ID

Manifold material  
Aluminium

Relief valve  
adjustment pressure range  
on B \*

0 =	10-60 bar
1 =	40-110 bar
2 =	110-220 bar
3 =	220-260 bar

Relief valve  
adjustment type on B \*

S = Screw

Relief valve  
adjustment pressure range on A \*

0 =	10-60 bar
1 =	40-110 bar
2 =	110-220 bar
3 =	220-260 bar

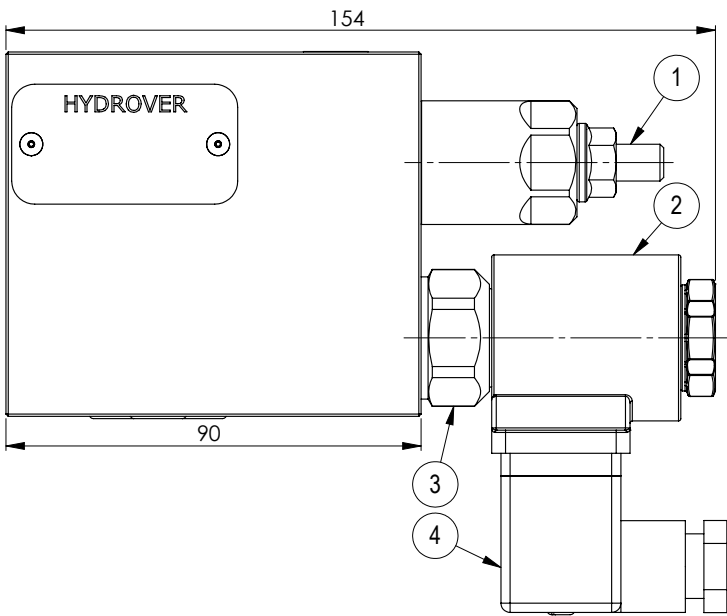
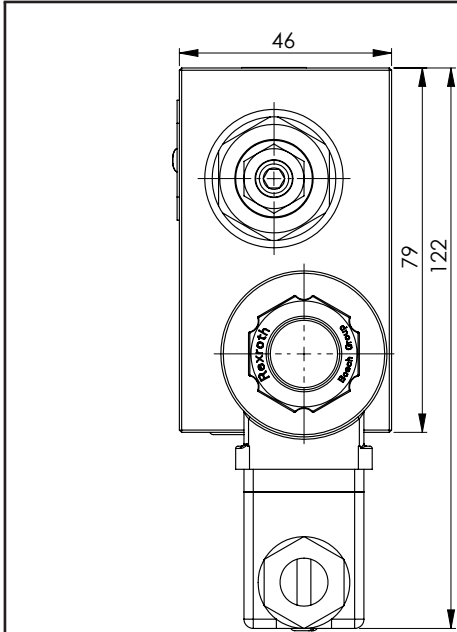
Relief valve  
adjustment type on A \*

S = Screw

\* Omit if not required. To order the product without the pressure relief cartridge valves, omit the pressure range and the adjustment type options for A and B: H3917A.  
The manifold will still be provided with the corresponding cavities.  
To inhibit a function, replace the related valve options with TL: eg H3917A-TL-S2.  
In the cavity it will be mounted a long plug.

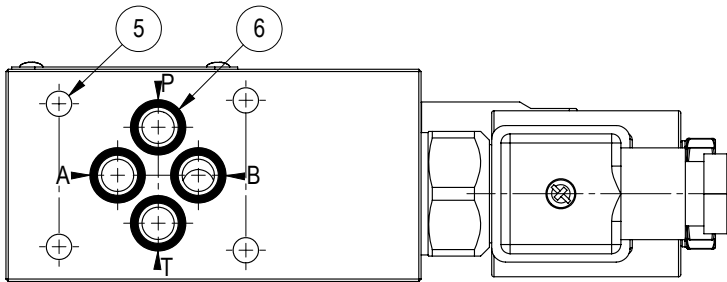
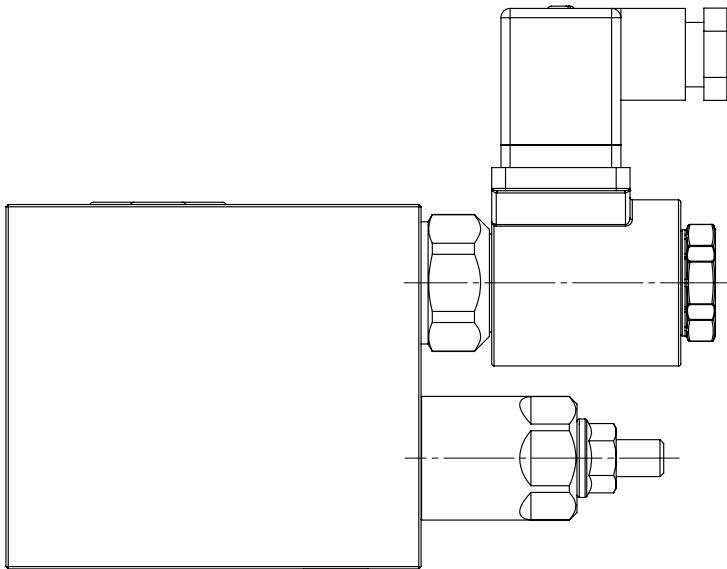
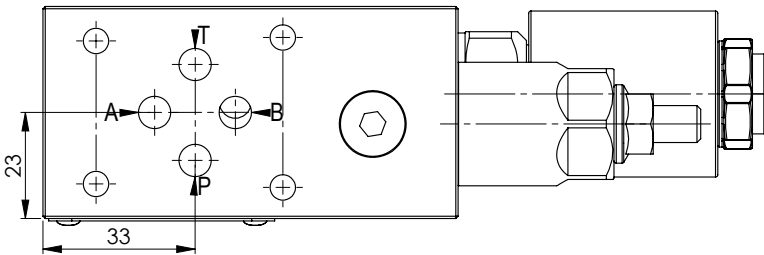
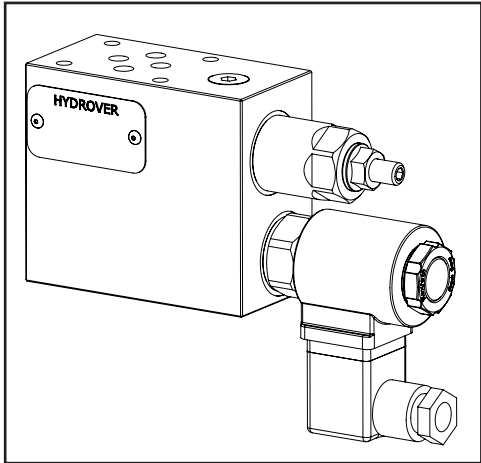
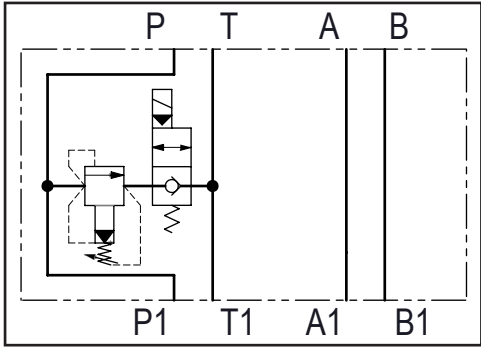
Valve	Cavity	Long plug code
Pressure relief valve VMD1.070	CA-10A-2N	0489A2008500000

Cetop 3 modular relief valve on P electrically enabled H3977



Dimensions in mm

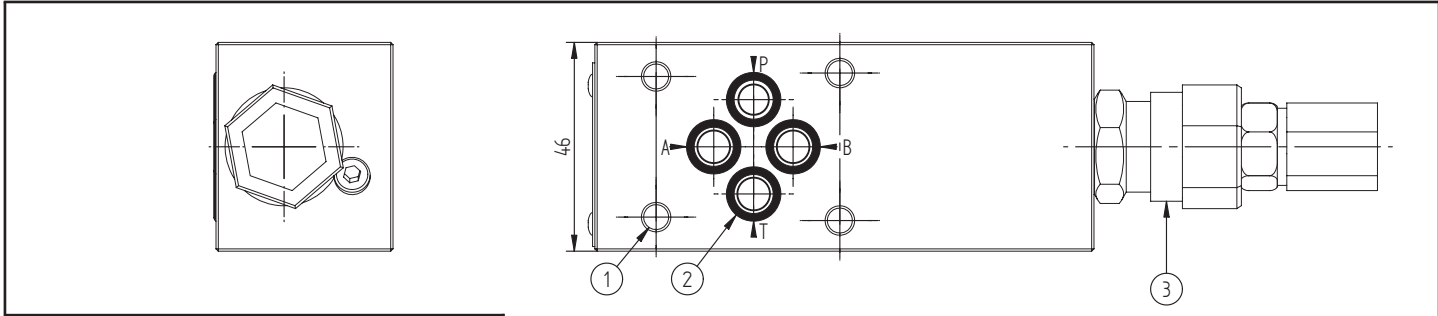
Technical data	
Max. pressure	250 bar
Max. flow	50 lpm *
Weight	1,4 Kg
Manifold material	Aluminium





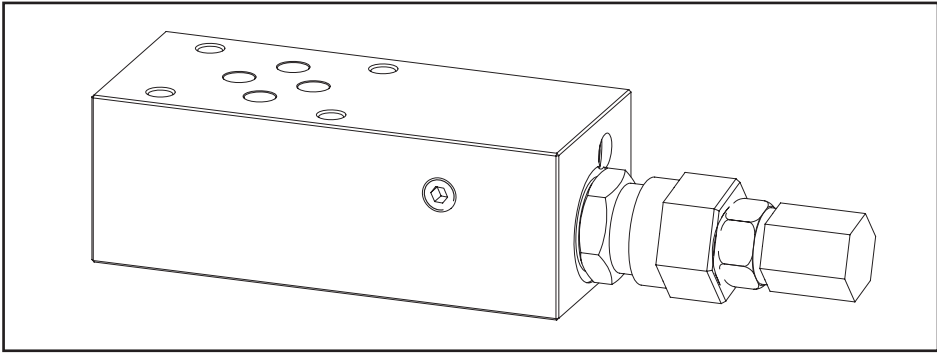
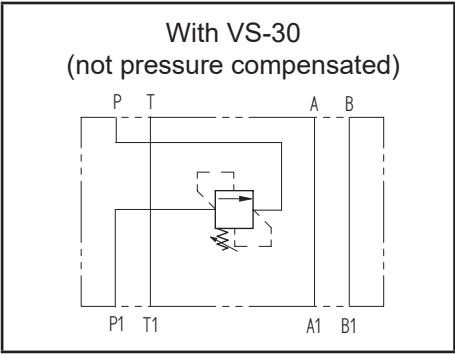
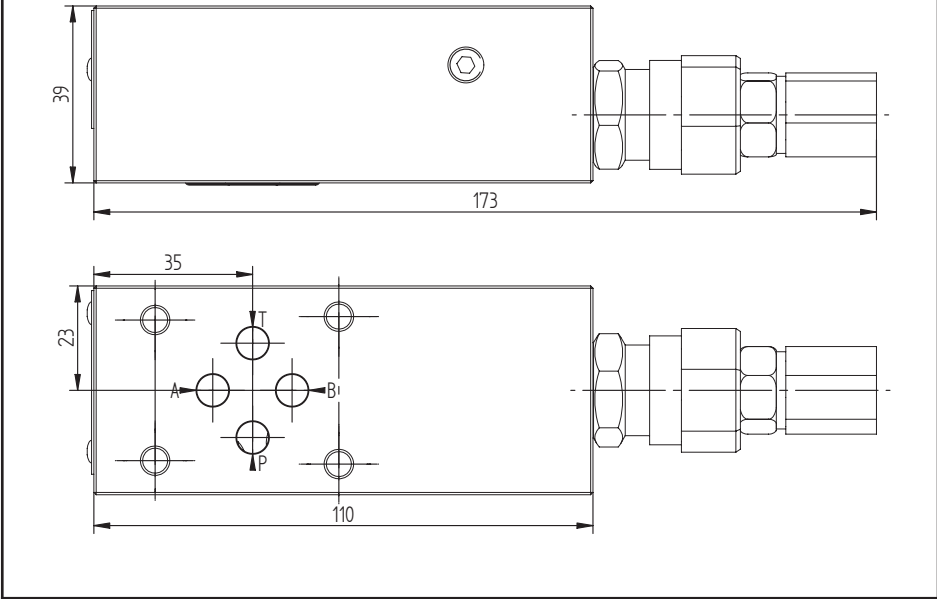
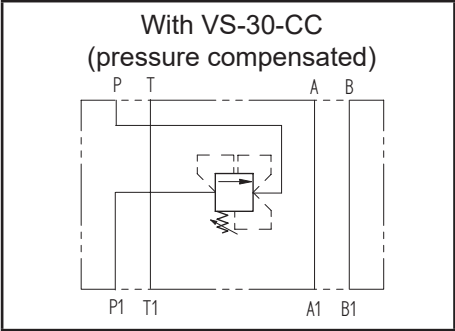


Cetop 3 modular sequence valve on P H3911



Dimensions in mm

Technical data	
Max. pressure	250 bar
Max. flow	30 lpm *
Weight	0,7 Kg
Manifold material	Aluminium



N°	Description	Q.ty
1	Ø 5,5 through hole for mounting	4
2	OR 108 i. Ø 8,73 cross section 1,78	4
3	Bosch Rexroth pressure compensated valve <b>VS-30-CC</b> * (as depicted) It's possible to use a Bosch Rexroth non pressure compensated valve <b>VS-30</b> * in case it is acceptable to add to the set pressure the pressure necessary for the second branch.	1

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

H3911

Ordering code

H	3	9	1	1	A	-	-	-
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Hydrover product

Product series

39 series - Cetop 3 modular valves

Product ID

Manifold material

Aluminium

S =

M =

Valve type \*

VS-30-CC

VS-30

Valve adjustment pressure range \*

0 = 5-50 bar

1 = 30-100 bar

2 = 50-210 bar

3 = 100-350 bar

Valve adjustment type \*

S =

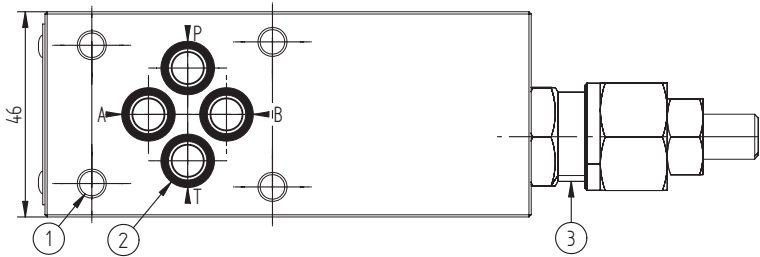
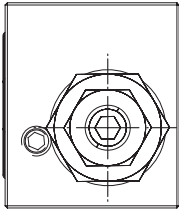
Screw

K =

Knob (only for VS-30)

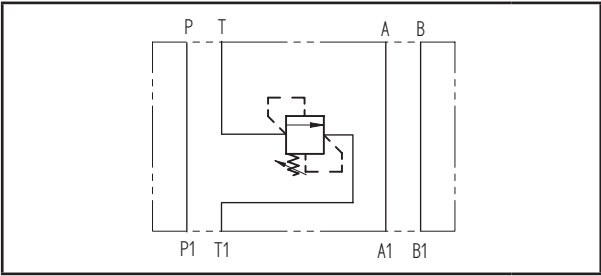
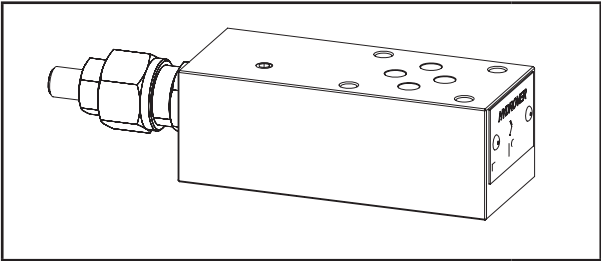
\* Omit if not required. To order the product without the cartridge valve, omit the adjustment type, valve pressure range and valve type options: H3911A.  
The manifold will still be provided with the corresponding cavity.

Cetop 3 modular relief valve for back pressure on T H3909



Dimensions in mm

Technical data	
Max. pressure	250 bar
Max. flow	30 lpm *
Weight	0,7 Kg
Manifold material	Aluminium



N°	Description	Q.ty
1	Ø 5,5 through hole for mounting	4
2	OR 108 i. Ø 8,73 cross section 1,78	4
3	Bosch Rexroth relief valve <b>VS-30</b> * depicted with screw adjustment	1

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

Ordering code

H	3	9	0	9	A	-	-	-
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Hydrover product

Product series  
39 series - Cetop 3 modular valves

Product ID

Relief valve  
adjustment pressure range \*

0 =	5-50 bar
1 =	30-100 bar
2 =	50-210 bar
3 =	100-350 bar

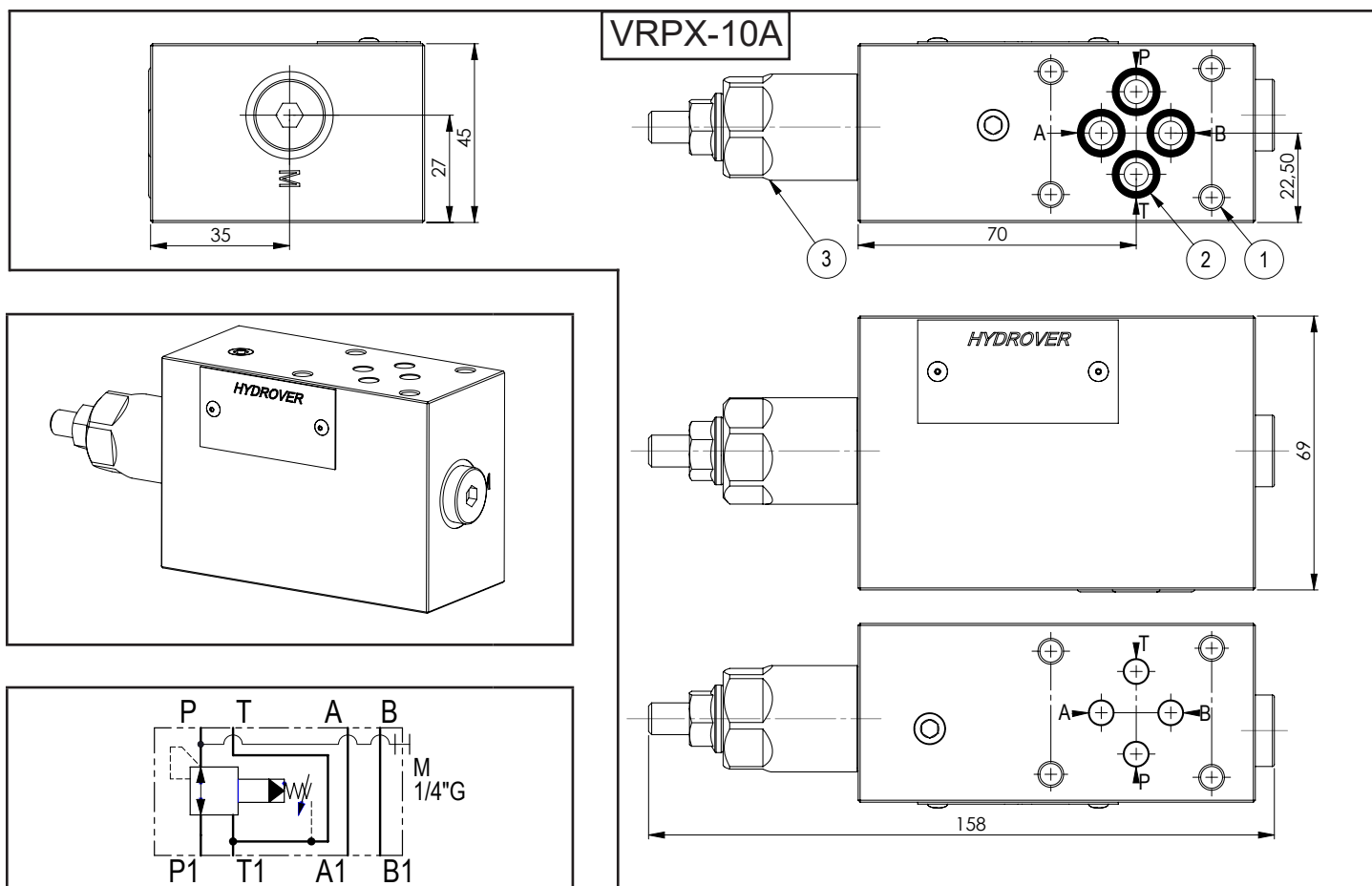
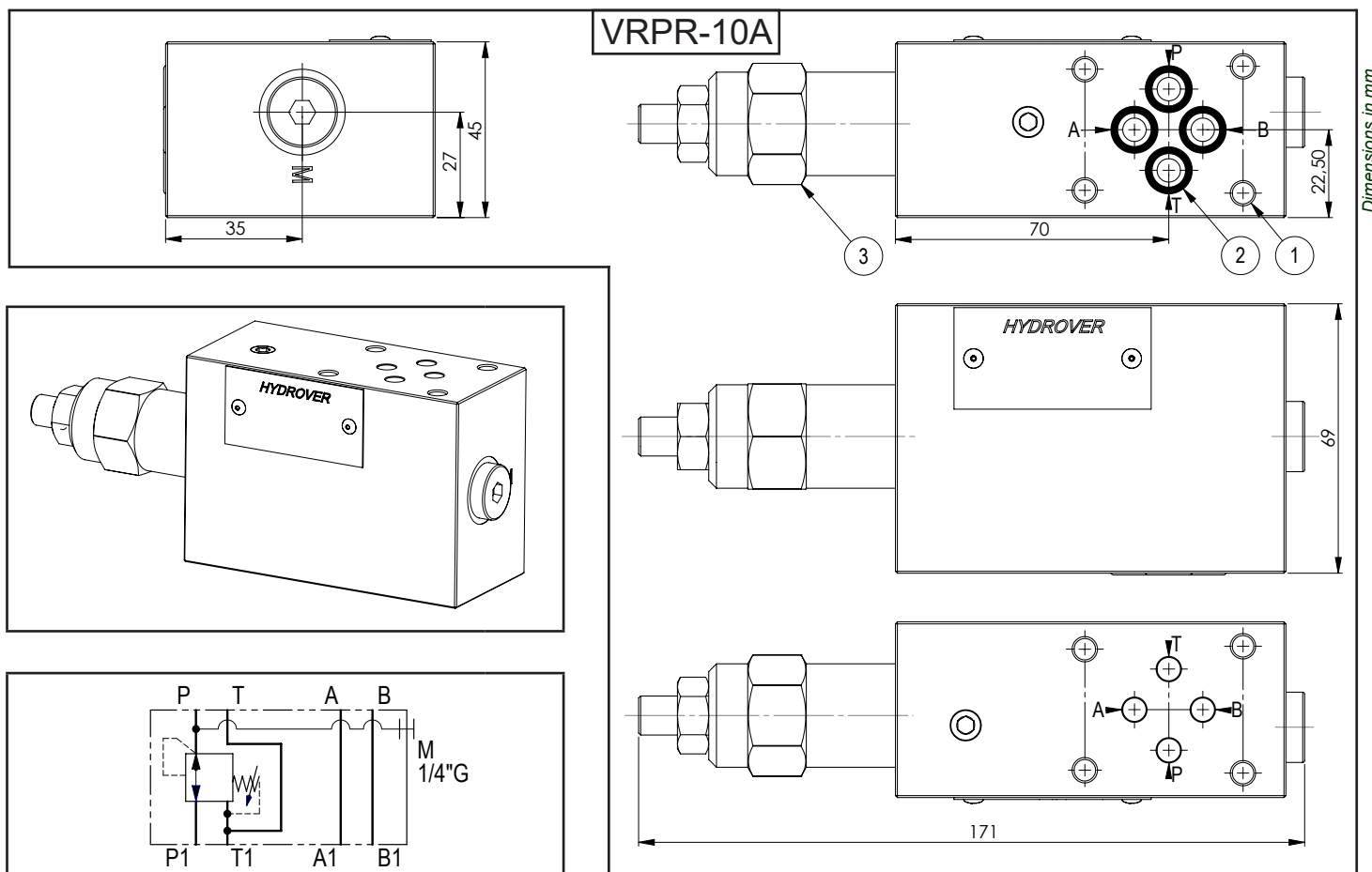
Relief valve  
adjustment type \*

S =	Screw
K =	Knob

Manifold material  
Aluminium

\* Omit if not required. To order the product without the relief cartridge valve, omit the adjustment type and pressure range options: H3909A.  
The manifold will still be provided with the corresponding cavity.

Cetop 3 modular pressure reducing valve on P **H3939**



## Ordering code

H	3	9	3	9	A	-	-	-
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## Hydrover product

## Product series

39 series - Cetop 3 modular valves

## Product ID

## Manifold material

Aluminium

## Pressure reducing valve type \*

R = VRPR-10A (direct)

X = VRPX-10A (pilot)

VRPR-10A reducing valve  
pressure range (static) \*

0 = 2-14 bar

1 = 2-25 bar

2 = 10-50 bar

3 = 28-80 bar

VRPX-10A reducing valve  
pressure range (static) \*

0 = 25-100 bar

1 = 35-140 bar

2 = 70-280 bar

3 = 35-350 bar (adj. knob)

## Reducing valve adjustment type \*

S = Screw

K = Knob

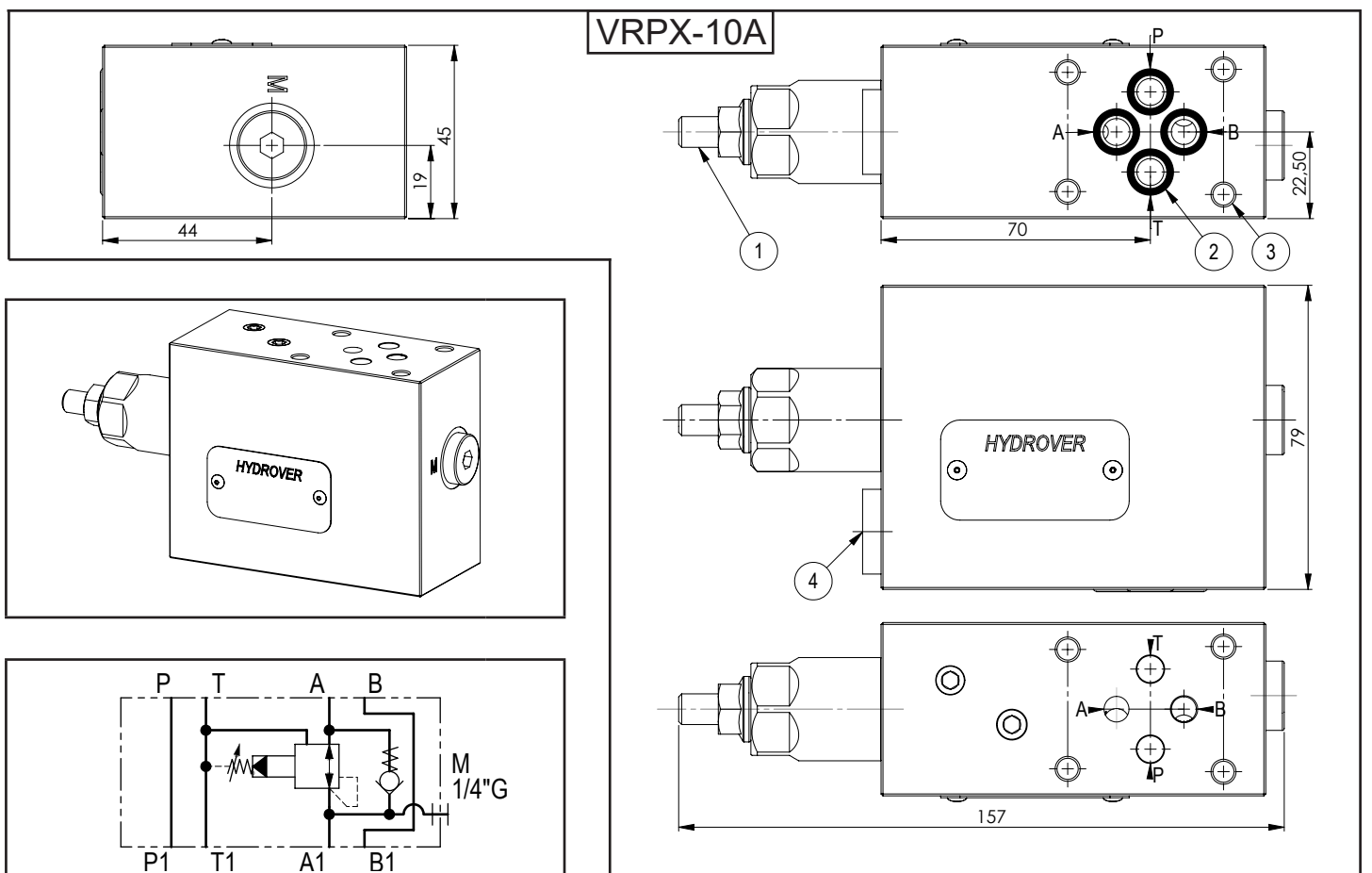
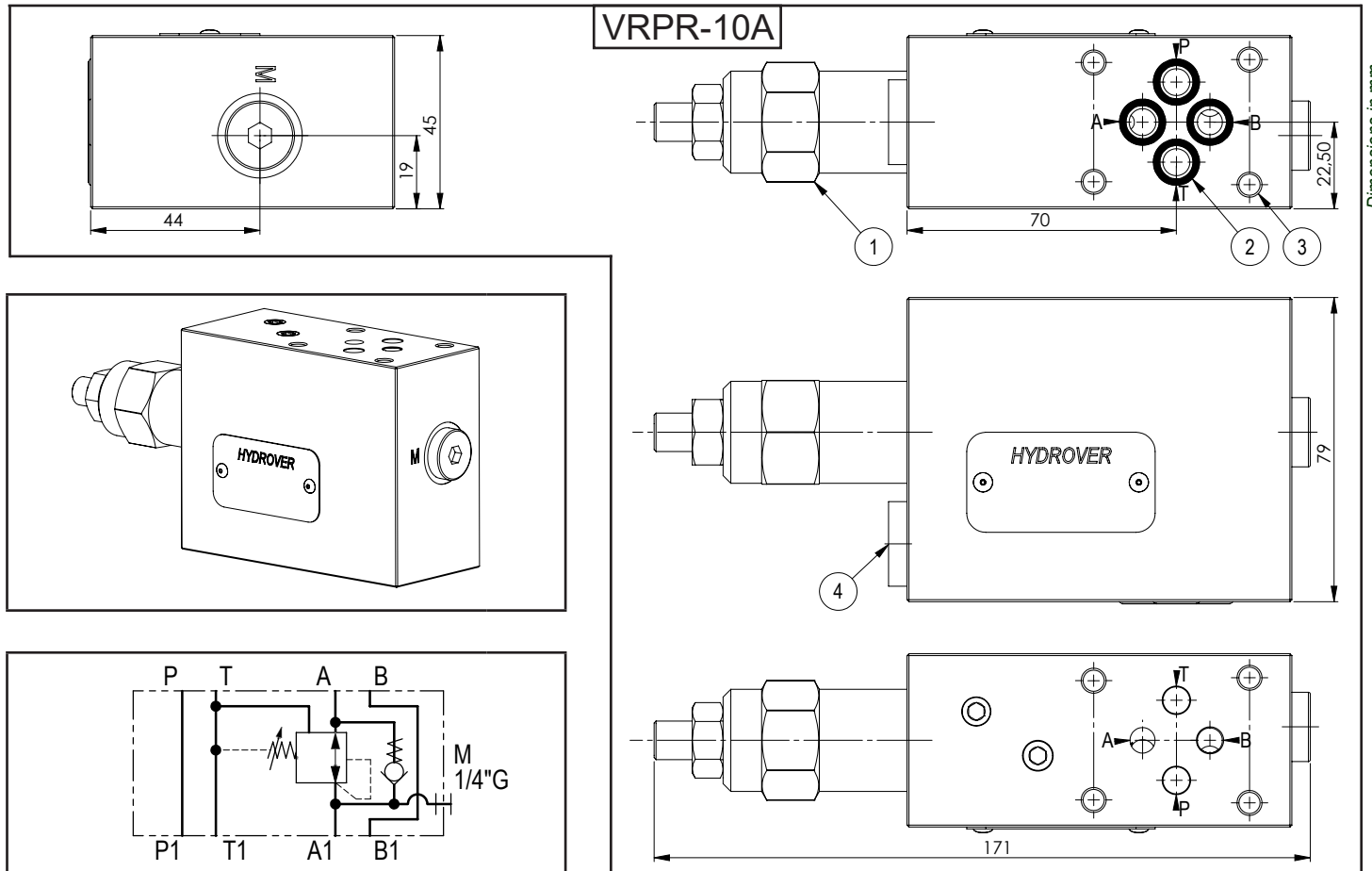
\* Omit if not required. To order the product without the pressure reducing cartridge valve, omit the valve adjustment type, valve pressure range and valve type options: H3939A.  
The manifold will still be provided with the corresponding cavity.

N°	Description	Q.ty
1	Ø 5,5 through hole for mounting	4
2	OR 108 i. Ø 8,73 cross section 1,78	4
3	Bosch Rexroth reducing valve <b>VRPR-10A</b> o <b>VRPX-10A</b> * depicted with screw adjustment	1

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

Technical data	
Max. pressure	250 bar
Max. flow with VRPR-10A	25 lpm *
Max. flow with VRPX-10A	55 lpm *
Weight	1,1 Kg
Manifold material	Aluminium

Cetop 3 modular pressure reducing valve on A **H3962**





## Ordering code

H	3	9	6	2	A	-	-	-
---	---	---	---	---	---	---	---	---

## Hydrover product

## Product series

39 series - Cetop 3 modular valves

## Product ID

## Manifold material

Aluminium

## Pressure reducing valve type \*

R = VRPR-10A (direct)

X = VRPX-10A (pilot)

VRPR-10A reducing valve  
pressure range (static) \*

0 = 2-14 bar

1 = 2-25 bar

2 = 10-50 bar

3 = 28-80 bar

VRPX-10A reducing valve  
pressure range (static) \*

0 = 25-100 bar

1 = 35-140 bar

2 = 70-280 bar

3 = 35-350 bar (adj. knob)

## Reducing valve adjustment type \*

S = Screw

K = Knob

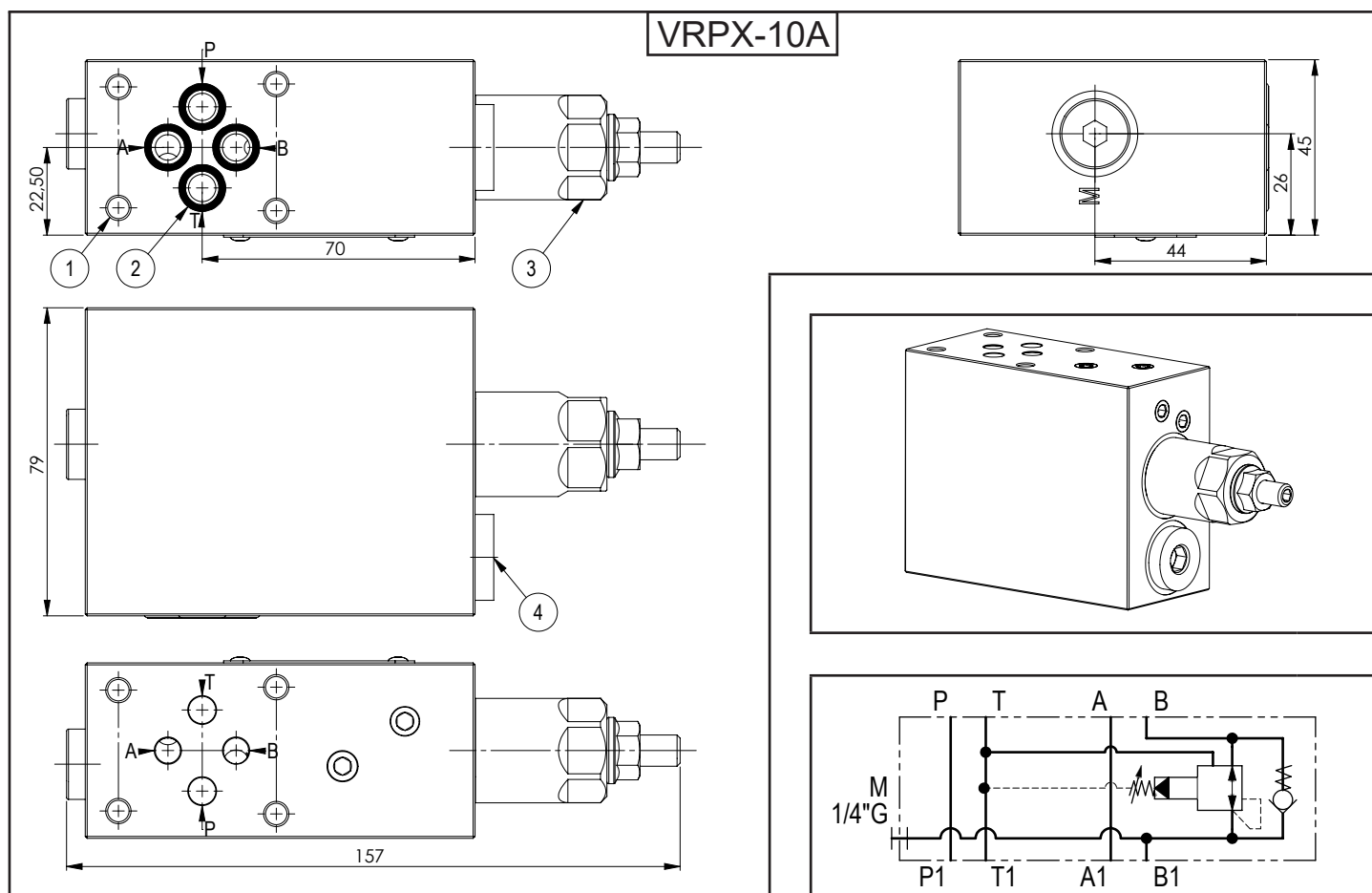
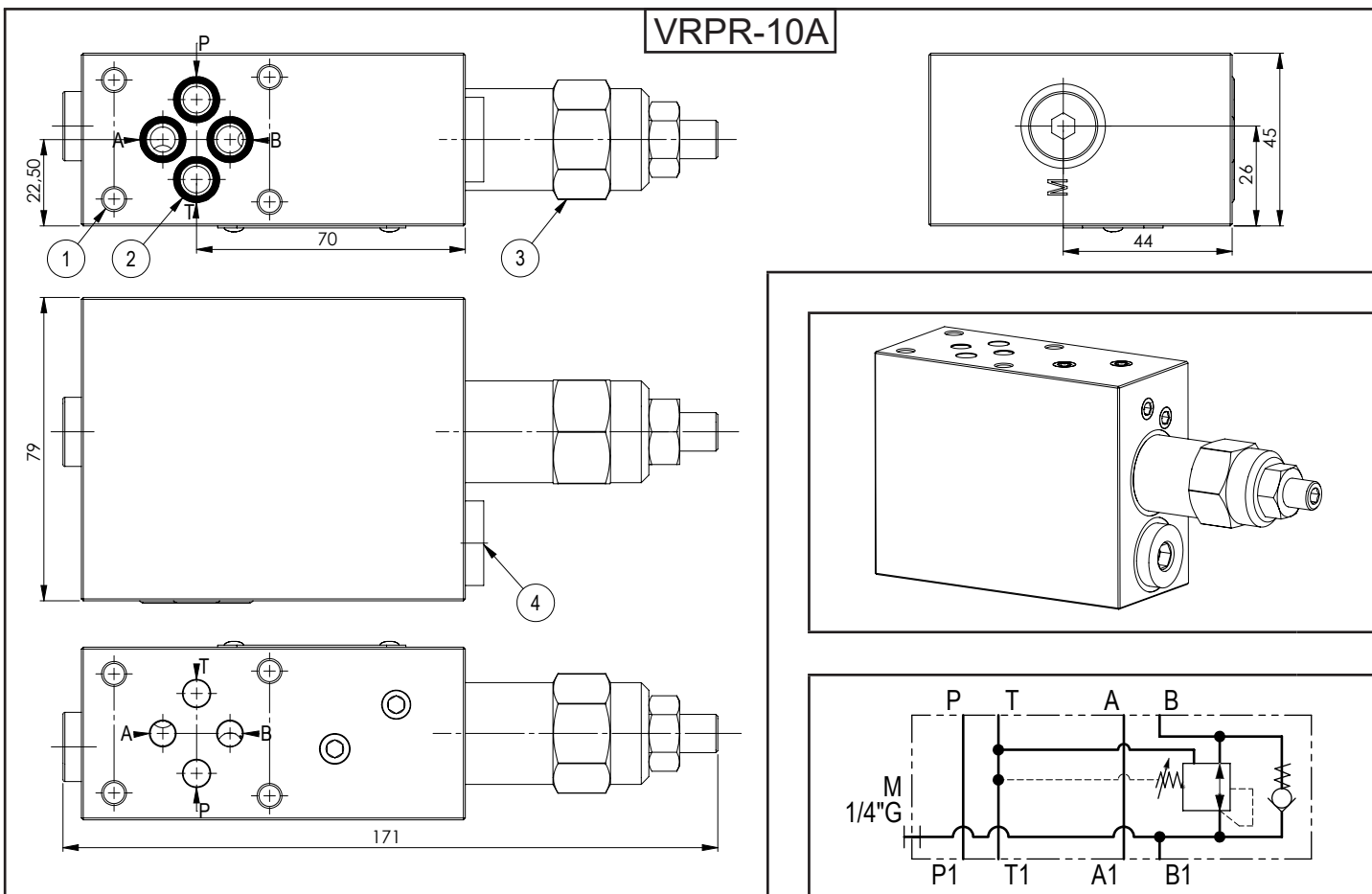
\* Omit if not required. To order the product without the pressure reducing cartridge valve, omit the valve adjustment type, valve pressure range and valve type options: H3962A.  
The manifold will still be provided with the corresponding cavity.

N°	Description	Q.ty
1	Bosch Rexroth reducing valve <b>VRPR-10A</b> o <b>VRPX-10A</b> * depicted with screw adjustment	1
2	OR 108 i. Ø 8,73 cross section 1,78	4
3	Ø 5,5 through hole for mounting	4
4	Check valve VUH1 3/8" G under 3/8" G plug	1

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

Technical data	
Max. pressure	250 bar
Max. flow with VRPR-10A	25 lpm *
Max. flow with VRPX-10A	55 lpm *
Weight	1,1 Kg
Manifold material	Aluminium

Cetop 3 modular pressure reducing valve on B **H3963**



## Ordering code

H	3	9	6	3	A	-	-	-
---	---	---	---	---	---	---	---	---

## Hydrover product

## Product series

39 series - Cetop 3 modular valves

## Product ID

## Manifold material

Aluminium

## Pressure reducing valve type \*

R = VRPR-10A (direct)

X = VRPX-10A (pilot)

VRPR-10A reducing valve  
pressure range (static) \*

0 = 2-14 bar

1 = 2-25 bar

2 = 10-50 bar

3 = 28-80 bar

VRPX-10A reducing valve  
pressure range (static) \*

0 = 25-100 bar

1 = 35-140 bar

2 = 70-280 bar

3 = 35-350 bar (adj. knob)

## Reducing valve adjustment type \*

S = Screw

K = Knob

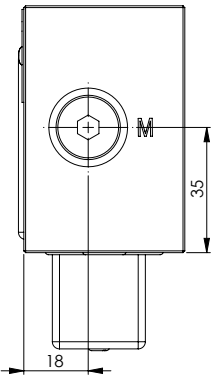
\* Omit if not required. To order the product without the pressure reducing cartridge valve, the valve adjustment type, valve pressure range and valve type options: H3963A.  
The manifold will still be provided with the corresponding cavity.

N°	Description	Q.ty
1	Bosch Rexroth reducing valve <b>VRPR-10A</b> o <b>VRPX-10A</b> * depicted with screw adjustment	1
2	OR 108 i. Ø 8,73 cross section 1,78	4
3	Ø 5,5 through hole for mounting	4
4	Check valve VUH1 3/8" G under 3/8" G plug	1

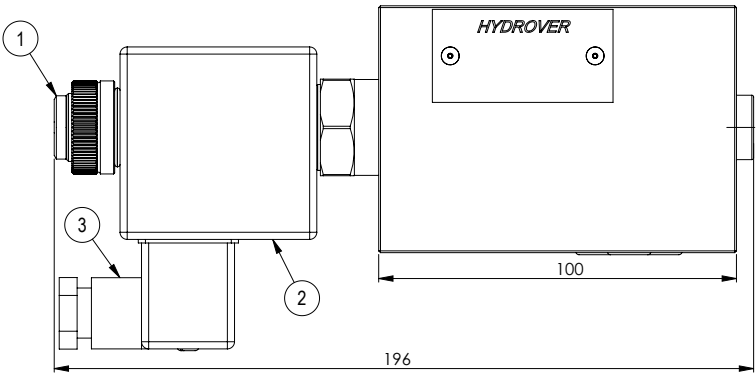
\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

Technical data	
Max. pressure	250 bar
Max. flow with VRPR-10A	25 lpm *
Max. flow with VRPX-10A	55 lpm *
Weight	1,1 Kg
Manifold material	Aluminium

Cetop 3 modular proportional pressure reducing valve on P H3942

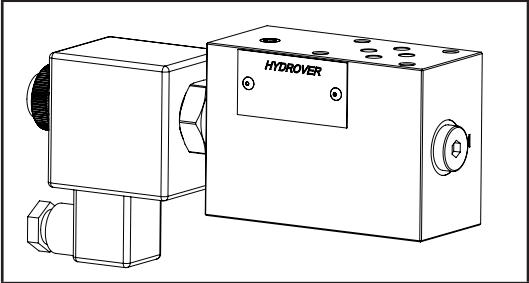


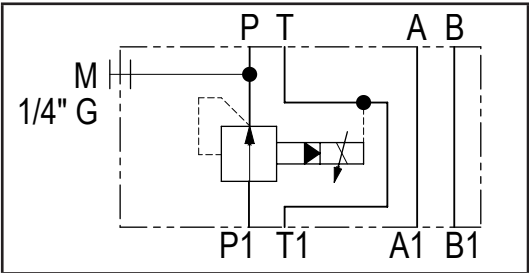
18 35



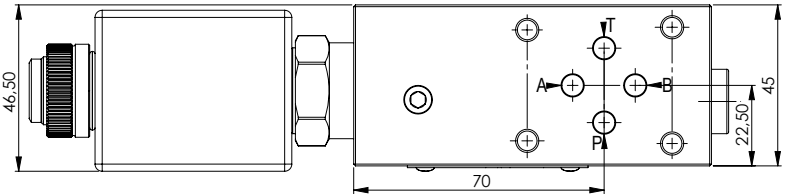
1 2 3 100 196

Technical data	
Max. pressure	250 bar
Max. flow	45 lpm *
Weight	1,2 Kg
Manifold material	Aluminium

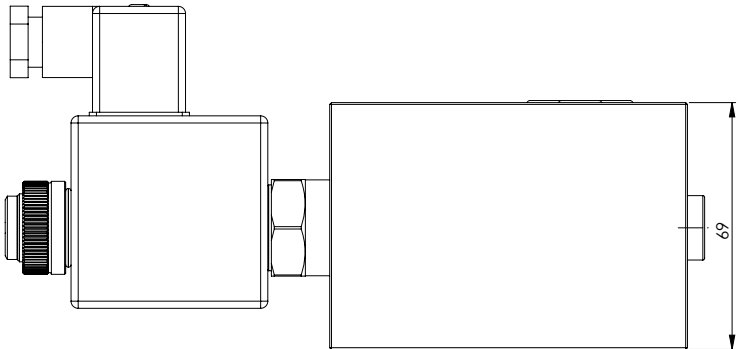




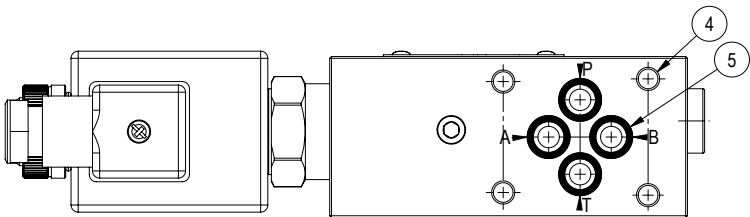
M 1/4" G P T A B P1 T1 A1 B1



46,50 70 45 22,50



69



4 5

Dimensions in mm

N°	Description	Q.ty
1	Bosch Rexroth proportional solenoid valve VEP-5A-2R-06-P / <a href="#">OD.91.06.77-Y-00</a> *	1
2	Bosch Rexroth coil <a href="#">S5-356</a> - CLASS H DIN 43650 ISO 4400 *	1
3	Connector DIN 43650 ISO 4400	1
4	Ø 5,5 through hole for mounting	4
5	OR 108 i. Ø 8,73 cross section 1,78	4

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

H3942

Ordering code

H	3	9	4	2	A	-	-	-	-	-	-
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Hydrover product

Product series

39 series - Cetop 3 modular valves

Product ID

Manifold material

Aluminium

Proportional solenoid valve  
coil connection \*

1 = DIN 43650 ISO 4400

Proportional solenoid valve coil  
voltage \*

OB = 12V DC

OC = 24V DC

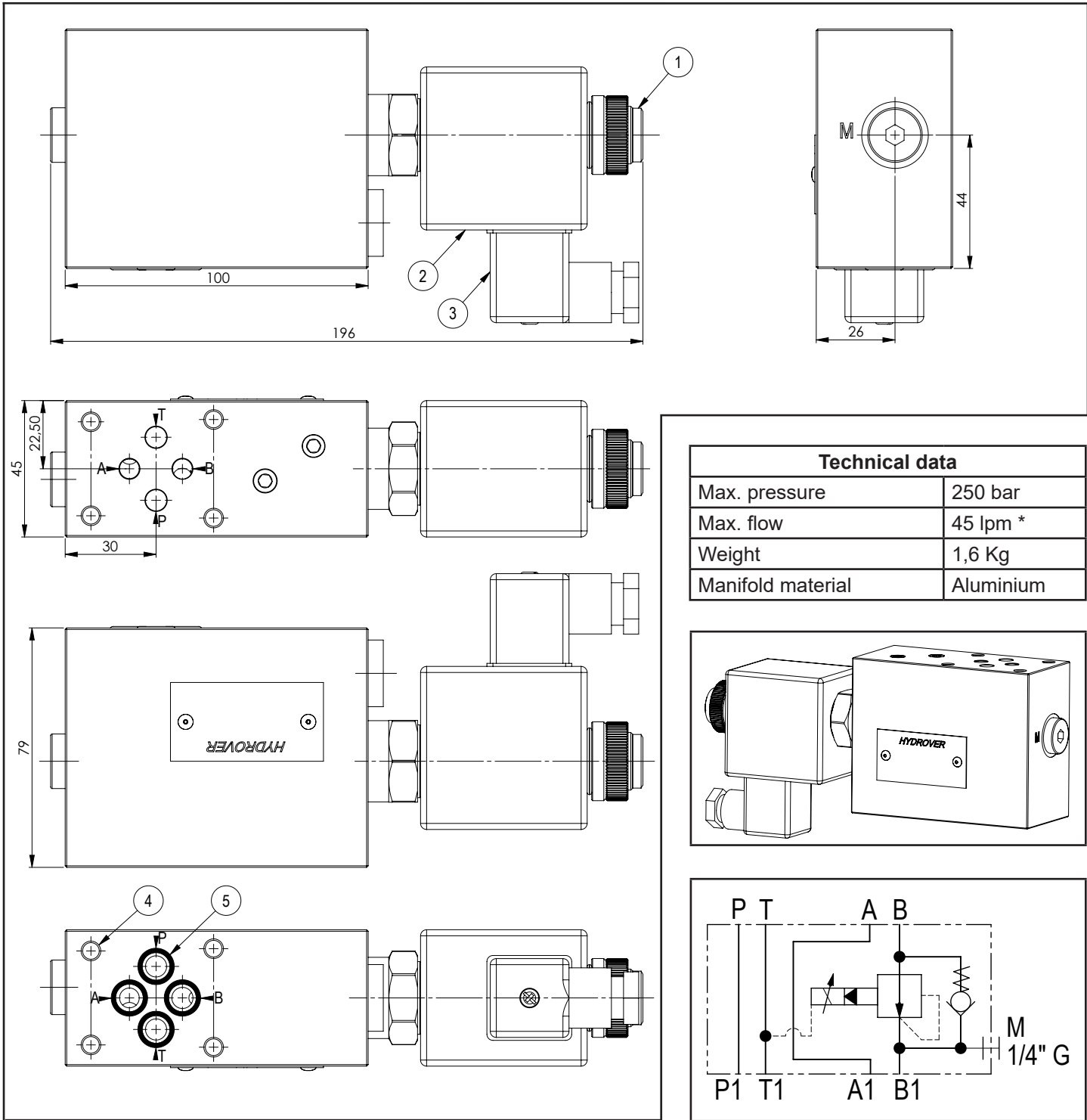
Proportional solenoid valve  
manual override \*

E0 = Without

EV = Screw

\* Omit if not required. To order the product without the proportional solenoid cartridge valve, omit the manual override, coil voltage and coil connection options: H3942A.  
The manifold will still be provided with the corresponding cavity.

Cetop 3 modular proportional pressure reducing valve on B H3943



N°	Description	Q.ty
1	Bosch Rexroth proportional solenoid valve VEP-5A-2R-06-P / <a href="#">OD.91.06.77-Y-00</a> *	1
2	Bosch Rexroth coil <a href="#">S5-356</a> - CLASS H DIN 43650 ISO 4400 *	1
3	Connector DIN 43650 ISO 4400	1
4	Ø 5,5 through hole for mounting	4
5	OR 108 i. Ø 8,73 cross section 1,78	4

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

H3943

Ordering code

H	3	9	4	3	A	-	-	-	-	-
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Hydrover product

Product series

39 series - Cetop 3 modular valves

Product ID

Manifold material

Aluminium

Proportional solenoid valve  
coil connection \*

1 = DIN 43650 ISO 4400

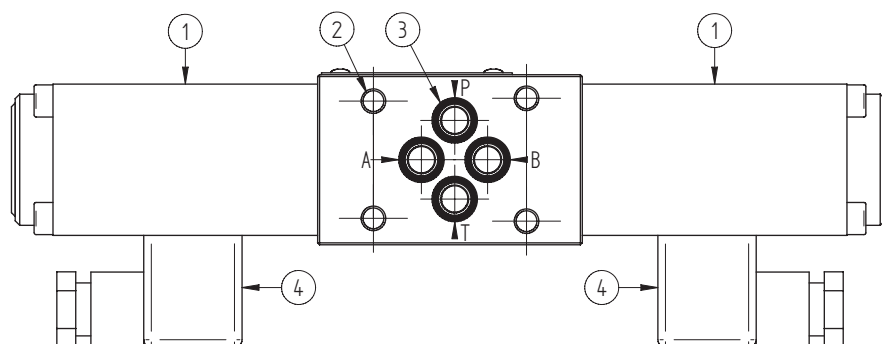
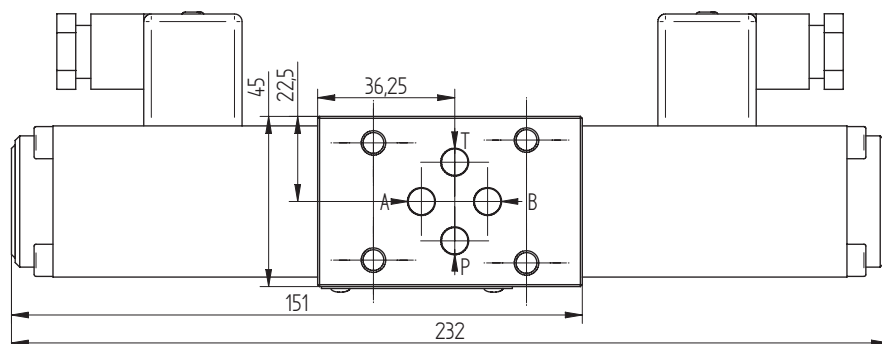
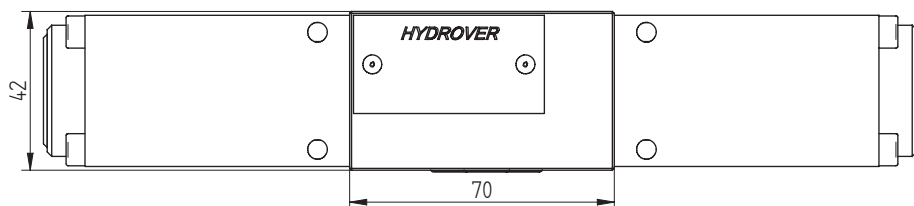
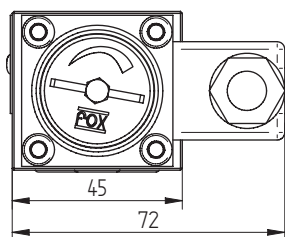
Proportional solenoid valve  
coil voltage \*

OB = 12V DC  
OC = 24V DC

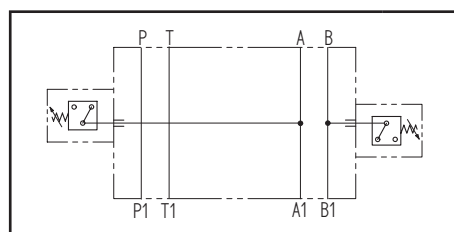
Proportional solenoid valve  
manual override \*

E0 = Without  
EV = Screw

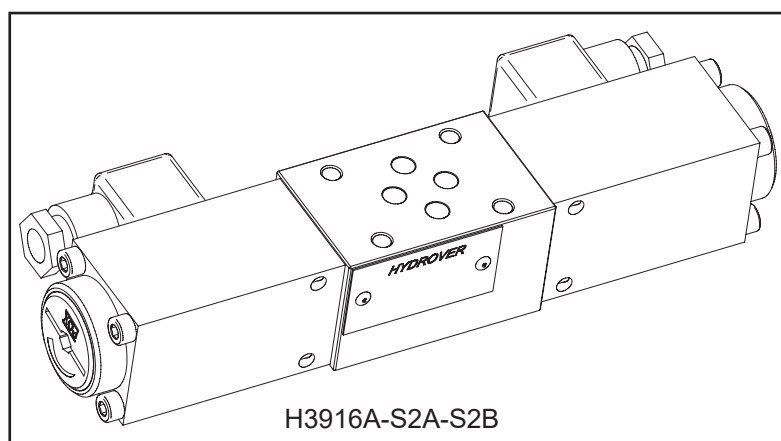
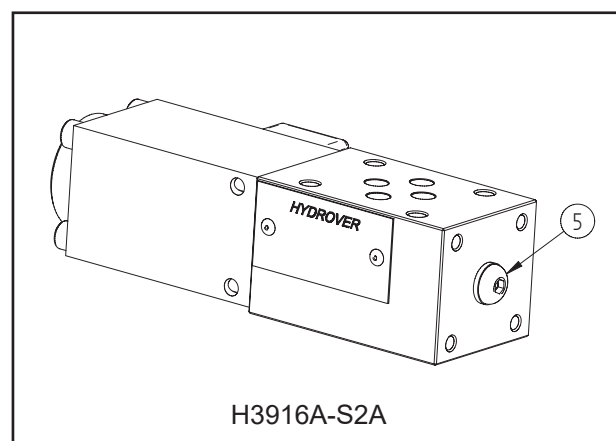
\* Omit if not required. To order the product without the proportional solenoid cartridge valve, omit the manual override, coil voltage and coil connection options: H3943A.  
The manifold will still be provided with the corresponding cavity.


**Technical data**

Max. pressure	250 bar
Manifold material	Aluminium
Weight 1 pressure switch	0,7 Kg
Weight 2 pressure switch	1,05 Kg



N°	Description	Q.ty
1	Pressure switch FOX K5	1/2
2	Ø 5,5 through hole for mounting	4
3	OR 108 i. Ø 8,73 cross section 1,78	4
4	Connector DIN 43650 ISO 4400	1/2
5	M6 plug with bonded washer for configurations with 1 pressure switch.	1





## Ordering code

H	3	9	1	6	A	-	-	-	A	-	-	-	B
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Hydrover product

Product series

39 series - Cetop 3 modular valves

Product ID

Manifold material

Aluminium

Pressure switch side\*  
On BB side  
pressure range \*

1 = 5-100 bar  
 2 = 20-200 bar  
 3 = 30-300 bar

B side  
adjustment type \*

S = Screw  
 K = Knob

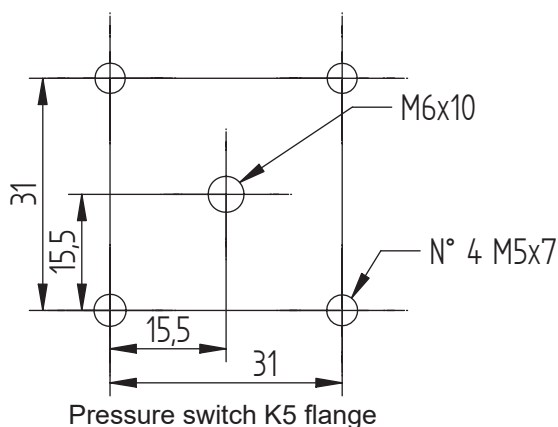
Pressure switch side\*  
On A

A side pressure range \*

1 = 5-100 bar  
 2 = 20-200 bar  
 3 = 30-300 bar

A side adjustment type \*

S = Screw  
 K = Knob



\* Omit if not required. For example to order the product with the pressure switch only on A, omit the adjustment type, pressure range and pressure switch B side options: H3916A-K2A.

"K5" adjustable pressure switches activate a microswitch once preset value is reached. The pressure is set by rotating a graduated knob or, for the economical version, by a setscrew located on top of the unit. Both systems are supplied with a device permits locking the desired set pressure. Mechanical stops protect both the spring and the microswitch from over pressurization.

## Technical Features:

Body : square 40x40mm in anodized aluminium

Assembly: in every position with 1/4"BSPF threaded port or Cetop flanged without needs adaptors

Working temperature: from - 20°C to + 80°C

Switching frequency: 120 cycles/min

Switching accuracy:  $\pm 2\%$  of the end of scale to 20°CFixed hysteresis value:  $\sim 15\%$  of the end of scale at 20°C

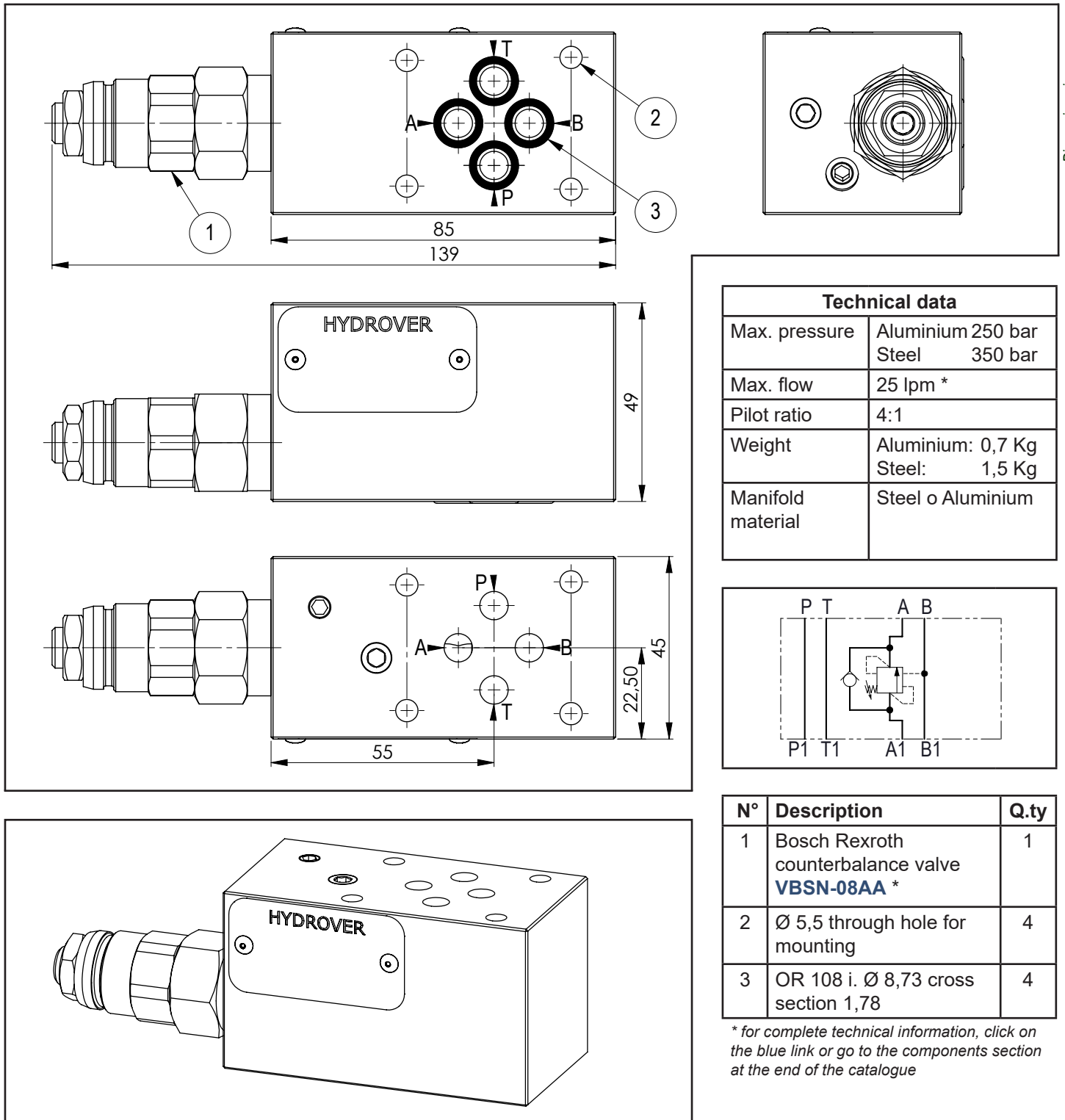
Mechanical life: 106 cycles at 70 bar at 20°C

Maximum load: 5 Ampère at 250 Volt AC 0.25 Ampère at 250 Volt DC

Exchange contact NO and NC

Electric connection according to DIN 43650

For more informations [www.fox.it](http://www.fox.it)



H3921

Ordering code

H	3	9	2	1	-	-	-
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Hydrover product

Product series

39 series - Cetop 3 modular valves

Product ID

Manifold material

Aluminium

Steel

= A

= S

Counterbalance valve  
adjustment pressure range \*

2 = 100-210 bar

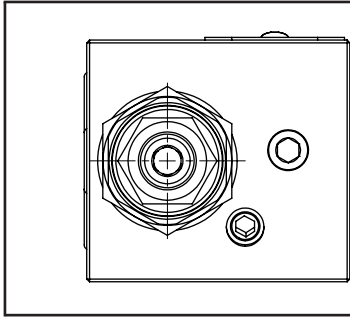
3 = 200-350 bar

Counterbalance valve  
adjustment type \*

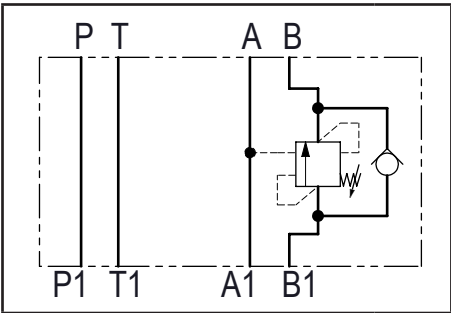
S = Screw

\* Omit if not required. To order the product without the counterbalance cartridge valve, omit the adjustment type and pressure range options: H3921A.  
The manifold will still be provided with the corresponding cavity.

Cetop 3 modular counterbalance valve on B / 25 lpm **H3969**

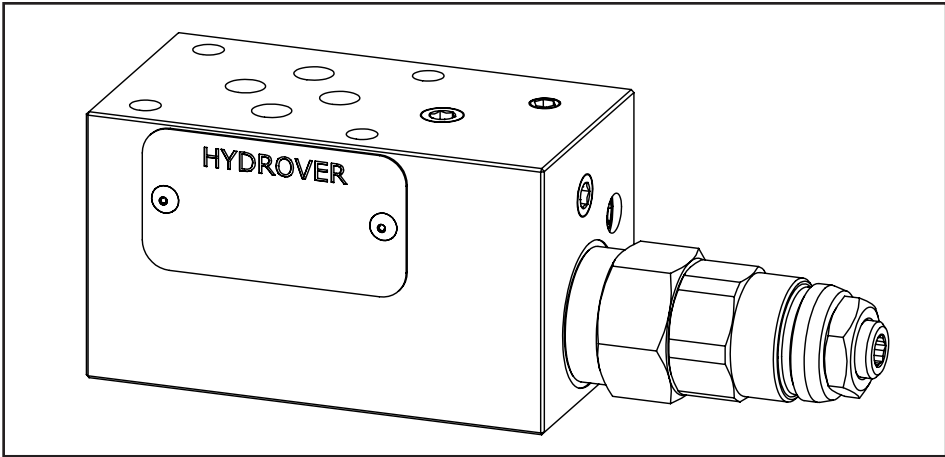
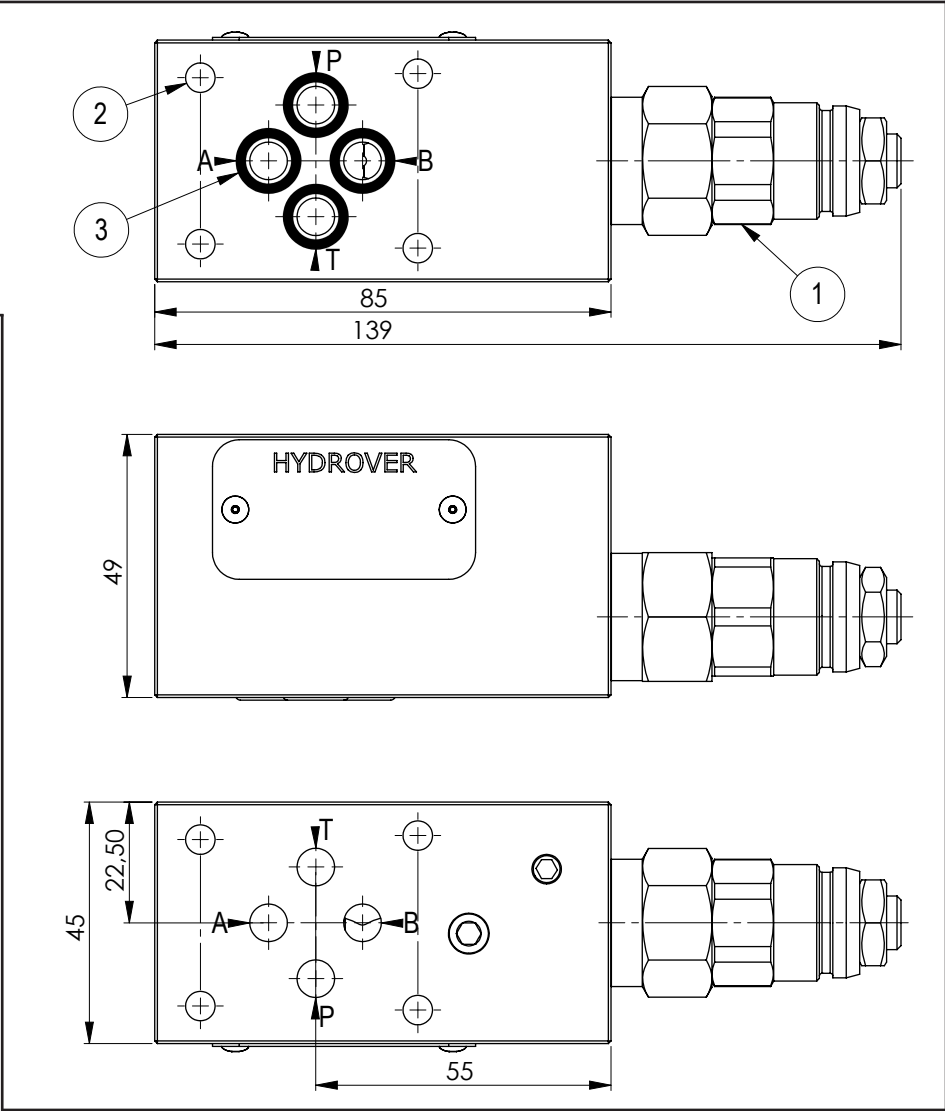


Technical data	
Max. pressure	Aluminium 250 bar Steel 350 bar
Max. flow	25 lpm *
Pilot ratio	4:1
Weight	Aluminium: 0,7 Kg Steel: 1,5 Kg
Manifold material	Steel o Aluminium



N°	Description	Q.ty
1	Bosch Rexroth counterbalance valve <b>VBSN-08AA</b> *	1
2	Ø 5,5 through hole for mounting	4
3	OR 108 i. Ø 8,73 cross section 1,78	4

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue



H3969

Ordering code

H	3	9	6	9	-	-	-
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Hydrover product

Product series

39 series - Cetop 3 modular valves

Product ID

Manifold material

Aluminium

Steel

= A

= S

Counterbalance valve  
adjustment pressure range \*

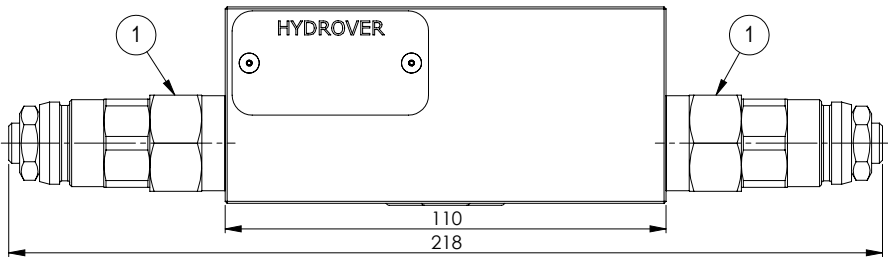
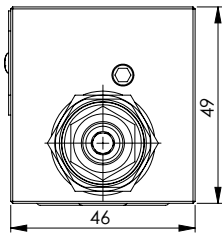
2 = 100-210 bar  
3 = 200-350 bar

Counterbalance valve  
adjustment type \*

S = Screw

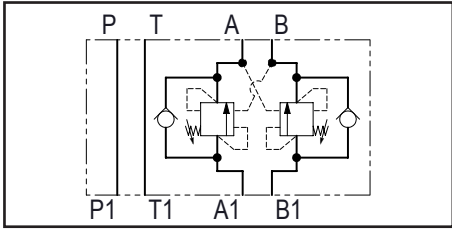
\* Omit if not required. To order the product without the counterbalance cartridge valve, omit the adjustment type and pressure range options: H3969A.  
The manifold will still be provided with the corresponding cavity.

Cetop 3 modular counterbalance valve on A and B / 25 lpm **H3929**



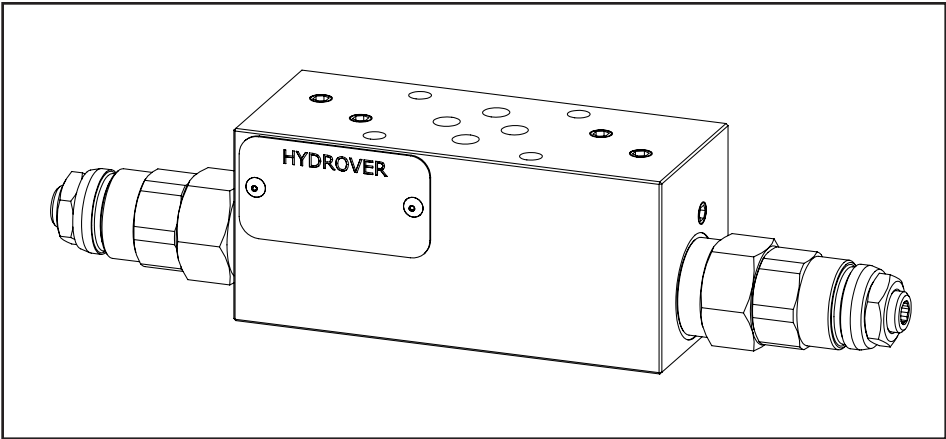
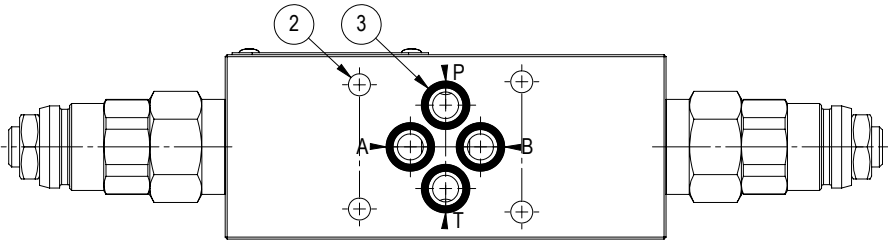
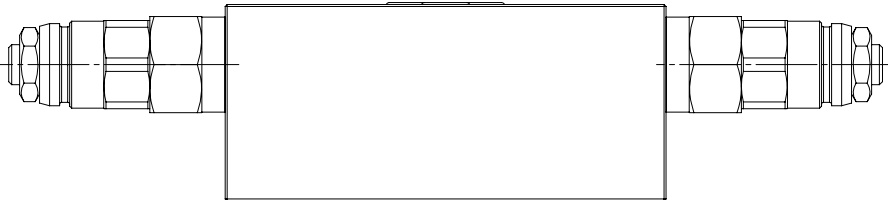
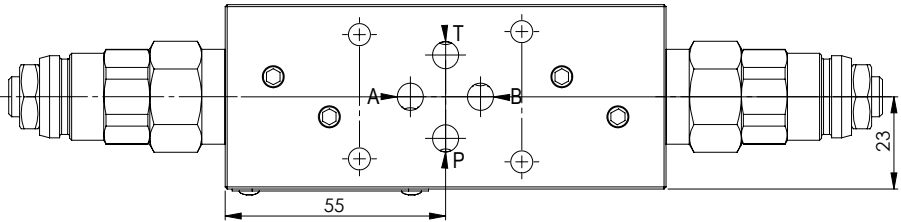
Dimensions in mm

Technical data	
Max. pressure	Aluminium 250 bar Steel 350 bar
Max. flow	25 lpm *
Pilot ratio	4:1
Weight	Aluminium: 1 Kg Steel: 2,1 Kg
Manifold material	Steel o Aluminium



N°	Description	Q.ty
1	Bosch Rexroth counterbalance valve <b>VBSN-08AA</b> *	2
2	Ø 5,5 through hole for mounting	4
3	OR 108 i. Ø 8,73 cross section 1,78	4

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue



H3929

Ordering code

H	3	9	2	9	-	-	-	-	-	-
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Hydrover product

Product series

39 series - Cetop 3 modular valves

Product ID

Manifold material

Aluminium

Steel

= A

= S

Counterbalance valve  
adjustment pressure range on B \*

2 = 100-210 bar

3 = 200-350 bar

Counterbalance valve  
adjustment type on B \*

S = Screw

Counterbalance valve  
adjustment pressure range on A \*

2 = 100-210 bar

3 = 200-350 bar

Counterbalance valve  
adjustment type on A

S = Screw

\* Omit if not required. To order the product without the counterbalance cartridge valves, omit the adjustment type and pressure range options on A e B: H3929A.  
The manifold will still be provided with the corresponding cavities.

Cetop 3 modular counterbalance valve on A / 45 lpm **H3925**

Dimensions in mm

Technical data	
Max. pressure	250 bar
Max. flow	45 lpm *
Pilot ratio	4.2:1
Weight	1,5 Kg
Manifold material	Aluminium

N°	Description	Q.ty
1	Bosch Rexroth counterbalance valve <b>VBSO-SEC-30</b> *	1
2	Ø 5,5 through hole for mounting	4
3	OR 108 i. Ø 8,73 cross section 1,78	4

*\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue*



Ordering code

H	3	9	2	5	A	-	-	-
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Hydrover product

Product series  
39 series - Cetop 3 modular valves

Product ID

Manifold material  
Aluminium

Counterbalance valve  
adjustment pressure range \*

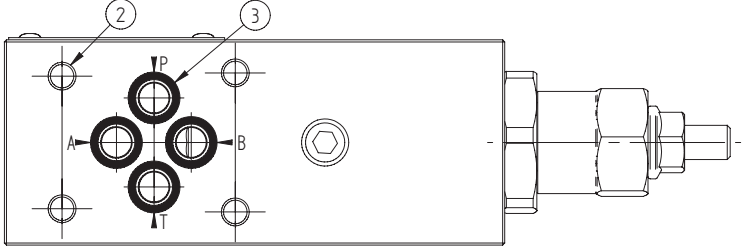
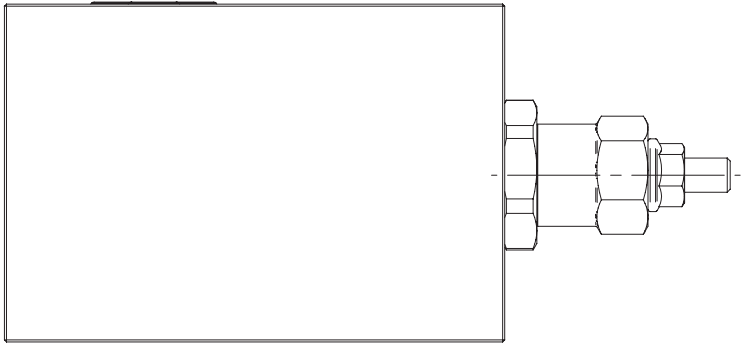
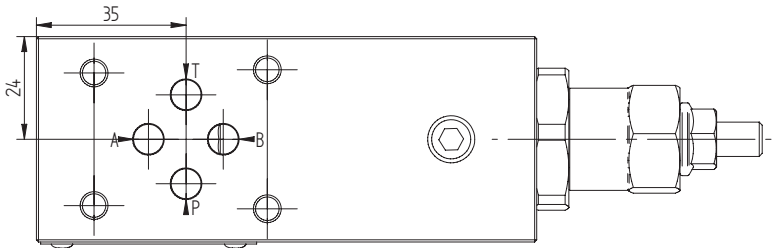
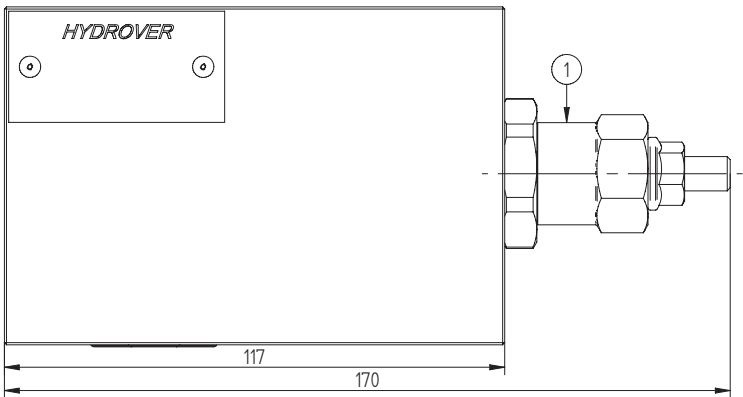
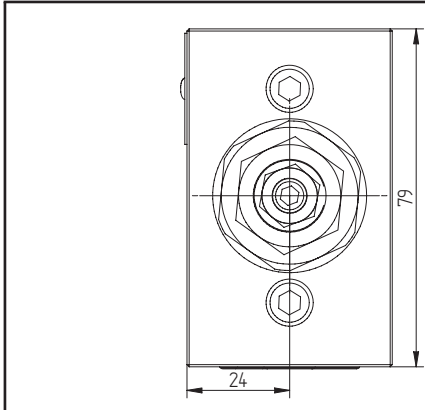
2 =	60-210 bar
3 =	100-350 bar

Counterbalance valve  
adjustment type \*

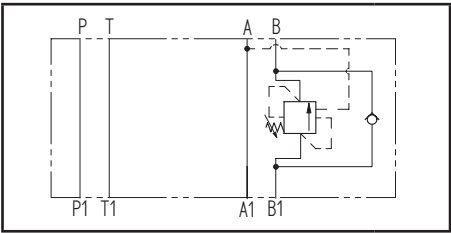
S =	Screw
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\* Omit if not required. To order the product without the counterbalance cartridge valve, omit the adjustment type and pressure range options: H3925A.  
The manifold will still be provided with the corresponding cavity.

Cetop 3 modular counterbalance valve on B / 45 lpm **H3926**



Technical data	
Max. pressure	250 bar
Max. flow	45 lpm *
Pilot ratio	4.2:1
Weight	1,5 Kg
Manifold material	Aluminium



N°	Description	Q.ty
1	Bosch Rexroth counterbalance valve <b>VBSO-SEC-30</b> *	1
2	Ø 5,5 through hole for mounting	4
3	OR 108 i. Ø 8,73 cross section 1,78	4

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

Dimensions in mm

H3926

Ordering code

H	3	9	2	6	A	-	-	-
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Hydrover product

Product series  
39 series - Cetop 3 modular valves

Product ID

Manifold material  
Aluminium

Counterbalance valve  
adjustment pressure range \*

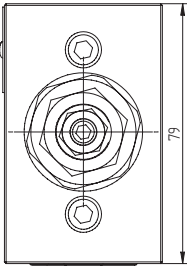
2 =	60-210 bar
3 =	100-350 bar

Counterbalance valve  
adjustment type \*

S =	Screw
-----	-------

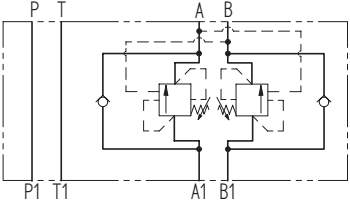
\* Omit if not required. To order the product without the counterbalance cartridge valve, omit the adjustment type and pressure range options: H3926A.  
The manifold will still be provided with the corresponding cavity.

Cetop 3 modular counterbalance valve on A and B / 45 lpm **H3924**



79

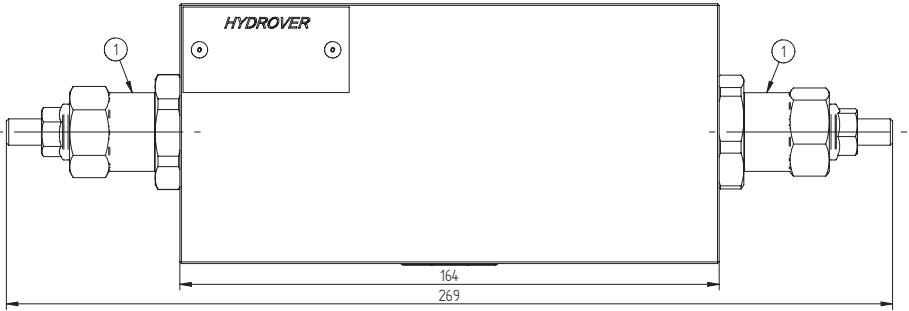
Technical data	
Max. pressure	250 bar
Max. flow	45 lpm *
Pilot ratio	4.2:1
Weight	2 Kg
Manifold material	Aluminium



P1 T1 A1 B1

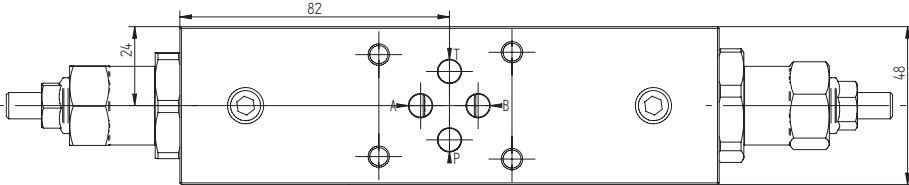
N°	Description	Q.ty
1	Bosch Rexroth counterbalance valve <b>VBSO-SEC-30</b> *	2
2	Ø 5,5 through hole for mounting	4
3	OR 108 i. Ø 8,73 cross section 1,78	4

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue




164 269 48

HYDROVER



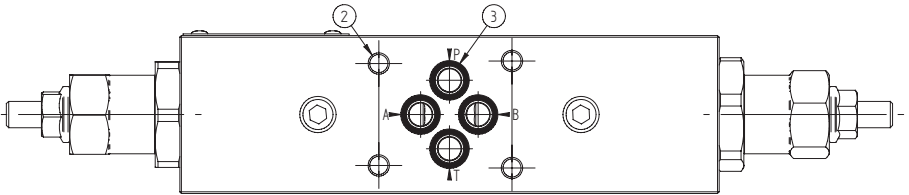
82 48

HYDROVER



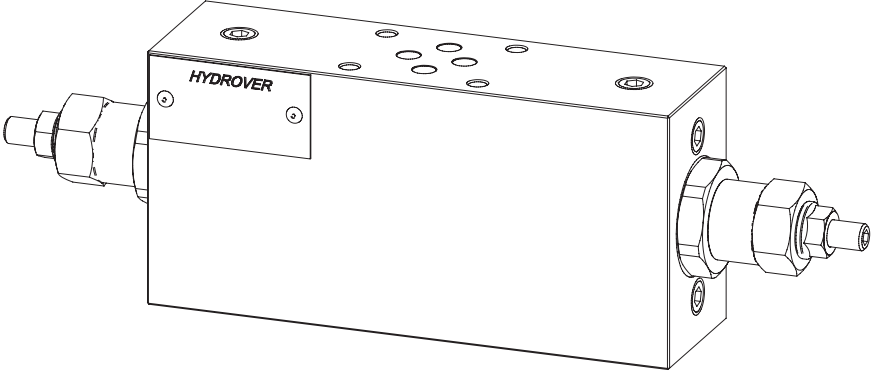
82 48

HYDROVER



82 48

HYDROVER



HYDROVER

Dimensions in mm

H3924

Ordering code

H	3	9	2	4	A	-	-	-	-	-
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Hydrover product

Product series  
39 series - Cetop 3 modular valves

Product ID

Manifold material  
Aluminium

Counterbalance valve  
adjustment pressure range  
on B \*

2 = 60-210 bar  
3 = 100-350 bar

Counterbalance valve  
adjustment type on B \*

S = Screw

Counterbalance valve  
adjustment pressure range on A \*

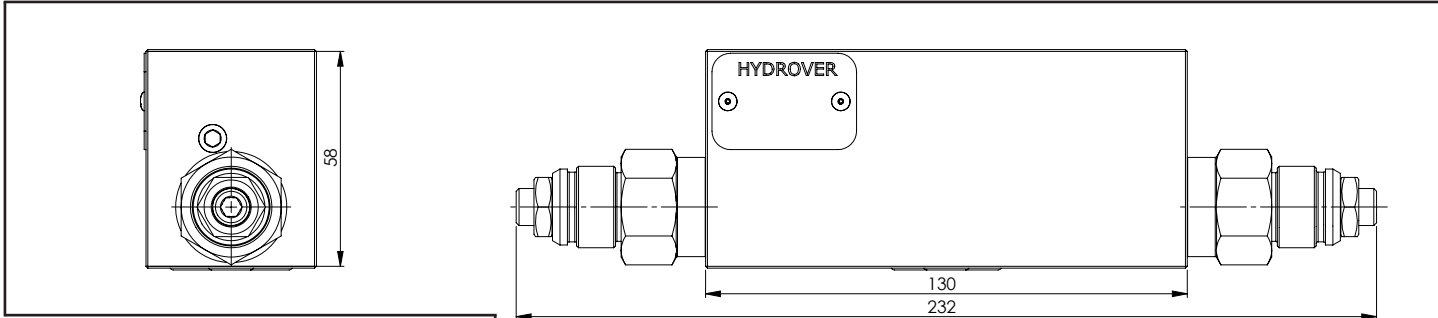
2 = 60-210 bar  
3 = 100-350 bar

Counterbalance valve  
adjustment type on A

S = Screw

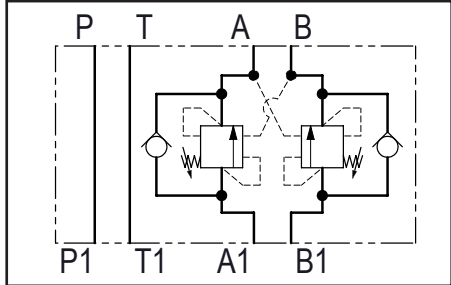
\* Omit if not required. To order the product without the counterbalance cartridge valves, omit the adjustment type and pressure range options on A e B: H3924A.  
The manifold will still be provided with the corresponding cavities.

Cetop 3 modular counterbalance valve on A and B / 60 lpm **H3984**



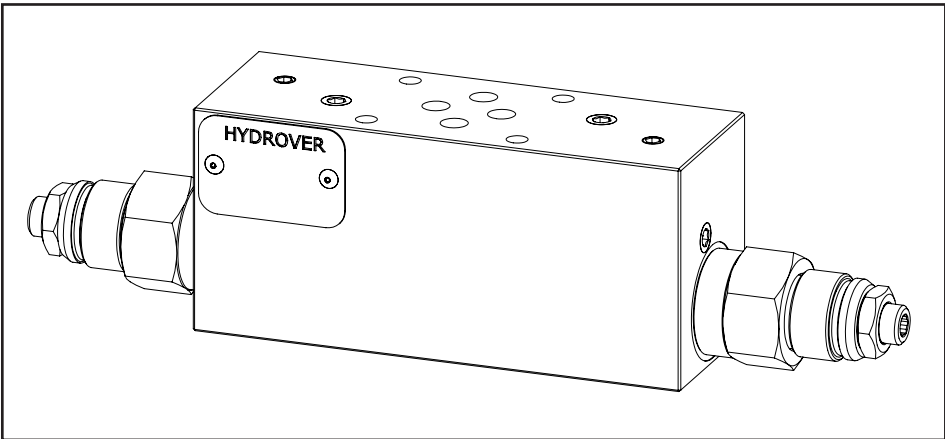
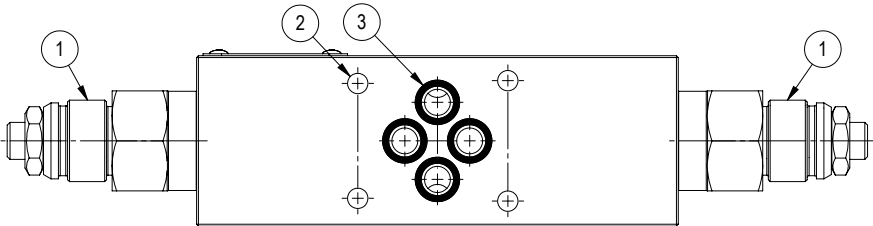
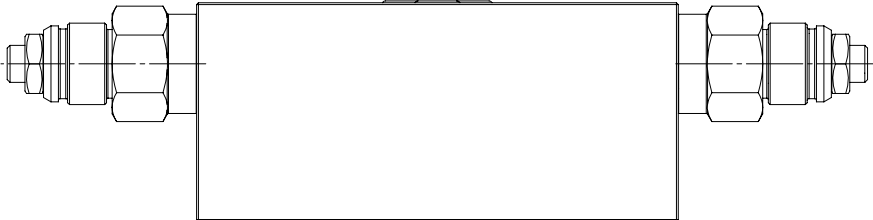
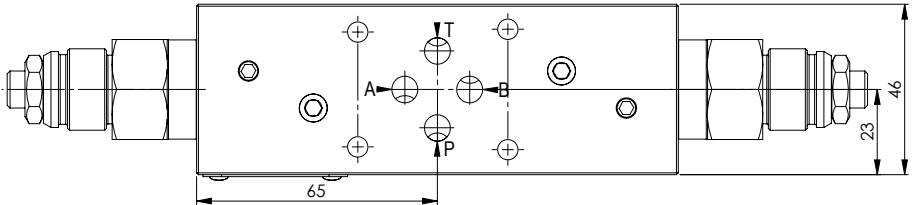
Dimensions in mm

Technical data	
Max. pressure	350 bar
Max. flow	60 lpm *
Weight	2,8 Kg
Manifold material	Steel



N°	Description	Q.ty
1	Bosch Rexroth counterbalance valve <b>VBSN-10A</b> *	2
2	Ø 5,5 through hole for mounting	4
3	OR 108 i. Ø 8,73 cross section 1,78	4

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue



H3984

Ordering code

H	3	9	8	4	S	-	-	-	-	-	-	-
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Hydrover product

Product series  
39 series - Cetop 3 modular valves

Product ID

Manifold material  
Aluminium

Counterbalance valve adjustment type on A \*  
Screw = S

Counterbalance valve adjustment pressure range on A \*  
70-210 bar = 2  
140-350 bar = 3

Counterbalance valve  
pilot ratio  
on B \*  
3 = 3:1  
8 = 8:1

Counterbalance valve  
adjustment pressure range  
on B \*  
2 = 70-210 bar  
3 = 140-350 bar

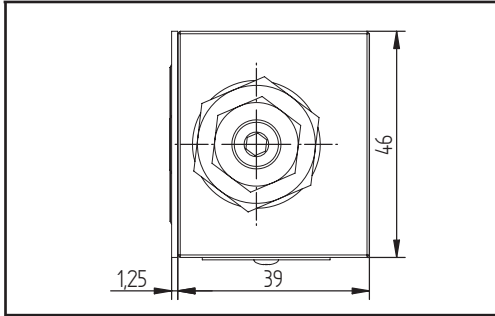
Counterbalance valve  
adjustment type on B \*  
Screw  
S =

Counterbalance valve  
pilot ratio on A \*  
3 = 3:1  
8 = 8:1

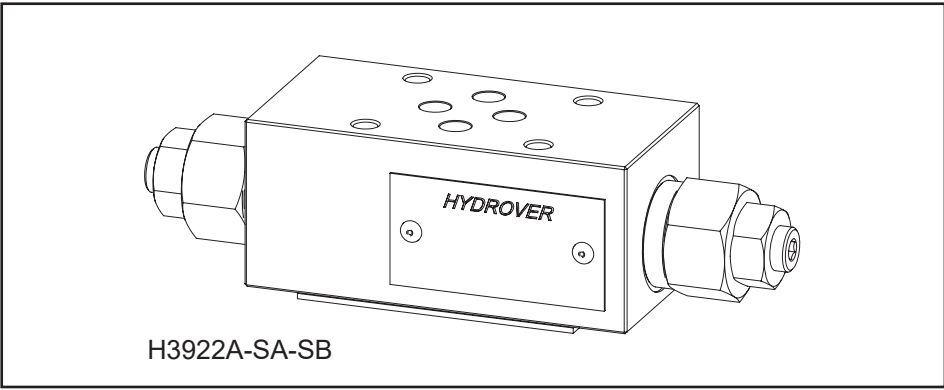
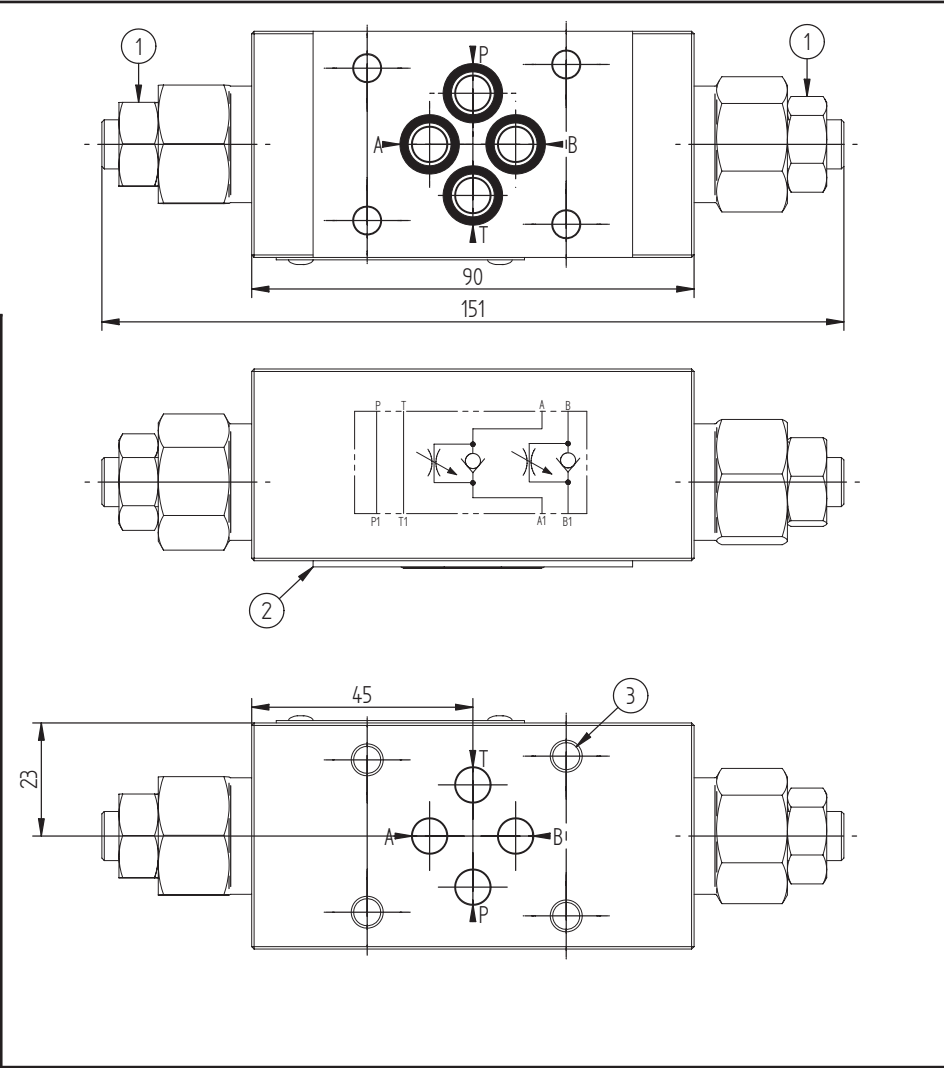
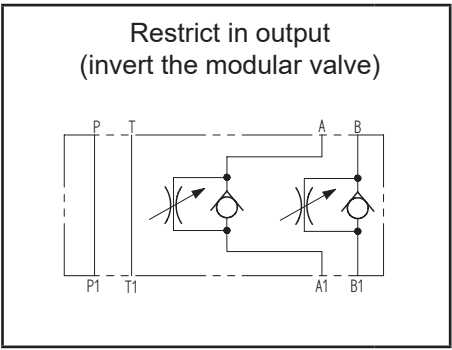
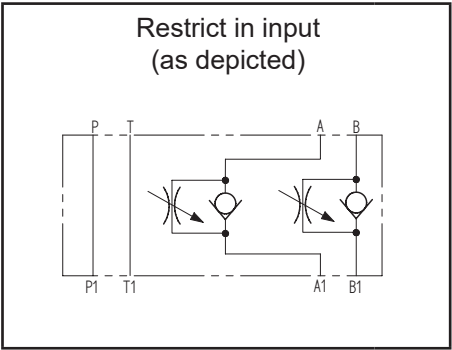
\* Omit if not required. To order the product without the counterbalance cartridge valves, omit the adjustment type, pressure range and pilot ratio options: H3984A.  
The manifold will still be provided with the corresponding cavities.

Cetop 3 modular valve with unidirectional flow restrictors on A / B / A and B

H3922



Technical data	
Max. pressure	Aluminium: 250 bar Steel: 350 bar
Max. flow	40 lpm *
Weight with 1 valve	Aluminium: 0,7 Kg Steel: 1,4 Kg
Weight with 2 valves	Aluminium: 0,8 Kg Steel: 1,5 Kg
Manifold material	Aluminium o Steel



N°	Description	Q.ty
1	Bosch Rexroth unidirectional flow restrictor <b>STVU-08A</b> * depicted with screw adjustment	1/2
2	Seal plate	4
3	Ø 5,5 through hole for mounting	4

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue



Ordering code

H	3	9	2	2	-	-	-	-	-	-
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Hydrover product

Product series

39 series - Cetop 3 modular valves

Product ID

Manifold material

Aluminium  
Steel

= A  
= S

Unidirectional flow restrictor on B

SB = Screw  
KB = Knob  
TB = Without flow restrictor

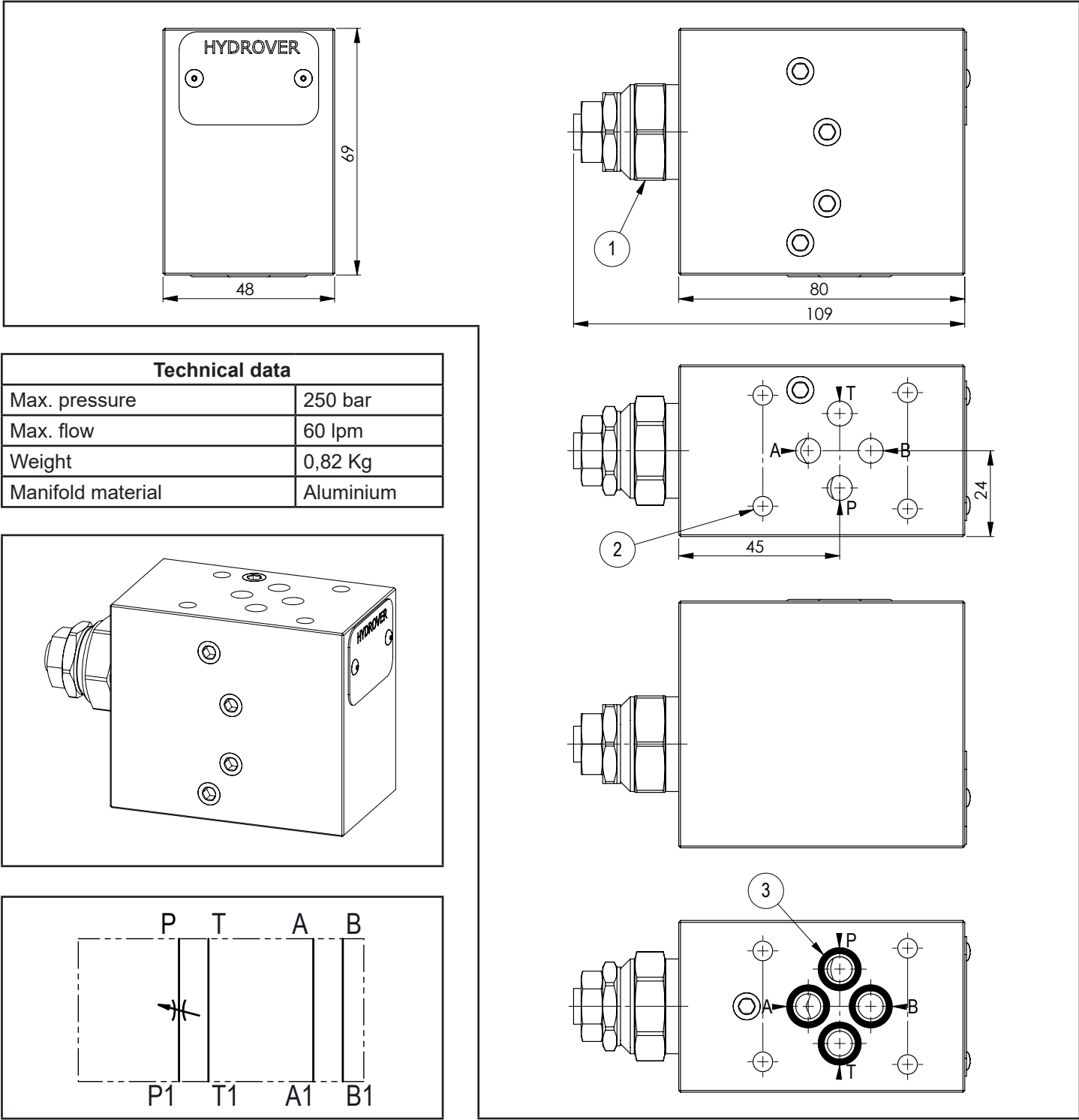
Unidirectional flow restrictor on A

SA = Screw  
KA = Knob  
TA = Without flow restrictor

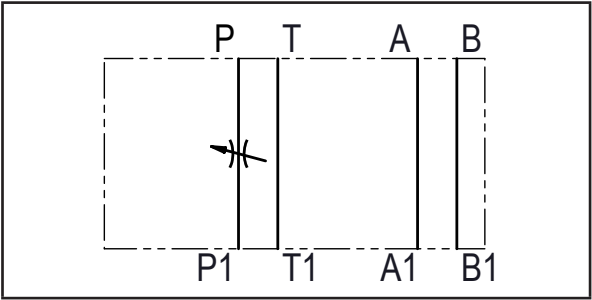
To inhibit one of the flow restrictors, substitute the related options with T: eg. H3922A-TA-SB.  
In the cavity it will be mounted a short plug.

Valve	Cavity	Short plug code
Bosch Rexroth unidirectional flow restrictor STVU-08A	CA-08A-2N	R-800-008

Cetop 3 modular valve with bidirectional flow restrictor on P H3956



Technical data	
Max. pressure	250 bar
Max. flow	60 lpm
Weight	0,82 Kg
Manifold material	Aluminium



N°	Description	Q.ty
1	Bosch Rexroth bidirectional flow restrictor <b>OD.21.01-X-36</b> * depicted with screw adjustment.	1
2	Ø 5,5 through hole for mounting	4
3	OR 108 i. Ø 8,73 cross section 1,78	4

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

Ordering code

H	3	9	5	6	A	_	Q
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Hydrover product

Product series

39 series - Cetop 3 modular valves

Product ID

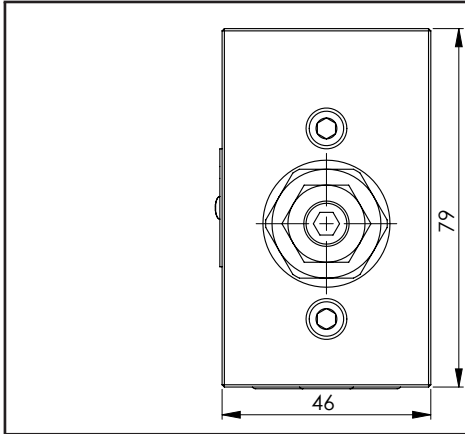
Flow restrictor adjustment type

S = Screw  
K = Knob

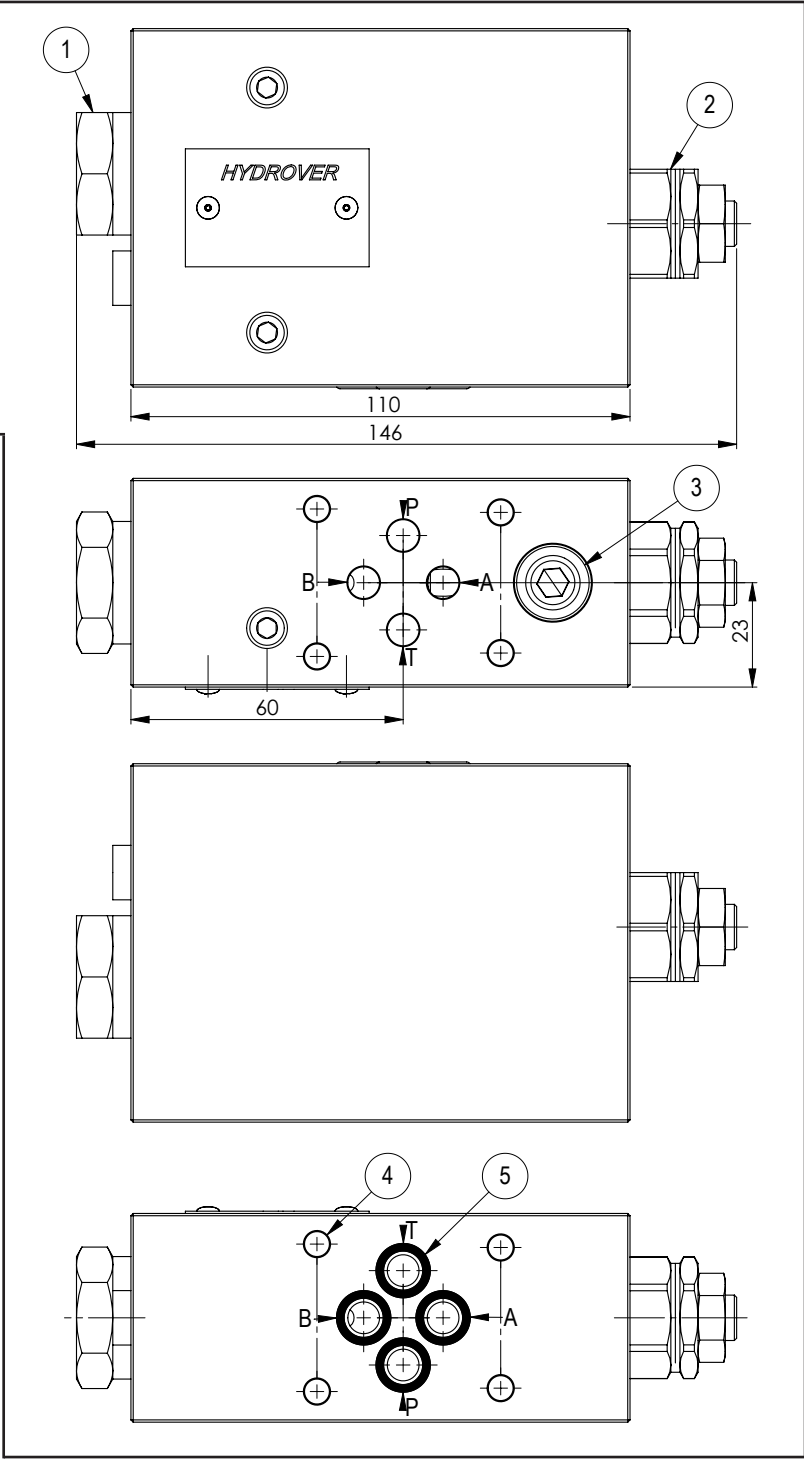
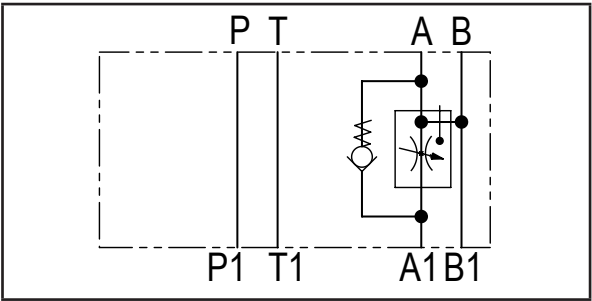
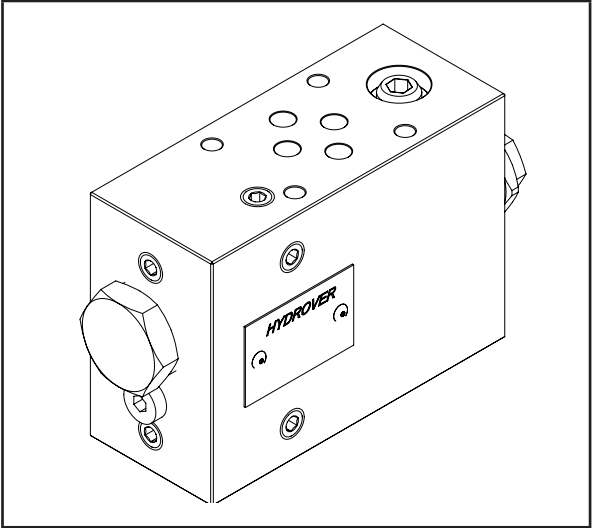
Manifold material

Aluminium

Cetop 3 modular 3 way compensated flow regulator valve on A **H3947**



Technical data	
Max. pressure	250 bar
Max. flow	30 lpm
Weight	1,3 Kg
Manifold material	Aluminium



N°	Description	Q.ty
1	Pressure compensator	1
2	Bosch Rexroth bidirectional flow restrictor <b>OD.21.01-X-56</b> * depicted with screw adjustment.	1
3	Check valve	4
4	Ø 5,5 through hole for mounting	4
5	OR 108 i. Ø 8,73 cross section 1,78	4

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

Ordering code

H	3	9	4	7	A	_	_	Q
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Hydrover product

Product series

39 series - Cetop 3 modular valves

Product ID

Flow regulator adjustment type

S = Screw  
K = Knob

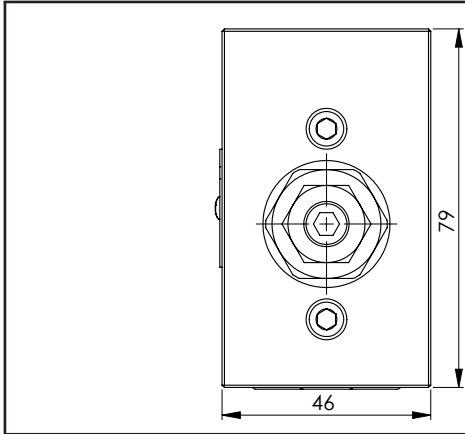
Compensator spring

6 = 6 bar (standard)  
1 = 12 bar

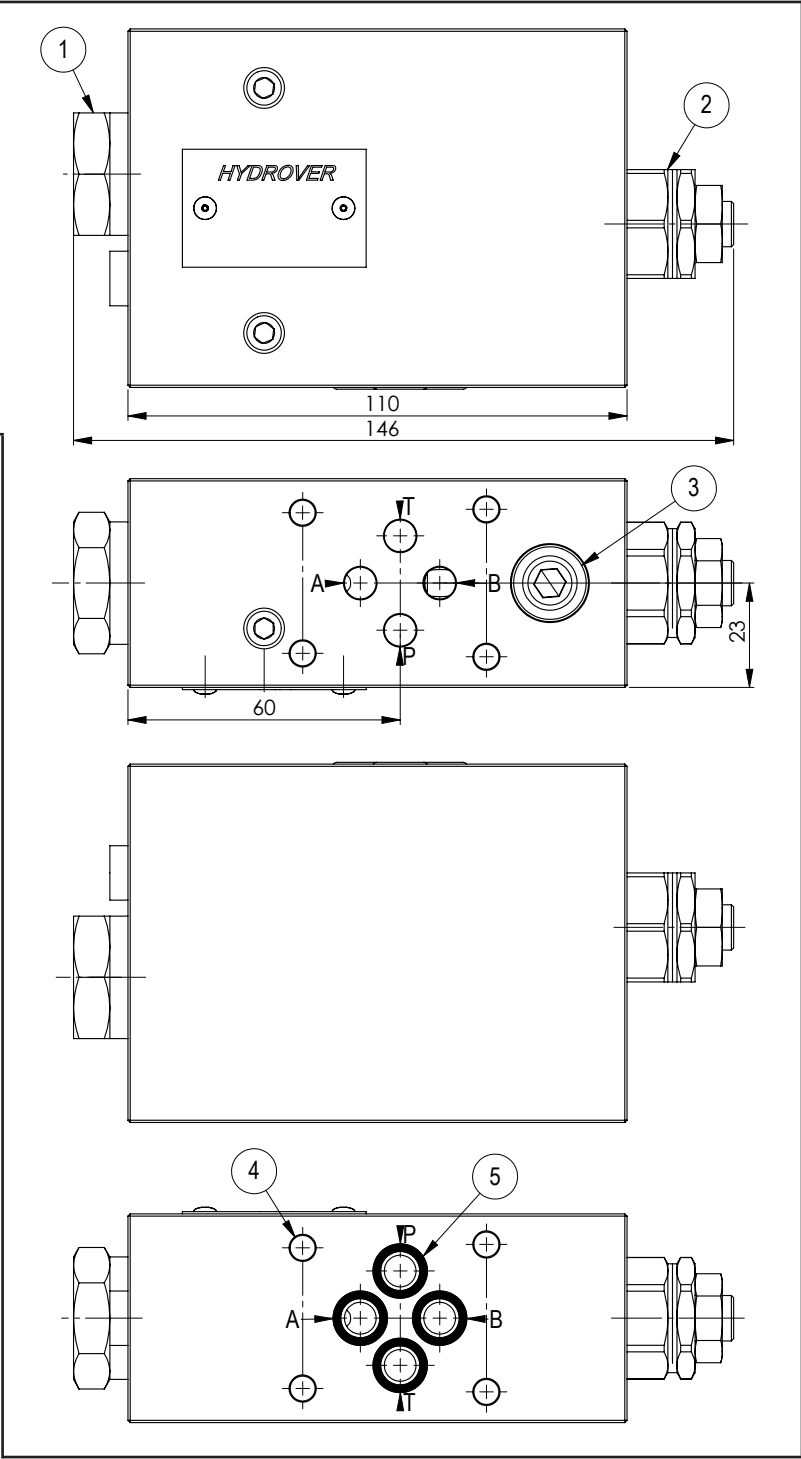
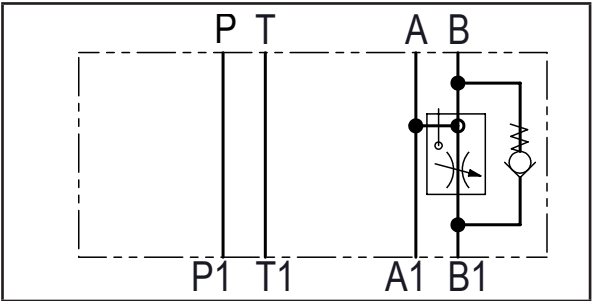
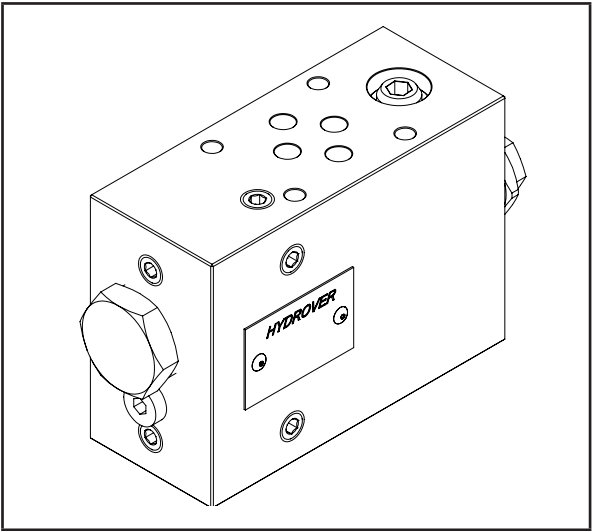
Manifold material

Aluminium

Cetop 3 modular 3 way compensated flow regulator valve on B H3930



Technical data	
Max. pressure	250 bar
Max. flow	30 lpm
Weight	1,3 Kg
Manifold material	Aluminium



Dimensions in mm

N°	Description	Q.ty
1	Pressure compensator	1
2	Bosch Rexroth bidirectional flow restrictor <a href="#">OD.21.01-X-56</a> * depicted with screw adjustment	1
3	Bosch Rexroth check valve	4
4	Ø 5,5 through hole for mounting	4
5	OR 108 i. Ø 8,73 cross section 1,78	4

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

Ordering code

H	3	9	3	0	A	_	_	Q
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Hydrover product

Product series

39 series - Cetop 3 modular valves

Product ID

Flow regulator adjustment type

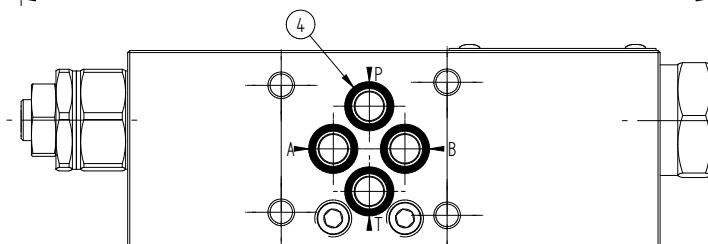
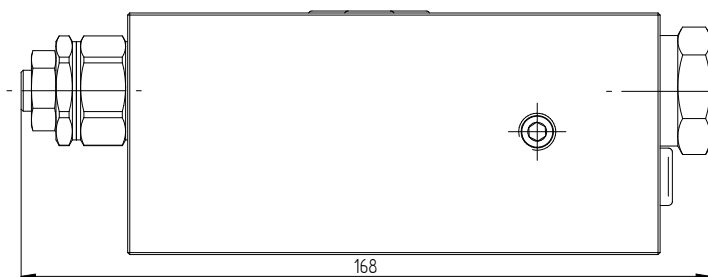
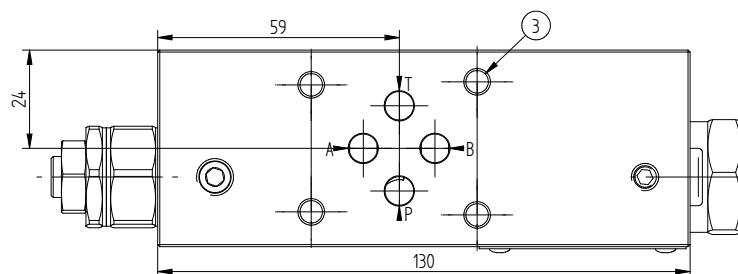
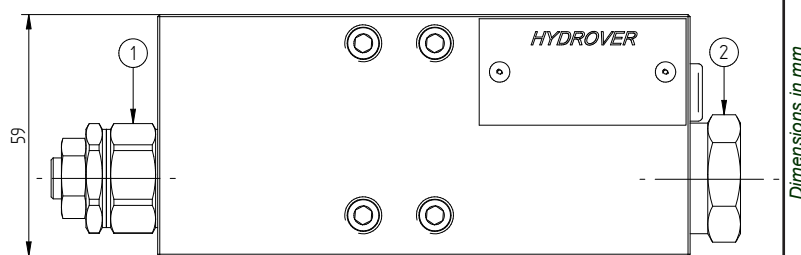
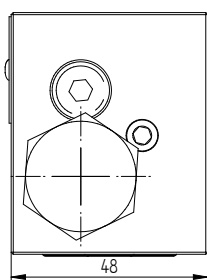
S = Screw  
K = Knob

Compensator spring

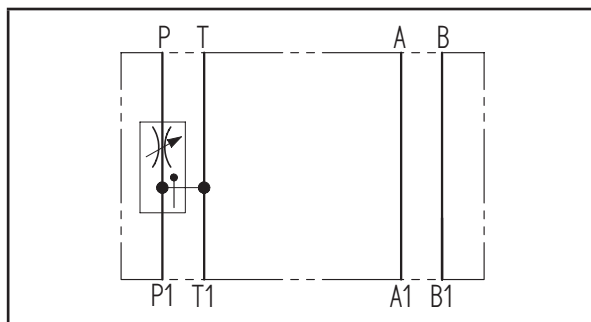
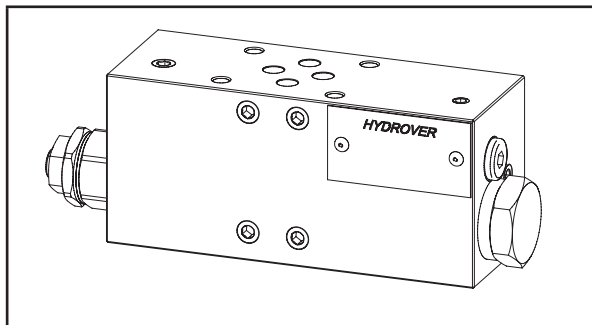
6 = 6 bar (standard)  
1 = 12 bar

Manifold material

Aluminium



Technical data	
Max. flow	30 lpm
<b>With Aluminium manifold</b>	
Max. pressure	250 bar
Weight	1,2 Kg
<b>With steel manifold</b>	
Max. pressure	350 bar
Weight	2,8 Kg



N°	Description	Q.ty
1	Bosch Rexroth bidirectional flow restrictor <b>OD.21.01-X-56</b> * depicted with screw adjustment	1
2	Pressure compensator	1
3	Ø 5,5 through hole for mounting	4
4	OR 108 i. Ø 8,73 cross section 1,78	4

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue



## Ordering code

H	3	9	0	7	_	_	_	Q
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## Hydrover product

## Product series

39 series - Cetop 3 modular valves

## Product ID

## Flow regulator adjustment type

S = Screw  
K = Knob

## Compensator spring

6 = 6 bar (standard)  
1 = 12 bar

## Manifold material

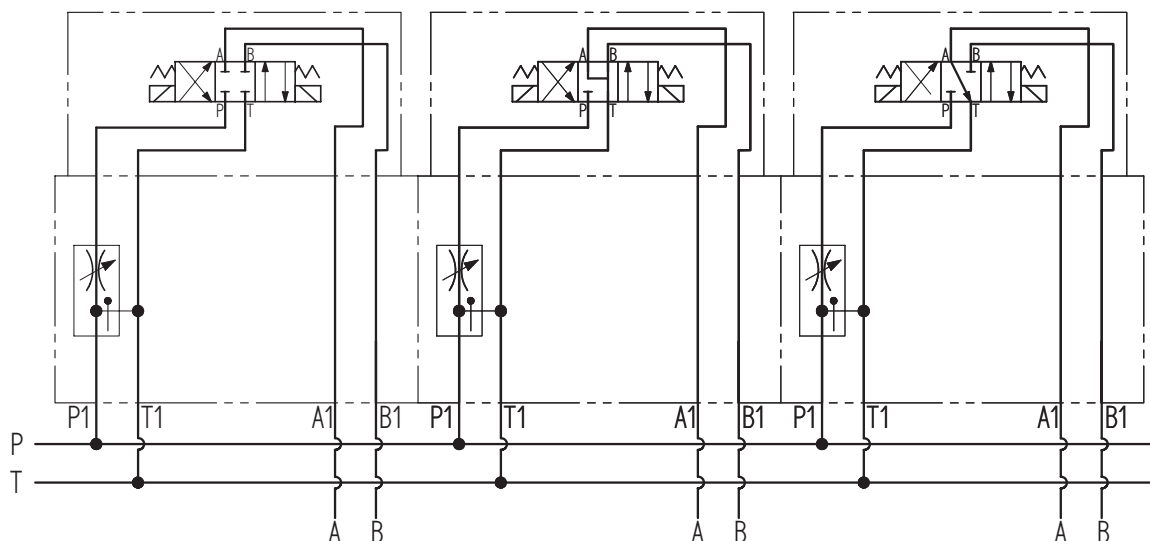
A = Aluminium  
S = Steel

## Notes:

With the 3 way compensated flow regulation it's possible to work to the load pressure plus 4/12 bar (compensator spring) rather than at the maximum pressure valve setting as with the 2 way type.

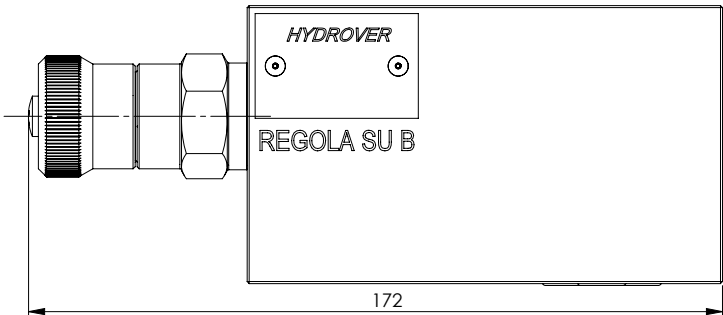
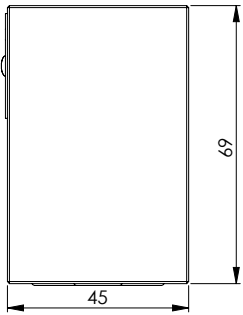
You can use several modular 3 way compensated flow regulation valves in parallel (see example), but:

- the solenoid valves must have the P closed
- you can't do simultaneous actions
- you can't close completely one or more flow regulators

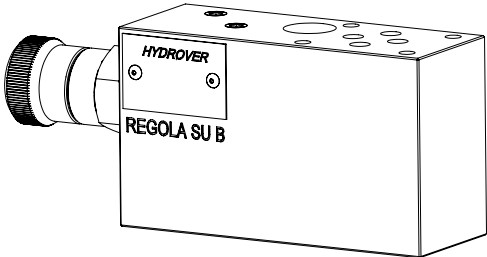


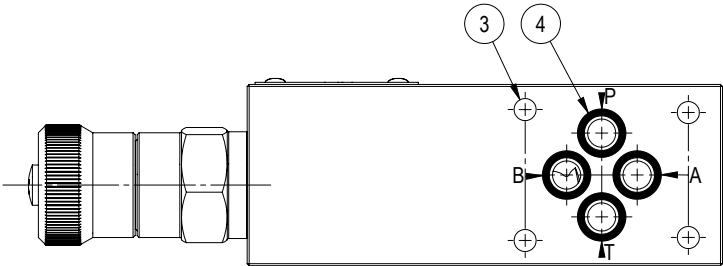
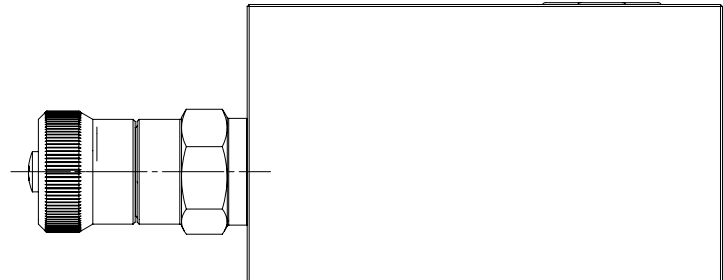
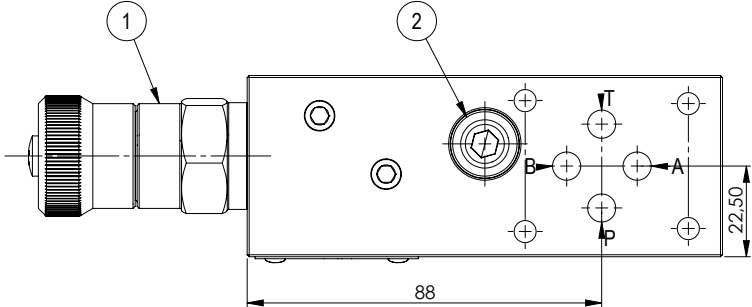
Cetop 3 modular 3 way compensated priority flow regulator valve on B

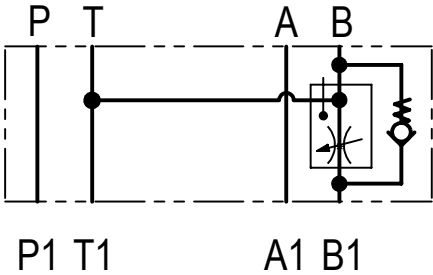
H3961



Technical data	
Max. pressure	250 bar
Max. flow	60 lpm *
Regulated max. flow	30 lpm *
Weight	1,1 Kg
Manifold material	Aluminium







Dimensions in mm

N°	Description	Q.ty
1	Bosch Rexroth 3 way compensated flow regulator <b>04.04.02.40.85.40 - VRFD-10A-M-40*</b>	1
2	Bosch Rexroth check valve	1
3	Ø 5,5 through hole for mounting	4
4	OR 108 i. Ø 8,73 cross section 1,78	4

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

Ordering code

H	3	9	6	1	A	-	_	_
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Hydrover product

Product series

39 series - Cetop 3 modular valves

Product ID

Flow regulator range\*  
0,2 - 30 lpm

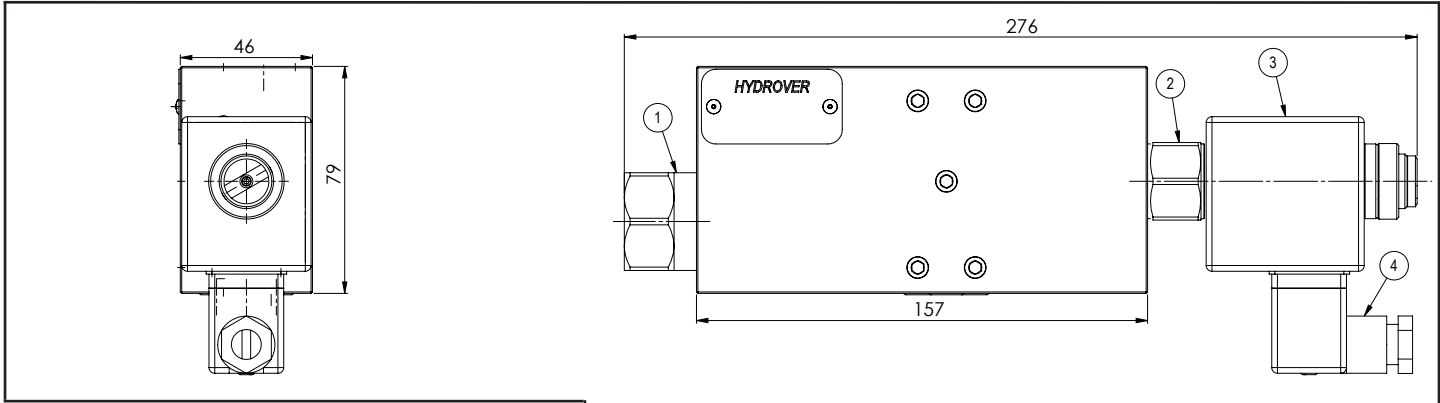
Flow regulator adjustment type\*  
Calibrated knob

Manifold material  
Aluminium

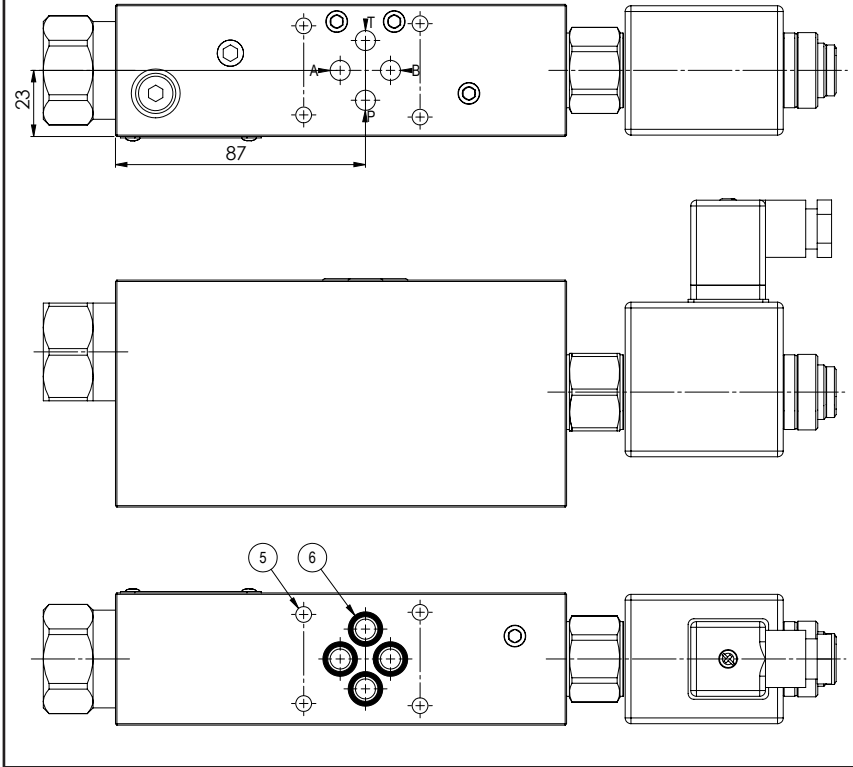
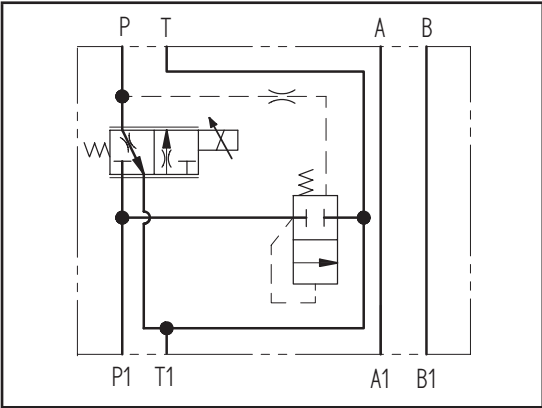
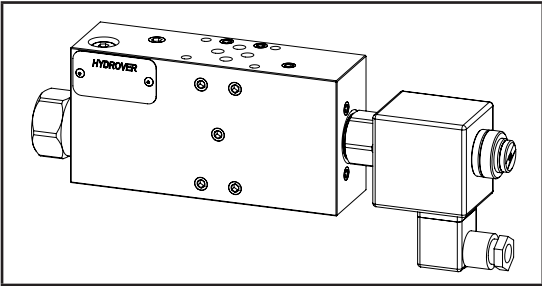
Product available on request also on P or A.

\* Omit if not required. To order the product without the flow regulator cartridge valve, omit the flow regulator adjustment type and flow range options: H3961A.  
The manifold will still be provided with the corresponding cavity.

Cetop 3 modular 3 way compensated proportional flow regulator valve on P **H3912**



Technical data	
Max. pressure	210 bar
Input max. flow	65 lpm
Weight	2,2 Kg
Manifold material	Aluminium



N°	Description	Q.ty
1	Pressure compensator	1
2	Bosch Rexroth proportional solenoid valve <b>VEP-5A-2Q-09 / OD.92.05.77-Y-Z *</b>	1
3	Bosch Rexroth coil <b>S5-356</b> - CLASS H DIN 43650 ISO 4400 *	1
4	Connector DIN 43650 ISO 4400	1
5	Ø 5,5 through hole for mounting	4
6	OR 108 i. Ø 8,73 cross section 1,78	4

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

Ordering code

H	3	9	1	2	A	_	_	_	_	-	_	_	_
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Hydrover product

Product series

39 series - Cetop 3 modular valves

Product ID

Manifold material

Aluminium

Compensator spring

5.5 bar (standard)	= 6
12.5 bar	= 1
19 bar	= 2

Proportional solenoid valve  
coil connection \*

1 = DIN 43650 ISO 4400

Proportional solenoid valve  
coil voltage \*

OB =	12V DC
OC =	24V DC

Proportional solenoid valve max. flow \*

1 =	20 lpm
2 =	30 lpm
3 =	40 lpm

To evaluate the max. flow refer to  
**VEP-5A-2Q-09 / OD.92.05.77-Y-Z**  
proportional solenoid valve catalogue and to  
the compensator spring.

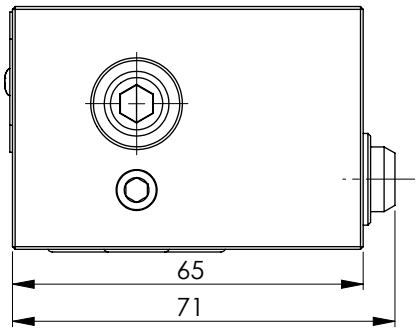
Proportional solenoid valve manual override \*

E0 =	Without
EV =	Screw

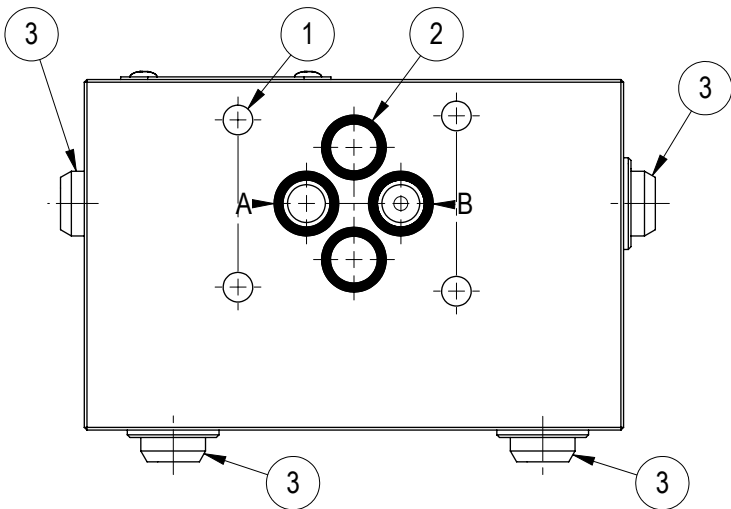
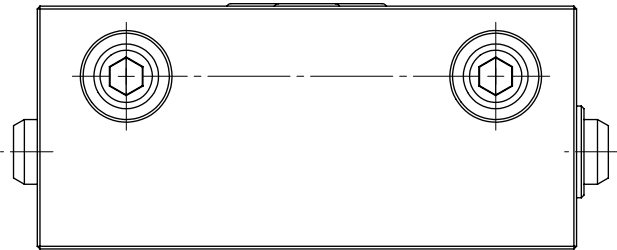
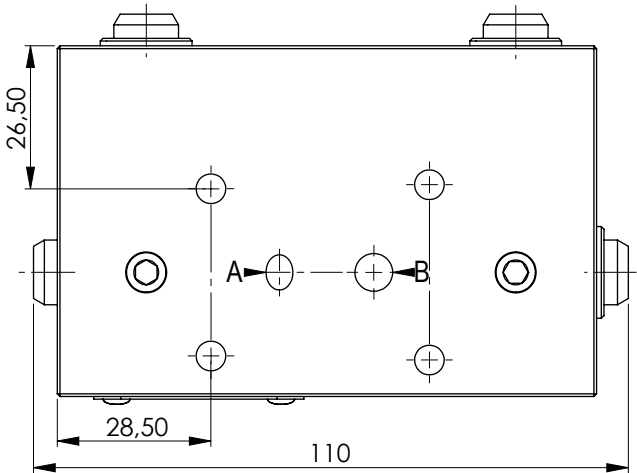
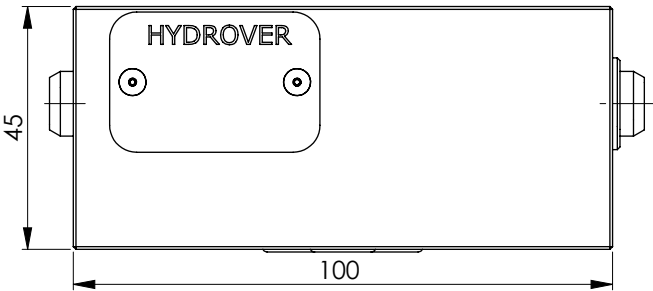
\* Omit if not required. For example, to order the product without the proportional solenoid cartridge valve, omit the coil connection, coil voltage, max. flow and manual override options: H3912A6.  
The manifold will still be provided with the corresponding cavity.

Cetop 3 modular bridge of wheatstone rectifier for 2 way flow regulator

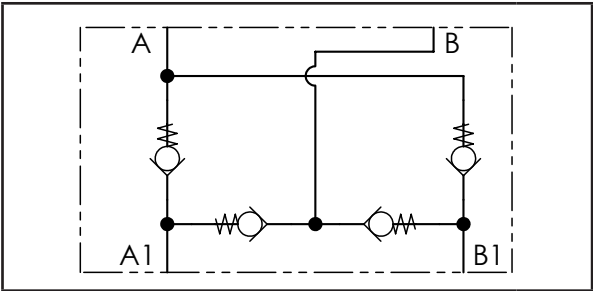
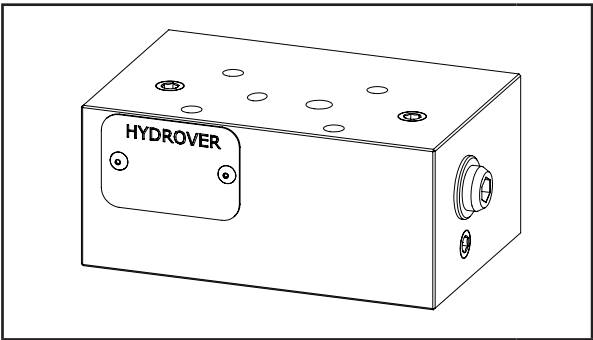
H3991



Please note that the standard width of a Cetop 3 modular valve is 45 mm. This one is 71 mm. Consequently, the potential station on the check valve side must be empty.



Technical data	
Max. pressure	250 bar
Max. flow	15 lt/1
Weight	0,9 Kg
Manifold material	Aluminium



N°	Description	Q.ty
1	Ø 5,5 through hole for mounting	4
2	OR 108 i. Ø 8,73 cross section 1,78	4
3	Bosch Rexroth check valve	4

Dimensions in mm

Ordering code

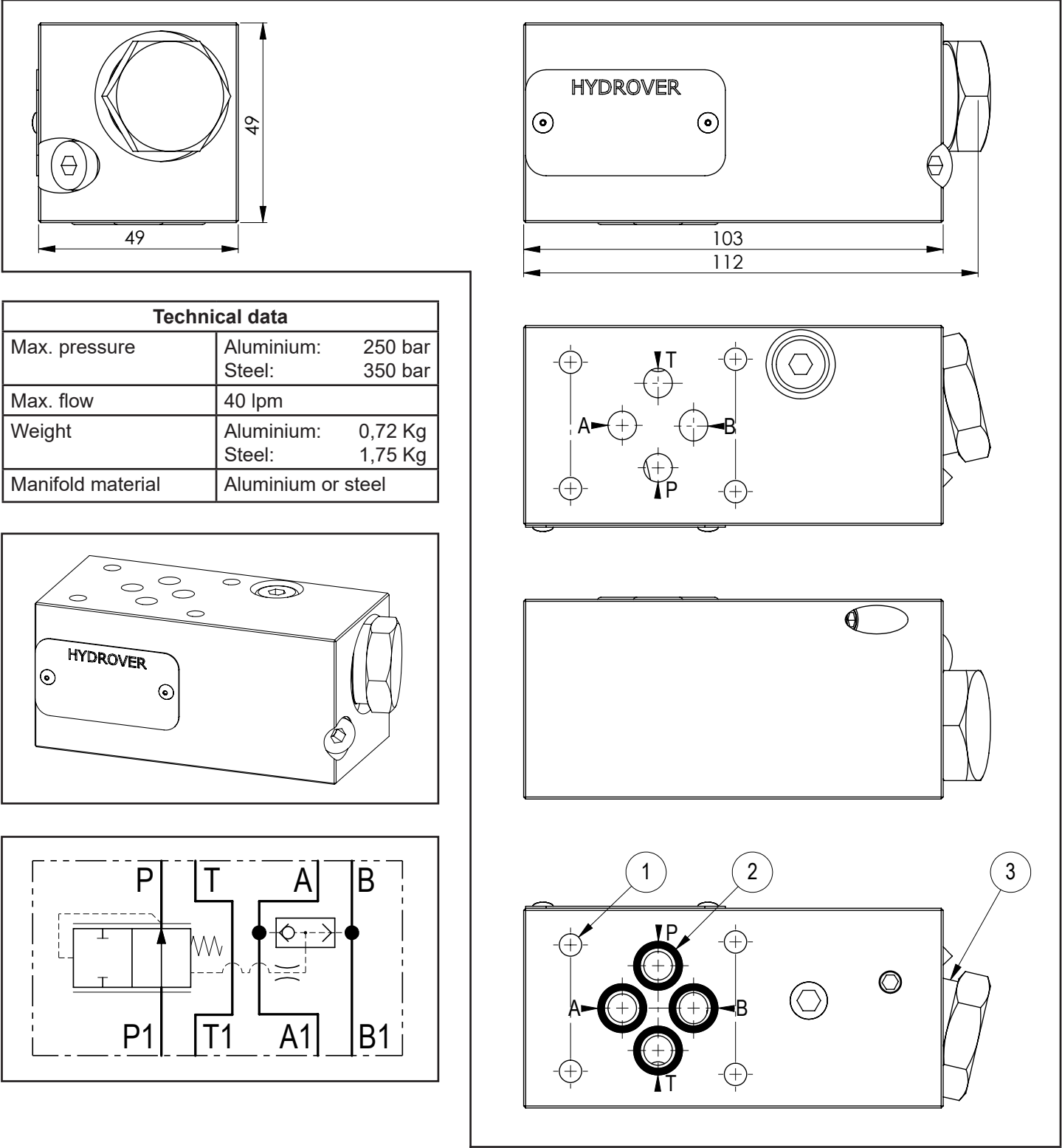
H	3	9	9	1	A
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Hydrover product

Manifold material  
Aluminium

Product series  
39 series - Cetop 3 modular valves

Product ID



N°	Description	Q.ty
1	Foro passante Ø 5,5 per fissaggio	4
2	Ø 5,5 through hole for mounting	4
3	OR 108 i. Ø 8,73 cross section 1,78	1



Ordering code

H	3	9	1	0	9	_
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Hydrover product

Product series

39 series - Cetop 3 modular valves

Manifold material

Aluminium

Steel

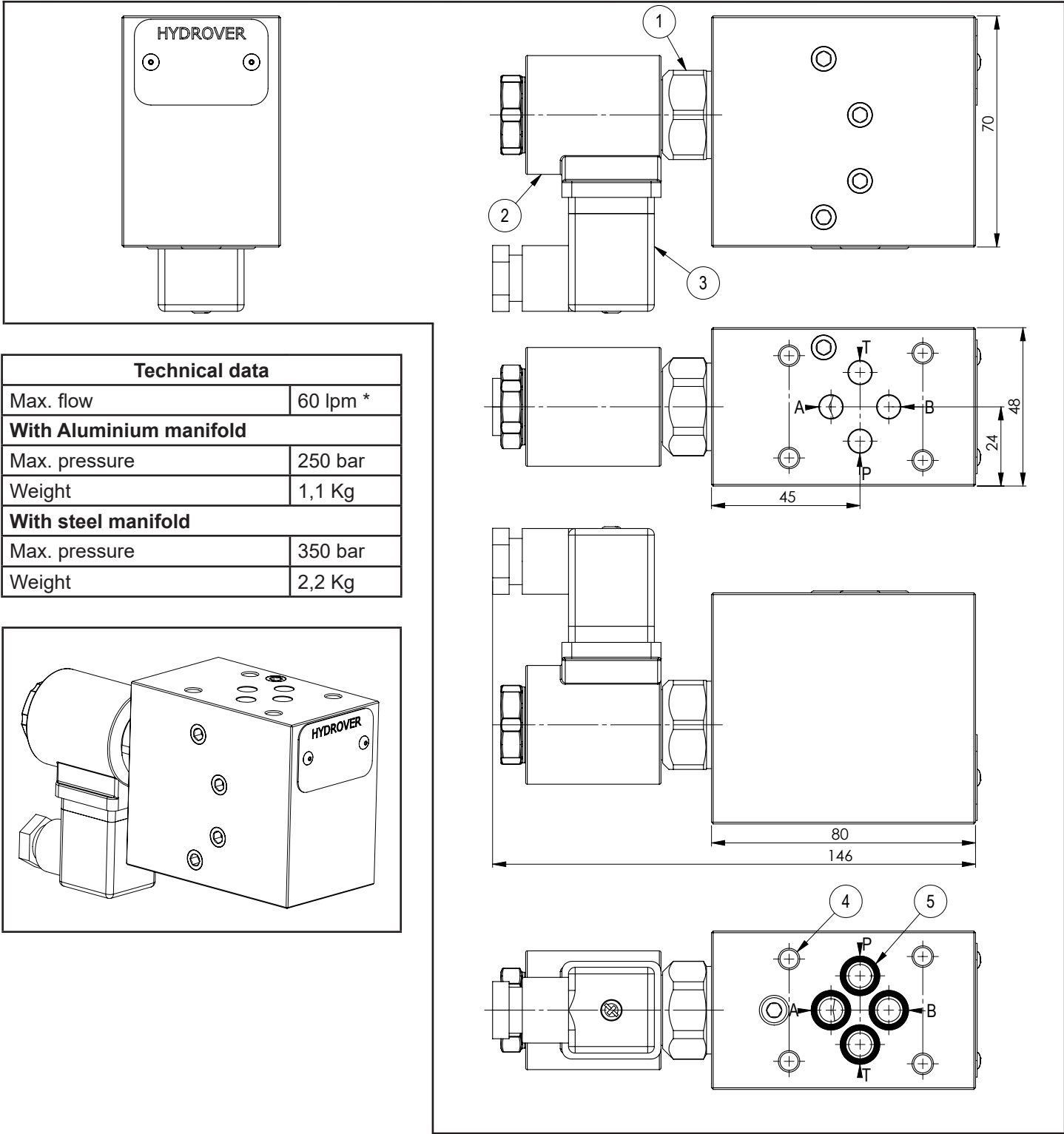
A =

S =

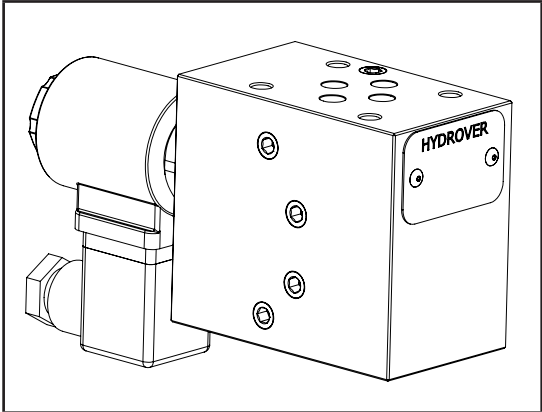
Product ID

Cetop 3 modular poppet type solenoid operated directional valve between P1 and P / 60 lpm

H3934



Technical data	
Max. flow	60 lpm *
<b>With Aluminium manifold</b>	
Max. pressure	250 bar
Weight	1,1 Kg
<b>With steel manifold</b>	
Max. pressure	350 bar
Weight	2,2 Kg



N°	Description	Q.ty
1	Bosch Rexroth solenoid valve <b>VEI-16-10A-NC OD.15-X-36-Y-000000</b> (normally closed) or <b>VEI-16-10A-NA OD.15-X-36-Y-000000</b> (normally open) depicted without manual override *	1
2	Bosch Rexroth coil <b>D36</b> - CLASS H DIN 43650 ISO 4400 *	1
3	Connector DIN 43650 ISO 4400	1
4	Ø 5,5 through hole for mounting	4
5	OR 108 i. Ø 8,73 cross section 1,78	4

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

Ordering code

H	3	9	3	4	-	-	-	-	-	-	-	-
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Hydrover product

Product series  
39 series - Cetop 3 modular valves

Product ID

Manifold material  
Aluminium = A  
Steel = S

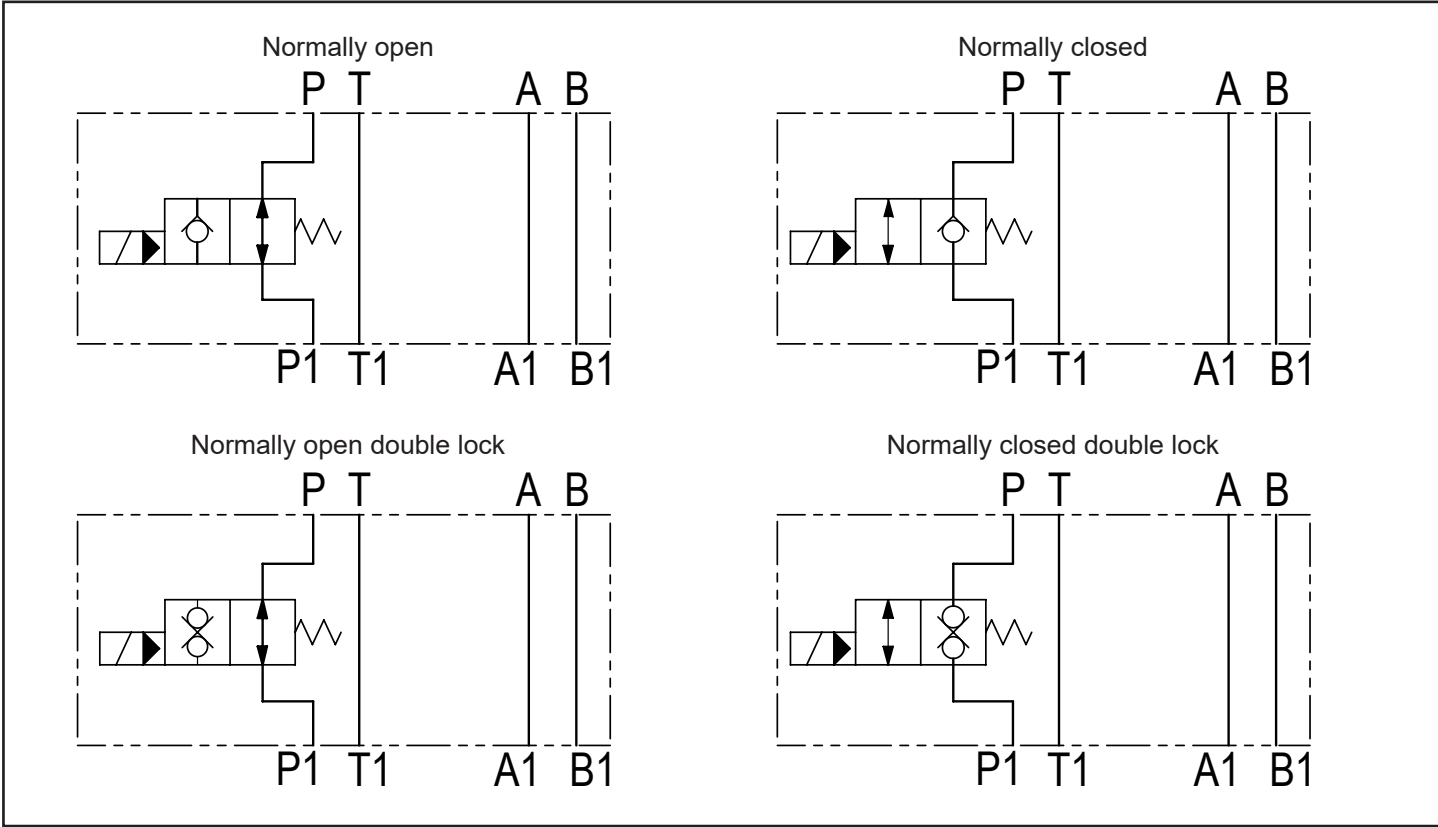
Solenoid valve spool type \*  
Normally open = NA  
Normally closed = NC  
Normally open double lock = 2A  
Normally closed double lock = 2C

Solenoid valve coil connection \*  
1 = DIN 43650 ISO 4400

Solenoid valve coil voltage \*  
OB = 12V DC  
OC = 24V DC  
OD = 48V DC  
OU = 110V RAC  
AH = 230V RAC

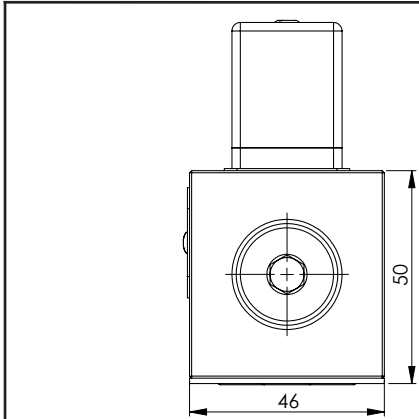
Solenoid valve manual override \*  
E0 = Without  
EP = Push (NA, 2A)  
EV = Screw (NC, 2C)  
EG = Push and twist (NA, 2A)

\* Omit if not required. For example, to order the product without coil, omit the solenoid valve coil connection and coil voltage options: H3934A-NC-E0.

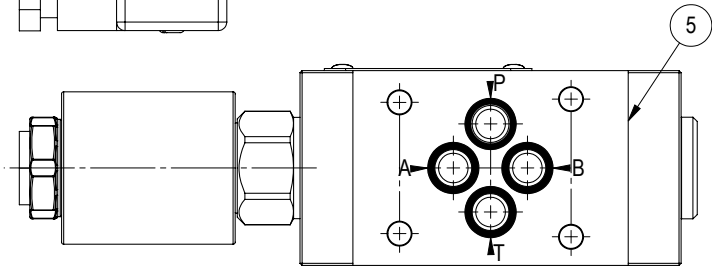
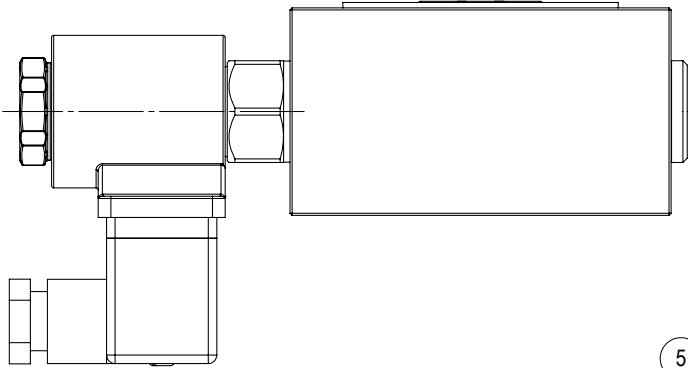
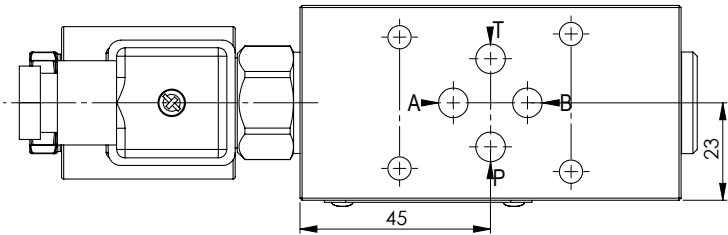
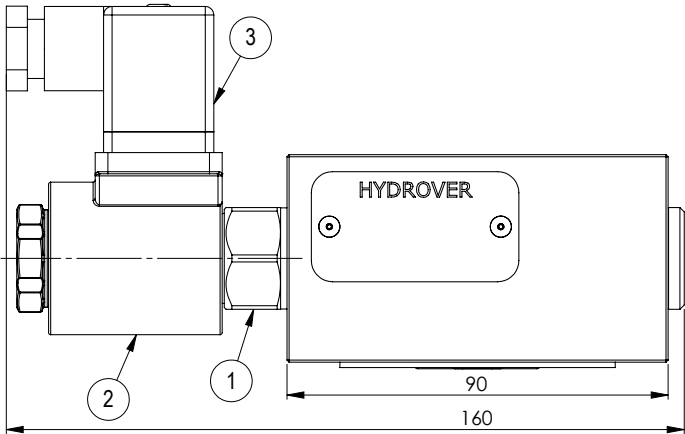
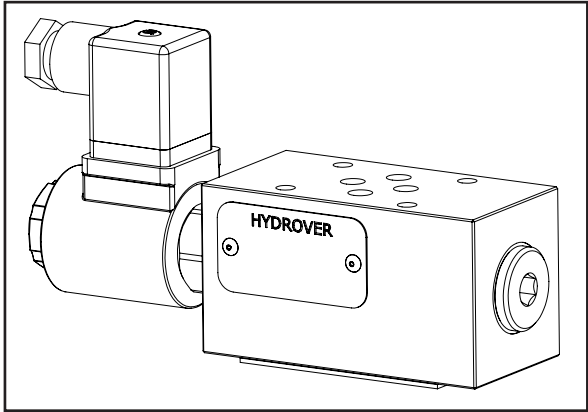


Cetop 3 modular poppet type solenoid operated directional valve  
between A1 and A / 40 lpm

H3965



Technical data	
Max. pressure	250 bar
Max. flow	40 lpm *
Weight	1 Kg
Manifold material	Aluminium



Dimensions in mm

N°	Description	Q.ty
1	Bosch Rexroth solenoid valve <b>VEI-16-08A-NC OD.15-X-18-Y-000000</b> (normally closed) or <b>VEI-16-08A-NA OD.15-X-18-Y-000000</b> (normally open) depicted without manual override *	1
2	Bosch Rexroth coil <b>D36</b> - CLASS H DIN 43650 ISO 4400 *	1
3	Connector DIN 43650 ISO 4400	1
4	Ø 5,5 through hole for mounting	4
5	Seal plate	1

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

Ordering code

H	3	9	6	5	A	-	-	-	-	-	-	-
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Hydrover product

Product series  
39 series - Cetop 3 modular valves

Product ID

Manifold material  
Aluminium

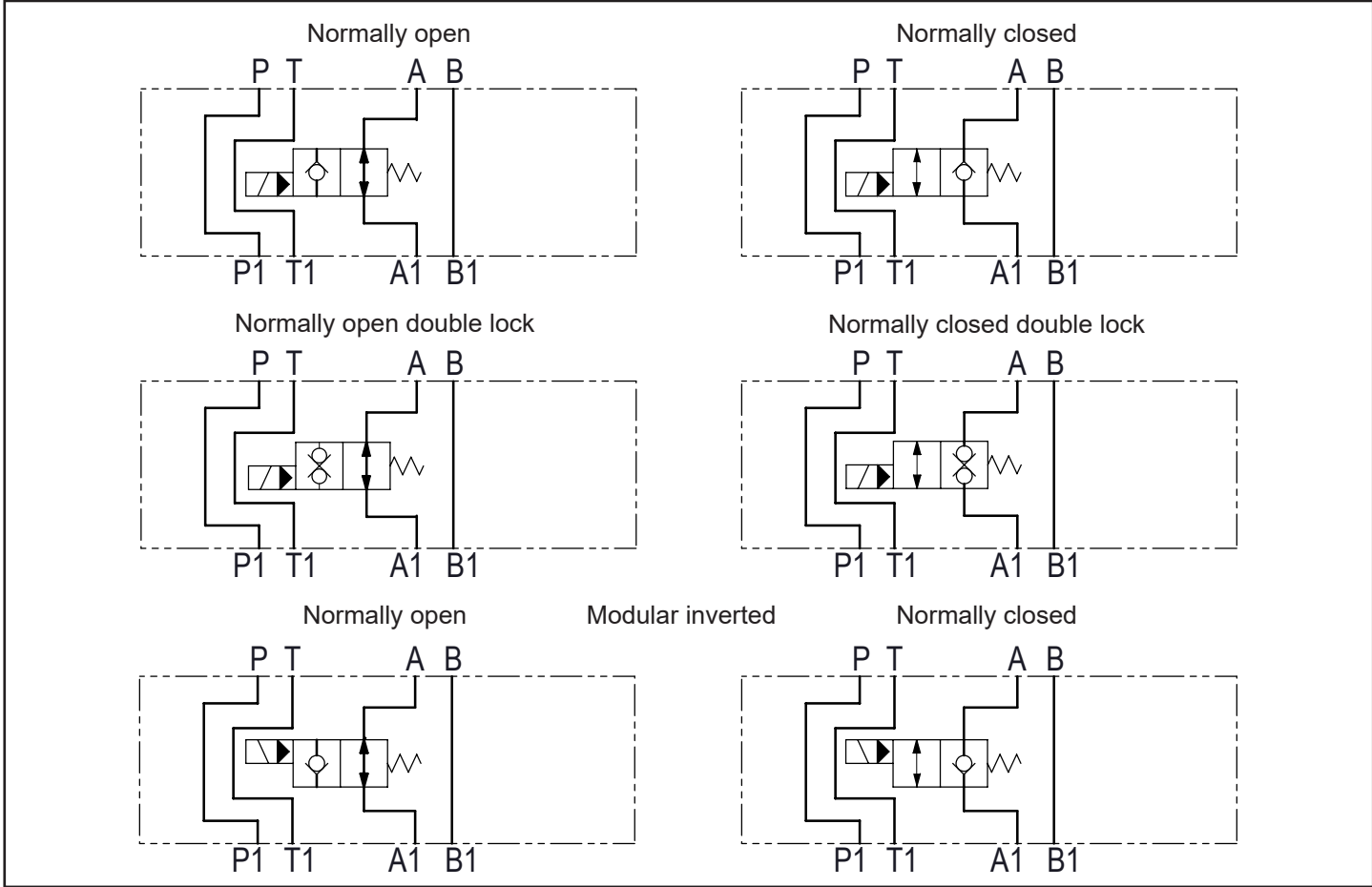
Solenoid valve spool type \*  
Normally open = NA  
Normally closed = NC  
Normally open double lock = 2A  
Normally closed double lock = 2C

Solenoid valve coil connection \*  
1 = DIN 43650 ISO 4400

Solenoid valve coil voltage \*  
OB = 12V DC  
OC = 24V DC  
OD = 48V DC  
OU = 110V RAC  
AH = 230V RAC

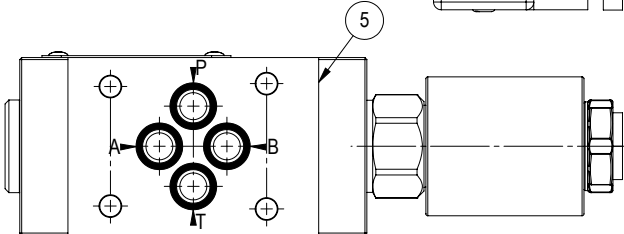
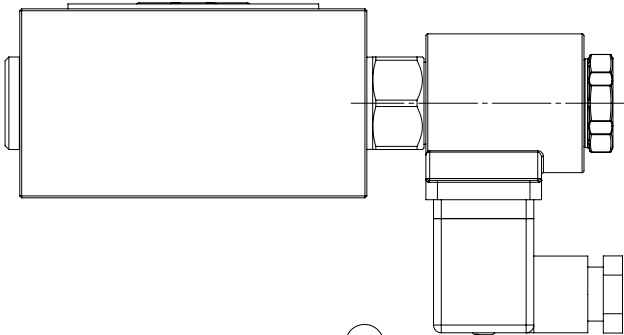
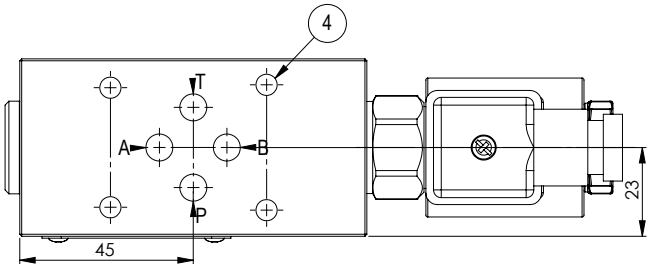
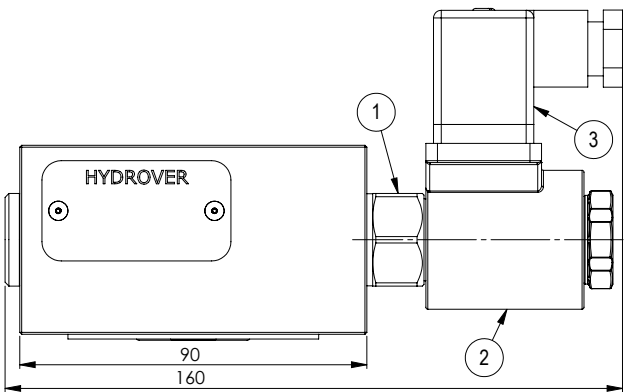
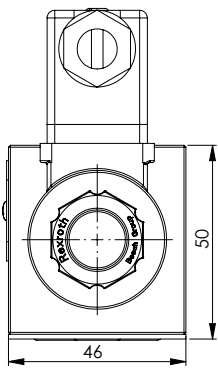
Solenoid valve manual override \*  
E0 = Without  
EP = Push (NA, 2A)  
EV = Screw (NC, 2C)  
EG = Push and twist (NA, 2A)

\* Omit if not required. For example, to order the product without coil, omit the solenoid valve coil connection and coil voltage options: H3965A-NC-E0.



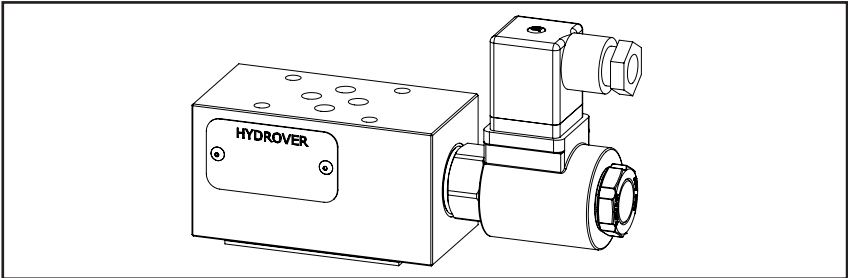
Cetop 3 modular poppet type solenoid operated directional valve  
between B1 and B / 40 lpm

H3966



Dimensions in mm

Technical data	
Max. pressure	250 bar
Max. flow	40 lpm *
Weight	1 Kg
Manifold material	Aluminium



N°	Description	Q.ty
1	Bosch Rexroth solenoid valve <b>VEI-16-08A-NC OD.15-X-18-Y-000000</b> (normally closed) or <b>VEI-16-08A-NA OD.15-X-18-Y-000000</b> (normally open) depicted without manual override *	1
2	Bosch Rexroth coil <b>D36</b> - CLASS H DIN 43650 ISO 4400 *	1
3	Connector DIN 43650 ISO 4400	1
4	Ø 5,5 through hole for mounting	4
5	Seal plate	1

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

Ordering code

H	3	9	6	6	A	-	-	-	-	-	-	-
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Hydrover product

Product series  
39 series - Cetop 3 modular valves

Product ID

Manifold material  
Aluminium

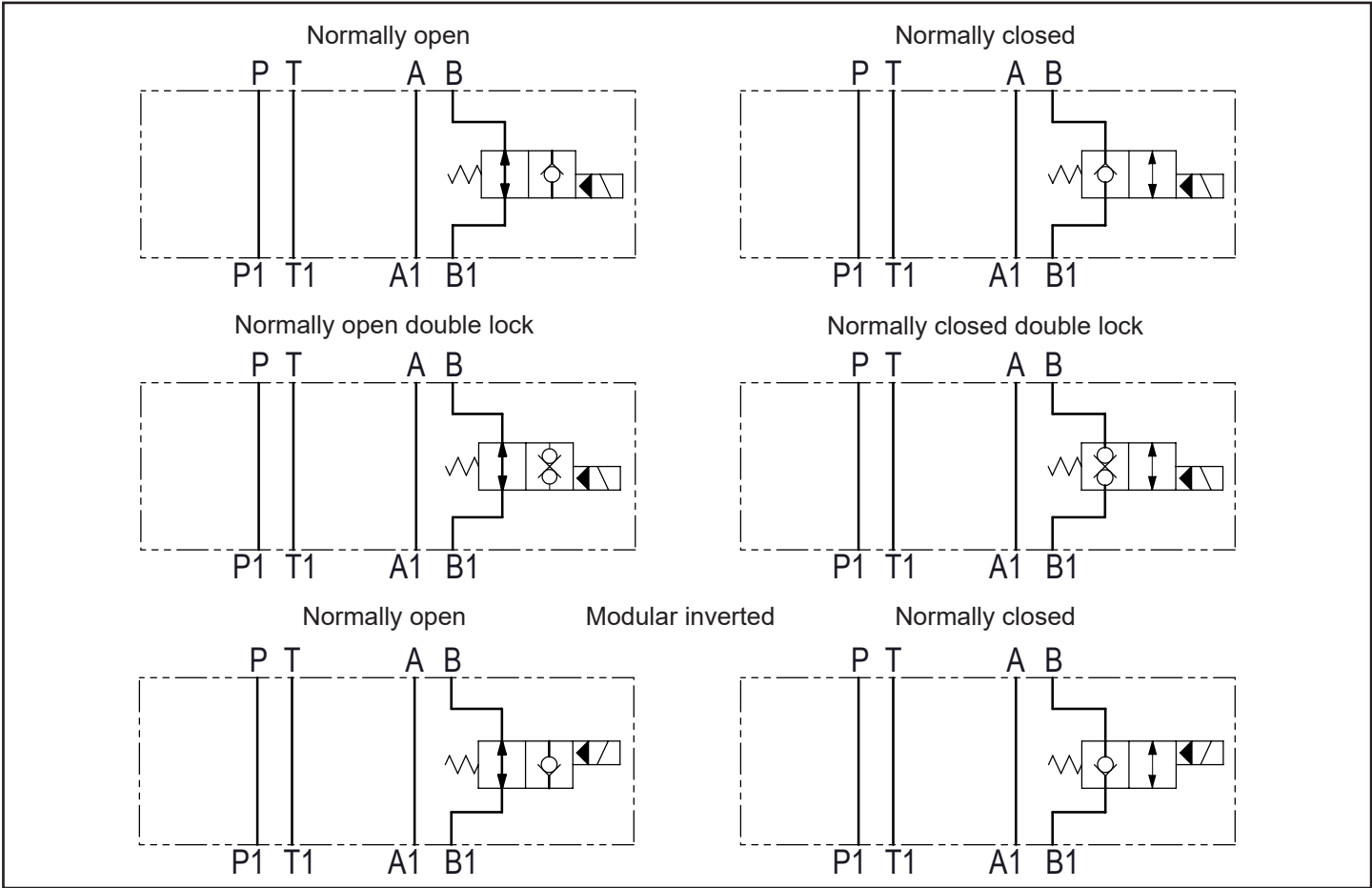
Solenoid valve spool type \*  
Normally open = NA  
Normally closed = NC  
Normally open double lock = 2A  
Normally closed double lock = 2C

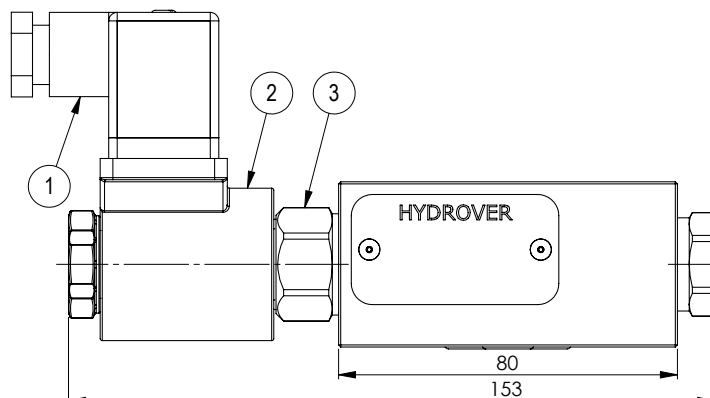
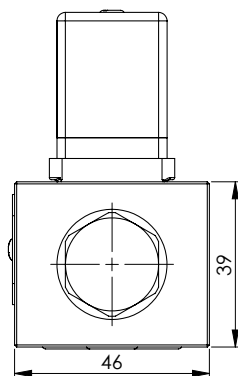
Solenoid valve coil connection \*  
1 = DIN 43650 ISO 4400

Solenoid valve coil voltage \*  
OB = 12V DC  
OC = 24V DC  
OD = 48V DC  
OU = 110V RAC  
AH = 230V RAC

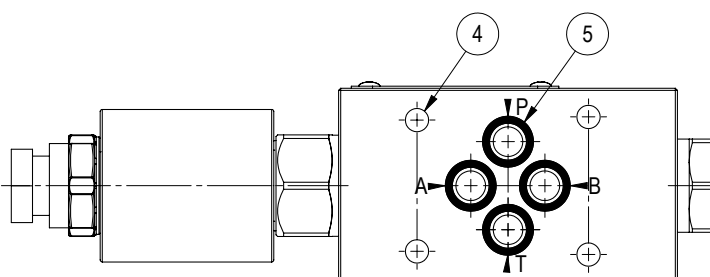
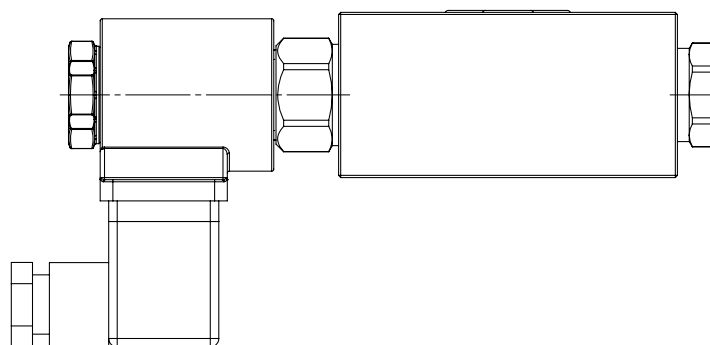
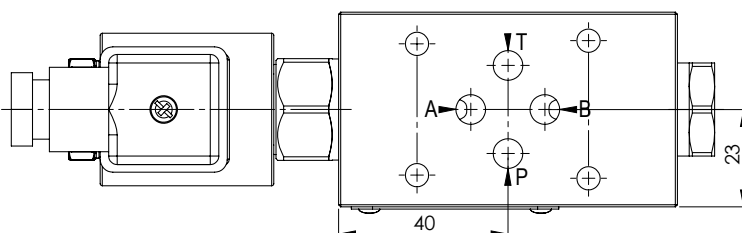
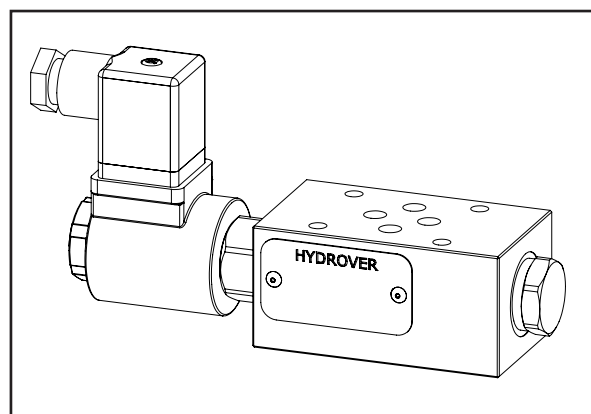
Solenoid valve manual override \*  
E0 = Without  
EP = Push (NA, 2A)  
EV = Screw (NC, 2C)  
EG = Push and twist (NA, 2A)

\* Omit if not required. For example, to order the product without coil, omit the solenoid valve coil connection and coil voltage options: H3966A-NC-E0.





Technical data	
Max. pressure	250 bar
Max. flow	40 lpm *
Weight	0,7 Kg
Manifold material	Aluminium



N°	Description	Q.ty
1	Connector DIN 43650 ISO 4400	1
2	Bosch Rexroth coil <b>D36</b> - CLASS H DIN 43650 ISO 4400 *	1
3	Bosch Rexroth solenoid valve <b>VEI-16-08A-NC OD.15-31-18-Y-000000</b> (normally closed) or <b>VEI-16-08A-NA OD.15-32-18-Y-000000</b> (normally open) depicted without manual override *	1
4	Ø 5,5 through hole for mounting	4
5	OR 108 i. Ø 8,73 cross section 1,78	1

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue



Ordering code

H	3	9	8	0	A	-	-	-	-	-	-	-
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Hydrover product

Product series  
39 series - Cetop 3 modular valves

Product ID

Manifold material  
Aluminium

Solenoid valve spool type \*  
Normally open double lock = 2A  
Normally closed double lock = 2C

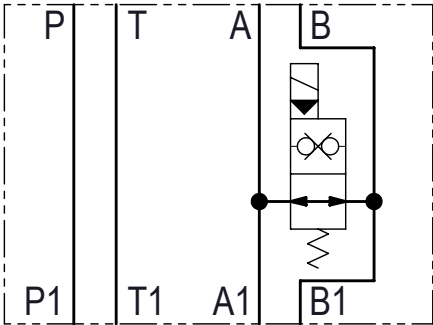
Solenoid valve coil connection \*  
1 = DIN 43650 ISO 4400

Solenoid valve coil voltage \*  
OB = 12V DC  
OC = 24V DC  
OD = 48V DC  
OU = 110V RAC  
AH = 230V RAC

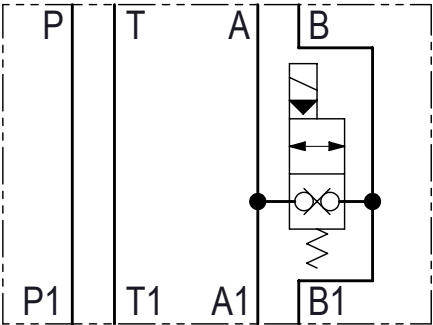
Solenoid valve manual override \*  
E0 = Without  
EP = Push (2A)  
EV = Screw (2C)  
EG = Push and twist (2A)

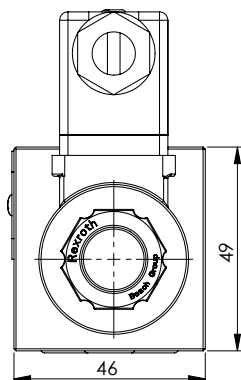
\* Omit if not required. For example, to order the product without coil, omit the solenoid valve coil connection and coil voltage options: H3980A-2C-E0.

Normally open double lock

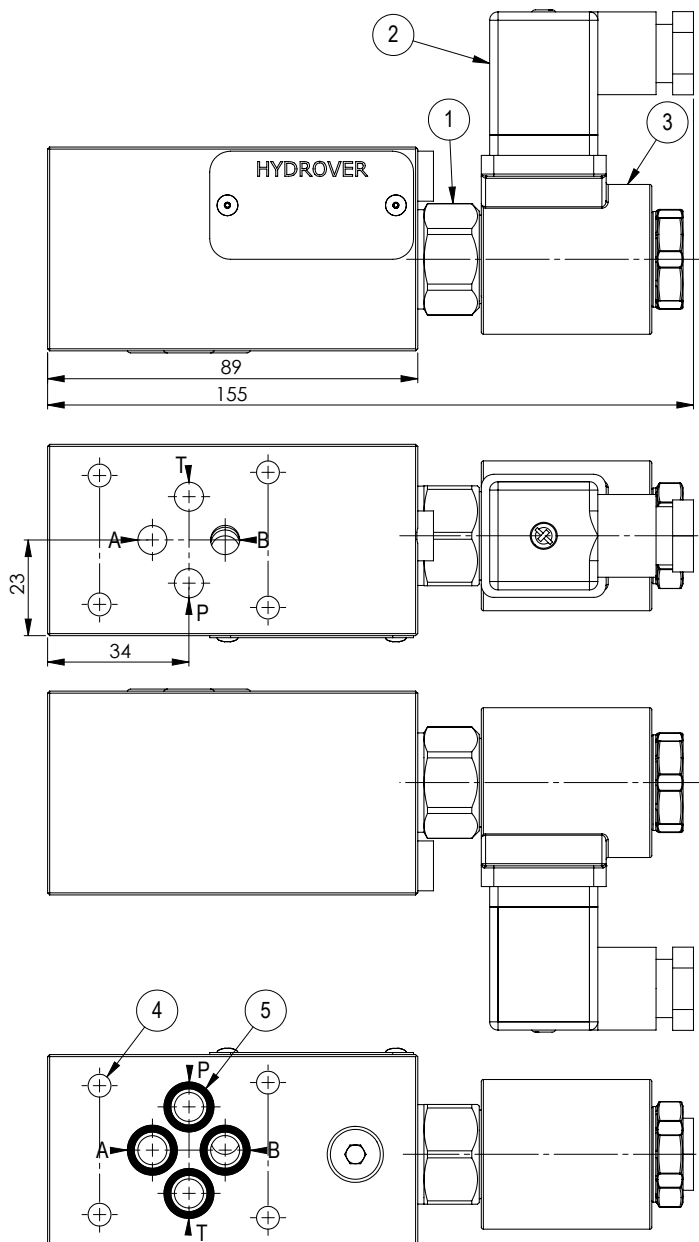
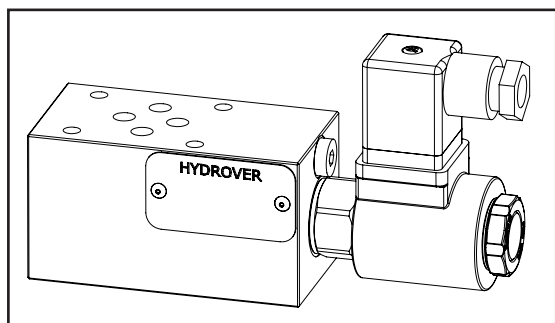


Normally closed double lock





Technical data	
Max. pressure	250 bar
Max. flow	40 lpm *
Weight	1 Kg
Manifold material	Aluminium



N°	Description	Q.ty
1	Bosch Rexroth solenoid valve <b>VEI-16-08A-NC OD.15-X-18-Y-000000</b> (normally closed) or <b>VEI-16-08A-NA OD.15-X-18-Y-000000</b> (normally open) depicted without manual override *	1
2	Connector DIN 43650 ISO 4400	1
3	Bosch Rexroth coil <b>D36</b> - CLASS H DIN 43650 ISO 4400 *	1
4	Ø 5,5 through hole for mounting	4
5	OR 108 i. Ø 8,73 cross section 1,78	4

*\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue*

Ordering code

H	3	9	9	8	A	-	-	-	-	-	-	-
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Hydrover product

Product series  
39 series - Cetop 3 modular valves

Product ID

Manifold material  
Aluminium

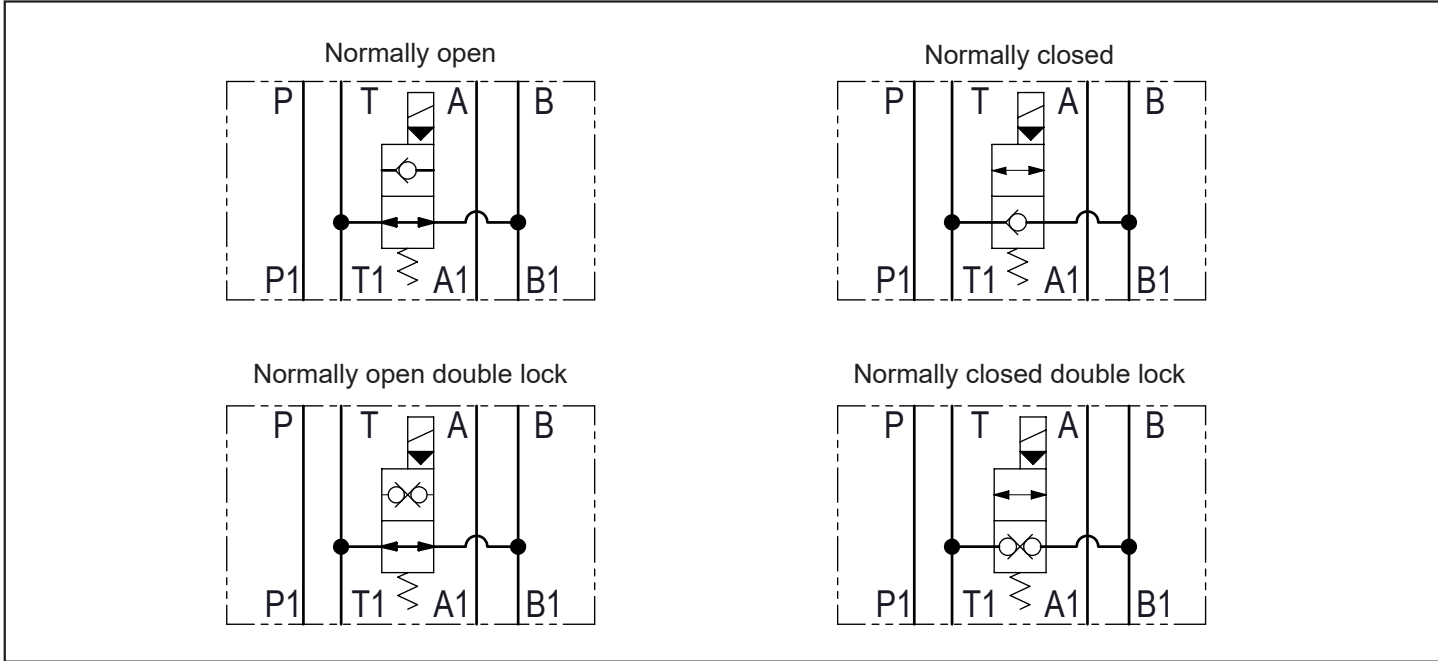
Solenoid valve spool type \*  
Normally open = NA  
Normally closed = NC  
Normally open double lock = 2A  
Normally closed double lock = 2C

Solenoid valve coil connection \*  
1 = DIN 43650 ISO 4400

Solenoid valve coil voltage \*  
OB = 12V DC  
OC = 24V DC  
OD = 48V DC  
OU = 110V RAC  
AH = 230V RAC

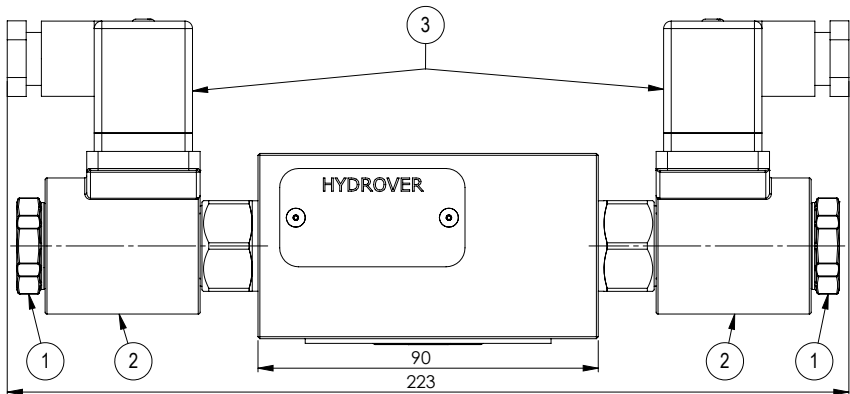
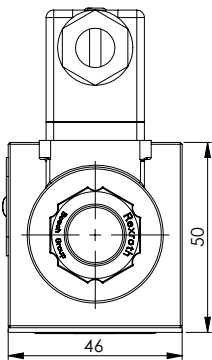
Solenoid valve manual override \*  
E0 = Without  
EP = Push (NA, 2A)  
EV = Screw (NC, 2C)  
EG = Push and twist (NA, 2A)

\* Omit if not required. For example, to order the product without coil, omit the solenoid valve coil connection and coil voltage options: H3998A-NC-E0.



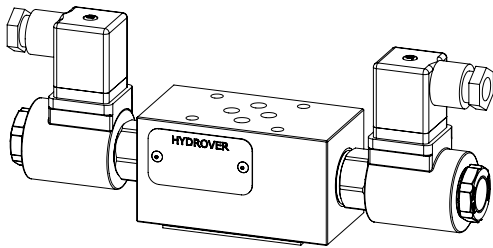
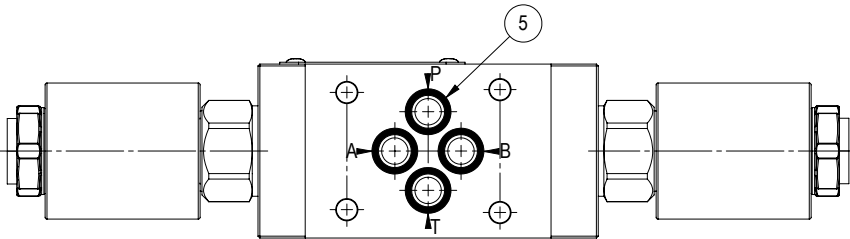
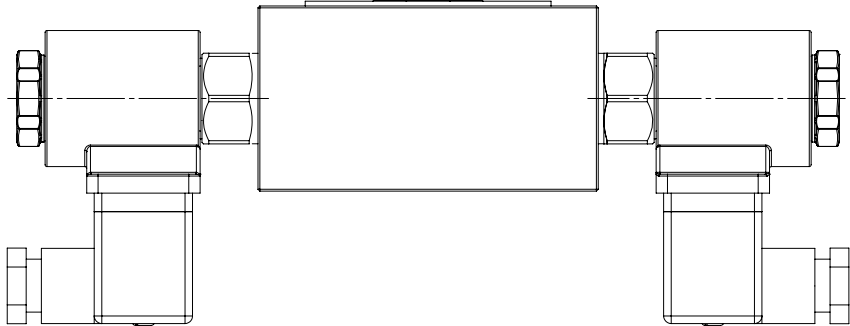
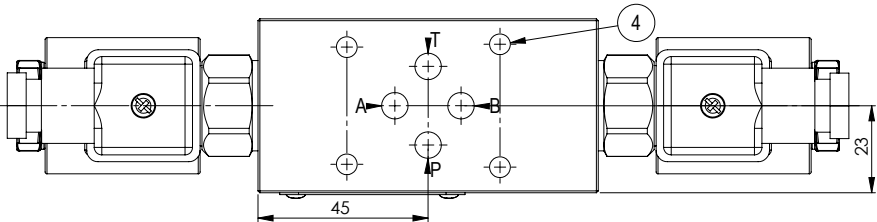
Cetop 3 modular poppet type solenoid operated directional valves  
between A1 and A / B1 and B / 40 lpm

H3959



Dimensions in mm

Technical data	
Max. flow	40 lpm *
<b>With Aluminium manifold</b>	
Max. pressure	250 bar
Weight	1,3 Kg
<b>With steel manifold</b>	
Max. pressure	350 bar
Weight	2,2 Kg



N°	Description	Q.ty
1	Bosch Rexroth solenoid valve <b>VEI-16-08A-NC OD.15-X-18-Y-000000</b> (normally closed) or <b>VEI-16-08A-NA OD.15-X-18-Y-000000</b> (normally open) depicted without manual override *	2
2	Bosch Rexroth coil <b>D36</b> - CLASS H DIN 43650 ISO 4400 *	2
3	Connector DIN 43650 ISO 4400	2
4	Ø 5,5 through hole for mounting	4
5	Seal plate	1

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

Ordering code

H	3	9	5	9	-	-	-	-	-	-	-	-
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Hydrover product

Product series  
39 series - Cetop 3 modular valves

Product ID

Manifold material  
Aluminium = A  
Steel = S

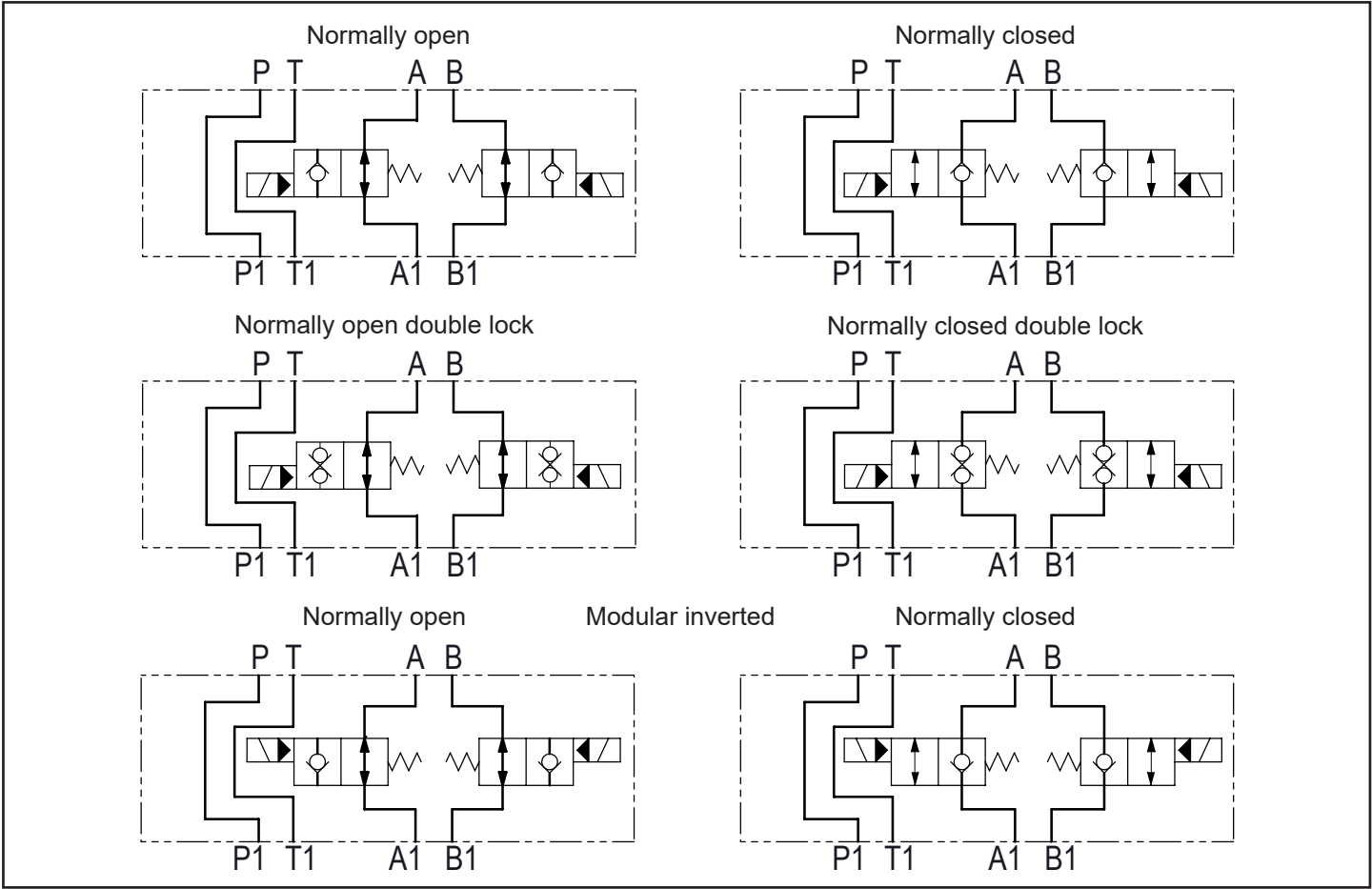
Solenoid valves spool type \*  
Normally open = NA  
Normally closed = NC  
Normally open double lock = 2A  
Normally closed double lock = 2C

Solenoid valves coil connection \*  
1 = DIN 43650 ISO 4400

Solenoid valves coil voltage \*  
OB = 12V DC  
OC = 24V DC  
OD = 48V DC  
OU = 110V RAC  
AH = 230V RAC

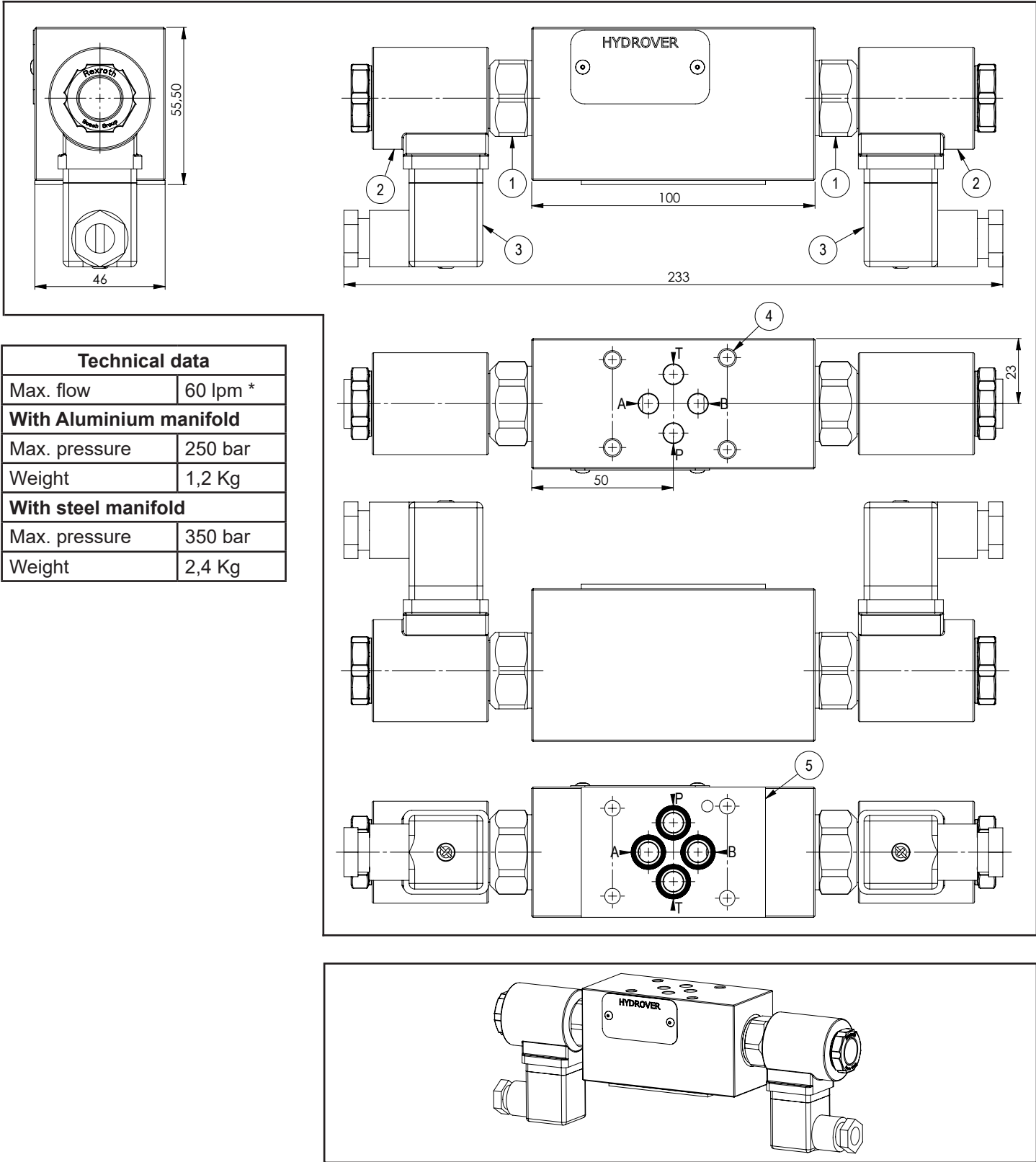
Solenoid valves manual override \*  
E0 = Without  
EP = Push (NA, 2A)  
EV = Screw (NC, 2C)  
EG = Push and twist (NA, 2A)

\* Omit if not required. For example, to order the product without coils, omit the solenoid valves coil connection and coil voltage options: H3959A-NC-E0.



Cetop 3 modular poppet type solenoid operated directional valves  
between A1 and A / B1 and B / 60 lpm

H3972



Technical data	
Max. flow	60 lpm *
<b>With Aluminium manifold</b>	
Max. pressure	250 bar
Weight	1,2 Kg
<b>With steel manifold</b>	
Max. pressure	350 bar
Weight	2,4 Kg

N°	Description	Q.ty
1	Bosch Rexroth solenoid valve <b>VEI-16-10A-NC OD.15-X-36-Y-000000</b> (normally closed) or <b>VEI-16-10A-NA OD.15-X-36-Y-000000</b> (normally open) *	2
2	Bosch Rexroth coil <b>D36</b> - CLASS H DIN 43650 ISO 4400 *	2
3	Connector DIN 43650 ISO 4400	2
4	Ø 5,5 through hole for mounting	4
5	Seal plate	1

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

Ordering code

H	3	9	7	2	-	-	-	-	-	-	-	-
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Hydrover product

Product series  
39 series - Cetop 3 modular valves

Product ID

Manifold material  
Aluminium = A  
Steel = S

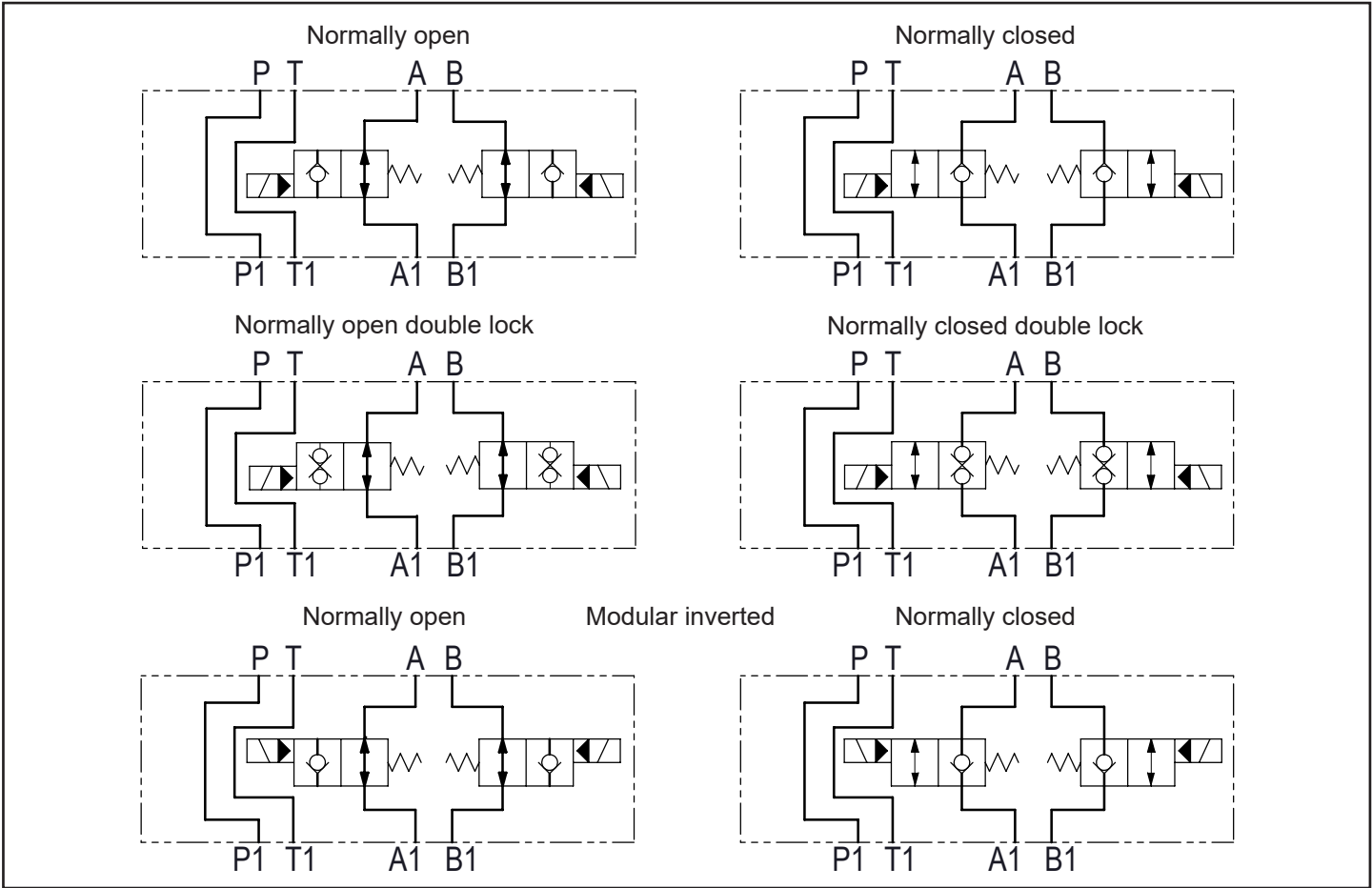
Solenoid valves spool type \*  
Normally open = NA  
Normally closed = NC  
Normally open double lock = 2A  
Normally closed double lock = 2C

Solenoid valves  
coil connection \*  
1 = DIN 43650 ISO 4400

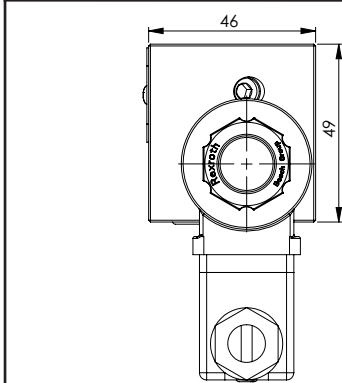
Solenoid valve  
coil voltage \*  
OB = 12V DC  
OC = 24V DC  
OD = 48V DC  
OU = 110V RAC  
AH = 230V RAC

Solenoid valves  
manual override \*  
E0 = Without  
EP = Push (NA, 2A)  
EV = Screw (NC, 2C)  
EG = Push and twist (NA, 2A)

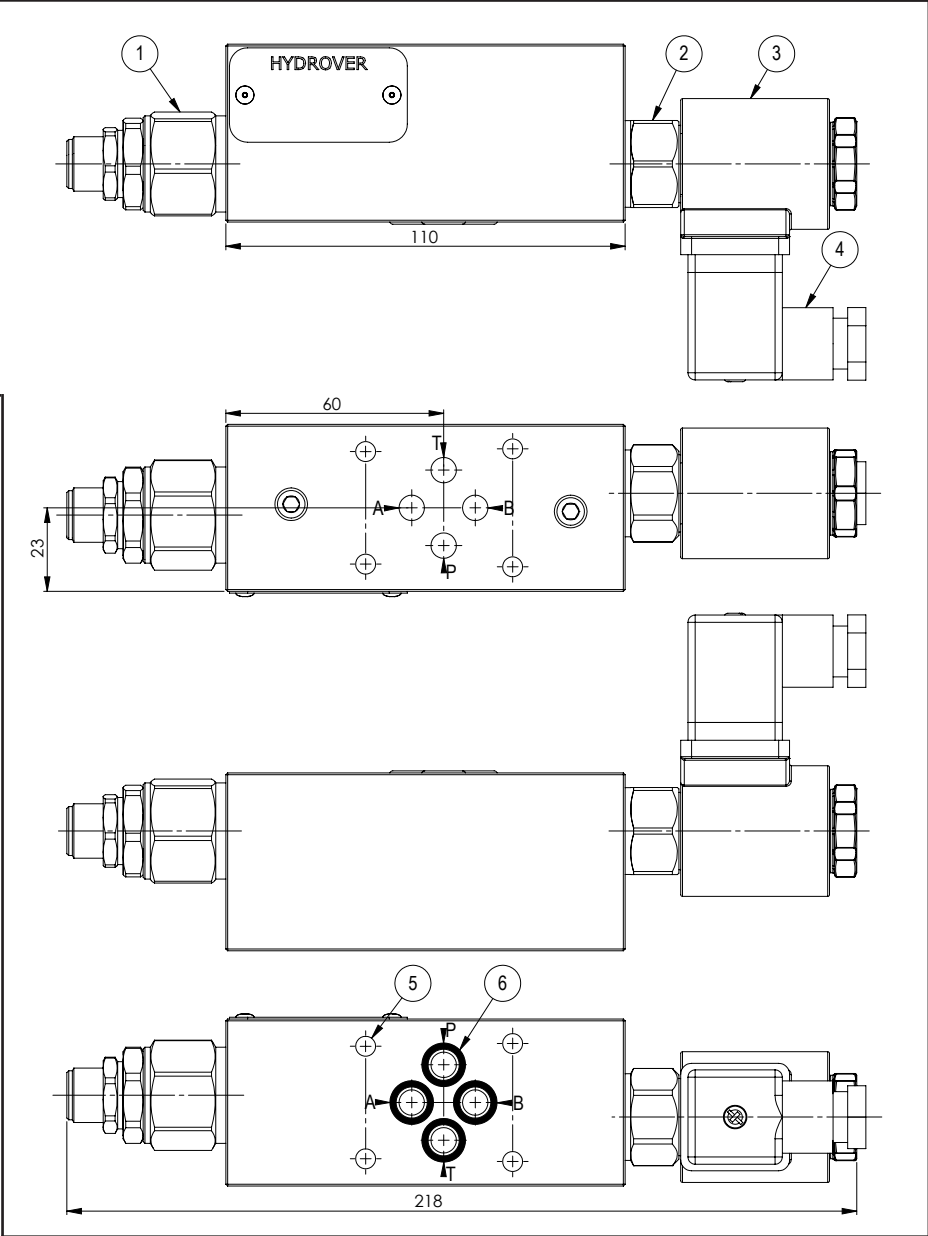
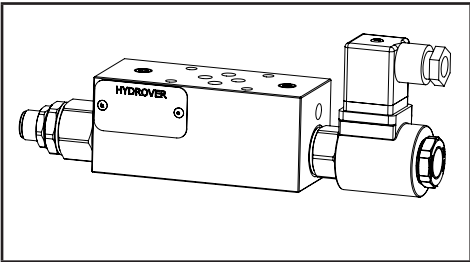
\* Omit if not required. For example, to order the product without coils, omit the solenoid valves coil connection and coil voltage options: H3972A-NC-E0.



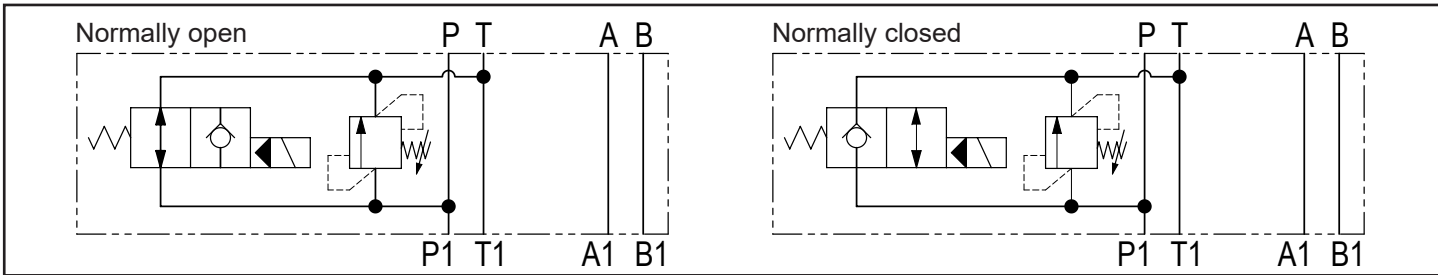
Cetop 3 modular bypass and relief valve / 35 lpm **H3933**



Technical data	
Max. pressure	250 bar
Max. flow	35 lpm *
Weight	1,2 Kg
Manifold material	Aluminium



Dimensions in mm



N°	Description	Q.ty
1	Bosch Rexroth solenoid valve <b>VEI-16-08A-NC OD.15.05.18-Y-000000</b> (normally closed) or <b>VEI-16-08A-NA OD.15.06.18-Y-000000</b> (normally open) depicted without manual override *	1
2	Bosch Rexroth coil <b>D36</b> - CLASS H DIN 43650 ISO 4400 *	1
3	Bosch Rexroth relief valve <b>VMD1.040</b> *	1
4	Connector DIN 43650 ISO 4400	1
5	Ø 5,5 through hole for mounting	4
6	OR 108 i. Ø 8,73 cross section 1,78	4

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

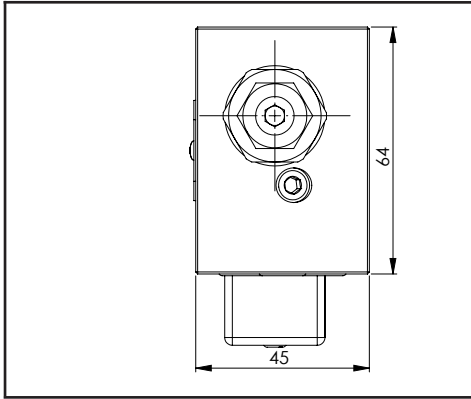


Ordering code

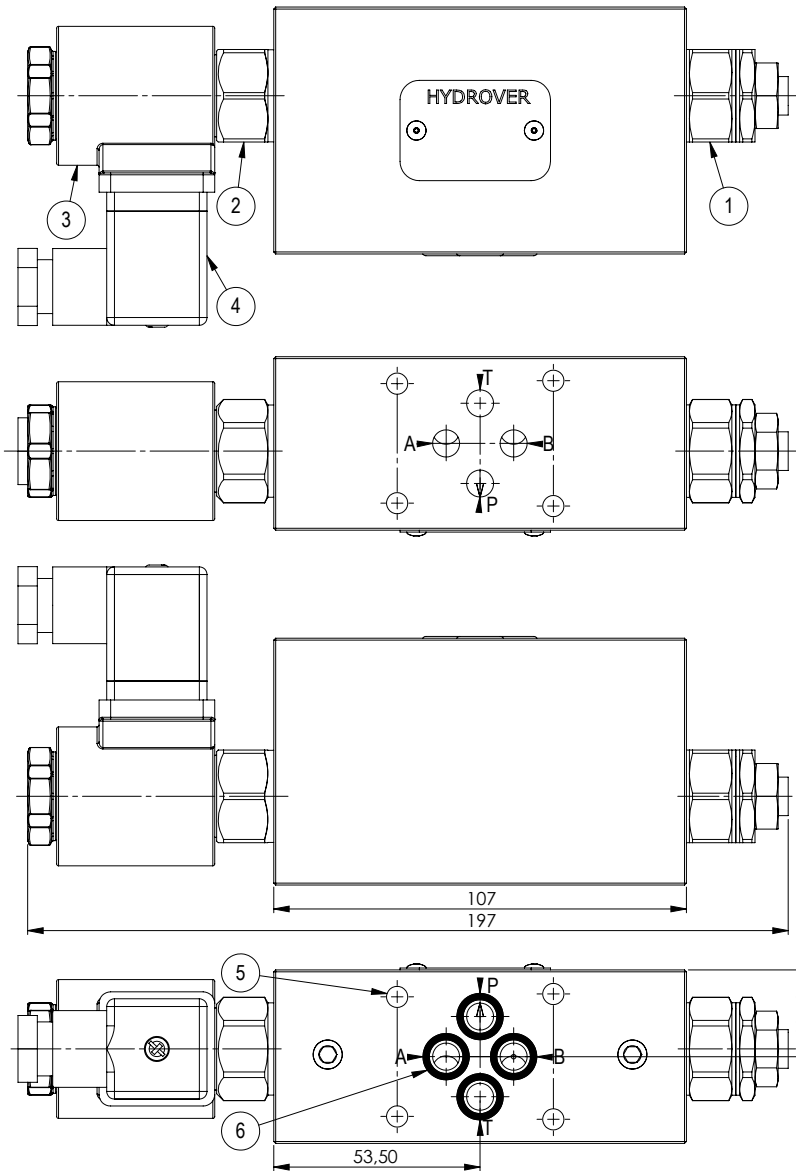
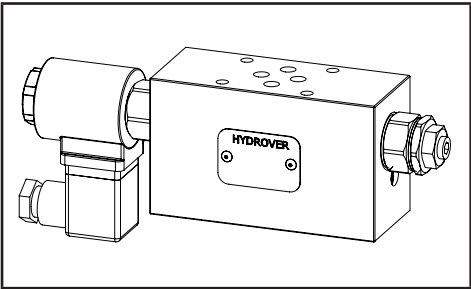
H	3	9	3	3	A	-	-	-	-	-	-	-	-	-	-
<b>Hydrover product</b>						<b>Solenoid valve coil connection *</b> 1 = DIN 43650 ISO 4400									
<b>Product series</b> 39 series - Cetop 3 modular valves						<b>Solenoid valve coil voltage *</b> OB = 12V DC OC = 24V DC OD = 48V DC OU = 110V RAC AH = 230V RAC									
<b>Product ID</b>						<b>Solenoid valve manual override *</b> E0 = Without EP = Push (NA) EV = Screw (NC) EG = Push and twist (NA)									
<b>Manifold material</b> Aluminium						<b>Solenoid valve spool type *</b> NA = Normally open NC = Normally closed									
<b>Relief valve adjustment type *</b> Screw = S															
<b>Relief valve pressure range *</b> 25-120 bar = 1 40-200 bar = 2 200-350 bar = 3															

\* Omit if not required. For example, to order the product without the relief cartridge valve, omit the relief valve adjustment type and pressure range options: H3933A-E0-OC1.  
The manifold will still be provided with the corresponding cavity.  
To inhibit a function, replace the related valve options with TL: eg H3933A-TL-E0-OC1.  
In the cavity it will be mounted a long plug.

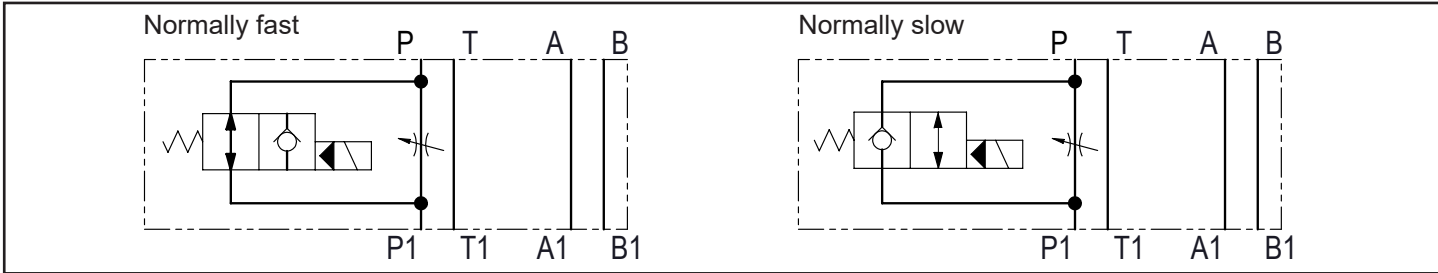
Valve	Cavity	Long plug code
Solenoid valve VEI-16-8A OD.15.05.18-Y-000000 or VEI-16-8A OD.15.06.18-Y-000000	CA-08A-2N	0489A2005600000
Pressure relief valve VMD1.040	CA-10A-2N	0489A2008500000



Technical data	
Max. pressure	250 bar
Max. flow	35 lpm *
Weight	1,2 Kg
Manifold material	Aluminium



Dimensions in mm



N°	Description	Q.ty
1	Bosch Rexroth bidirectional flow restrictor <b>OD.21.01-X-56</b> * depicted with screw adjustment	1
2	Bosch Rexroth solenoid valve <b>VEI-16-08A-NC OD.15.05.18-Y-000000</b> (normally slow) or <b>VEI-16-08A-NA OD.15.06.18-Y-000000</b> (normally fast) depicted without manual override *	1
3	Bosch Rexroth coil <b>D36</b> - CLASS H DIN 43650 ISO 4400 *	1
4	Connector DIN 43650 ISO 4400	1
5	Ø 5,5 through hole for mounting	4
6	OR 108 i. Ø 8,73 cross section 1,78	4

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

Ordering code

H	3	9	1	0	4	A	-	-	Q	-	-	-	-	-	-	-
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Hydrover product

Product series  
39 series - Cetop 3  
modular valves

Product ID

Manifold material  
Aluminium

Restrictor adjustment type

Screw = S  
Knob = K

Slow or fast in normal position \*

Normally slow = NL  
Normally fast = NR

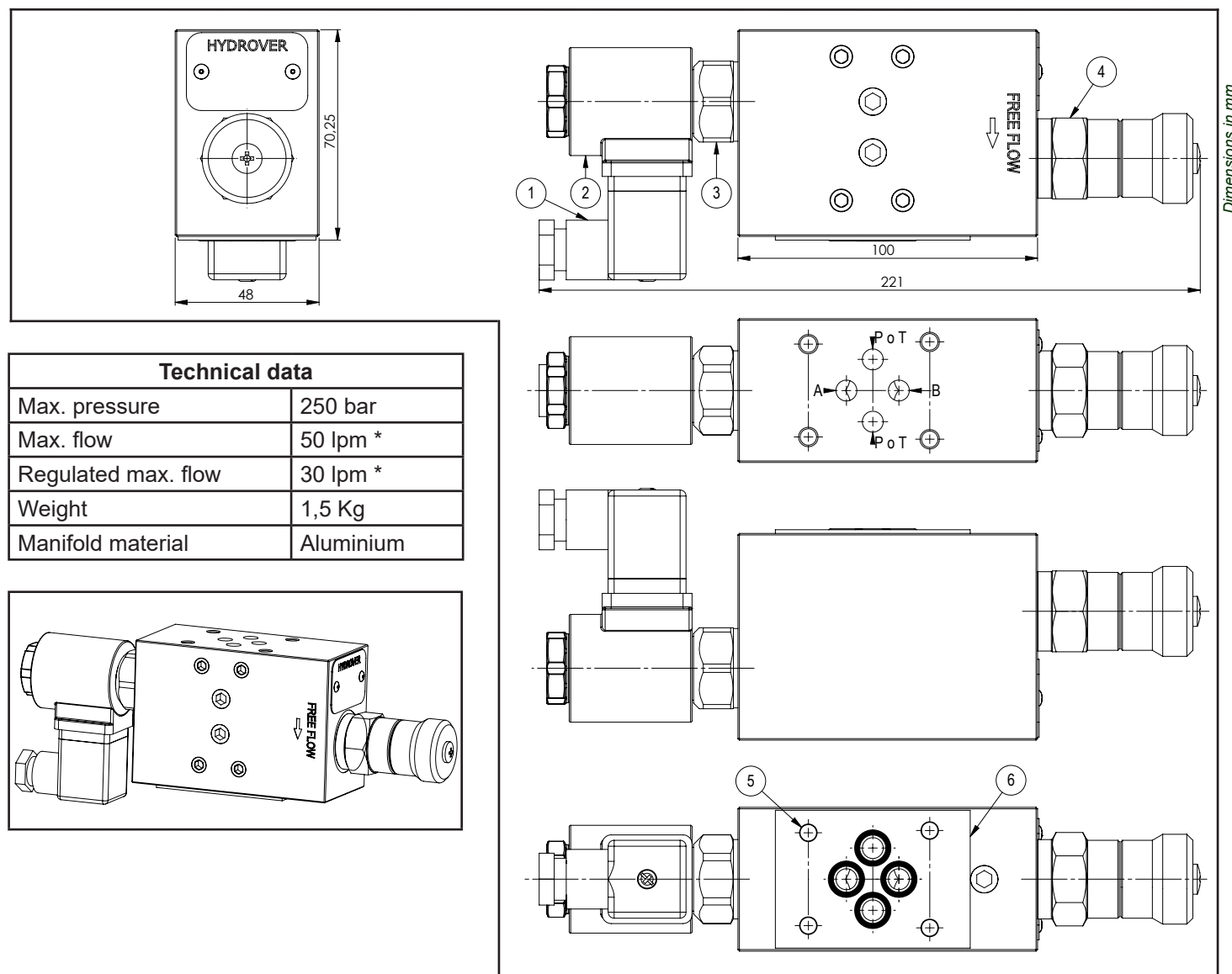
Solenoid valve  
coil  
connection \*  
1 = DIN 43650  
ISO 4400

Solenoid valve  
coil voltage \*  
OB = 12V DC  
OC = 24V DC  
OD = 48V DC  
OU = 110V RAC  
AH = 230V RAC

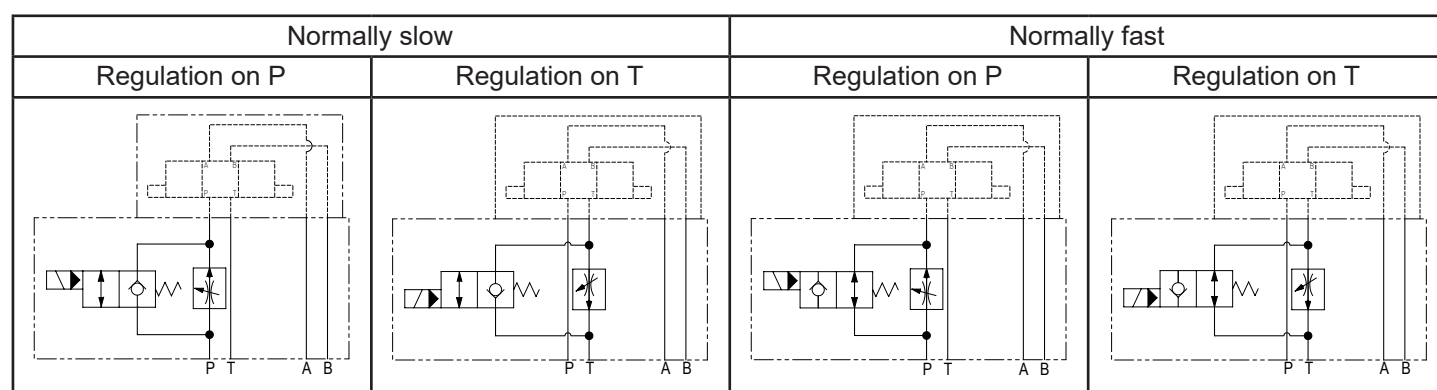
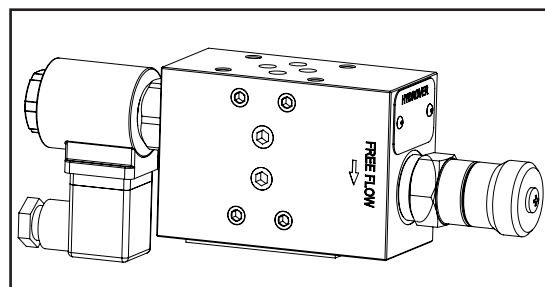
Solenoid valve  
manual override \*  
E0 = Without  
EP = Push (NR)  
EV = Screw (NL)  
EG = Push and twist (NR)

\* Omit if not required. For example, to order the product without the relief cartridge valve, omit the relief valve adjustment type and pressure range options: H39104A-SQ.  
The manifold will still be provided with the corresponding cavity.

## Modular Cetop 3 2 way compensated flow regulator valve on P or T with fast slow speed / reversible with seal plate

**H3931**

**Technical data**

Max. pressure	250 bar
Max. flow	50 lpm *
Regulated max. flow	30 lpm *
Weight	1,5 Kg
Manifold material	Aluminium



N°	Description	Q.ty
1	Connector DIN 43650 ISO 4400	1
2	Bosch Rexroth coil <b>D36</b> - CLASS H DIN 43650 ISO 4400 *	1
3	Bosch Rexroth solenoid valve for fast slow function <b>OD.15.05.36-Y-000000</b> (normally slow) or <b>OD.15.06.36-Y-000000</b> (normally fast) depicted without manual override *	1
4	Bosch Rexroth 2 way compensated flow regulator <b>04.02.02.40.85-Z</b> *	1
5	Ø 5,5 through hole for mounting	4
6	Seal plate	1

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

Ordering code

H	3	9	3	1	A	-	C		-			-			-			
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### Hydrover product

## Product series

39 series - Cetop 3  
modular valves

Product ID

## Manifold material

Aluminium

### Flow regulator adjustment type

### Calibrated knob

### Flow regulator range

0,1 - 20 lpm

$$= 2$$

0,2 - 30 lpm

$$= 3$$

**Slow or fast in normal position \***

Normally slow

$$= NL$$

Normally fast

$$= NR$$

### Solenoid valve coil connection \*

1 = DIN 43650  
ISO 4400

**Solenoid valve  
coil voltage \***

OB =	12V DC
OC =	24V DC
OD =	48V DC
OU =	110V RAC
AH =	230V RAC

**Solenoid valve  
manual override \***

E0 =	Without
EP =	Push (NR)
EV =	Screw (NL)
EG =	Push and twist (NR)

\* Omit if not required. To order the product without the fast slow solenoid cartridge valve, omit the slow fast in normal position, manual override, coil voltage and coil connection options: H3931A-C2.

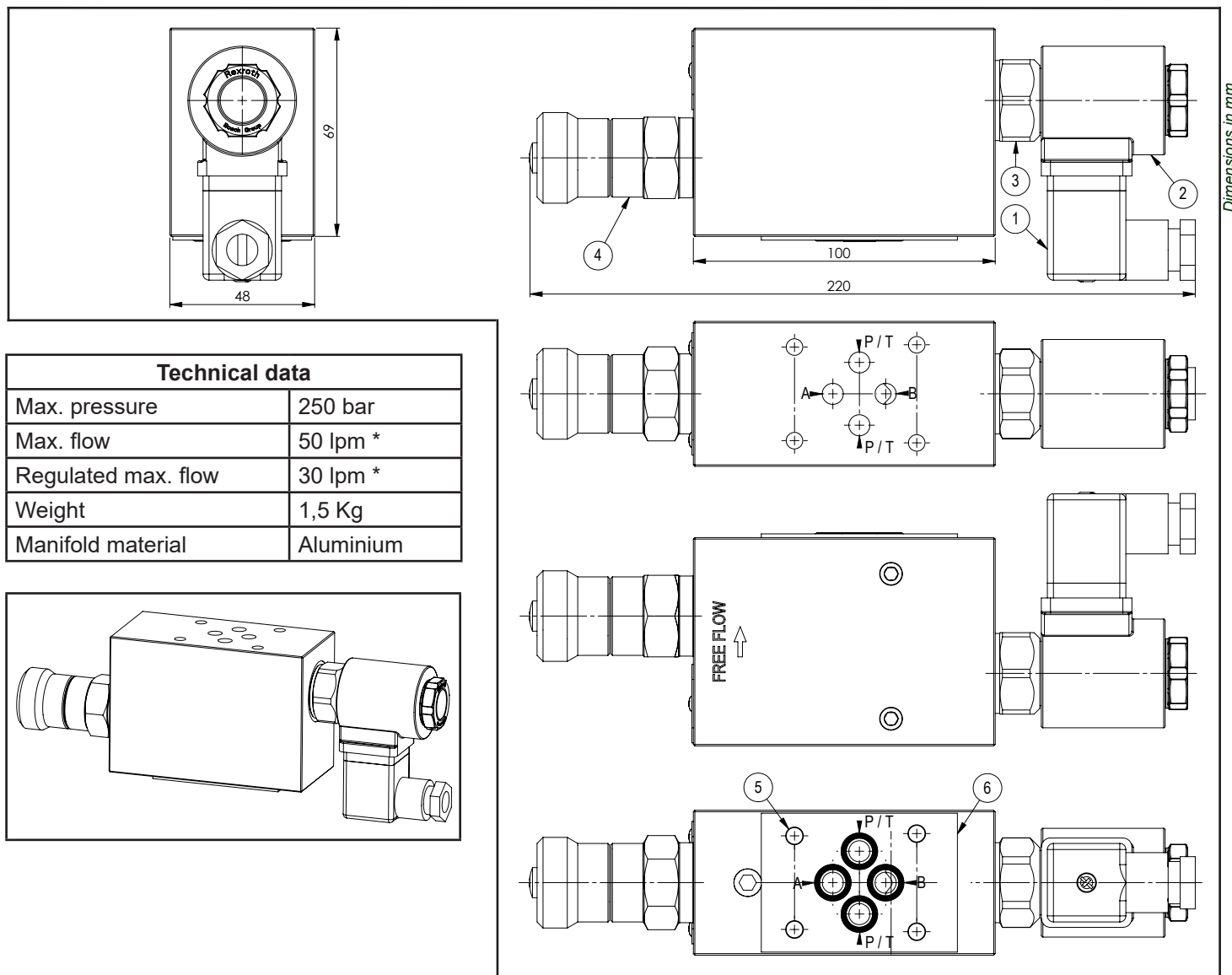
The manifold will still be provided with the corresponding cavity.

To inhibit the fast slow speed function, replace the related solenoid valve options with TL: eg H3931A-C2-TL.

In the cavity it will be mounted a long plug.

Valve	Cavity	Long plug code
Solenoid valve OD.15.05.36-Y-000000 or OD.15.06.36-Y-000000	CA-10A-2N	<b>0489A2008500000</b>

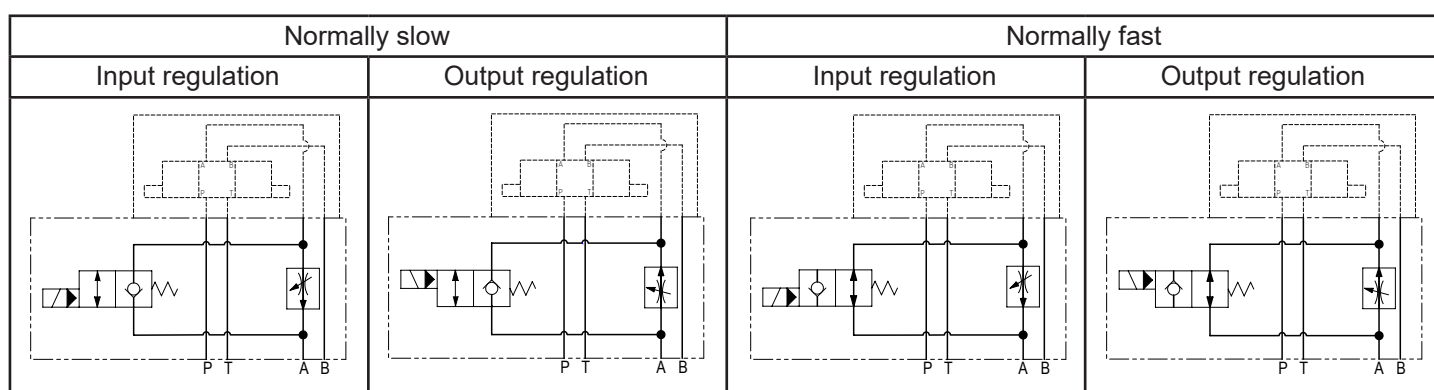
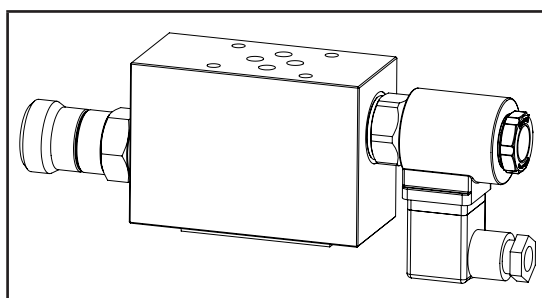
Modular Cetop 3 flow regulation 2 way compensated on A (in or out)  
 with fast slow speed / reversible with seal plate

**H3960**


Dimensions in mm

**Technical data**

Max. pressure	250 bar
Max. flow	50 lpm *
Regulated max. flow	30 lpm *
Weight	1,5 Kg
Manifold material	Aluminium



N°	Description	Q.ty
1	Connector DIN 43650 ISO 4400	1
2	Bosch Rexroth coil <b>D36</b> - CLASS H DIN 43650 ISO 4400 *	1
3	Bosch Rexroth solenoid valve for fast slow function <b>OD.15.05.36-Y-000000</b> (normally slow) or <b>OD.15.06.36-Y-000000</b> (normally fast) depicted without manual override *	1
4	Bosch Rexroth 2 way compensated flow regulator <b>04.02.02.40.85-Z</b> *	1
5	Ø 5,5 through hole for mounting	4
6	Seal plate	1

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

## Ordering code

H	3	9	6	0	A	-	C	-	-	-	-	-	-	-	-
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**Hydrover product****Product series**

39 series - Cetop 3 modular valves

**Product ID****Manifold material**

Aluminium

**Flow regulator adjustment type**

Calibrated knob

**Flow regulator range**

0,1 - 20 lpm

= 2

0,2 - 30 lpm

= 3

**Slow or fast in normal position \***

Normally slow

= NL

Normally fast

= NR

**Solenoid valve coil connection \***1 = DIN 43650  
ISO 4400**Solenoid valve coil voltage \***

OB =	12V DC
OC =	24V DC
OD =	48V DC
OU =	110V RAC
AH =	230V RAC

**Solenoid valve manual override \***

E0 =	Without
EP =	Push (NR)
EV =	Screw (NL)
EG =	Push and twist (NR)

\* Omit if not required. For example, to order the product without the fast slow solenoid cartridge valve, omit the solenoid valve manual override, coil voltage and coil connection options: H3960A-C2.

The manifold will still be provided with the corresponding cavity.

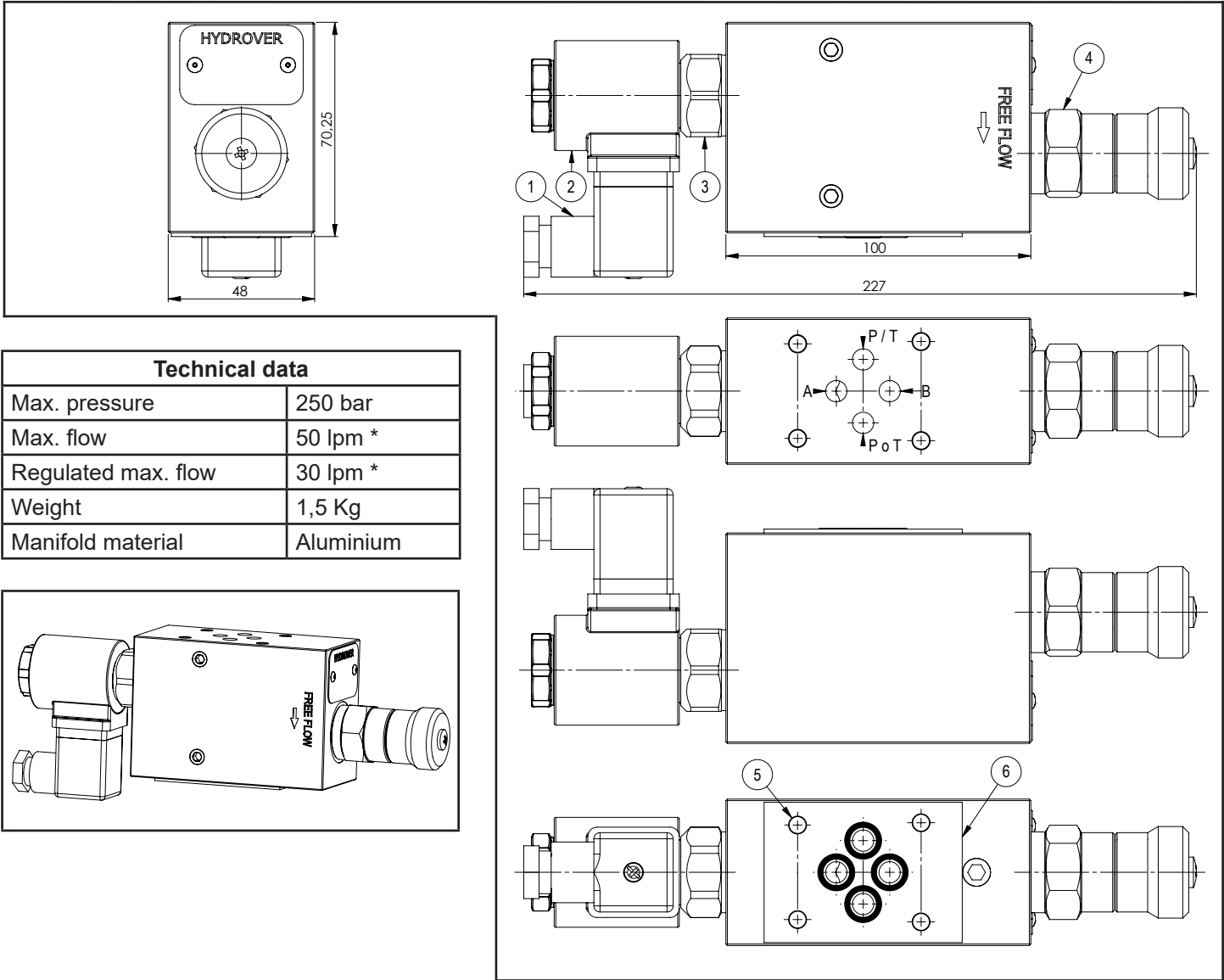
To inhibit the fast slow speed function, replace the related solenoid valve options with TL: eg H3960A-C2-TL.

In the cavity it will be mounted a long plug.

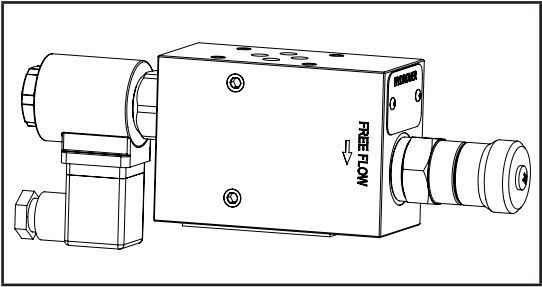
Valve	Cavity	Long plug code
Solenoid valve OD.15.05.36-Y-000000 or OD.15.06.36-Y-000000	CA-10A-2N	<b>0489A2008500000</b>

Modular Cetop 3 flow regulation 2 way compensated on B valve (in or out)  
with fast slow speed / reversible with seal plate

**H3932**



Technical data	
Max. pressure	250 bar
Max. flow	50 lpm *
Regulated max. flow	30 lpm *
Weight	1,5 Kg
Manifold material	Aluminium



Normally slow		Normally fast	
Input regulation	Output regulation	Input regulation	Output regulation

N°	Description	Q.ty
1	Connector DIN 43650 ISO 4400	1
2	Bosch Rexroth coil <b>D36</b> - CLASS H DIN 43650 ISO 4400 *	1
3	Bosch Rexroth solenoid valve for fast slow function <b>OD.15.05.36-Y-000000</b> (normally slow) or <b>OD.15.06.36-Y-000000</b> (normally fast) depicted without manual override *	1
4	Bosch Rexroth 2 way compensated flow regulator <b>04.02.02.40.85-Z</b> *	1
5	Ø 5,5 through hole for mounting	4
6	Seal plate	1

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue



Ordering code

H	3	9	3	2	A	-	C		-			-			-			
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### Hydrover product

## Product series

39 series - Cetop 3  
modular valves

Product ID

## Manifold material

Aluminium

### Flow regulator adjustment type

Calibrated knob

### Flow regulator range

0,1 - 20 lpm

$$= 2$$

0,2 - 30 lpm

$$= 3$$

**Slow or fast in normal position \***

Normally slow

$$= NL$$

Normally fast

= NR

**Solenoid valve  
coil connection \***

1 = DIN 43650  
ISO 4400

**Solenoid valve  
coil voltage \***

OB =	12V DC
OC =	24V DC
OD =	48V DC
OU =	110V RAC
AH =	230V RAC

**Solenoid valve  
manual override \***

E0 =	Without
EP =	Push (NR)
EV =	Screw (NL)
EG =	Push and twist (NR)

\* Omit if not required. For example, to order the product without the fast slow solenoid cartridge valve, omit the solenoid valve manual override, coil voltage and coil connection options: H3932A-C2.

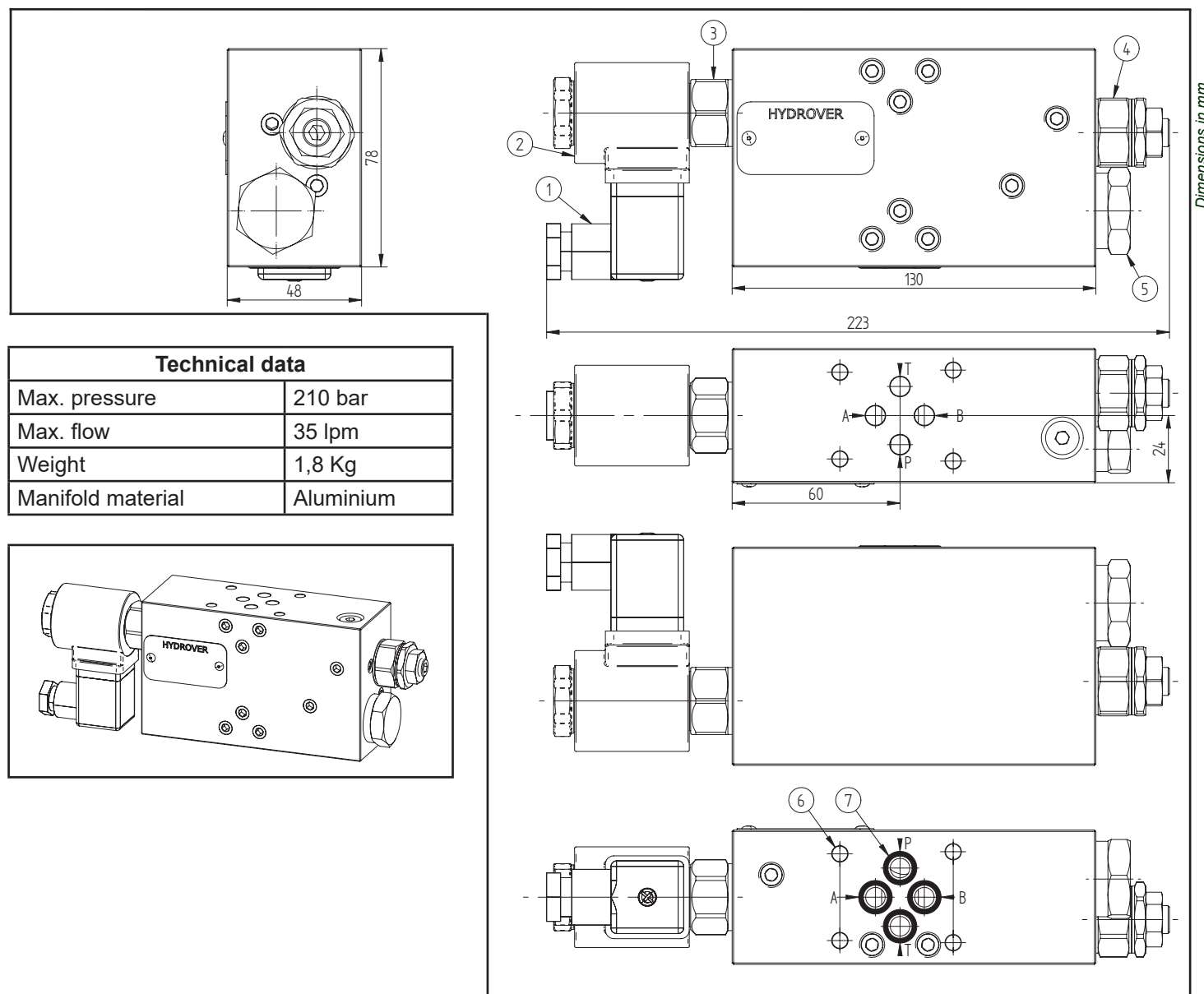
The manifold will still be provided with the corresponding cavity.

To inhibit the fast slow speed function, replace the related solenoid valve options with TL: eg H3932A-C2-TL.

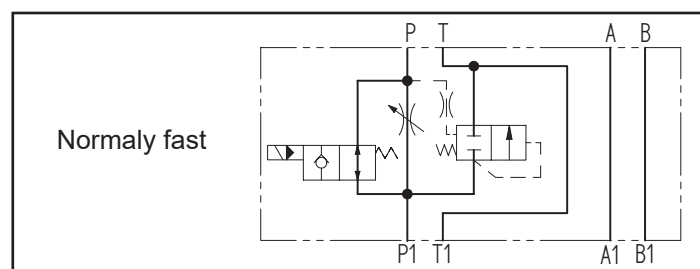
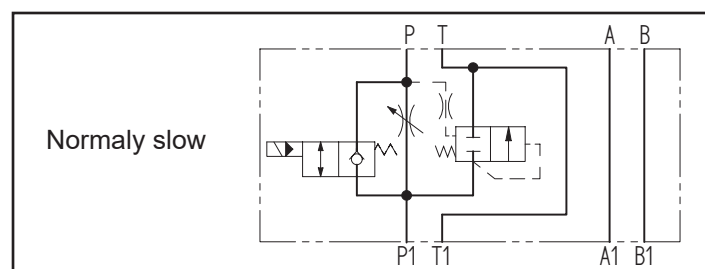
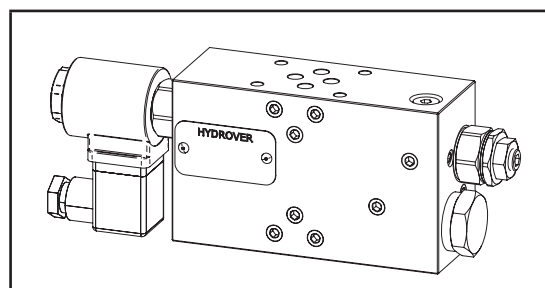
In the cavity it will be mounted a long plug.

Valve	Cavity	Long plug code
Solenoid valve OD.15.05.36-Y-000000 or OD.15.06.36-Y-000000	CA-10A-2N	<b>0489A2008500000</b>

Modular Cetop 3 3 way compensated flow regulator valve on P  
with fast slow speed

**H3927**

**Technical data**

Max. pressure	210 bar
Max. flow	35 lpm
Weight	1,8 Kg
Manifold material	Aluminium



N°	Description	Q.ty
1	Connector DIN 43650 ISO 4400	1
2	Bosch Rexroth coil <b>D36</b> - CLASS H DIN 43650 ISO 4400 *	1
3	Bosch Rexroth solenoid valve for fast slow function <b>VEI-16-08A-NC OD.15.05.18-Y-000000</b> (normally slow) or <b>VEI-16-08A-NA OD.15.06.18-Y-000000</b> (normally fast) depicted without manual override *	1
4	Bosch Rexroth bidirectional flow restrictor <b>OD.21.01-X-56</b> * depicted with screw adjustment	1
5	Pressure compensator	1
6	Ø 5,5 through hole for mounting	4
7	OR 108 i. Ø 8,73 cross section 1,78	4

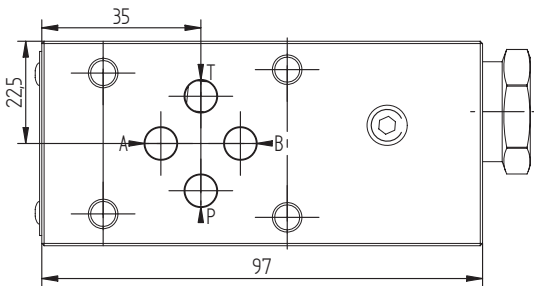
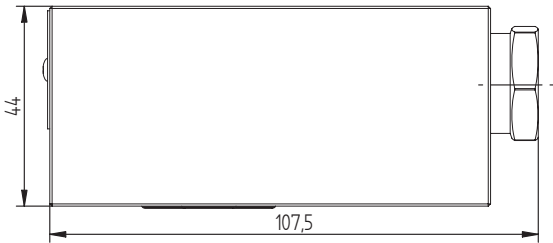
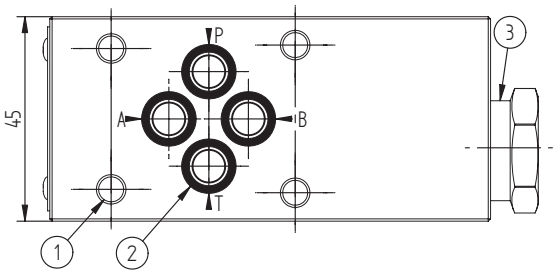
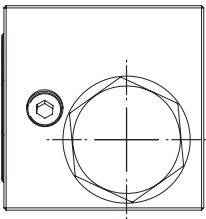
\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

Ordering code

H	3	9	2	7	A	_	_	Q	-	_	_	-	_	_	-	_	_	_
<b>Hydrover product</b>																		
<b>Product series</b> 39 series - Cetop 3 modular valves																		
<b>Product ID</b>																		
<b>Manifold material</b> Aluminium																		
<b>Compensator spring</b> 6 bar (standard) = 6 12 bar = 1																		
<b>Flow regulator adjustment type</b> Screw = S Knob = K																		
<b>Slow or fast in normal position *</b> Normally slow = NL Normally fast = NR																		
						<b>Solenoid valve coil connection *</b> 1 = DIN 43650 ISO 4400												
						<b>Solenoid valve coil voltage *</b> OB = 12V DC OC = 24V DC OD = 48V DC OU = 110V RAC AH = 230V RAC												
						<b>Solenoid valve manual override *</b> E0 = Without EP = Push (NR) EV = Screw (NL) EG = Push and twist (NR)												

\* Omit if not required. For example, to order the product without the fast slow solenoid cartridge valve, omit the solenoid valve manual override, coil voltage and coil connection options: H3927A4SQ.  
The manifold will still be provided with the corresponding cavity.  
To inhibit the fast slow speed function, replace the related solenoid valve options with TL: eg H3927A4SQ-TL.  
In the cavity it will be mounted a long plug.

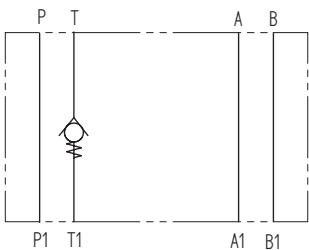
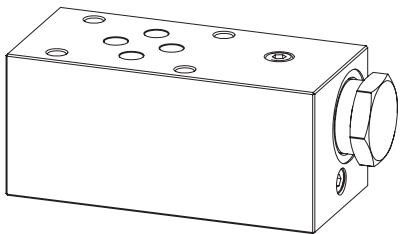
Valve	Cavity	Long plug code
Solenoid valve VEI-16-08A-NC OD.15.05.18-Y-000000 or VEI-16 08A-NA OD.15.06.18-Y-000000	CA-08A-2N	0489A2005600000



Dimensions in mm

Technical data

Max. pressure	250 bar
Max. flow	50 lpm
Weight	0,7 Kg
Manifold material	Aluminium



N°	Description	Q.ty
1	Ø 5,5 through hole for mounting	4
2	OR 108 i. Ø 8,73 cross section 1,78	4
3	Bosch Rexroth check valve	1

Ordering code

H	3	9	1	0	A
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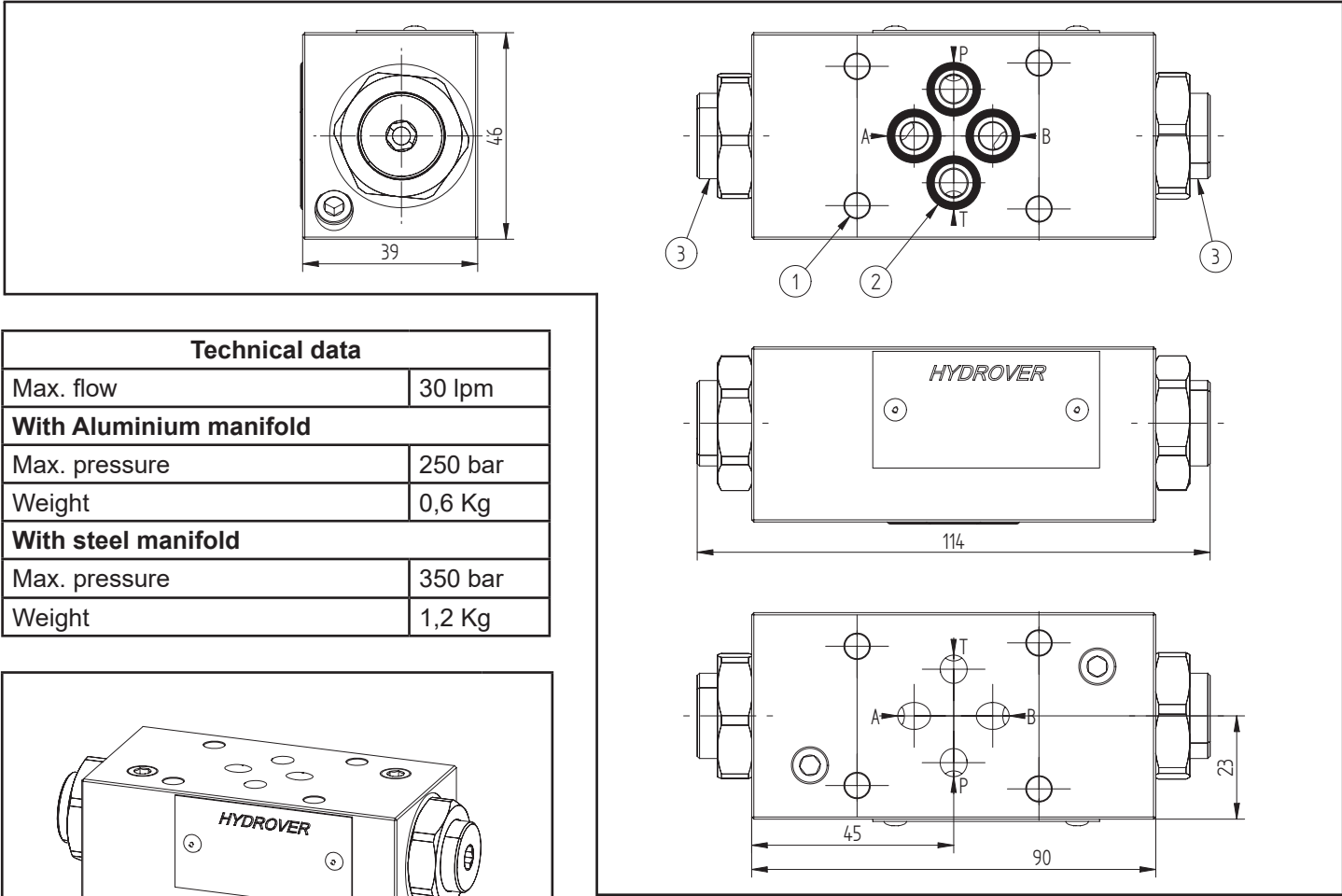
Hydrover product

Manifold material  
Aluminium

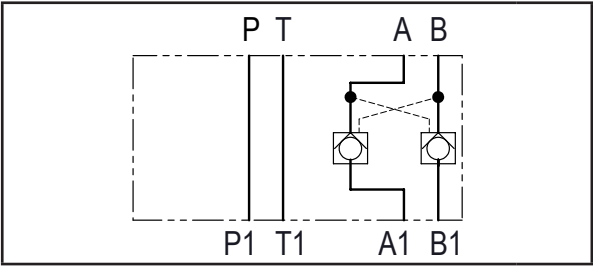
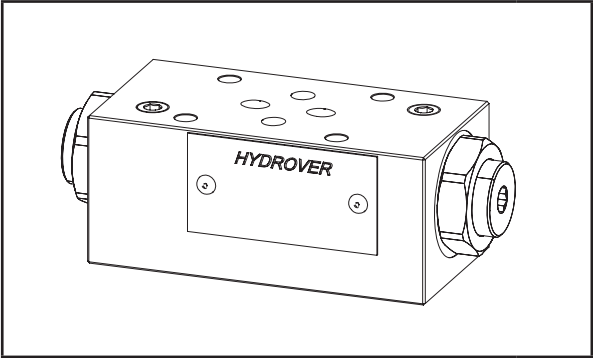
Product series  
39 series - Cetop 3 modular valves

Product ID

Cetop 3 modular piloted operated check valves on A e B / pilot ratio 7:1 **H3928**



Technical data	
Max. flow	30 lpm
<b>With Aluminium manifold</b>	
Max. pressure	250 bar
Weight	0,6 Kg
<b>With steel manifold</b>	
Max. pressure	350 bar
Weight	1,2 Kg



N°	Description	Q.ty
1	Ø 5,5 through hole for mounting	4
2	OR 108 i. Ø 8,73 cross section 1,78	4
3	Bosch Rexroth check valve	2

Ordering code

H	3	9	2	8	-	-
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Hydrover product

Product series  
39 series - Cetop 3 modular valves

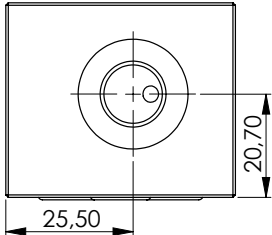
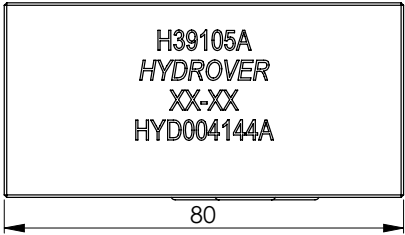
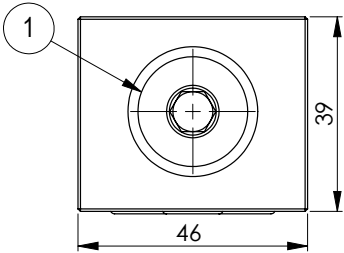
Product ID

Cracking pressure  
3 = 3 bar  
8 = 8 bar

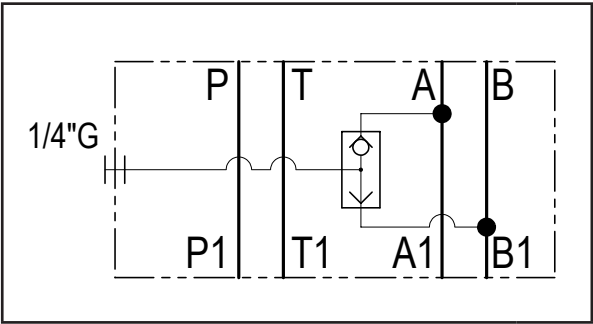
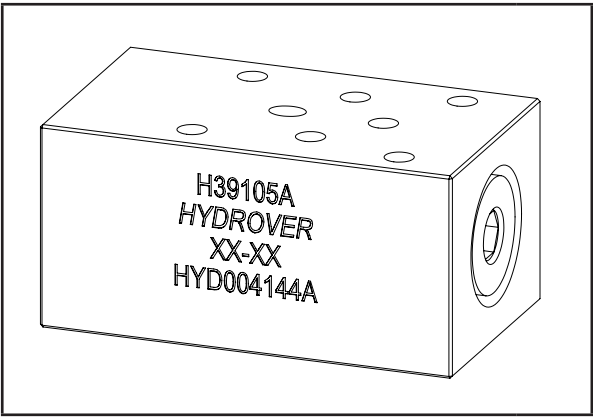
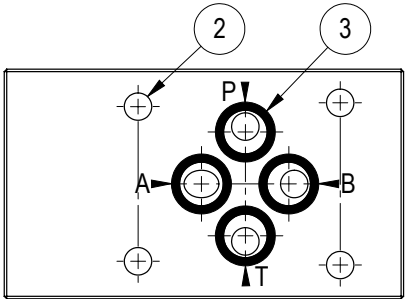
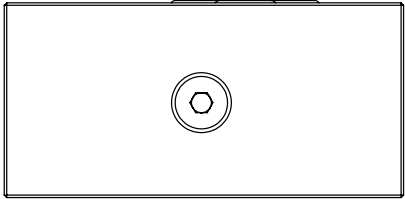
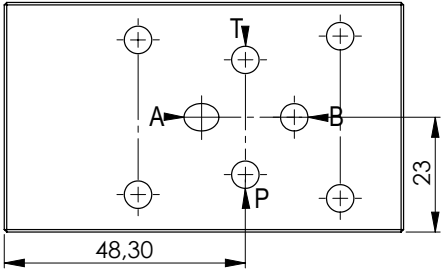
Manifold material  
A = Aluminium  
S = Steel

Cetop 3 modular shuttle valve between A and B H39105

Dimensions in mm



Technical data	
Max. flow shuttle valve	5 lpm
Max. flow A/ B/ P/ T	40 lpm
Max. pressure	Aluminium: 250 bar Steel: 350 bar
Weight	Aluminium: 0,4 Kg Steel: 1 Kg
Manifold material	Aluminium or Steel
Shuttle valve port	1/4" G



N°	Description	Q.ty
1	Sealed shuttle valve under 3/8" G plug	1
2	Ø 5,5 through hole for mounting	4
3	OR 108 i. Ø 8,73 cross section 1,78	4



Codice d'ordinazione

H	3	9	1	0	5	_
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Hydrover product

Product series

39 series - Cetop 3 modular valves

Manifold material

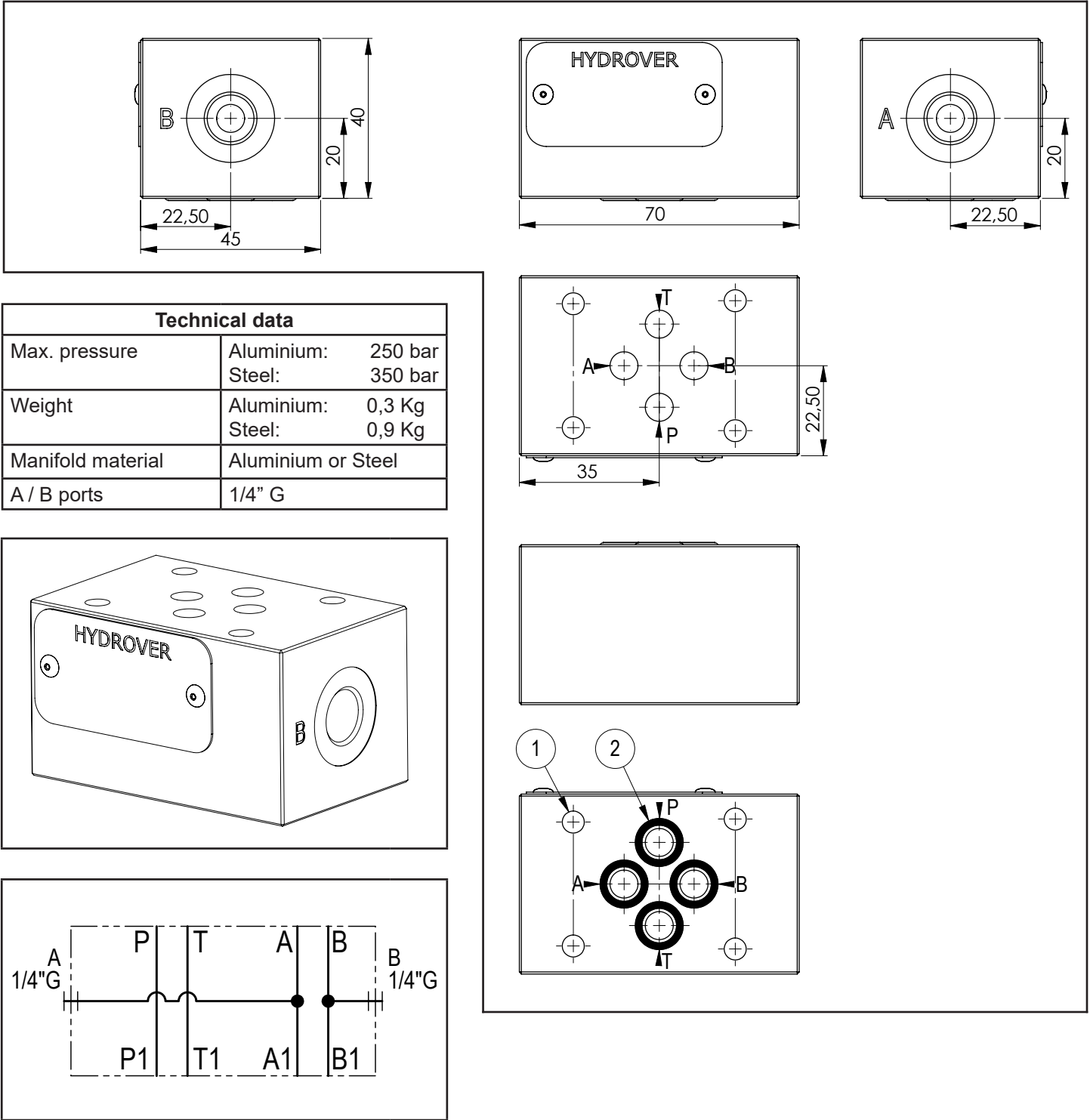
Aluminium

Steel

A =

S =

Product ID



N°	Description	Q.ty
1	Ø 5,5 through hole for mounting	4
2	OR 108 i. Ø 8,73 cross section 1,78	4

Ordering code

H	3	9	7	3	_
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Hydrover product

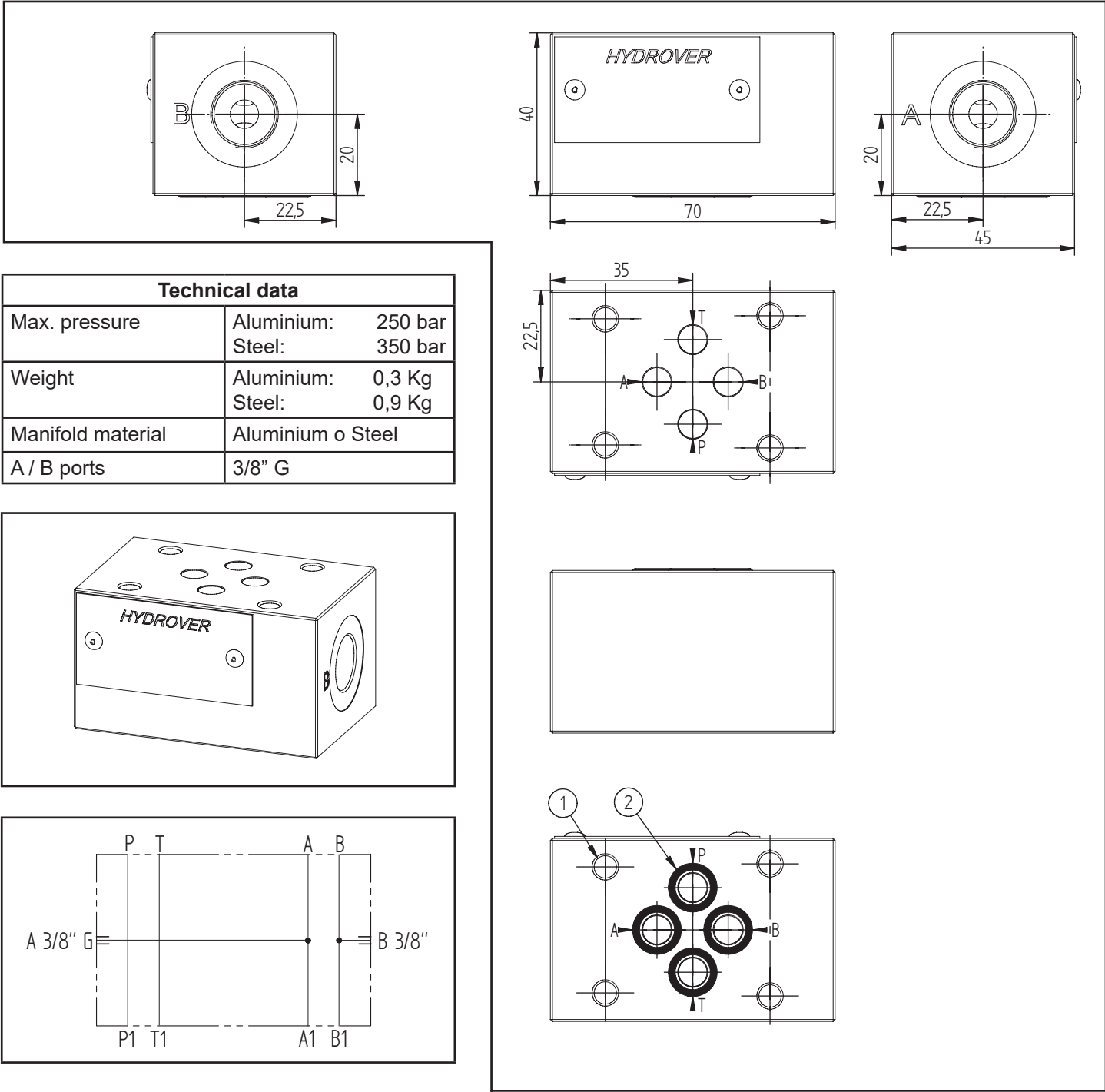
Product series  
39 series - Cetop 3 modular valves

Manifold material  
Aluminium  
Steel

A =  
S =

Product ID

Cetop 3 modular manifold with side additional A-B ports 3/8" G H3913



Technical data		
Max. pressure	Aluminium:	250 bar
	Steel:	350 bar
Weight	Aluminium:	0,3 Kg
	Steel:	0,9 Kg
Manifold material	Aluminium o Steel	
A / B ports	3/8" G	

N°	Description	Q.ty
1	Ø 5,5 through hole for mounting	4
2	OR 108 i. Ø 8,73 cross section 1,78	4

Ordering code

H	3	9	1	3	_
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Hydrover product

Product series

39 series - Cetop 3 modular valves

Manifold material

Aluminium

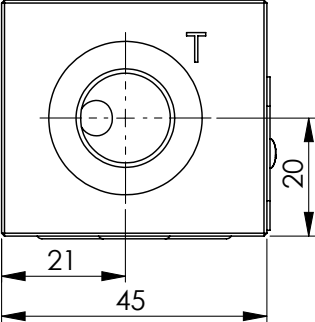
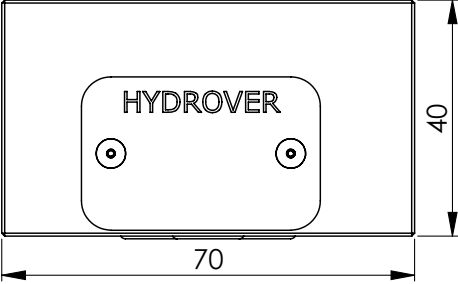
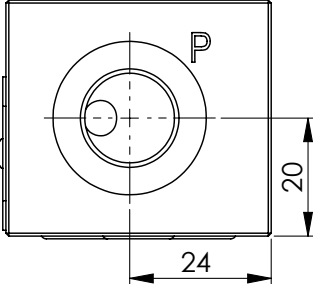
Steel

A =

S =

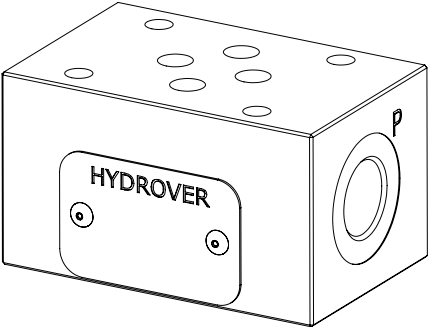
Product ID

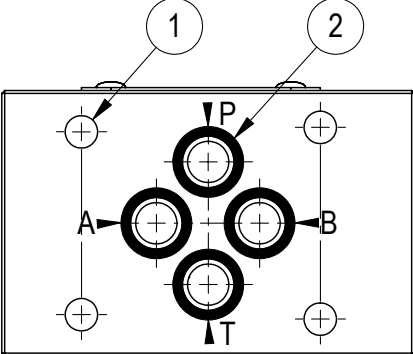
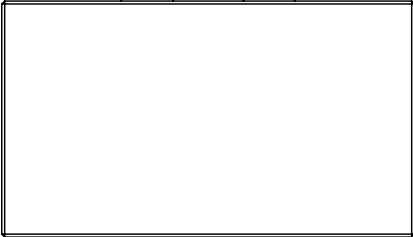
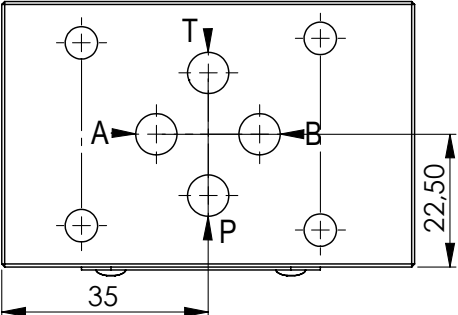
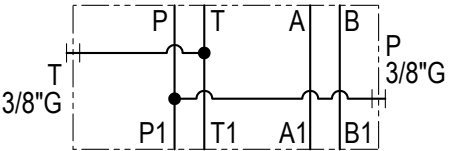
Cetop 3 modular manifold with side additional P-T ports **H3987**



Dimensions in mm

Technical data	
Max. pressure	250 bar
Weight	0,3 Kg
Manifold material	Alluminio
P / T ports	3/8" G





N°	Description	Q.ty
1	Ø 5,5 through hole for mounting	4
2	OR 108 i. Ø 8,73 cross section 1,78	4

Ordering code

H	3	9	8	7	A
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Hydrover product

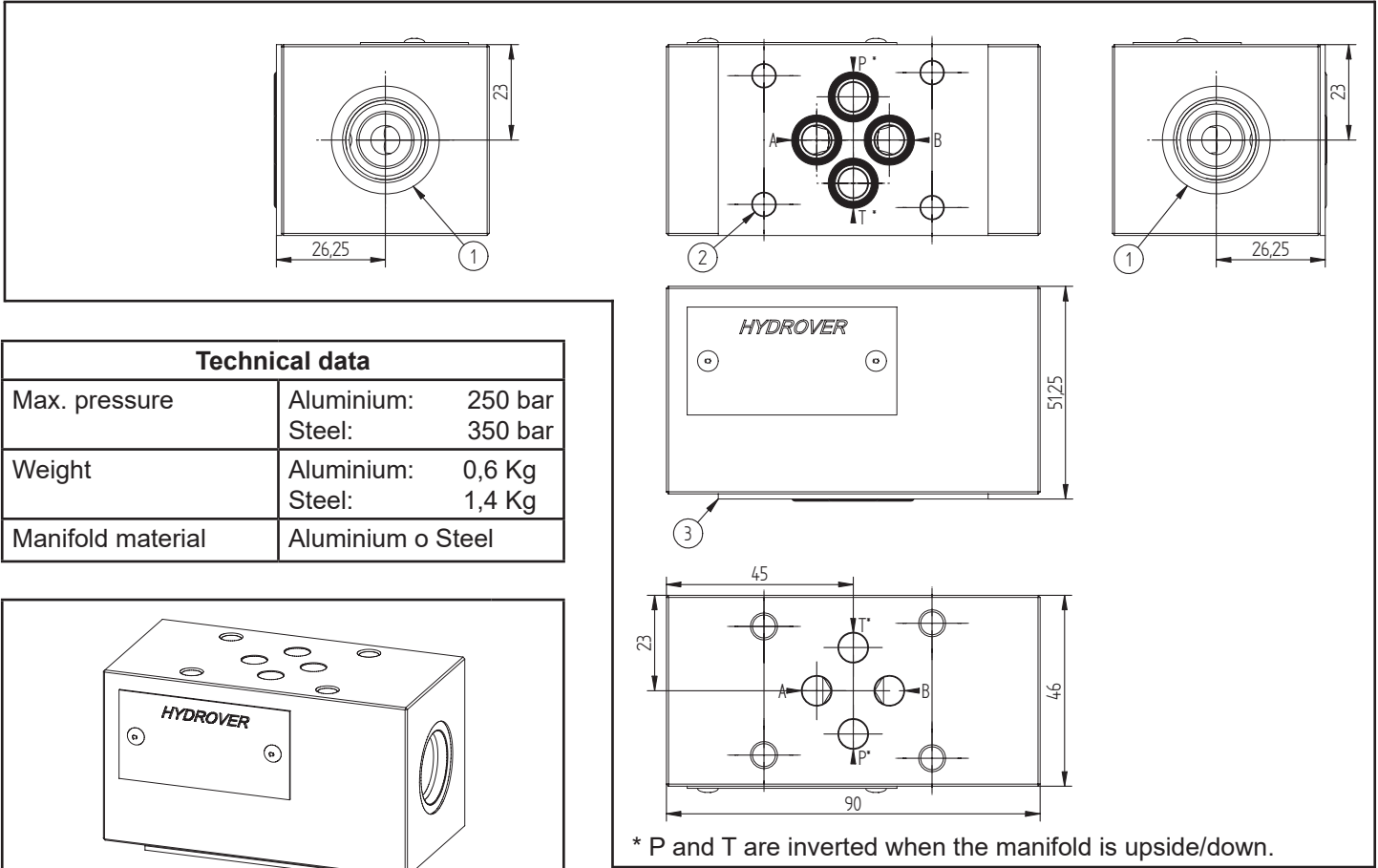
Manifold material  
Aluminium

Product series  
39 series - Cetop 3 modular valves

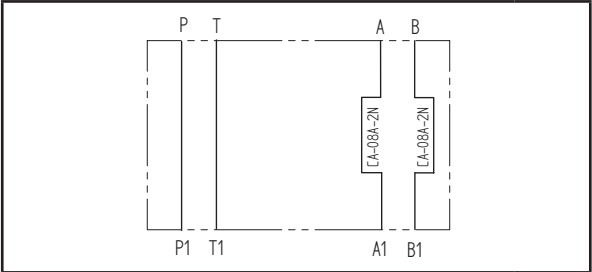
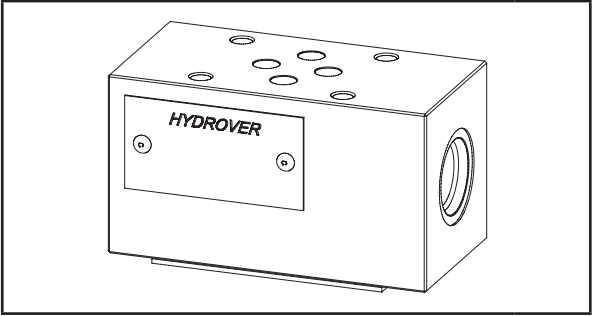
Product ID

Cetop 3 modular manifold with CA-08A-2N cavities on A and B for valves and solenoid valves / invertible with seal plate

H3902



Technical data		
Max. pressure	Aluminium:	250 bar
	Steel:	350 bar
Weight	Aluminium:	0,6 Kg
	Steel:	1,4 Kg
Manifold material	Aluminium o Steel	



N°	Description	Q.ty
1	Cavity CA-08A-2N	2
2	Ø 5,5 through hole for mounting	4
3	Seal plate	1

This Cetop 3 modular manifold have two CA-08A-2N cavities.  
With a few valves, solenoid valves and plugs, you can configurare on A and/or B a high quantity of functions.



Ordering code

H 3 9 0 2 \_

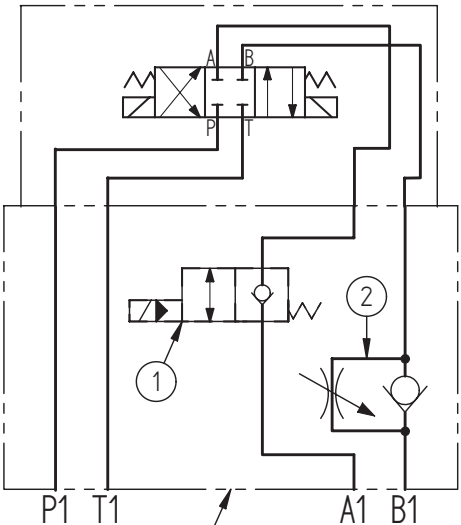
Hydrover product

Product series  
39 series - Cetop 3 modular valves

Manifold material  
Aluminium  
Steel

Product ID

Diagram example with manifold in normal position



Seal plate

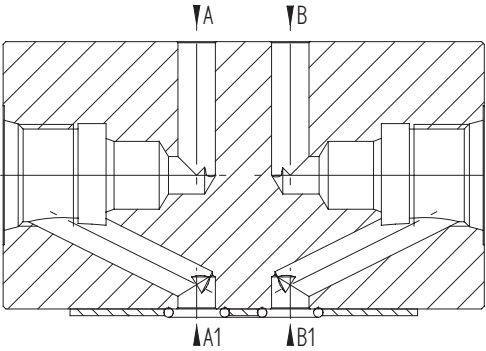
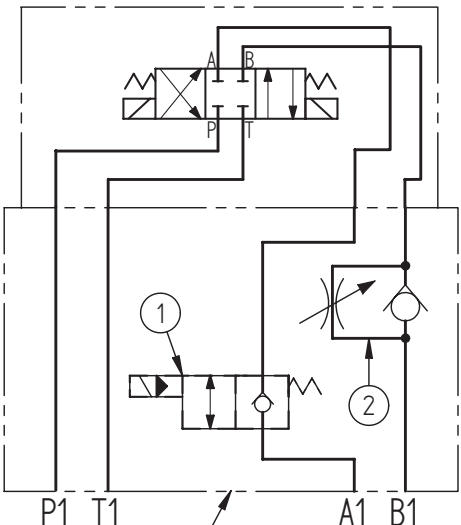
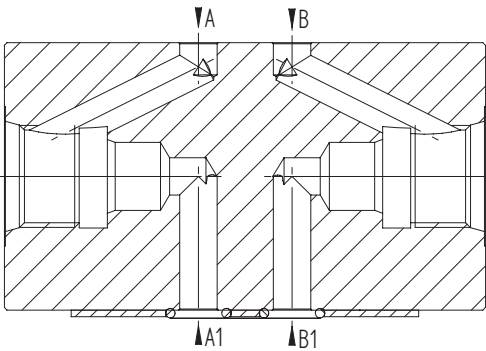


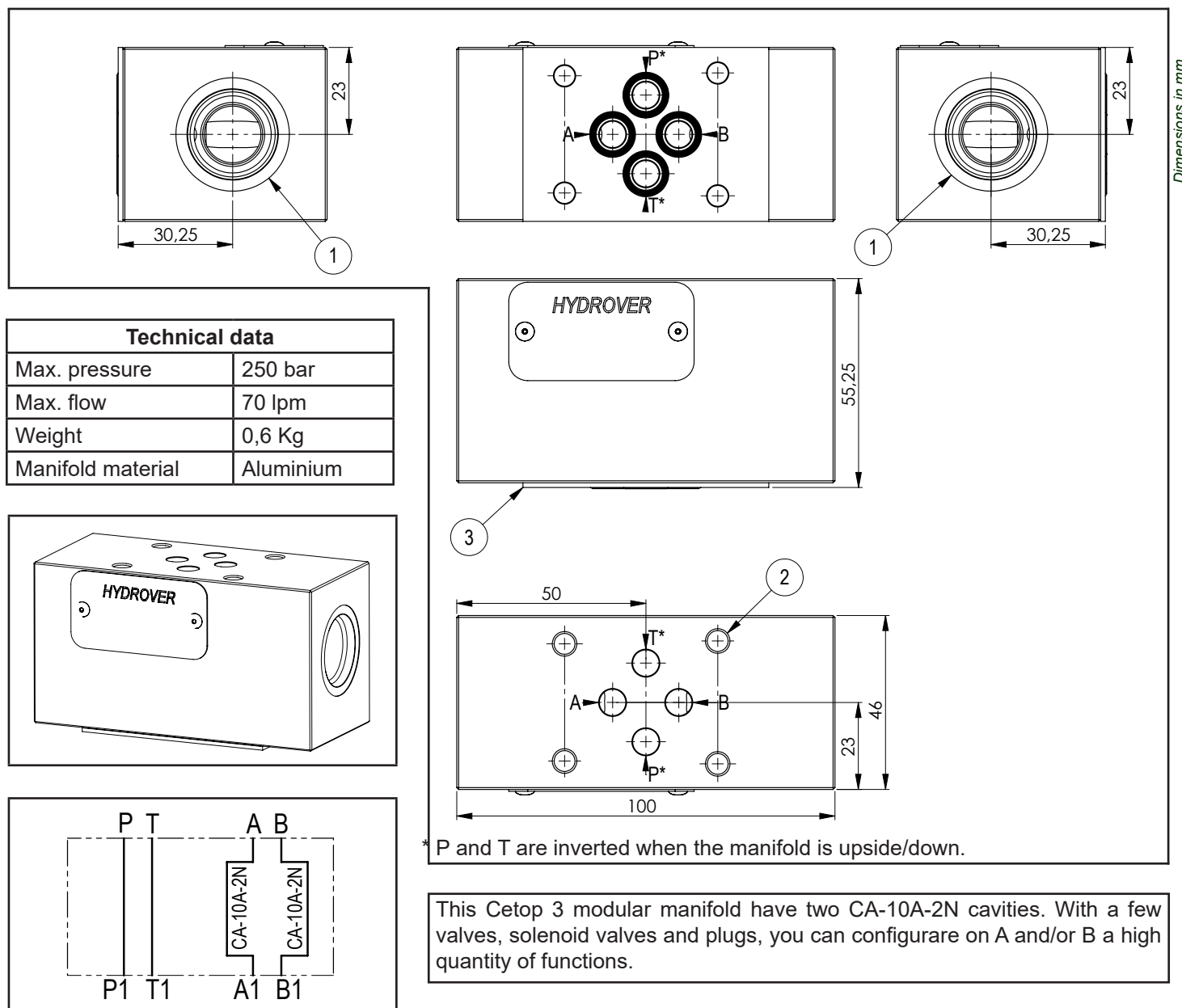
Diagram example with manifold in inverted position



Seal plate



N°	Description	Q.ty
1	Bosch Rexroth solenoid valve <b>VEI-16-08A-NA OD.15.06.18-Y-000000</b>	1
2	Bosch Rexroth unidirectional flow restrictor <b>STVU-08A</b>	1



N°	Description	Q.ty
1	Cavity CA-10A-2N	2
2	Ø 5,5 through hole for mounting	4
3	Seal plate	1

Ordering code

H	3	9	6	8	A
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Hydrover product

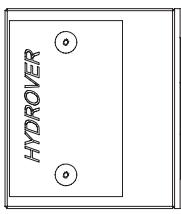
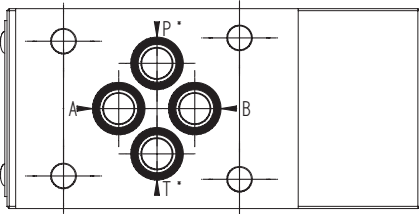
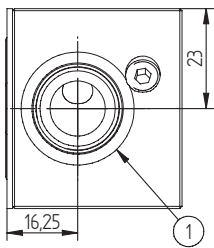
Manifold material  
Aluminium

Product series  
39 series - Cetop 3 modular valves

Product ID

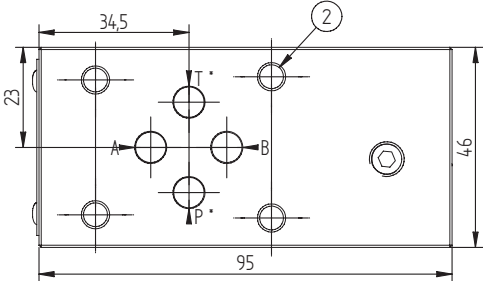
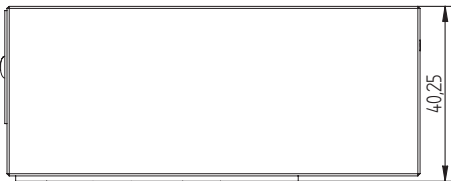
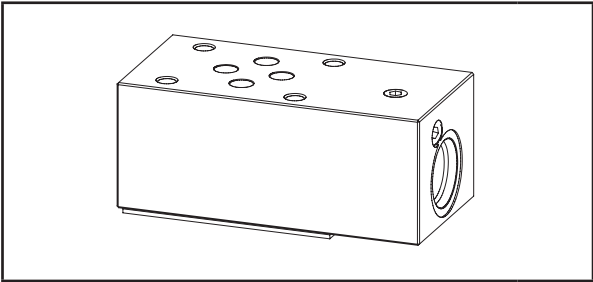
Cetop 3 modular manifold with CA-08A-2N cavity between P (end cavity) and T (side cavity) for valves / invertible with seal plate

H3908

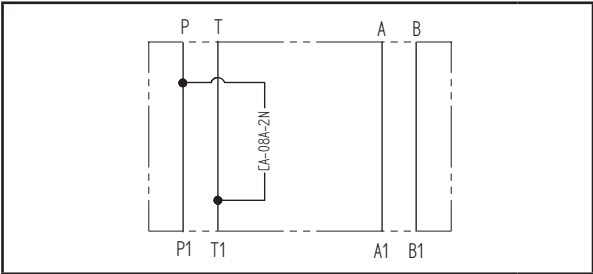


Dimensions in mm

Technical data		
Max. pressure	Aluminium:	250 bar
	Steel:	350 bar
Weight	Aluminium:	0,5 Kg
	Steel:	1,2 Kg
Manifold material	Aluminium o Steel	



\* P and T are inverted when the manifold is upside/down.



N°	Description	Q.ty
1	Cavity CA-08A-2N	1
2	Ø 5,5 through hole for mounting	4
3	Seal plate	1

This Cetop 3 modular manifold have one CA-08A-2N cavity.  
With a few valves and solenoid valves, you can configurare a high quantity of functions.

Ordering code

H	3	9	0	8	_
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Hydrover product

Product series  
39 series - Cetop 3 modular valves

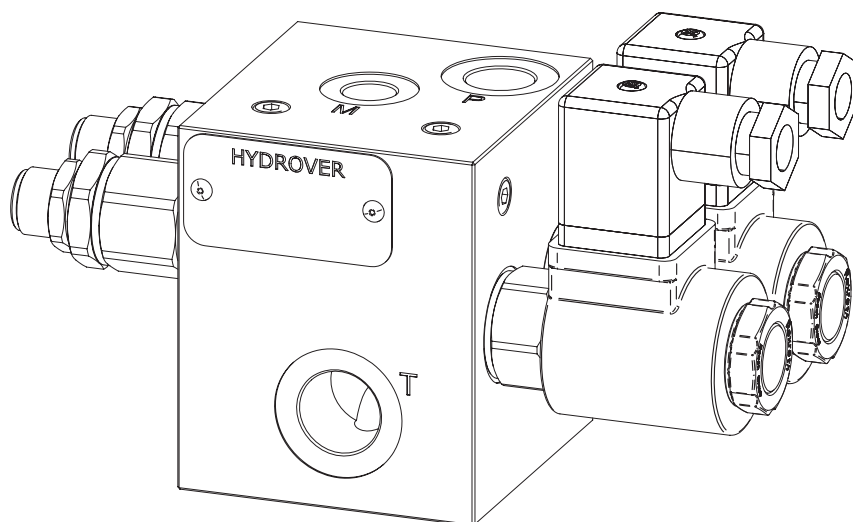
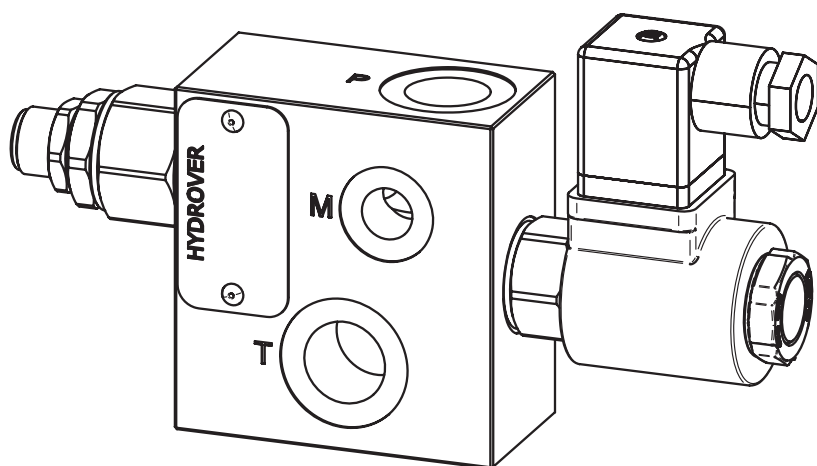
A =  
S =

Manifold material  
Aluminium  
Steel

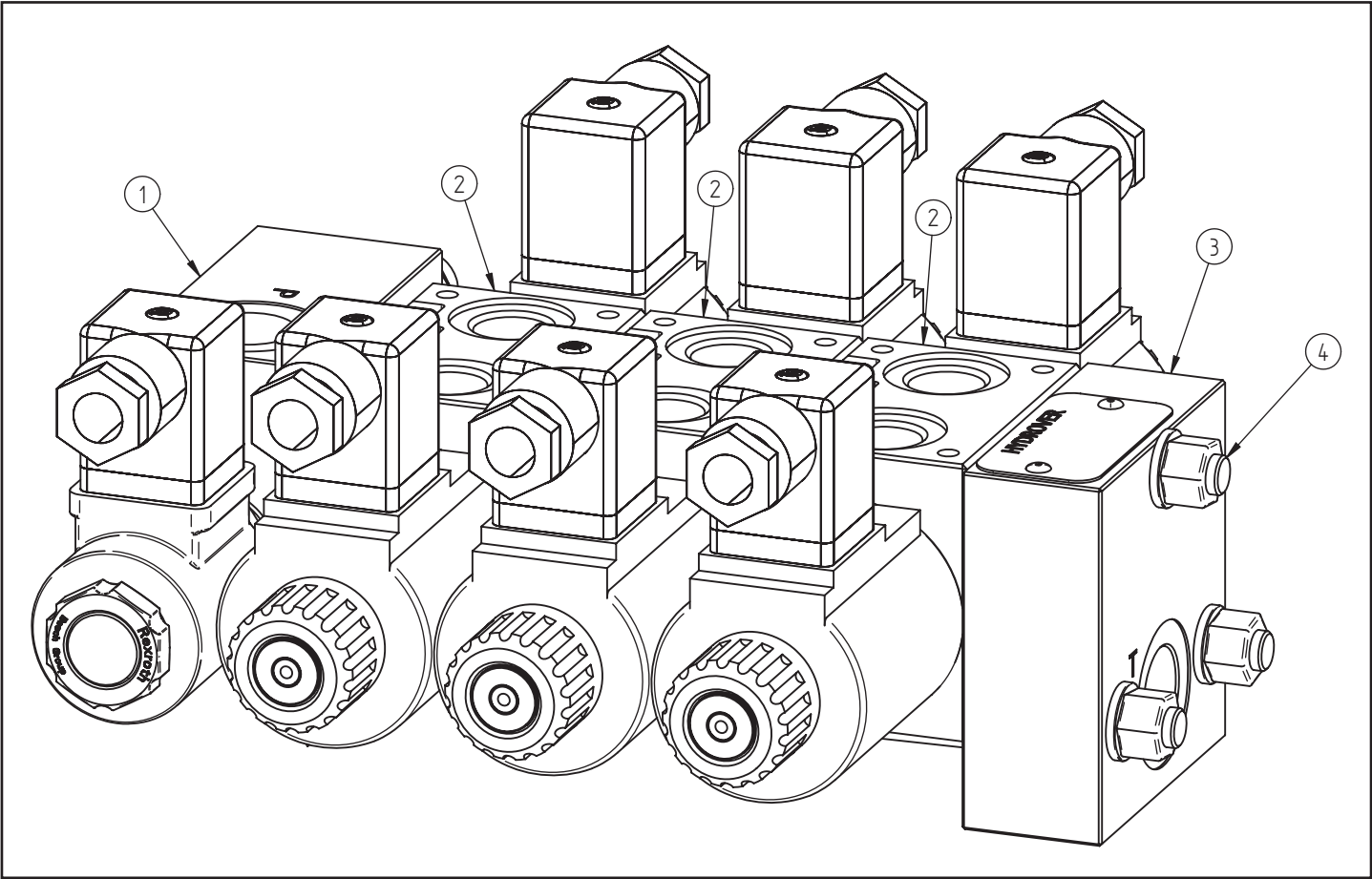
Product ID



## SERIE 41

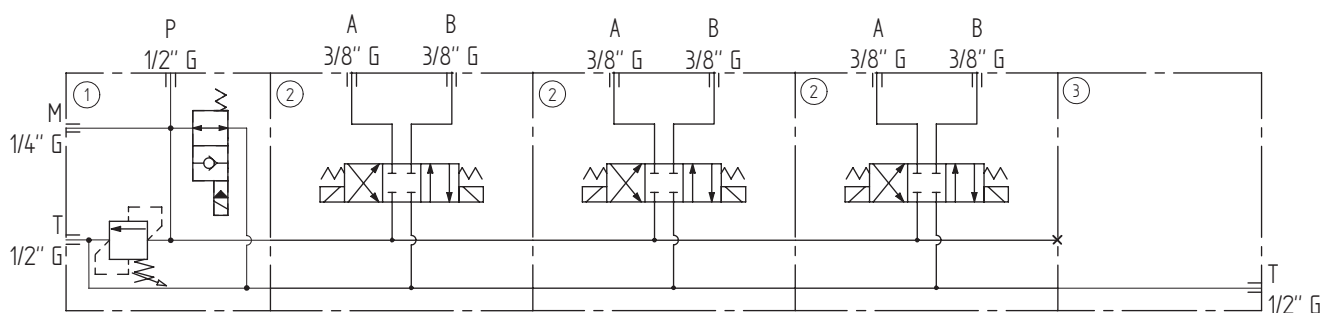
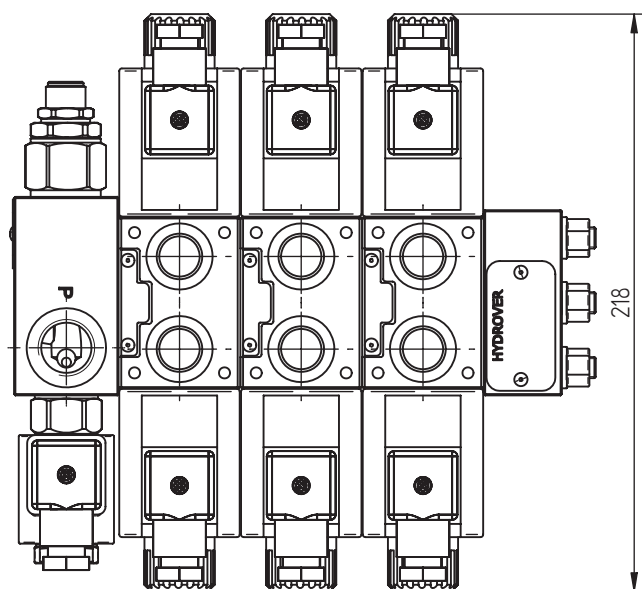
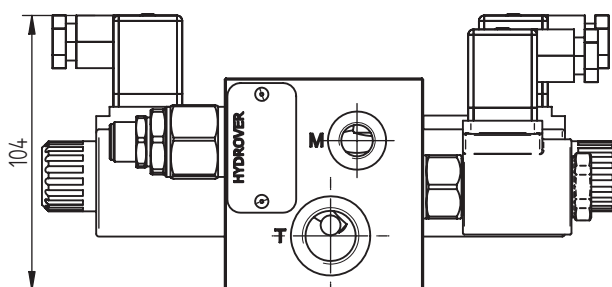
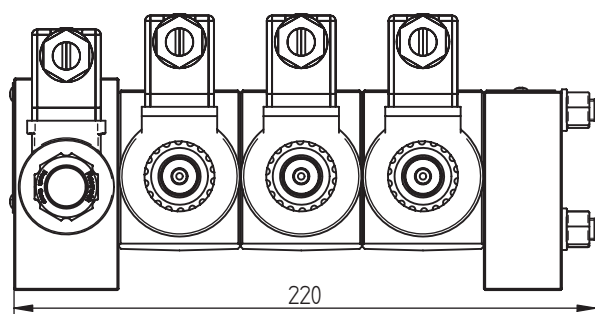
Elementi per elettro distributori bancabili  
ED Bosch Rexroth

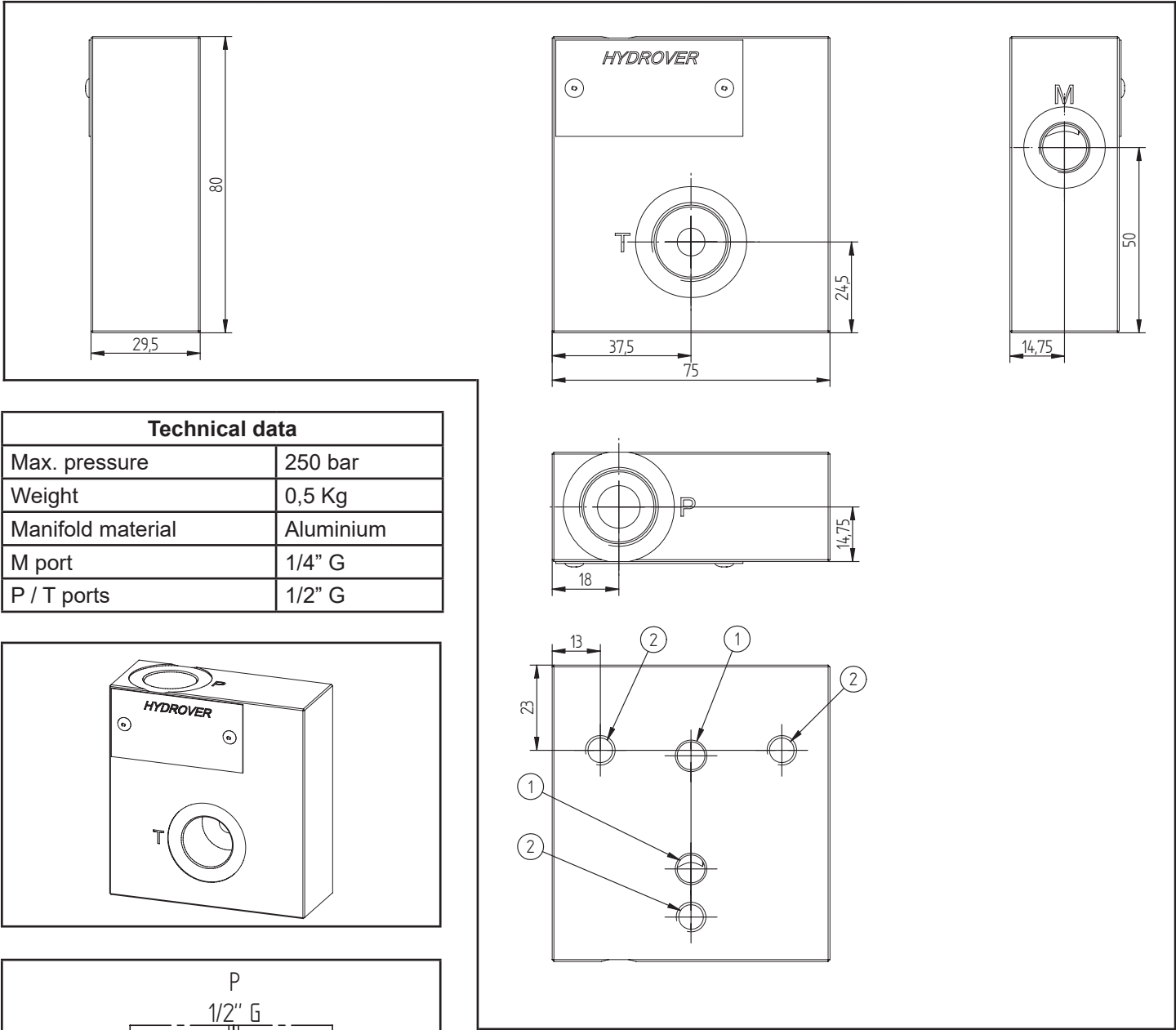
N°	Ordering code	Description	Q.ty
1	H4101A-S2-E0-OC1	INLET PLATE S41 P-T 1/2G RV 40-200 BAR EV BYPASS 24V DC DIN 40 LPM AL.	1
2	L8011B201OB0200	EE. ED2-DZ-1/2"G-PT9-B201-12DC-N WITH CONNECTOR DIN 43650 ISO 4400	3
3	H4102A	CLOSING PLATE S41 T 1/2G AL.	1
4	HKTM8X185DS-3	3 TIE RODS KIT M8X185 STANDARD NUT - S41 3 EL.	1



Note: 41 series plates have the flange for Bosch Rexroth valves from catalogue RE 18300 / RE 18301, but are not compatible with Bosch Rexroth plates.  
For checking if your configuration is technically correct please contact our sales office.







Dimensions in mm

N°	Description	Q.ty
1	Ø 7,5 hole without counterbore for O-ring (P-T)	2
2	M8x17 for tie rod	3
3	M8x15 thread for mounting	2

Ordering code

H	4	1	0	4	A
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Hydrover product

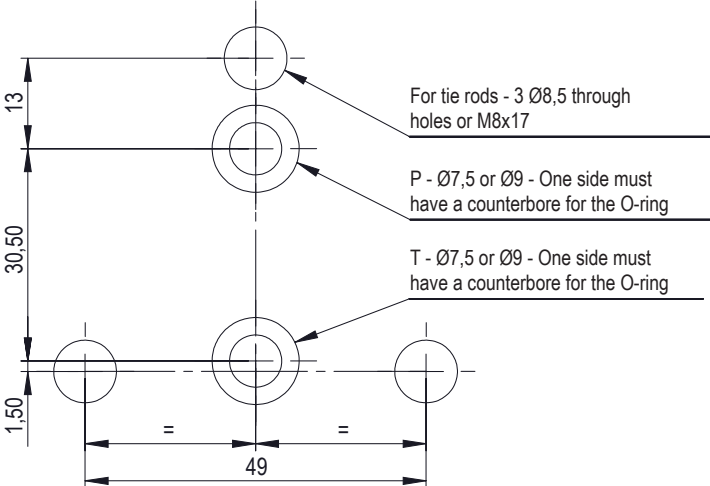
Manifold material  
Aluminium

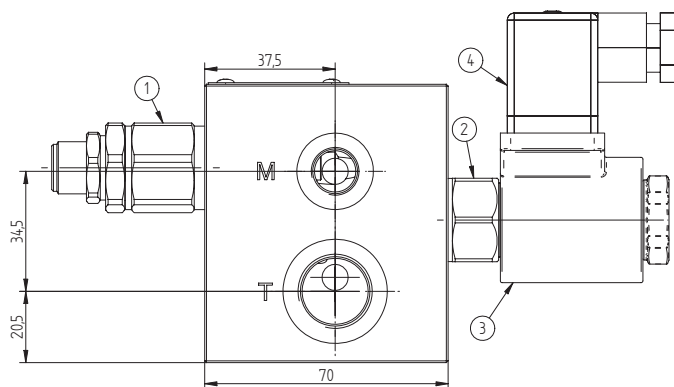
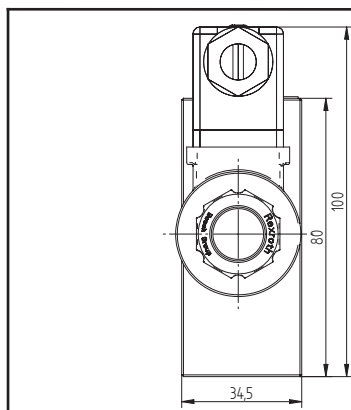
Product series

41 series - Plates for Bosch Rexroth ED bankable valves

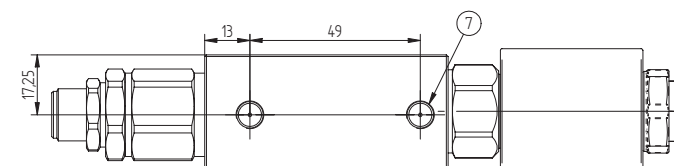
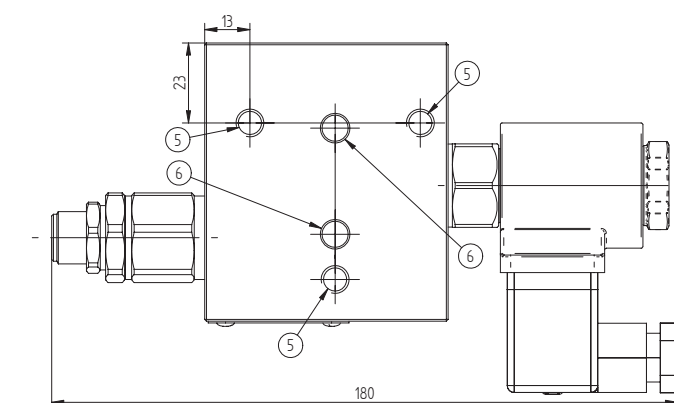
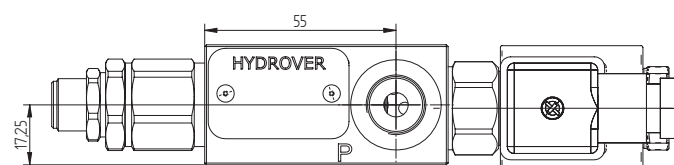
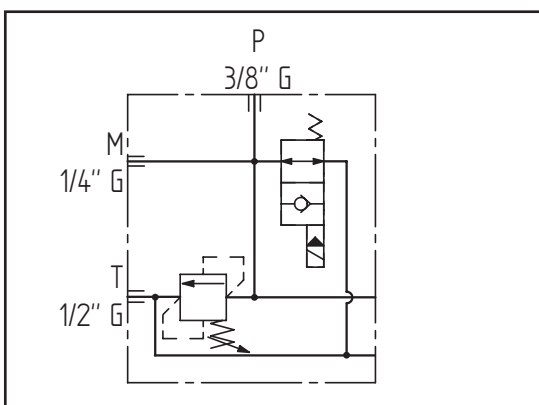
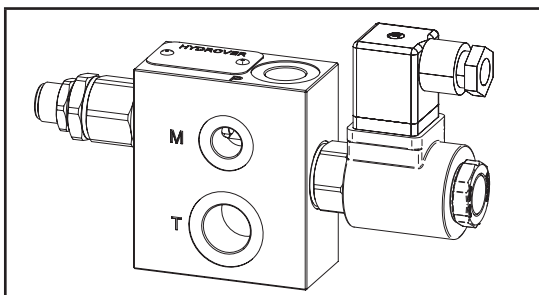
Product ID

Flange





Technical data	
Max. pressure	250 bar
Max. flow	30 lpm *
Weight	0,8 Kg
Manifold material	Aluminium
M port	1/4" G
P port	3/8" G
T port	1/2" G



Dimensions in mm

N°	Description	Q.ty
1	Bosch Rexroth relief valve <b>VMD1.025</b> *	1
2	Bosch Rexroth bypass solenoid valve <b>VEI-16-08A-NA OD.15.06.18-Y-000000</b> depicted without manual override *	1
3	Bosch Rexroth coil <b>D36</b> - CLASS H DIN 43650 ISO 4400 *	1
4	Connector DIN 43650 ISO 4400	1
5	M8x17 for tie rod	3
6	Ø 7,5 hole without counterbore for O-ring (P-T)	2
7	M8x15 thread for mounting	2

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

Ordering code

H	4	1	0	3	A	-	-	-	-	-	-	-
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Hydrover product

Product series  
41 series - Plates for  
Bosch Rexroth ED  
bankable valves

Product ID

Manifold material  
Aluminium

Relief valve adjustment type \*  
Screw = S

Relief valve adjustment pressure range \*  
25-120 bar = 1  
40-200 bar = 2  
200-350 bar = 3

Solenoid valve  
coil connection \*  
1 = DIN 43650 ISO 4400

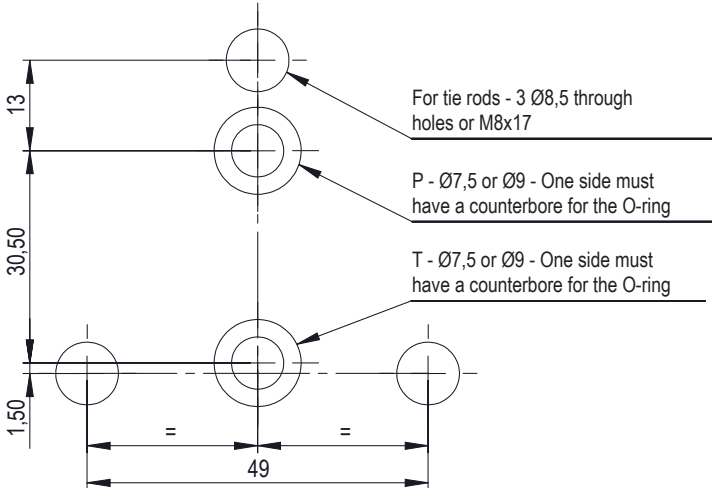
Solenoid valve  
coil voltage \*  
OB = 12V DC  
OC = 24V DC  
OD = 48V DC  
OU = 110V RAC  
AH = 230V RAC

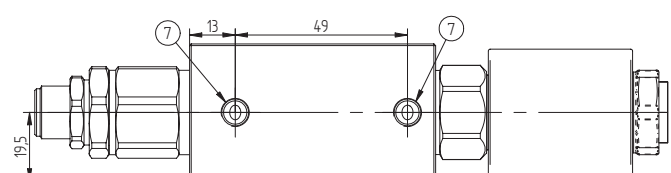
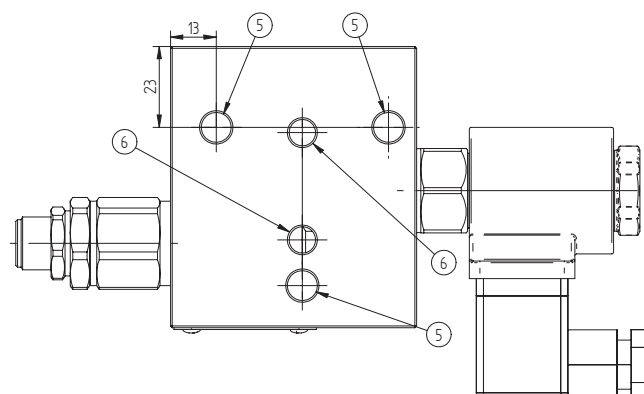
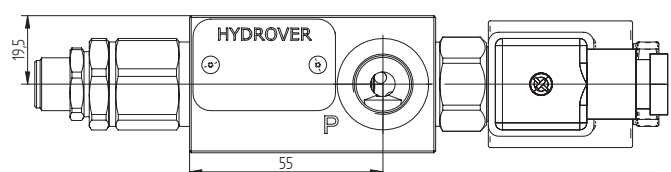
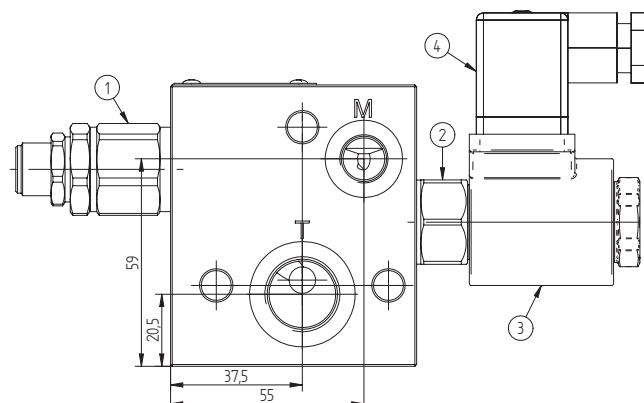
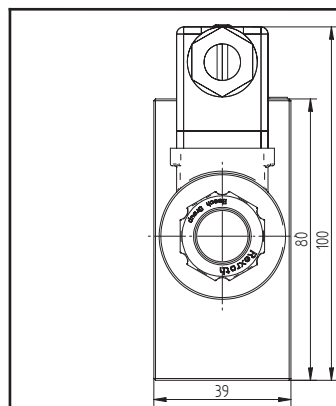
Solenoid valve  
manual override \*  
E0 = Without  
EP = Push  
EG = Push and twist

\* Omit if not required. For example, to order the product without the bypass solenoid cartridge valve, omit the coil connection, coil voltage and manual override options: H4103A-S2.  
The manifold will still be provided with the corresponding cavity.  
To inhibit a function, replace the related valve options with TL: eg H4103A-S2-TL.  
In the cavity it will be mounted a long plug.

Valve	Cavity	Long plug code
Solenoid valve VEI-16-08A-NA OD.15.06.18-Y-000000	CA-08A-2N	0489A2005600000
Pressure relief valve VMD1.025	VMD1.025	R-800-016

Flange

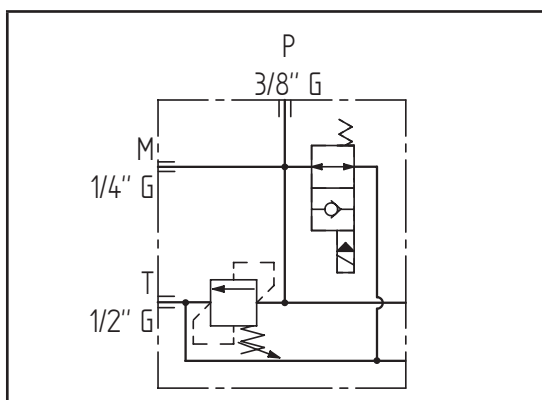
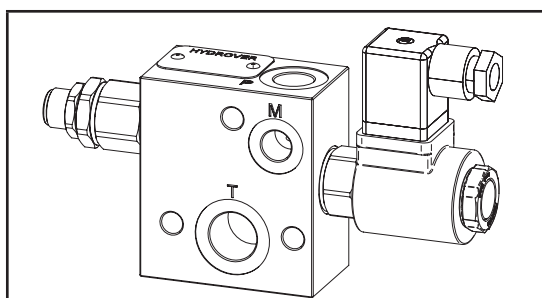




Dimensions in mm

**Technical data**

Max. pressure	250 bar
Max. flow	30 lpm *
Weight	1 Kg
Manifold material	Aluminium
M port	1/4" G
P port	3/8" G
T port	1/2" G



N°	Description	Q.ty
1	Bosch Rexroth relief valve <b>VMD1.025</b> *	1
2	Bosch Rexroth bypass solenoid valve <b>VEI-16-08A-NA OD.15.06.18-Y-000000</b> depicted without manual override *	1
3	Bosch Rexroth coil <b>D36</b> - CLASS H DIN 43650 ISO 4400 *	1
4	Connector DIN 43650 ISO 4400	1
5	Ø 8,5 through hole for tie rod	3
6	Ø 7,5 hole without counterbore for O-ring (P-T)	2
7	M8x15 thread for mounting	2

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

Ordering code

H	4	1	0	7	A	-	-	-	-	-	-	-
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Hydrover product

Product series  
41 series - Plates for Bosch Rexroth ED bankable valves

Product ID

Manifold material  
Aluminium

Relief valve adjustment type \*  
Screw = S

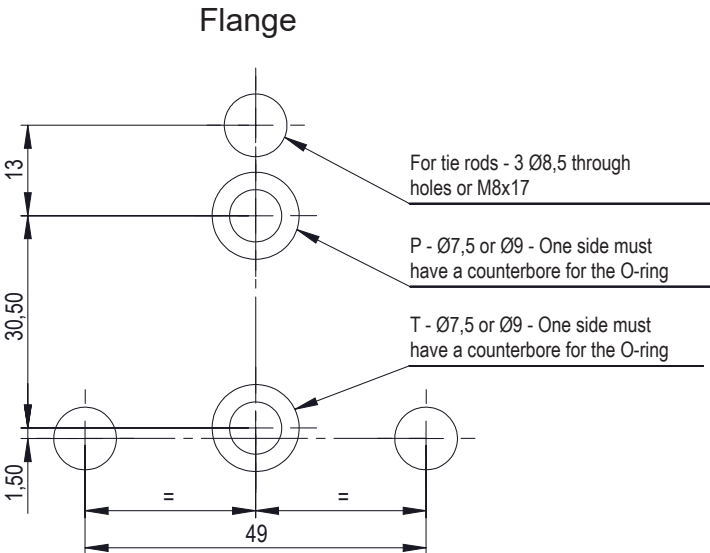
Relief valve adjustment pressure range \*  
25-120 bar = 1  
40-200 bar = 2  
200-350 bar = 3

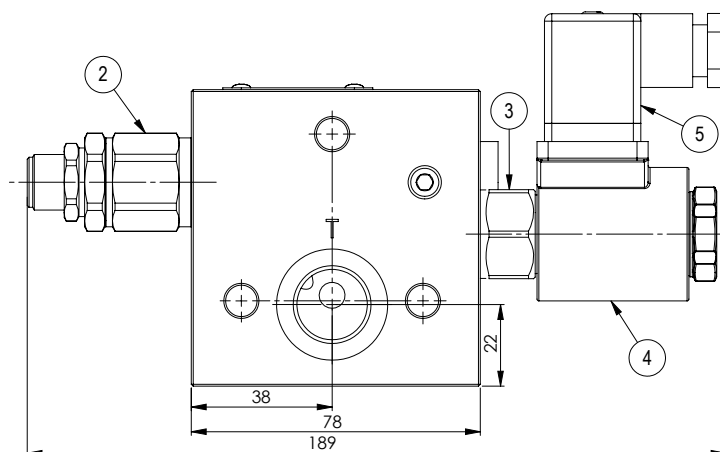
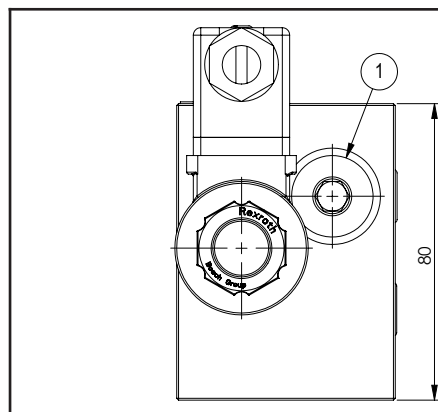
Solenoid valve coil connection \*  
1 = DIN 43650 ISO 4400

Solenoid valve coil voltage \*  
OB = 12V DC  
OC = 24V DC  
OD = 48V DC  
OU = 110V RAC  
AH = 230V RAC

Solenoid valve manual override \*  
E0 = Without  
EP = Push  
EG = Push and twist

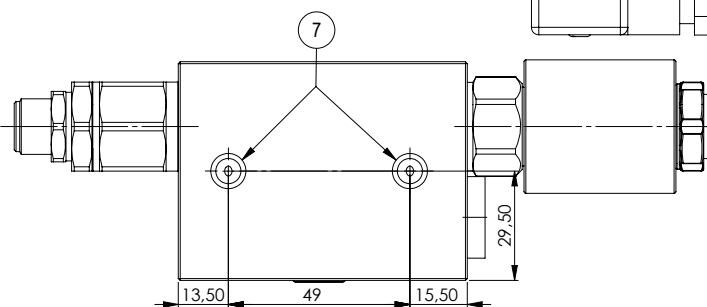
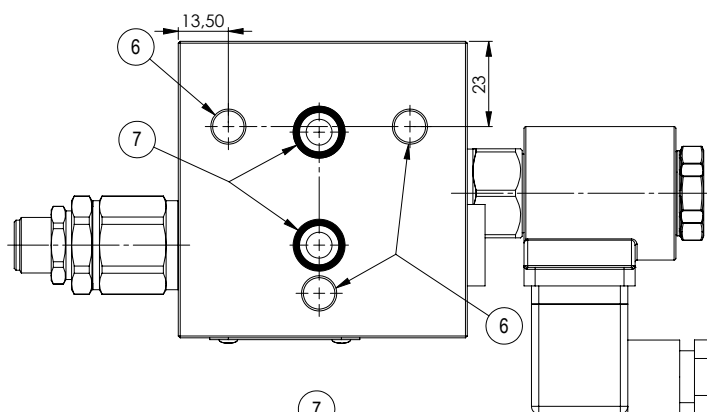
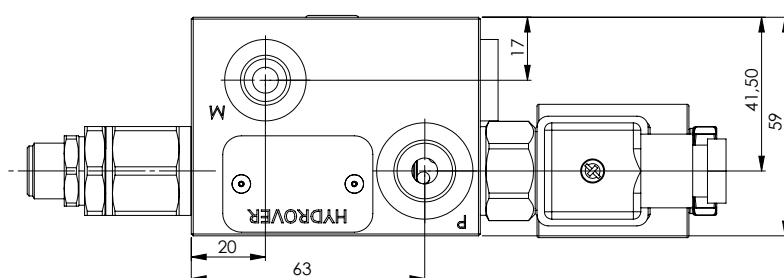
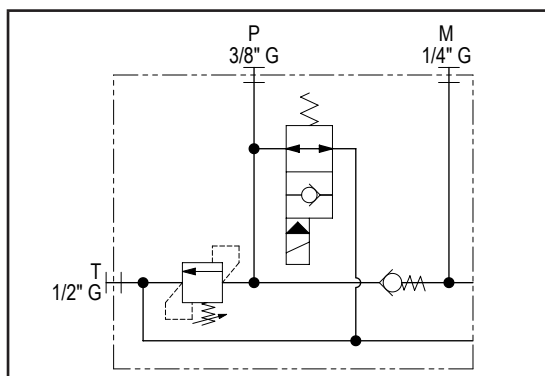
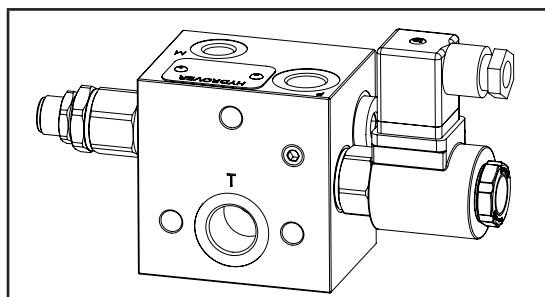
* Omit if not required. For example, to order the product without the bypass solenoid cartridge valve, omit the coil connection, coil voltage and manual override options: H4107A-S2. The manifold will still be provided with the corresponding cavity. To inhibit a function, replace the related valve options with TL: eg H4107A-S2-TL. In the cavity it will be mounted a long plug.		
Valve	Cavity	Long plug code
Solenoid valve VEI-16-08A-NA OD.15.06.18-Y-000000	CA-08A-2N	0489A2005600000
Pressure relief valve VMD1.025	VMD1.025	R-800-016





## Technical data

Max. pressure	250 bar
Max. flow	30 lpm *
Weight	1,4 Kg
Manifold material	Aluminium
M port	1/4" G
P port	3/8" G
T port	1/2" G



Dimensions in mm

N°	Description	Q.ty
1	Check valve <b>0TU301000200</b> (under the plug) *	1
2	Bosch Rexroth relief valve <b>VMD1.025</b> *	1
3	Bosch Rexroth bypass solenoid valve <b>VEI-16-08A-NA OD.15.06.18-Y-000000</b> depicted without manual override *	1
4	Bosch Rexroth coil <b>D36</b> - CLASS H DIN 43650 ISO 4400 *	1
5	Connector DIN 43650 ISO 4400	1
6	Ø 8,5 through hole for tie rod	3
7	Ø 7,5 hole with OR 2043 i. Ø 10,82 cross section 1,78 (P-T)	2
8	M8x15 thread for mounting	2

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue



Ordering code

H	4	1	1	2	A	-	-	-	-	-	-	-
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Hydrover product

Product series  
41 series - Plates for  
Bosch Rexroth ED  
bankable valves

Product ID

Manifold material  
Aluminium

Relief valve adjustment type \*  
Screw = S

Relief valve adjustment pressure range \*  
25-120 bar = 1  
40-200 bar = 2  
200-350 bar = 3

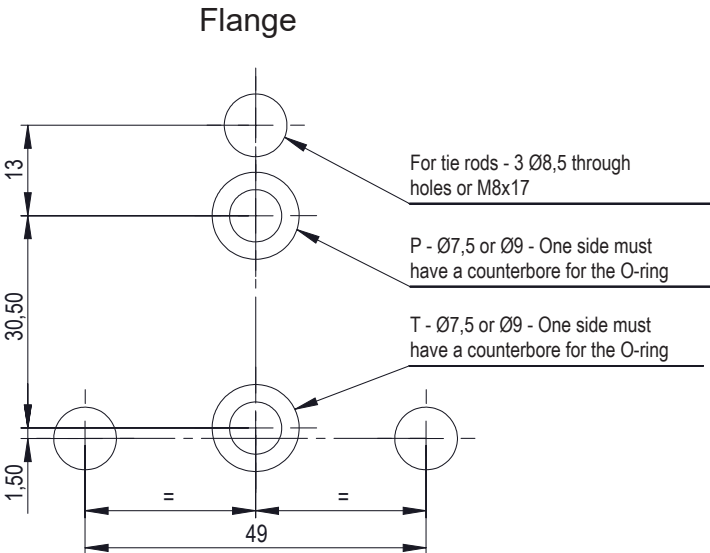
Solenoid valve  
coil connection \*  
1 = DIN 43650 ISO 4400

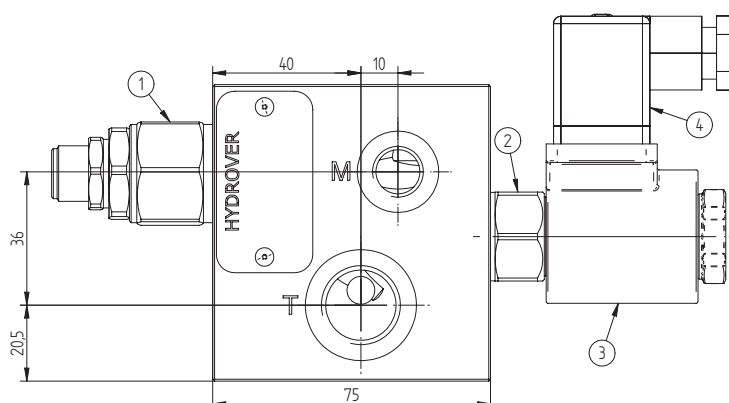
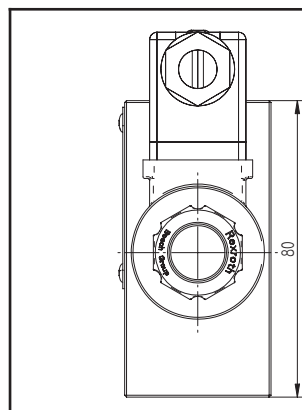
Solenoid valve  
coil voltage \*  
OB = 12V DC  
OC = 24V DC  
OD = 48V DC  
OU = 110V RAC  
AH = 230V RAC

Solenoid valve  
manual override \*  
E0 = Without  
EP = Push  
EG = Push and twist

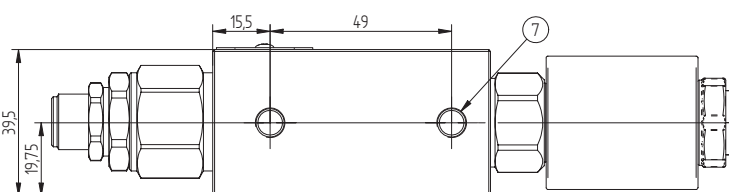
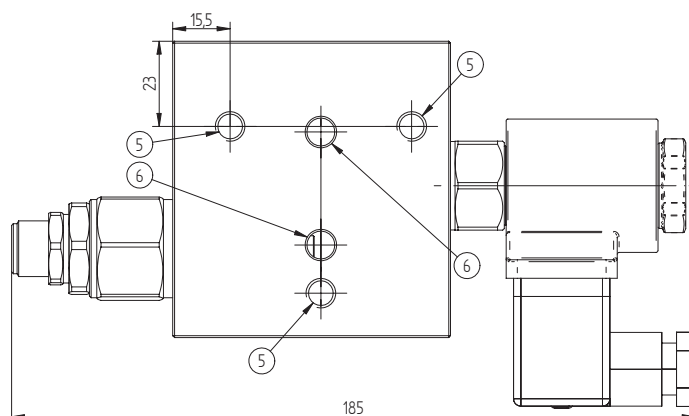
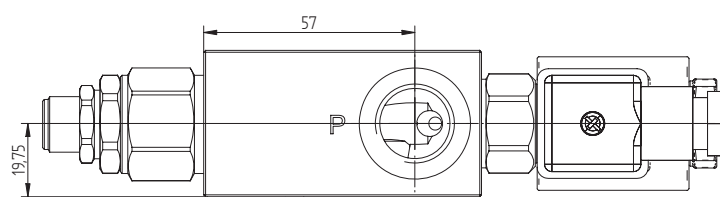
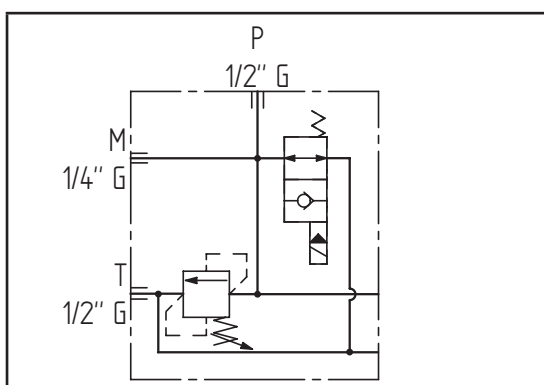
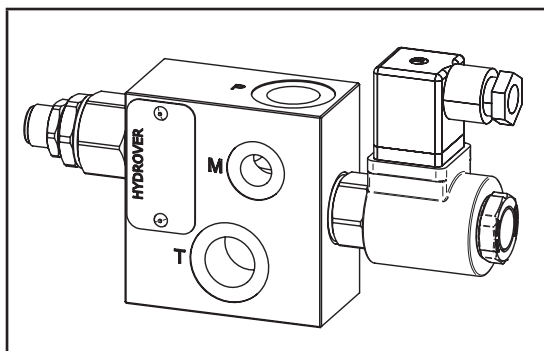
\* Omit if not required. For example, to order the product without the bypass solenoid cartridge valve, omit the coil connection, coil voltage and manual override options: H4112A-S2.  
The manifold will still be provided with the corresponding cavity.  
To inhibit a function, replace the related valve options with TL: eg H4112A-S2-TL.  
In the cavity it will be mounted a long plug.

Valve	Cavity	Long plug code
Solenoid valve VEI-16-08A-NA OD.15.06.18-Y-000000	CA-08A-2N	0489A2005600000
Pressure relief valve VMD1.025	VMD1.025	R-800-016





Technical data	
Max. pressure	250 bar
Max. flow	40 lpm *
Weight	1,1 Kg
Manifold material	Aluminium
M port	1/4" G
P / T ports	1/2" G



Dimensions in mm

N°	Description	Q.ty
1	Bosch Rexroth relief valve <b>VMD1.040</b> *	1
2	Bosch Rexroth bypass solenoid valve <b>VEI-16-08A-NA OD.15.06.18-Y-000000</b> depicted without manual override *	1
3	Bosch Rexroth coil <b>D36</b> - CLASS H DIN 43650 ISO 4400 *	1
4	Connector DIN 43650 ISO 4400	1
5	M8x17 for tie rod	3
6	Ø 7,5 hole without counterbore for O-ring (P-T)	2
7	M8x15 thread for mounting	2

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

Ordering code

H	4	1	0	1	A	-	-	-	-	-	-	-
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Hydrover product

Product series  
41 series - Plates for  
Bosch Rexroth ED  
bankable valves

Product ID

Manifold material  
Aluminium

Relief valve adjustment type \*  
Screw = S

Relief valve adjustment pressure range \*  
25-120 bar = 1  
40-200 bar = 2  
200-350 bar = 3

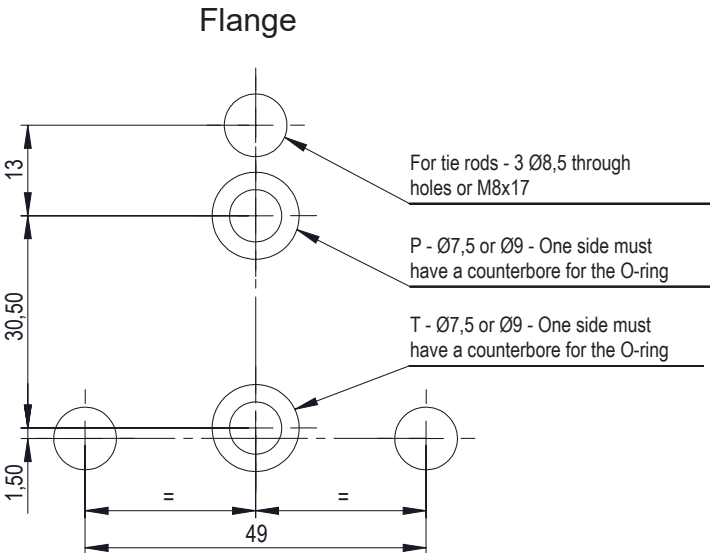
Solenoid valve  
coil connection \*  
1 = DIN 43650 ISO 4400

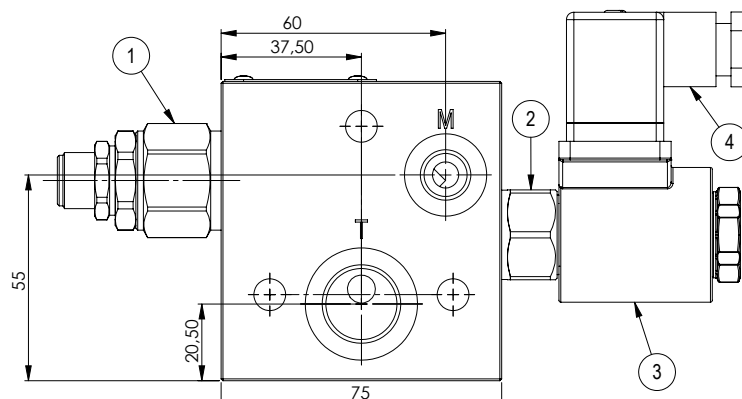
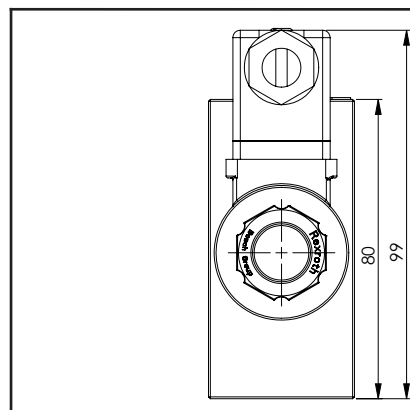
Solenoid valve  
coil voltage \*  
OB = 12V DC  
OC = 24V DC  
OD = 48V DC  
OU = 110V RAC  
AH = 230V RAC

Solenoid valve  
manual override \*  
E0 = Without  
EP = Push  
EG = Push and twist

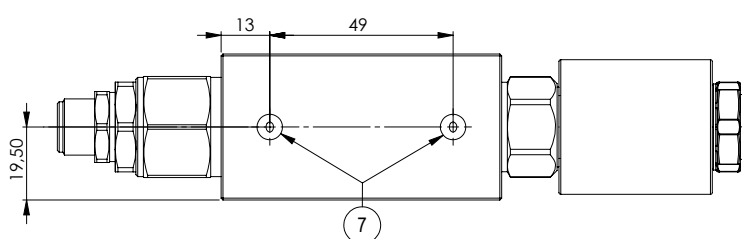
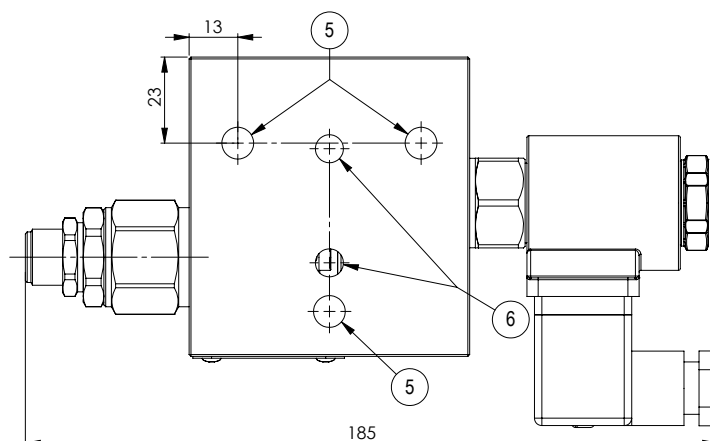
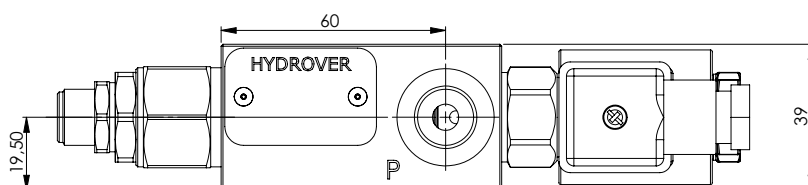
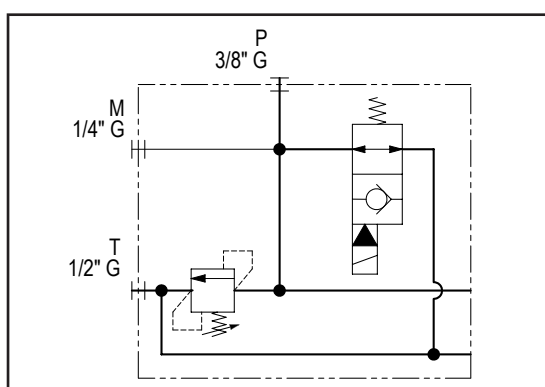
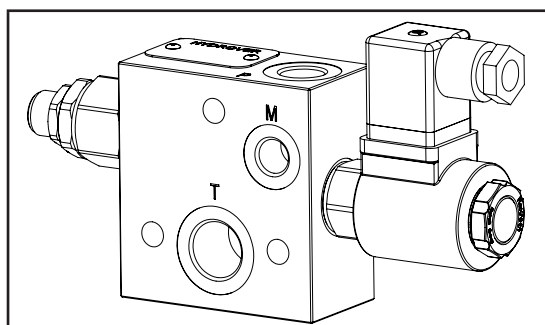
\* Omit if not required. For example, to order the product without the bypass solenoid cartridge valve, omit the coil connection, coil voltage and manual override options: H4101A-S2.  
The manifold will still be provided with the corresponding cavity.  
To inhibit a function, replace the related valve options with TL: eg H4101A-S2-TL.  
In the cavity it will be mounted a long plug.

Valve	Cavity	Long plug code
Solenoid valve VEI-16-08A-NA OD.15.06.18-Y-000000	CA-08A-2N	0489A2005600000
Pressure relief valve VMD1.040	CA-10A-2N	0489A2008500000





Technical data	
Max. pressure	250 bar
Max. flow	40 lpm *
Weight	1,1 Kg
Manifold material	Aluminium
M port	1/4" G
P port	3/8" G
T port	1/2" G



Dimensions in mm

N°	Description	Q.ty
1	Bosch Rexroth relief valve <b>VMD1.040</b> *	1
2	Bosch Rexroth bypass solenoid valve <b>VEI-16-08A-NA OD.15.06.18-Y-000000</b> depicted without manual override *	1
3	Bosch Rexroth coil <b>D36</b> - CLASS H DIN 43650 ISO 4400 *	1
4	Connector DIN 43650 ISO 4400	1
5	Ø 8,5 through hole for tie rod	3
6	Ø 7,5 hole without counterbore for O-ring (P-T)	2
7	M8x15 thread for mounting	2

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

Ordering code

H	4	1	2	4	A	-	-	-	-	-	-	-
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Hydrover product

Product series  
41 series - Plates for  
Bosch Rexroth ED  
bankable valves

Product ID

Manifold material  
Aluminium

Relief valve adjustment type \*  
Screw = S

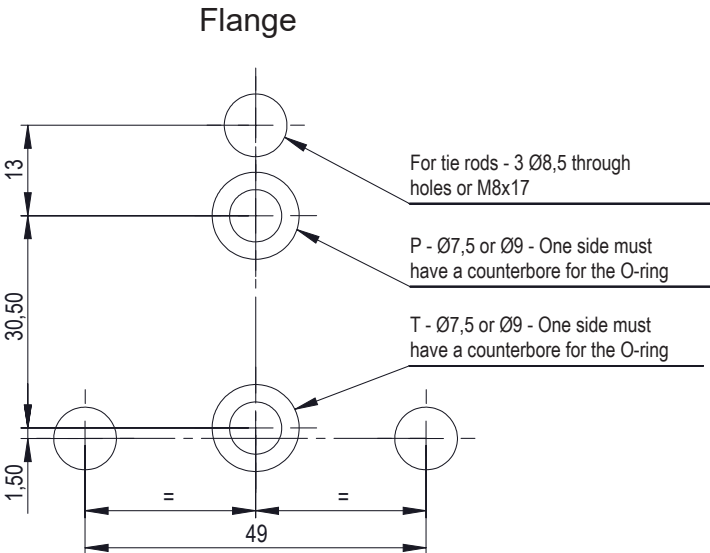
Relief valve adjustment pressure range \*  
25-120 bar = 1  
40-200 bar = 2  
200-350 bar = 3

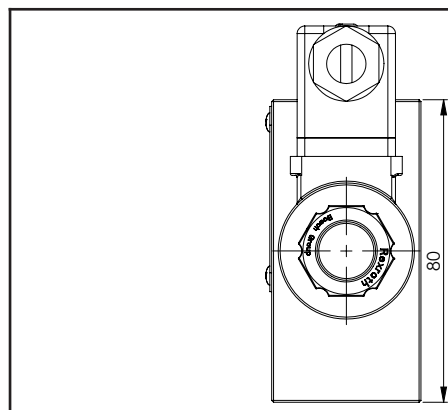
Solenoid valve  
coil connection \*  
1 = DIN 43650 ISO 4400

Solenoid valve  
coil voltage \*  
OB = 12V DC  
OC = 24V DC  
OD = 48V DC  
OU = 110V RAC  
AH = 230V RAC

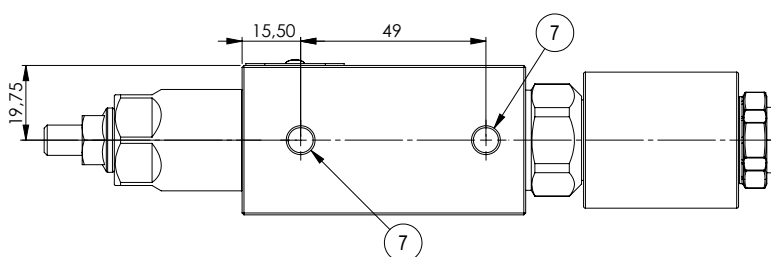
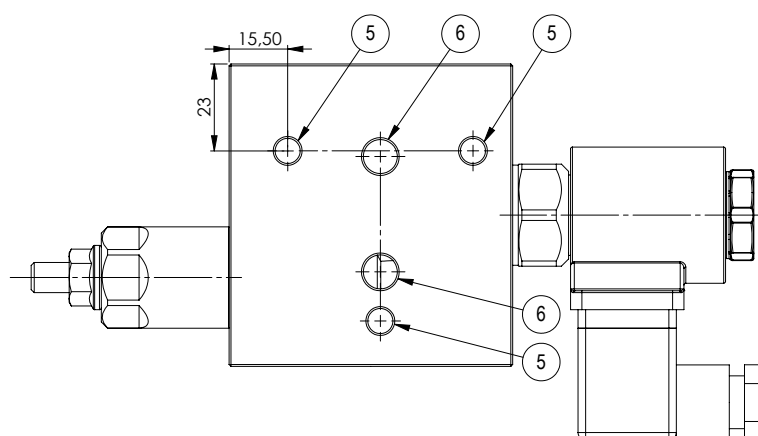
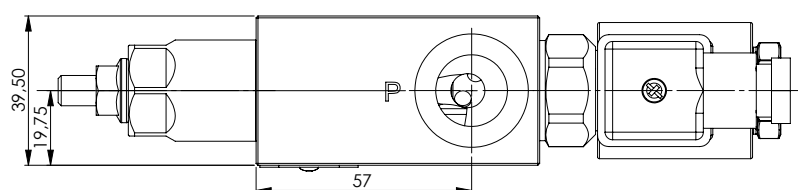
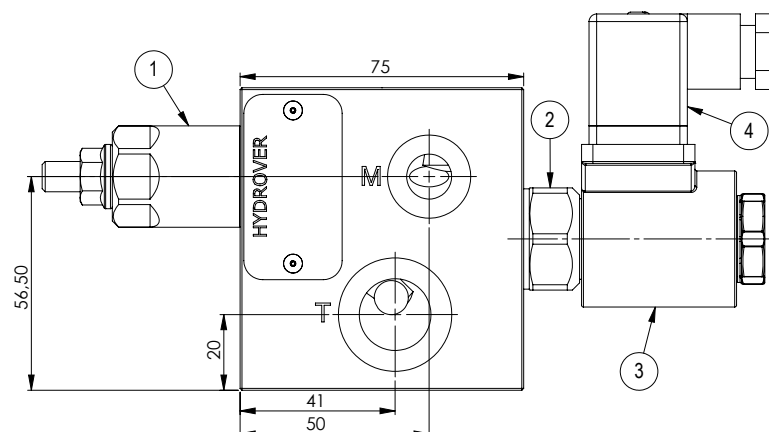
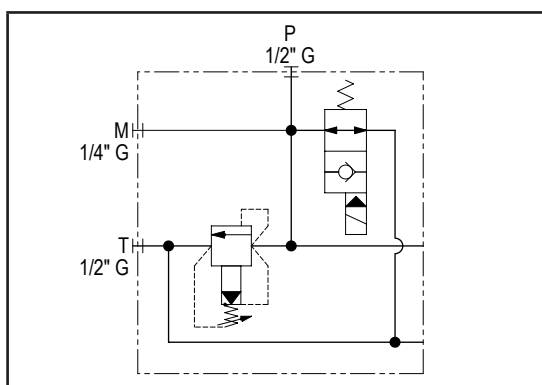
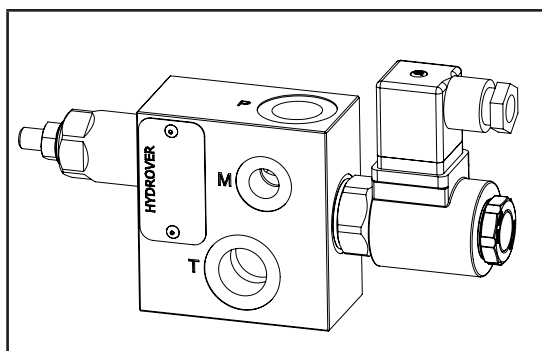
Solenoid valve  
manual override \*  
E0 = Without  
EP = Push  
EG = Push and twist

* Omit if not required. For example, to order the product without the bypass solenoid cartridge valve, omit the coil connection, coil voltage and manual override options: H4124A-S2. The manifold will still be provided with the corresponding cavity. To inhibit a function, replace the related valve options with TL: eg H4124A-S2-TL. In the cavity it will be mounted a long plug.		
Valve	Cavity	Long plug code
Solenoid valve VEI-16-08A-NA OD.15.06.18-Y-000000	CA-08A-2N	0489A2005600000
Pressure relief valve VMD1.040	CA-10A-2N	0489A2008500000





Technical data	
Max. pressure	250 bar
Max. flow	60 lpm *
Weight	1,3 Kg
Manifold material	Aluminium
M port	1/4" G
P / T ports	1/2" G



Dimensions in mm

N°	Description	Q.ty
1	Bosch Rexroth relief valve <b>VSPN-10A</b> *	1
2	Bosch Rexroth bypass solenoid valve <b>VEI-16-10A-NA OD.15.06.36-Y-000000</b> *	1
3	Bosch Rexroth coil <b>D36</b> - CLASS H DIN 43650 ISO 4400 *	1
4	Connector DIN 43650 ISO 4400	1
5	M8x17 for tie rod	3
6	Ø 9 hole without counterbore for O-ring (P-T)	2
7	M8x15 thread for mounting	2

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

Ordering code

H	4	1	0	8	A	-	-	-	-	-	-	-
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Hydrover product

Product series

Product ID

Manifold material

Relief valve adjustment type \*

Relief valve adjustment pressure range \*

41 series - Plates for Bosch Rexroth ED bankable valves

Aluminium

Screw = S  
Knob = K

35-140 bar = 1  
70-280 bar = 2  
140-420 bar = 3  
35-350 bar (adj. knob) = 3

Solenoid valve coil connection \*

Solenoid valve coil voltage \*

Solenoid valve manual override \*

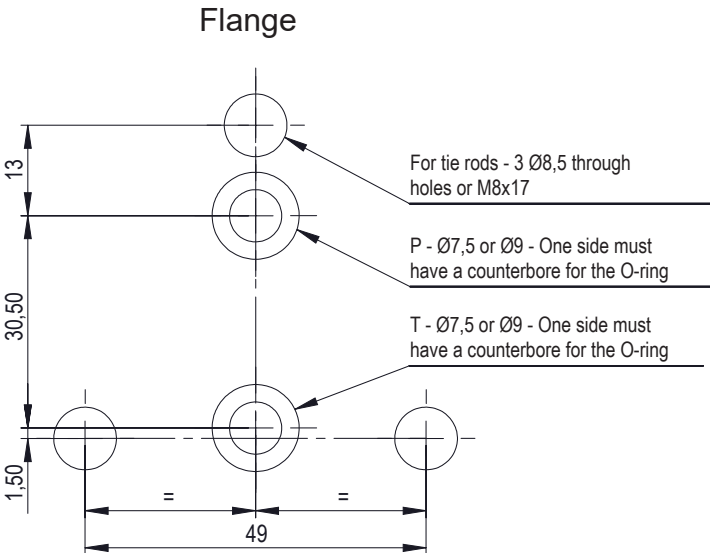
1 = DIN 43650 ISO 4400

OB = 12V DC  
OC = 24V DC  
OD = 48V DC  
OU = 110V RAC  
AH = 230V RAC

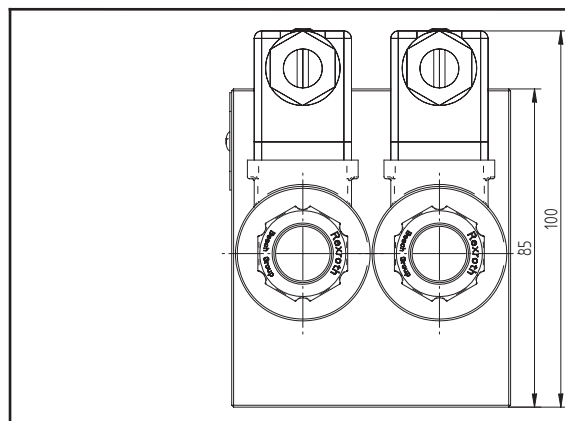
E0 = Without  
EP = Push  
EG = Push and twist

\* Omit if not required. For example, to order the product without the bypass solenoid cartridge valve, omit the coil connection, coil voltage and manual override options: H4108A-S2.  
The manifold will still be provided with the corresponding cavity.  
To inhibit a function, replace the related valve options with TL: eg H4108A-S2-TL.  
In the cavity it will be mounted a long plug.

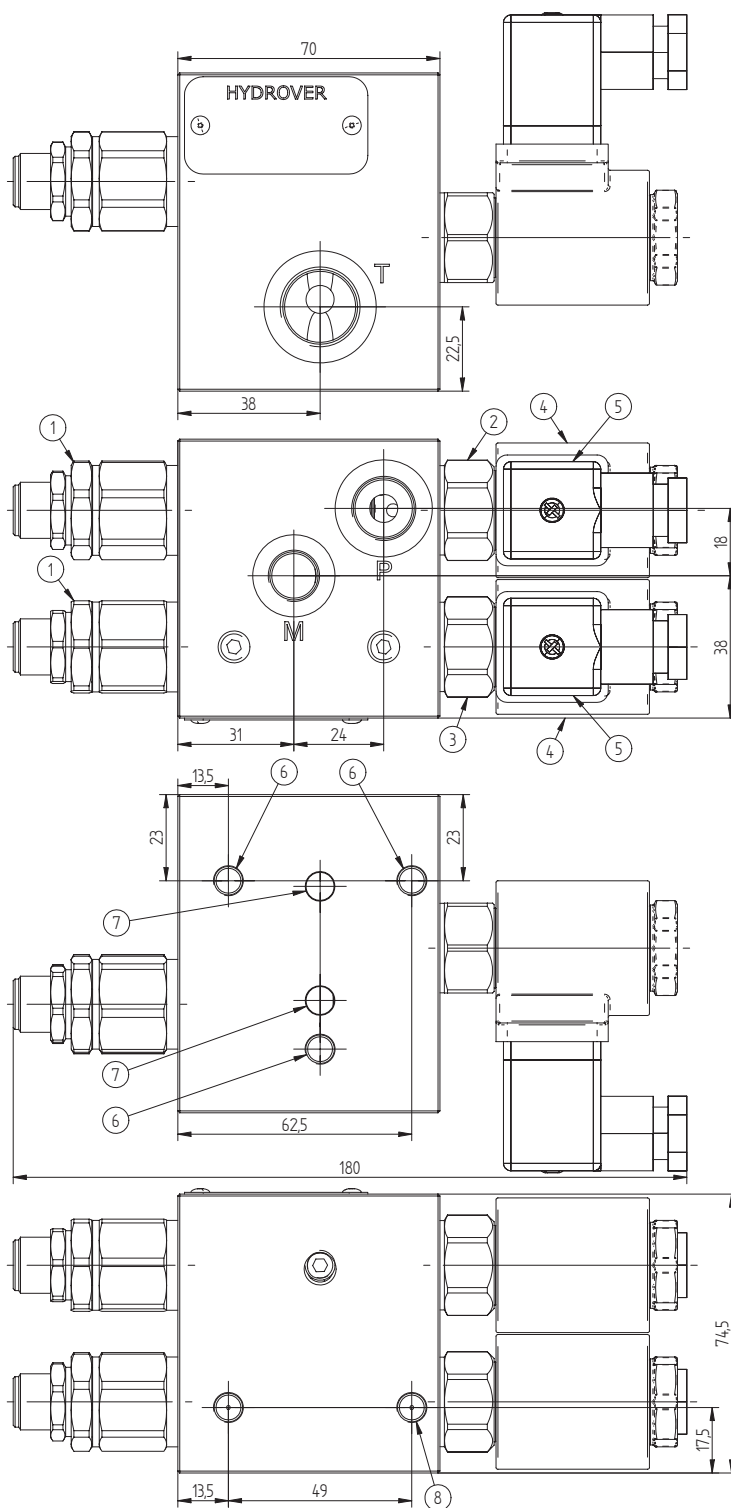
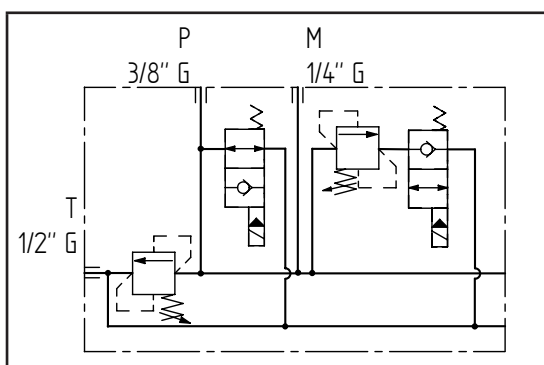
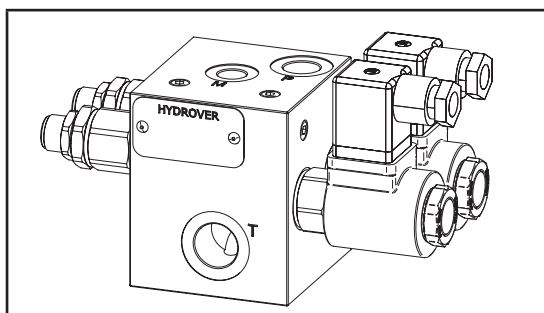
Valve	Cavity	Long plug code
Solenoid valve VEI-16-10A-NA OD.15.06.36-Y-000000	CA-10A-2N	0489A2008500000
Pressure relief valve VSPN-10A	CA-10A-2N	0489A2008500000



## Inlet plate / double stage relief pressure control / bypass / 30 lpm

**H4106**

Technical data	
Max. pressure	250 bar
Max. flow	30 lpm *
Weight	2,9 Kg
Manifold material	Aluminium
M port	1/4" G
P port	3/8" G
T port	1/2" G



Dimensions in mm

N°	Description	Q.ty
1	Bosch Rexroth relief valve <b>VMD1.025</b> *	2
2	Bosch Rexroth bypass solenoid valve <b>VEI-16-08A-NA OD.15.06.18-Y-000000</b> *	1
3	Bosch Rexroth pressure switch solenoid valve <b>VEI-16-08A-NC OD.15.05.18-Y-000000</b> *	1
4	Bosch Rexroth coil <b>D36</b> - CLASS H DIN 43650 ISO 4400 *	2
5	Connector DIN 43650 ISO 4400	2
6	M8x17 for tie rod	3
7	Ø 7,5 hole without counterbore for O-ring (P-T)	2
8	M8x15 thread for mounting	2

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue



Ordering code

H	4	1	0	6	A	-				-				-				-			
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**Hydrover  
product**

## Product series

41 series - Plates for  
Bosch Rexroth ED  
bankable valves

## Product ID

## Manifold material

## Aluminium

## Relief valves

adjustment type \*

Screw

$$= S$$

**Solenoid valves  
coil**

**connection \***

1 = DIN 43650  
ISO 4400

**Solenoid valves  
coil voltage \***

OB = 12V DC

OC = 24V DC

OD = 48V DC

OU = 110V RAC

AH = 230V RAC

**Pressure switch  
solenoid valve**

**manual override \***

E0 = Without

EV = Screw

### Bypass solenoid valve manual override \*

Without

E0 = Without

EP = Push

EG = Push and twist

### Push and twist

### Relief valves adjustment pressure range \*

1° stadio 25-120 bar, 2° stadio 25-120 bar = 11

1° stadio 40-200 bar, 2° stadio 25-120 bar = 21

1° stadio 200-350 bar, 2° stadio 25-120 bar = 31

1° stadio 40-200 bar, 2° stadio 40-200 bar = 22

1° stadio 200-350 bar, 2° stadio 40-200 bar = 32

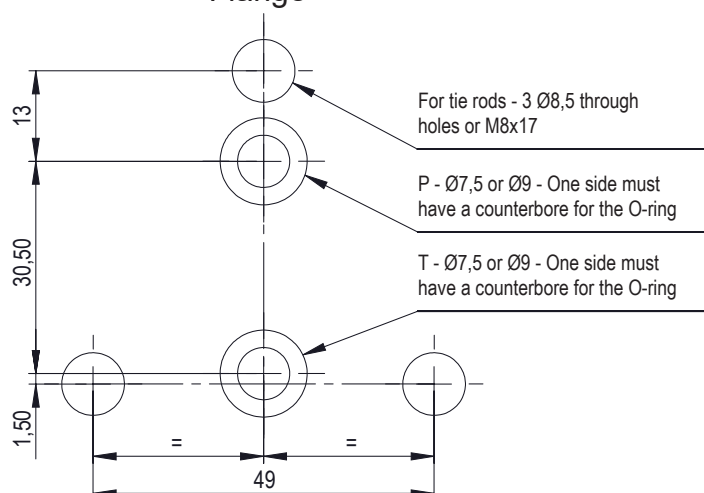
1° stadio 200-350 bar, 2° stadio 200-350 bar = 33

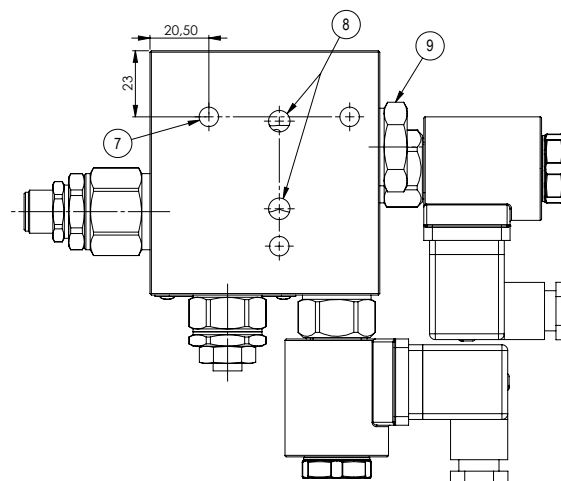
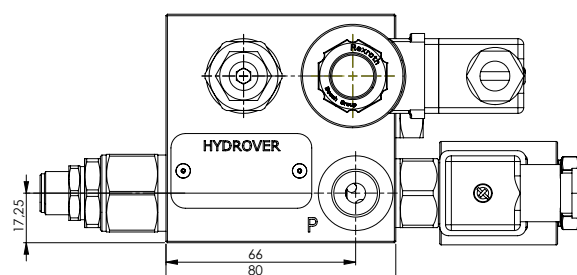
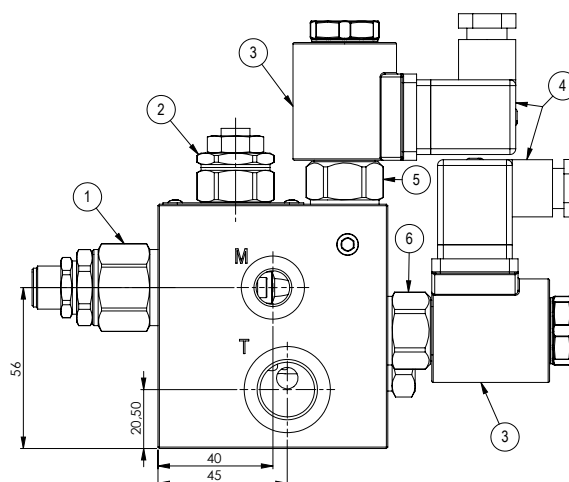
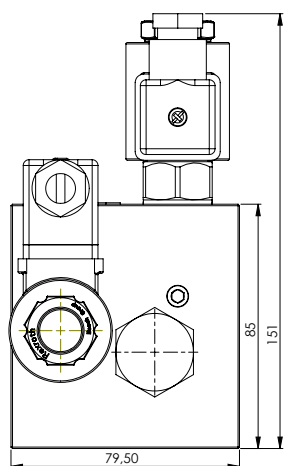
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\* Omit if not required. For example, to order the product without the bypass solenoid cartridge valve, omit the coil connection, coil voltage and manual override options: H4106A-S32-E0-OB1. The manifold will still be provided with the corresponding cavity. To inhibit a function, replace the related valve options with TL: eg H4106A-S32-TL-E0-OB1. In the cavity it will be mounted a long plug.

Valve	Cavity	Long plug code
Solenoid valve VEI-16-08A-NA OD.15.06.18-Y-000000 / VEI-16-08A-NC OD.15.05.18-Y-000000	CA-08A-2N	<b>0489A2005600000</b>
Pressure relief valve VMD1.025	VMD1.025	R-800-016

## Flange

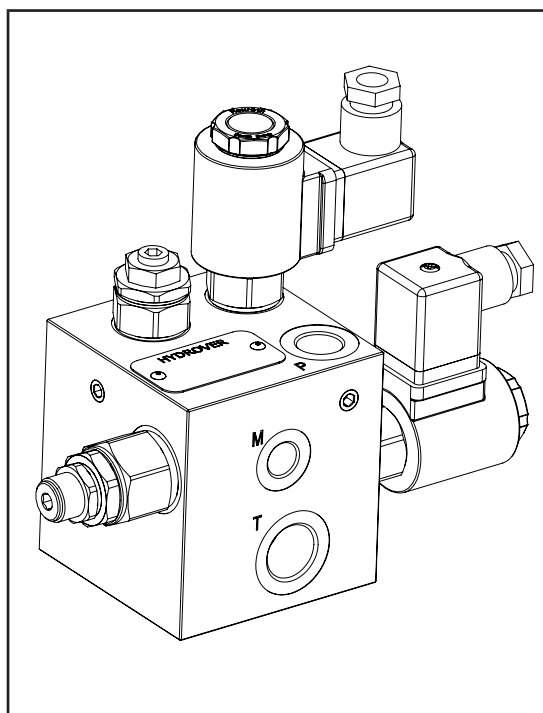
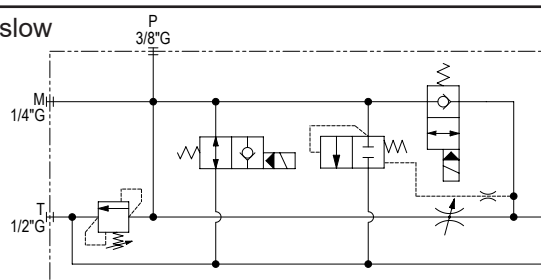
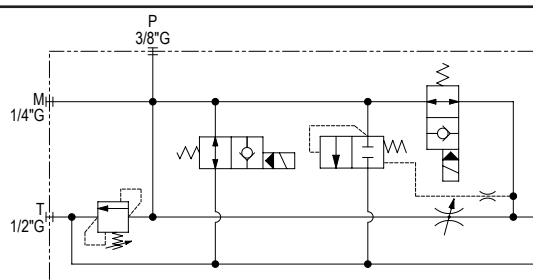




Dimensions in mm

**Technical data**

Max. pressure	250 bar
Max. flow	40 lpm
Weight	2,4 Kg
Manifold material	Aluminium
M port	1/4" G
P port	3/8" G
T port	1/2" G


**Normally slow**

**Normally fast**


Ordering code

H	4	1	1	5	A	-			-			-			-			
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### Hydrover product

## Product series

41 series - Plates for  
Bosch Rexroth ED  
bankable valves

## Product ID

## Manifold material

## Aluminium

Relief valve  
adjustment type \*

Screw

$$= S$$

### Relief valve

**adjustment pressure range \***

25-120 bar

$$= 1$$

40-200 bar

$$= 2$$

200-350 bar

$$= 3$$

**Solenoid valves**  
**coil**

**connection \***  
1 = DIN 43650  
ISO 4400

**Solenoid valves  
coil voltage \***

OB =	12V DC
OC =	24V DC
OD =	48V DC
OU =	110V RAC
AH =	230V RAC

**Bypass solenoid  
valve manual override \***

E0 =	Without
EP =	Push
EG =	Push and twist

**Slow or fast in normal position \***

NL = Normally slow  
NR = Normally fast

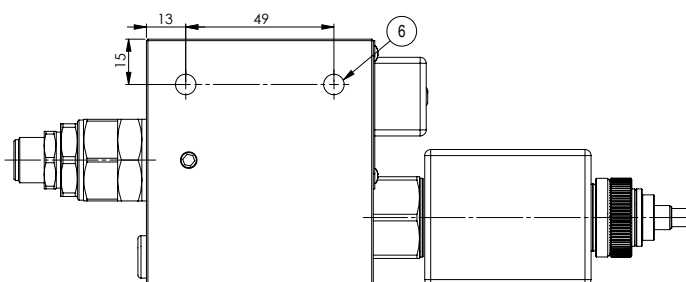
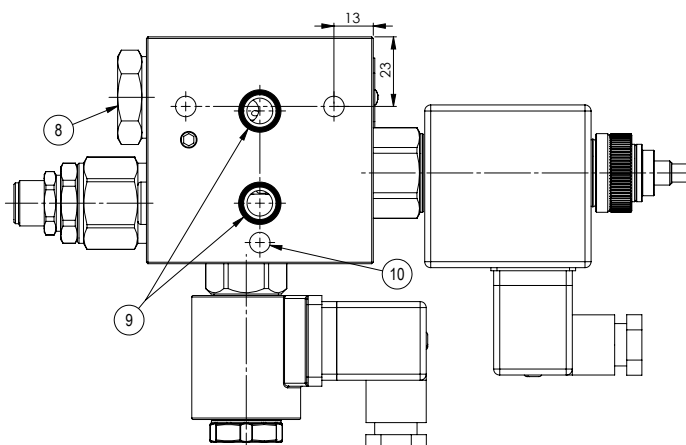
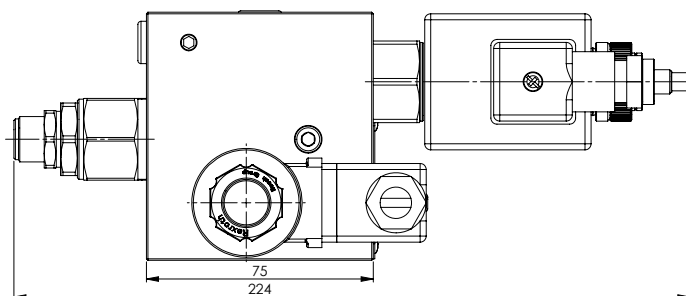
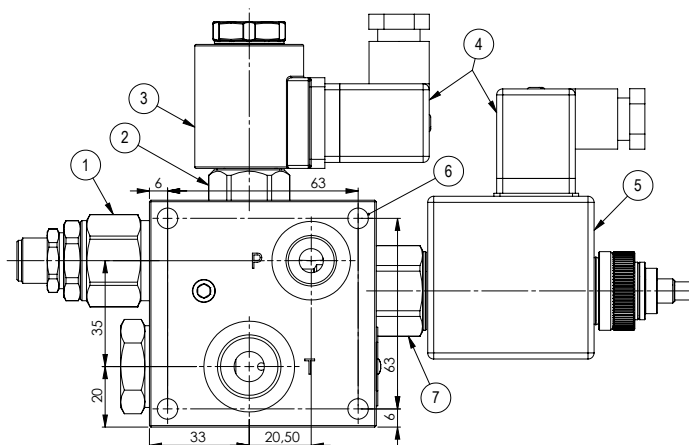
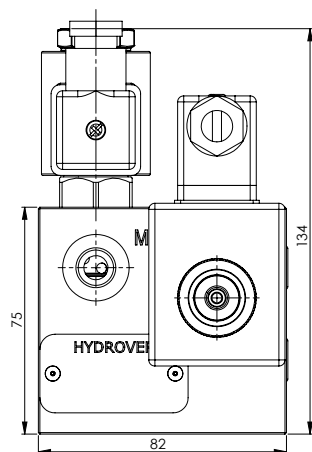
\* Omit if not required. For example, to order the product without the fast slow solenoid cartridge valve, omit the slow or fast in normal position option: H4115A-S2-E0-OC1. The manifold will still be provided with the corresponding cavity. To inhibit a function, replace the related valve options with TL: eg H4115A-S2-TL-E0-OC1.

In the cavity it will be mounted a long plug.

Valve	Cavity	Long plug code
Solenoid valve VEI-16-08A-NA OD.15.05.18-Y-000000 or VEI-16-08A-NC OD.15.06.18-Y-000000	CA-08A-2N	<b>0489A2005600000</b>
Pressure relief valve VMD1.040	CA-10A-2N	<b>0489A2008500000</b>

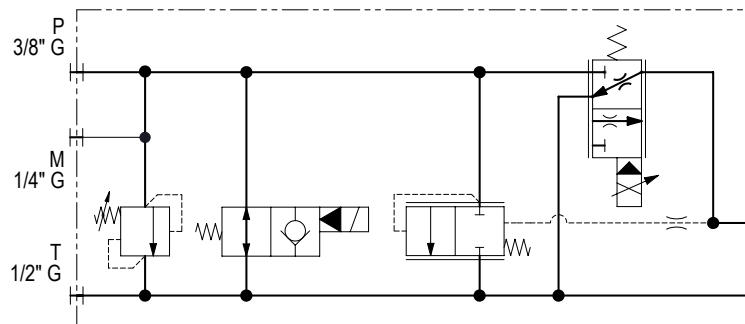
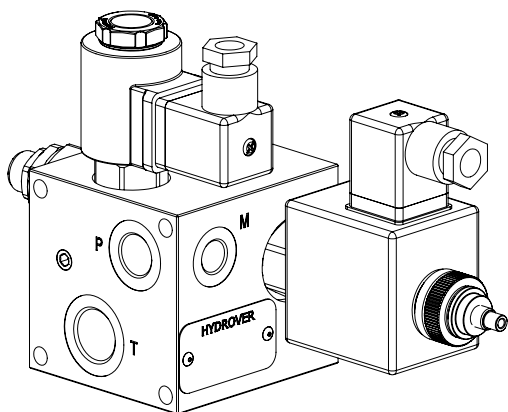
N°	Description	Q.ty
1	Bosch Rexroth relief valve <b>VMD1.040</b> *	1
2	Bosch Rexroth bidirectional flow restrictor <b>OD.21.01.03.56</b> * depicted with screw adjustment	1
3	Bosch Rexroth coil <b>D36</b> - CLASS H DIN 43650 ISO 4400 *	2
4	Connector DIN 43650 ISO 4400	2
5	Bosch Rexroth solenoid valve for fast slow function <b>VEI-16-08A-NC OD.15.05.18-Y-000000</b> (normally slow) o <b>VEI-16-08A-NA OD.15.06.18-Y-000000</b> (normally fast) depicted without manual override *	1
6	Bosch Rexroth bypass solenoid valve <b>VEI-16 OD.15.06.18-Y-000000</b> *	1
7	M8x17 for tie rod	3
8	Ø 7,5 hole without counterbore for O-ring (P-T)	2
9	Pressure compensator	1
10	M8x15 thread for mounting	2

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue



## Technical data

Max. pressure	250 bar
Max. flow	50 lpm
Max. regulated flow	40 lpm
Weight	2,1 Kg
Manifold material	Aluminium
M port	1/4" G
P port	3/8" G
T port	1/2" G



Ordering code

H	4	1	2	1	A				-			-				-			
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**Hydrover  
product**

## Product series

41 series - Plates for  
Bosch Rexroth  
ED bankable valves

## Product ID

## Manifold material

## Aluminium

### Compensator spring

5,5 bar (standard)	= 6
12,5 bar	= 1
19 bar	= 2

## Relief valve

**adjustment type \***

Screw = S

### Relief valve adjustment pressure range \*

25-120 bar	= 1
40-200 bar	= 2
200-350 bar	= 3

### Bypass solenoid valve manual override \*

Without	= E0
Push	= EP
Push and twist	= EG

### Solenoid valves coil connection \*

1 = DIN 43650  
ISO 4400

**Bypass  
solenoid valve  
coil voltage \***

OB =	12V DC
OC =	24V DC
OD =	48V DC
OU =	110V RAC
AH =	230V RAC

**Proportional solenoid valve**  
**max. flow \***

1 =	20 lpm
2 =	30 lpm
3 =	40 lpm

To evaluate the max. flow refer to **VEP-5A-2Q-09 / OD.92.05.77-Y-Z** proportional solenoid valve catalogue and to the compensator spring.

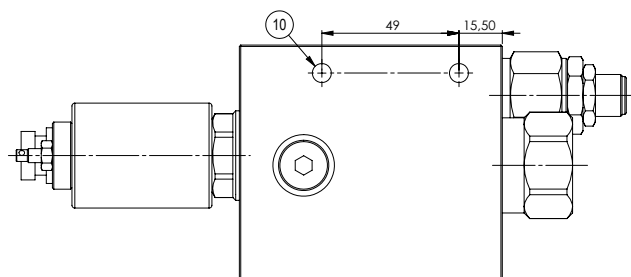
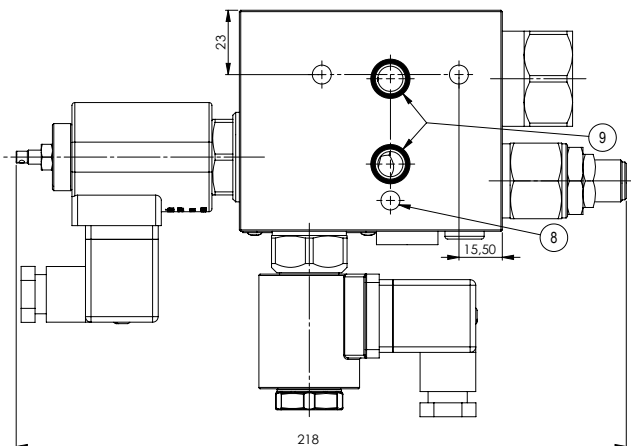
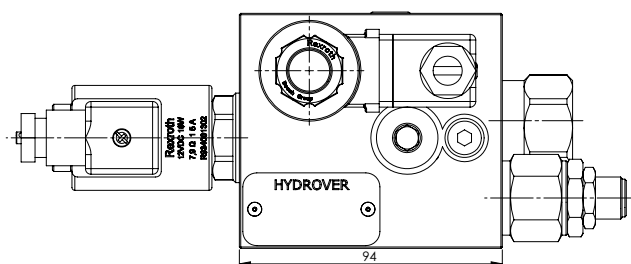
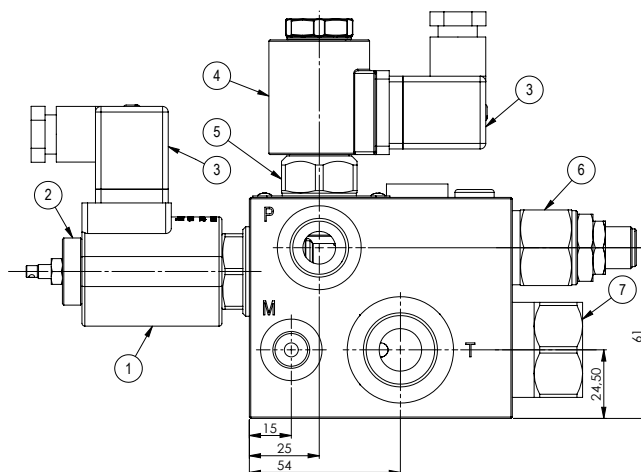
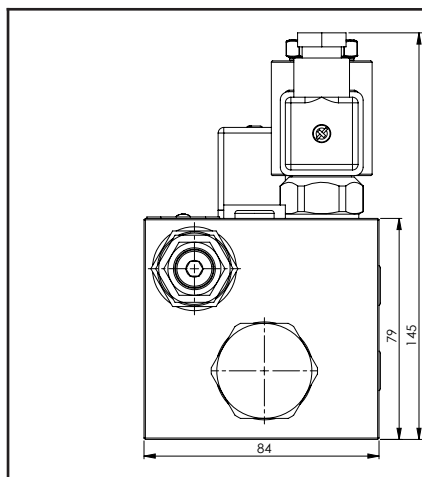
### Proportional solenoid valve manual override \*

E0 = Without  
EV = Screw

\* Omit if not required.

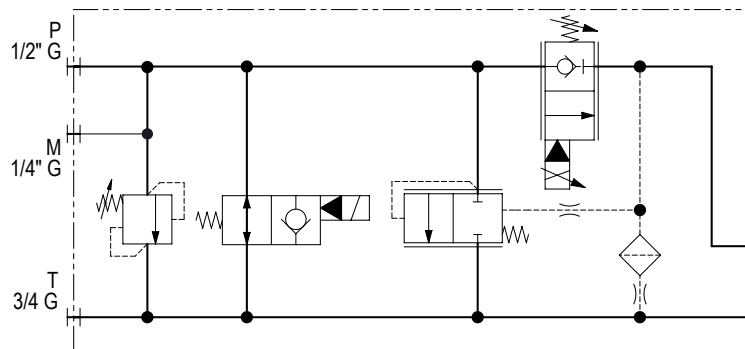
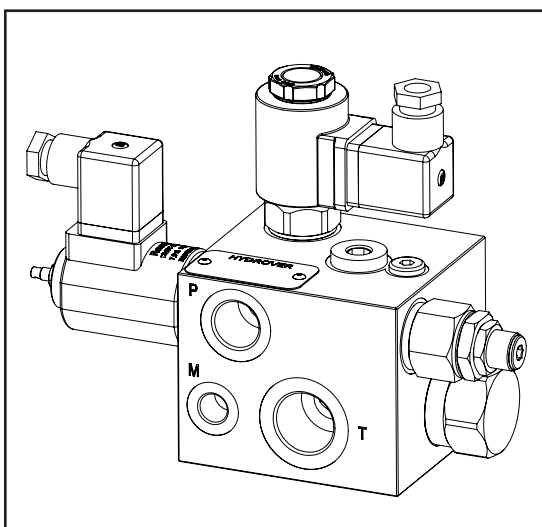
N°	Description	Q.ty
1	Bosch Rexroth relief valve <b>VMD1.040</b> **	1
2	Bosch Rexroth bypass solenoid valve <b>VEI-16 OD.15.06.18-Y-000000</b> **	1
3	Bosch Rexroth coil <b>D36</b> - CLASS H DIN 43650 ISO 4400 **	1
4	Connector DIN 43650 ISO 4400	2
5	Bosch Rexroth coil <b>S5-356</b> - CLASS H DIN 43650 ISO 4400 - 12V DC **	1
6	M8x15 thread for mounting	6
7	Bosch Rexroth proportional solenoid valve <b>VEP-5A-2Q-09 / OD.92.05.77-Y-Z</b> **	1
8	Compensator	1
9	Ø 9 hole with OR 2043 i. Ø 10,82 cross section 1,78 (P-T)	2
10	M8x17 for tie rod	3

**\*\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue**



## Technical data

Max. pressure	250 bar
Max. flow	60 lpm
Weight	2,8 Kg
Manifold material	Aluminium
M port	1/4" G
P port	1/2" G
T port	3/4" G



Ordering code

H	4	1	2	2	A	-	-	-	-	-	-	-
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## Hydrover product

## Product series

41 series - Plates for  
Bosch Rexroth  
ED bankable valves

## Product ID

## Manifold material

## Aluminium

### Relief valve adjustment type \*

Screw

$$= S$$

**Relief valve  
adjustment pressure range \***

10-60 bar	= 0
40-110 bar	= 1
110-220 bar	= 2
220-260 bar	= 3

### Solenoid valves coil connection \*

1 = DIN 43650  
ISO 4400

**Solenoid valves  
coil voltage \***

OB =	12V DC
OC =	24V DC
OD =	48V DC
OU =	110V RAC
AH =	230V RAC

### Bypass solenoid valve manual override \*

E0 = Without  
EP = Push  
EG = Push and twist

\* Omit if not required. For example, to order the product without the relief valve, omit the relief valve adjustment type and pressure range options: H4122A-E0-OB1. The manifold will still be provided with the corresponding cavity.  
To inhibit a function, replace the related valve options with TL: eg H4122A-TL-E0-OB1.  
In the cavity it will be mounted a long plug.

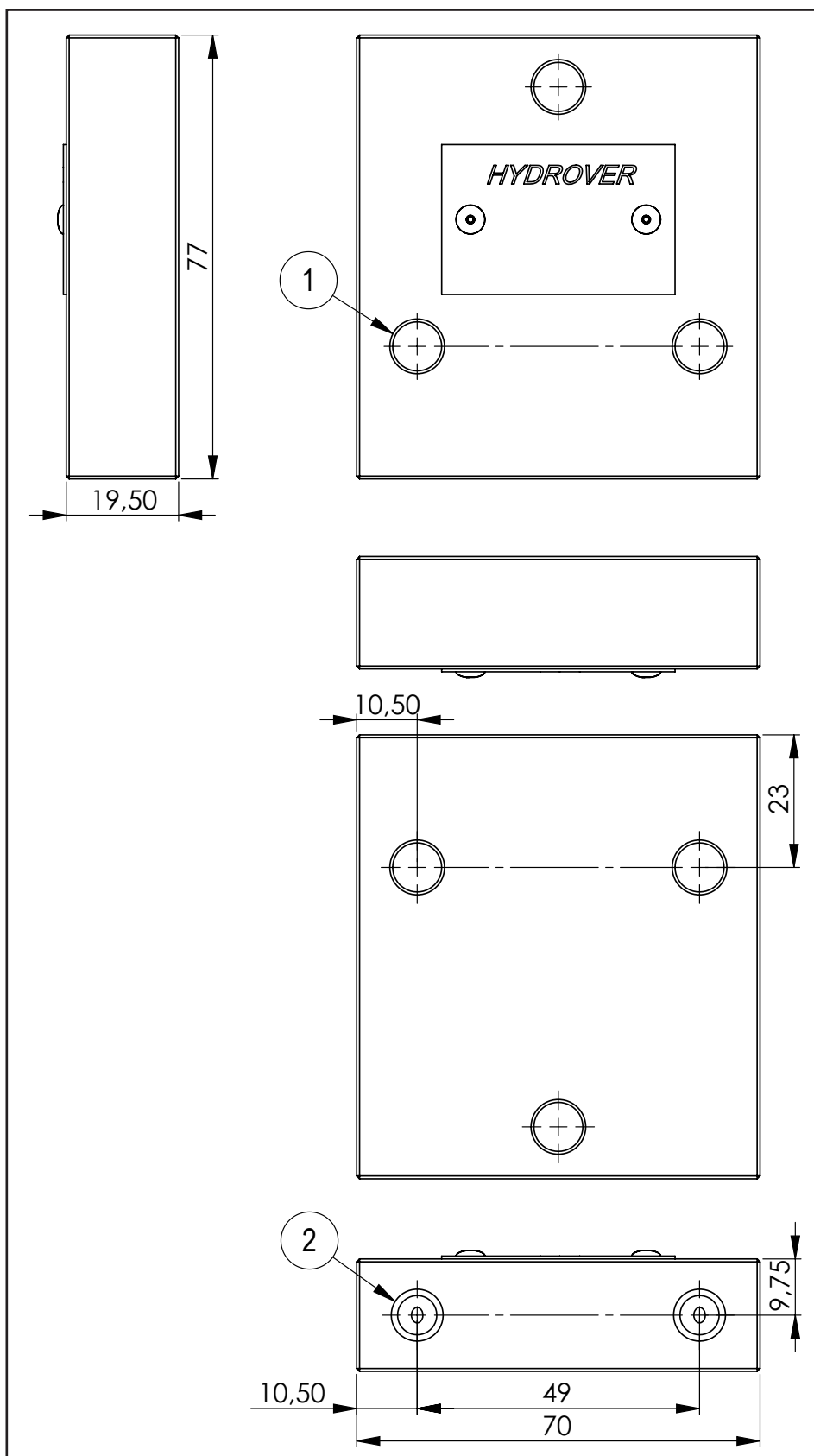
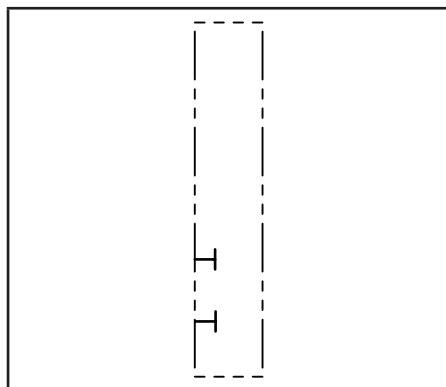
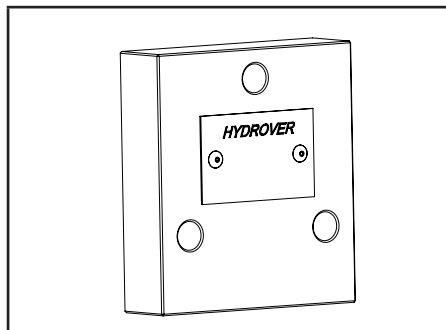
Valve	Cavity	Long plug code
Solenoid valve VEI-16-10A-NA OD.15.06.36-Y-000000	CA-10A-2N	<b>0489A2008500000</b>
Pressure relief valve VMD1.070	CA-10A-2N	<b>0489A2008500000</b>

N°	Description	Q.ty
1	Bosch Rexroth coil <b>R7</b> - CLASS H DIN 43650 ISO 4400 - Only 12V DC *	1
2	Bosch Rexroth proportional solenoid valve VEPN-12A <b>OD.95.06.89.72.00.00</b> *	1
3	Connector DIN 43650 ISO 4400	2
4	Bosch Rexroth coil <b>D36</b> - CLASS H DIN 43650 ISO 4400 *	1
5	Bosch Rexroth bypass solenoid valve <b>VEI-16-10A-NA OD.15.06.36-Y-000000</b> *	1
6	Bosch Rexroth relief valve <b>VMD1.070</b> *	1
7	Compensator	1
8	M8x17 for tie rod	3
9	Ø 9 hole with OR 2043 i. Ø 10,82 cross section 1,78 (P-T)	2
10	M8x15 thread for mounting	2

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

## Technical data

Max. pressure	250 bar
Weight	0,3 Kg
Manifold material	Aluminium



N°	Description	Q.ty
1	Ø 8,5 through hole for tie rod	3
2	M8x15 thread for mounting	2



Ordering code

H	4	1	1	4	A
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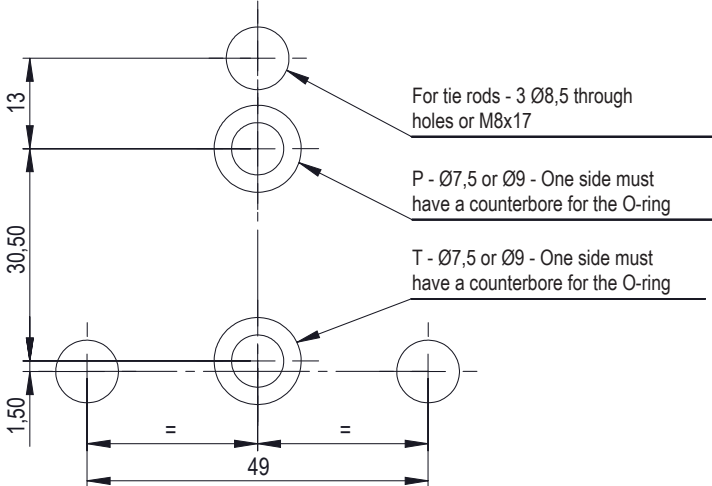
Hydrover product

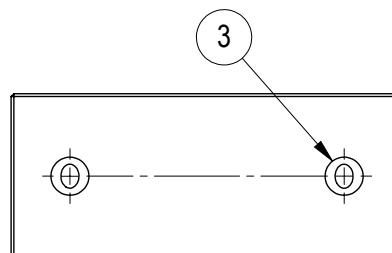
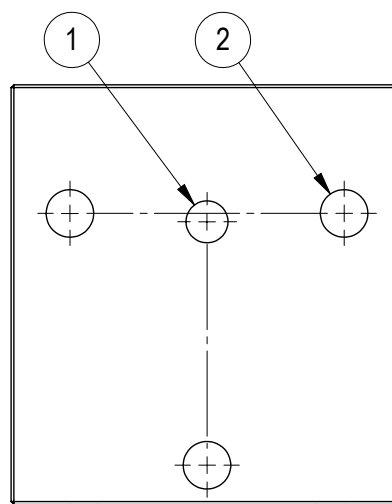
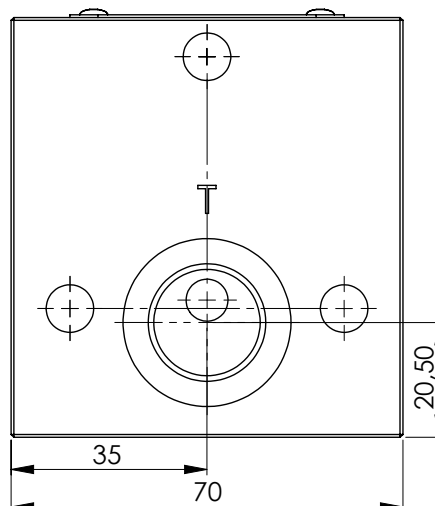
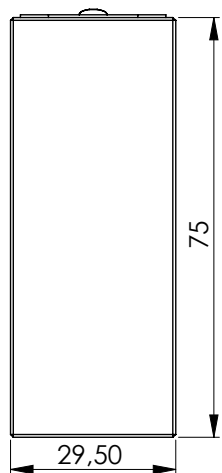
Manifold material  
Aluminium

Product series  
41 series - Plates for Bosch Rexroth ED  
bankable valves

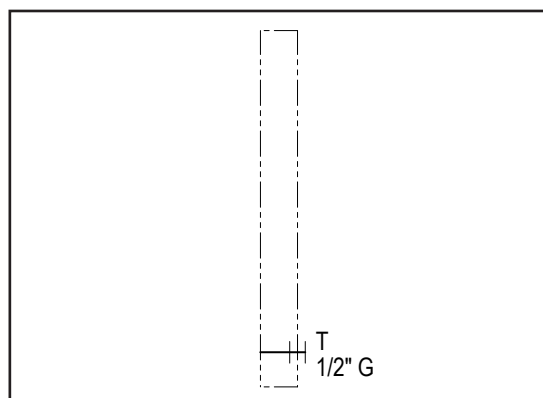
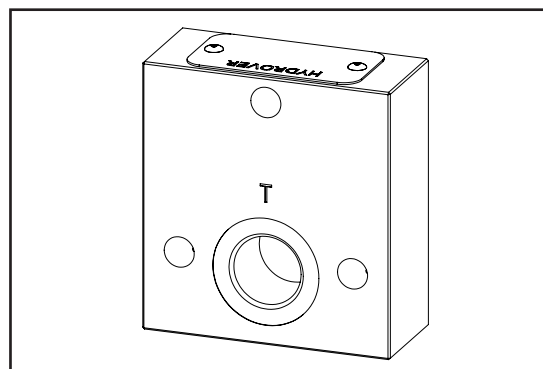
Product ID

Flange





Technical data	
Max. pressure	250 bar
Weight	0,4 Kg
Manifold material	Aluminium
T port	1/2" G



N°	Description	Q.ty
1	T Ø 9 with OR 2043 i. Ø 10,82 cross section 1,78	1
2	Ø 8,5 through hole for tie rod	3
3	M8x15 thread for mounting	2

Ordering code

H	4	1	2	3	A
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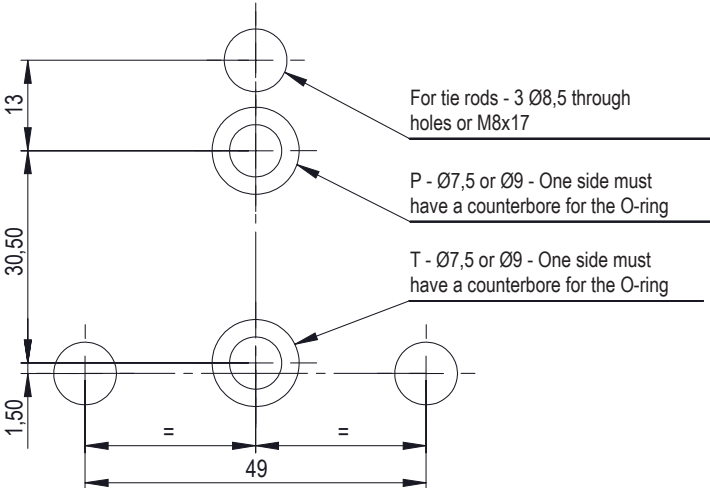
Hydrover product

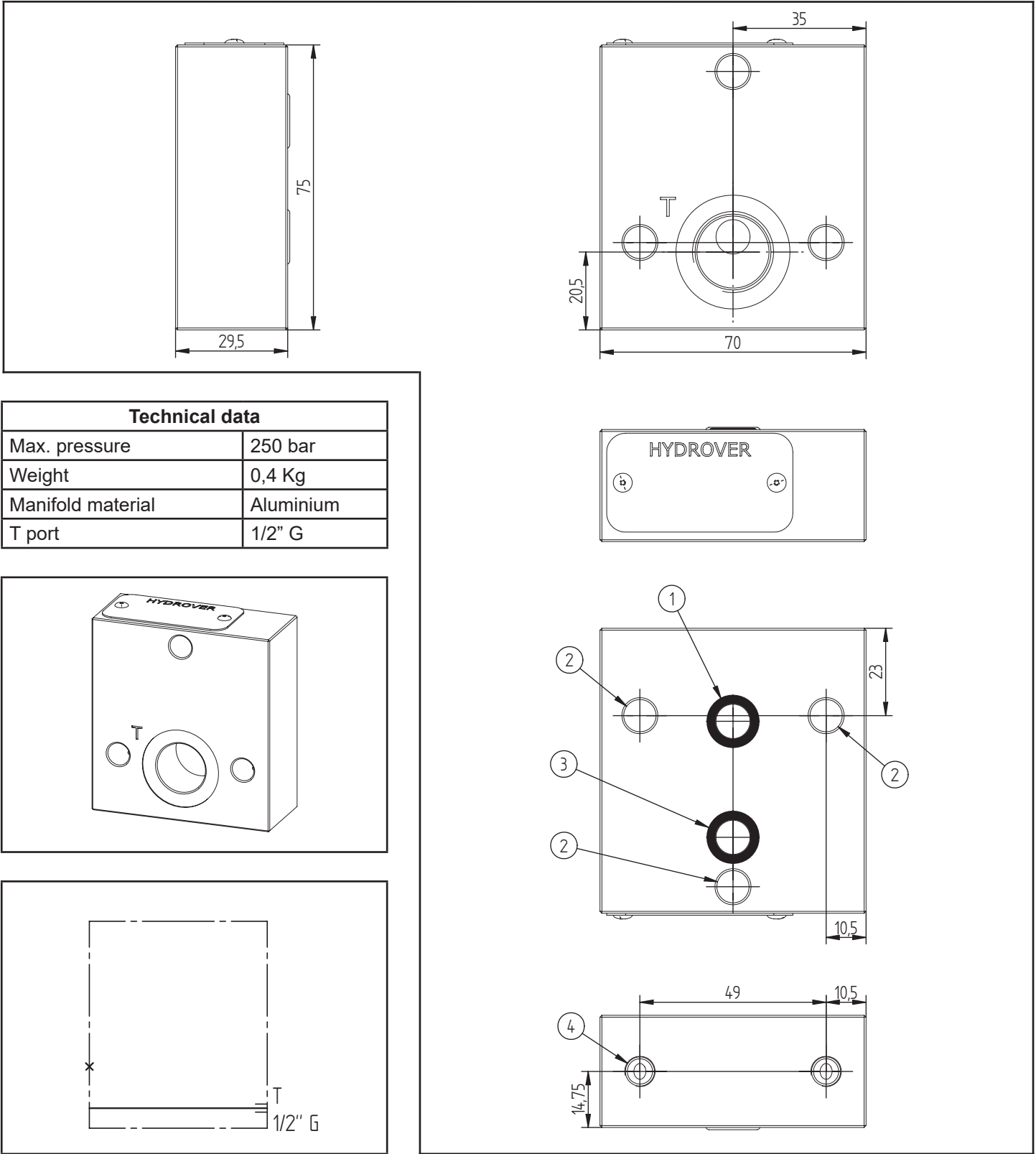
Manifold material  
Aluminium

Product series  
41 series - Plates for Bosch Rexroth ED  
bankable valves

Product ID

Flange





Technical data	
Max. pressure	250 bar
Weight	0,4 Kg
Manifold material	Aluminium
T port	1/2" G

N°	Description	Q.ty
1	T Ø 9 with OR 2043 i. Ø 10,82 cross section 1,78	1
2	Ø 8,5 through hole for tie rod	3
3	Closed P with OR 2043 i. Ø 10,82 cross section 1,78	1
4	M8x15 thread for mounting	2

Ordering code

H	4	1	0	2	A
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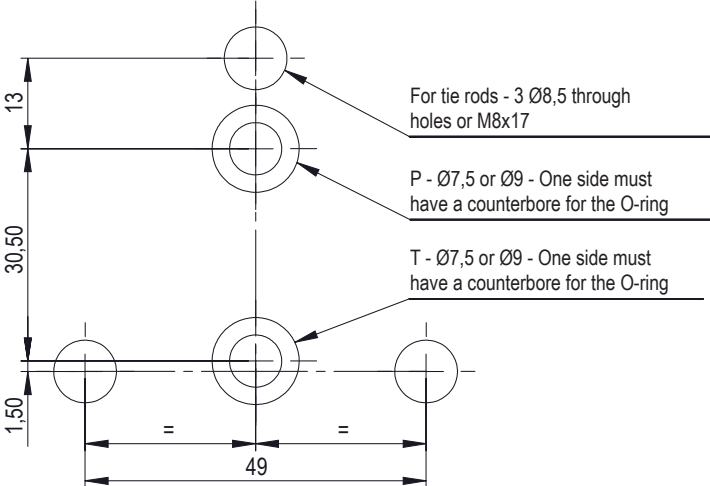
Hydrover product

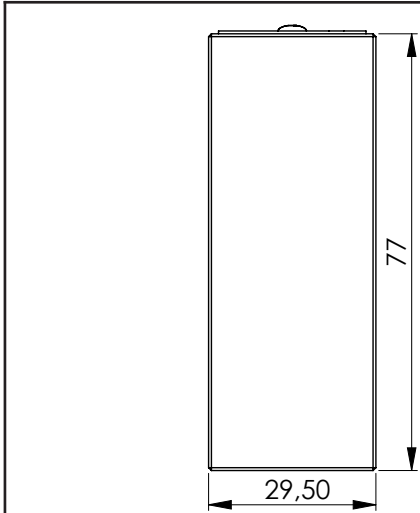
Manifold material  
Aluminium

Product series  
41 series - Plates for Bosch Rexroth ED  
bankable valves

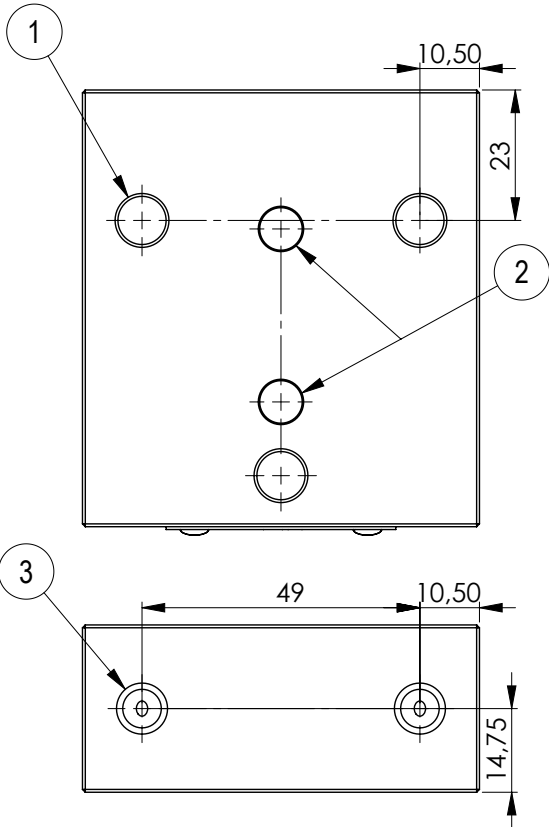
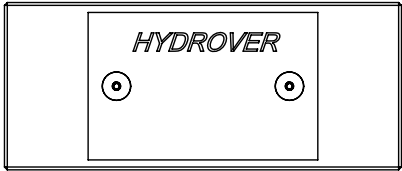
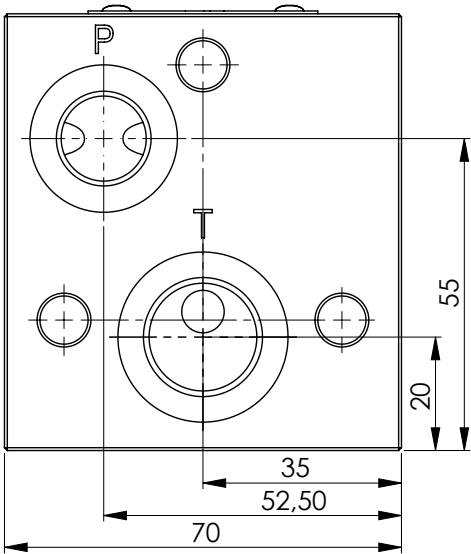
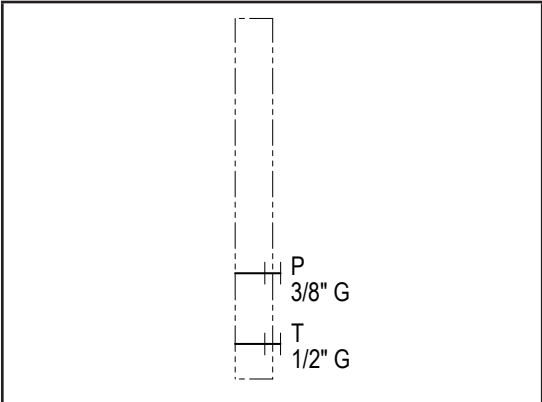
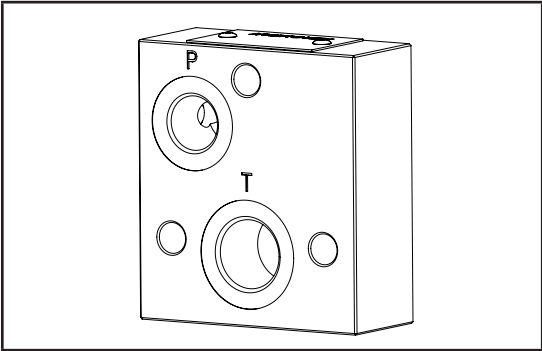
Product ID

Flange





Technical data	
Max. pressure	250 bar
Weight	0,4 Kg
Manifold material	Aluminium
P port	3/8" G
T port	1/2" G



Dimensions in mm

N°	Description	Q.ty
1	Ø 8,5 through hole for tie rod	3
2	Ø 7,5 hole without counterbore for O-ring (P-T)	2
3	M8x15 thread for mounting	2

Ordering code

H	4	1	1	6	A
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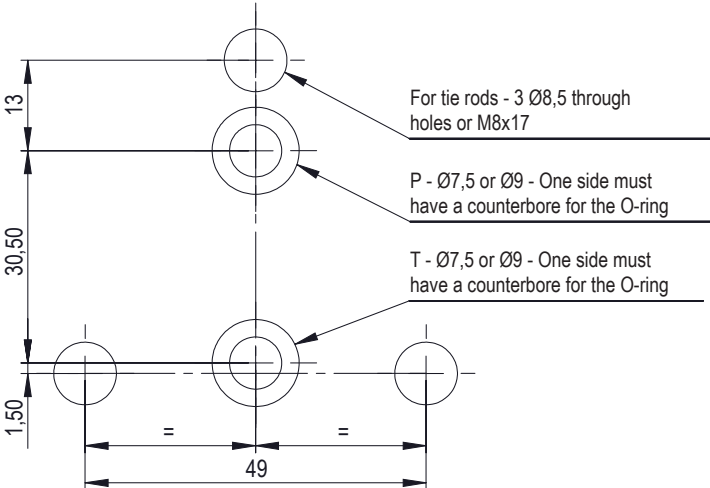
Hydrover product

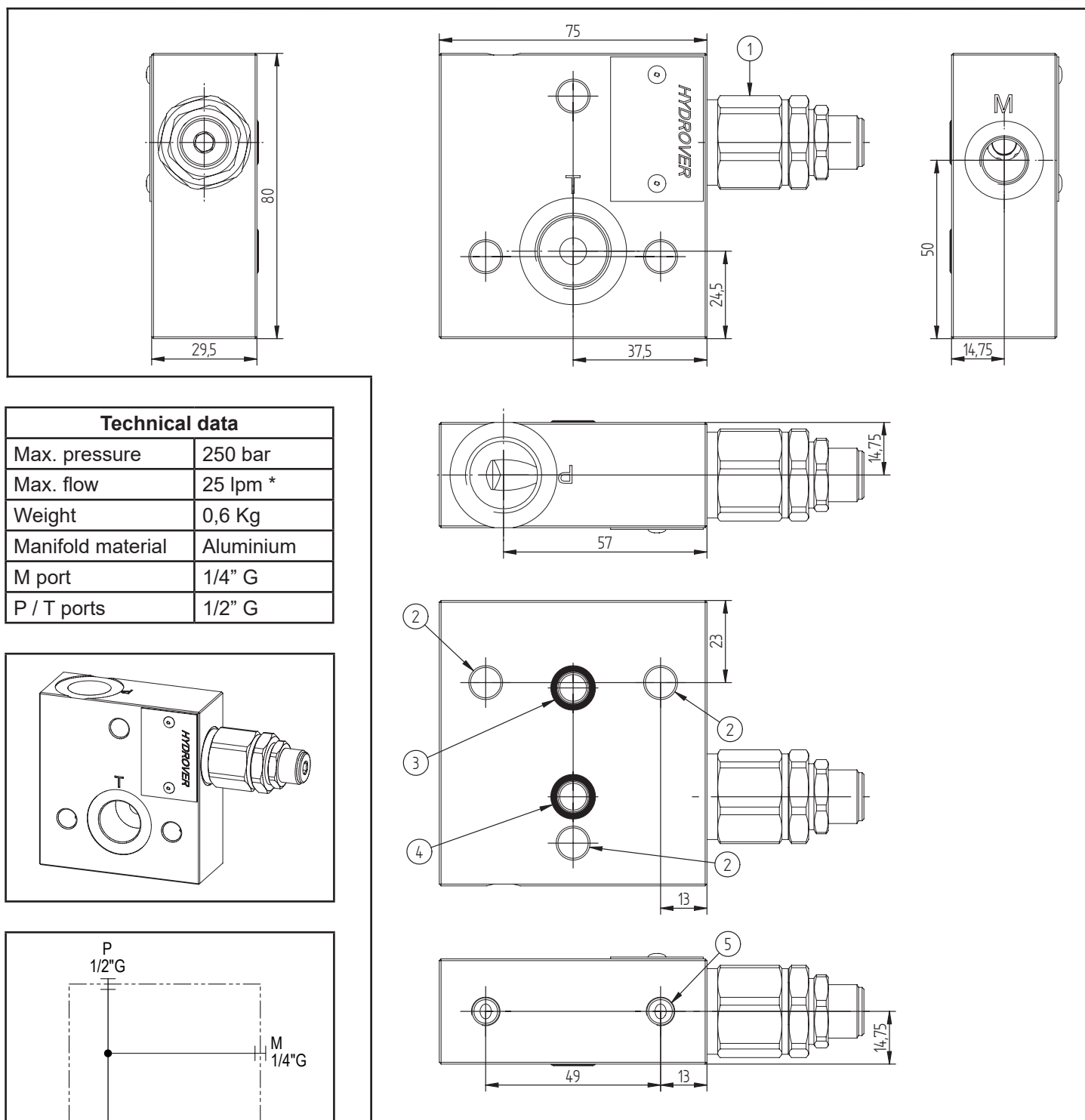
Manifold material  
Aluminium

Product series  
41 series - Plates for Bosch Rexroth ED  
bankable valves

Product ID

Flange

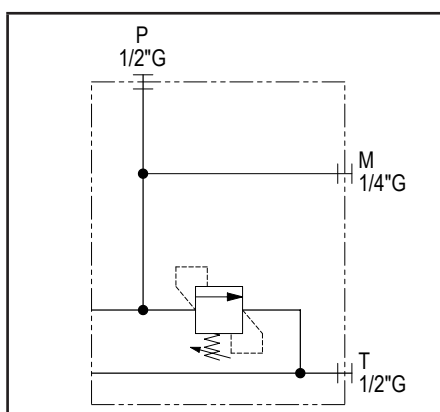
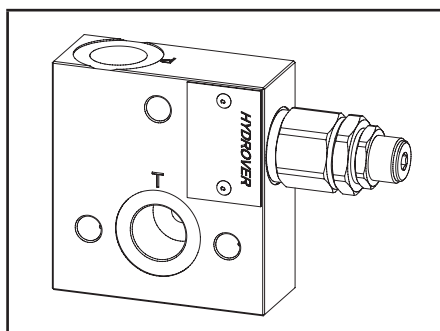




Dimensions in mm

**Technical data**

Max. pressure	250 bar
Max. flow	25 lpm *
Weight	0,6 Kg
Manifold material	Aluminium
M port	1/4" G
P / T ports	1/2" G



N°	Description	Q.ty
1	Bosch Rexroth relief valve <b>VMD1.025</b> *	1
2	Ø 8,5 through hole for tie rod	3
3	P Ø 7,5 con OR 2037 i. Ø 9,25 cross section 1,78	1
4	T Ø 7,5 con OR 2037 i. Ø 9,25 cross section 1,78	1
5	M8x15 thread for mounting	2

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue



Ordering code

H	4	1	0	5	A	-	-
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**Hydrover product**

**Product series**  
41 series - Plates for Bosch Rexroth ED bankable valves

**Product ID**

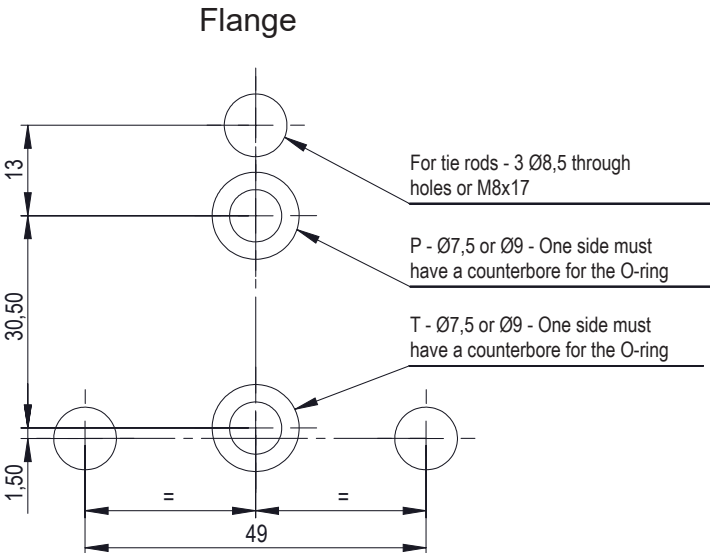
**Manifold material**  
Aluminium

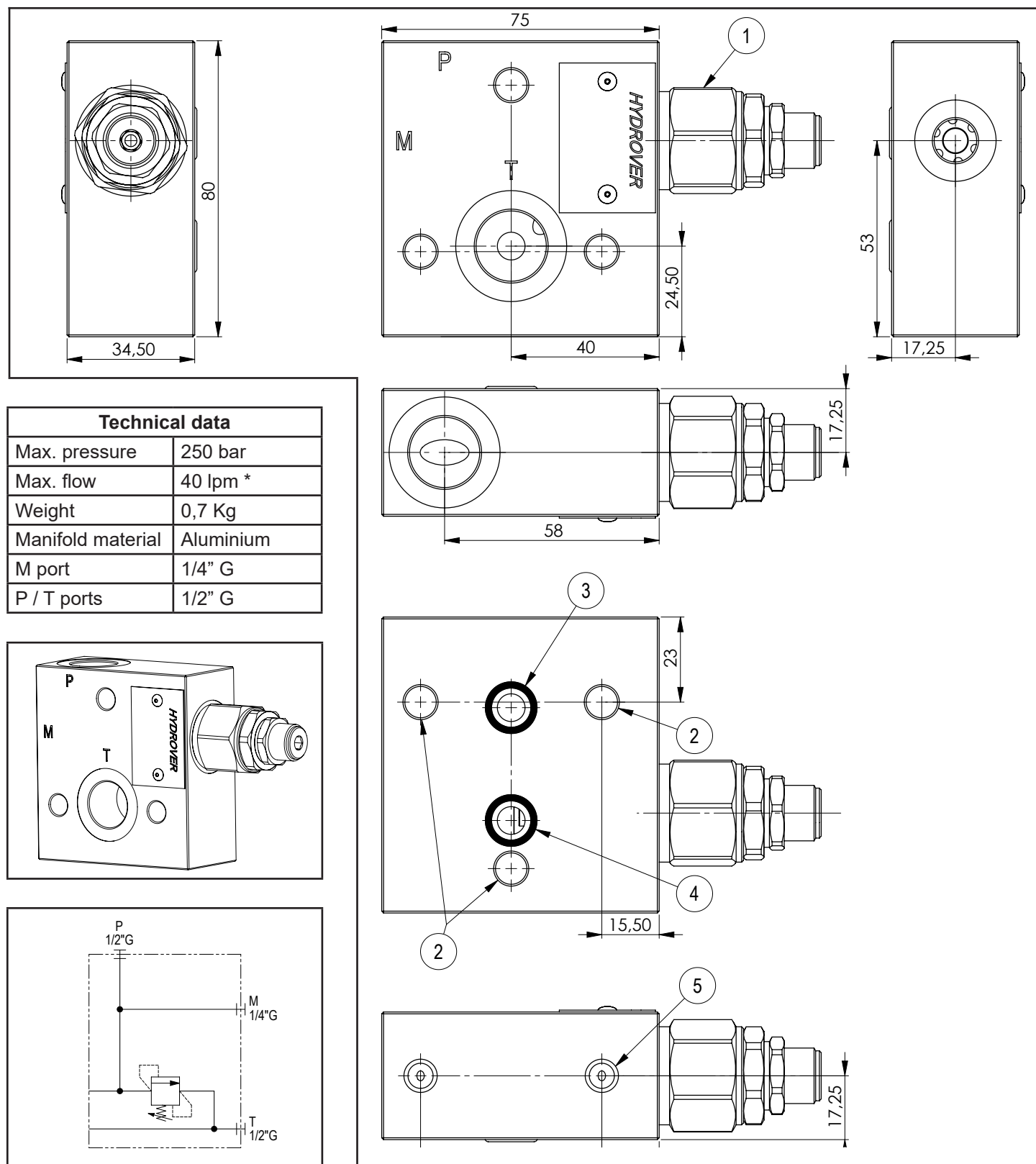
**Relief valve adjustment pressure range \***

1= 25-120 bar  
2= 40-200 bar  
3= 200-350 bar

**Relief valve adjustment type \***  
S = Screw

\* Omit if not required. To order the product without the pressure relief cartridge valve, omit the adjustment type and pressure range options: H4105A.  
The manifold will still be provided with the corresponding cavity.





Dimensions in mm

N°	Description	Q.ty
1	Bosch Rexroth relief valve <b>VMD1.040</b> *	1
2	Ø 8,5 through hole for tie rod	3
3	Ø 9 P with OR 2043 i. Ø 10,82 cross section 1,78	1
4	Ø 9 T with OR 2043 i. Ø 10,82 cross section 1,78	1
5	M8x15 thread for mounting	2

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

Ordering code

H	4	1	1	7	A	-	-
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Hydrover product

Product series  
41 series - Plates for Bosch  
Rexroth ED bankable valves

Product ID

Manifold material  
Aluminium

Relief valve  
adjustment pressure range \*

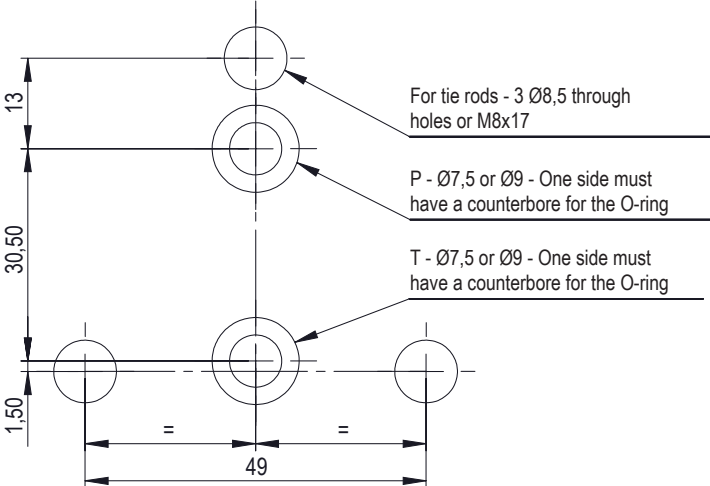
1 =	25-120 bar
2 =	40-200 bar
3 =	200-350 bar

Relief valve  
adjustment type \*

S = Screw

\* Omit if not required. To order the product without the pressure relief cartridge valve, omit the adjustment type and pressure range options: H4117A.  
The manifold will still be provided with the corresponding cavity.

Flange



Ordering code for assemblies with 1 or 2 elements

	H	K	V	M	8	X	_	_	_	-	3	
Hydrover product												Screw quantity
												3
Product type												Screw length
Kit												for elements quantity *
Kit type												1 element
Screw kit												2 elements
Thread												
M8												

80 =

125 =

\* For assemblies with 29,5 mm width closing plates

Dimensions in mm

Ordering code for assemblies with 3 or 9 elements

	H	K	T	M	8	X	_	_	_	D	S	-	3	
Hydrover product												Tie rods quantity		
												3		
Product type												Nut type		
Kit												Standard		
Kit type												Screw length		
Tie rods												for elements quantity *		
												199 =		
												245 =		
												291 =		
												337 =		
												383 =		
												429 =		
												475 =		
Thread														
M8														

199 =

245 =

291 =

337 =

383 =

429 =

475 =

\* For assemblies with 29,5 mm width closing plates

3 elements

4 elements

5 elements

6 elements

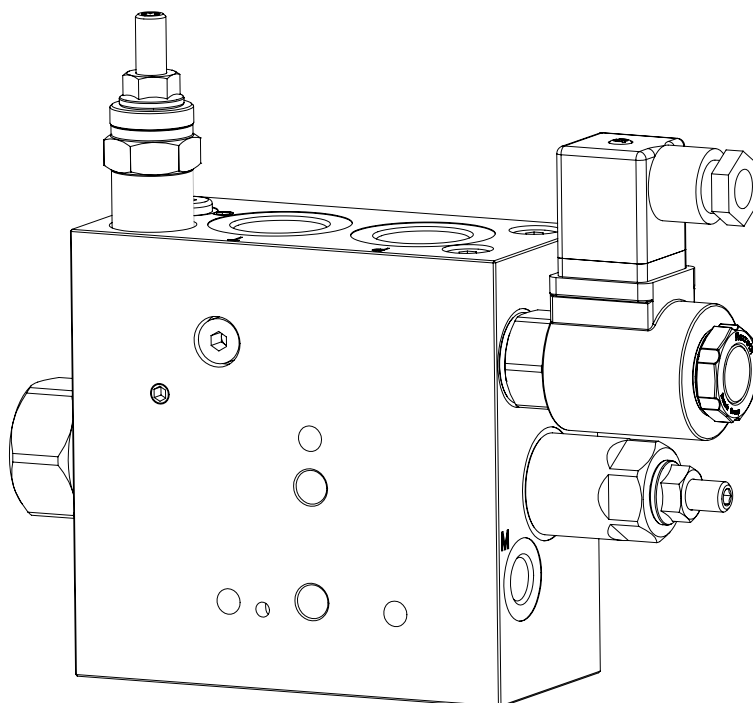
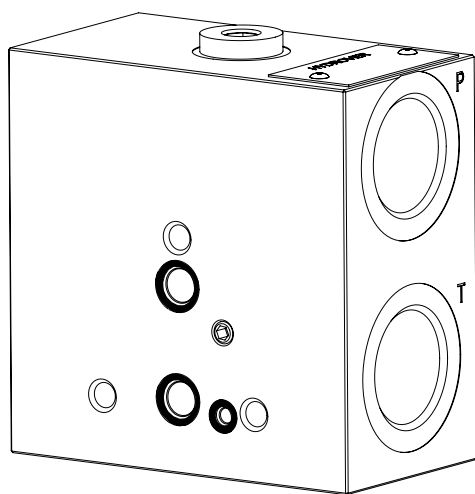
7 elements

8 elements

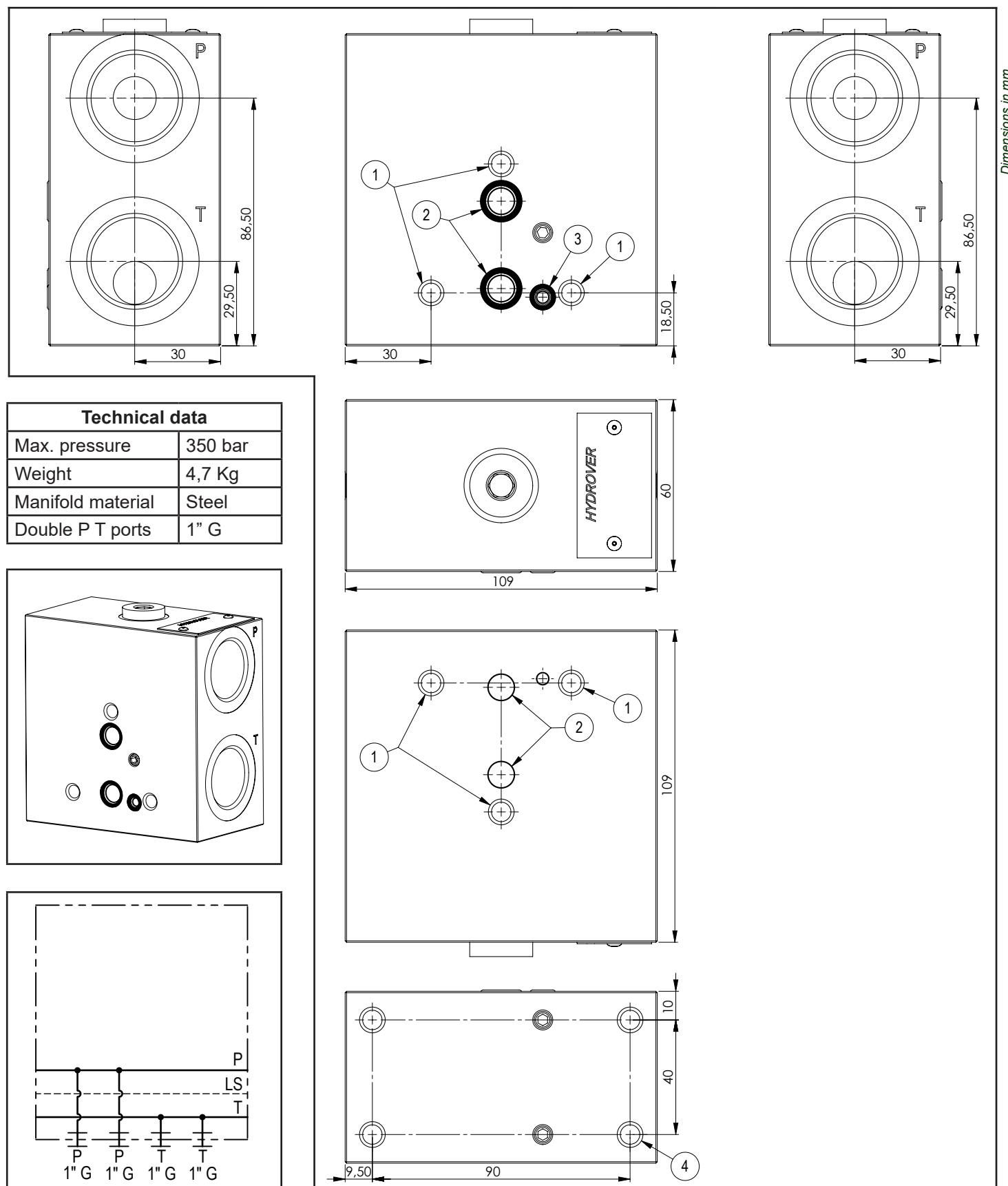
9 elements

# 42 SERIES

## Load sensing plates for Bosch Rexroth ED bankable valves



## Intermediate load sensing inlet ED plate / dual side P-T ports 1" G

**H4201**

**Technical data**

Max. pressure	350 bar
Weight	4,7 Kg
Manifold material	Steel
Double P T ports	1" G

N°	Description	Q.ty
1	M8x17 for tie rod	6
2	Ø 9 through hole with counterbore on one side for OR 2043 i. Ø 5,28 cross section 1,78 (P-T)	2
3	LS through hole with counterbore on one side for OR 2021 i. Ø 10,82 cross section 1,78	1
4	M8x15 thread for mounting	4

Ordering code

H	4	2	0	1	S
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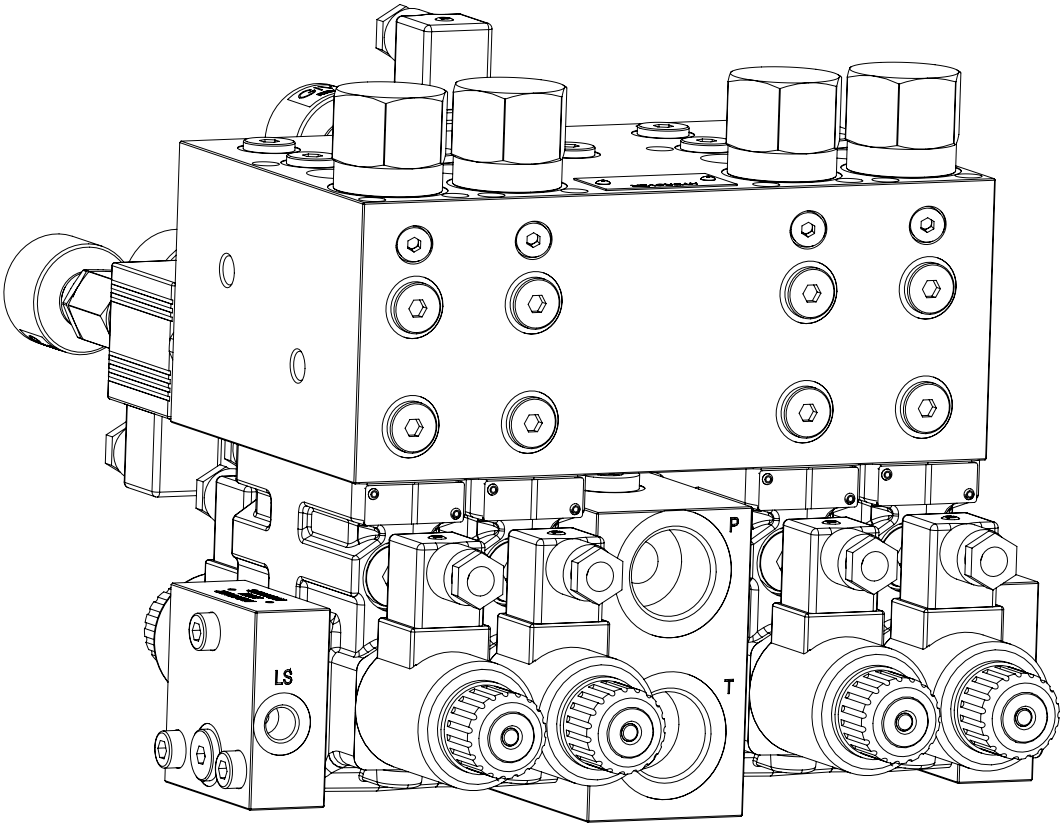
Hydrover product

Manifold material  
Steel

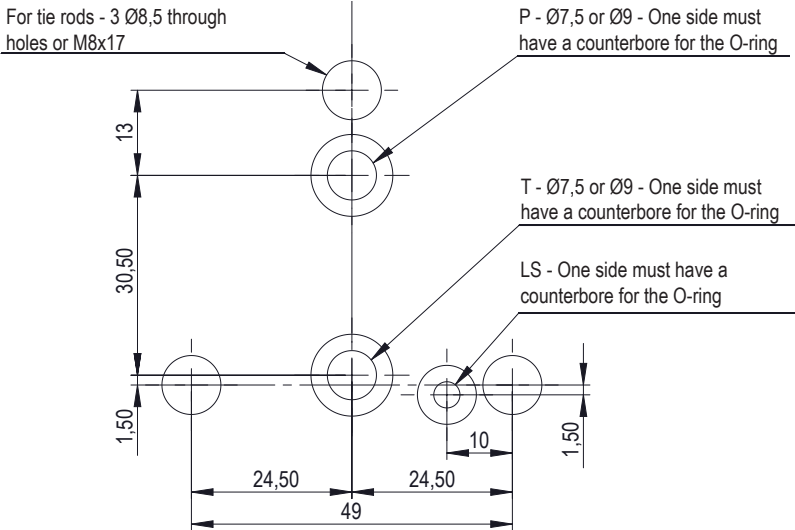
Product series  
42 series - Load sensing plates for Bosch Rexroth ED bankable valves

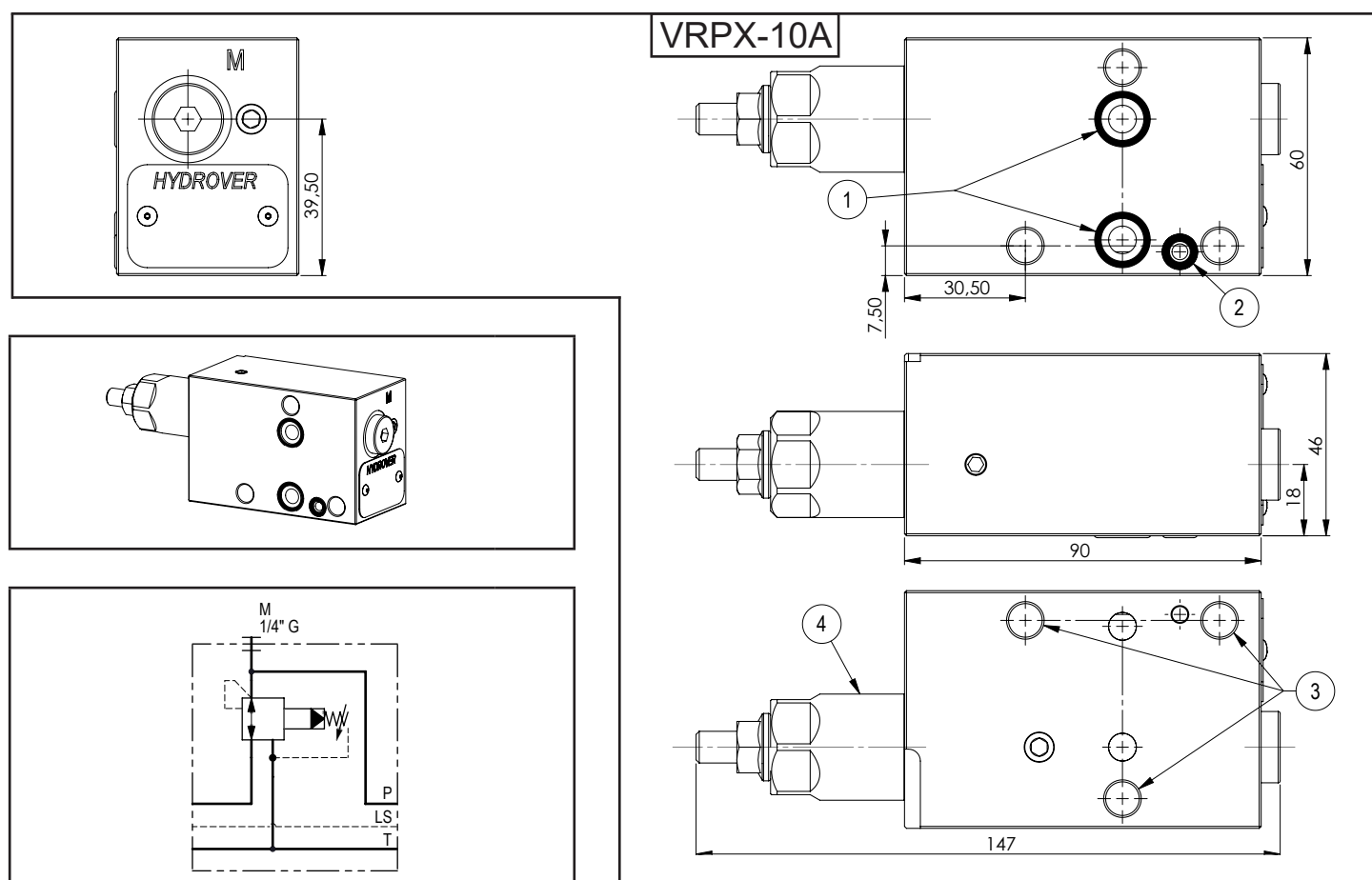
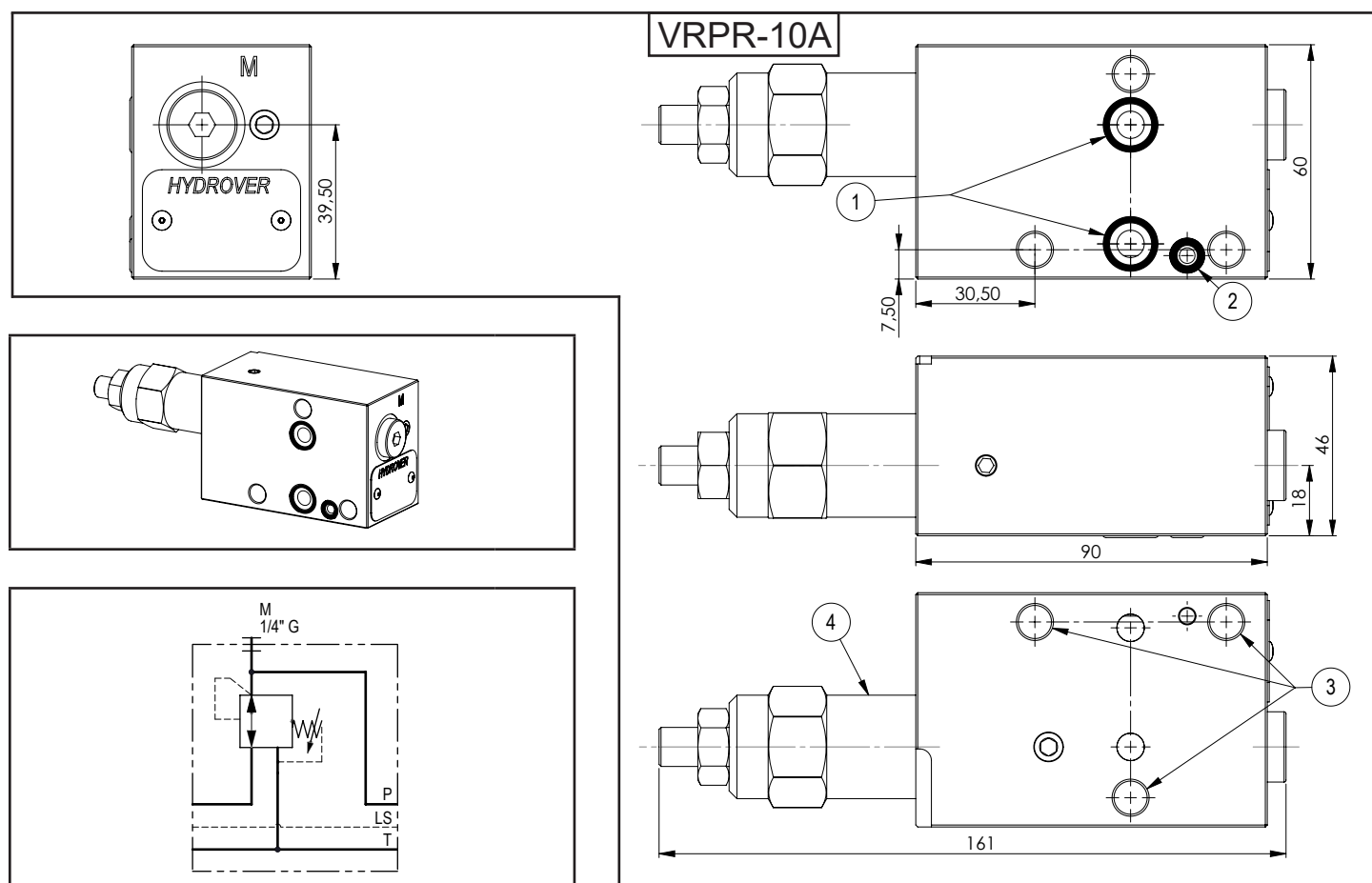
Product ID

Assembly example



Flange







## Ordering code

H	4	2	0	7	A	-	-	-
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## Hydrover product

## Product series

42 series - Load sensing plates for Bosch Rexroth ED bankable valves

## Product ID

## Manifold material

Aluminium

## Pressure reducing valve type \*

R = VRPR-10A (direct)  
X = VRPX-10A (pilot)

## VRPR-10A reducing valve pressure range (static) \*

0 = 2-14 bar  
1 = 2-25 bar  
2 = 10-50 bar  
3 = 28-80 bar

## VRPX-10A reducing valve pressure range (static) \*

0 = 25-100 bar  
1 = 35-140 bar  
2 = 70-280 bar  
3 = 35-350 bar (adj. knob)

## Reducing valve adjustment type \*

S = Screw  
K = Knob

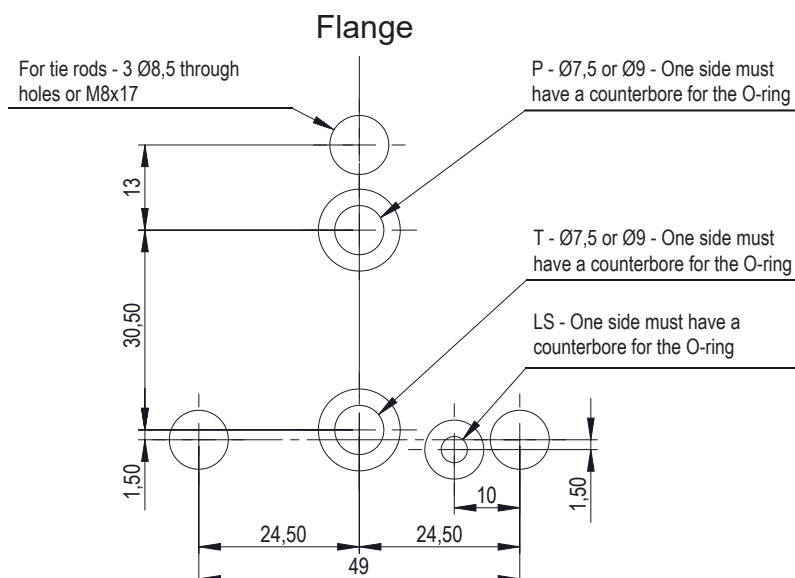
\* Omit if not required. To order the product without the reducing cartridge valve, omit the adjustment type, pressure range and valve type options: H4207A.  
The manifold will still be provided with the corresponding cavity.

N°	Description	Q.ty
1	Ø 7,5 hole with OR 2043 i. Ø 10,82 cross section 1,78 (P-T)	2
2	LS through hole with counterbore on one side for OR 2021 i. Ø 5,28 cross section 1,78	1
3	Ø 8,5 through hole for tie rod	3
4	Bosch Rexroth reducing valve <b>VRPR-10A</b> o <b>VRPX-10A</b> * depicted with screw adjustment	1

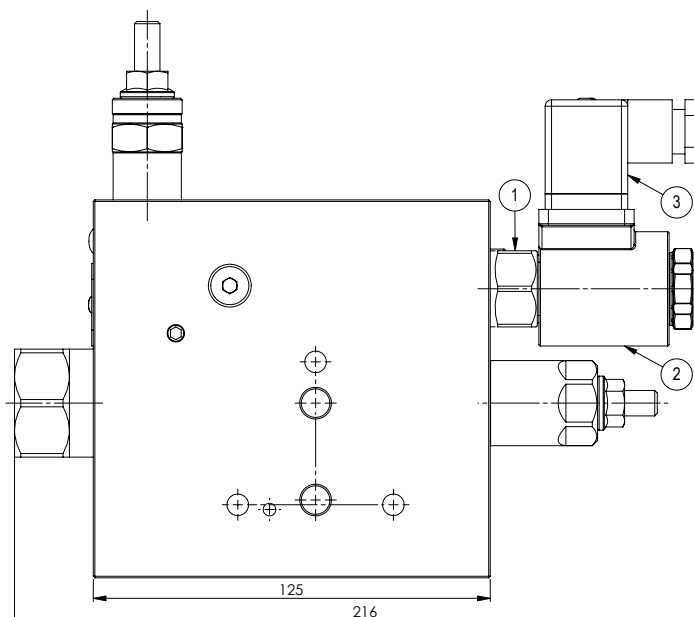
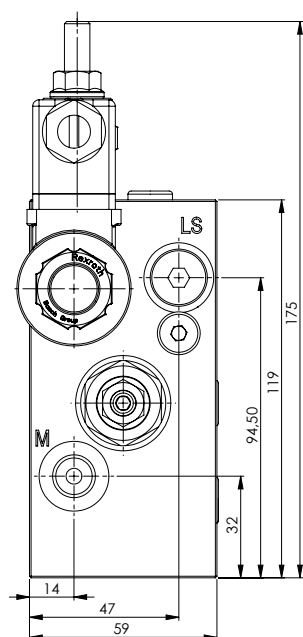
\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

Technical data	
Max. pressure	250 bar
Max. flow with VRPR-10A	25 lpm *
Max. flow with VRPX-10A	55 lpm *
Weight	0,7 Kg
Manifold material	Aluminium

Can be used with LS or non LS elements.



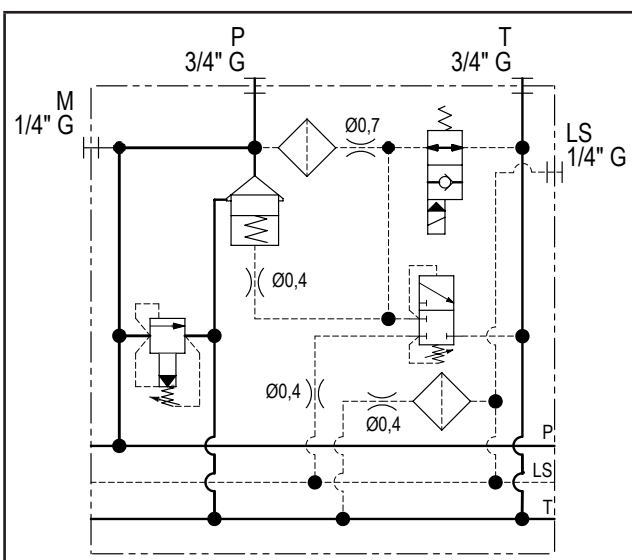
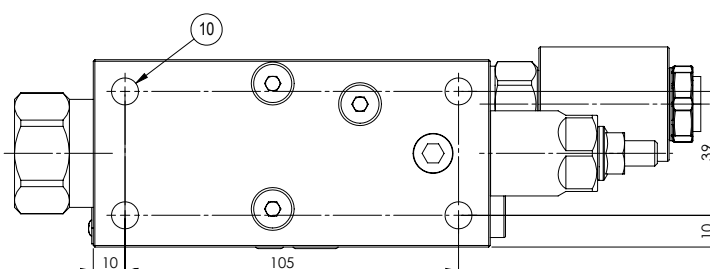
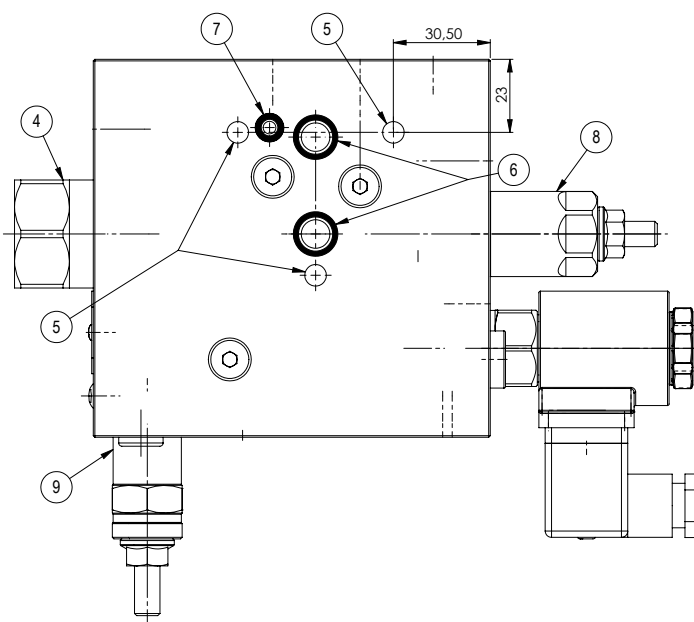
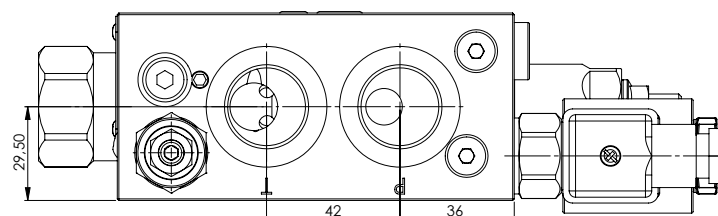
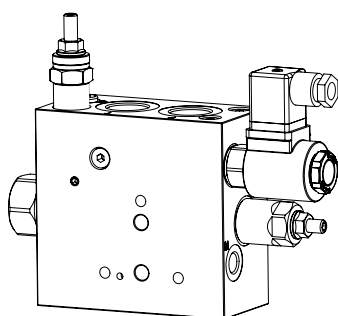
Intermediate load sensing inlet ED plate 3 way compensated  
 variable delta P / relief valve / bypass valve / P-T ports 3/4" G

**H4206**


Dimensions in mm

**Technical data**

Max. pressure	350 bar
Max. flow	90 lpm
Weight	6,7 Kg
Manifold material	Steel
Ports M LS	1/4" G
Ports P T	3/4" G



### Ordering code

H	4	2	0	6	S	-		-		-	
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## Hydrover product

## Product series

## 42 series - Load sensing plates for Bosch Rexroth ED bankable valves

## Product ID

**Manifold material**  
Steel

### Relief valve adjustment type \*

Screw = S  
Knob = K

**Relief valve adjustment pressure range \***

35-140 bar	= 1
70-280 bar	= 2
140-420 bar	= 3
35-350 bar (adj. knob)	= 3

**Solenoid valve  
coil connection \***

1 = DIN 43650  
ISO 4400

**Solenoid valve  
coil voltage \***

OB =	12V DC
OC =	24V DC
OD =	48V DC
OU =	110V RAC
AH =	230V RAC

**Solenoid valve  
manual override \***

E0 =	Without
EP =	Push
EG =	Push and twist

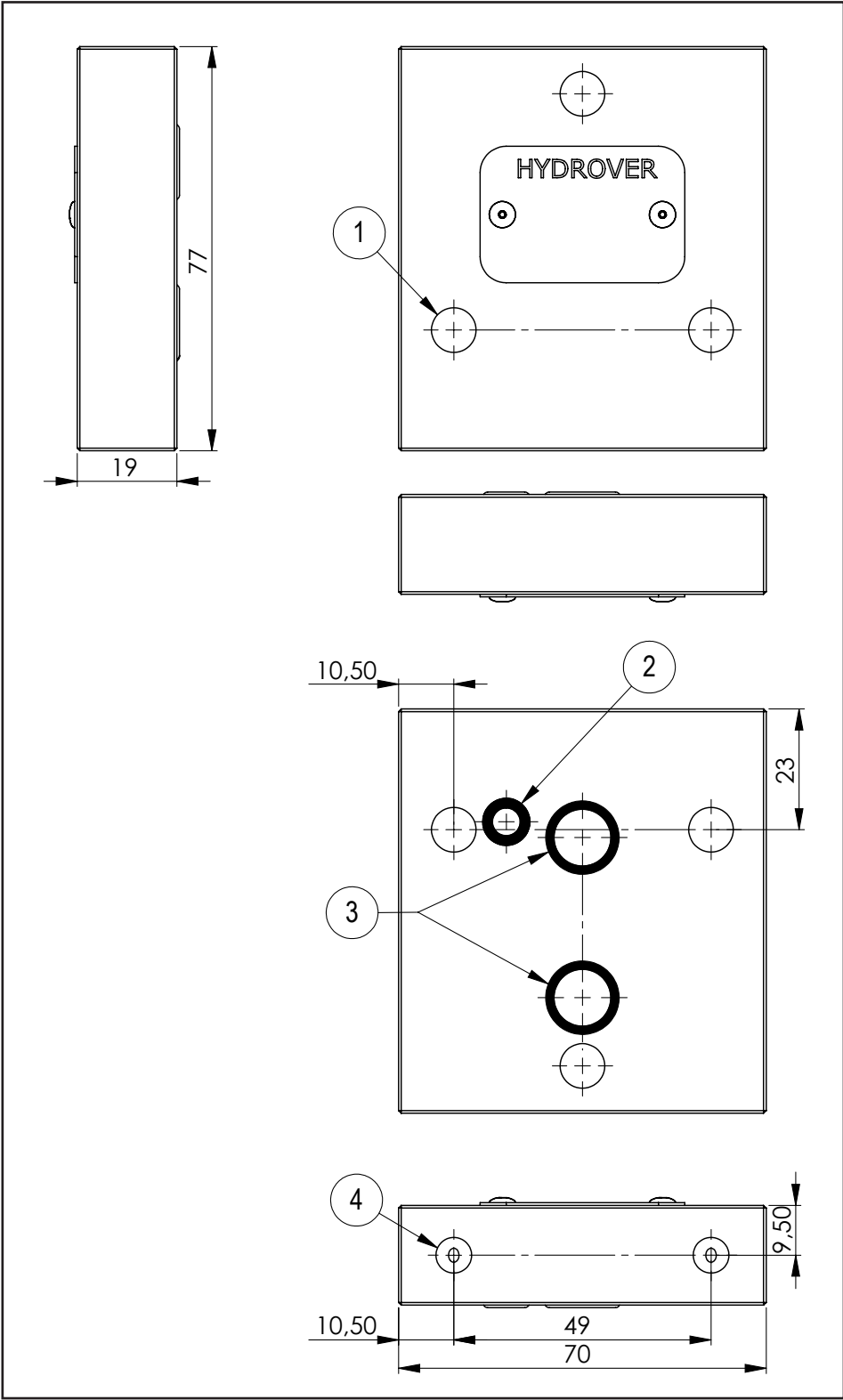
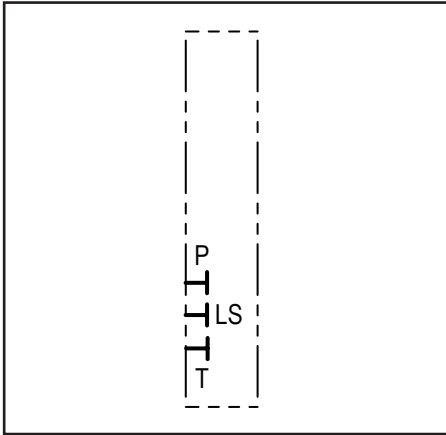
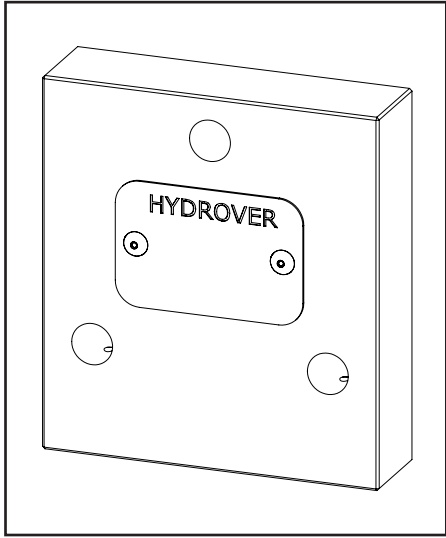
\* Omit if not required. For example, to order the product without the relief valve, omit the relief valve adjustment type and pressure range options: H4206S-E0-OC1. The manifold will still be provided with the corresponding cavity.  
To inhibit a function, replace the related valve options with TL: eg H4206S-TL-E0-OC1.  
In the cavity it will be mounted a long plug.

Valve	Cavity	Long plug code
Solenoid valve VEI-16-10A-NA OD.15.06.36-Y-000000	CA-08A-2N	<b>0489A2005600000</b>
Pressure relief valve VSPN-10A	CA-10A-2N	<b>0489A2008500000</b>

N°	Description	Q.ty
1	Bosch Rexroth bypass solenoid valve <b>VEI-16-10A-NA OD.15.06.36-Y-000000</b> **	1
2	Bosch Rexroth coil <b>D36</b> - CLASS H DIN 43650 ISO 4400 **	1
3	Connector DIN 43650 ISO 4400	1
4	Pressure compensator	1
5	M8x12 for tie rod	6
6	Ø 9 through hole with counterbore on one side for OR 2043 i. Ø 10,82 cross section 1,78 (P-T)	2
7	LS hole with counterbore on one side for OR 2021 i. Ø 5,28 cross section 1,78	1
8	Bosch Rexroth relief valve <b>VSPN-10A</b> ** depicted with screw adjustment	1
9	Bosch Rexroth valve VDP32-07A-03-A for pressure drop regulation from 10 to 30 bar	1
10	M10x15 for mounting	4

**\*\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue**

Technical data	
Max. pressure	250 bar
Weight	0,28 Kg
Manifold material	Aluminium



N°	Description	Q.ty
1	Ø 8,5 through hole for tie rod	3
2	OR 2021 i. Ø 5,28 cross section 1,78 (LS)	1
3	OR 2043 i. Ø 10,82 cross section 1,78 (P-T)	2
4	M8x15 thread for mounting	2

Ordering code

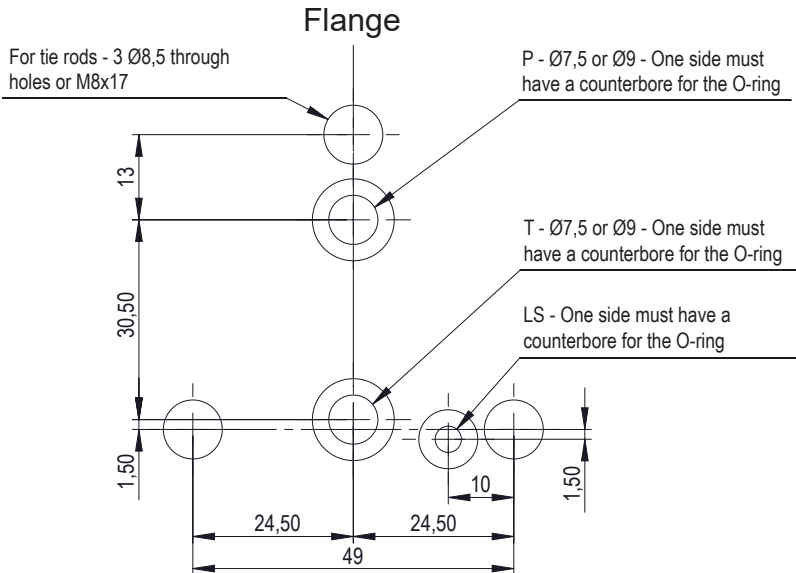
H	4	2	2	1	A
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Hydrover product

Manifold material  
Aluminium

Product series  
42 series - Load sensing plates for Bosch Rexroth ED bankable valves

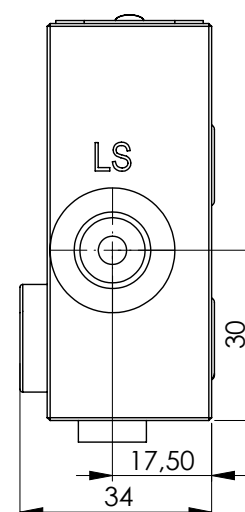
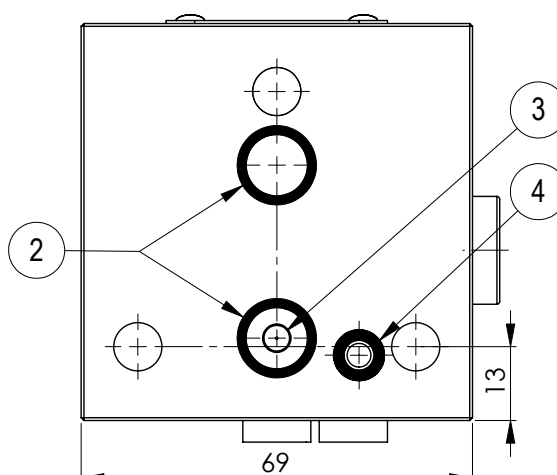
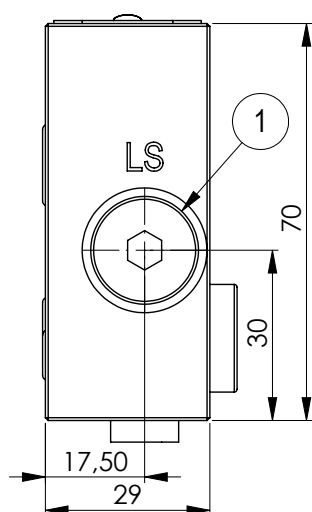
Product ID



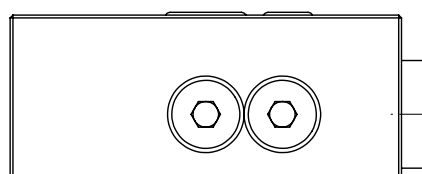
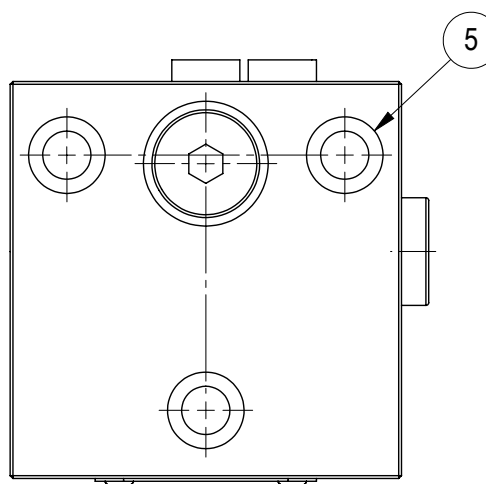
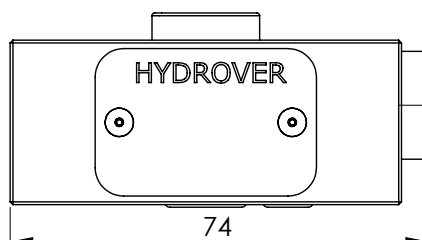
## Closing plate with LS ports and LS leakage

**H4202**

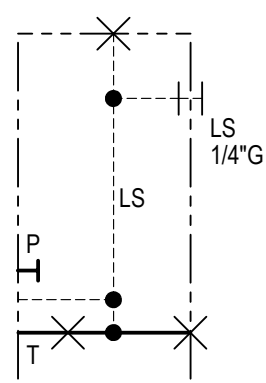
Dimensions in mm

**Technical data**

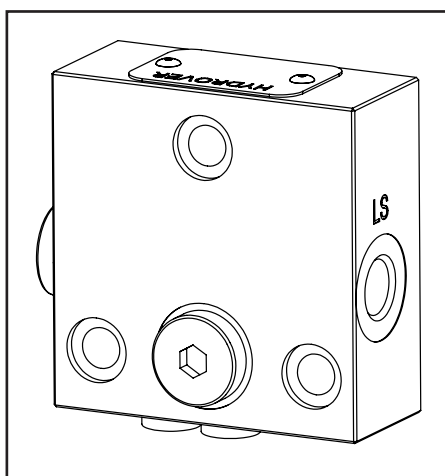
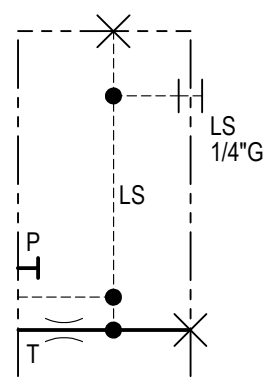
Max. pressure	350 bar
Weight	1 Kg
Manifold material	Steel
LS ports	1/4" G



## Without LS leakage



## With LS leakage



N°	Description	Q.ty
1	TPCLG 1/4"G plug on LS	1
2	OR 2043 i. Ø 10,82 cross section 1,78 (P-T)	2
3	TPCN 6 conical plug or flow restrictor for LS leakage	1
4	OR 2021 i. Ø 5,28 cross section 1,78 (LS)	1
5	Ø 8,5 through hole for tie rod with counterbore Ø 13,5 ± 2	3

Ordering code

H	4	2	0	2	S	-	
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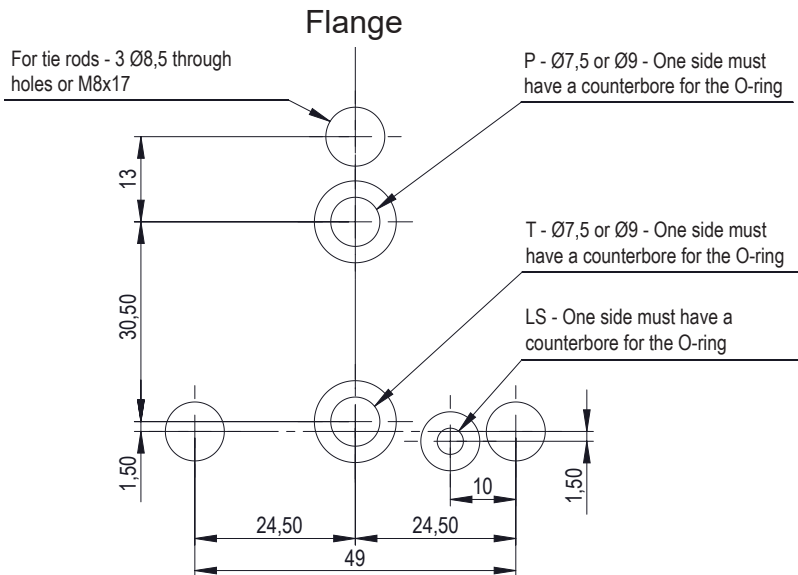
Hydrover product

Product series  
42 series - Load sensing plates for Bosch  
Rexroth ED bankable valves

Product ID

LS leakage  
00 = without  
04 = Ø 0,4 mm  
05 = Ø 0,5 mm  
06 = Ø 0,6 mm  
07 = Ø 0,7 mm

Manifold material  
Steel

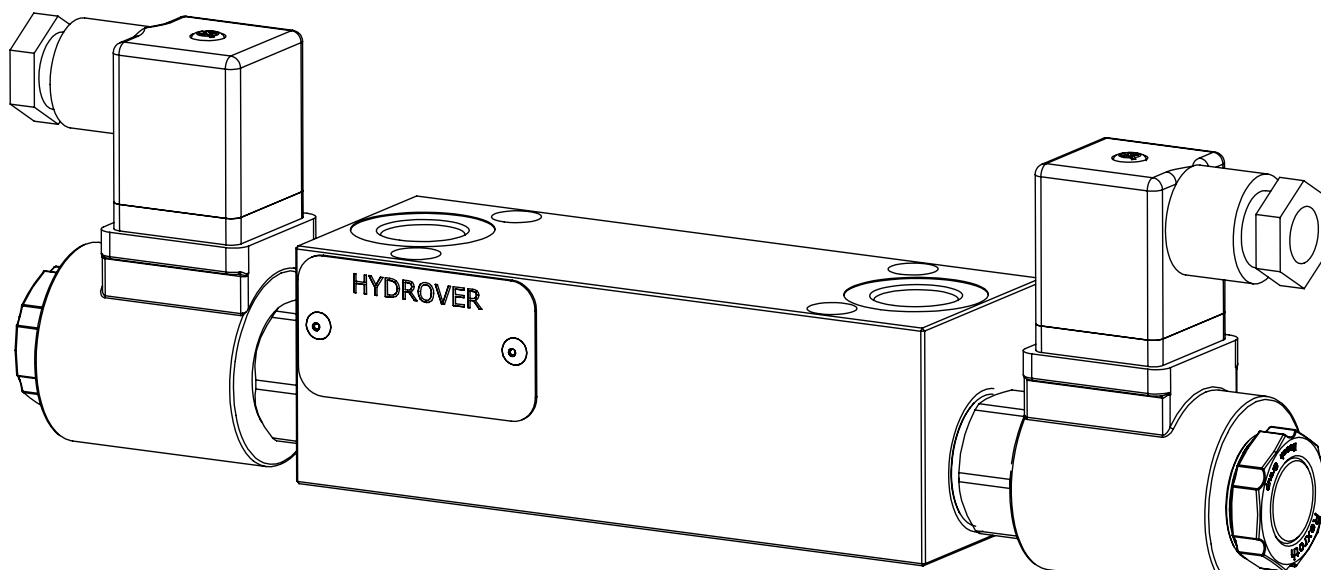
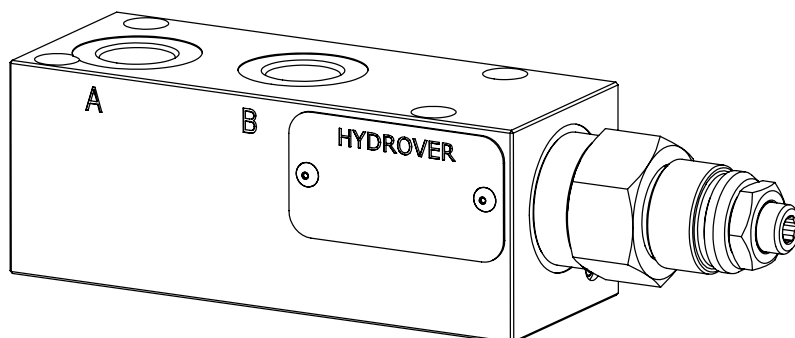


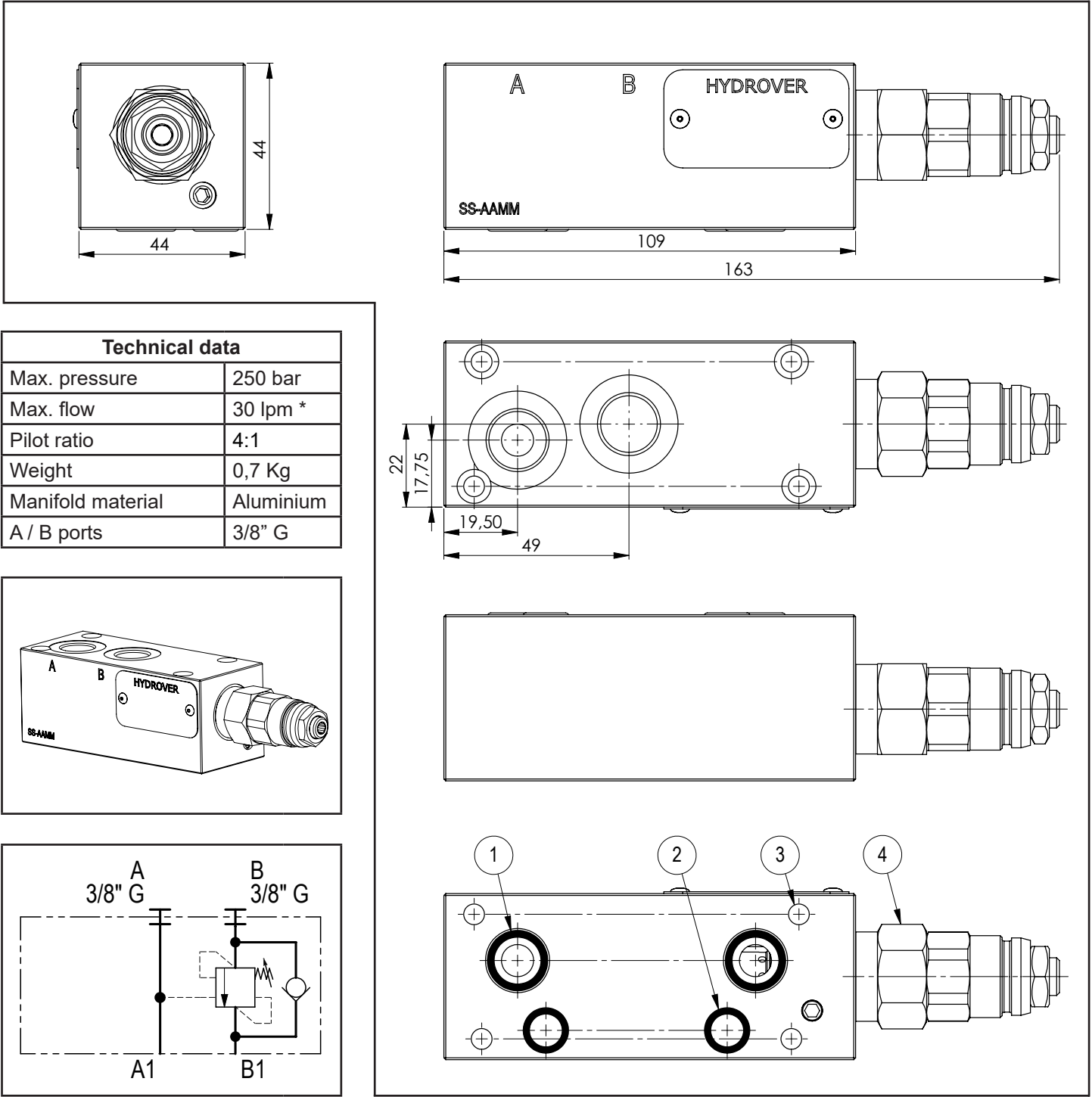




## 48 SERIES

Flangeable elements for Bosch Rexroth  
EDC bankable valves





N°	Description	Q.ty
1	OR 2050 i. Ø 12,42 cross section 1,78	2
2	OR 108 i. Ø 8,73 cross section 1,78	2
3	Ø 5,5 through hole with counterbore for mounting	4
4	Bosch Rexroth counterbalance valve <b>VBSN-08AA</b> *	1

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

Ordering code

H	4	8	0	3	A	-	-	-
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Hydrover product

Product series

48 series - Flangeable elements for Bosch  
Rexroth EDC bankable valves

Product ID

Manifold material  
Aluminium

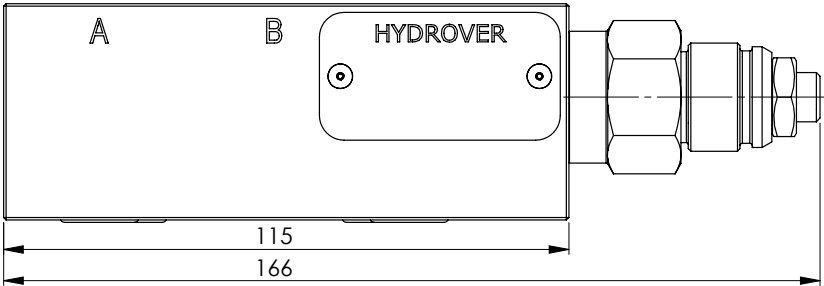
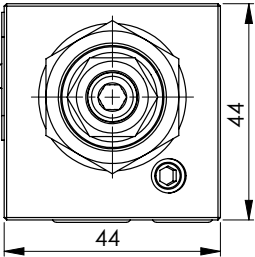
Counterbalance valve  
adjustment pressure range \*

2 =	70-210 bar
3 =	140-350 bar

Counterbalance valve  
adjustment type \*

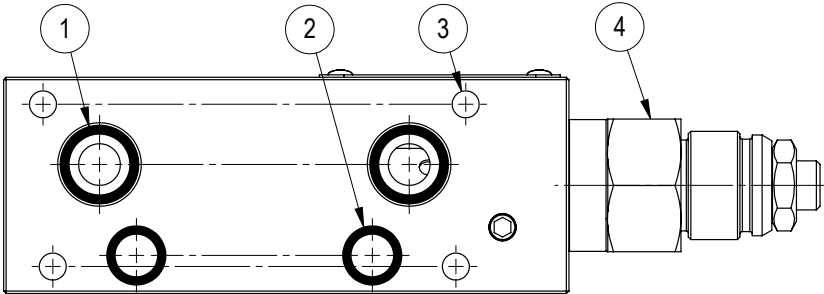
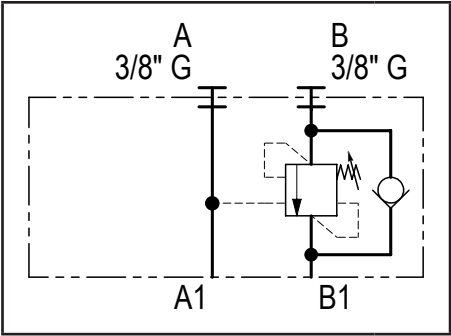
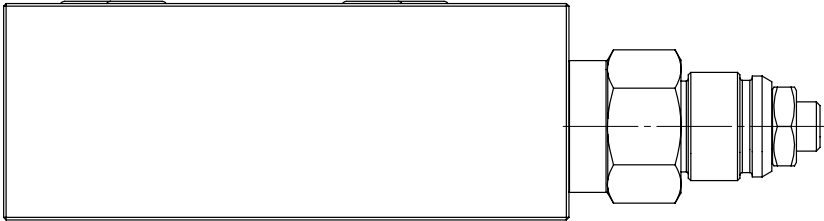
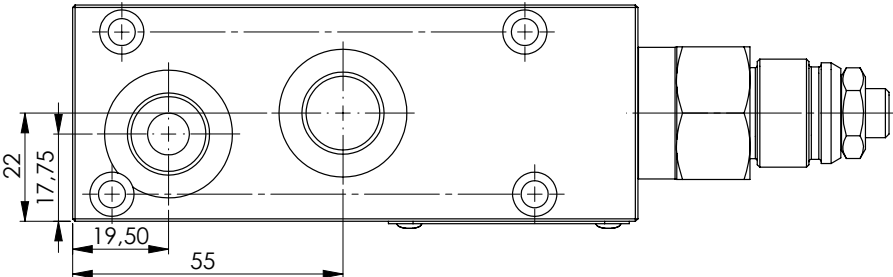
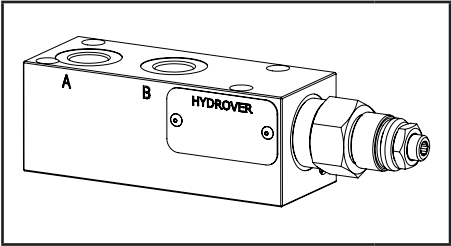
S =	Screw
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\* Omit if not required. The manifold will still be provided with the corresponding cavity.



Dimensions in mm

Technical data	
Max. pressure	350 bar
Max. flow	60 lpm *
Weight	1,7 Kg
Manifold material	Steel
A / B ports	3/8" G



N°	Description	Q.ty
1	Bosch Rexroth counterbalance valve <a href="#">VBSN-10A</a> *	1
2	Ø 5,5 through hole with counterbore for mounting	4
3	OR 108 i. Ø 8,73 cross section 1,78	2
4	OR 2050 i. Ø 12,42 cross section 1,78	2

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

Ordering code

H	4	8	0	1	S	-	-	-
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Hydrover product

Product series  
48 series - Flangeable elements  
for Bosch Rexroth EDC bankable  
valves

Product ID

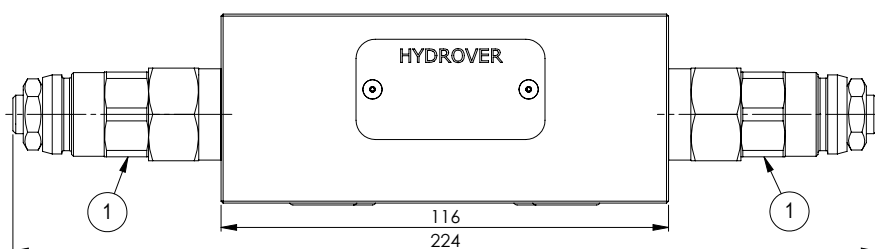
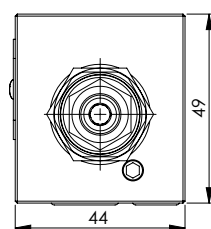
Manifold material  
Steel

Counterbalance valve  
pilot ratio \*  
3 = 3:1  
8 = 8:1

Counterbalance valve  
adjustment pressure range \*  
2 = 70-210 bar  
3 = 140-350 bar

Counterbalance valve  
adjustment type \*  
S = Screw

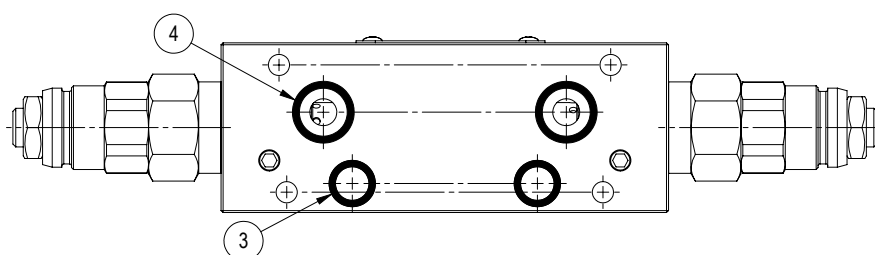
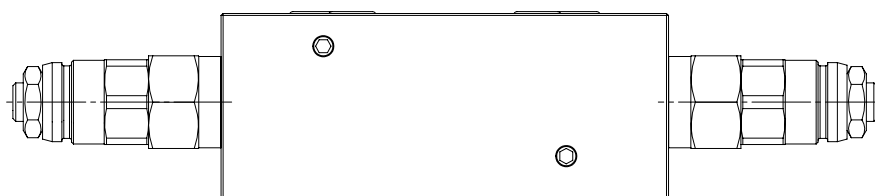
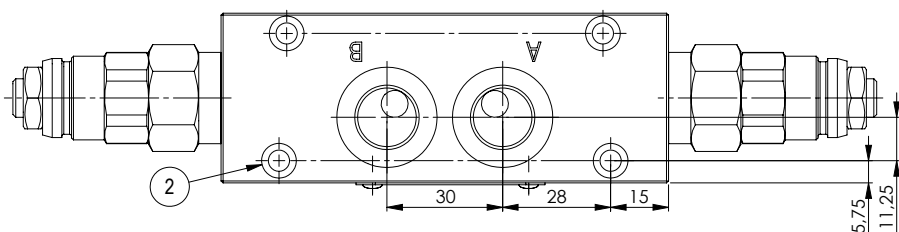
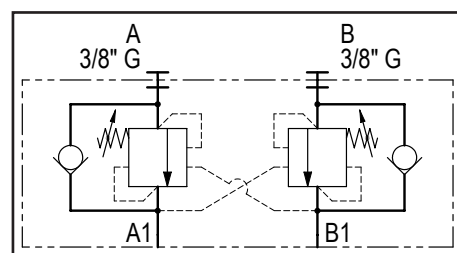
\* Omit if not required. The manifold will still be provided with the corresponding cavity.



Dimensions in mm

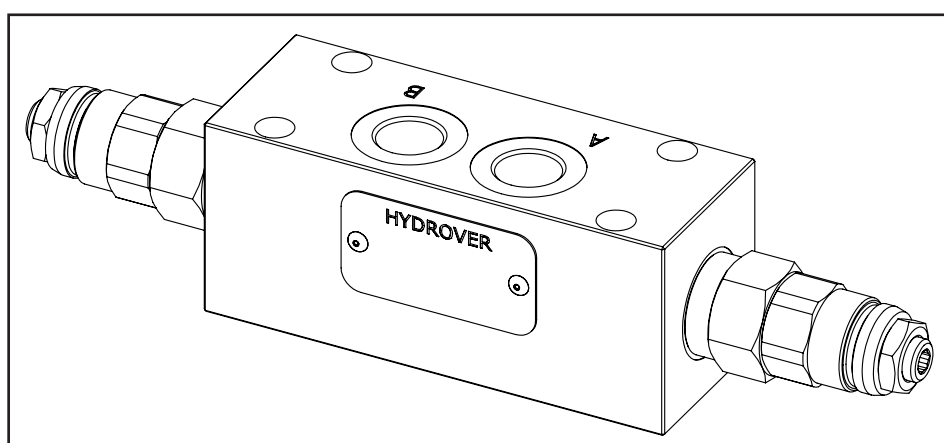
**Technical data**

Max. pressure	250 bar
Max. flow	30 lpm *
Pilot ratio	4:1
Weight	1 Kg
Manifold material	Aluminium
A / B ports	3/8" G



N°	Description	Q.ty
1	Bosch Rexroth counterbalance valve <b>VBSN-08AA *</b>	2
2	Ø 5,5 through hole with counterbore for mounting	4
3	OR 108 i. Ø 8,73 cross section 1,78	2
4	OR 2050 i. Ø 12,42 cross section 1,78	2

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue



Ordering code

H	4	8	0	7	A	-	-	-	-	-
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Hydrover product

Product series  
48 series - Flangeable elements  
for Bosch Rexroth EDC bankable  
valves

Product ID

Manifold material  
Aluminium

Counterbalance valve  
adjustment pressure range on B \*

2 =	100-210 bar
3 =	200-350 bar

Counterbalance valve  
adjustment type on B \*

S = Screw

Counterbalance valve  
adjustment pressure range on A \*

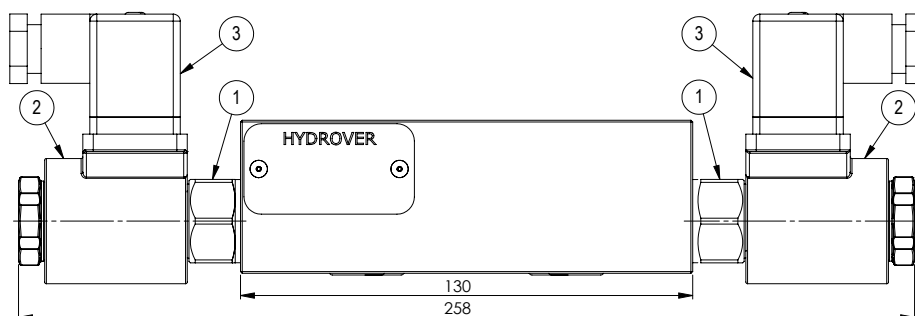
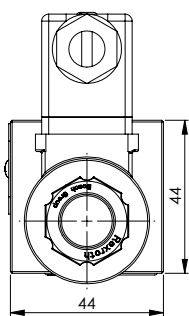
2 =	100-210 bar
3 =	200-350 bar

Counterbalance valve  
adjustment type on A

S = Screw

\* Omit if not required. To order the product without the counterbalance cartridge valves, omit the adjustment type and pressure range options on A e B: H4807A.  
The manifold will still be provided with the corresponding cavities.

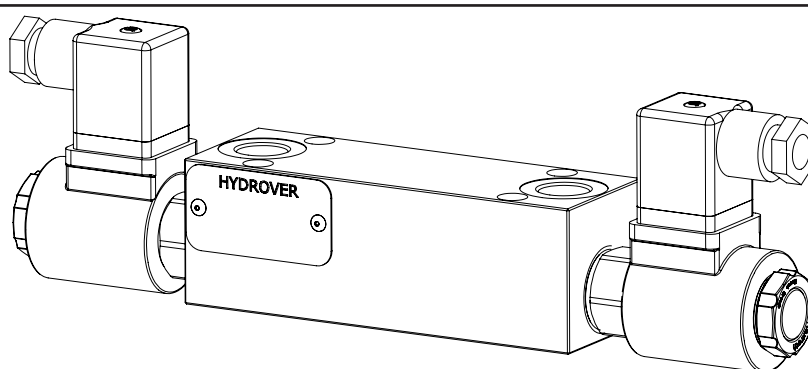
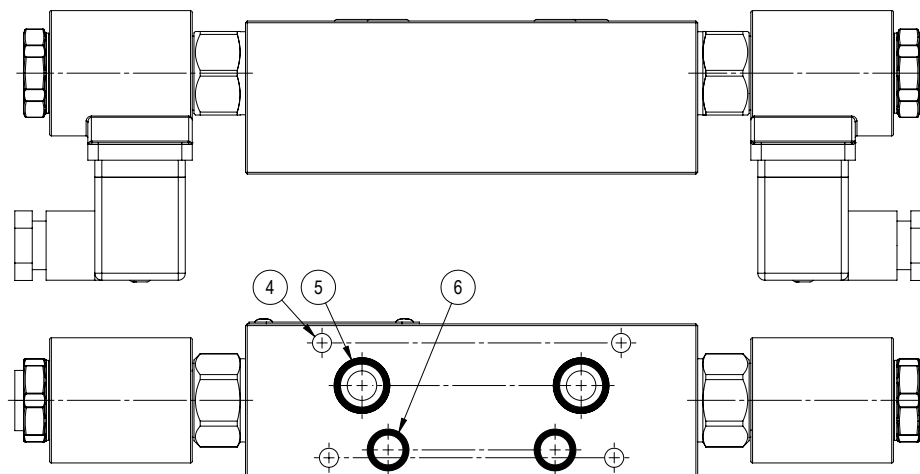
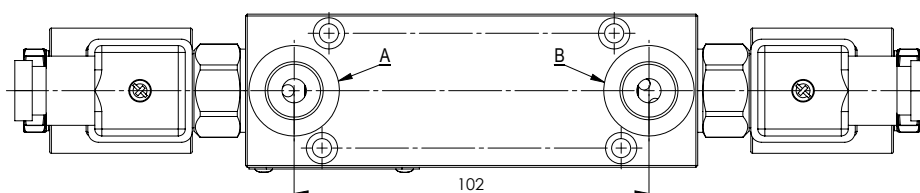
## EDC flangeable element with poppet type solenoid operated directional valves between A and A1 / B and B1

**H4802**


Dimensions in mm

**Technical data**

Max. pressure	250 bar
Max. flow	40 lpm *
Weight	1,4 Kg
Manifold material	Aluminium
A / B ports	3/8" G



N°	Description	Q.ty
1	Bosch Rexroth solenoid valve <b>VEI-16-08A-NC OD.15-X-18-Y-000000</b> (normally closed) or <b>VEI-16-08A-NA OD.15-X-18-Y-000000</b> (normally open) depicted without manual override *	2
2	Bosch Rexroth coil <b>D36</b> - CLASS H DIN 43650 ISO 4400 *	2
3	Connector DIN 43650 ISO 4400	2
4	Ø 5,5 through hole for mounting	4
5	OR 2050 i. Ø 12,42 cross section 1,78	2
6	OR 108 i. Ø 8,73 cross section 1,78	2

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue



Ordering code

H	4	8	0	2	A	-	-	-	-	-	-	-
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Hydrover product

Product series  
48 series - Flangeable elements  
for Bosch Rexroth EDC  
bankable valves

Product ID

Manifold material  
Aluminium

Solenoid valves spool type \*

Normally open	= NA
Normally closed	= NC
Normally open double lock	= 2A
Normally closed double lock	= 2C

Solenoid valves  
coil connection \*

1 = DIN 43650 ISO 4400

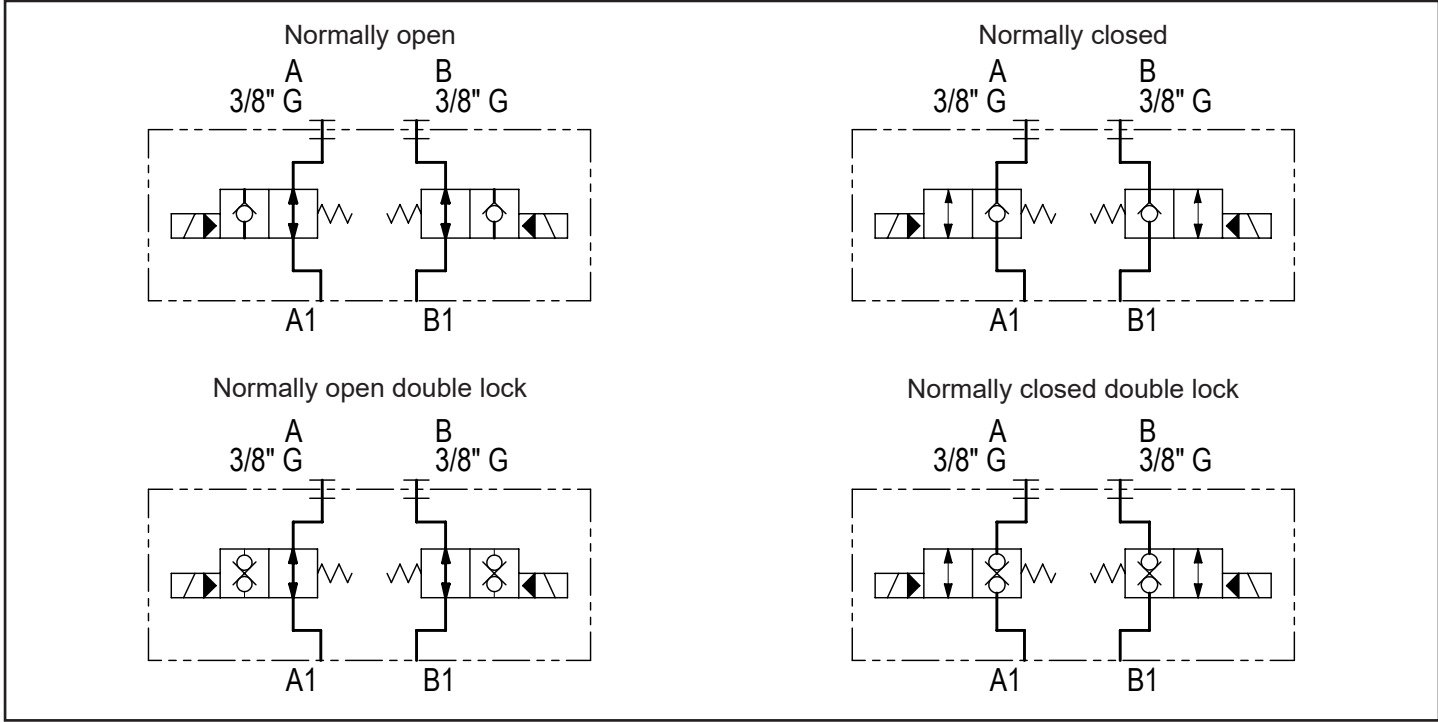
Solenoid valves  
coil voltage \*

OB =	12V DC
OC =	24V DC
OD =	48V DC
OU =	110V RAC
AH =	230V RAC

Solenoid valves  
manual override \*

E0 =	Without
EP =	Push (NA, 2A)
EV =	Screw (NC, 2C)
EG =	Push and twist (NA, 2A)

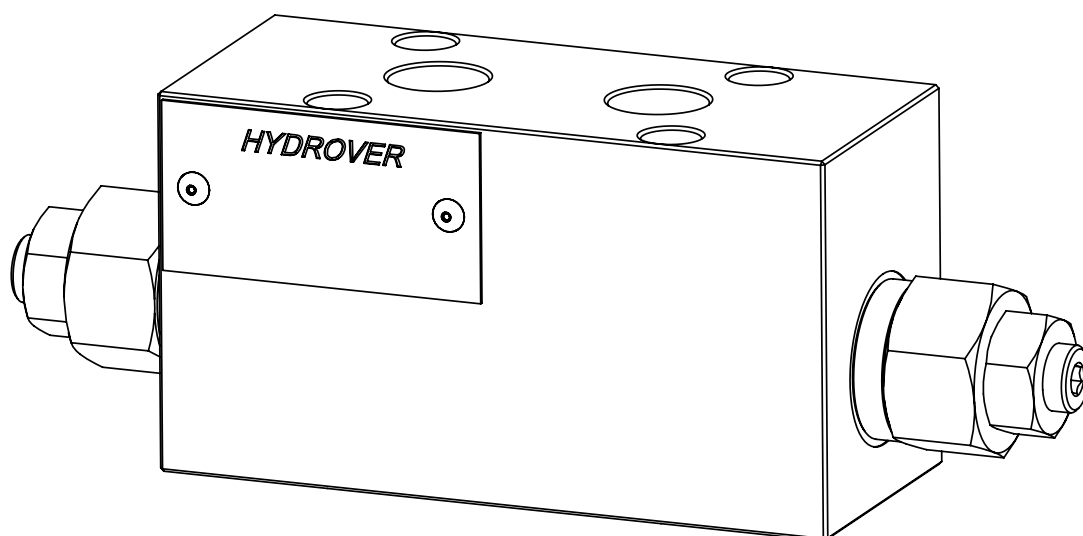
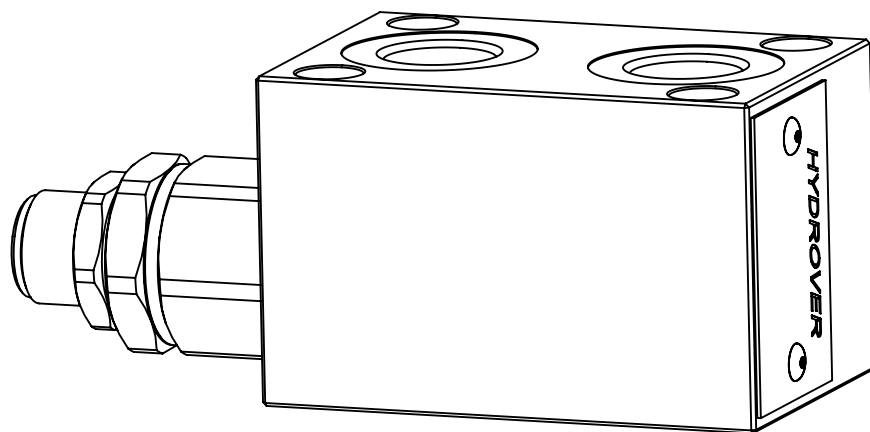
\* Omit if not required. For example to order the product without the coils, omit the solenoid valves coil voltage and coil connection options: H4802A-NC-E0.



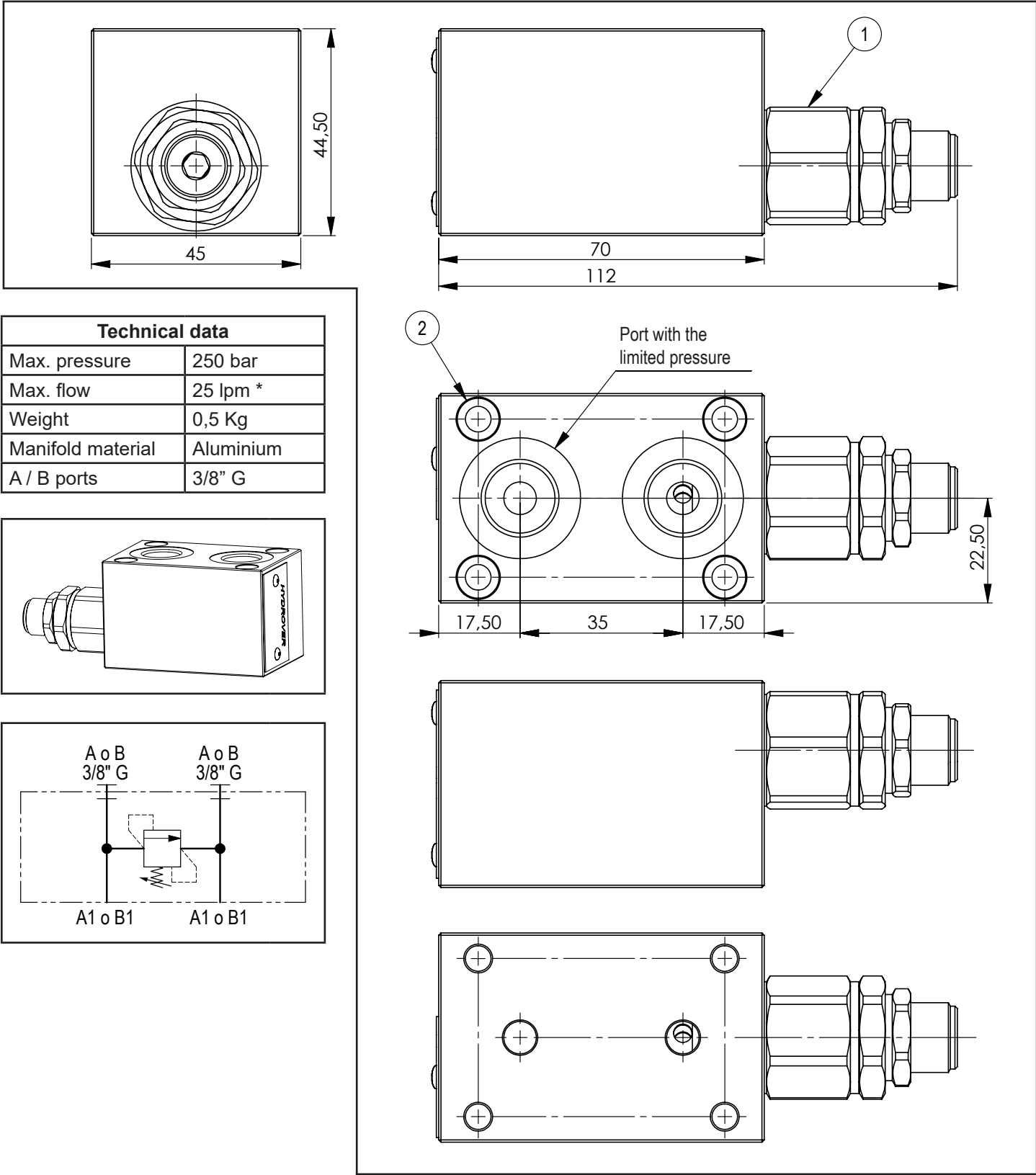


## 49 SERIES

Flangeable elements for Bosch Rexroth ED bankable valves



ED flangeable valve with relief valve on A or B **H4902**



N°	Description	Q.ty
1	Bosch Rexroth relief valve <a href="#">VMD1.025</a> *	1
2	Ø 5,5 through hole with counterbore for mounting	4

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

Ordering code

H	4	9	0	2	A	-	-	-
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Hydrover product

Product series

49 series - Flangeable elements for Bosch  
Rexroth ED bankable valves

Product ID

Relief valve  
adjustment pressure range \*

- 1= 25-120 bar
- 2= 40-200 bar
- 3= 200-350 bar

Relief valve adjustment type \*

S = Screw

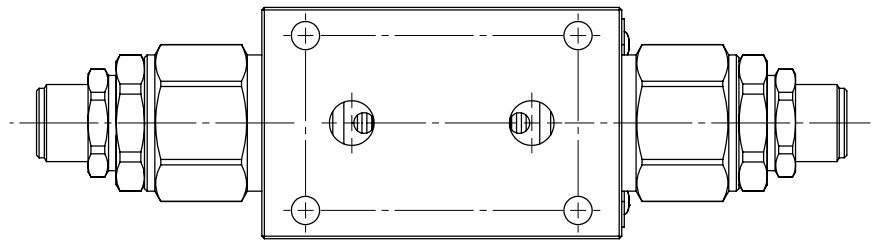
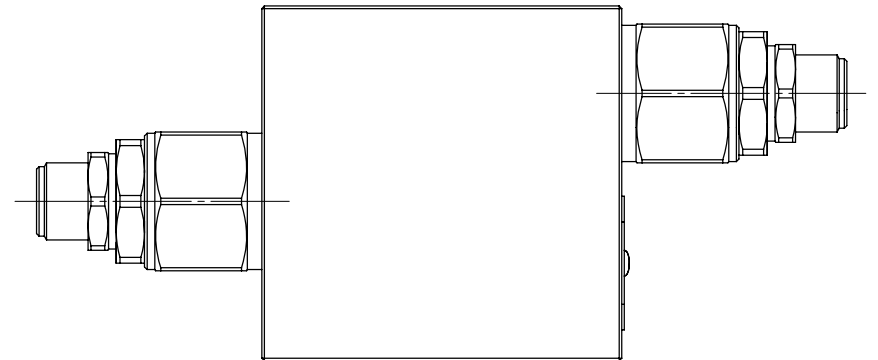
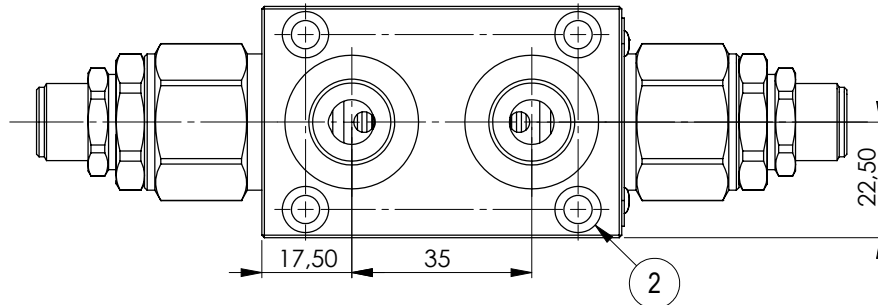
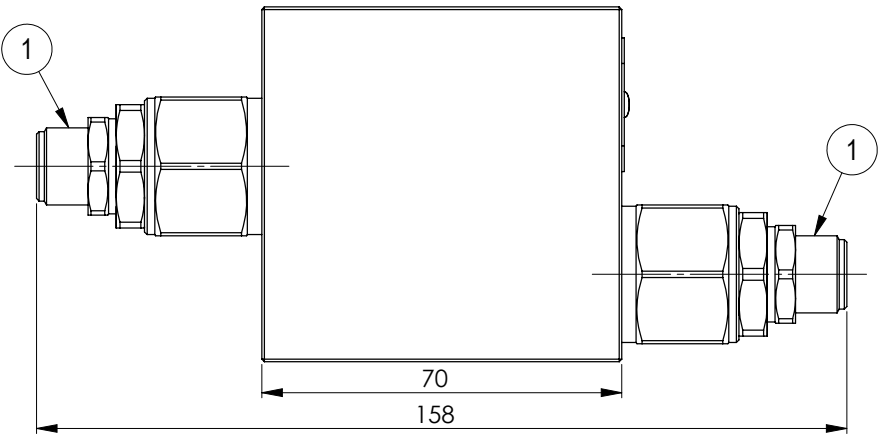
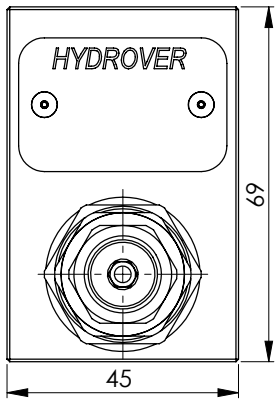
Manifold material

Aluminium

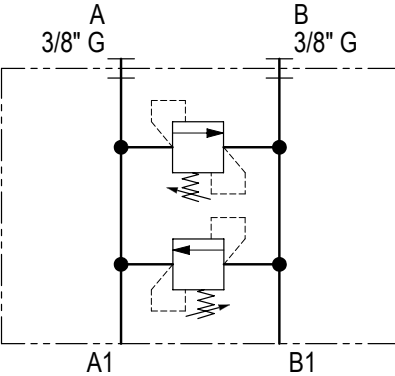
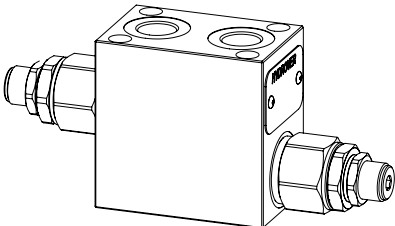
\* Omit if not required. The manifold will still be provided with the corresponding cavity.

ED flangeable element with relief valve on A and B

H4908



Technical data	
Max. pressure	250 bar
Max. flow	40 lpm *
Weight	0,9 Kg
Manifold material	Aluminium
A / B ports	3/8" G



N°	Description	Q.ty
1	Bosch Rexroth relief valve <a href="#">VMD1.040</a> *	2
2	Ø 5,5 through hole with counterbore for mounting	4

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

Ordering code

H	4	9	0	8	A	-	-	-	-	-
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Hydrover product

Product series  
49 series - Flangeable elements  
for Bosch Rexroth ED  
bankable valves

Product ID

Manifold material  
Aluminium

Relief valve adjustment type on A \*  
Screw = S

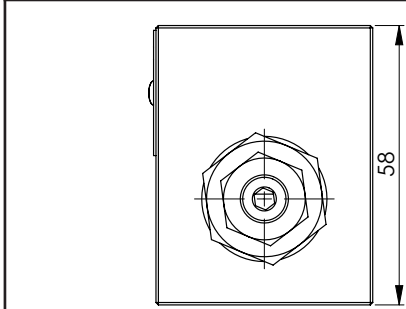
Relief valve  
adjustment pressure range  
on B \*  
1= 25-120 bar  
2= 40-200 bar  
3= 200-350 bar

Relief valve adjustment type  
on B \*  
S = Screw

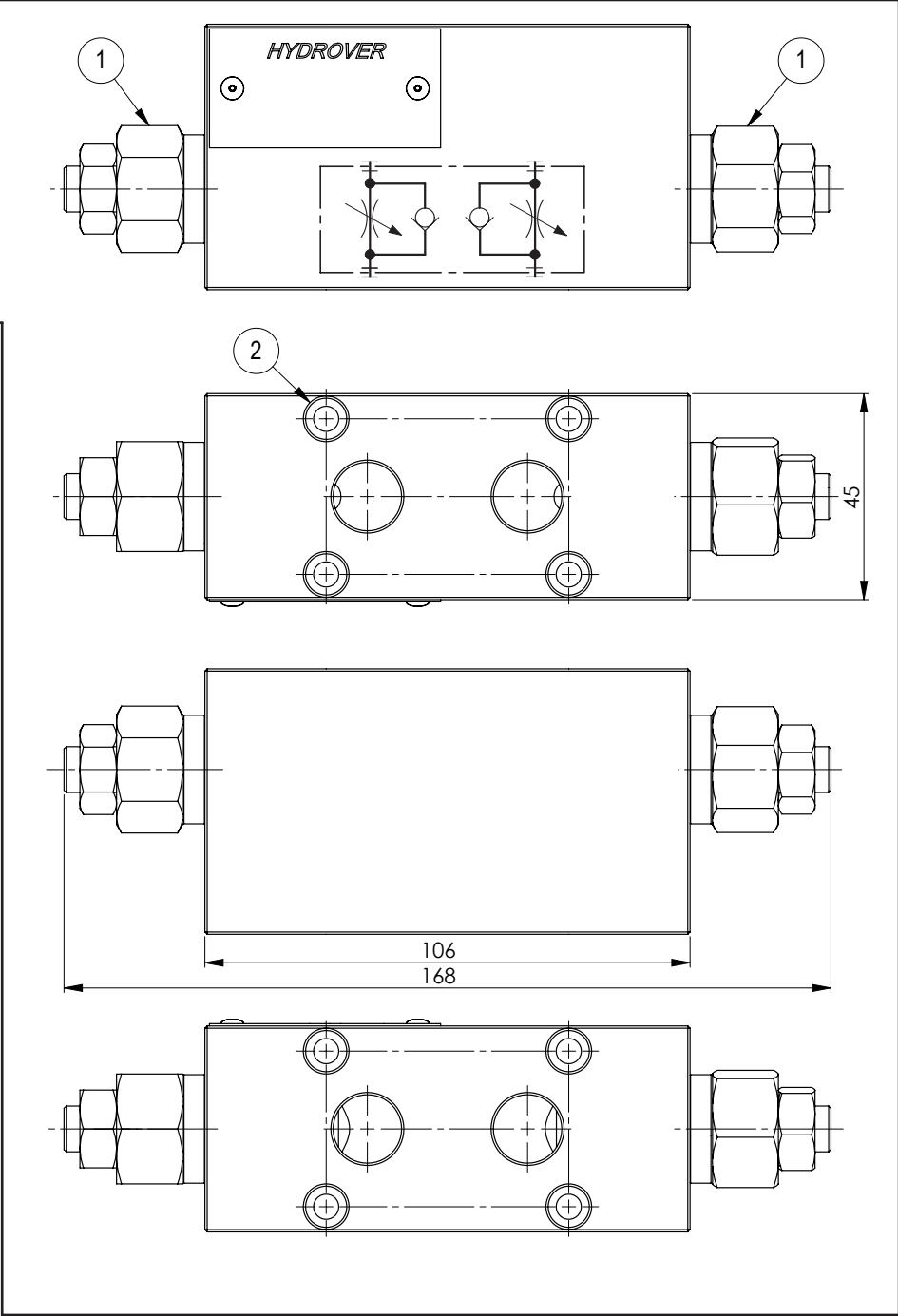
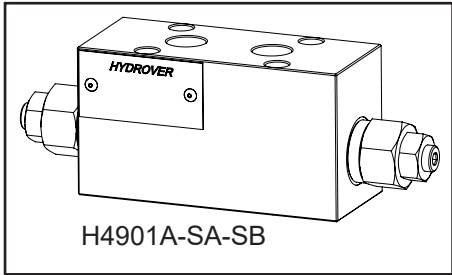
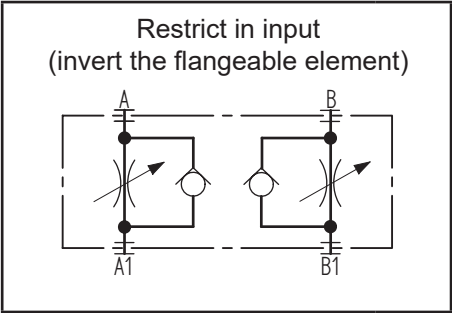
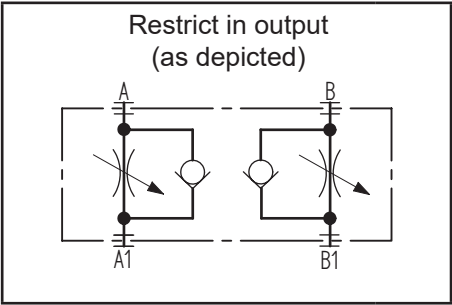
Relief valve  
adjustment pressure range on A \*  
1= 25-120 bar  
2= 40-200 bar  
3= 200-350 bar

\* Omit if not required. The manifold will still be provided with the corresponding cavity.

ED flangeable valve with unidirectional flow restrictors on A / B / A and B **H4901**



Technical data	
Max. pressure	250 bar
Max. flow	40 lpm *
Weight with 1 valve	0,9 Kg
Weight with 2 valves	1 Kg
Manifold material	Aluminium
Bottom and top A / B ports	3/8" G



N°	Description	Q.ty
1	Bosch Rexroth unidirectional flow restrictor <b>STVU-08A</b> * depicted with screw adjustment	1/2
2	Ø 5,5 through hole with counterbore for mounting	4

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue



Ordering code

H	4	9	0	1		-			-		
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### Hydrover product

## Product series

49 series - Flangeable elements  
for Bosch Rexroth ED  
bankable valves

Product ID

## Manifold material

Aluminium  
Steel

$$= A$$
$$= S$$

### Unidirectional flow restrictor on B

SB = Screw

KB =	Knob
------	------

TB = Without flow restrictor

### Unidirectional flow restrictor on A

SA = Screw

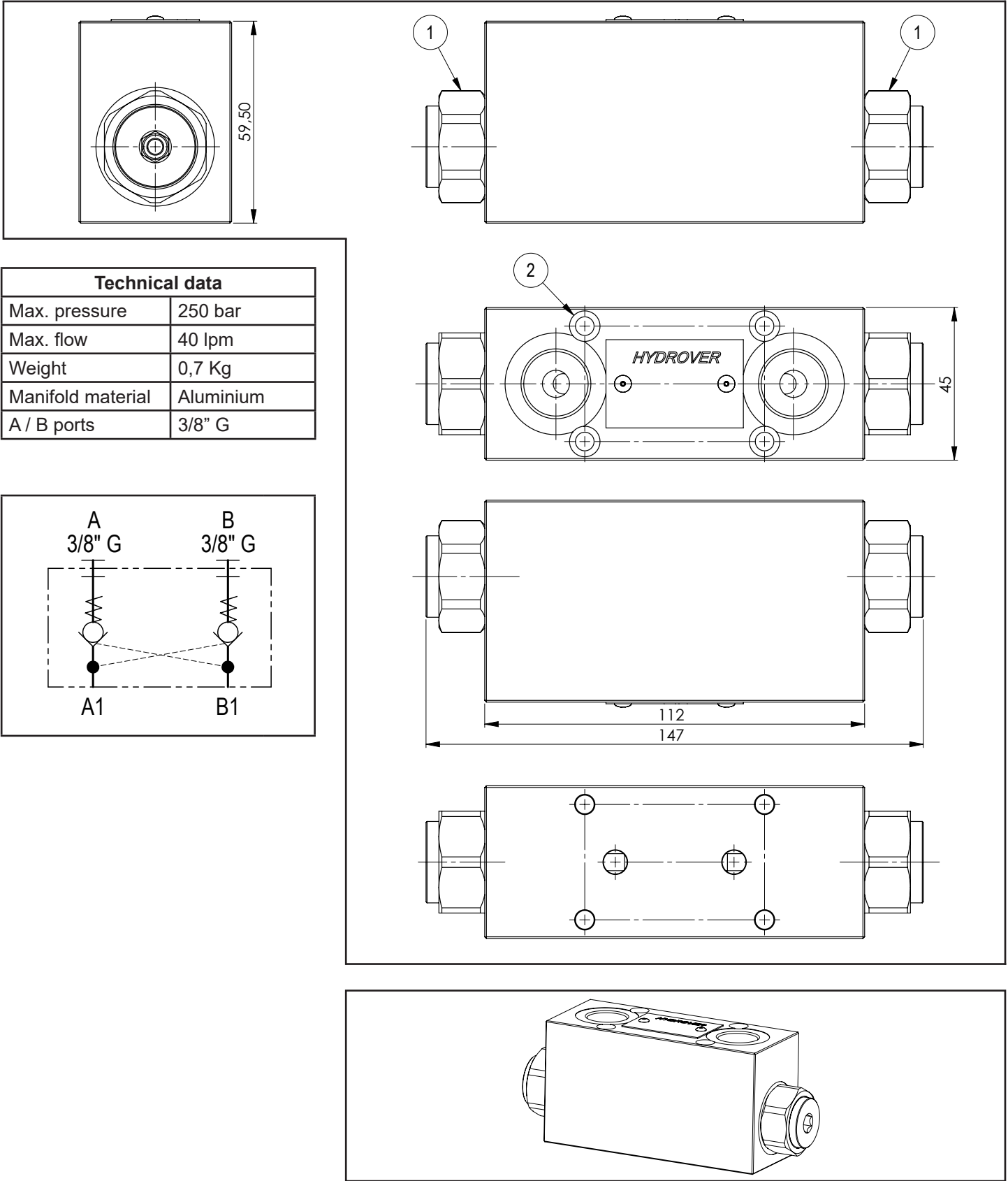
KA = Knob

TA = Without flow restrictor

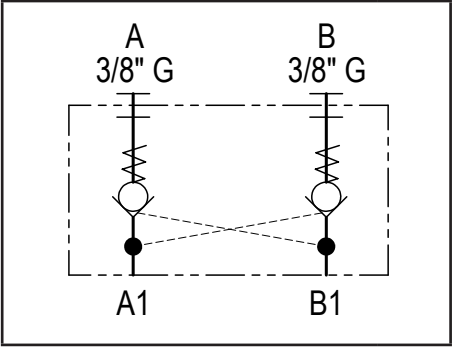
To inhibit one of the flow restrictors, substitute the related options with T: eg. H4901A-TA-SB.

In the cavity it will be mounted a short plug.

Valve	Cavity	Short plug code
Bosch Rexroth unidirectional flow restrictor STVU-08A	CA-08A-2N	R-800-008



Technical data	
Max. pressure	250 bar
Max. flow	40 lpm
Weight	0,7 Kg
Manifold material	Aluminium
A / B ports	3/8" G



N°	Description	Q.ty
1	Bosch Rexroth check valve	2
2	Ø 5,5 through hole with counterbore for mounting	4

Ordering code

H	4	9	0	3	A	-	I	A	_	-	O	R	_
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Hydrover product

Product series  
49 series - Flangeable elements  
for Bosch Rexroth ED  
bankable valves

Product ID

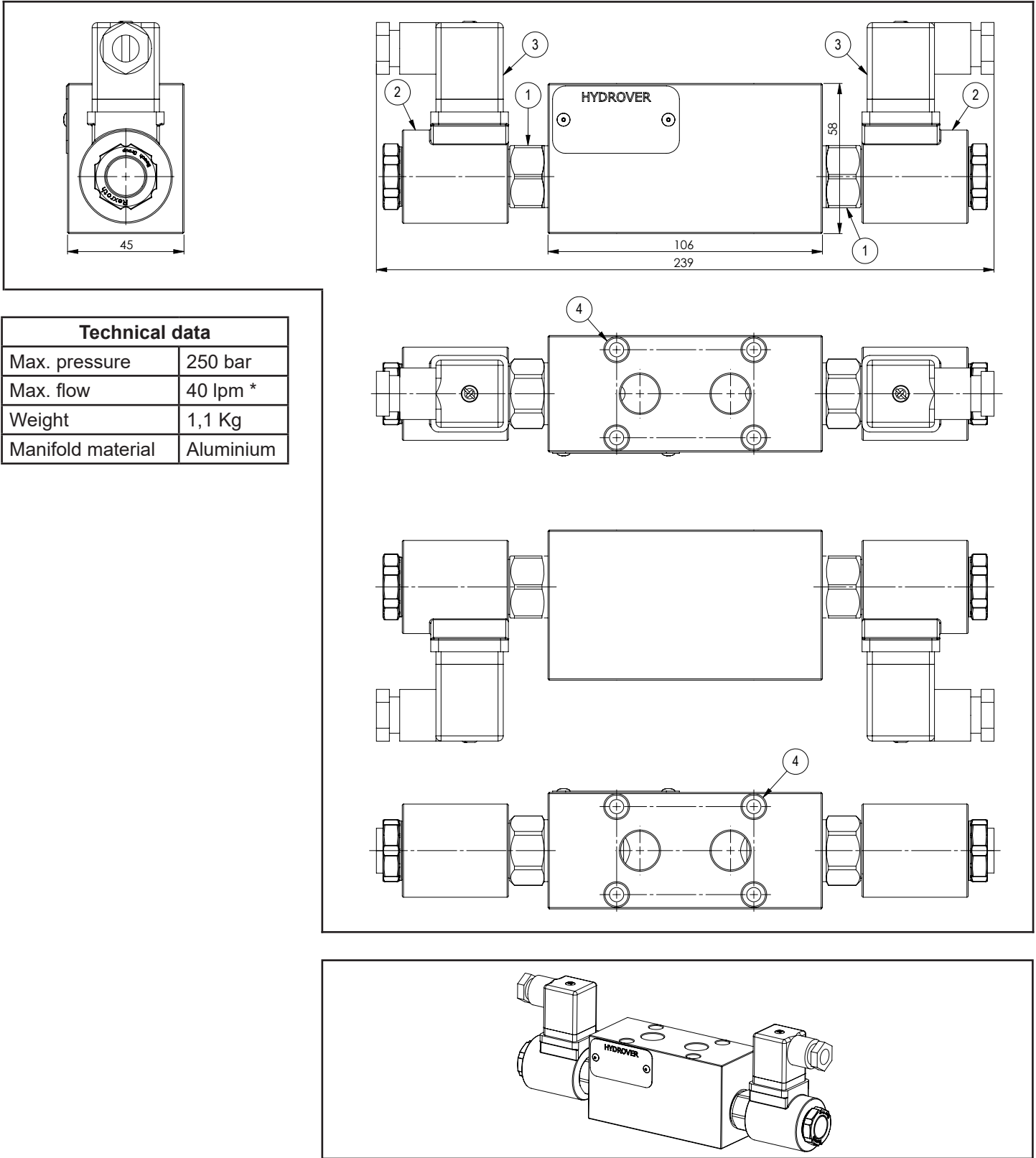
Manifold material  
Aluminium

O-ring on the spool

0 = Without  
1 = With

Cracking pressure

1 = 1 bar  
8 = 8 bar



N°	Description	Q.ty
1	Bosch Rexroth solenoid valve <b>VEI-16-08A-NC OD.15-X-18-Y-000000</b> (normally closed) or <b>VEI-16-08A-NA OD.15-X-18-Y-000000</b> (normally open) depicted without manual override *	2
2	Bosch Rexroth coil <b>D36</b> - CLASS H DIN 43650 ISO 4400 *	2
3	Connector DIN 43650 ISO 4400	2
4	Ø 5,5 through hole with counterbore for mounting	4

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

Ordering code

H	4	9	0	4	A	-	-	-	-	-	-	-
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Hydrover product

Product series  
49 series - Flangeable elements  
for Bosch Rexroth ED  
bankable valves

Product ID

Manifold material  
Aluminium

Solenoid valves spool type \*

Normally open	= NA
Normally closed	= NC
Normally open double lock	= 2A
Normally closed double lock	= 2C

Solenoid valves  
coil connection \*  
1 = DIN 43650 ISO 4400

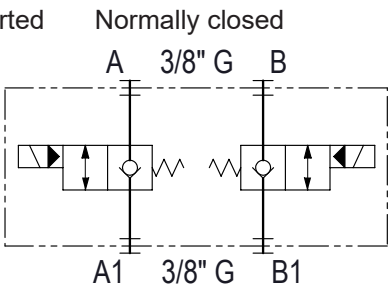
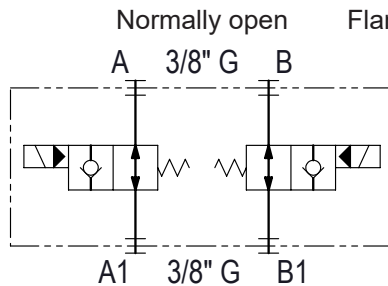
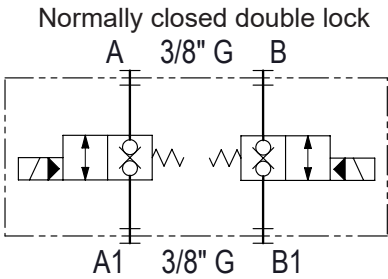
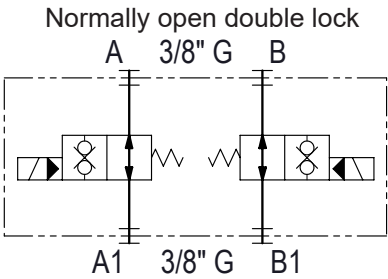
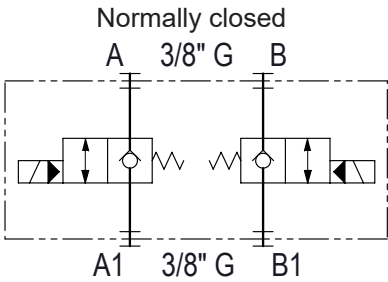
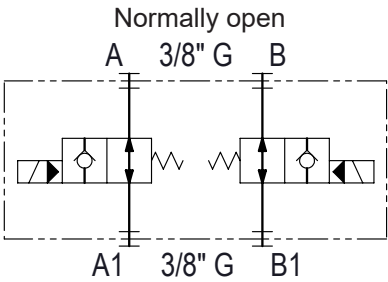
Solenoid valve  
coil voltage \*

OB =	12V DC
OC =	24V DC
OD =	48V DC
OU =	110V RAC
AH =	230V RAC

Solenoid valves  
manual override \*

E0 =	Without
EP =	Push (NA, 2A)
EV =	Screw (NC, 2C)
EG =	Push and twist (NA, 2A)

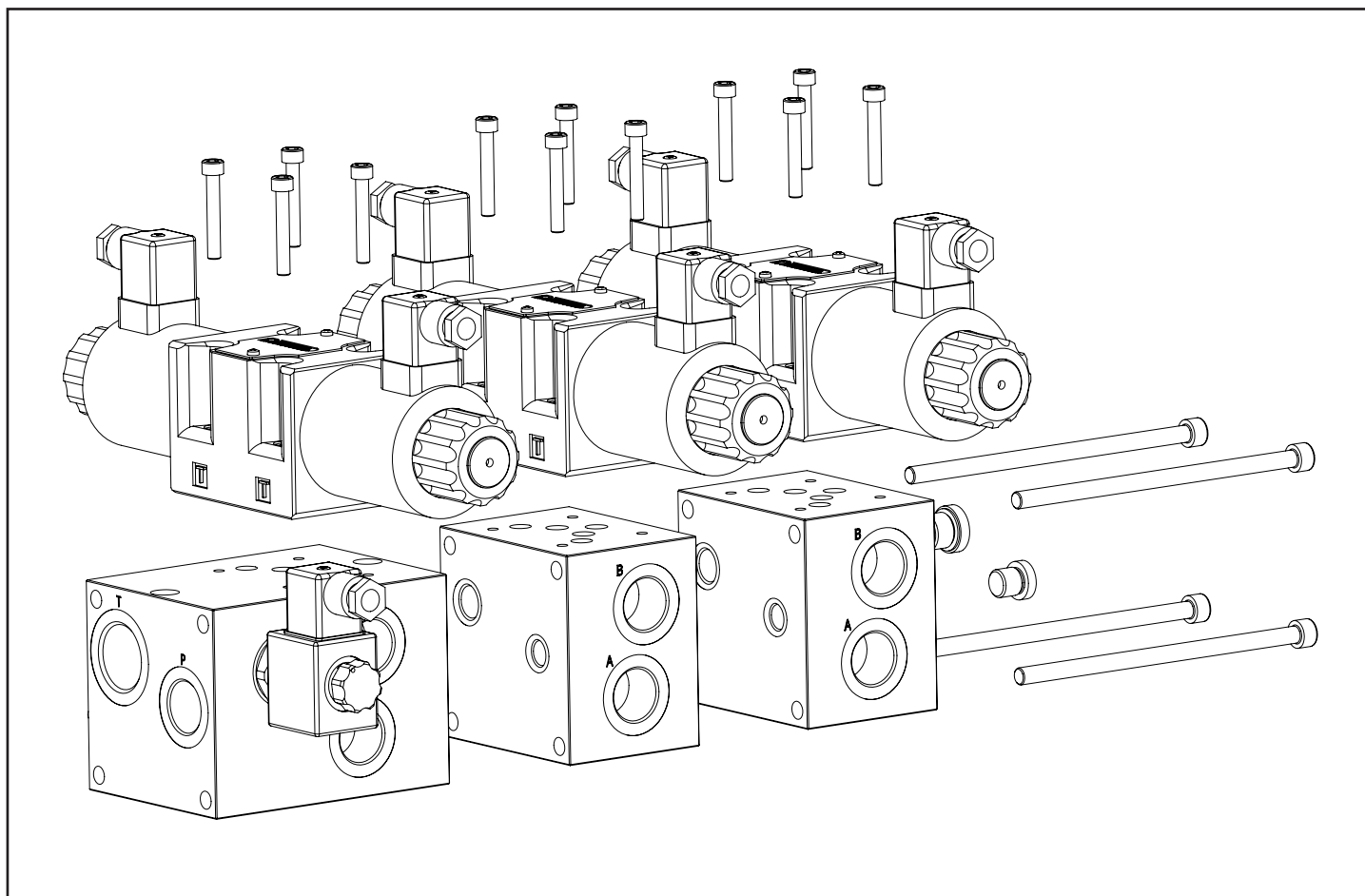
\* Omit if not required. For example to order the product without the coils, omit the solenoid valves coil voltage and coil connection options: H4904A-NC-E0.





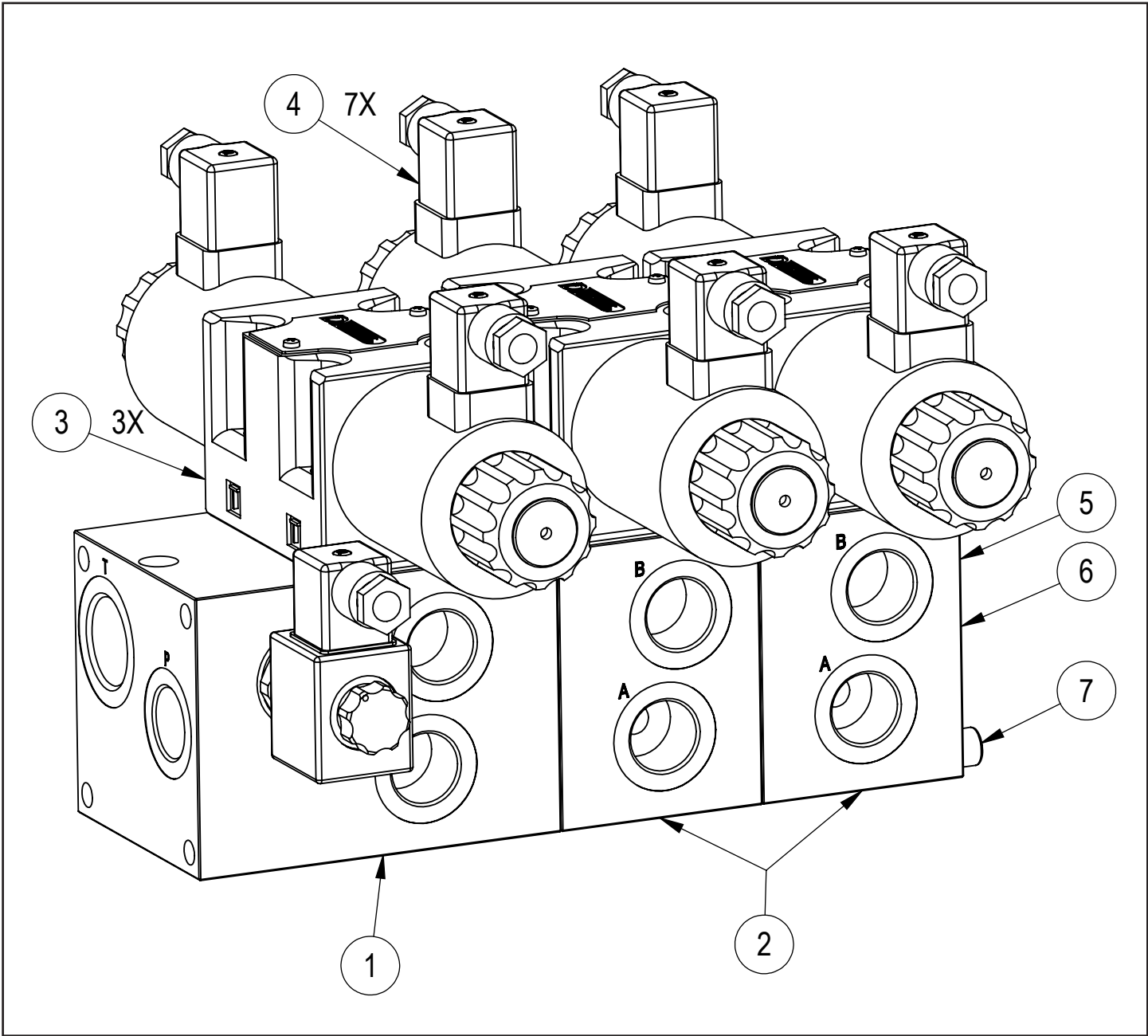
# 51 SERIES

## Modular Cetop 5 subplates for parallel circuits

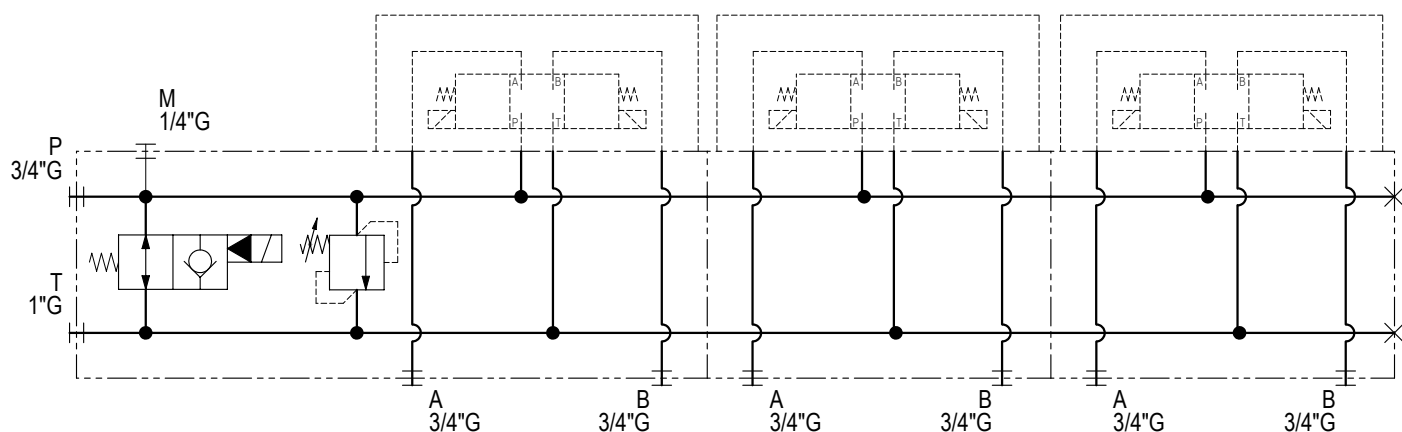
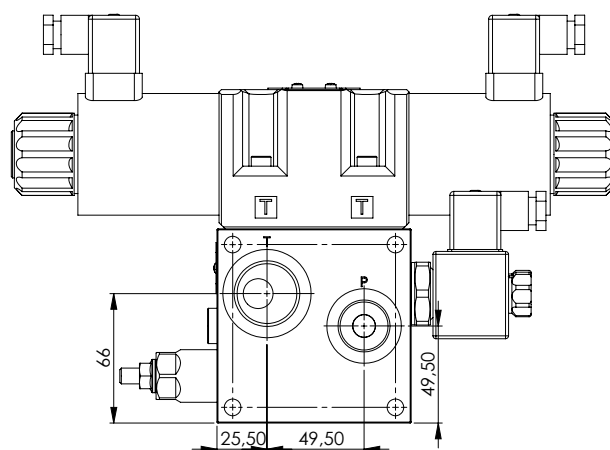
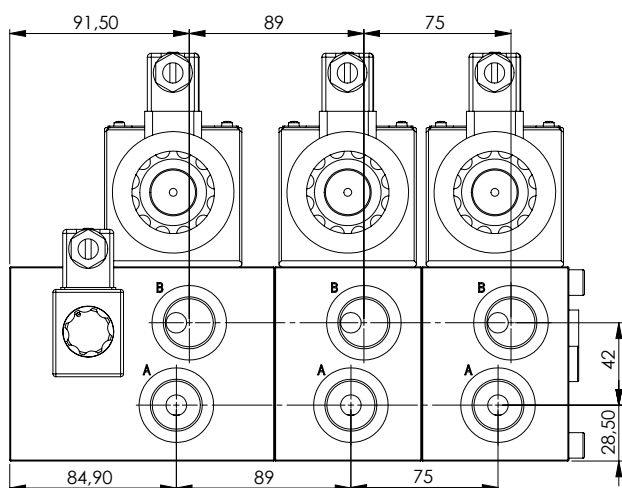
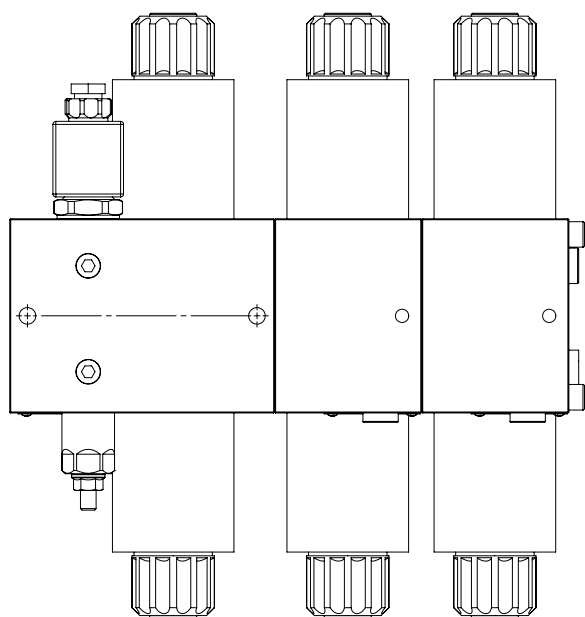


N°	Ordering code	Description	Q.ty
1	H5101A-S2-E0-OC1	CETOP 5 SUBPLATE S51 1 STAT. RV 70-280 BAR EV BYPASS 24V DC DIN 150 LPM AL.	1
2	H5102A	CETOP 5 INT. EL. S51 1 STAT. 3/4" G SIDE A-B PORTS AL.	2
3	CETOP 5 VALVE	CETOP 5 VALVE	3
4	V1389	DIN 43650 ISO 4400 CONNECTOR	7
5	TPCLG3/8	3/8" G PLUG FOR T	1
6	TPCLG1/4	1/4" G PLUG FOR P	1
7	HKVM8X160-4	ASSEMBLING KIT 4 SCREWS M8X160 - S51 2 EL.	1

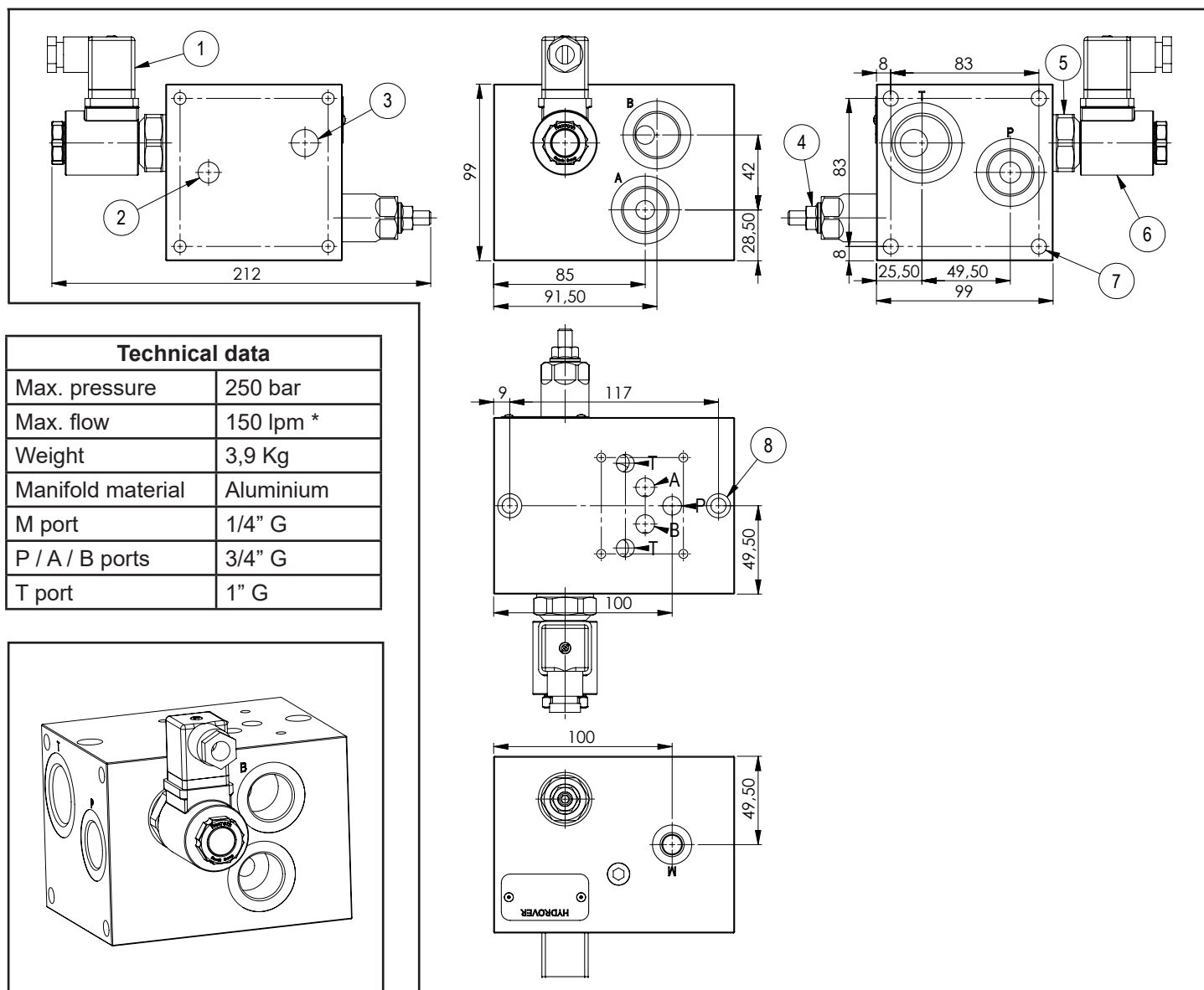
Dimensions in mm



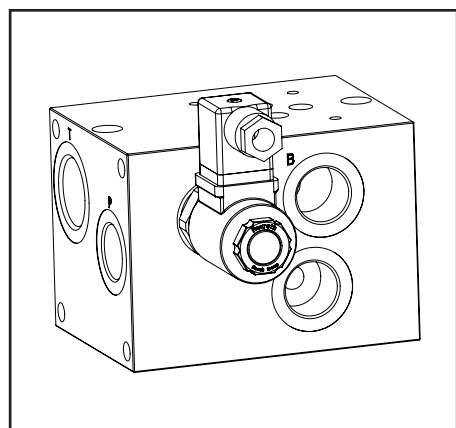




Inlet subplate with 1 station / extensible / relief and bypass valve  
side A-B ports / crossing P-T ports

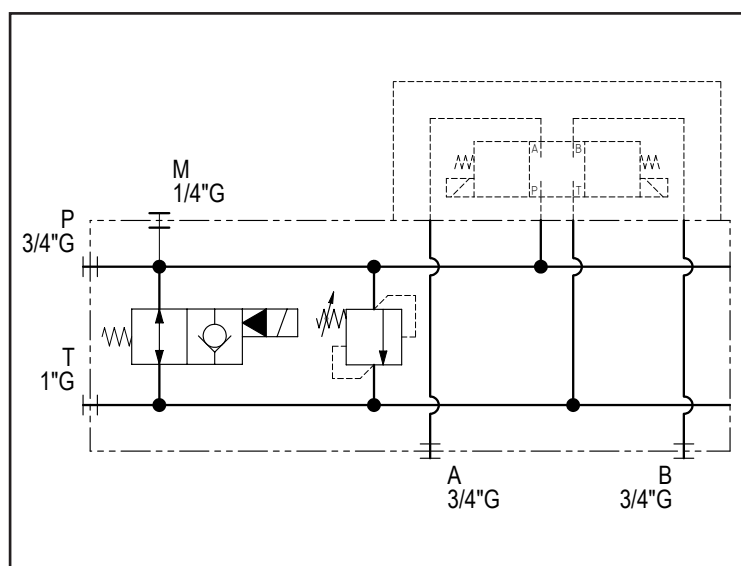
**H5101****Technical data**

Max. pressure	250 bar
Max. flow	150 lpm *
Weight	3,9 Kg
Manifold material	Aluminium
M port	1/4" G
P / A / B ports	3/4" G
T port	1" G



N°	Description	Q.ty
1	Connector DIN 43650 ISO 4400	1
2	Ø 11,5 through hole with 1/4" G thread (P)	1
3	Ø 15 through hole with 3/8" G thread (T)	1
4	Bosch Rexroth relief valve <b>VSPN-10A</b> * depicted with screw adjustment	1
5	Bosch Rexroth solenoid valve <b>OD.15.06.89-Y-000000</b> depicted without manual override *	1
6	Bosch Rexroth coil <b>D36</b> - CLASS H DIN 43650 ISO 4400 *	2
7	M10x15 thread for mounting	4
8	Ø 8,5 through hole for mounting with counterbore	2

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue



Ordering code

H	5	1	0	1	A	-	-	-	-	-	-	-	-	-	-
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Hydrover product

Product series  
51 series - Modular Cetop 5 subplates for parallel circuits

Product ID

Manifold material  
Aluminium

Relief valve adjustment type  
Screw = S  
Knob = K

Relief valve adjustment pressure range  
35-140 bar = 1  
70-280 bar = 2  
140-420 bar = 3  
35-350 bar (adj. knob) = 3

Solenoid valve coil connection \*  
1 = DIN 43650  
ISO 4400

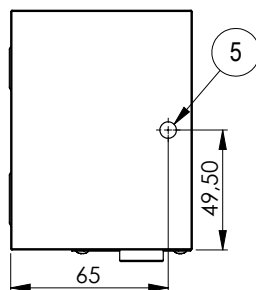
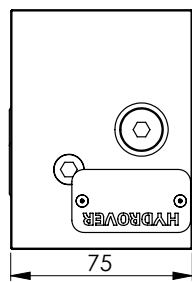
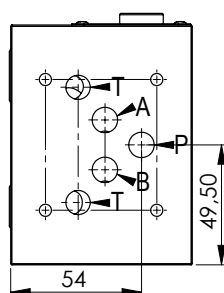
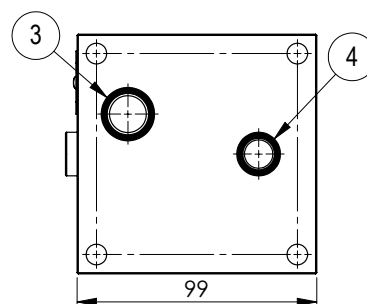
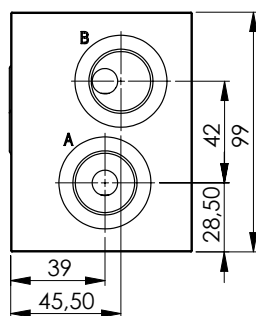
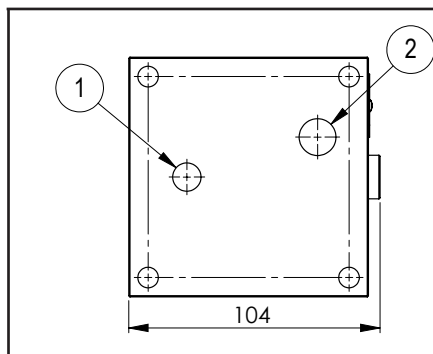
Solenoid valve coil voltage \*  
OB = 12V DC  
OC = 24V DC  
OD = 48V DC  
OU = 110V RAC  
AH = 230V RAC

Solenoid valve manual override \*  
E0 = Without  
EP = Push  
EG = Push and twist

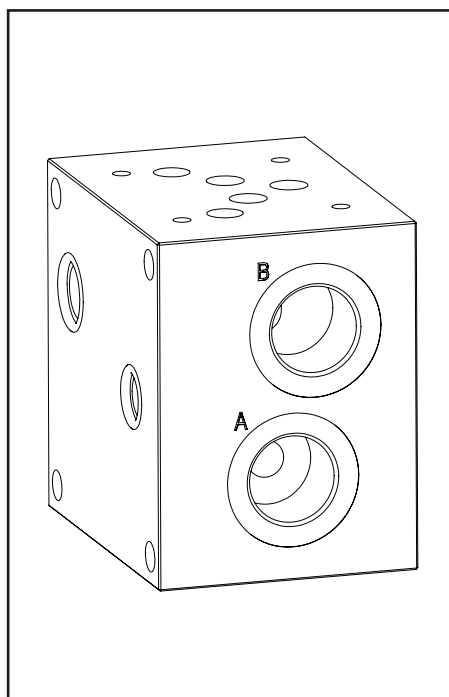
\* Omit if not required. To order the product without the relief cartridge valve, omit the pressure range and adjustment type options: eg. H5101A-E0-OC1.  
The manifold will still be provided with the corresponding cavity.  
To inhibit the relief cartridge valve, replace the related options with TL: eg. H5101A-TL-E0-OC1.  
In the cavity it will be mounted a long plug.

Valve	Cavity	Long plug code
Solenoid valve OD.15.06.89-Y-000000	CA-12A-2N	0489A2005700000
Pressure relief valve VSPN-10A	CA-10A-2N	0489A2008500000

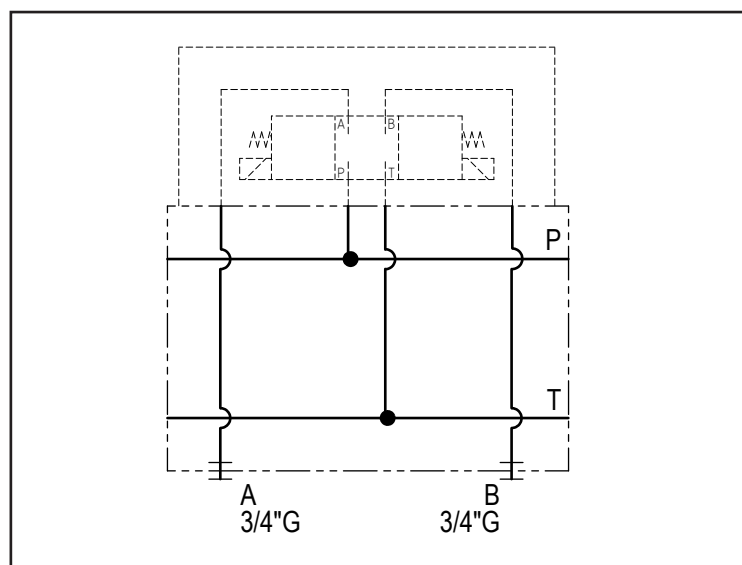
Note: to add stations use the intermediate / closing subplate **H5102**.



Technical data	
Max. pressure	250 bar
Weight	1,8 Kg
Manifold material	Aluminium
A / B ports	3/4" G



N°	Description	Q.ty
1	Ø 11,5 through hole with 1/4" G thread (P)	1
2	Ø 15 through hole with 3/8" G thread (T)	1
3	OR 3068 Ø i. 17,12 cross section 2,62 (T)	1
4	OR 117 Ø i. 13,10 cross section 2,62 (P)	1
5	M8x15 thread for mounting	1



Ordering code

H	5	1	0	2	A
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Hydrover product

Manifold material  
Aluminium

Product series

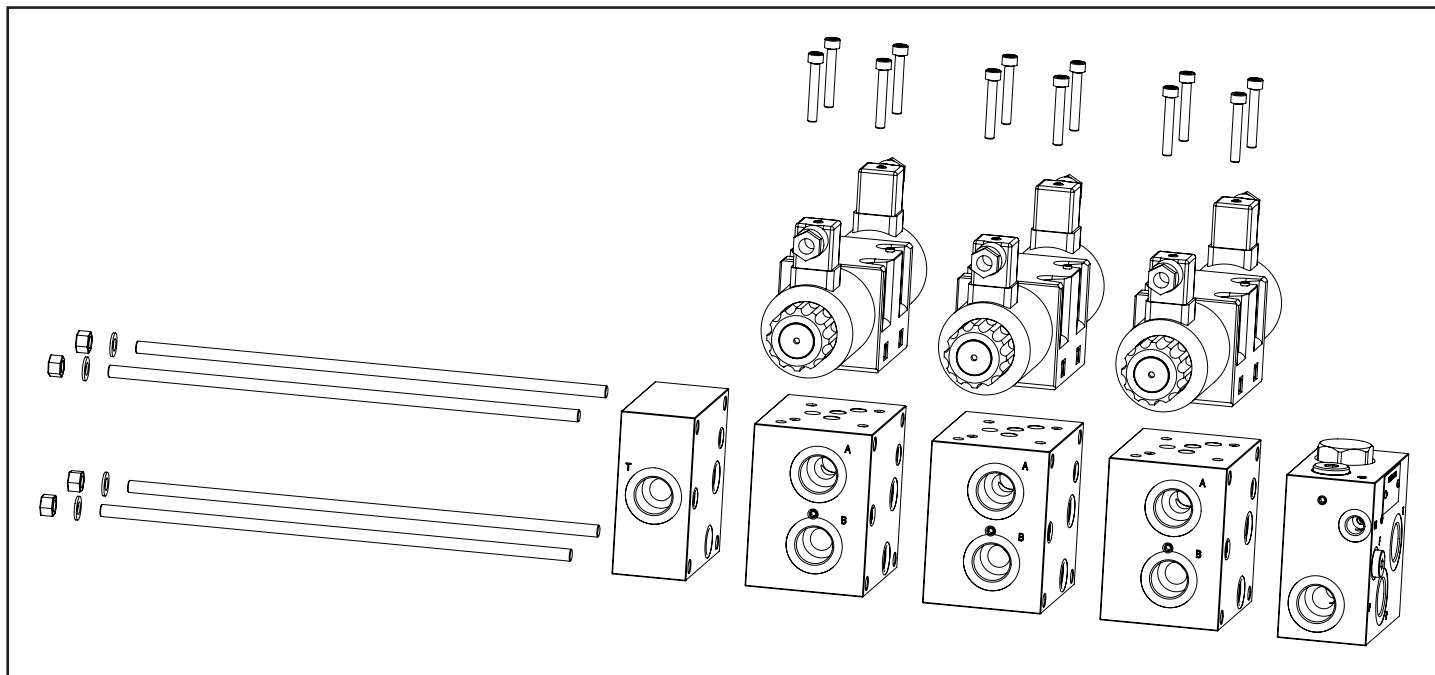
51 series - Modular Cetop 5 subplates for parallel circuits

Product ID



# 52 SERIES

## Load sensing modular Cetop 5 subplates for parallel circuits



52 SERIES products give you the possibility to build Cetop 5 load sensing systems for variable displacement pumps or gear pumps.

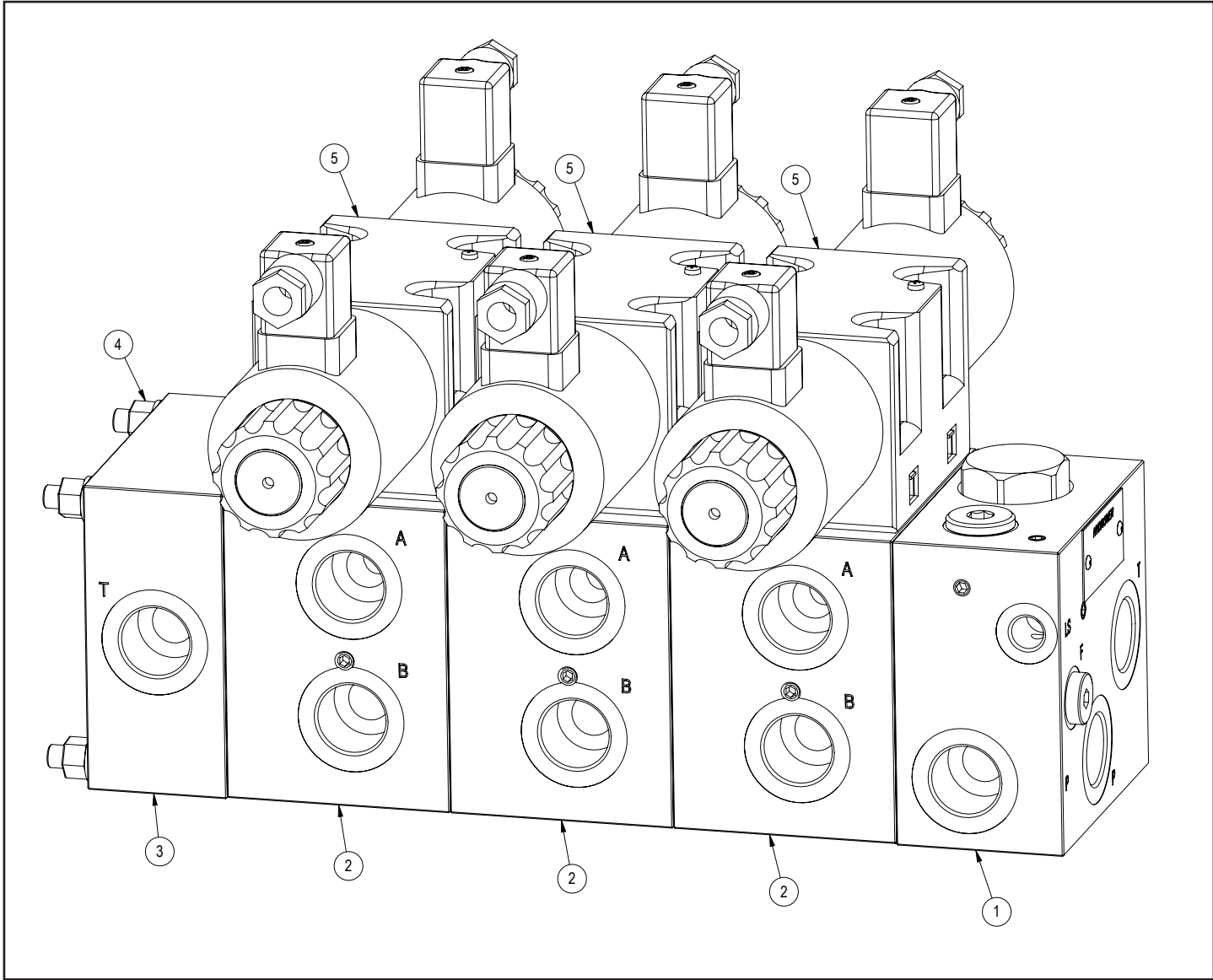
It need Cetop 5 valves with A/B in T in neutral position. So if there is a load to sustain, you will have to add check valves or counterbalance valves. Maximum inlet flow is 150 lpm, maximum operating pressure 250 bar (Aluminium manifolds). We can build on request steel manifolds for a maximum operating pressure of 350 bar.

Mounted group sample H52-G1

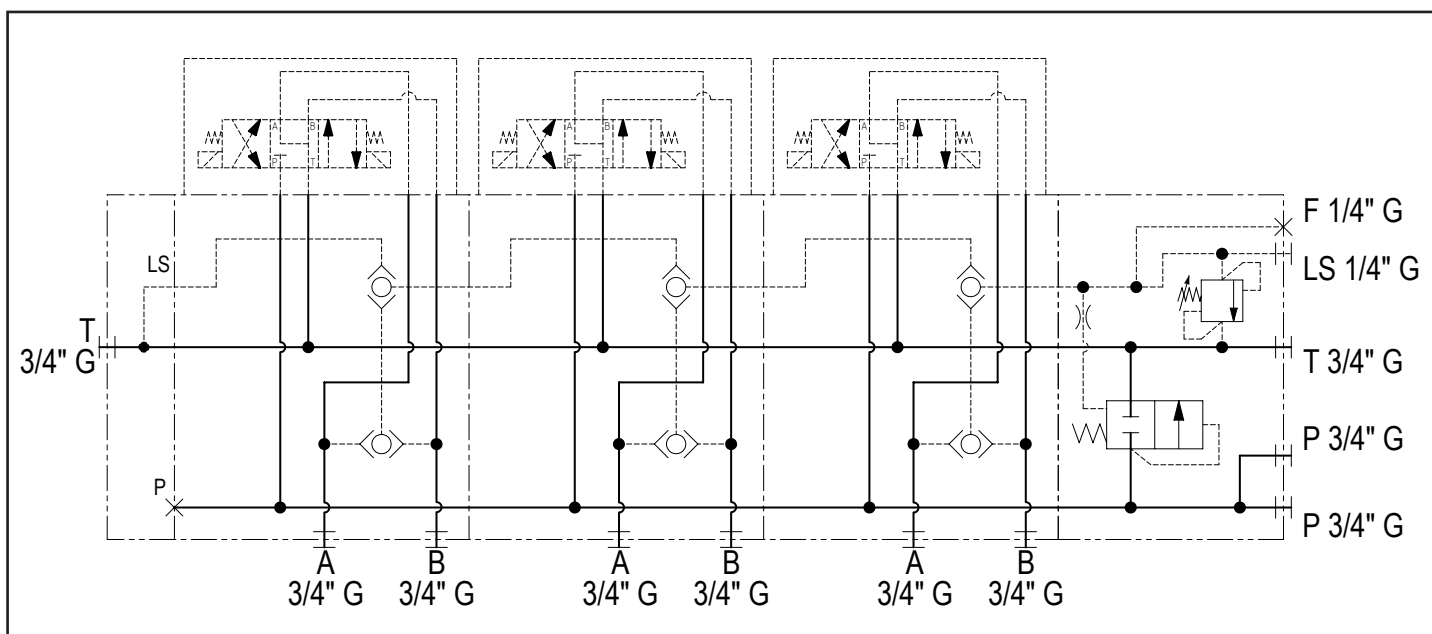
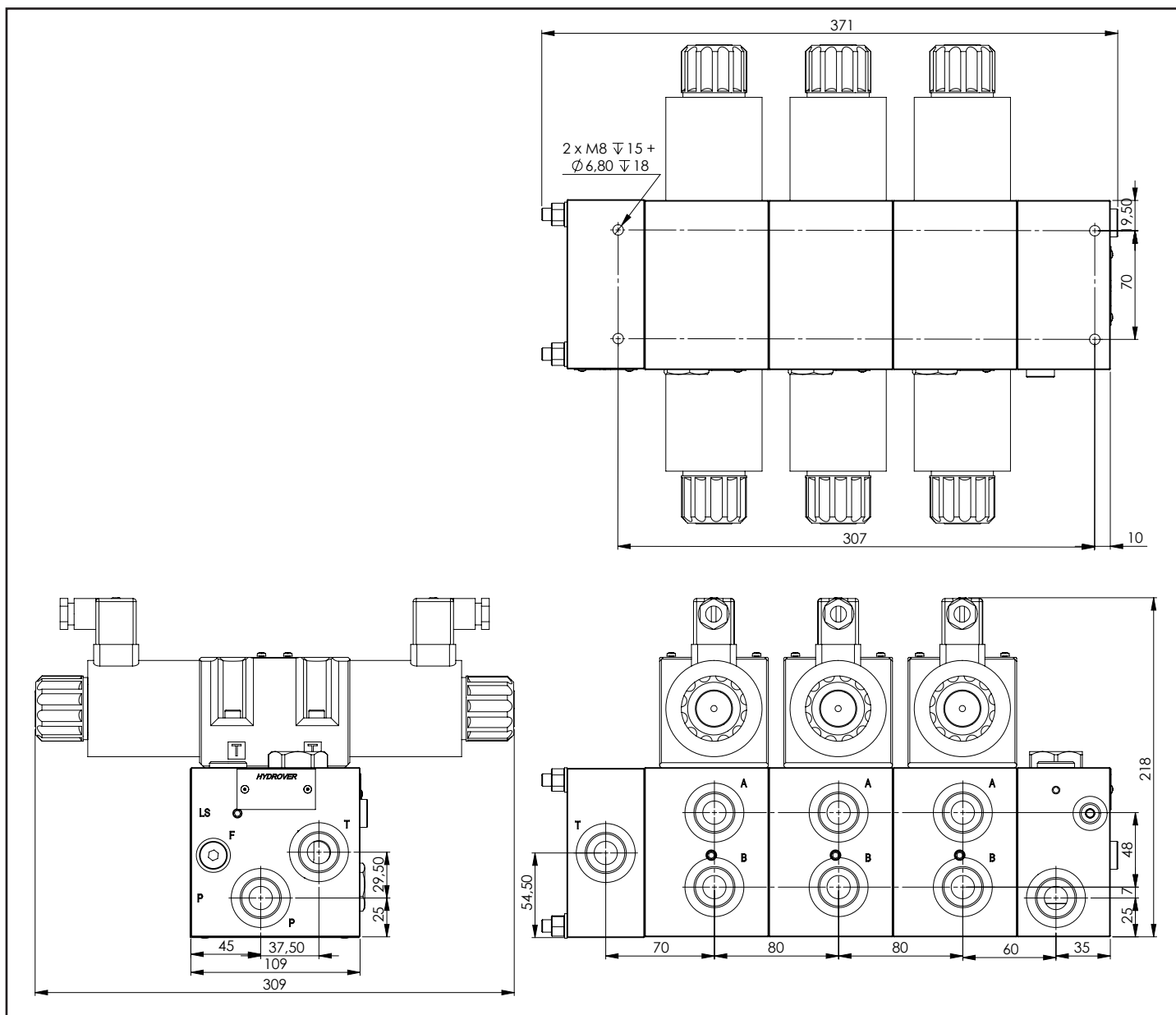
H52-G1

N°	Ordering code	Description	Q.ty
1	H5204A1TL	CETOP5 S52 LS/FS INLET PLATE COMP. 3 WAYS S. 12.5 BAR 3/4G P-T LS 1/4G PORTS RV LONG PLUG 90 LPM AL.	1
2	H5203A-TC	CETOP5 S52 LS/FS INT. EL. 1 STAT. 3/4G SIDE A-B PORTS AL.	3
3	H5202A	CETOP5 S52 LS/FS INT. EL. 1 STAT. 3/4G SIDE A-B PORTS AL.	1
4	HKTM8X318DS-4	ASSEMBLING KIT	1
5	CETOP 5 VALVE	WITH A-B IN T IN NEUTRAL POSITION	3

Dimensions in mm

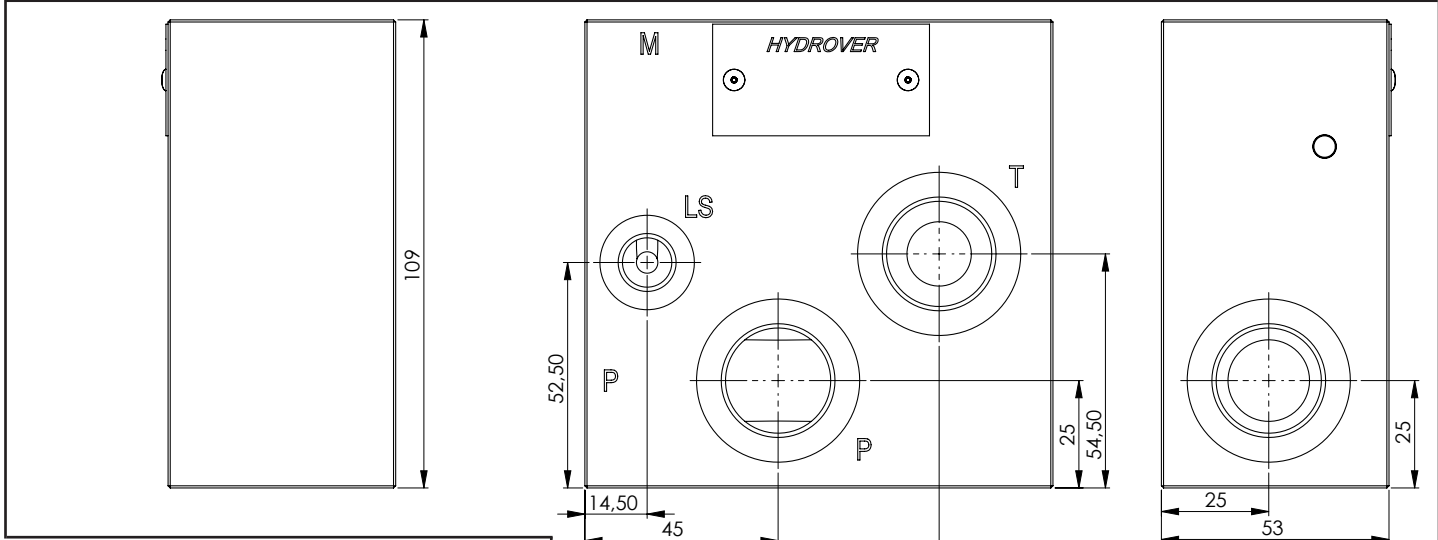




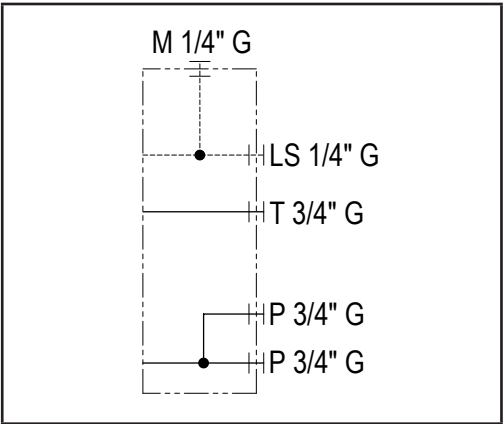
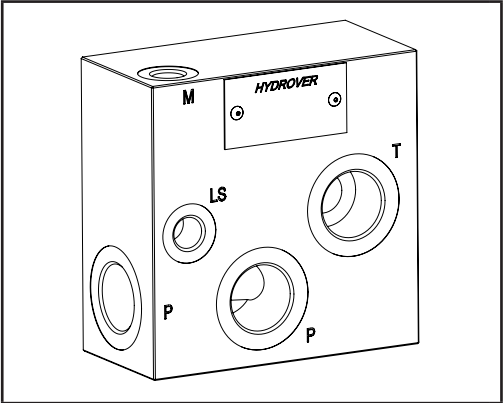


Inlet plate for variable displacement pump

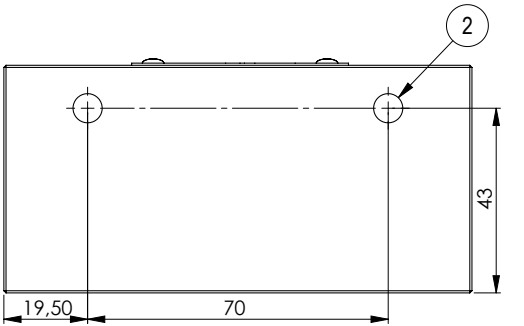
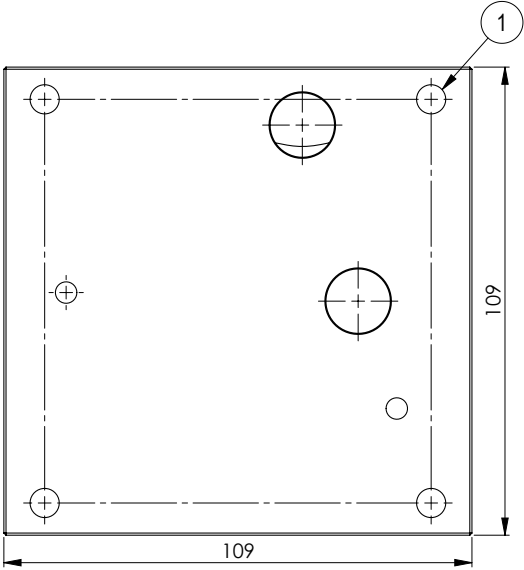
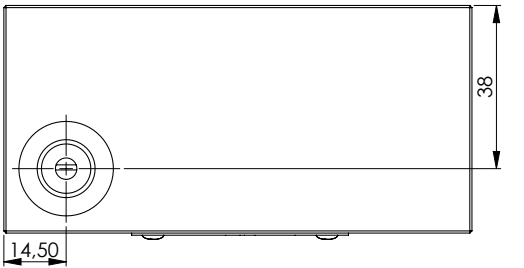
H5205



Technical data	
Max. pressure	250 bar
Weight	1,6 Kg
Manifold material	Aluminium
LS / M ports	1/4" G
P / P / T ports	3/4" G



N°	Description	Q.ty
1	M8x12 for tie rod	4
2	M8x15 thread for mounting	2



Ordering code

H	5	2	0	5	A
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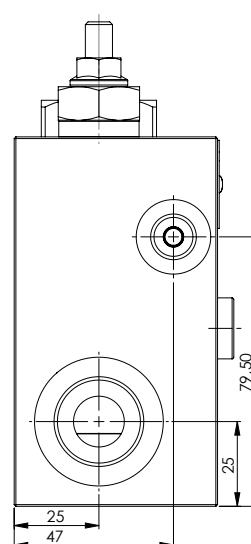
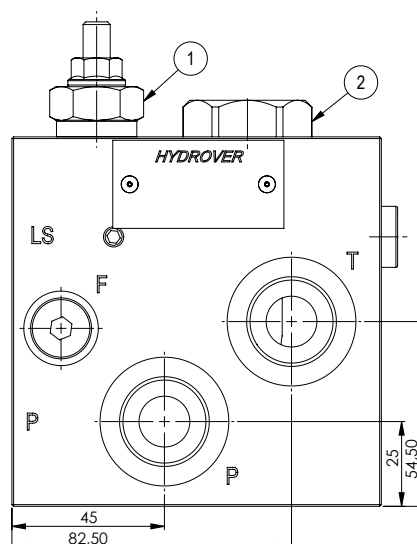
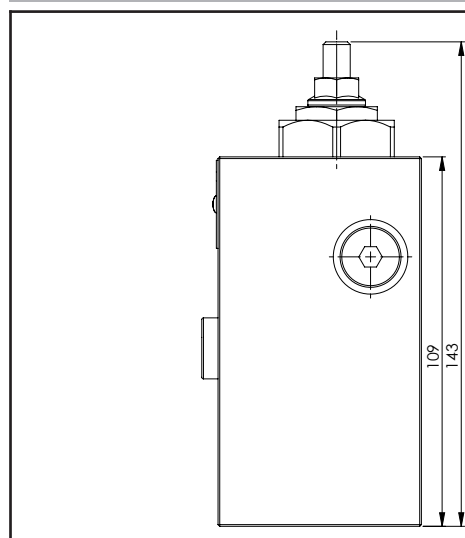
Hydrover product

Manifold material  
Aluminium

Product series  
52 series - Load sensing modular Cetop 5 subplates  
for parallel circuits

Product ID

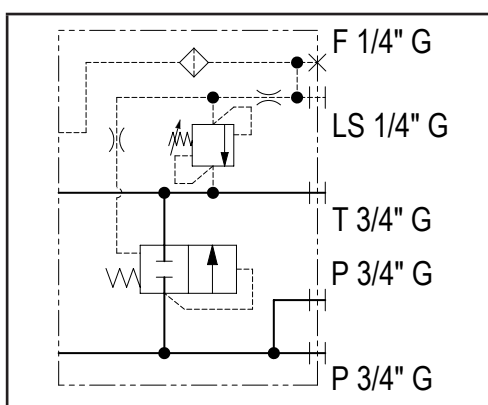
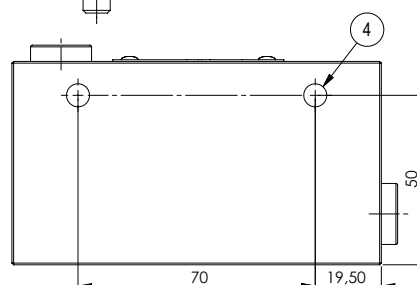
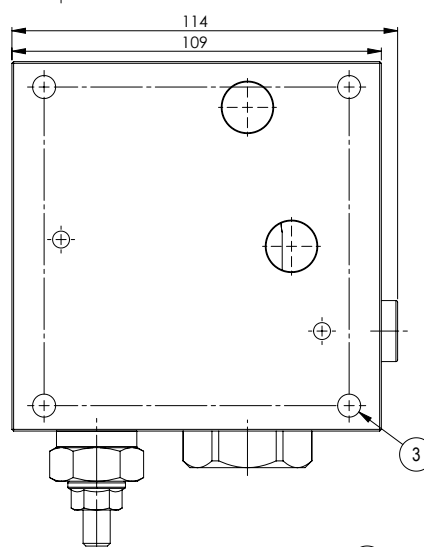
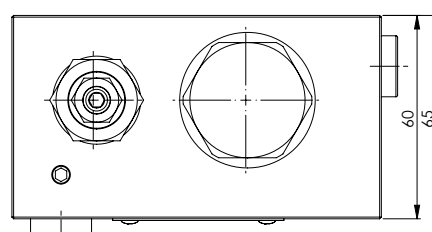
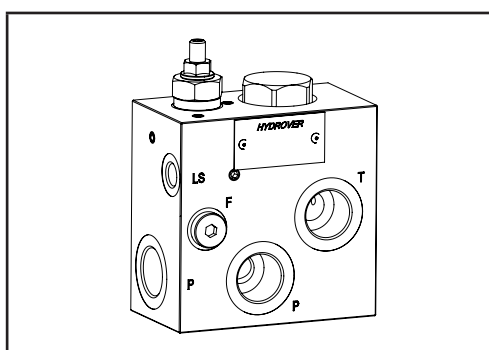
Inlet plate / relief valve / 3 way compensated / for fixed displacement pump

**H5204**

Dimensions in mm

**Technical data**

Max. pressure	250 bar
Max. flow	150 lpm
Weight	2 Kg
Manifold material	Aluminium
LS port	1/4" G
P / P / T ports	3/4" G



N°	Description	Q.ty
1	Bosch Rexroth relief valve <b>VSBN-08A</b> *	1
2	Pressure compensator	1
3	M8x12 for tie rod	4
4	M8x15 thread for mounting	2

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

Ordering code

H	5	2	0	4	A	-	-	-
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Hydrover product

Product series

52 series - Load sensing modular Cetop 5 subplates for parallel circuits

Product ID

Manifold material

Aluminium

Relief valve adjustment pressure range \*

0 =	10-70 bar
1 =	35-140 bar
2 =	105-210 bar
3 =	175-350 bar
3 =	35-350 bar (knob reg.)

Relief valve adjustment type \*

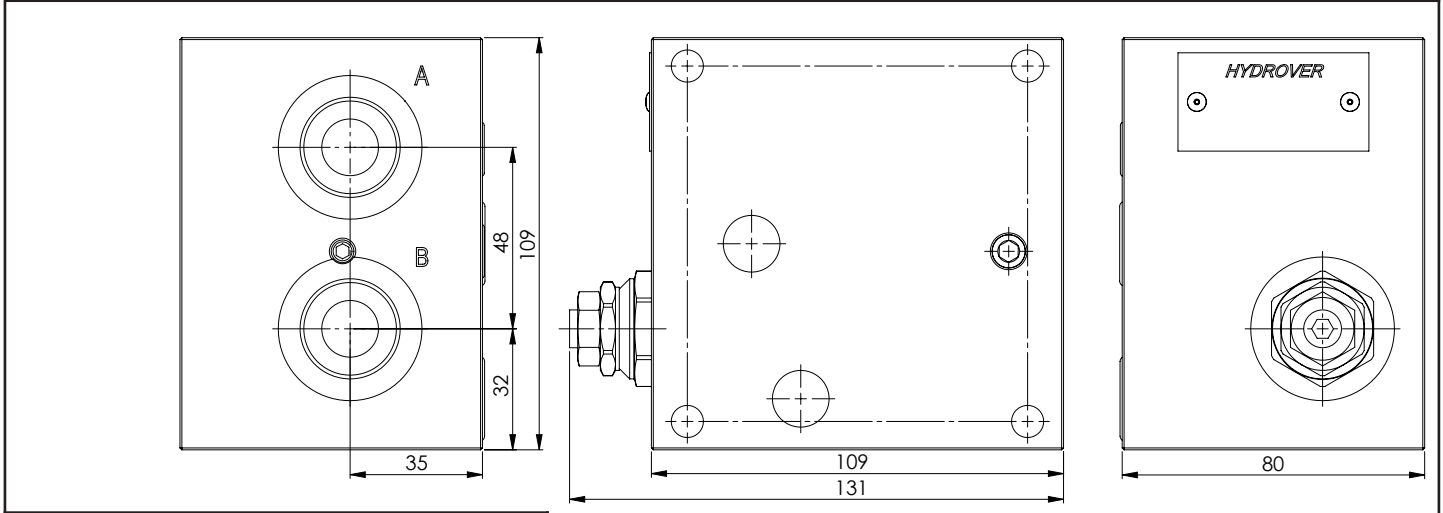
S =	Screw
K =	Knob

Compensator spring

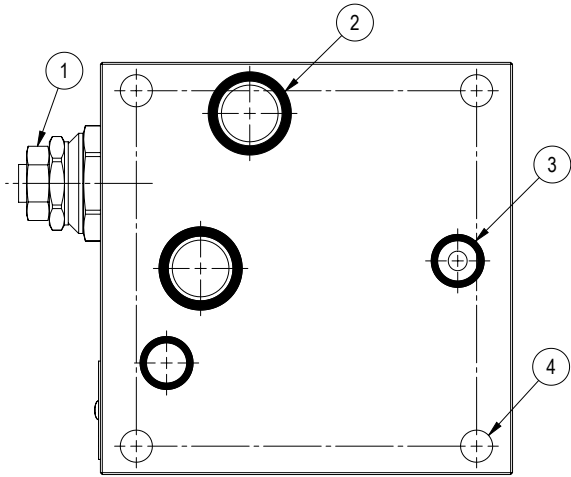
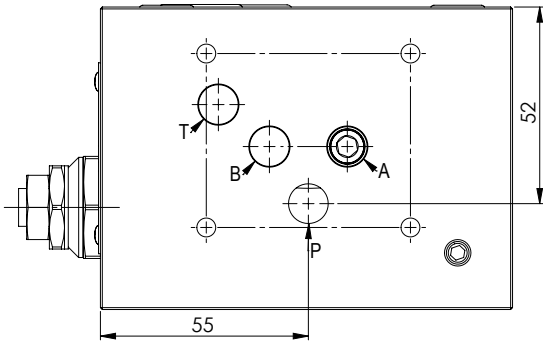
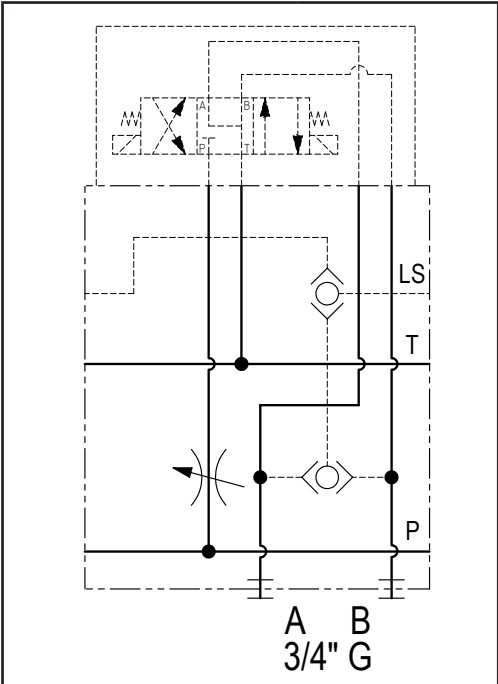
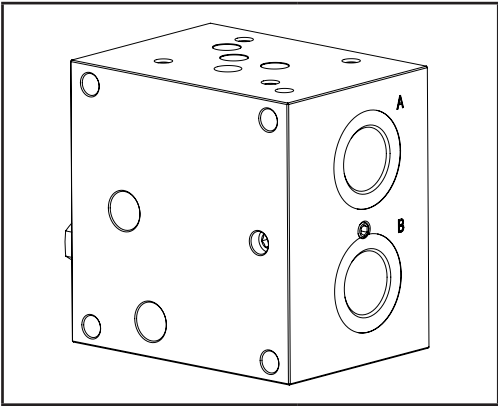
6 =	5.5 bar (standard)
1 =	12.5 bar
2 =	19 bar

\* Omit if not required. To order the product without the pressure relief cartridge valve, omit the adjustment type and pressure range options: eg H5204A6.  
The manifold will still be provided with the corresponding cavity.  
To inhibit the relief valve, replace the related options with TL: eg H5204A6TL.  
In the cavity it will be mounted a long plug.

Valve	Cavity	Long plug code
Pressure relief valve VSBN-08A	CA-08A-2N	0489A2005600000



Technical data	
Max. pressure	250 bar
Regulated max. flow	70 lpm *
Weight	2,5 Kg
Manifold material	Aluminium
A / B ports	3/4" G



N°	Description	Q.ty
1	Bosch Rexroth bidirectional flow restrictor <b>OD.21.01-X-36 *</b> depicted with screw adjustment	1
2	OR 3068 i. Ø 17,12 cross section 2,62 (P-T)	2
3	OR 2043 i. Ø 10,82 cross section 1,78(LS-FS)	2
4	Ø 8,5 through hole for tie rod	4

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

Ordering code

H	5	2	0	3	A	-	
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Hydrover product

Product series

52 series - Load sensing modular Cetop 5 subplates for parallel circuits

Product ID

Manifold material

Aluminium

Restrictor adjustment type \*

SQ =

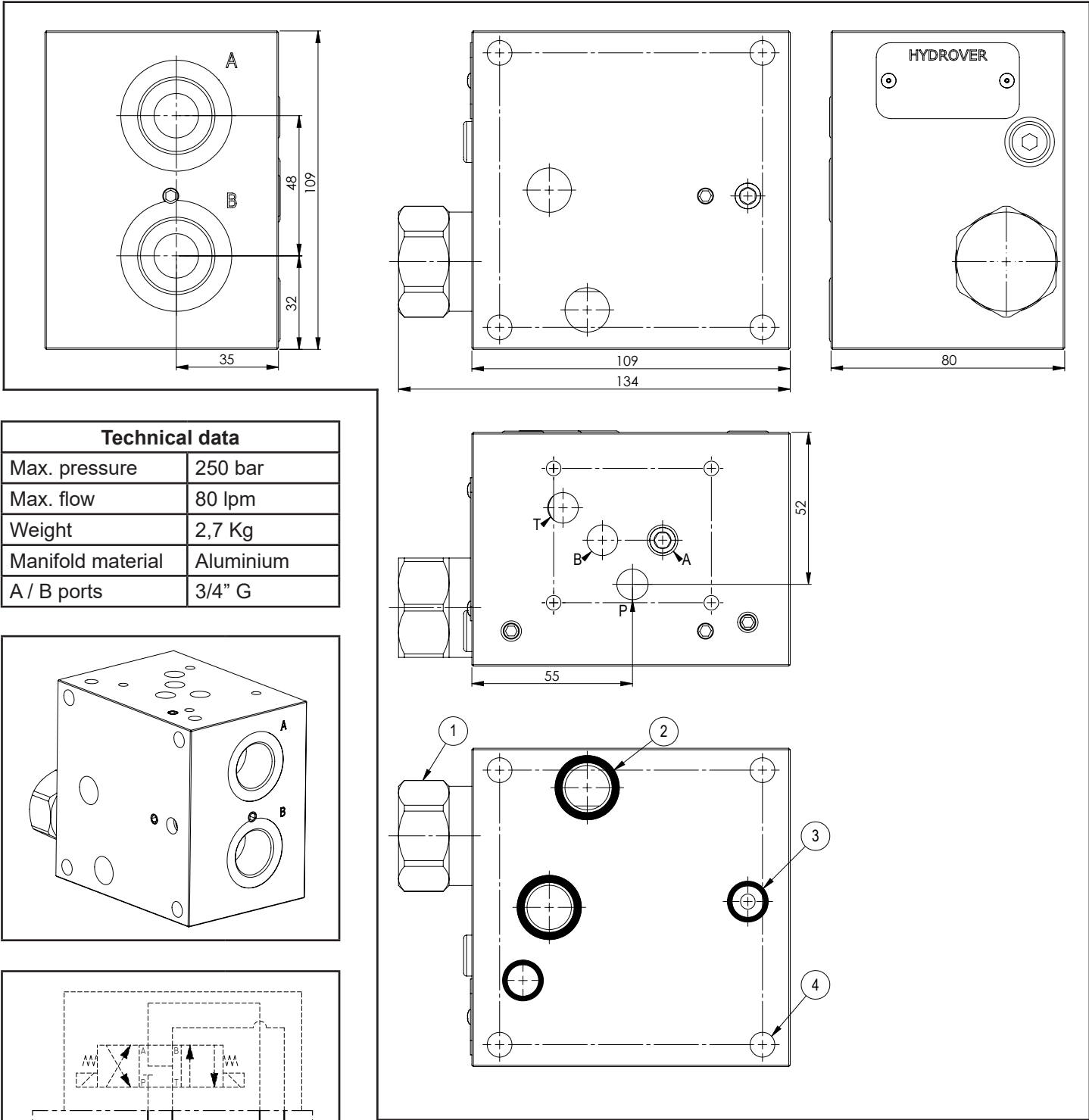
Screw

KQ =

Knob

\* Omit if not required. To order the product without the flow restrictor cartridge valve, omit restrictor adjustment type option: H5203A. The manifold will still be provided with the corresponding cavity.  
To inhibit the flow restrictor cartridge valve, replace the related option with TC: eg H5203A-TC.  
In the cavity it will be mounted a short plug.

Valve	Cavity	Short plug code
Bidirectional flow restrictor OD.21.01-X-36	CA-10A-2N	207505-7/8UNF



Technical data	
Max. pressure	250 bar
Max. flow	80 lpm
Weight	2,7 Kg
Manifold material	Aluminium
A / B ports	3/4" G

N°	Description	Q.ty
1	2 way compensator 5,5 bar spring	1
2	OR 3068 i. Ø 17,12 cross section 2,62 (P-T)	2
3	OR 2043 i. Ø 10,82 cross section 1,78(LS-FS)	2
4	Ø 8,5 through hole for tie rod	4



Ordering code

H	5	2	1	3	A
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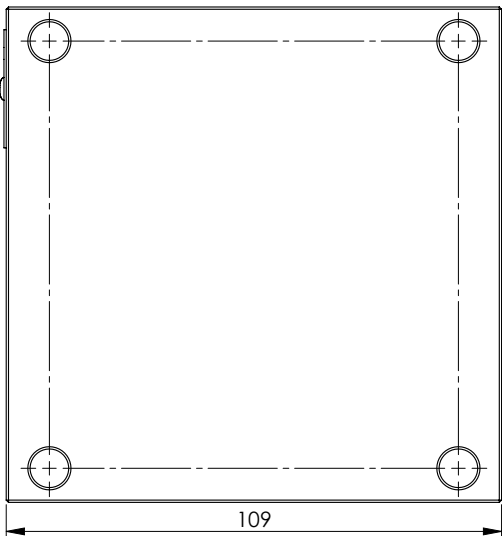
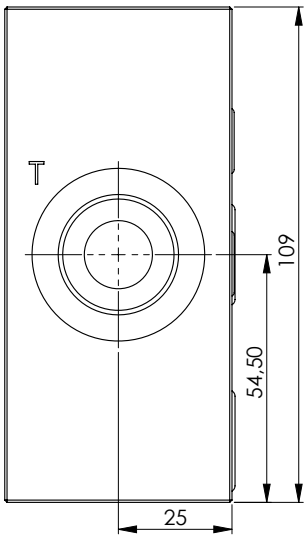
Hydrover product

Manifold material  
Aluminium

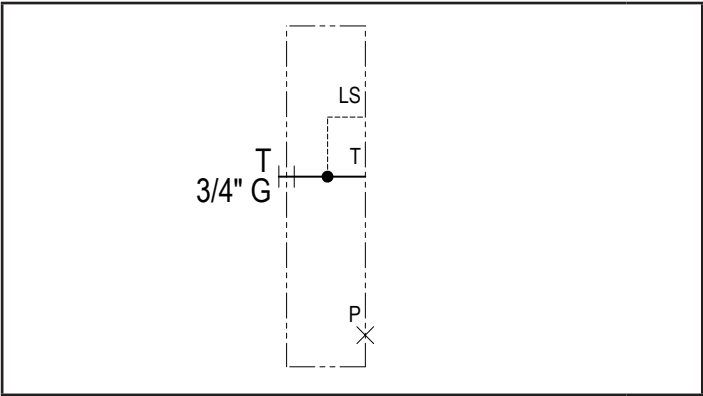
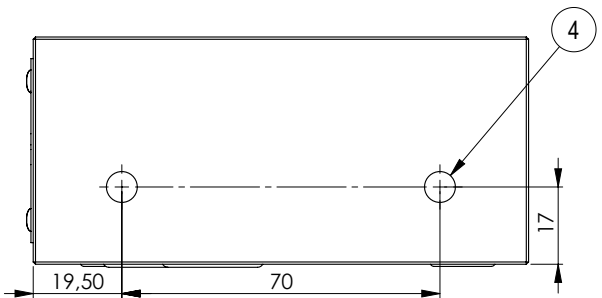
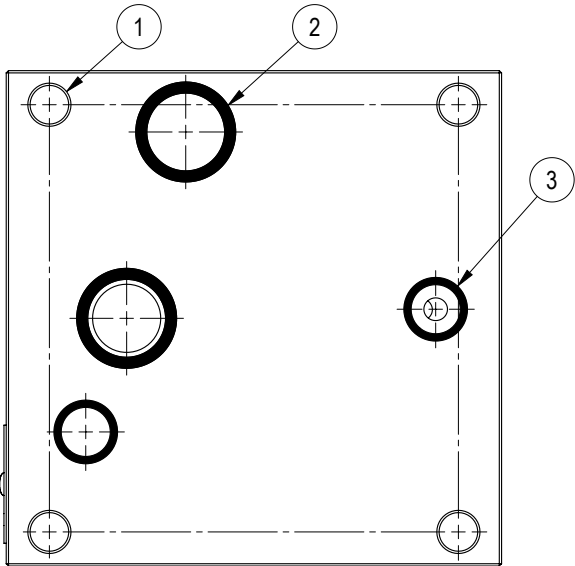
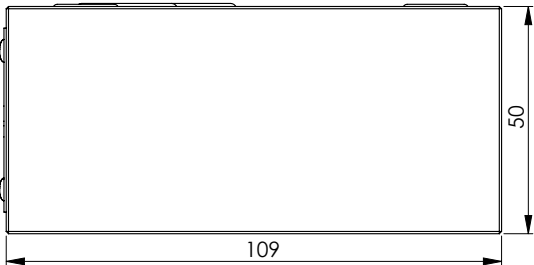
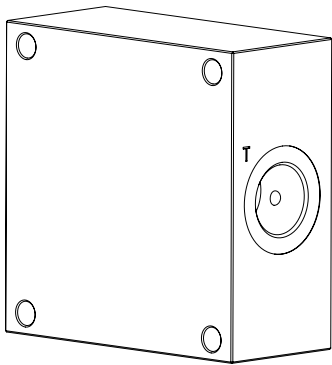
Product series  
52 series - Load sensing modular Cetop 5 subplates  
for parallel circuits

Product ID

Dimensions in mm



Technical data	
Max. pressure	250 bar
Weight	1,6 Kg
Manifold material	Aluminium
T port	3/4" G



N°	Description	Q.ty
1	Ø 8,5 through hole for tie rod	4
2	OR 3068 i. Ø 17,12 cross section 2.62 (P-T)	2
3	OR 2043 i. Ø 10,82 cross section 1,78(LS-FS)	2
5	M8x15 thread for mounting	2

Ordering code

H	5	2	0	2	A
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Hydrover product

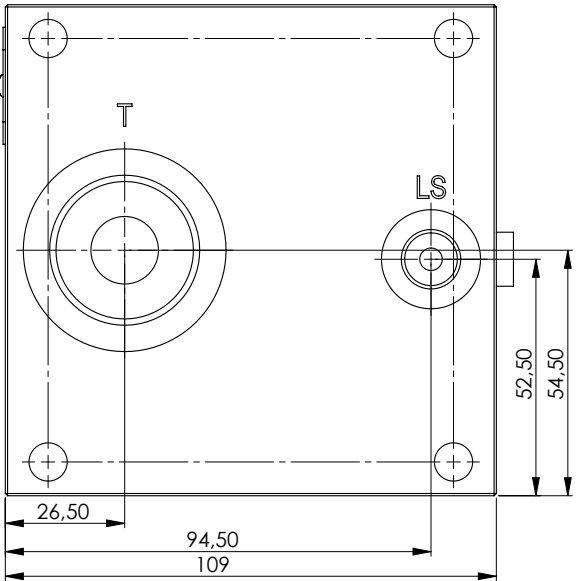
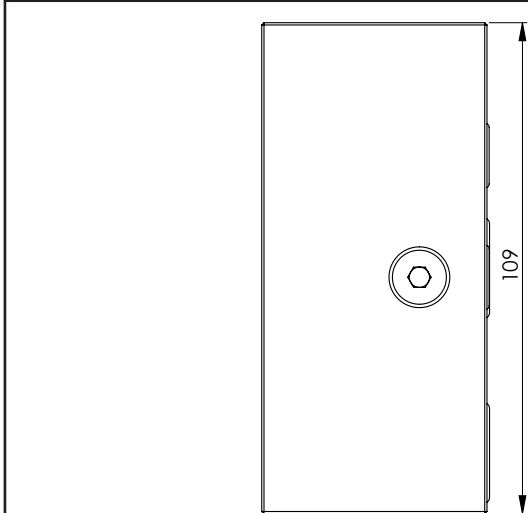
Manifold material  
Aluminium

Product series  
52 series - Load sensing modular Cetop 5 subplates  
for parallel circuits

Product ID

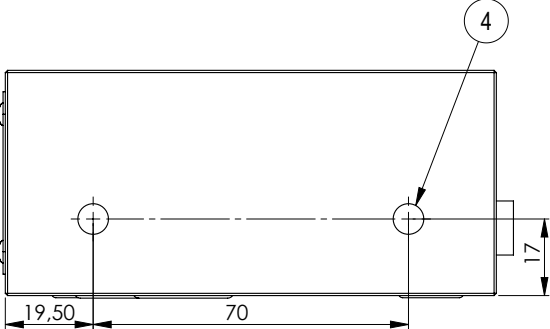
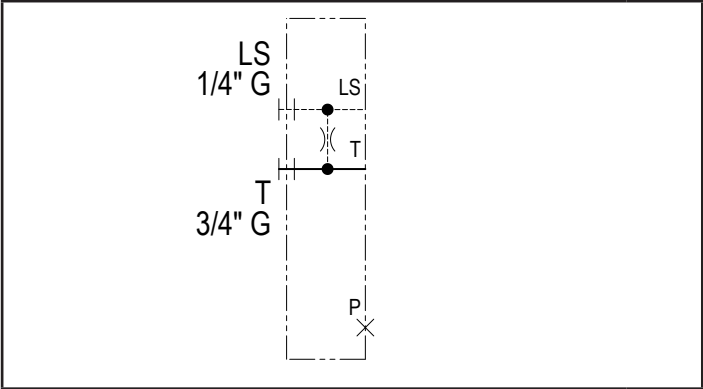
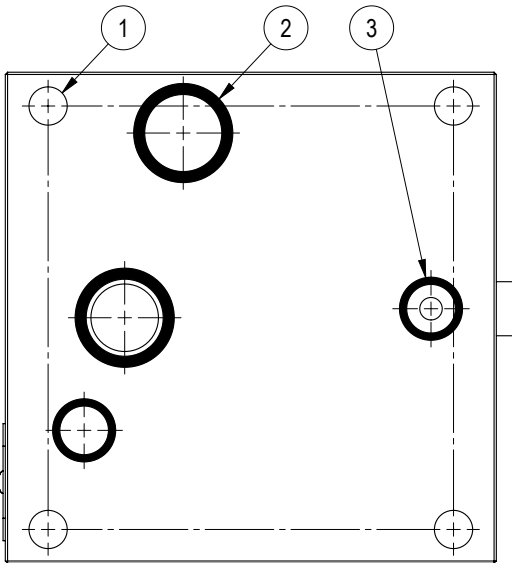
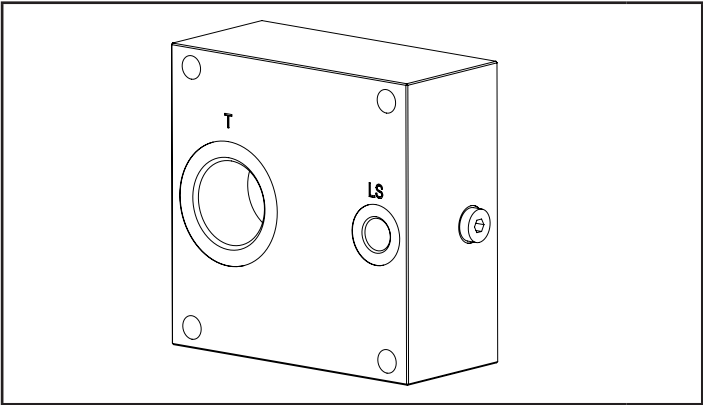
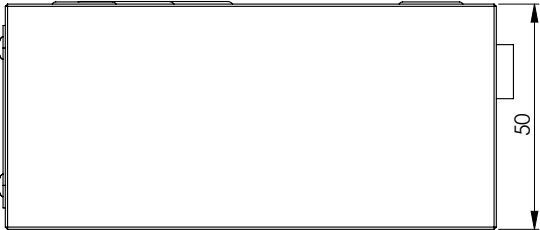
Note: this closing plate can be used like a blank closing plate. For that just screw a 3/4" G plug in the T port.

Closing plate / front 3/4" G T and LS 1/4" G ports H5209



Dimensions in mm

Technical data	
Max. pressure	250 bar
Weight	1,6 Kg
Manifold material	Aluminium
LS port	1/4" G
T port	3/4" G



N°	Description	Q.ty
1	Ø 8,5 through hole for tie rod	4
2	OR 3068 i. Ø 17,12 cross section 2,62 (P-T)	2
3	OR 2043 i. Ø 10,82 cross section 1,78(LS-FS)	2
5	M8x15 thread for mounting	2

Ordering code

H	5	2	0	9	A
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Hydrover product

Manifold material  
Aluminium

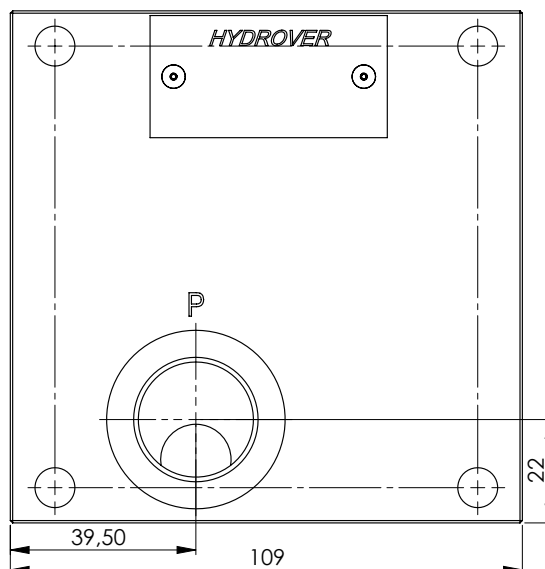
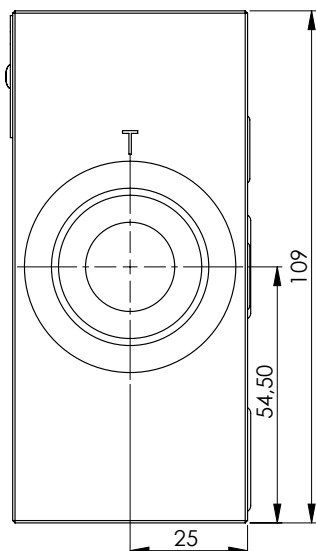
Product series  
52 series - Load sensing modular Cetop 5 subplates  
for parallel circuits

Product ID

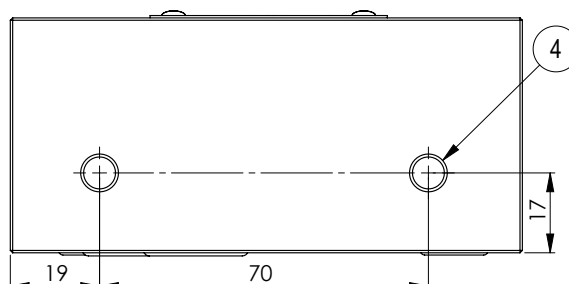
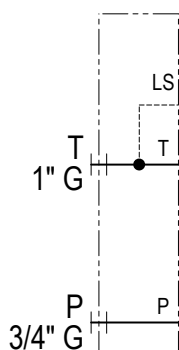
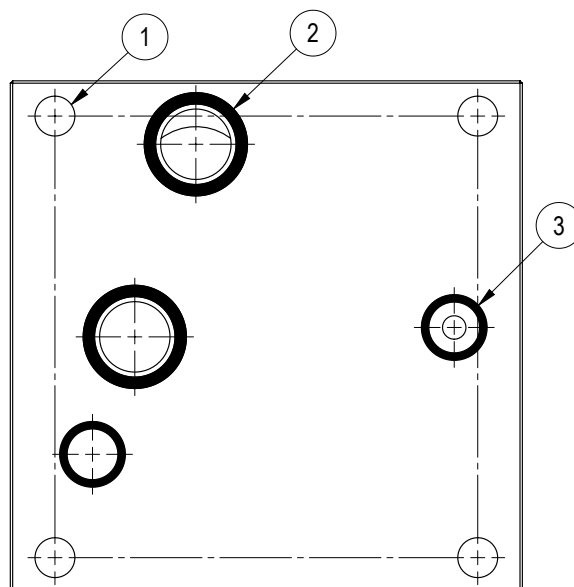
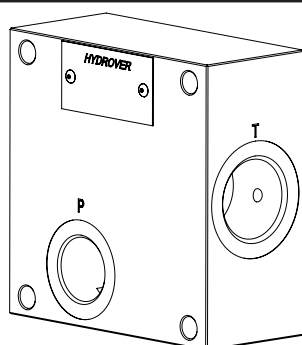
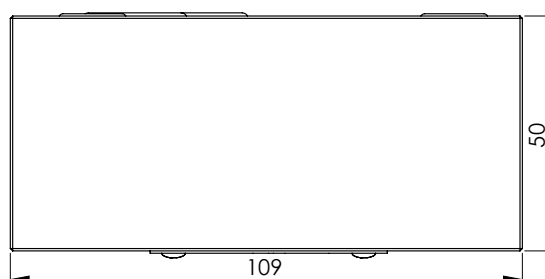
Note: this closing plate can be used like a blank closing plate. For that just screw a 3/4" G plug in the T port.

Closing plate / 3/4" G P port / 1" G T port **H5207**

Dimensions in mm

**Technical data**

Max. pressure	250 bar
Weight	1,5 Kg
Manifold material	Aluminium
P port	3/4" G
T port	1" G



N°	Description	Q.ty
1	Ø 8,5 through hole for tie rod	4
2	OR 3068 i. Ø 17.12 cross section 2.62 (P-T)	2
3	OR 2043 i. Ø 10.82 cross section 1.78 (LS-FS)	2
4	M8x15 thread for mounting	2

Ordering code

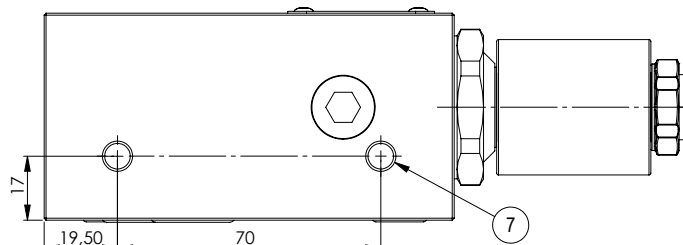
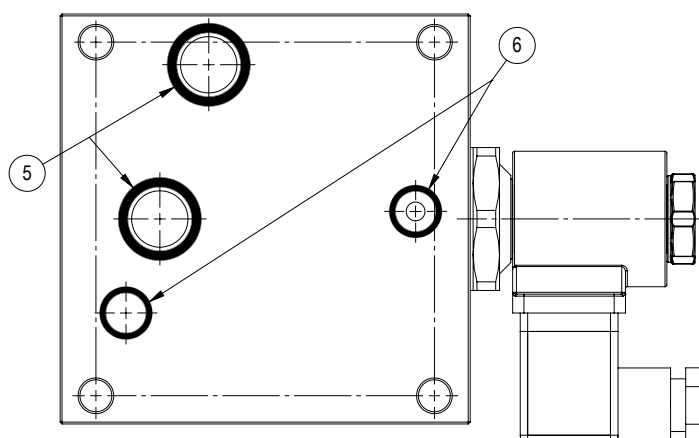
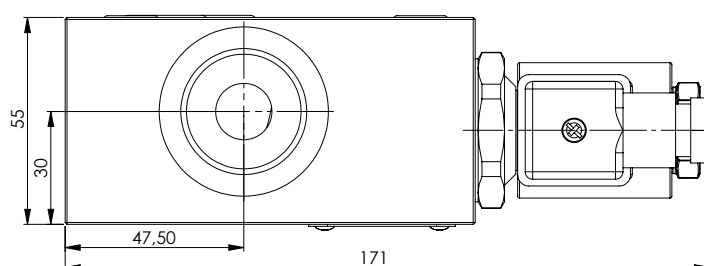
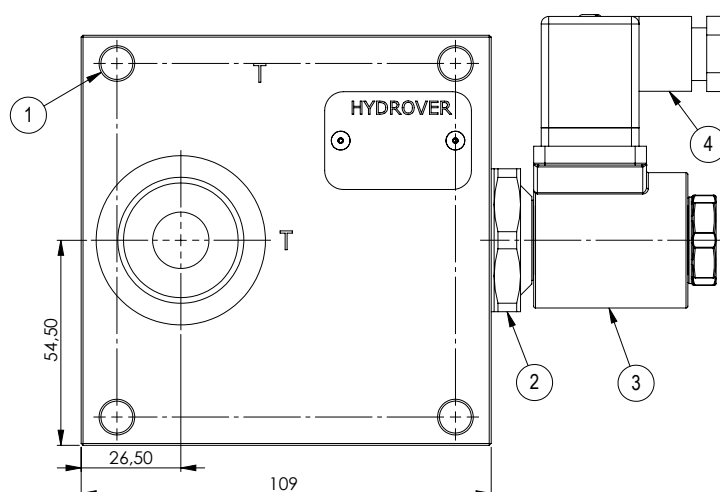
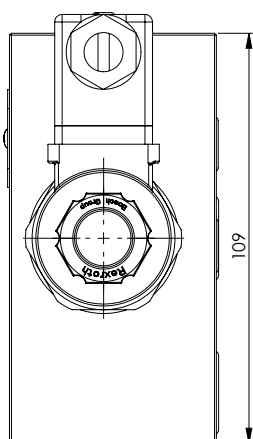
H	5	2	0	7	A
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Hydrover product

Manifold material  
Aluminium

Product series  
52 series - Load sensing modular Cetop 5 subplates  
for parallel circuits

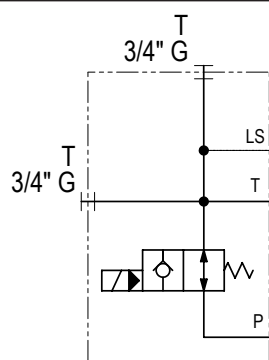
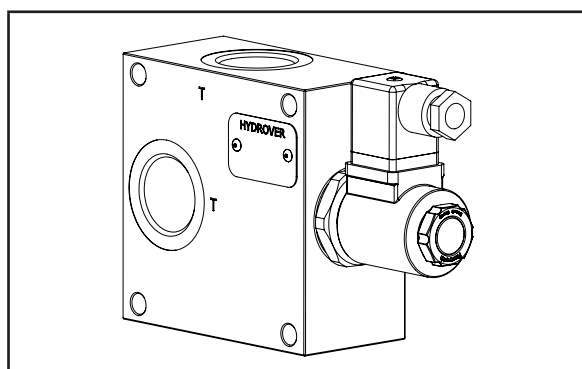
Product ID

Closing plate / unloading valve / two 3/4" G T ports **H5208**

Dimensions in mm

**Technical data**

Max. pressure	250 bar
Max. flow	120 lpm *
Weight	2 Kg
Manifold material	Aluminium
Ports T/T	3/4" G



N°	Description	Q.ty
1	Ø 8,5 through hole for tie rod	4
2	Bosch Rexroth solenoid valve <b>VEI-16-021-NA OD.15.06.21-Y-000000</b> depicted without manual override *	1
3	Bosch Rexroth coil <b>D36</b> - CLASS H DIN 43650 ISO 4400 *	1
4	Connector DIN 43650 ISO 4400	1
5	OR 3068 i. Ø 17.12 cross section 2.62 (P-T)	2
6	OR 2043 i. Ø 10.82 cross section 1,78(LS-FS)	2
7	M8x15 thread for mounting	2

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue



Ordering code

H	5	2	0	8	A	-	-	-	-	-	-
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Hydrover product

Product series  
52 series - Load sensing modular  
Cetop 5 subplates  
for parallel circuits

Product ID

Manifold material  
Aluminium

Bypass  
solenoid valve  
coil connection \*  
1 = DIN 43650 ISO 4400

Solenoid valve  
coil voltage \*  
OB = 12V DC  
OC = 24V DC  
OD = 48V DC  
OU = 110V RAC  
AH = 230V RAC

Bypass solenoid valve  
manual override \*  
E0 = Without  
EP = Push  
EG = Push and twist

Ordering code for assemblies with 1 intermediate subplate

	H	K	V	M	8	X	1	4	0	-	4	
Hydrover product												Screw quantity
												4
Product type												Screw length
Kit												140
Kit type												
Screw kit												
Thread												
M8												

Dimensions in mm

Ordering code for assemblies from 2 to 9 intermediate subplates

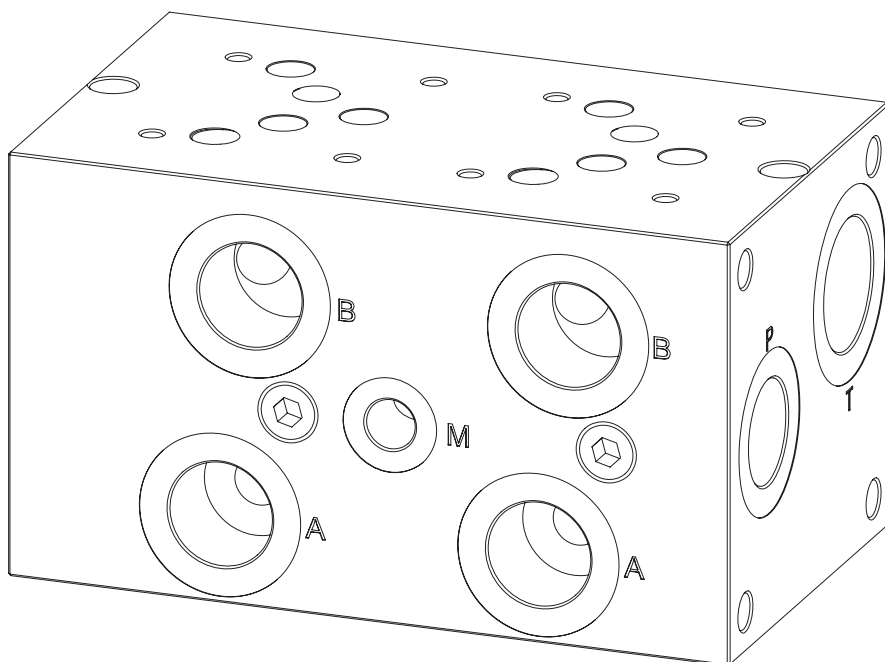
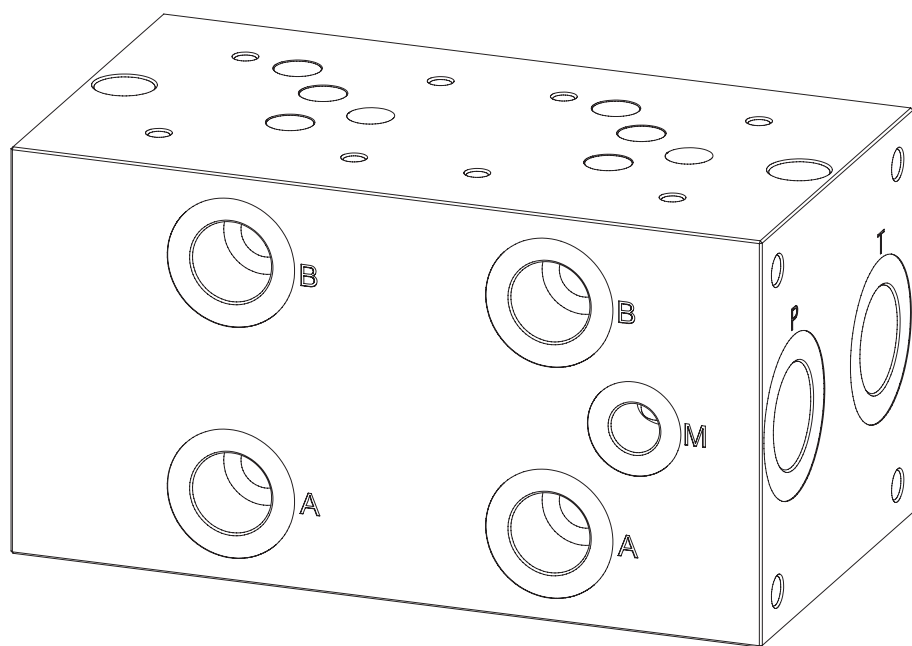
	H	K	T	M	8	X	_	_	_	D	S	-	4	
Hydrover product														Tie rods quantity
														4
Product type														Nut type
Kit														Standard
Kit type														
Tie rods														
Thread														
M8														

**Tie rod length for intermediate subplates quantity**

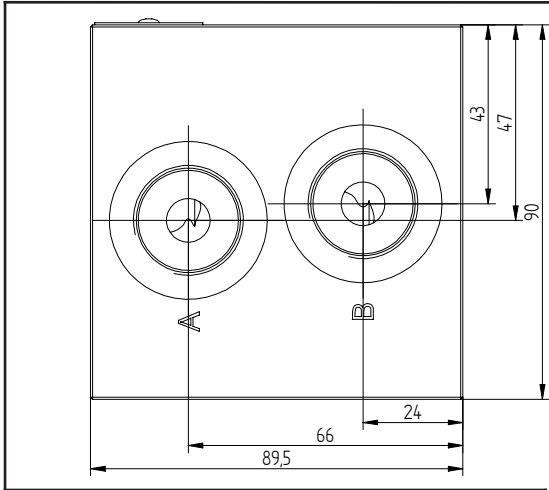
238 =	2 subplates
318 =	3 subplates
395 =	4 subplates
475 =	5 subplates
555 =	6 subplates
635 =	7 subplates
715 =	8 subplates
795 =	9 subplates

# 56 SERIES

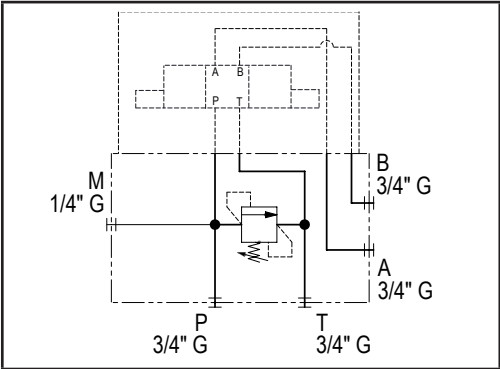
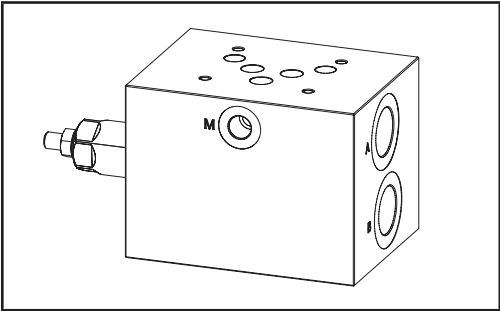
## Cetop 5 subplates



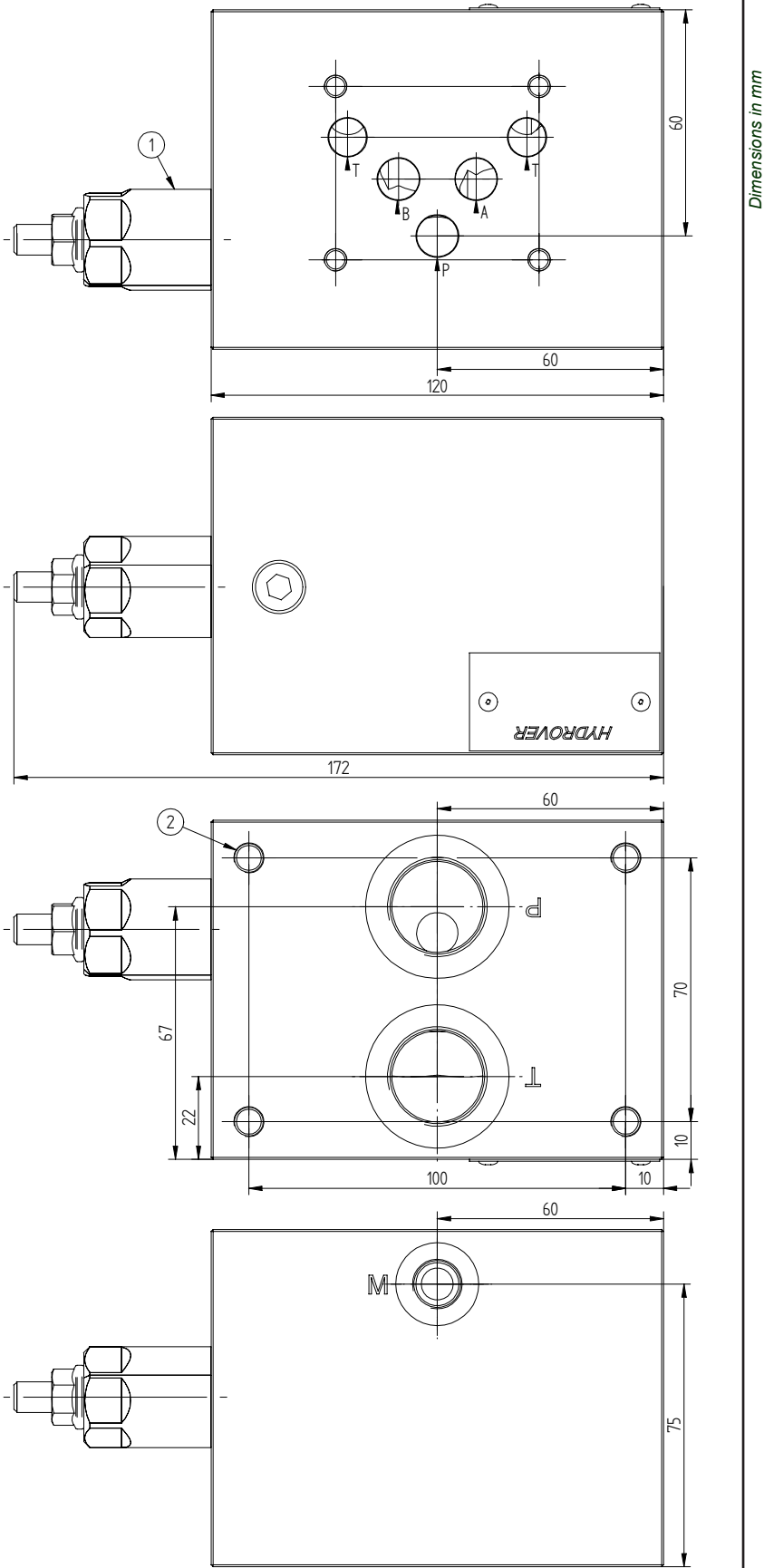
Cetop 5 single station subplate / relief valve / back P-T ports / side A-B ports **H5603**



Technical data	
Max. pressure	250 bar
Max. flow	120 lpm *
Weight	2,7 Kg
Manifold material	Aluminium
M port	1/4" G
P / T / A / B ports	3/4" G



N°	Description	Q.ty
1	Bosch Rexroth relief valve <b>VSPN-10A</b> depicted with screw adjustment	1
2	M8x15 thread for mounting	4



Dimensions in mm

H5603

Ordering code

H	5	6	0	3	A	-	-	-
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Hydrover product

Product series  
56 series - Cetop 5 subplates

Product ID

Relief valve  
adjustment pressure range \*

1 =	35-140 bar
2 =	70-280 bar
3 =	140-420 bar
3 =	35-350 bar (adj. knob)

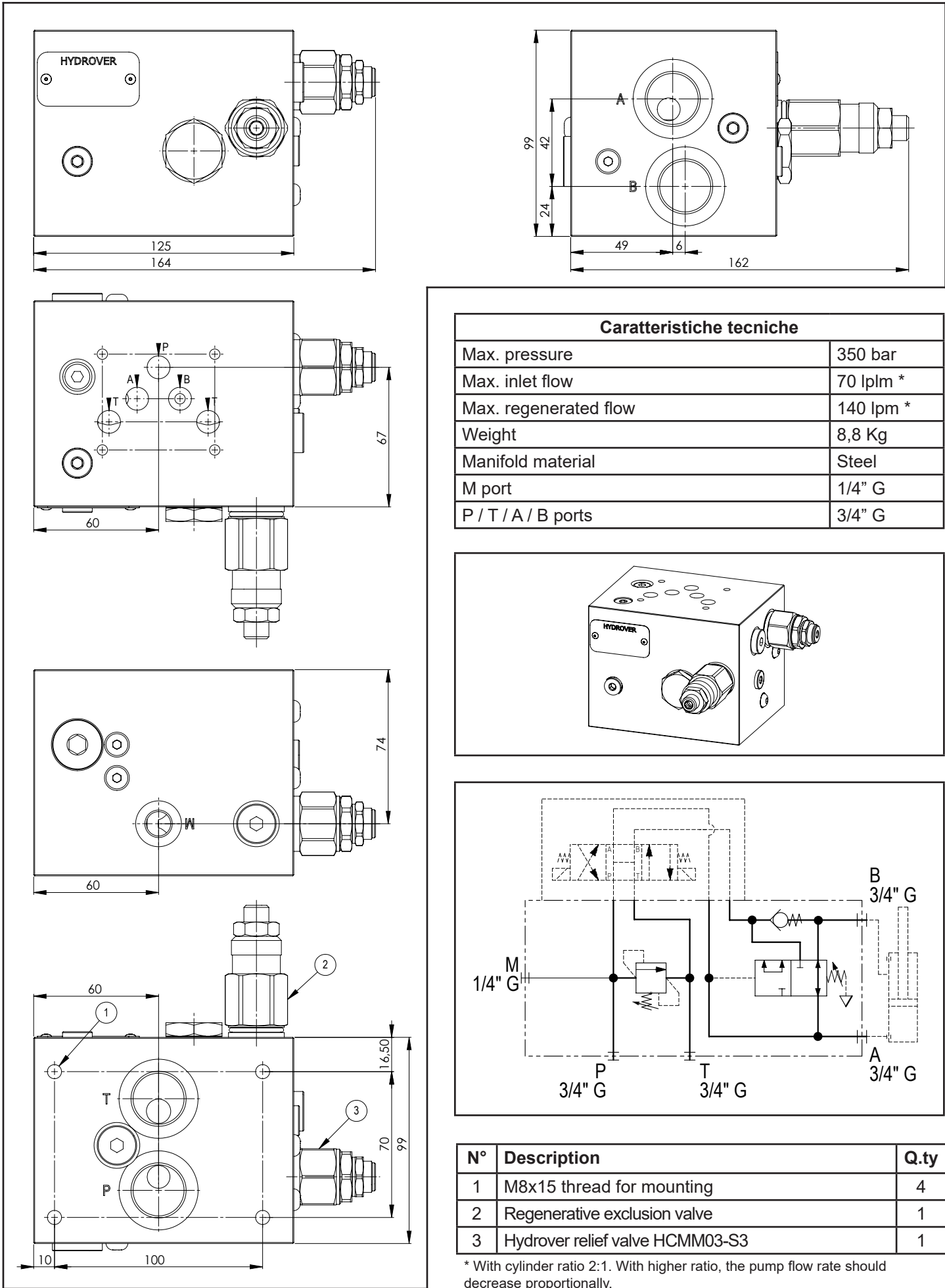
Relief valve  
adjustment type \*

S =	Screw
K =	Knob

Manifold material  
Aluminium

\* Omit if not required. To order the product without the relief cartridge valve, omit the pressure range and adjustment type options: H5603A.  
The manifold will still be provided with the corresponding cavity.  
To inhibit the relief valve, replace the related options with TL: H5203A-TL.  
In the cavity it will be mounted a long plug.

Valve	Cavity	Long plug code
Pressure relief valve VSPN-10A	CA-10A-2N	0489A2008500000



Dimensions in mm

H5609

Ordering code

H	5	6	0	9	S	-	S	3	-	-	-
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Hydrover product

Product series  
56 series - Cetop 5 subplates

Product ID

Manifold material  
Steel

Relief valve adjustment type  
Screw = S

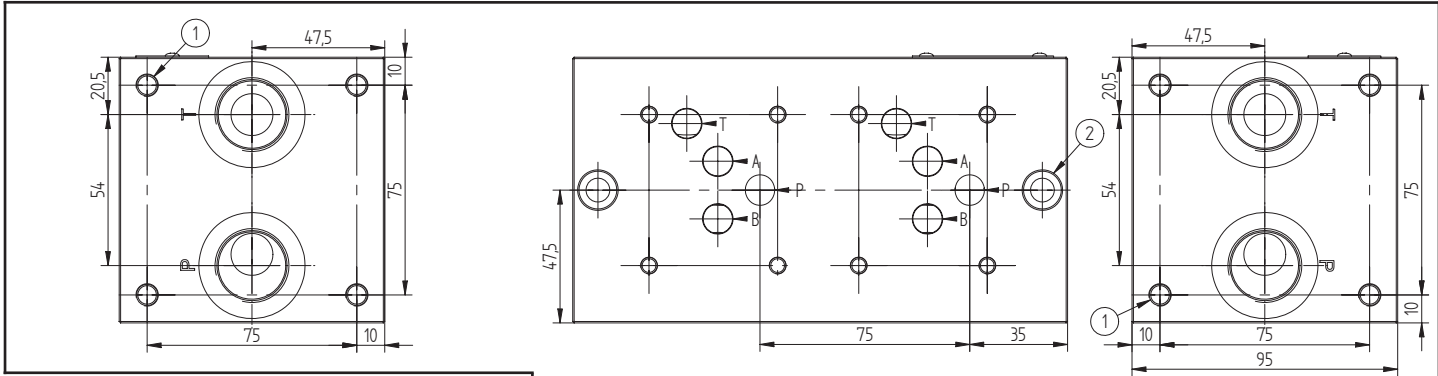
Regenerative exclusion valve  
adjustment pressure range  
2 = 14-70 bar  
4 = 70-210 bar

Regenerative exclusion valve  
adjustment type  
S = Screw

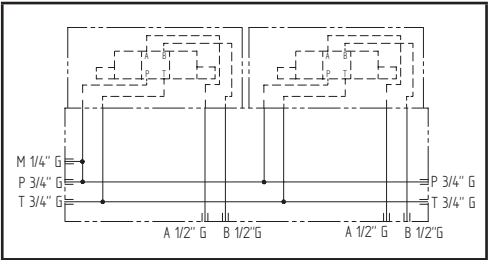
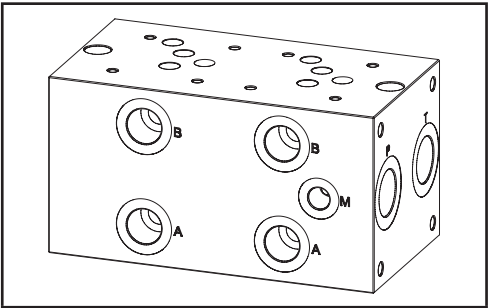
Relief valve  
adjustment pressure range  
3 = 50-350 bar

Cetop 5 subplate from 1 to 6 stations  
3/4" G crossing P-T ports / 1/2" G side A-B ports

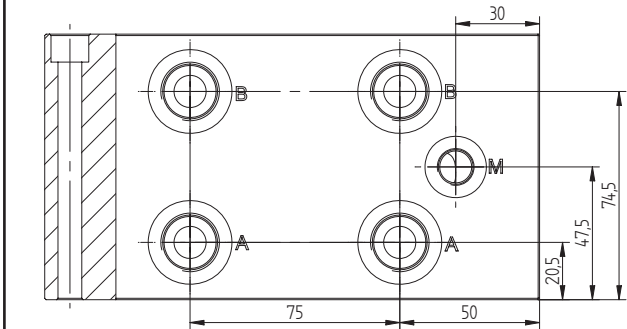
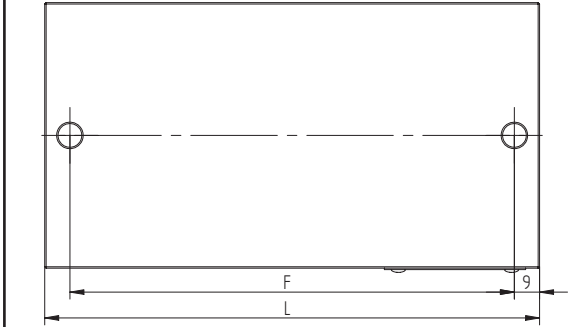
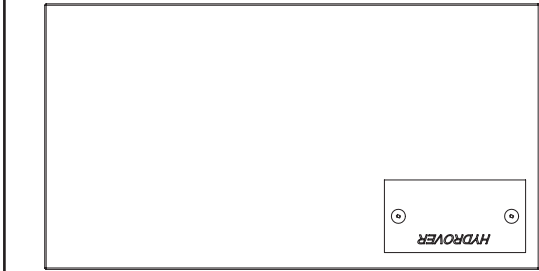
H5601



Technical data	
Press. max.	350 bar
1 station weight	6,1 Kg
2 stations weight	10,9 Kg
3 stations weight	15,6 Kg
4 stations weight	20,4 Kg
5 stations weight	25,1 Kg
6 stations weight	29,9 Kg
Manifold material	Steel
M port	1/4" G
A / B ports	1/2" G
P / T ports	3/4" G



N°	Description	Q.ty
1	M8x15 thread for mounting	8
2	Ø 8,5 through hole for mounting	2



Stat.	1	2	3	4	5	6
L	102	177	252	327	402	477
F	84	159	234	309	384	459



Ordering code

H	5	6	0	1	S	_	P
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Hydrover product

Product series  
56 series - Cetop 5 subplates

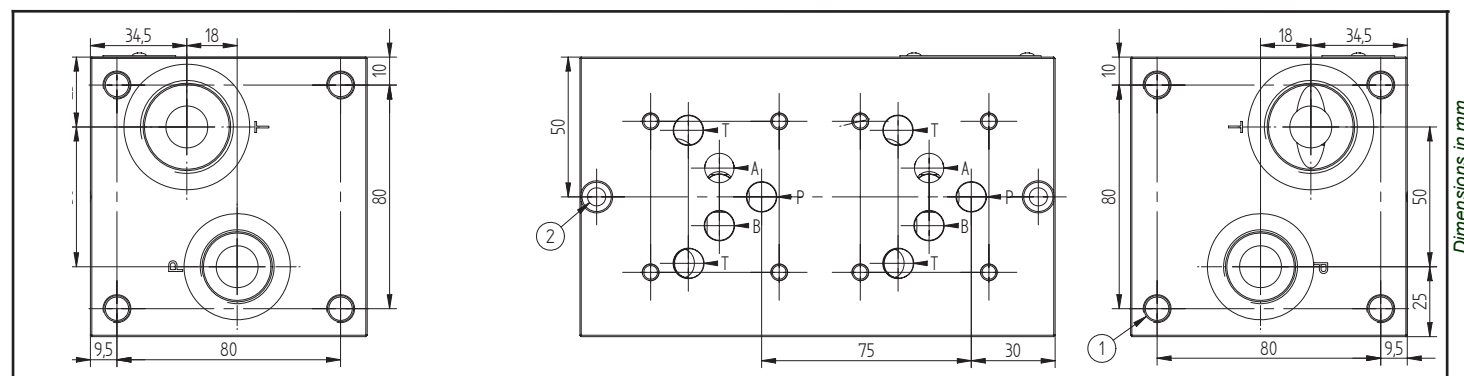
Product ID

Number of Cetop 5 stations

1P =	1 station
2P =	2 stations
3P =	3 stations
4P =	4 stations
5P =	5 stations
6P =	6 stations

Manifold material  
Steel

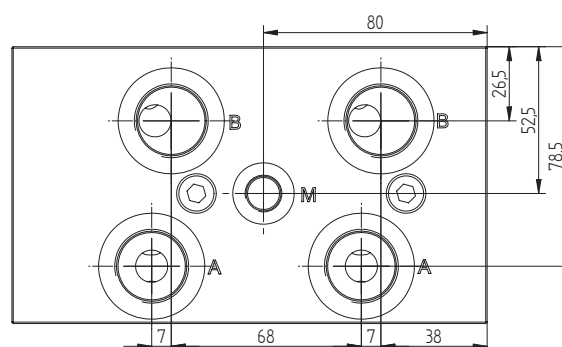
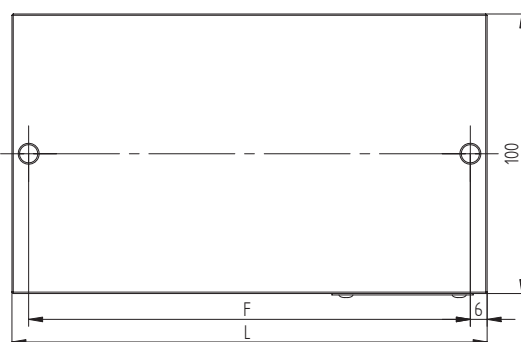
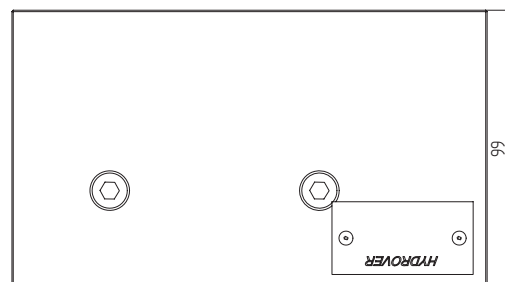
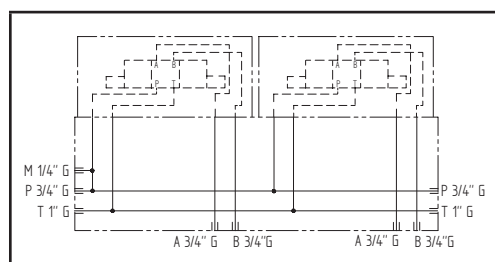
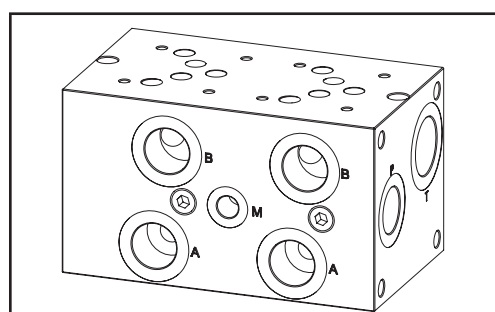
Cetop 5 subplate from 2 to 6 stations  
 3/4" G crossing P port / 1" G crossing T port / 3/4" G side A-B ports

**H5602**


Dimensions in mm

**Technical data**

Press. max.	350 bar
2 stations weight	11,4 Kg
3 stations weight	16,3 Kg
4 stations weight	21,2 Kg
5 stations weight	26,1 Kg
6 stations weight	31 Kg
Manifold material	Steel
M port	1/4" G
P / A / B ports	3/4" G
T port	1" G



N°	Description	Q.ty
1	M10x15 for mounting	8
2	Ø 6,5 through hole with counterbore for mounting	2

Stat.	2	3	4	5	6
L	170	245	320	395	470
F	158	233	308	383	458

H5602

Ordering code

H	5	6	0	2	S	_	P
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Hydrover product

Product series  
56 series - Cetop 5 subplates

Product ID

Number of Cetop 5 stations

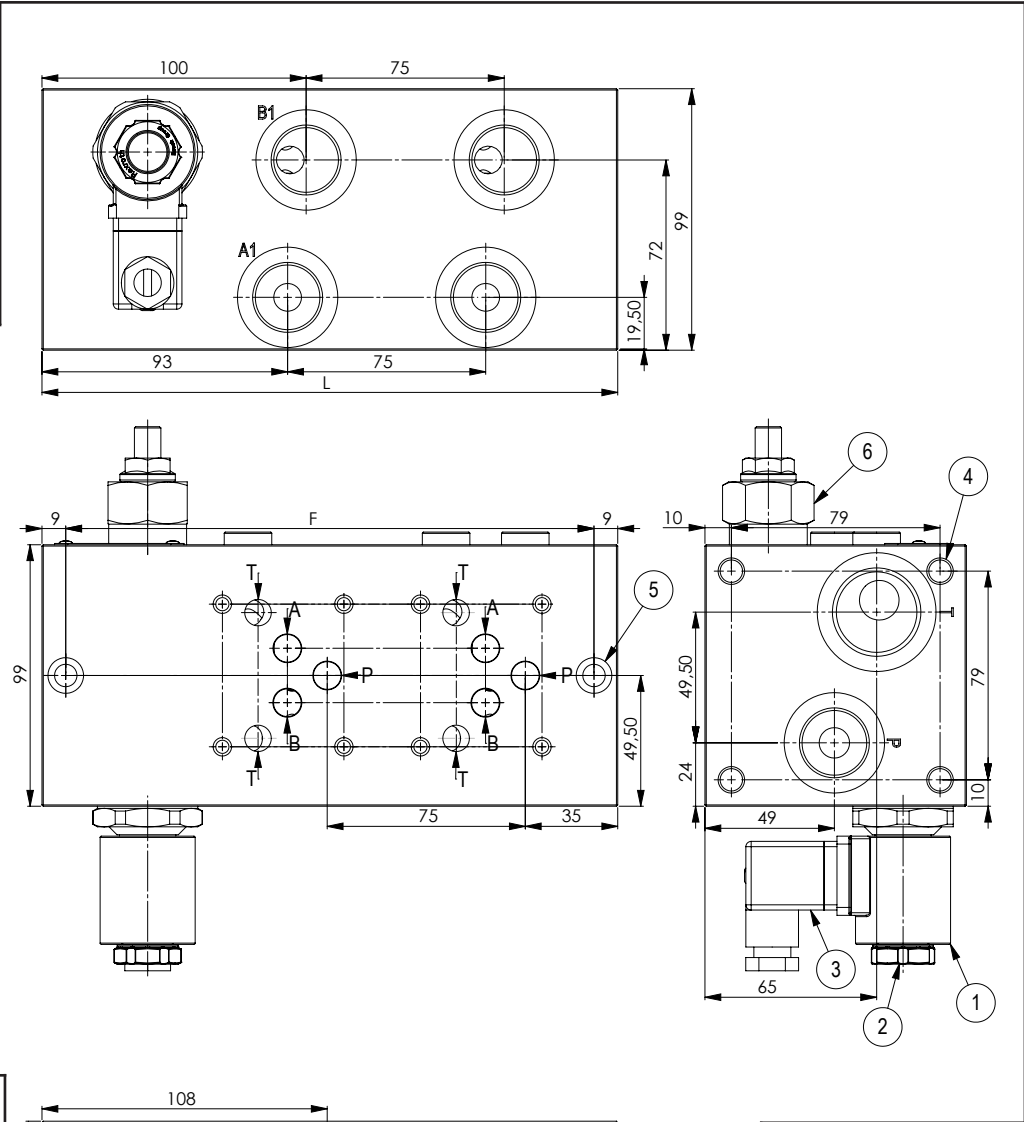
2P =	2 stations
3P =	3 stations
4P =	4 stations
5P =	5 stations
6P =	6 stations

Manifold material  
Steel

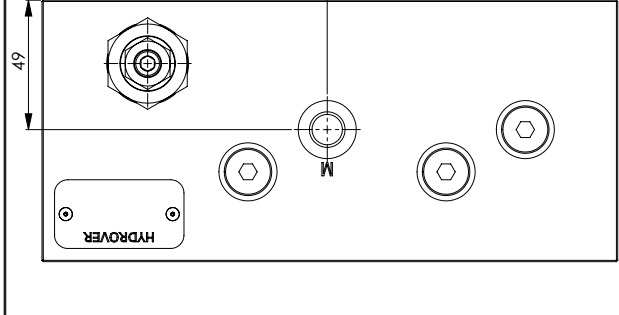
Cetop 5 subplate from 1 to 5 stations / bypass and relief valves  
crossing P 3/4" G and T 1" G ports / side A-B ports

H5604

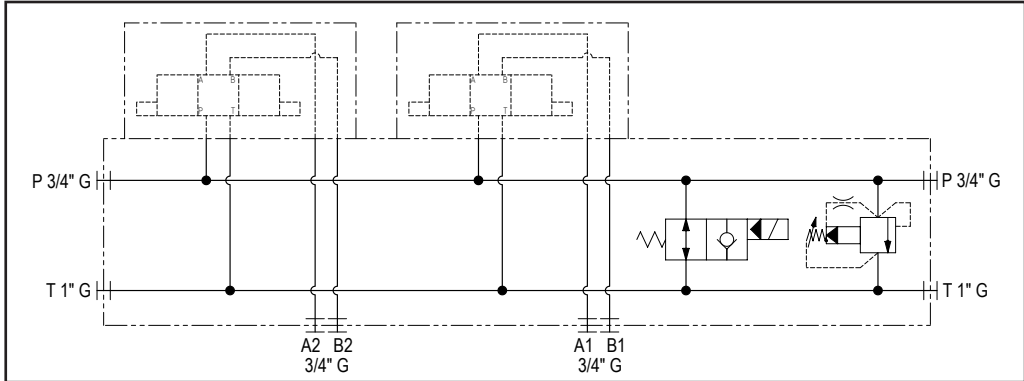
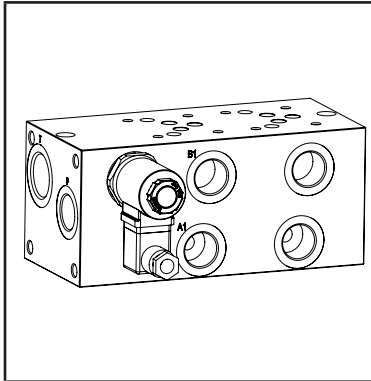
Technical data		
Max. pressure	Alumi-nium	Steel
	250 bar	350 bar
Max. flow		140 lpm *
M port		1/4" G
P / A / B ports		3/4" G
T port		1" G



Weight		
Stat.	Alumi-nium	Steel
1	3,8 Kg	9,7 Kg
2	5,1 Kg	14,9 Kg
3	7 Kg	20,1 Kg
4	8,9 Kg	25,3 Kg
5	10,8 Kg	30,5 Kg



Stat.	F	L
1	125	143
2	200	218
3	275	293
4	350	368
5	425	443



## Ordering code

H	5	6	0	4	_	_	_	-	_	_	-	_	_	-	_	_	_
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**Hydrover product****Product series**

56 series - Cetop 5 subplates

**Product ID****Manifold material**

Aluminium

= A

Steel

= S

**Number of Cetop 5 stations**

1 station

= 1P

2 stations

= 2P

3 stations

= 3P

4 stations

= 4P

5 stations

= 5P

**Relief valve adjustment type**

Screw

= S

Knob

= K

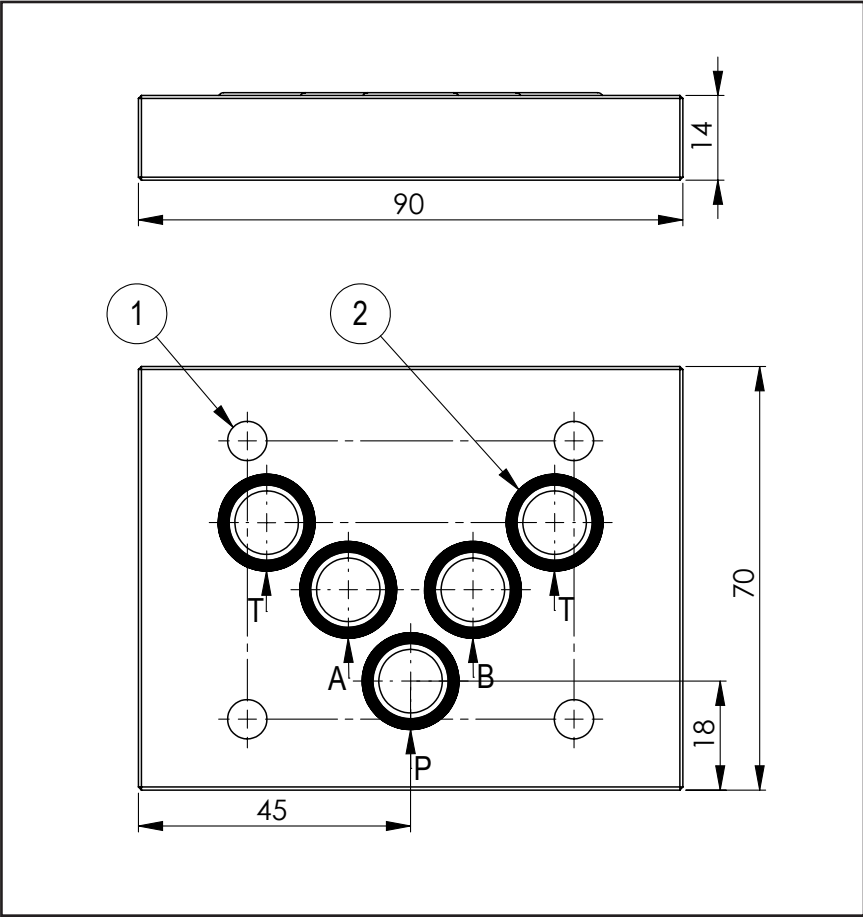
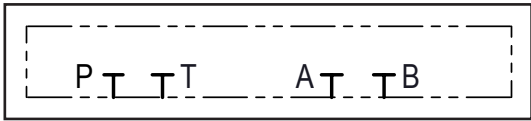
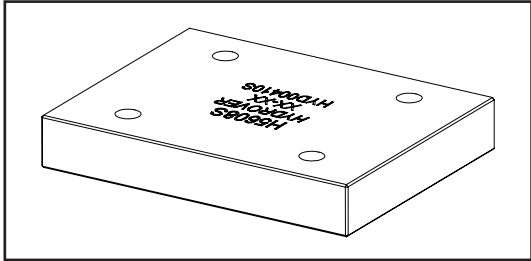
**Solenoid valve  
coil connection \***1 = DIN 43650  
ISO 4400**Solenoid valve  
coil voltage \***OB = 12V DC  
OC = 24V DC  
OD = 48V DC  
OU = 110V RAC  
AH = 230V RAC**Solenoid valve  
manual override \***E0 = Without  
EP = Push  
EG = Push and twist**Relief valve  
adjustment pressure range \***0 = 3-70 bar  
1 = 7-105 bar  
2 = 10-210 bar  
3 = 35-420 bar

\* Omit if not required. For example, to order the product without the relief cartridge valve, omit the pressure range and adjustment type options: H5604S3P-E0-OC1. The manifold will still be provided with the corresponding cavity. To inhibit the solenoid valve, replace the related options with TL: eg. H5604S3P-S2-TL. In the cavity it will be mounted a long plug.

Valve	Cavity	Long plug code
Bosch Rexroth solenoid valve VEI-16-021-NA OD.15.06.21-Y-000000	021-E	R-800-015
Pressure relief valve VSP-150	065	Contact Hydrover

N°	Description	Q.ty
1	Bosch Rexroth coil <b>S8-356</b> - CLASS H DIN 43650 ISO 4400 *	1
2	Bosch Rexroth solenoid valve <b>VEI-16-021-NA OD.15.06.21-Y-000000</b> depicted without manual override *	1
3	Connector DIN 43650 ISO 4400	1
4	M10x15 for mounting	8
5	Ø 8,5 through hole for mounting with counterbore	2
6	Bosch Rexroth relief valve <b>VSP-150*</b> depicted with screw adjustment	1

Technical data	
Manifold material	Steel
Max. pressure	350 bar
Weight	0,9 Kg



N°	Description	Q.ty
1	Ø 6,5 through hole for mounting	4
2	OR 2050 i. Ø 12,42 cross section 1,78	5

H5608

Ordering code

H	5	6	0	8	S
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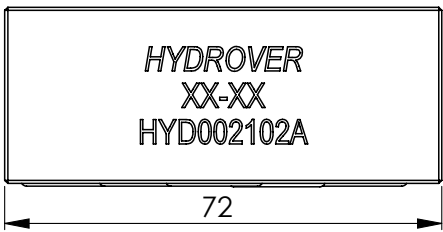
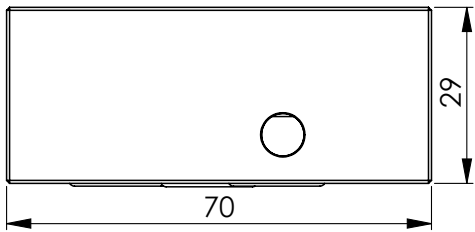
Hydrover product

Manifold material  
Steel

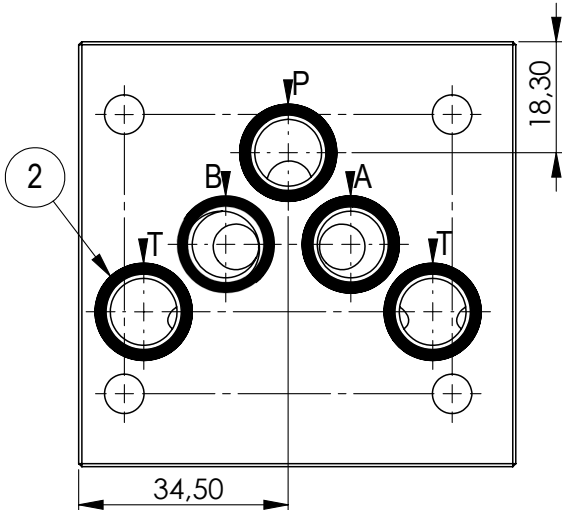
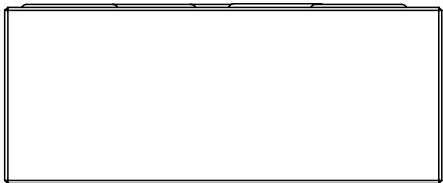
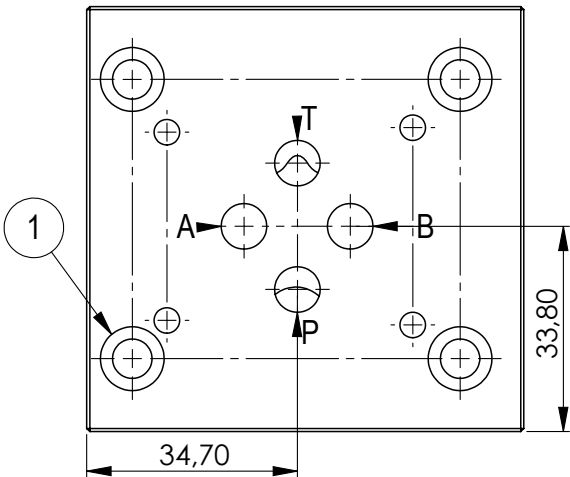
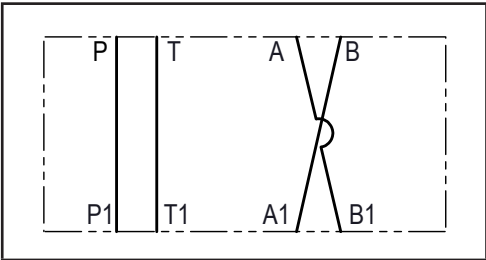
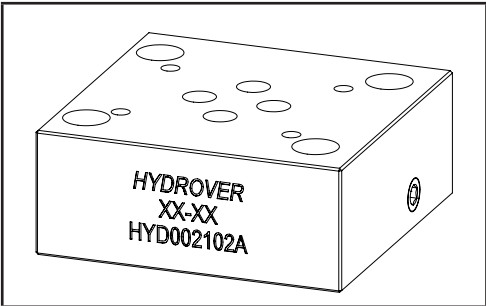
Product series  
56 series - Cetop 5 subplates

Product ID

Dimensions in mm



Technical data		
Manifold material	Aluminium	Steel
Max. pressure	250 bar	350 bar
Weight	0,3 Kg	0,9 Kg



N°	Description	Q.ty
1	Ø 6,5 through hole for mounting with counterbore	4
2	OR 2050 i. Ø 12,42 cross section 1,78	5



Ordering code

H	5	6	0	6	_
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Hydrover product

Product series  
56 series - Cetop 5 subplates

Manifold material  
Aluminium  
Steel

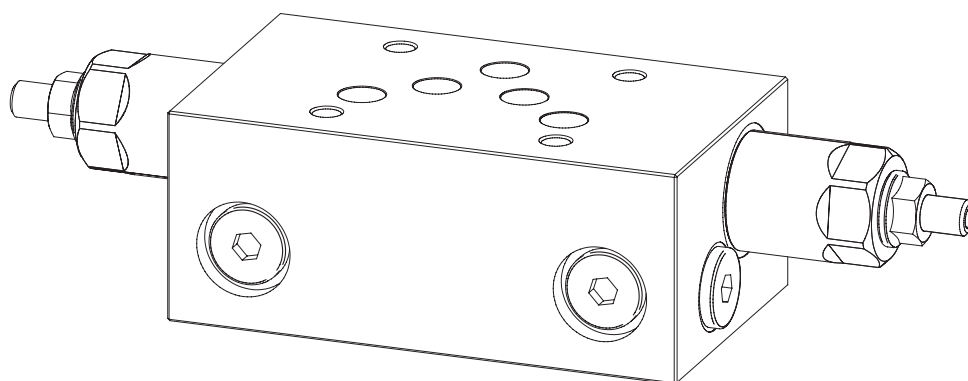
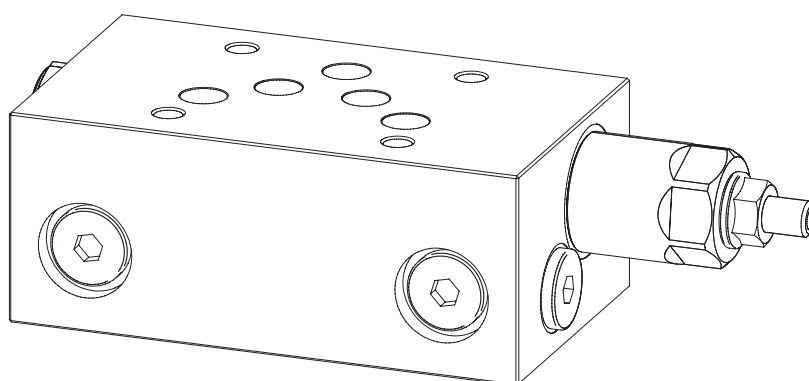
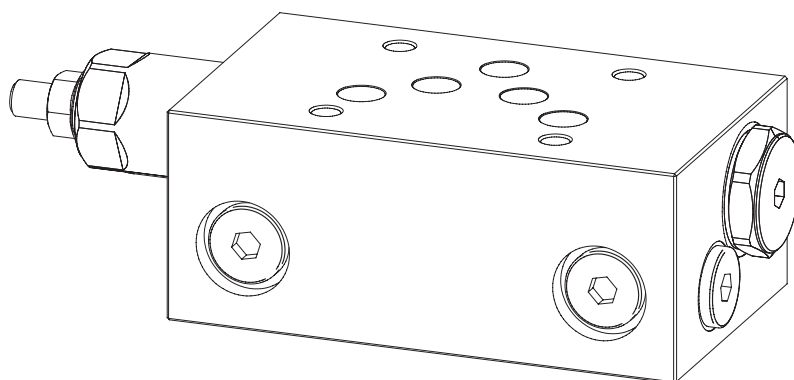
A=  
S=

Product ID

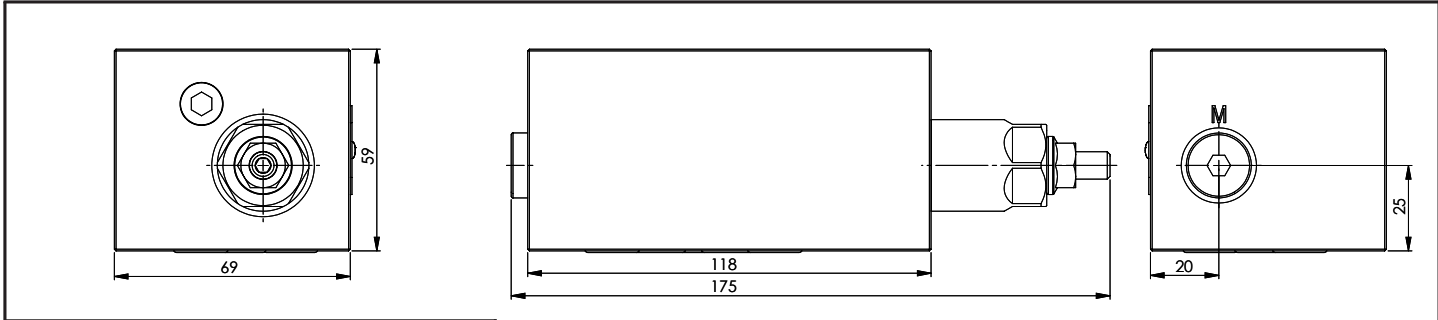


# 59 SERIES

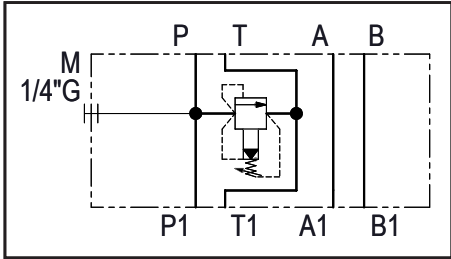
## Cetop 5 modular valves



Cetop 5 modular relief valve on P H5913

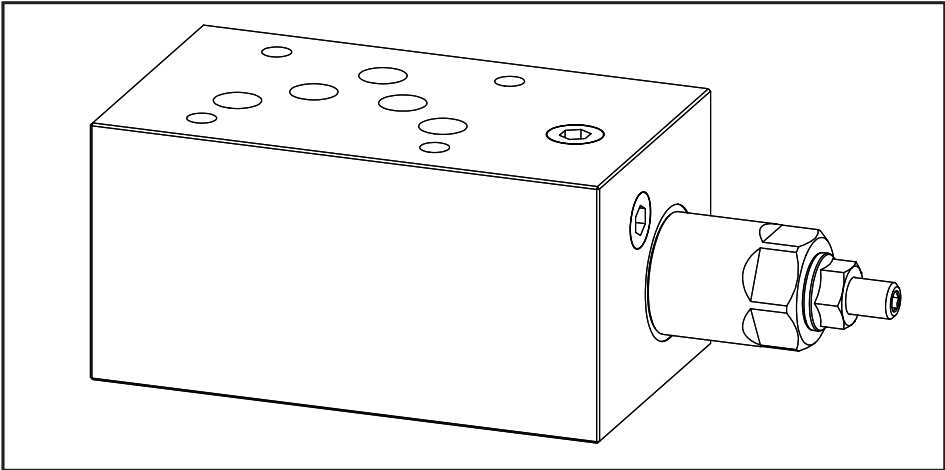
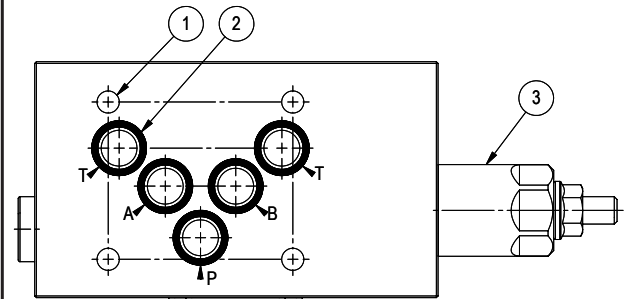
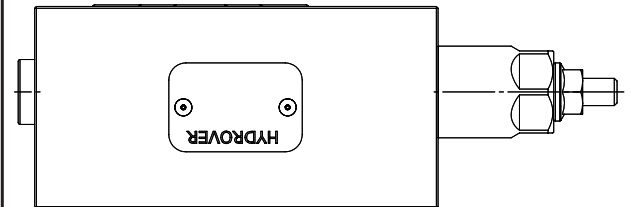
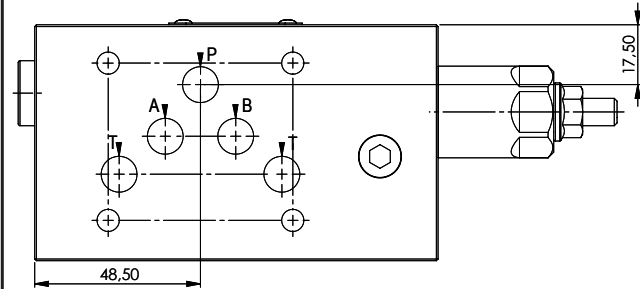


Technical data	
Max. pressure	250 bar
Max. flow	120 lpm *
Weight	1,45 Kg
Manifold material	Aluminium
M port	1/4" G



N°	Description	Q.ty
1	Ø 6,5 through hole for mounting	4
2	OR 2050 i. Ø 12,42 cross section 1,78	5
3	Bosch Rexroth relief valve <b>VSPN-10A</b> * depicted with screw adjustment	1

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue



Dimensions in mm

H5913

Ordering code

H	5	9	1	3	A	-	-	-
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Hydrover product

Product series

59 series - Cetop 5 modular valves

Product ID

Manifold material

Aluminium

Relief valve  
adjustment pressure range \*

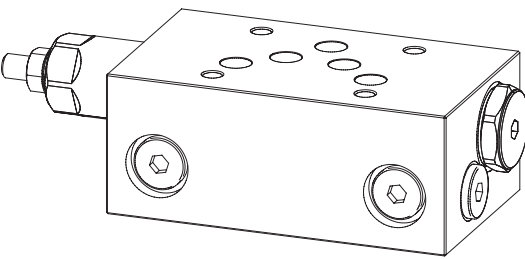
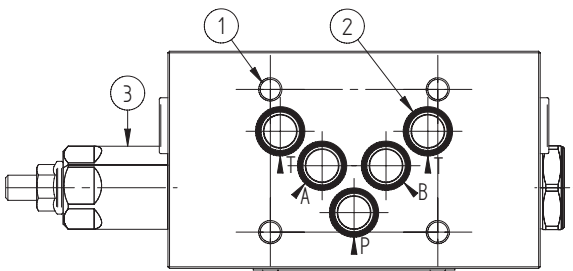
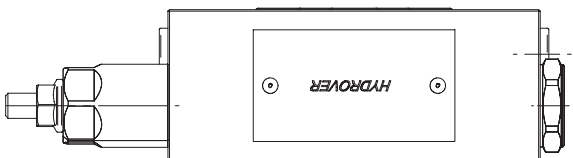
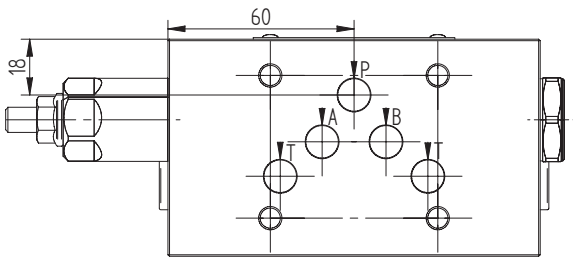
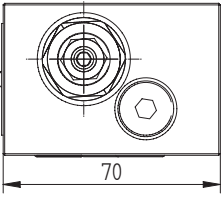
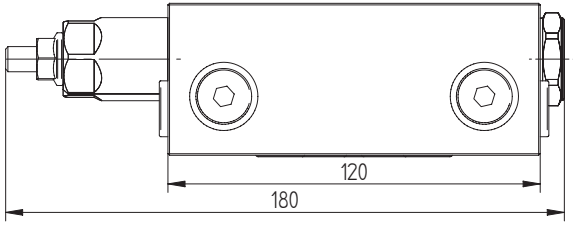
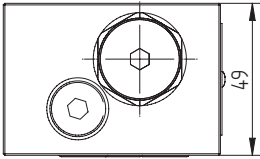
1 =	35-140 bar
2 =	70-280 bar
3 =	140-420 bar
3 =	35-350 bar (adj. knob)

Relief valve  
adjustment type \*

S =	Screw
K =	Knob

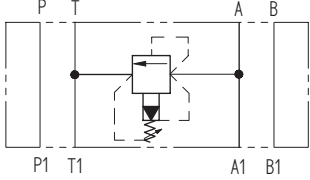
\* Omit if not required. To order the product without the pressure relief cartridge valve, omit the pressure range and the adjustment type options: H5913A.  
The manifold will still be provided with the corresponding cavity.

Cetop 5 modular relief valve on A H5902



Technical data

Max. pressure	350 bar
Max. flow	120 lpm *
Weight	3 Kg
Manifold material	Steel



N°	Description	Q.ty
1	Ø 6,5 through hole for mounting	4
2	OR 2050 i. Ø 12,42 cross section 1,78	5
3	Bosch Rexroth relief valve <b>VSPN-10A</b> * depicted with screw adjustment	1

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

Dimensions in mm

Ordering code

H	5	9	0	2	S	-	-	-
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Hydrover product

Product series

59 series - Cetop 5 modular valves

Product ID

Manifold material

Steel

Relief valve  
adjustment pressure range \*

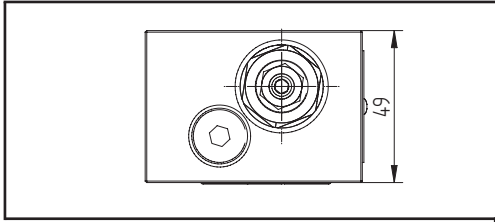
1 =	35-140 bar
2 =	70-280 bar
3 =	140-420 bar
3 =	35-350 bar (adj. knob)

Relief valve  
adjustment type \*

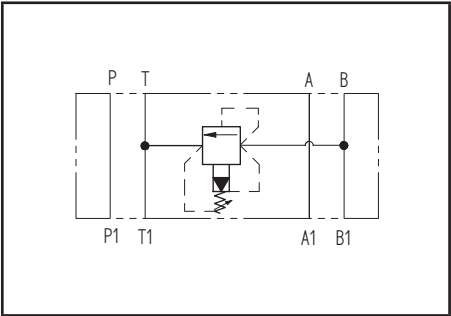
S =	Screw
K =	Knob

\* Omit if not required. To order the product without the pressure relief cartridge valve, omit the pressure range and the adjustment type options: H5902S.  
The manifold will still be provided with the corresponding cavity.

Cetop 5 modular relief valve on B H5903

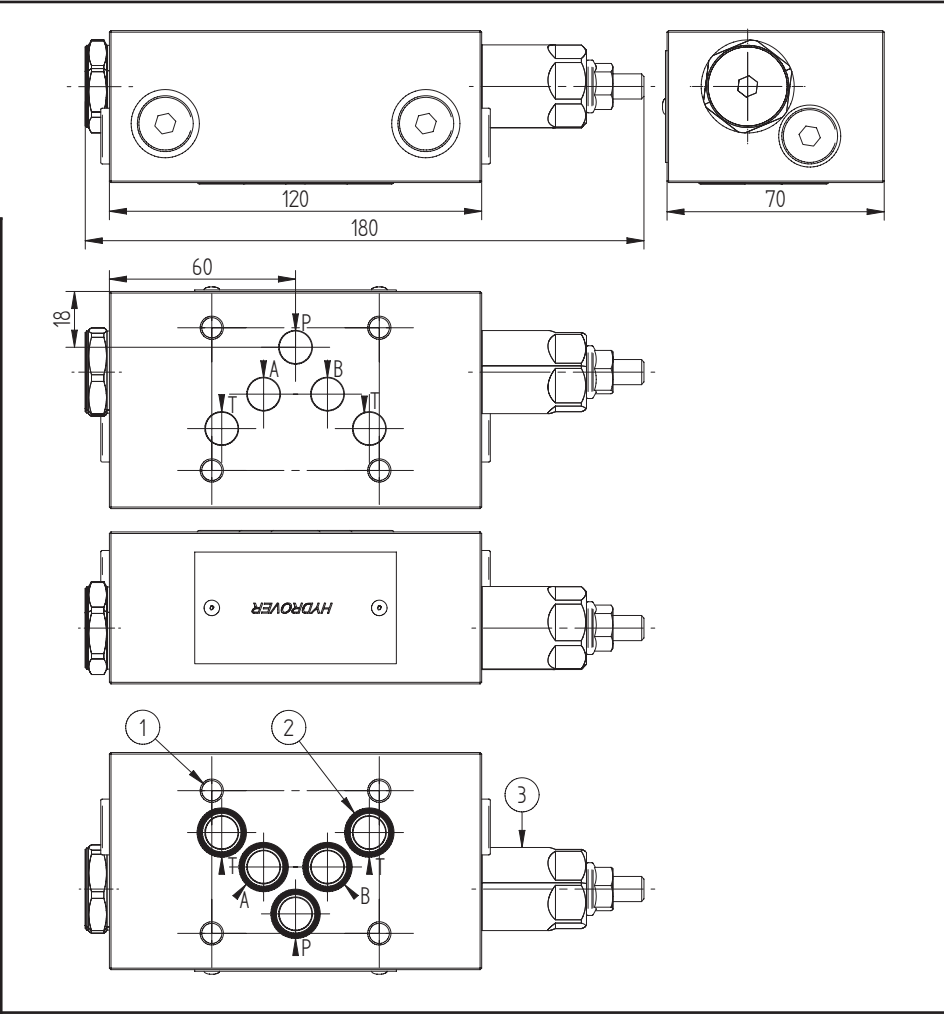


Technical data	
Max. pressure	350 bar
Max. flow	120 lpm *
Weight	3 Kg
Manifold material	Steel

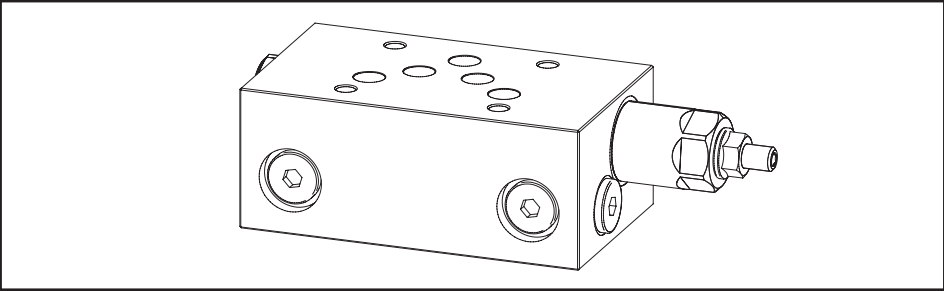


N°	Description	Q.ty
1	Ø 6,5 through hole for mounting	4
2	OR 2050 i. Ø 12,42 cross section 1,78	5
3	Bosch Rexroth relief valve <b>VSPN-10A</b> * depicted with screw adjustment	1

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue



Dimensions in mm





Ordering code

H	5	9	0	3	S	-	-	-
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Hydrover product

Product series

59 series - Cetop 5 modular valves

Product ID

Manifold material

Steel

Relief valve  
adjustment pressure range \*

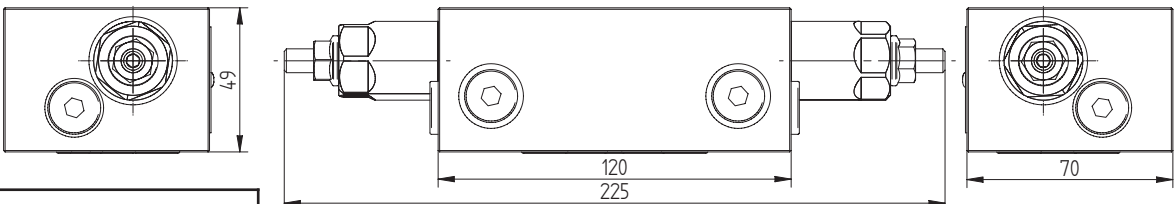
1 =	35-140 bar
2 =	70-280 bar
3 =	140-420 bar
3 =	35-350 bar (adj. knob)

Relief valve  
adjustment type \*

S =	Screw
K =	Knob

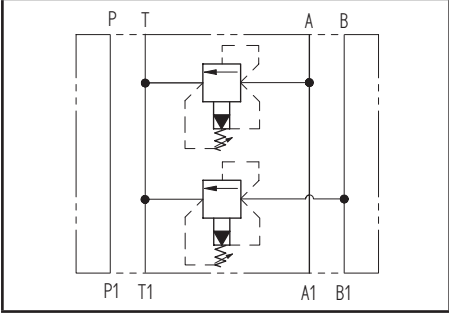
\* Omit if not required. To order the product without the pressure relief cartridge valve, omit the pressure range and the adjustment type options: H5903S.  
The manifold will still be provided with the corresponding cavity.

Cetop 5 modular relief valve on A and B **H5901**



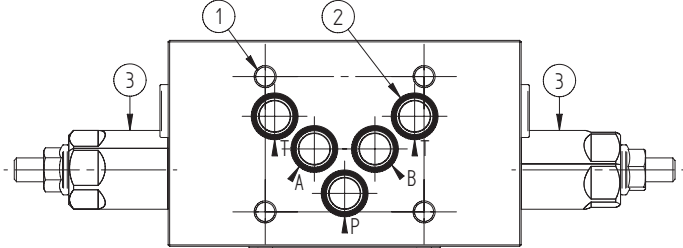
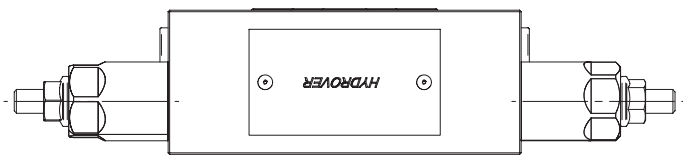
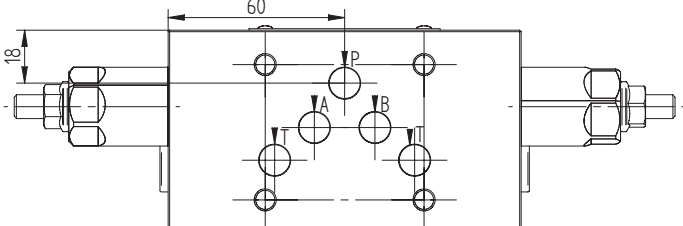
Dimensions in mm

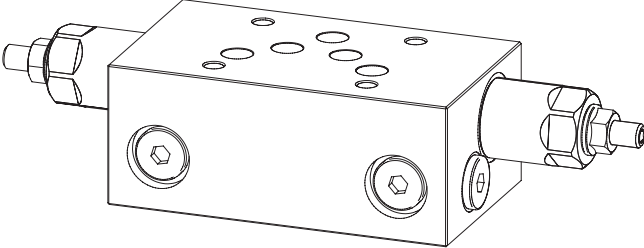
Technical data	
Max. pressure	350 bar
Max. flow	120 lpm *
Weight	3 Kg
Manifold material	Steel



N°	Description	Q.ty
1	Ø 6,5 through hole for mounting	4
2	OR 2050 i. Ø 12,42 cross section 1,78	5
3	Bosch Rexroth relief valve <b>VSPN-10A*</b> depicted with screw adjustment	2

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue





Ordering code

H	5	9	0	1	S	-	-	-	-	-
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Hydrover product

Product series

59 series - Cetop 5 modular valves

Product ID

Manifold material

Steel

Relief valve  
adjustment pressure range  
on B \*

- 1 = 35-140 bar
- 2 = 70-280 bar
- 3 = 140-420 bar (reg. vite)
- 3 = 35-350 bar (adj. knob)

Relief valve  
adjustment type on B \*

- S = Screw
- K = Knob (solo 35-350 bar)

Relief valve  
adjustment pressure range on A \*

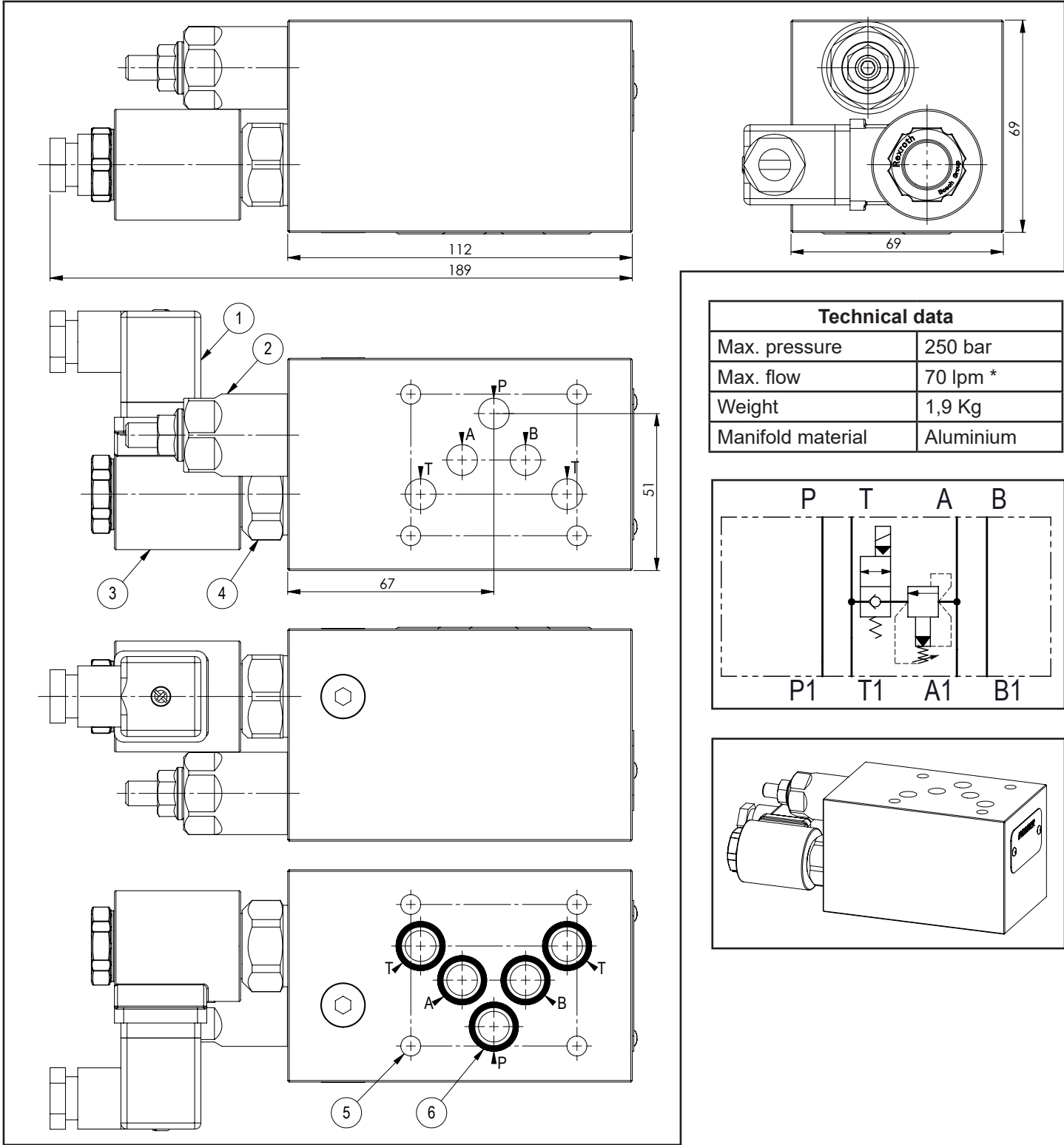
- 1 = 35-140 bar
- 2 = 70-280 bar
- 3 = 140-420 bar
- 3 = 35-350 bar (adj. knob)

Relief valve  
adjustment type on A \*

- S = Screw
- K = Knob

\* Omit if not required. To order the product without the pressure relief cartridge valves, omit the pressure range and the adjustment type options: H5901S.  
The manifold will still be provided with the corresponding cavities.

Cetop 5 modular relief valve on A electrically enabled H5921



N°	Description	Q.ty
1	Connector DIN 43650 ISO 4400	1
2	Bosch Rexroth relief valve <b>VSPN-10A*</b> depicted with screw adjustment	1
3	Bosch Rexroth coil <b>D36</b> - CLASS H DIN 43650 ISO 4400 *	1
4	Bosch Rexroth solenoid valve <b>VEI-16-10A-NC OD.15.05.36-Y-000000</b> or <b>VEI-16-10A-NA OD.15.06.36-Y-000000</b> depicted without manual override *	1
5	Ø 6,5 through hole for mounting	4
6	OR 2050 i. Ø 12,42 cross section 1,78	5

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

H5921

Ordering code

H	5	9	2	1	A	-	-	-	-	-	-	-	-	-
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Hydrover product

Product series

59 series - Cetop 5 modular valves

Product ID

Manifold material

Aluminium

Relief valve adjustment type \*

Screw = S

Knob = K

Relief valve adjustment pressure range \*

35-140 bar = 1

70-280 bar = 2

140-420 bar = 3

35-350 bar (adj. knob) = 3

Solenoid valve coil connection \*

1 = DIN 43650

ISO 4400

Solenoid valve coil voltage \*

OB = 12V DC

OC = 24V DC

OD = 48V DC

OV = 24V RAC

OU = 110V RAC

AH = 230V RAC

Solenoid valve manual override \*

E0 = Without

EP = Push (NA, 2A)

EV = Screw (NC, 2C)

EG = Push and twist (NA, 2A)

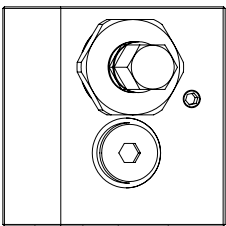
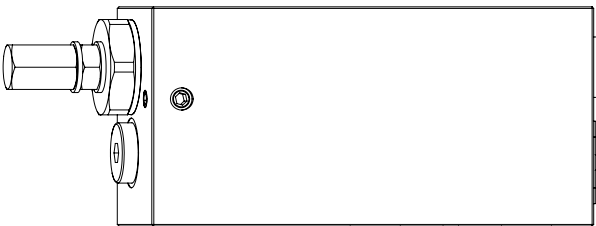
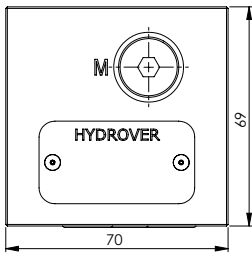
Solenoid valve spool type \*

NA = Normally open

NC = Normally closed

\* Omit if not required. For example to order the product without the relief cartridge valve, omit the pressure range and adjustment type options: eg. H5921A-NC-E0-OC1.  
The manifold will still be provided with the corresponding cavity.

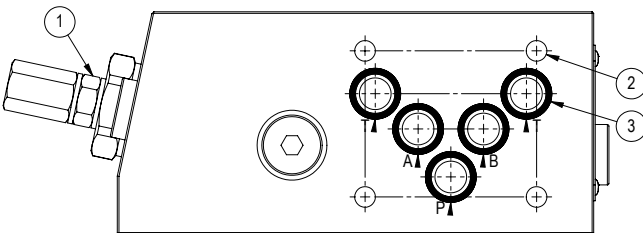
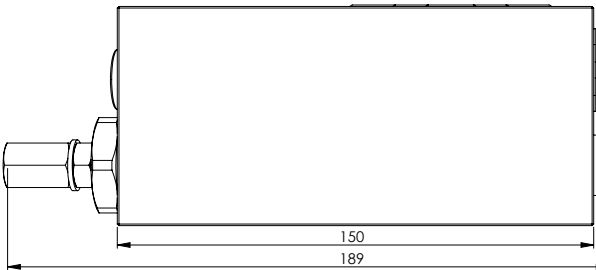
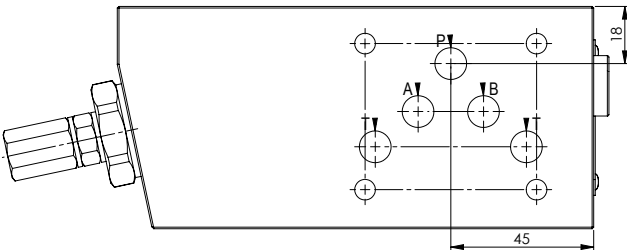
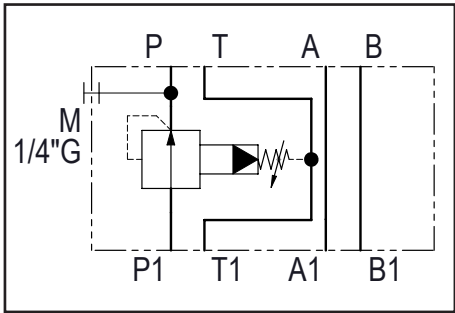
Cetop 5 modular pressure reducing valve on P H5915



Dimensions in mm

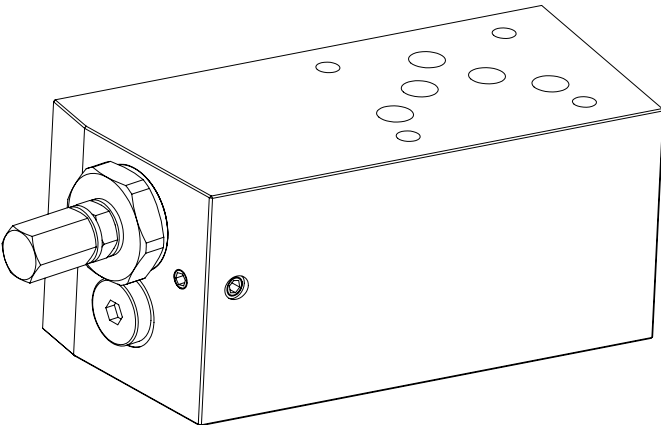
Technical data

Max. pressure	250 bar
Max. flow	120 lpm *
Weight	2 Kg
Manifold material	Aluminium
M port	1/4" G



N°	Description	Q.ty
1	Bosch Rexroth pressure reducing valve <b>VRP-150*</b> depicted with screw adjustment	1
2	Ø 6,5 through hole for mounting	4
3	OR 2050 i. Ø 12,42 cross section 1,78	5

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue



Ordering code

H	5	9	1	5	A	-	-	-
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Hydrover product

Product series

59 series - Cetop 5 modular valves

Product ID

Manifold material

Aluminium

Reducing valve  
adjustment pressure range \*

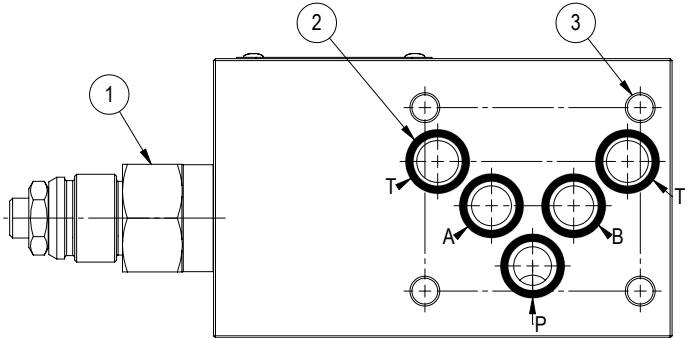
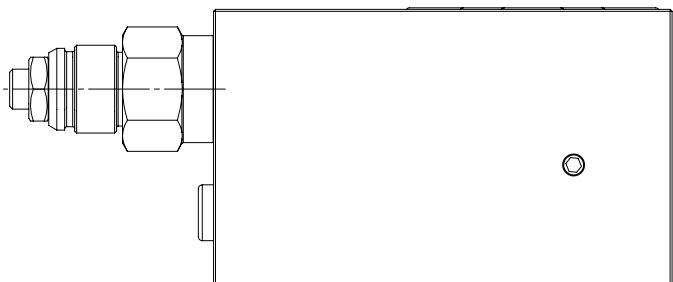
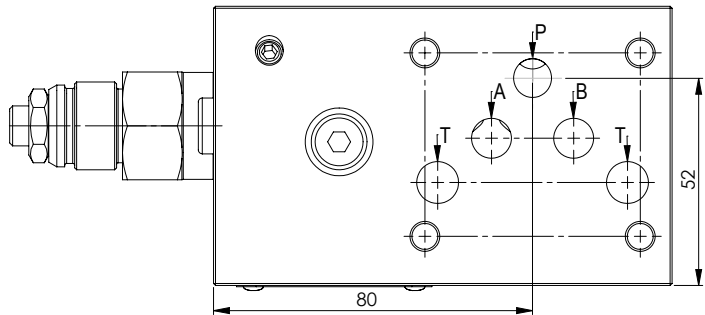
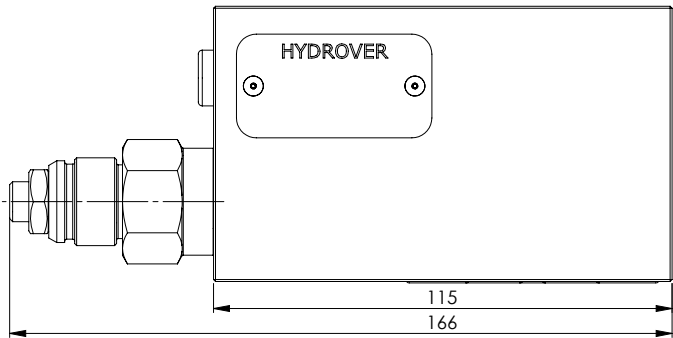
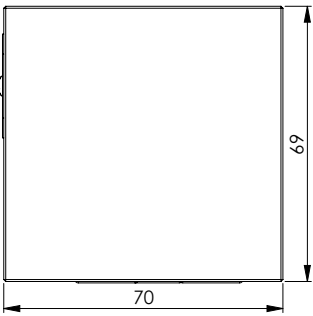
2 = 20-210 bar

Reducing valve  
adjustment type \*

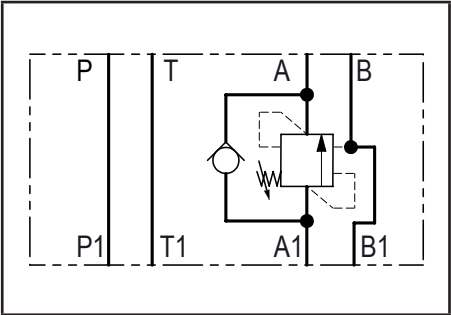
S = Screw  
K = Knob

\* Omit if not required. To order the product without the pressure relief cartridge valve, omit the pressure range and the adjustment type options: H5915A.  
The manifold will still be provided with the corresponding cavity.

Cetop 5 modular counterbalance valve on A / 50 lpm **H5916**

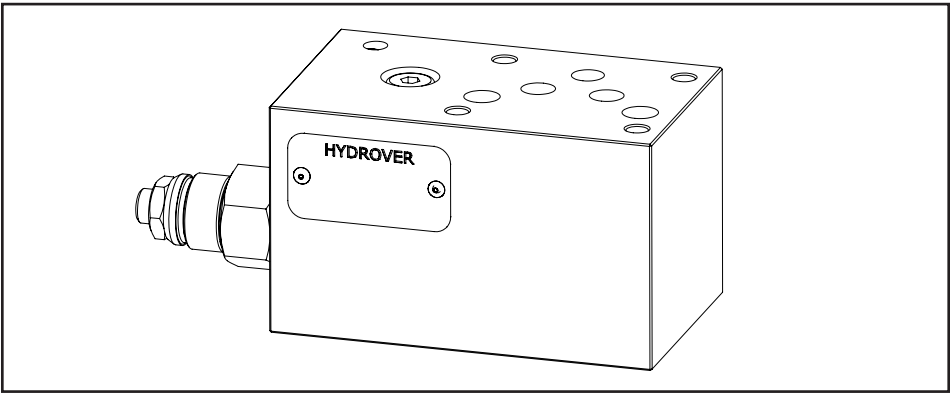


Technical data	
Max. pressure	250 bar
Max. flow	50 lpm *
Weight	1,6 Kg
Manifold material	Aluminium



N°	Description	Q.ty
1	Bosch Rexroth counterbalance valve <b>VBSN-10A</b> *	1
2	OR 2050 i. Ø 12,42 cross section 1,78	5
3	Ø 6,5 through hole for mounting	4

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue



Dimensions in mm



Ordering code

H	5	9	1	6	A	-	-	-
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Hydrover product

Product series

59 series - Cetop 5 modular valves

Product ID

Manifold material

Aluminium

Counterbalance valve  
pilot ratio

3 = 3:1  
8 = 8:1

Counterbalance valve  
adjustment pressure range

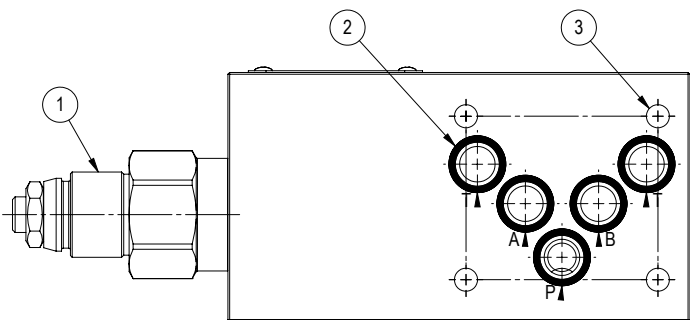
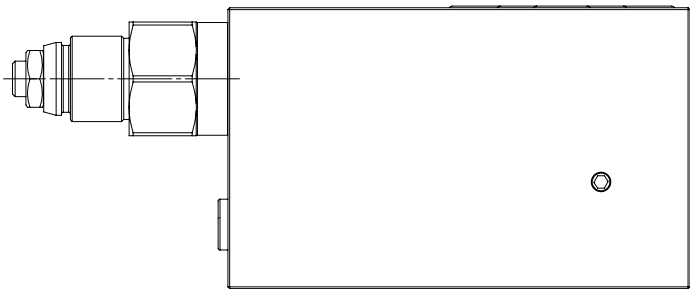
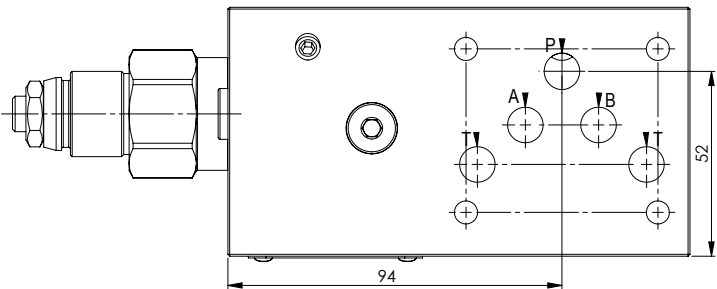
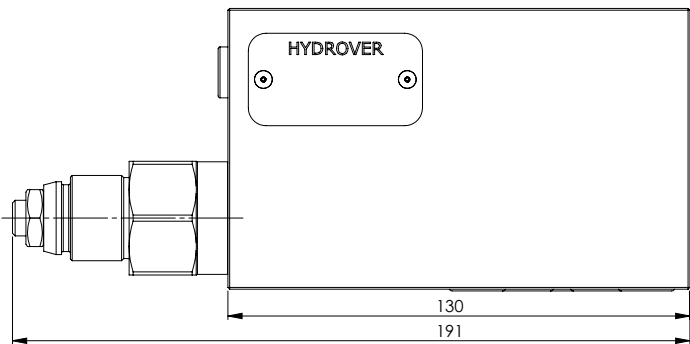
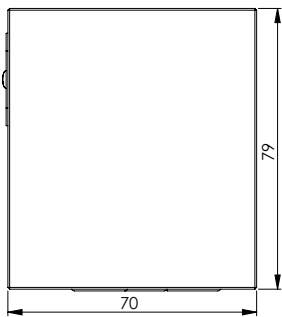
2 = 70-210 bar  
3 = 140-350 bar

Counterbalance valve  
adjustment type \*

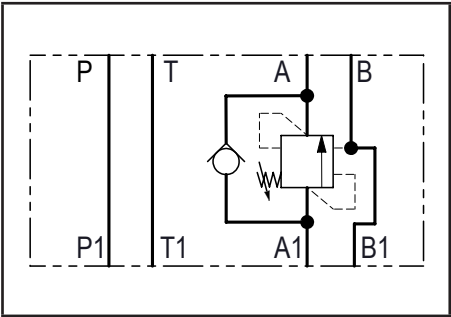
S = Screw

\* Omit if not required. To order the product without the counterbalance cartridge valve, omit the adjustment type, pressure range and pilot ratio options: H5916A.  
The manifold will still be provided with the corresponding cavity.

Cetop 5 modular counterbalance valve on A / 100 lpm **H5917**

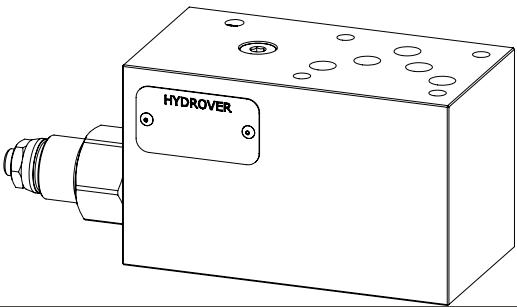


Technical data	
Max. pressure	250 bar
Max. flow	100 lpm *
Weight	2,3 Kg
Manifold material	Aluminium



N°	Description	Q.ty
1	Bosch Rexroth counterbalance valve <b>VBSN-12A</b> *	1
2	OR 2050 i. Ø 12,42 cross section 1,78	5
3	Ø 6,5 through hole for mounting	4

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue



Dimensions in mm

H5917

Ordering code

H	5	9	1	7	A	-	-	-
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Hydrover product

Product series  
59 series - Cetop 5 modular valves

Product ID

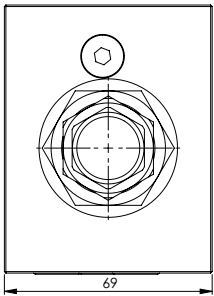
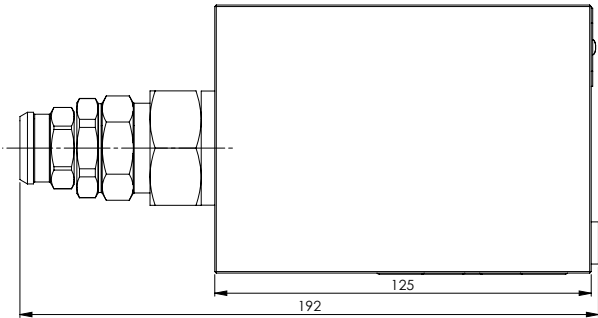
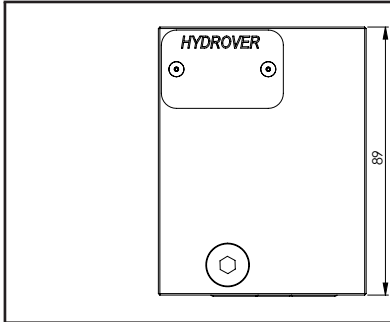
Manifold material  
Aluminium

Counterbalance valve  
pilot ratio  
4 = 4:1  
8 = 8:1

Counterbalance valve  
adjustment pressure range  
2 = 70-210 bar  
3 = 140-350 bar

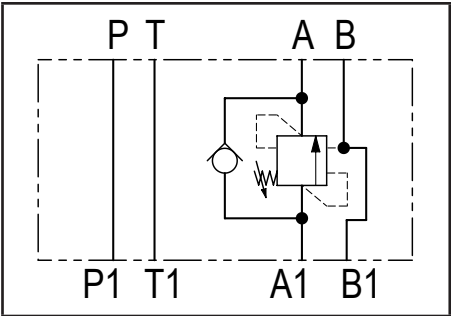
Counterbalance valve  
adjustment type \*  
S = Screw

\* Omit if not required. To order the product without the counterbalance cartridge valve, omit the adjustment type, pressure range and pilot ratio options: H5917A.  
The manifold will still be provided with the corresponding cavity.

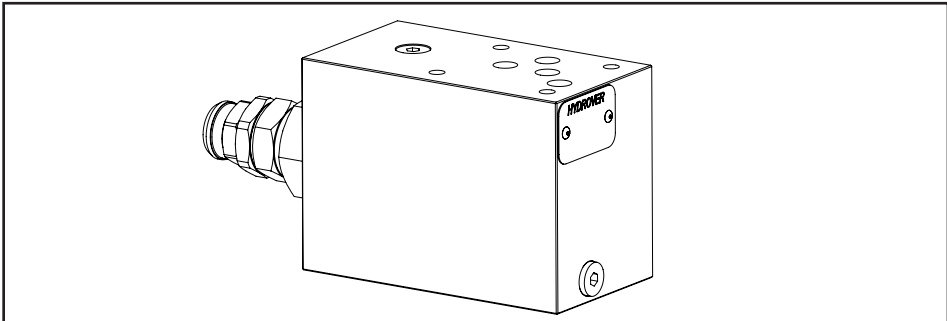
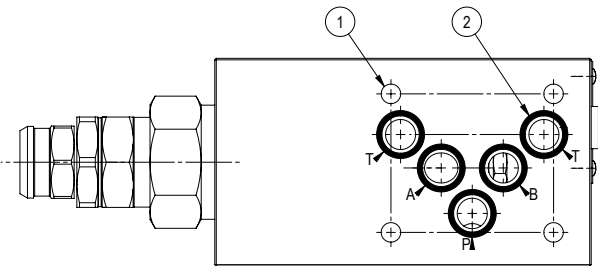
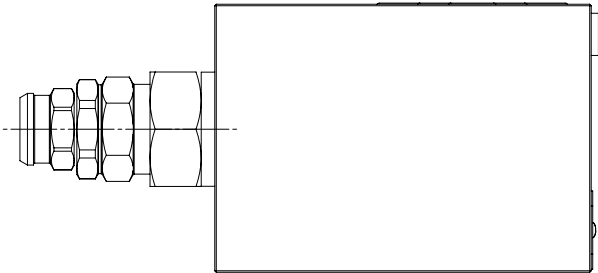
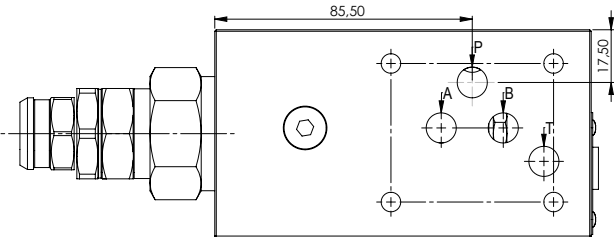


Dimensions in mm

Technical data	
Max. pressure	350 bar
Max. flow	130 lpm *
Pilot ratio	4:1
Weight	6 Kg
Manifold material	Steel



N°	Description	Q.ty
1	Ø 6,5 through hole for mounting	4
2	OR 2050 i. Ø 12,42 cross section 1,78	5
3	Bosch Rexroth counterbalance valve VBSO-SEC-33	1



Ordering code

H	5	9	0	7	S	-	-	-
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Hydrover product

Product series

59 series - Cetop 5 modular valves

Product ID

Manifold material

Steel

Counterbalance valve  
adjustment pressure range \*

3 =

100-350 bar

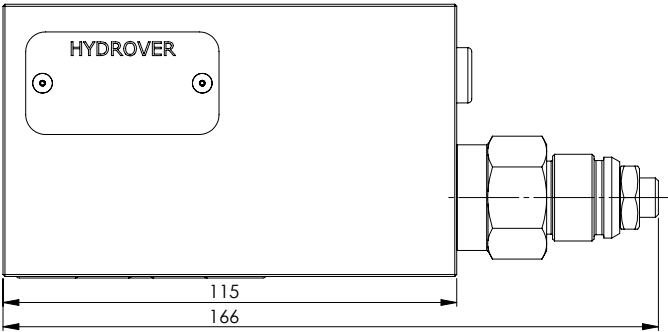
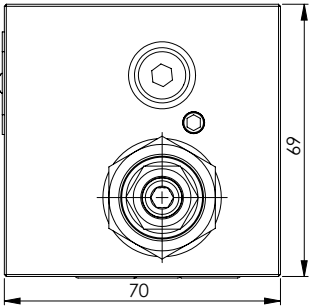
Counterbalance valve  
adjustment type \*

S =

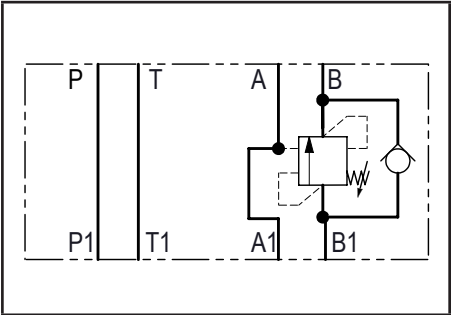
Screw

\* Omit if not required. To order the product without the counterbalance cartridge valve, omit the adjustment type and pressure range options: H5907S.  
The manifold will still be provided with the corresponding cavity.

Cetop 5 modular counterbalance valve on B / 50 lpm **H5918**

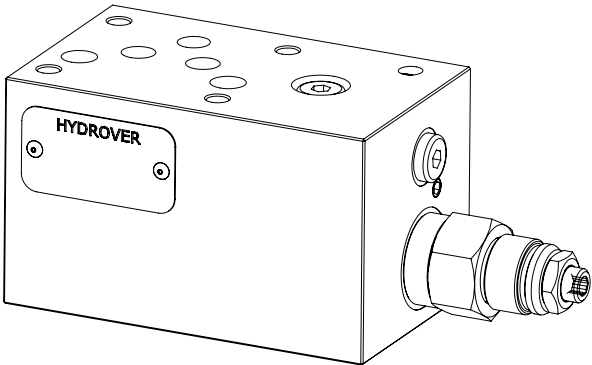
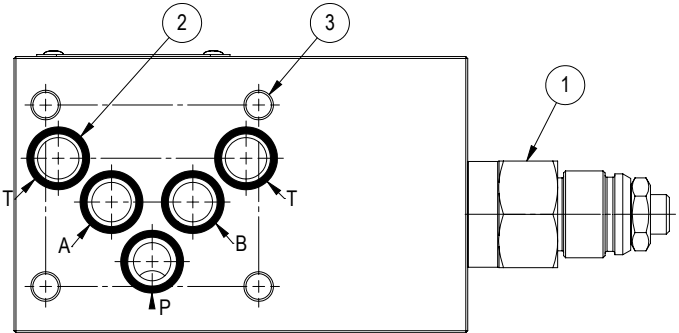
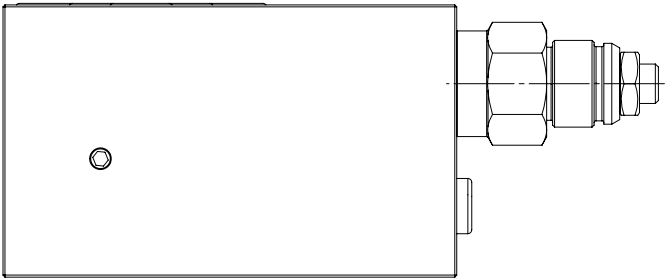
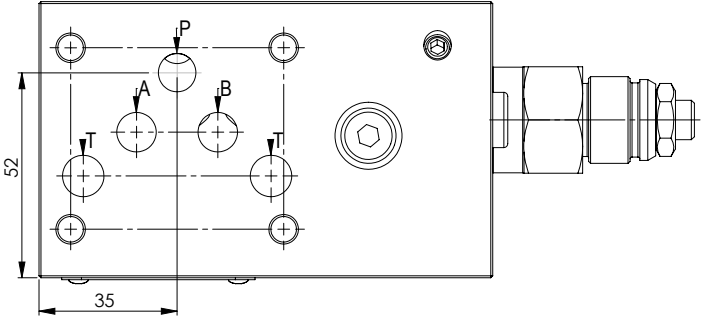


Technical data	
Max. pressure	250 bar
Max. flow	50 lpm *
Weight	1,6 Kg
Manifold material	Aluminium



N°	Description	Q.ty
1	Bosch Rexroth counterbalance valve <b>VBSN-10A</b> *	1
2	OR 2050 i. Ø 12,42 cross section 1,78	5
3	Ø 6,5 through hole for mounting	4

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue



Dimensions in mm

H5918

Ordering code

H	5	9	1	8	A	-			
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Hydrover product

Product series  
59 series - Cetop 5 modular valves

Product ID

Manifold material  
Aluminium

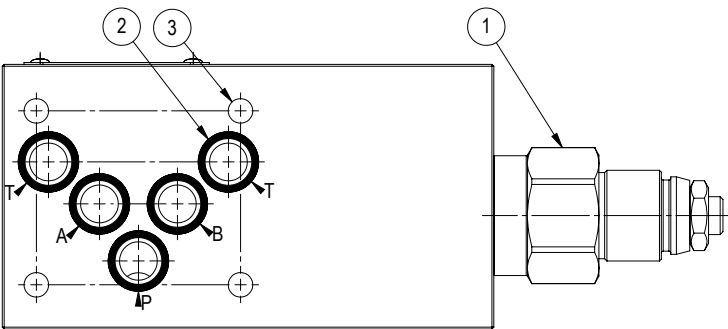
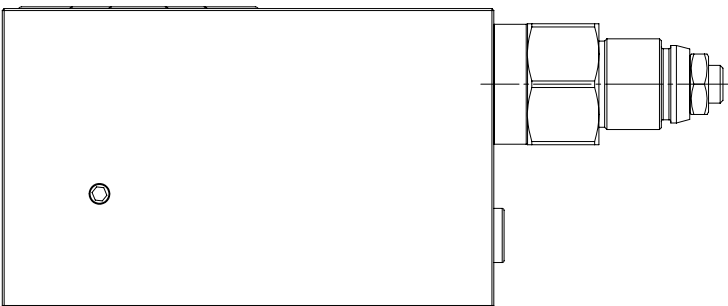
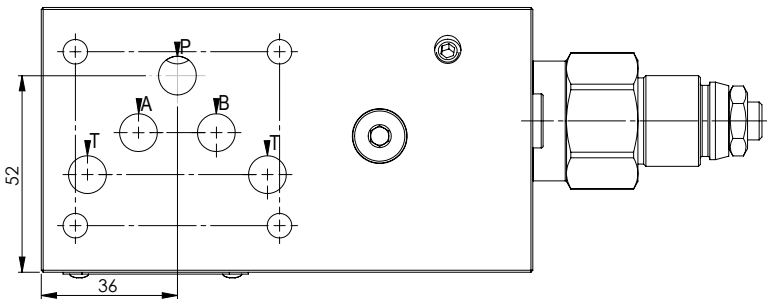
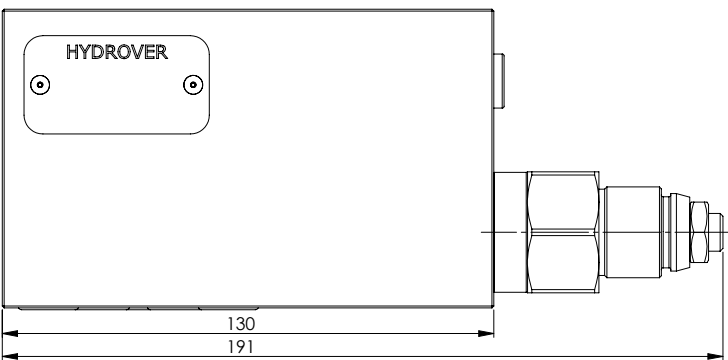
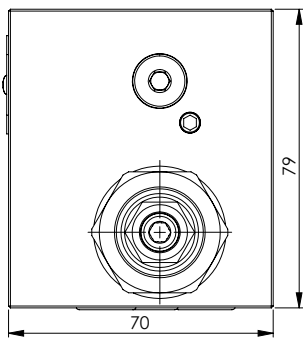
Counterbalance valve  
pilot ratio  
3 = 3:1  
8 = 8:1

Counterbalance valve  
adjustment pressure range  
2 = 70-210 bar  
3 = 140-350 bar

Counterbalance valve  
adjustment type \*  
S = Screw

\* Omit if not required. To order the product without the counterbalance cartridge valve, omit the adjustment type, pressure range and pilot ratio options: H5918A.  
The manifold will still be provided with the corresponding cavity.

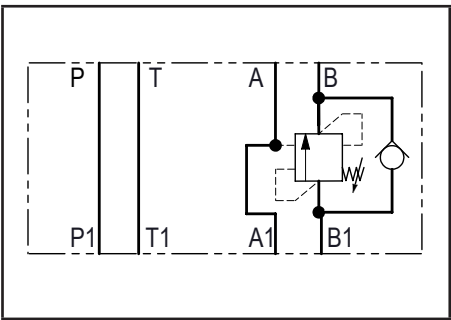
Cetop 5 modular counterbalance valve on B / 100 lpm **H5919**



Dimensions in mm

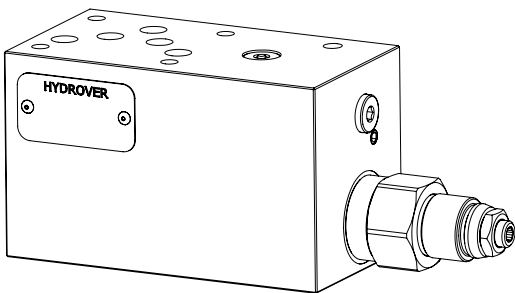
Technical data

Max. pressure	250 bar
Max. flow	100 lpm *
Weight	2,3 Kg
Manifold material	Aluminium



N°	Description	Q.ty
1	Bosch Rexroth counterbalance valve <b>VBSN-12A</b> *	1
2	OR 2050 i. Ø 12,42 cross section 1,78	5
3	Ø 6,5 through hole for mounting	4

*\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue*





Ordering code

H	5	9	1	9	A	-	-	-
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Hydrover product

Product series

59 series - Cetop 5 modular valves

Product ID

Manifold material

Aluminium

Counterbalance valve  
pilot ratio

4 = 4:1  
8 = 8:1

Counterbalance valve  
adjustment pressure range

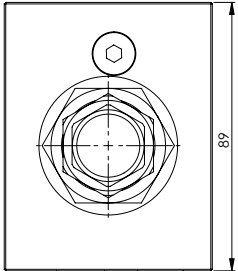
2 = 70-210 bar  
3 = 140-350 bar

Counterbalance valve  
adjustment type \*

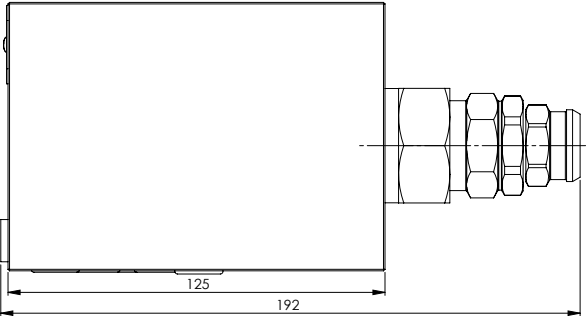
S = Screw

\* Omit if not required. To order the product without the counterbalance cartridge valve, omit the adjustment type, pressure range and pilot ratio options: H5919A.  
The manifold will still be provided with the corresponding cavity.

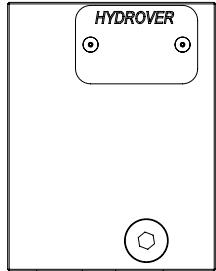
Cetop 5 modular counterbalance valve on B / 130 lpm **H5906**



89



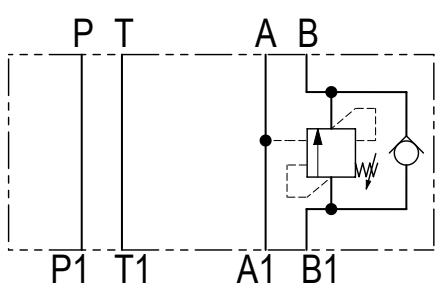
125 192



HYDROVER

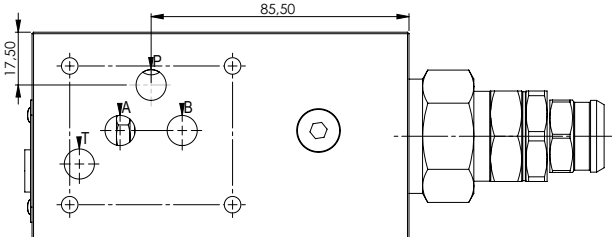
Dimensions in mm

Technical data	
Max. pressure	350 bar
Max. flow	130 lpm *
Pilot ratio	4:1
Weight	6 Kg
Manifold material	Steel

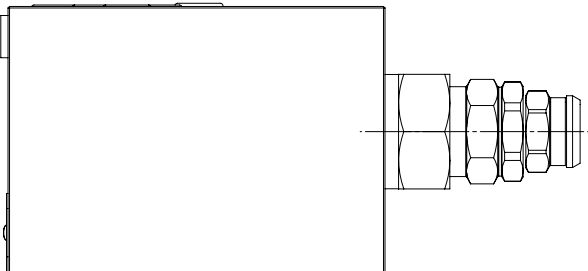


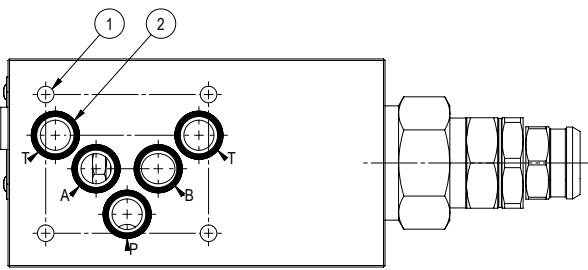
P T A B  
P1 T1 A1 B1

N°	Description	Q.ty
1	Ø 6,5 through hole for mounting	4
2	OR 2050 i. Ø 12,42 cross section 1,78	5
3	Bosch Rexroth counterbalance valve <b>VBSO-SEC-33</b>	1

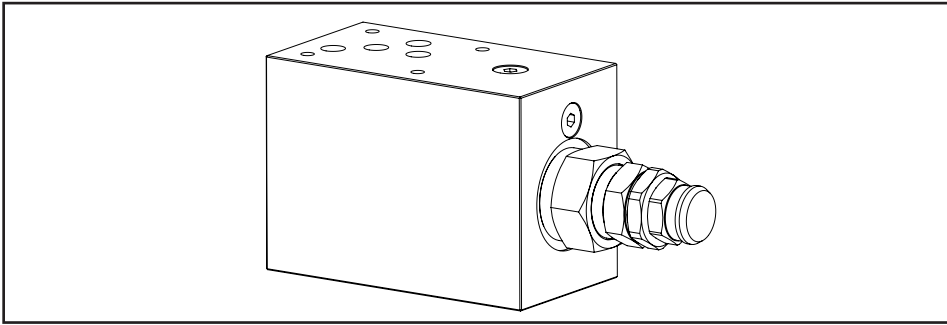


85,50 17,50





1 2



Ordering code

H	5	9	0	6	S	-	-	-
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Hydrover product

Product series

59 series - Cetop 5 modular valves

Product ID

Manifold material

Steel

Counterbalance valve  
adjustment pressure range \*

3 =

100-350 bar

Counterbalance valve  
adjustment type \*

S =

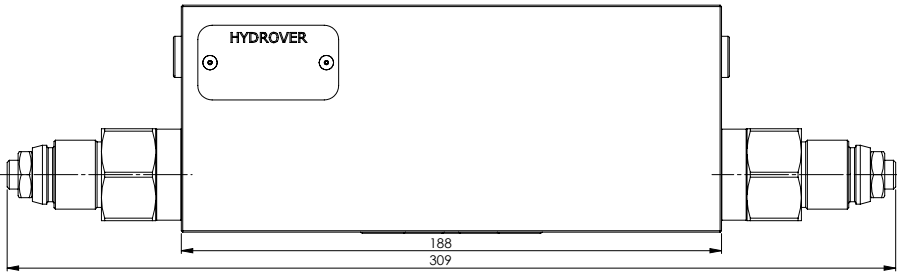
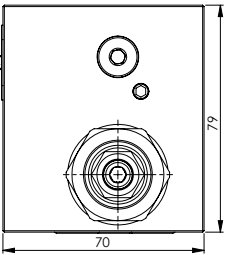
Screw

\* Omit if not required. To order the product without the counterbalance cartridge valve, omit the adjustment type and pressure range options: H5906S.  
The manifold will still be provided with the corresponding cavity.

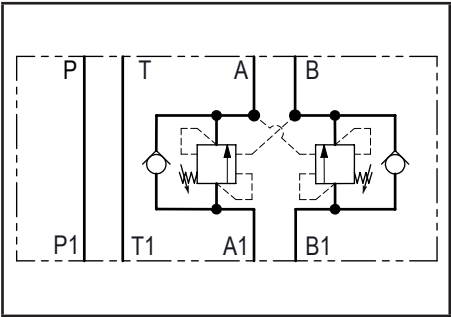
Cetop 5 modular counterbalance valve on A and B / 100 lpm

H5914

Dimensions in mm

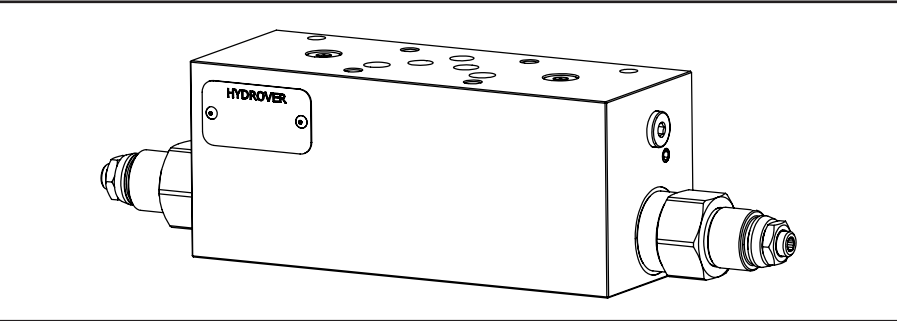
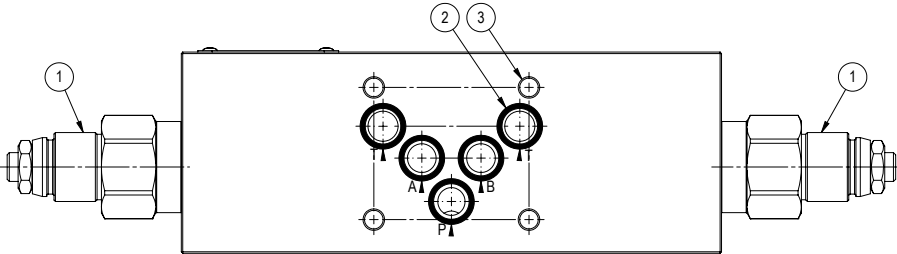
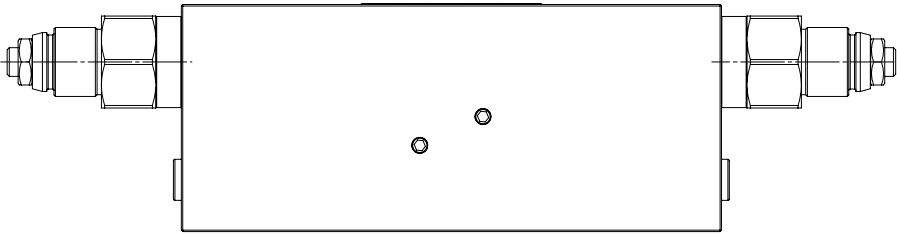
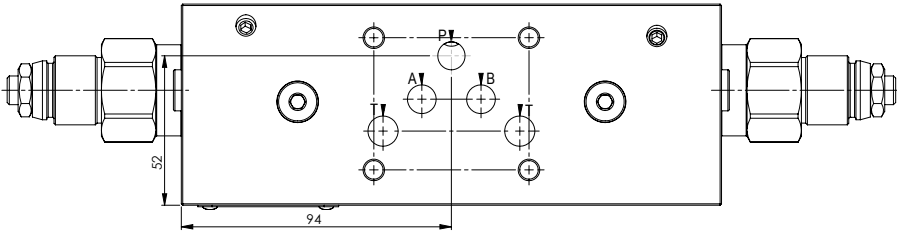


Technical data	
Max. pressure	250 bar
Max. flow	100 lpm *
Weight	3,4 Kg
Manifold material	Aluminium



N°	Description	Q.ty
1	Bosch Rexroth counterbalance valve <b>VBSN-12A</b> *	2
2	OR 2050 i. Ø 12,42 cross section 1,78	5
3	Ø 6,5 through hole for mounting	4

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue



H5914

Ordering code

H	5	9	1	4	A	-	-	-	-	-	-	-
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Hydrover product

Product series  
59 series - Cetop 5 modular valves

Product ID

Manifold material  
Aluminium

Counterbalance valve adjustment type on A \*  
Screw = S

Counterbalance valve adjustment pressure range on A \*  
70-210 bar = 2  
140-350 bar = 3

Counterbalance valve  
pilot ratio  
on B \*  
4 = 4:1  
8 = 8:1

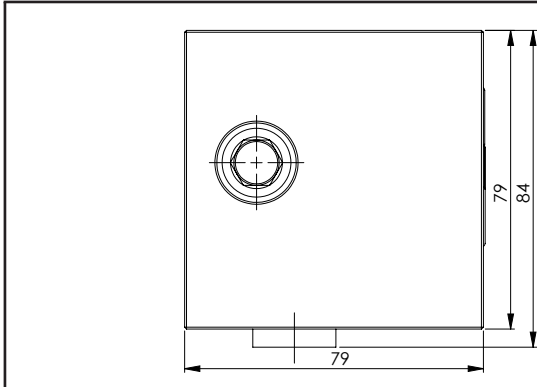
Counterbalance valve  
adjustment pressure range  
on B \*  
2 = 70-210 bar  
3 = 140-350 bar

Counterbalance valve  
adjustment type on B \*  
Screw  
S =

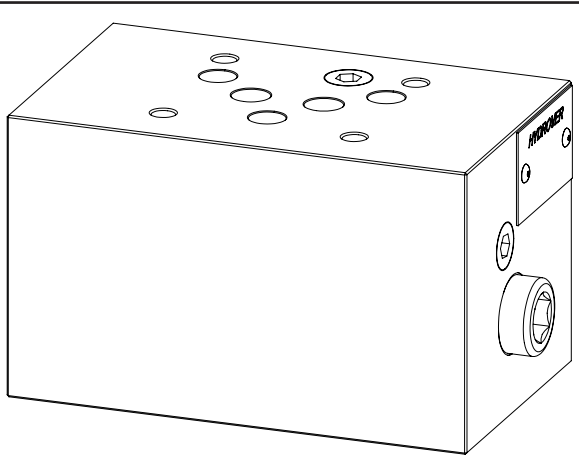
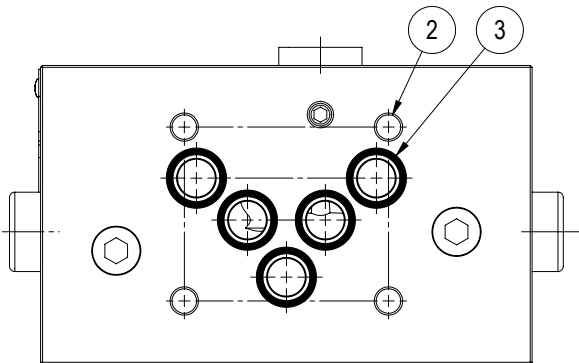
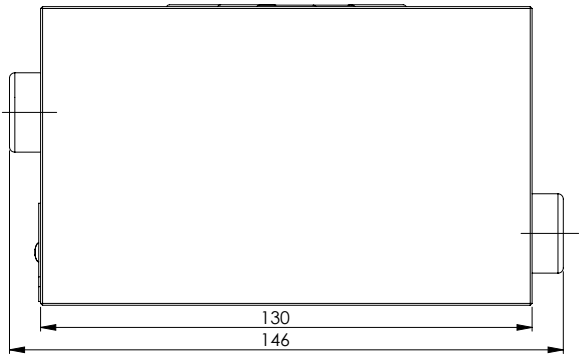
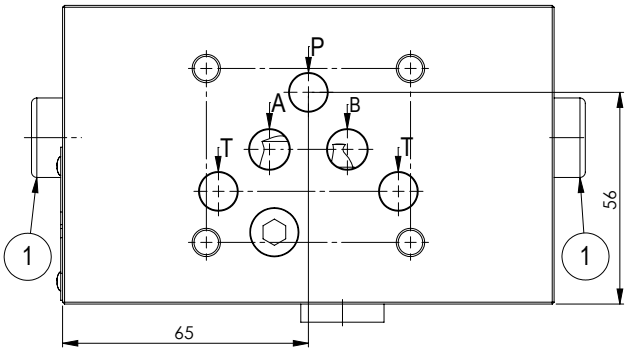
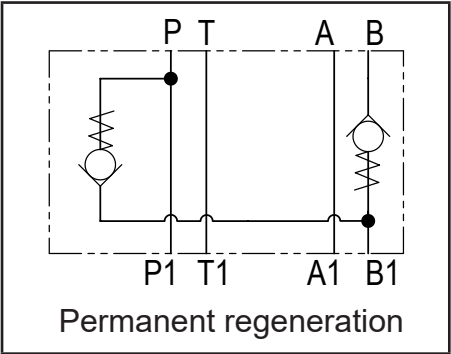
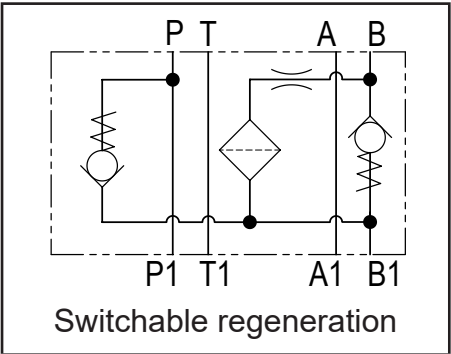
Counterbalance valve  
pilot ratio on A \*  
4 = 4:1  
8 = 8:1

\* Omit if not required. To order the product without the counterbalance cartridge valves, omit the adjustment type, pressure range and pilot ratio options: H5914A.  
The manifold will still be provided with the corresponding cavities.

Cetop 5 modular valve with permanent or switchable regenerative control **H5905**



Technical data	
Max. pressure	350 bar
Input max. flow	60 lpm*
Regenerated max. flow	60 lpm*
* The sum of both must not exceed the maximum flow rate allowed by the Cetop 5 solenoid valve.	
Weight	2,2 Kg
Manifold material	Steel



N°	Description	Q.ty
1	Bosch Rexroth check valve <b>VUM1.060</b>	2
2	Ø 6,5 through hole for mounting	4
3	OR 2050 i. Ø 12,42 cross section 1,78	5

Ordering code

H	5	9	0	5	S	-	-	-
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### Hydrover product

## Product series

## 59 series - Cetop 5 modular valves

Product ID

### Regeneration type

$$|RP =$$

### Permanent regeneration

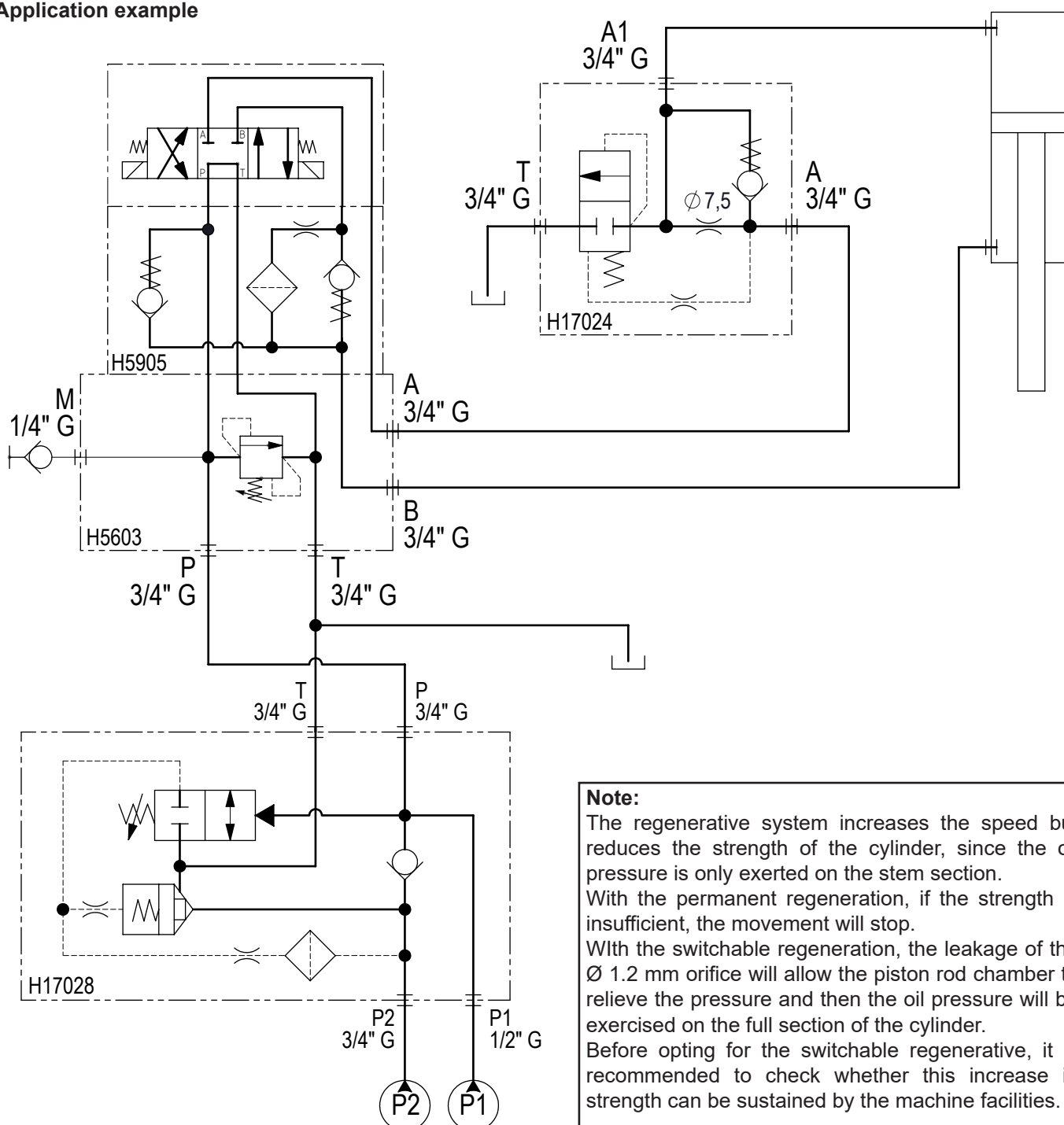
RE =

### Switchable regeneration

## Manifold material

Steel

### Application example



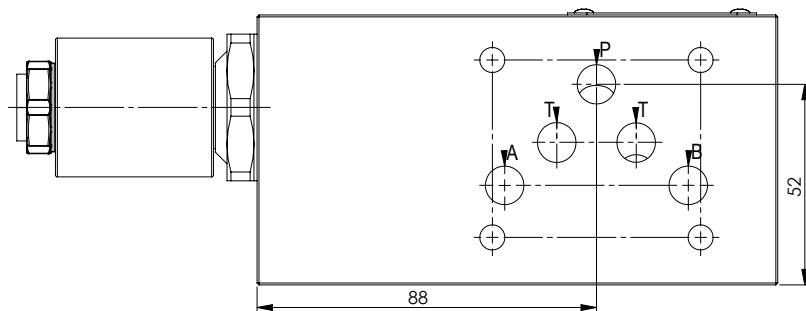
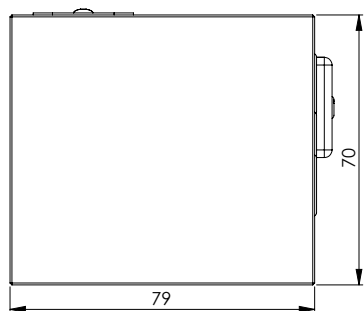
**Note:**

The regenerative system increases the speed but reduces the strength of the cylinder, since the oil pressure is only exerted on the stem section.

With the permanent regeneration, if the strength is insufficient, the movement will stop.

With the switchable regeneration, the leakage of the Ø 1.2 mm orifice will allow the piston rod chamber to relieve the pressure and then the oil pressure will be exercised on the full section of the cylinder.

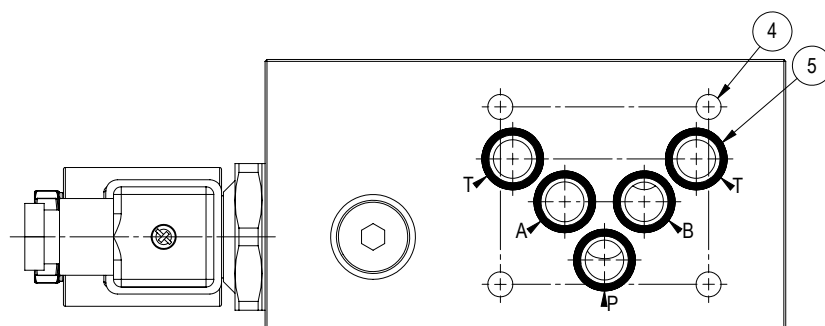
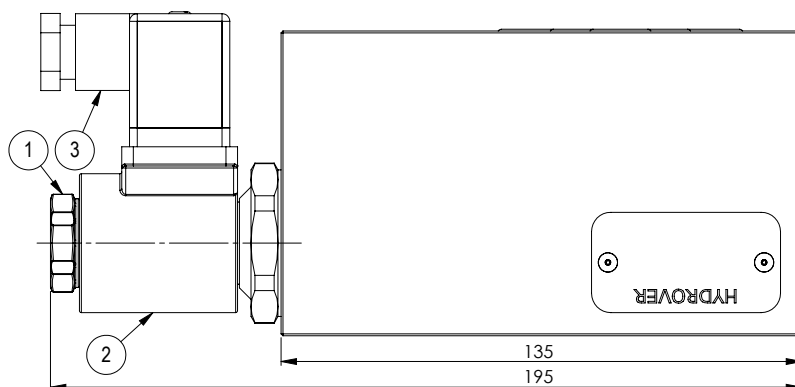
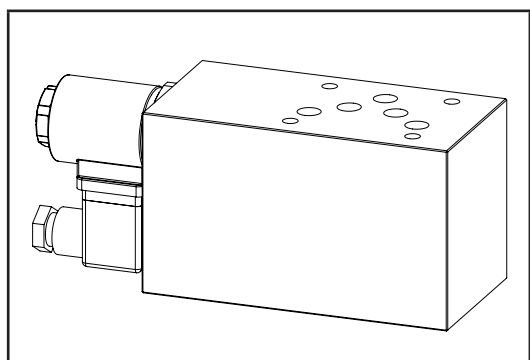
Before opting for the switchable regenerative, it is recommended to check whether this increase in strength can be sustained by the machine facilities.



*Dimensions in mm*

## Technical data

Max. pressure	250 bar
Max. flow	130 lpm *
Weight	2,4 Kg
Manifold material	Aluminium



N°	Description	Q.ty
1	Bosch Rexroth solenoid valve <b>VEI-16-021-NC OD.15-X-21-Y-000000</b> * (normally closed) or <b>VEI-16-021-NA OD.15-X-21-Y-000000</b> * (normally open)	1
2	Bosch Rexroth coil <b>D36</b> - CLASS H DIN 43650 ISO 4400 *	1
3	Connector DIN 43650 ISO 4400	1
4	Ø 6,5 through hole for mounting	4
5	OR 2050 i. Ø 12,42 cross section 1,78	5

*\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue*



Ordering code

H	5	9	2	4	A	-	-	-	-	-	-	-
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Hydrover product

Product series  
59 series - Cetop 5 modular valves

Product ID

Manifold material  
Aluminium

Solenoid valve spool type \*

Normally open	= NA
Normally closed	= NC
Normally open double lock	= 2A
Normally closed double lock	= 2C

Solenoid valve coil connection \*  
1 = DIN 43650 ISO 4400

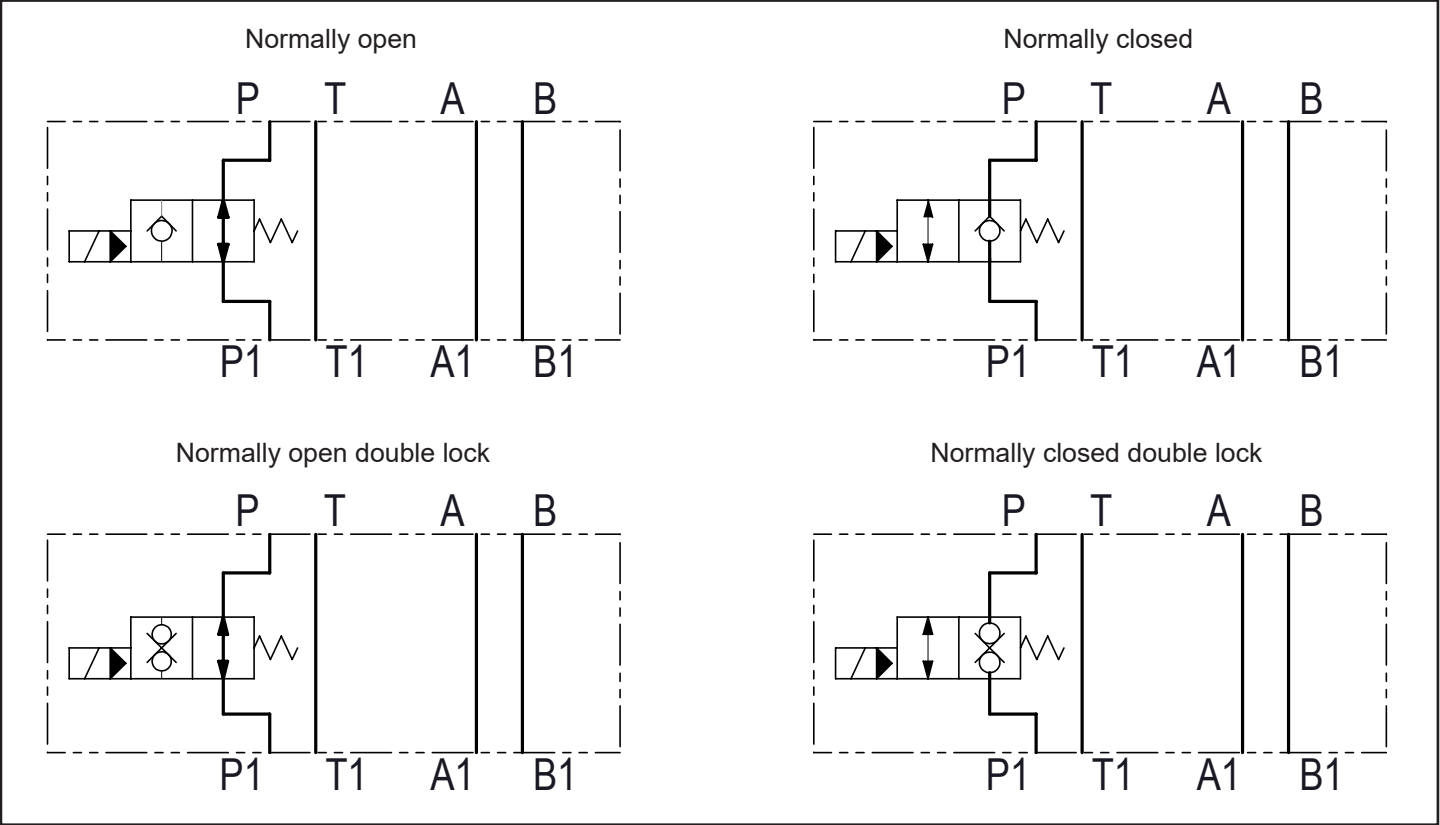
Solenoid valve coil voltage \*

OB =	12V DC
OC =	24V DC
OD =	48V DC
OU =	110V RAC
AH =	230V RAC

Solenoid valve manual override \*

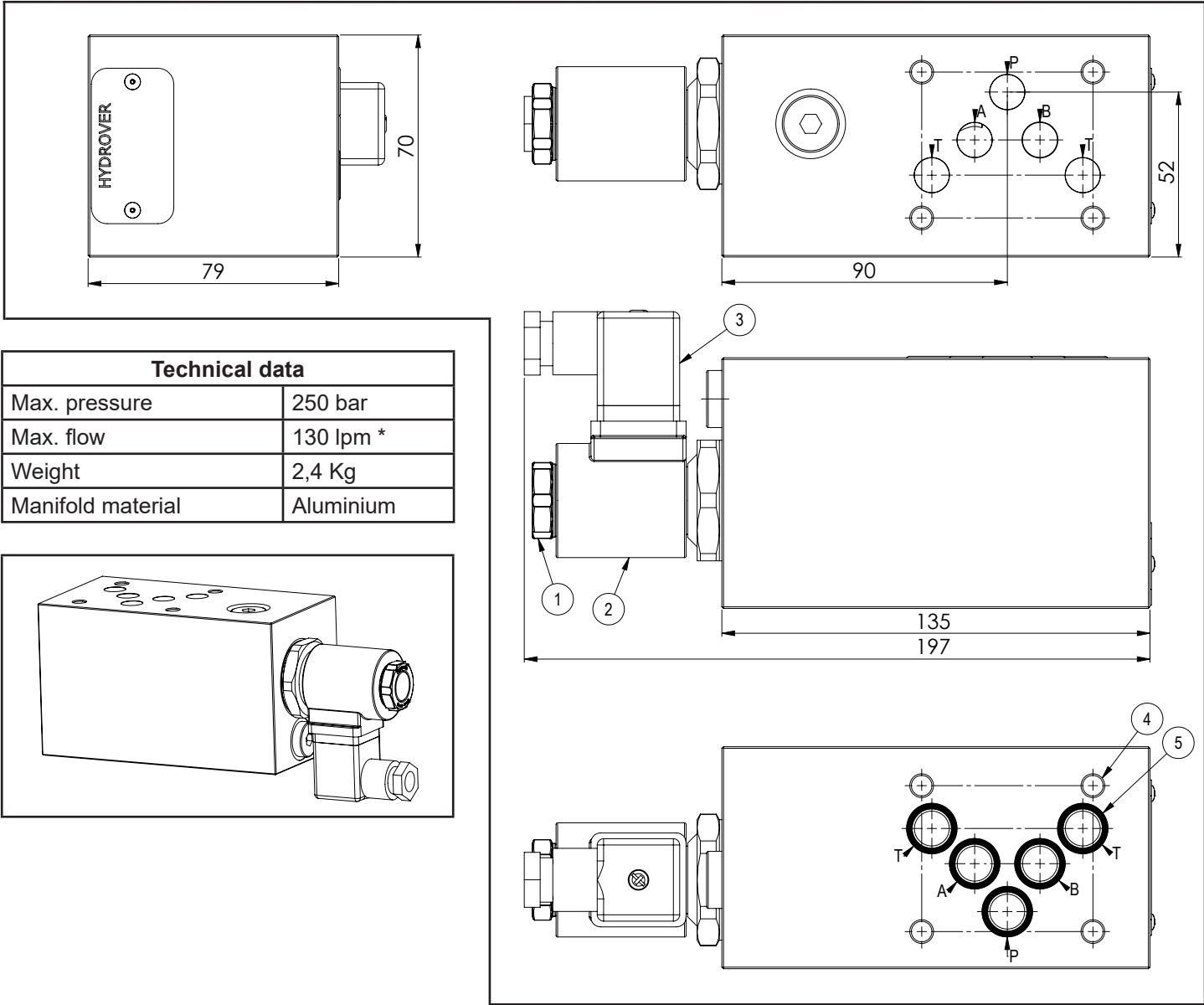
E0 =	Without
EP =	Push (NA, 2A)
EV =	Screw (NC, 2C)
EG =	Push and twist (NA, 2A)

\* Omit if not required. For example, to order the product without coil, omit the solenoid valve coil connection and coil voltage options: H5924A-NC-E0.

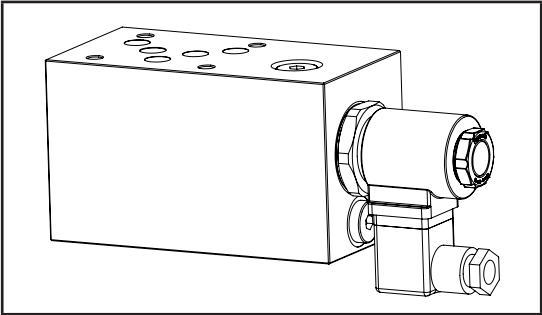


Cetop 5 modular poppet type solenoid operated directional valve between A1 and A

H5909



Technical data	
Max. pressure	250 bar
Max. flow	130 lpm *
Weight	2,4 Kg
Manifold material	Aluminium



N°	Description	Q.ty
1	Bosch Rexroth solenoid valve <b>VEI-16-021-NC OD.15-X-21-Y-000000</b> * (normally closed) or <b>VEI-16-021-NA OD.15-X-21-Y-000000</b> * (normally open)	1
2	Bosch Rexroth coil <b>D36</b> - CLASS H DIN 43650 ISO 4400 *	1
3	Connector DIN 43650 ISO 4400	1
4	Ø 6,5 through hole for mounting	4
5	OR 2050 i. Ø 12,42 cross section 1,78	5

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

Ordering code

H 5 9 0 9 A - - - - -

Hydrover product

Product series  
59 series - Cetop 5 modular valves

Product ID

Manifold material  
Aluminium

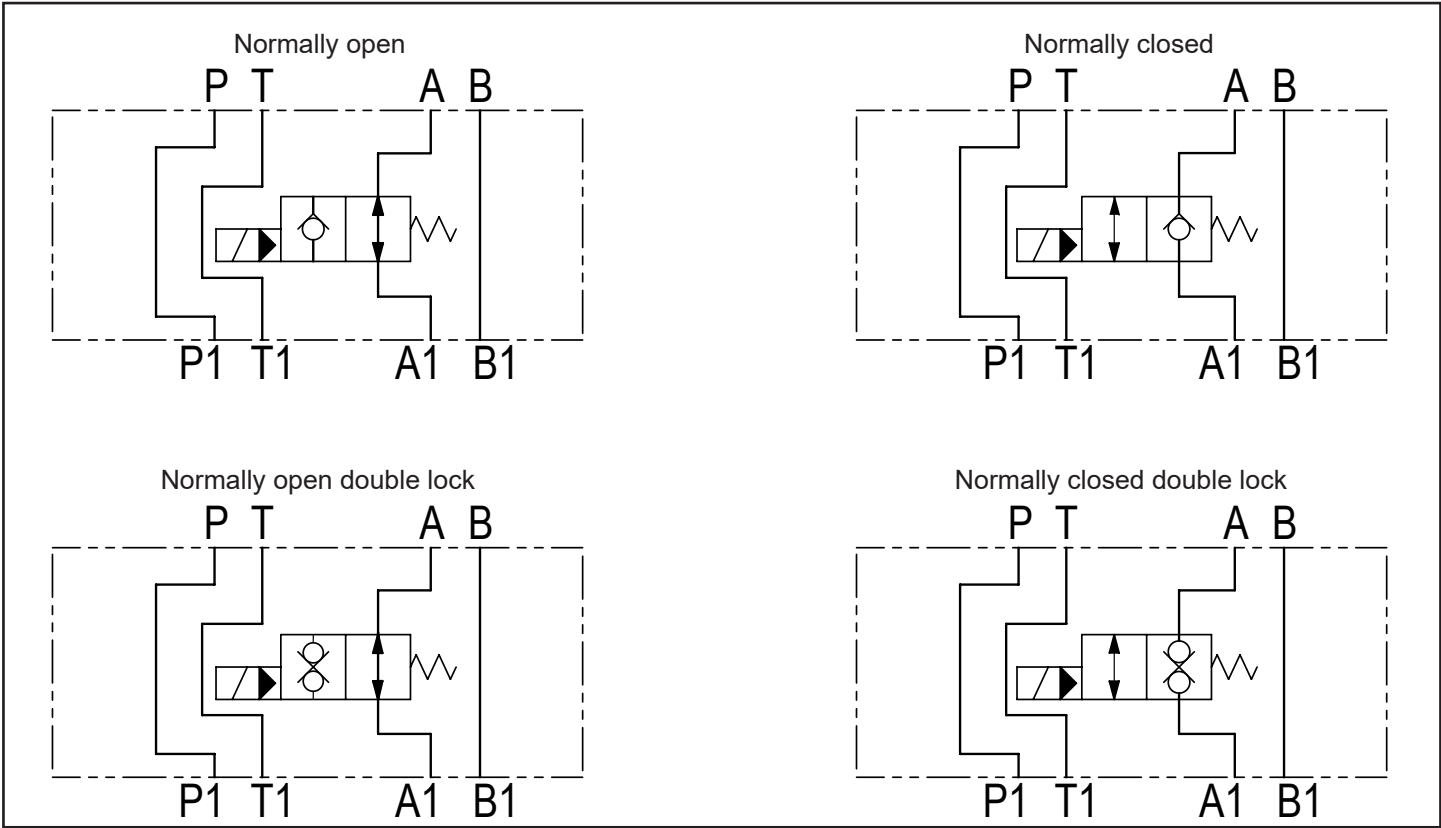
Solenoid valve spool type \*  
Normally open = NA  
Normally closed = NC  
Normally open double lock = 2A  
Normally closed double lock = 2C

Solenoid valve coil connection \*  
1 = DIN 43650 ISO 4400

Solenoid valve coil voltage \*  
OB = 12V DC  
OC = 24V DC  
OD = 48V DC  
OU = 110V RAC  
AH = 230V RAC

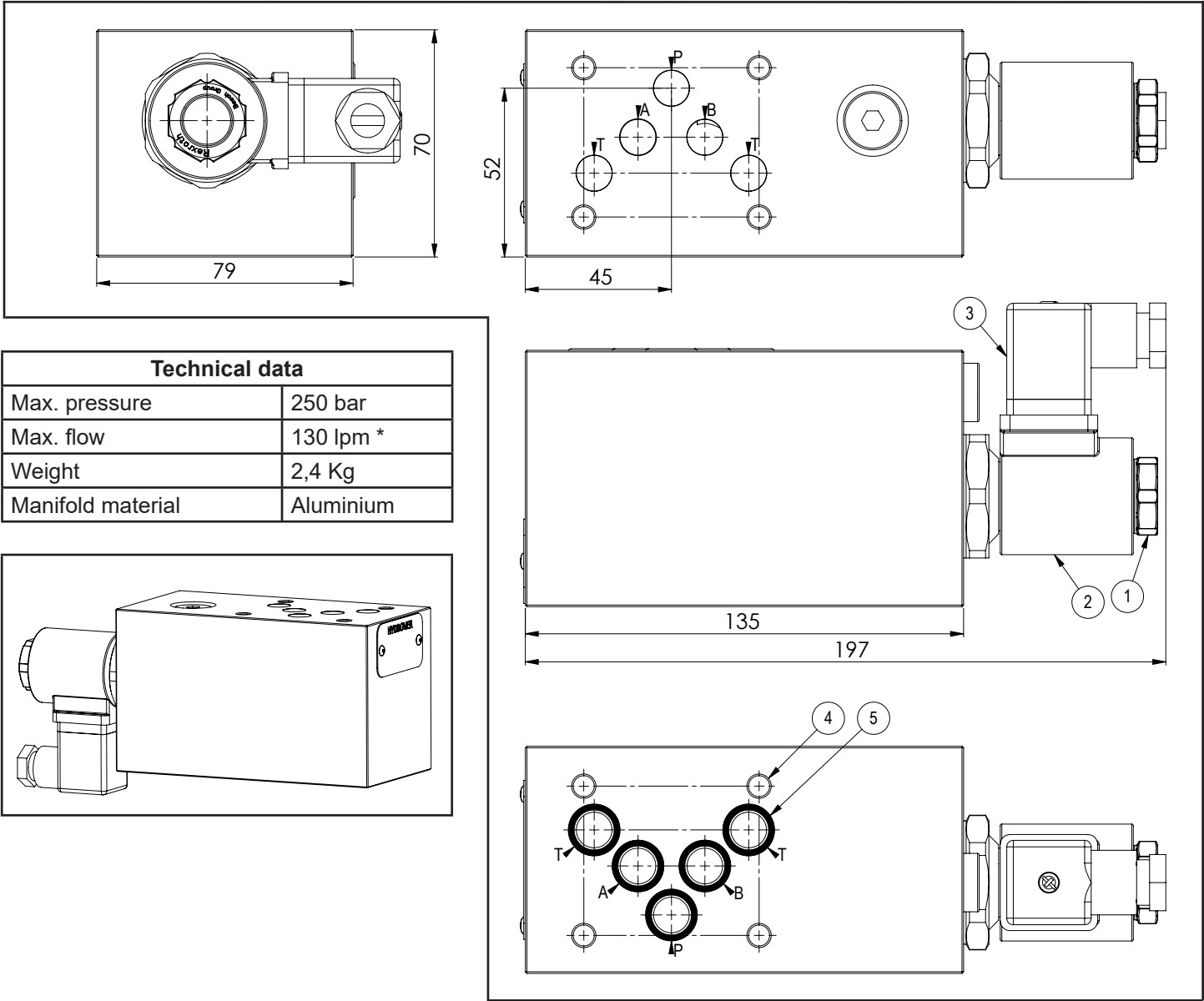
Solenoid valve manual override \*  
E0 = Without  
EP = Push (NA, 2A)  
EV = Screw (NC, 2C)  
EG = Push and twist (NA, 2A)

\* Omit if not required. For example, to order the product without coil, omit the solenoid valve coil connection and coil voltage options: H5909A-NC-E0.



Cetop 5 modular poppet type solenoid operated directional valve between B1 and B

H5910



N°	Description	Q.ty
1	Bosch Rexroth solenoid valve <b>VEI-16-021-NC OD.15-X-21-Y-000000</b> * (normally closed) or <b>VEI-16-021-NA OD.15-X-21-Y-000000</b> * (normally open)	1
2	Bosch Rexroth coil <b>D36</b> - CLASS H DIN 43650 ISO 4400 *	1
3	Connector DIN 43650 ISO 4400	1
4	Ø 6,5 through hole for mounting	4
5	OR 2050 i. Ø 12,42 cross section 1,78	5

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

Ordering code

H	5	9	1	0	A	-	-	-	-	-	-	-
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Hydrover product

Product series  
59 series - Cetop 5 modular valves

Product ID

Manifold material  
Aluminium

Solenoid valve spool type \*

Normally open	= NA
Normally closed	= NC
Normally open double lock	= 2A
Normally closed double lock	= 2C

Solenoid valve coil connection \*

1 = DIN 43650 ISO 4400

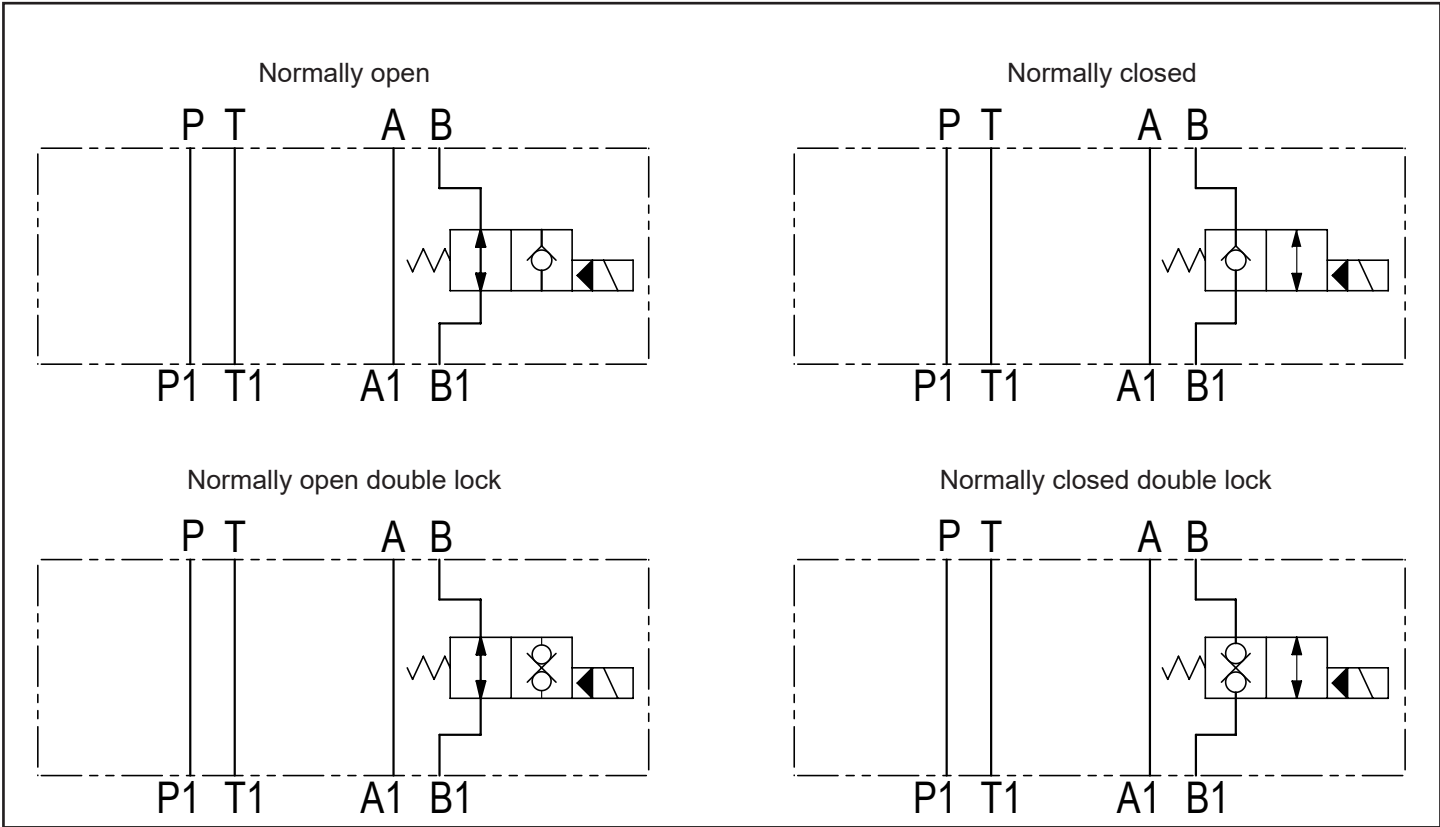
Solenoid valve coil voltage \*

OB =	12V DC
OC =	24V DC
OD =	48V DC
OU =	110V RAC
AH =	230V RAC

Solenoid valve manual override \*

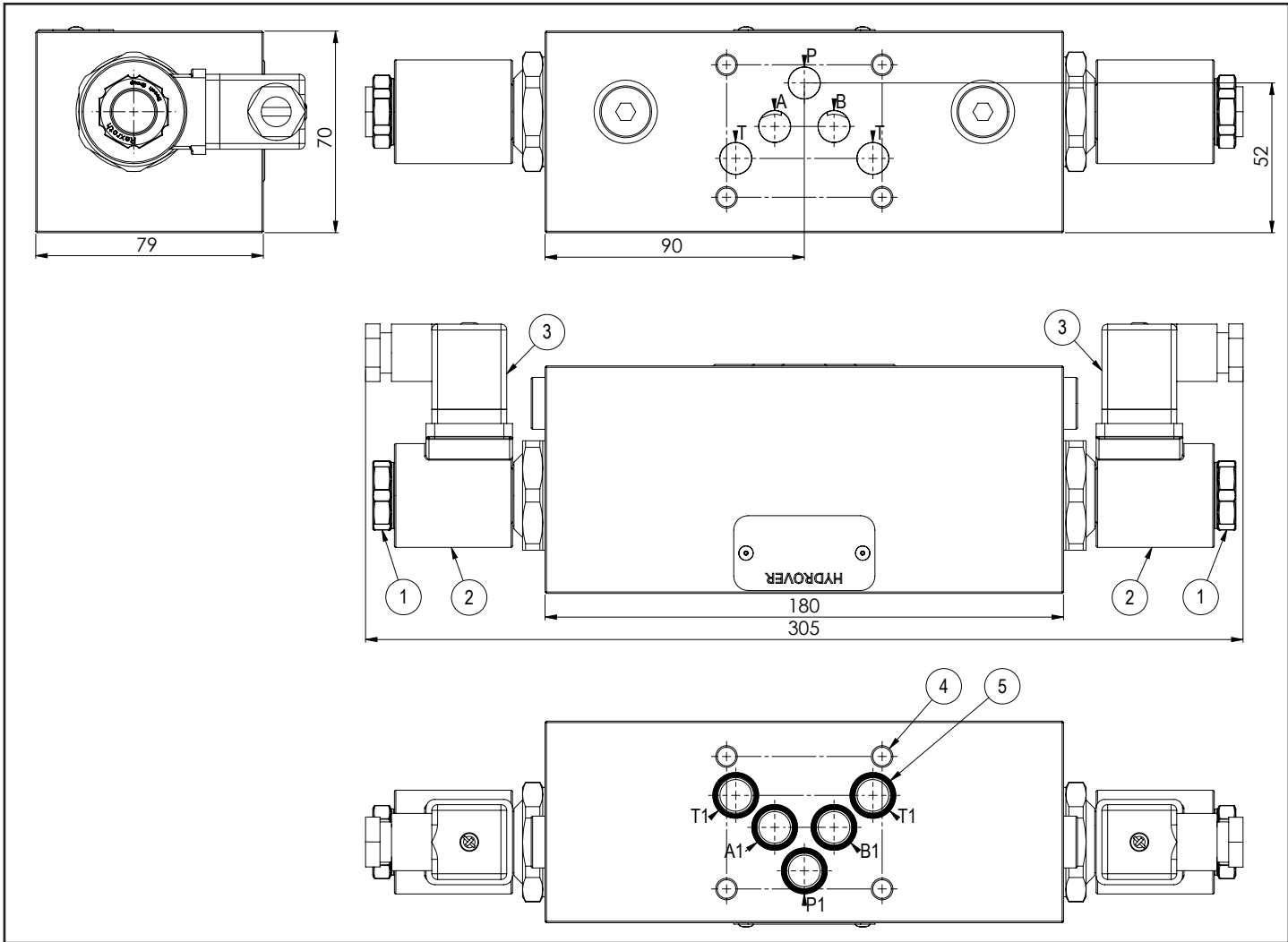
E0 =	Without
EP =	Push (NA, 2A)
EV =	Screw (NC, 2C)
EG =	Push and twist (NA, 2A)

\* Omit if not required. For example, to order the product without coil, omit the solenoid valve coil connection and coil voltage options: H5910A-NC-E0.

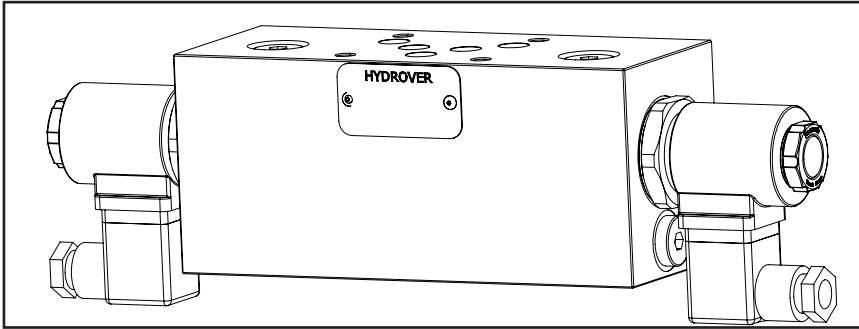


Cetop 5 modular poppet type solenoid operated directional valves  
between A1 and A / B1 and B

H5911



Technical data	
Max. pressure	Aluminium: 250 bar Steel: 350 bar
Max. flow	130 lpm *
Weight	Aluminium: 3,6 Kg Steel: 7,7 Kg
Manifold material	Aluminium or steel



N°	Description	Q.ty
1	Bosch Rexroth solenoid valve <b>VEI-16-021-NC OD.15-X-21-Y-000000</b> * (normally closed) or <b>VEI-16-021-NA OD.15-X-21-Y-000000</b> * (normally open)	2
2	Bosch Rexroth coil <b>D36</b> - CLASS H DIN 43650 ISO 4400 *	2
3	Connector DIN 43650 ISO 4400	2
4	Ø 6,5 through hole for mounting	4
5	OR 2050 i. Ø 12,42 cross section 1,78	5

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

Ordering code

H	5	9	1	1	-	-	-	-	-	-	-	-
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Hydrover product

Product series  
59 series - Cetop 5 modular valves

Product ID

Manifold material  
Aluminium = A  
Steel = S

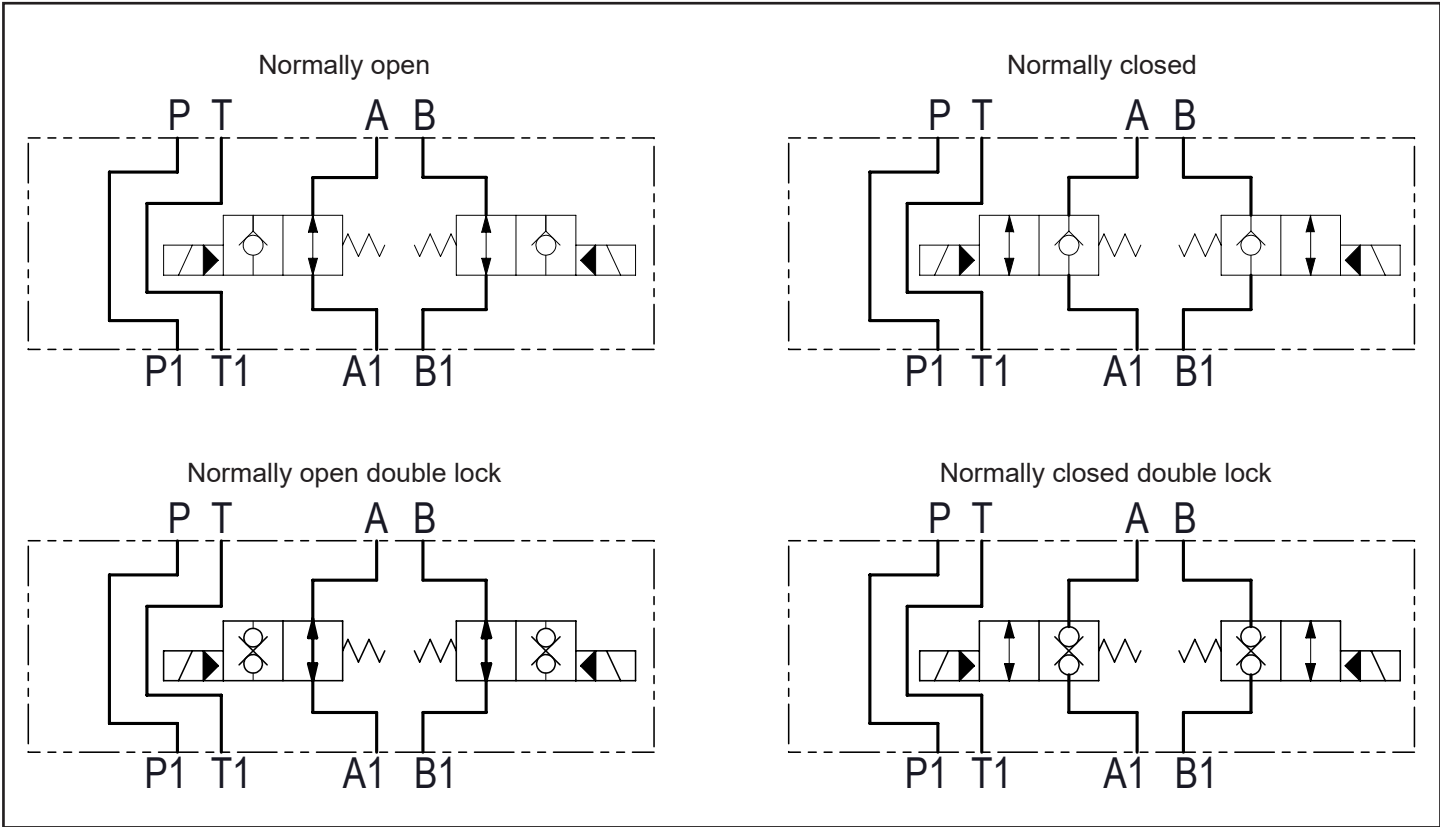
Solenoid valve spool type \*  
Normally open = NA  
Normally closed = NC  
Normally open double lock = 2A  
Normally closed double lock = 2C

Solenoid valves coil connection \*  
1 = DIN 43650 ISO 4400

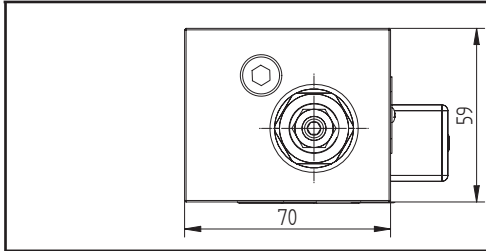
Solenoid valve coil voltage \*  
OB = 12V DC  
OC = 24V DC  
OD = 48V DC  
OU = 110V RAC  
AH = 230V RAC

Solenoid valves manual override \*  
E0 = Without  
EP = Push (NA, 2A)  
EV = Screw (NC, 2C)  
EG = Push and twist (NA, 2A)

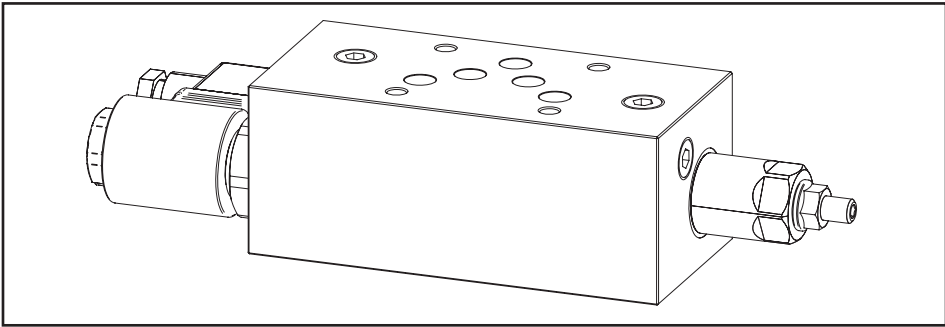
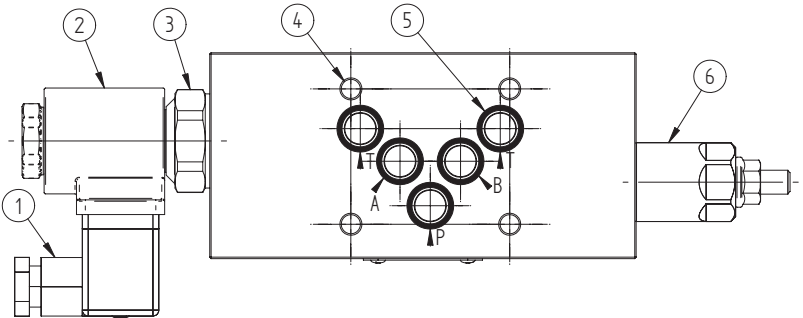
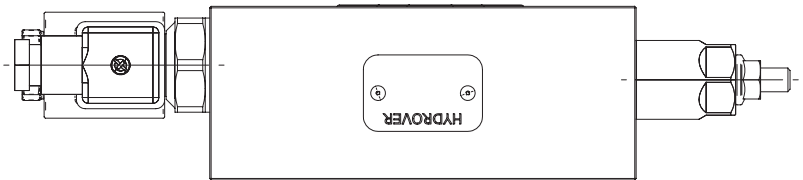
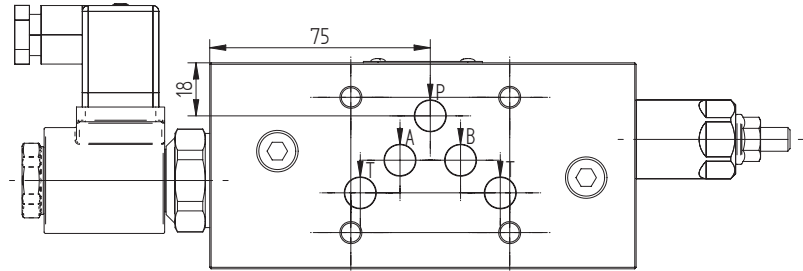
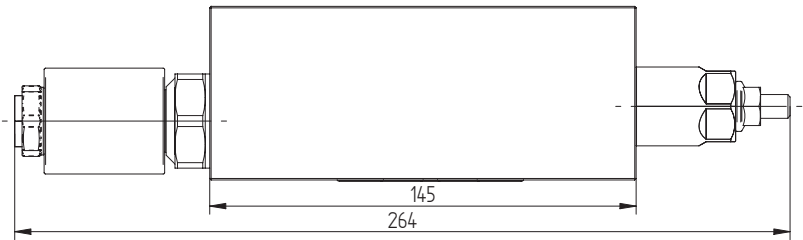
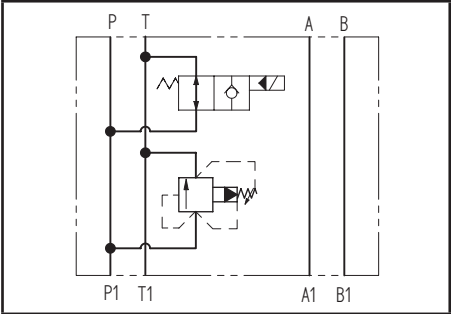
\* Omit if not required. For example, to order the product without coils, omit the solenoid valves coil connection and coil voltage options: H5911A-NC-E0.



Cetop 5 modular relief and bypass valve H5904



Technical data	
Max. pressure	250 bar
Max. flow	70 lpm *
Weight	2,1 Kg
Manifold material	Aluminium



Dimensions in mm

N°	Description	Q.ty
1	Connector DIN 43650 ISO 4400	1
2	Bosch Rexroth coil <b>D36</b> - CLASS H DIN 43650 ISO 4400 *	1
3	Bosch Rexroth solenoid valve <b>OD.15.06.17-Y-000000</b> depicted without manual override *	1
4	Ø 6,5 through hole for mounting	4
5	OR 2050 i. Ø 12,42 cross section 1,78	5
6	Bosch Rexroth relief valve <b>VSPN-10A</b> * depicted with screw adjustment	1

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue



Ordering code

H	5	9	0	4	A	-		-		-	
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## Hydrover product

## Product series

59 series - Cetop 5 modular valves

## Product ID

## Manifold material

Aluminium

### Relief valve adjustment type \*

Screw

$$= S$$

Knob

$$= K$$

**Relief valve adjustment pressure range \***

35-140 bar = 1

$$= 1$$

70-280 bar

$$= 2$$

140-420 bar

$$= 3$$

35-350 bar (adj. knob)

$$= 3$$

### Solenoid valve coil connection \*

1 = DIN 43650  
ISO 4400

**Solenoid valve  
coil voltage \***

OB = 12V DC

OC = 24V DC

OD = 48V DC

OU = 110V RAC

AH = 230V RAC

**Solenoid valve  
manual override \***

	mandar override	Without
E0 =		

EP = Without Push

EG = Push and twist

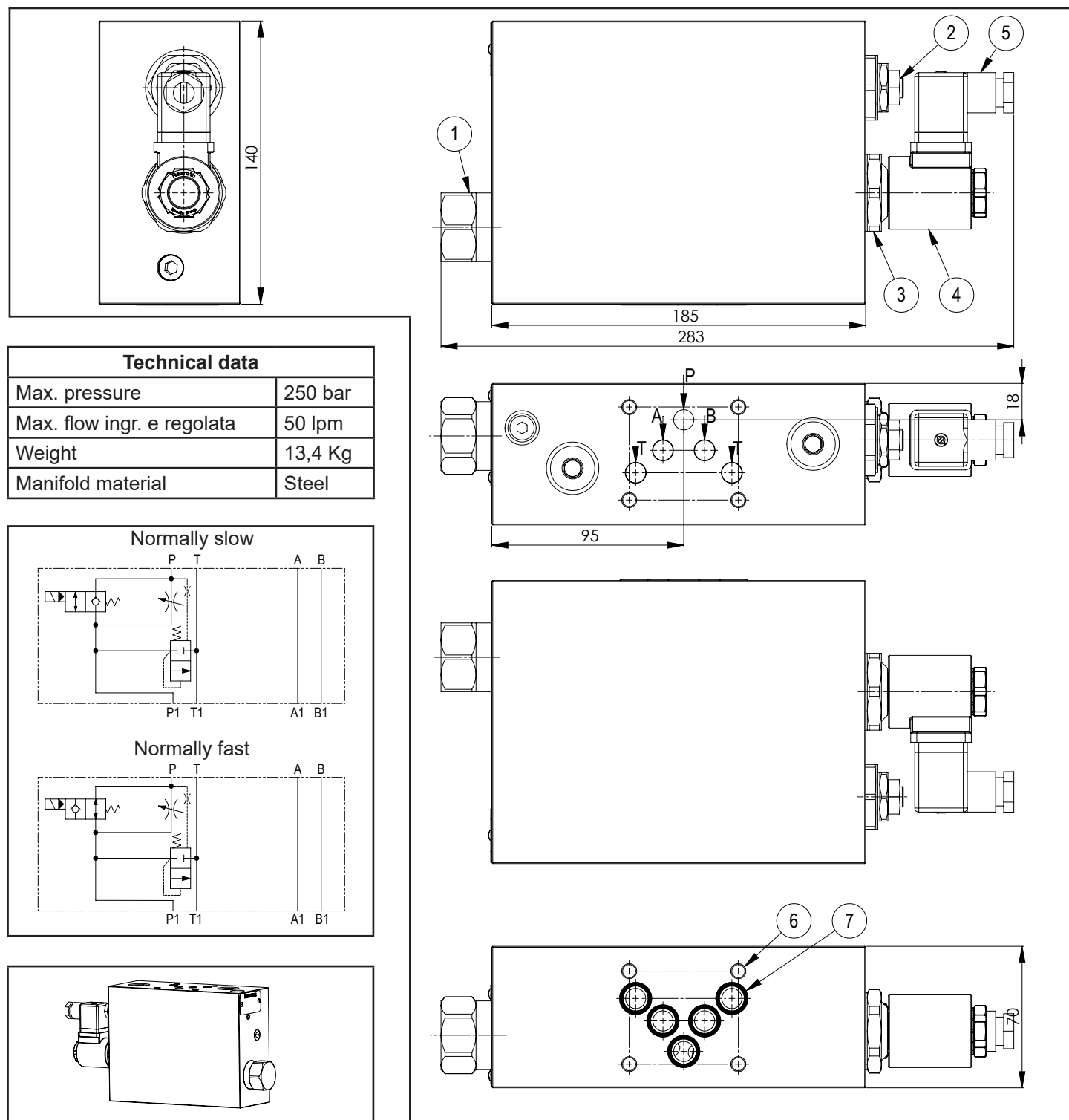
\* Omit if not required. To order the product without the relief cartridge valve, omit the pressure range and adjustment type options: eg. H5904A-E0-OC1.

The manifold will still be provided with the corresponding cavity.

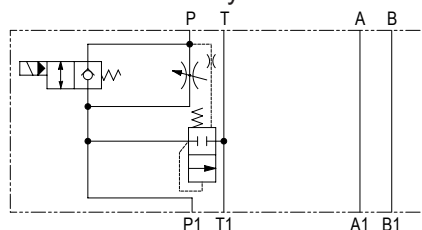
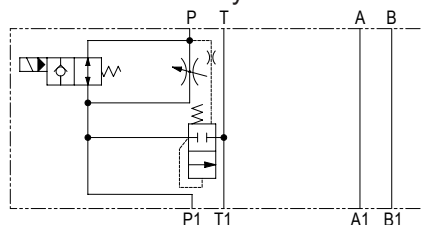
To inhibit the relief cartridge valve, replace the related options with TL: eq. H5904A-TL-E0-OC1.

In the cavity it will be mounted a long plug.

Valve	Cavity	Long plug code
Pressure relief valve VSPN-10A	CA-10A-2N	<b>0489A2008500000</b>


**Technical data**

Max. pressure	250 bar
Max. flow ingr. e regolata	50 lpm
Weight	13,4 Kg
Manifold material	Steel

**Normally slow**

**Normally fast**


N°	Description	Q.ty
1	Pressure compensator	1
2	Bosch Rexroth bidirectional flow restrictor <b>OD.21.01-X-04</b> * depicted with screw adjustment	1
3	Bosch Rexroth solenoid valve for fast slow function <b>VEI-16-021-NC OD.15.05.21-Y-000000</b> * (normally slow) o <b>VEI-16-021-NA OD.15.06.21-Y-000000</b> * (normally fast)	1
4	Bosch Rexroth coil <b>D36</b> - CLASS H DIN 43650 ISO 4400 *	1
5	Connector DIN 43650 ISO 4400	1
6	Ø 6,5 through hole for mounting	4
7	OR 2050 i. Ø 12,42 cross section 1,78	5

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

## Ordering code

H	5	9	0	8	S	-	-	Q	-	-	-	-	-	-	-	-	-
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**Hydrover product****Product series**

59 series - Cetop 5  
modular valves

**Product ID****Manifold material**

Steel

**Compensator spring**

Molla 5.5 bar (standard) = 6

Molla 12.5 bar = 1

Molla 19 bar = 2

**Flow regulator adjustment type**

Screw = S

Knob = K

**Fast slow  
solenoid  
valve****coil connection \***

1 = DIN 43650  
ISO 4400

**Solenoid valve  
coil voltage \***

OB = 12V DC

OC = 24V DC

OD = 48V DC

OU = 110V RAC

AH = 230V RAC

**Fast slow solenoid valve  
manual override \***

E0 = Without

EP = Push (NR)

EV = Screw (NL)

EG = Push and twist (NR)

**Slow or fast in normal position \***

NL = Normally slow

NR = Normally fast

\* Omit if not required. To order the product without the fast slow solenoid cartridge valve, omit the slow or fast in normal position, manual override, coil voltage and coil connection options: eg. H5908S1SQ.

The manifold will still be provided with the corresponding cavity.

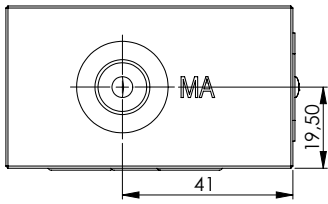
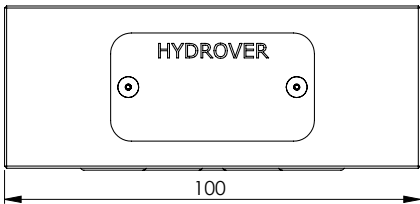
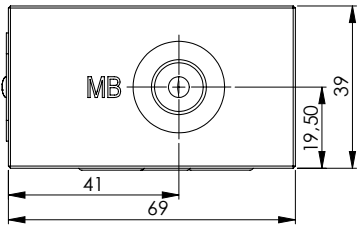
To inhibit the fast slow speed function, replace the related solenoid valve options with TL: eg H5908S1SQ-TL.

In the cavity it will be mounted a long plug.

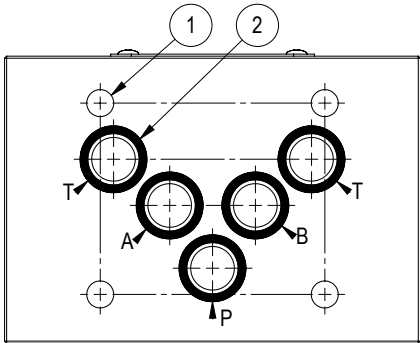
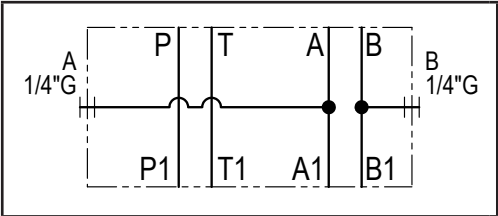
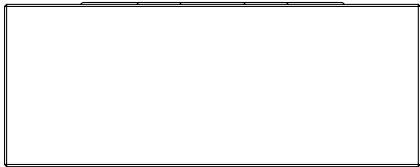
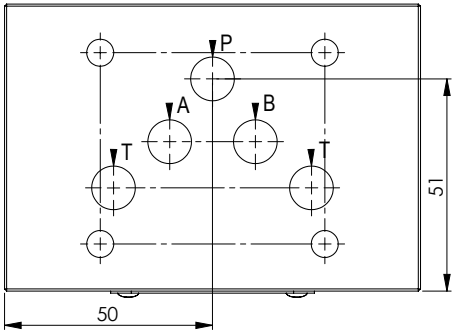
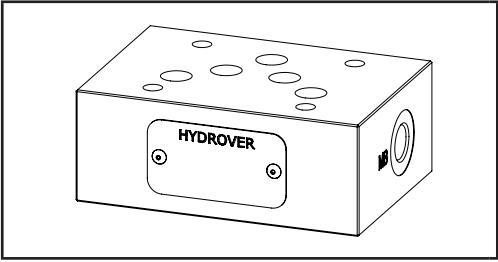
Valve	Cavity	Long plug code
Solenoid valve VEI-16-021-NC OD.15.05.21-Y-000000 / VEI-16-021-NA OD.15.06.21-Y-000000	021-E	R-800-015

Cetop 5 modular manifold with side additional A-B ports 1/4" G H5923

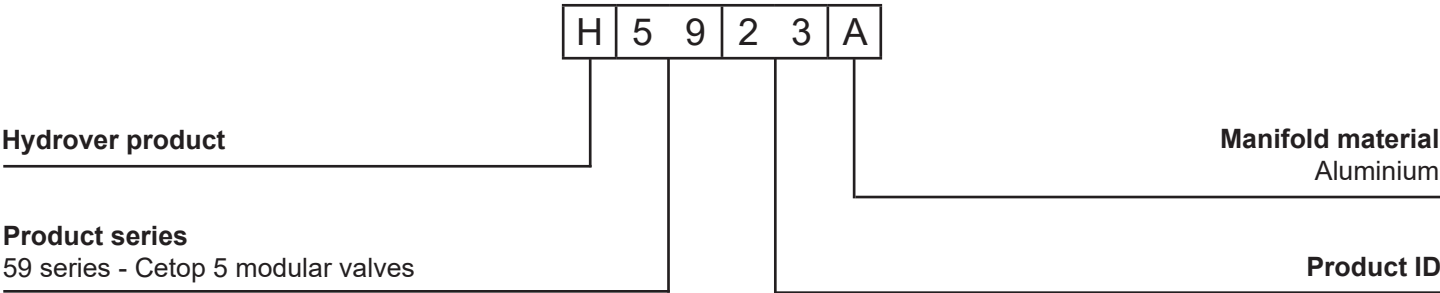
Dimensions in mm



Technical data	
Max. pressure	250 bar
Weight	0,7 kg
Manifold material	Aluminium
A / B ports	1/4" G



N°	Description	Q.ty
1	Ø 6,5 through hole for mounting	4
2	OR 2050 i. Ø 12,42 cross section 1,78	5





# ELECTRONIC CONTROLS

**Introduction**

This electronic control it's been developed to drive a solenoid proportional valve without integrated position transducer. The device is enclosed in a "OCTAL" plastic container with 8 pin standard circular connector (the typical circular relays connector).

The output stage operates in PWM high-frequency modulation and produces a sinusoidal dither signal whose value can be varied between 80 and 220Hz to fit most existing valve cursors.

The integrated current feedback allows a fine control versus solenoid temperature variations. The circuit also integrates a short-circuit protection, which is signaled by its overloaded LED (O. LOAD) and protection for supply voltage inversion. The green LED (SUPPLY) signals power supply presence, the two yellow LED (OUT A e OUT B) indicate the driving of the solenoid.

Minimum current (I.MIN), Maximum current (I.MAX), Rise ramp (R.UP) and Fall ramp (R.DW) can be calibrated with the trimmer on frontal panel.

Ramps can be excluded shorting input RAMP CONTROL (8) to supply voltage (the red LED "R.OFF" lights).

You can drive the valve wiring a 5 K Ohm or 10 K Ohm, potentiometer between pin 4 (+5V) and pin 1 (0V) with the tap on pin 3 (ref.) or giving a voltage (or current) reference between pin 3 (Ref.) and 0V pin 1 (-).

**Electrical wiring**

Wiring the card following the electric diagram and don't apply supply. Turn all the trimmer counterclockwise almost for ten turns, set the external potentiometer tap or the reference to zero. Turn on the card, check if the green led lights up and the yellow led stay off (no driving to the valve(s)). If not as described above, check wiring and if the external pot. tap is really turned to 0V.

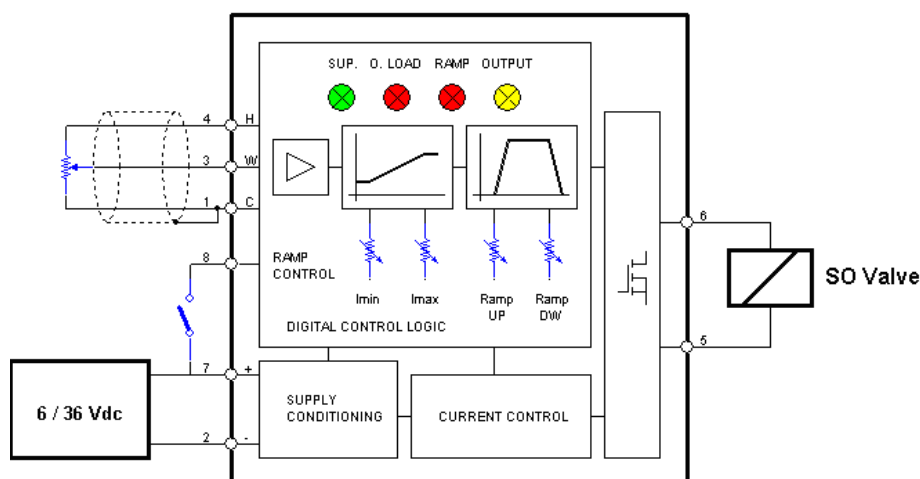


Diagram 1

1. Pot. 0V
2. Supply -
3. Pot. tap
4. Pot. +5V
5. Solenoid -
6. Solenoid +
7. Supply +
8. Ramp control

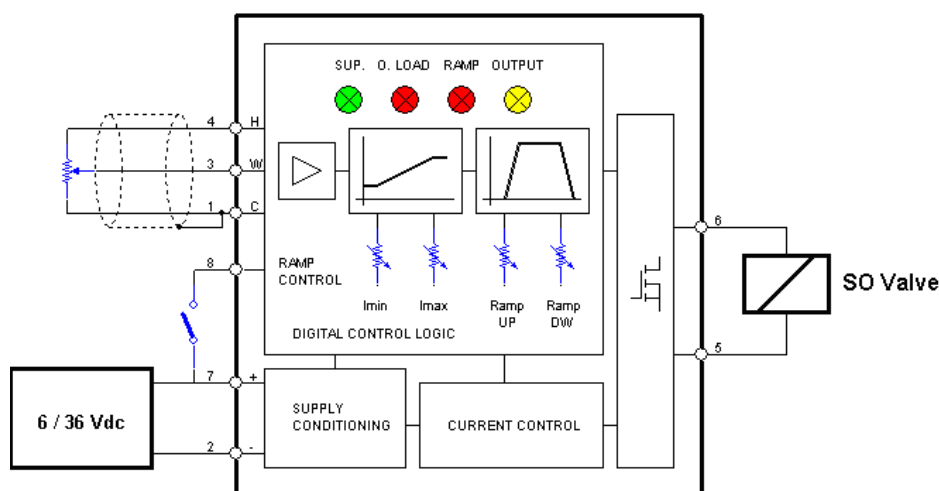


Diagram 2

1. Pot. 0V
2. Supply -
3. Reference (V or I)
4. Pot. +5V
5. Solenoid -
6. Solenoid +
7. Supply +
8. Ramp control



**Current calibration**

Turn the external potentiometer or the external reference to the minimum value that lights up the yellow led (OUT A on) and turn the trimmer I MIN until you obtain the minimum current required to drive the solenoid (see valve datasheet). Turn the external potentiometer or the external reference to its maximum value and then turn the trimmer I MAX until you obtain the maximum current required by the solenoid (see valve datasheet). Current value can be read inserting a voltmeter's tips in the red and black socket on PROPEL panel. You will read 1 VDC = 1Amp.

**Ramps setup**

If start and stop ramps are needed, disconnect the input on pin 8 (red led RAMP OFF turns off) and utilize the trimmer R.UP, R.DW to fix the rise and fall time needed. If you don't need ramps, simply short pin 8, Ramp Control, to +V (pin 7), the red led RAMP OFF turns on and the ramps will be disabled.

**Dip-Switch setup**

As you can see in the table below, the dither frequency can be fixed from 80Hz to 220Hz, refer to the solenoid datasheet to know the best dither frequency to use. Dip switch 1-2-3 fixes the various frequency.

1	2	3	Dither
OFF	OFF	OFF	80 Hz
OFF	OFF	ON	100 Hz
OFF	ON	OFF	120 Hz
OFF	ON	ON	140 Hz
ON	OFF	OFF	160 Hz
ON	OFF	ON	180 Hz
ON	ON	OFF	200 Hz
ON	ON	ON	220 Hz

Dip-switch 5 fixes the maximum output current allowable for the valve (OFF->1A, ON->2A)

Dip-switch -6-7-8 setup the input configuration, see the table below for the various possibilities:

6	7	8	Input (Pin 3)
OFF	OFF	OFF	0-5 V, Potenz. (diagram 1)
OFF	OFF	ON	0-10 V (diagram 2)
ON	OFF	OFF	0-20 mA (diagram 2)

**Normal operation**

Once you have ended the above setup, the system is ready to control the valves. Giving a set point to the input (~500mV when you use the potentiometer) the current flows to the solenoid starting from the minimum current, fixed with the trimmer I MIN, to the maximum current, fixed with the trimmer I MAX, when the set point is at maximum value. Of course the current to the valves will rise or fall with the time imposed by the ramps, if you disabled the ramps, the current will change immediately.

**Technical data**

Nominal Operating Voltage.....	12 ÷ 28 VDC
Max Operating Voltage .....	36 VDC
Nominal Power .....	48W
Nominal current .....	2,8A (12V) - 1,4A (24V)
Supply to external potentiometer.....	+5V
Minimum current swing (I min.) .....	0 ÷ 50%
Maximum current swing (I max.) .....	I Min ÷ 100%
Ramp time swing (R. up. – R. Dw.) .....	0 ÷ 10 sec.
Working temperature .....	-20 ÷ +80 °C
Potentiometric input ADC resolution.....	10 bit

**Ordering code**

H	6	1	0	1
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Hydrover product

Product ID

**Product series**

61 series - Electronic controls

## Introduction

This electronic control it's been developed to drive a double solenoid proportional valve without integrated position transducer. The device is enclosed in a "UNDECAL" plastic container with 11 pin standard circular connector (the typical circular relays connector).

The output stage operates in PWM high-frequency modulation and produces a sinusoidal dither signal whose value can be varied between 80 and 220Hz to fit most existing valve cursors.

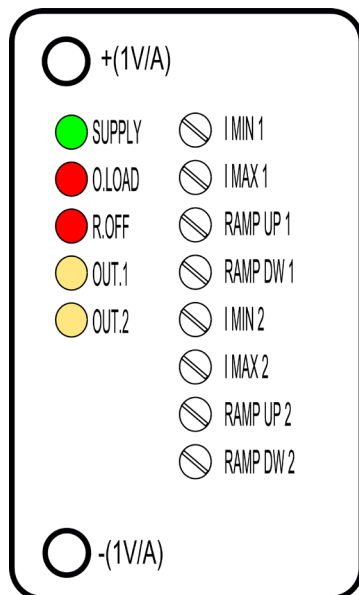
The integrated current feedback allows a fine control versus solenoid temperature variations. The circuit also integrates a short-circuit protection, which is signaled by its overloaded LED (O. LOAD) and protection for supply voltage inversion. The green LED (SUPPLY) signals power supply presence, the two yellow LED (OUT A e OUT B) indicate the driving of the solenoid.

Minimum current (I.MIN), maximum current (I.MAX), rise ramp (R.UP) and fall ramp (R.DW) can be calibrated with the trimmer on frontal panel.

Ramps can be excluded shorting input RAMP CONTROL (3) to supply voltage (the red LED “R.OFF” lights).

You can drive the valve(s) wiring a 5 K Ohm or 10 K Ohm, potentiometer between pin 10 (+5V) and pin 8 (0V) with the tap on pin 9 (ref.) or giving a reference set point between pin 9 (Ref.1) or pin 2 (Ref.2) and 0V pin 2 (-).

## Control panel

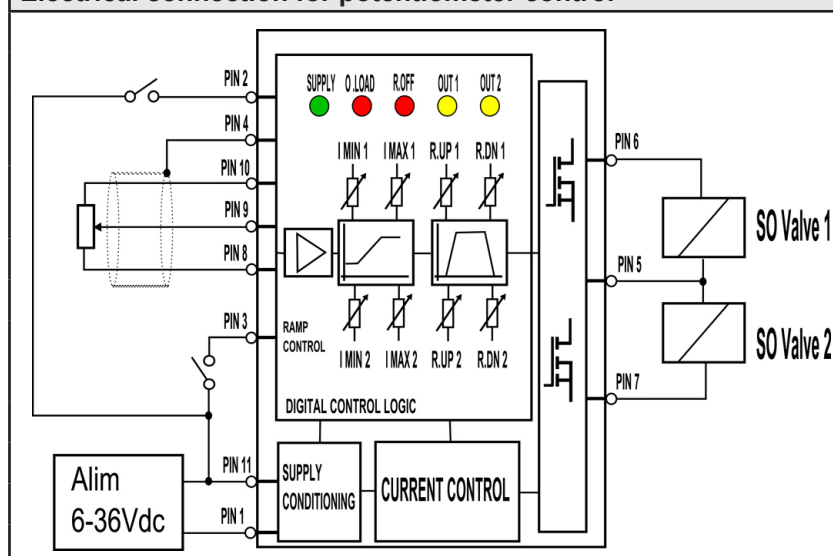


Control	Description
SUPPLY	Supply present
O.LOAD	Overload protection
R.OFF	Rise/fall ramp OFF
OUT.1	Output-solenoid 1 ON
OUT.2	Output-solenoid 2 ON
I MIN 1	OUT1 minimum current calibration
I MAX 1	OUT1 maximum current calibration
RAMP UP 1	OUT1 Rise ramp calibration
RAMP DW 1	OUT1 Fall ramp calibration
I MIN 2	OUT2 minimum current calibration
I MAX 2	OUT2 maximum current calibration
RAMP UP 2	OUT2 Rise ramp calibration
RAMP DW 2	OUT2 Fall ramp calibration
+ (1V/A) - (1V/A)	Voltmeter sockets for current measurement ( 1Volt = 1Ampere)

## Electric wiring

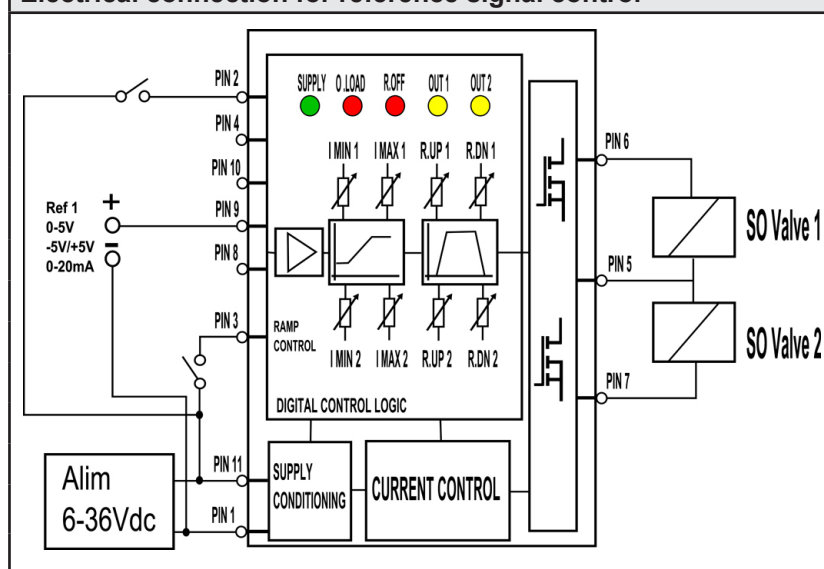
Wiring the card following the electric diagram and don't apply supply. Turn all the trimmer counterclockwise almost for ten turns, set the external potentiometer tap or the set point to midway (remember that you are using a double valve system). Turn on the card, check if the green led lights up and the yellow led stay off (no driving to the valve(s)). If not as described above, check wiring and if the external pot. tap is really turned to midway.

## Electrical connection for potentiometer control



PIN	Description
1	Supply (-)
2	Output selector (0V -> OUT1, +V -> OUT2)
3	Ramp control (0V -> Ramp ON, +V Ramp OFF)
4	Shield
5	Solenoid common (-)
6	Solenoid 1 (+)
7	Solenoid 2 (+)
8	Potentiometer 0V
9	Potentiometer tap
10	Potentiometer +5V
11	Supply (+)

## Electrical connection for reference signal control



PIN	Description
1	Supply (-)
2	Output selector (0V -> OUT1, +V -> OUT2) *note1
3	Ramp control (0V -> Ramp ON, +V Ramp OFF)
4	Shield
5	Solenoid common (-)
6	Solenoid 1 (+)
7	Solenoid 2 (+)
8	No connection
9	External reference
10	No connection
11	Supply (+)

\*Note1: in case of +5V/-5V input control signal, pin 2 works as output enable, in all other case pin 2 works as output selector.

## Current calibration

Turn the external potentiometer or the external reference set point to the minimum value that lights up the yellow LED (OUT1 ON) and turn the trimmer I MIN until you obtain the minimum current required to drive the solenoid and open valve cursor(see valve datasheet).

Turn the external potentiometer or the external reference set point to its maximum value and then turn the trimmer I MAX until you obtain the maximum current required by the solenoid (see valve datasheet). Current value can be read inserting a voltmeter's tips in the red and black socket on PROPEL panel. You will read 1 VDC = 1Amp.

Repeat the above operations for OUT 2 selecting Pin 2 ON (+V)

## Ramps setup

If start and stop ramps are needed, disconnect the input pin 3 (red LED R.OFF turns off) and utilize the trimmer R.UP (1 and 2), R.DW (1 and 2) to fix the rise and fall time needed.

If you don't need ramps, simply short pin 3, Ramp Control, to +V (pin 11), the red led R. OFF turns on and the ramps will be disabled.

Dip-Switch setup

As you can see in the table below, the dither frequency can be fixed from 80Hz to 220Hz. Dip switch 1-2-3 fixes the various frequency.

1	2	3	Freq dither
OFF	OFF	OFF	80Hz
ON	OFF	OFF	90Hz
OFF	ON	OFF	100Hz
ON	ON	OFF	110Hz
OFF	OFF	ON	120HZ
ON	OFF	ON	140Hz
OFF	ON	ON	160Hz
ON	ON	ON	180Hz

Dip-switch 4 fixes the the dither level percentage.

DIP4	% dither
OFF	MAX
ON	MIN

Dip-switch 6-7-8-12 setup the reference input type and the functionality of the input PIN 2.

DIP6	DIP7	DIP8	DIP12	Reference input	PIN 2	See image
OFF	OFF	OFF	OFF	0-5V or potentiometer	OUT selector	DIAG 1
OFF	OFF	ON	OFF	0-10V	OUT selector	DIAG 2
ON	OFF	OFF	OFF	0-20mA	OUT selector	DIAG 3
OFF	ON	OFF	ON	+5V 0 -5V	OUT enable	DIAG 4

0-5V

Diag 1

0-10V

Diag 2

0-20mA

Diag 3

+5V/-5V

Diag 4

Working

Once you have ended the above setup, the system is ready to control the valves.

Giving a set point to the input (~200mV when you use the potentiometer) the current flows to the solenoid starting from the minimum current, fixed with the trimmer I MIN, to the maximum current, fixed with the trimmer I MAX, when the set point is at maximum value.

Of course the current to the valves will rise or fall with the time imposed by the ramps, if you disabled the ramps, the current will change immediately.

Technical data	
Operating Voltage.....	12 ÷ 28 VDC
Max Operating Voltage.....	36 VDC
Nominal Power .....	48W
Nominal current .....	2,8A (12V) - 1,4A (24V)
Supply to external potentiometer.....	+5V
Minimum current swing (I min.) .....	0 ÷ 50%
Maximum current swing (I max.) .....	I Min ÷ 100%
Ramp time swing (R. up. – R. Dw.) .....	0 ÷ 10 sec.
Working temperature .....	-20 ÷ +80 °C
Potentiometric input ADC resolution.....	10 bit

Ordering code

H	6	1	0	2
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Hydrover product

Product ID

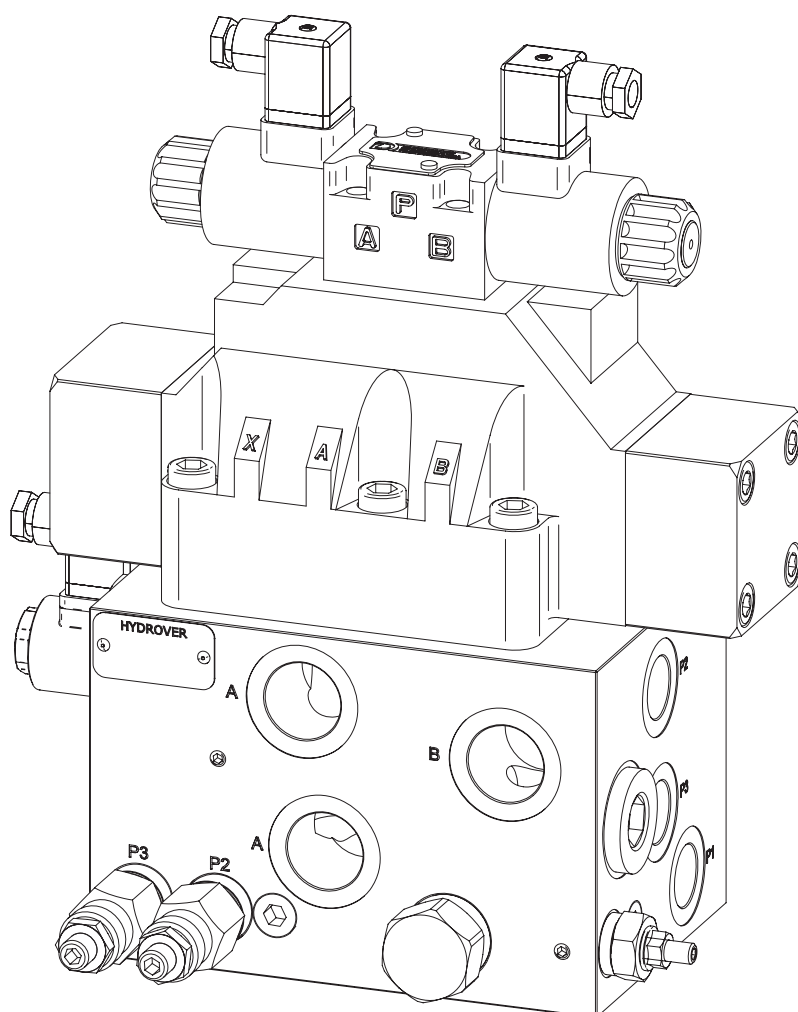
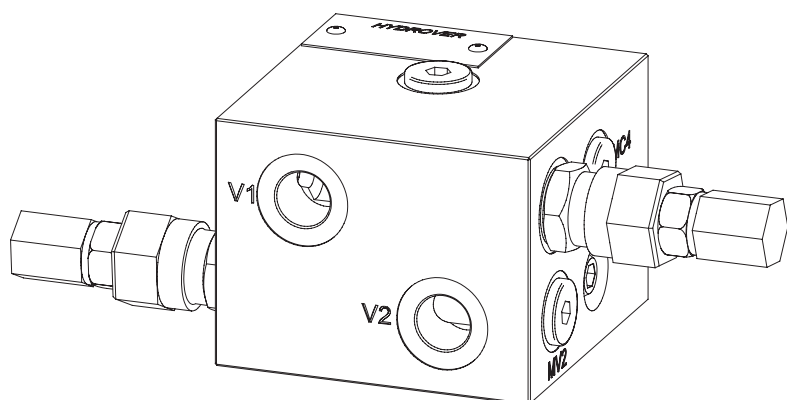
Product series  
61 series - Electronic controls



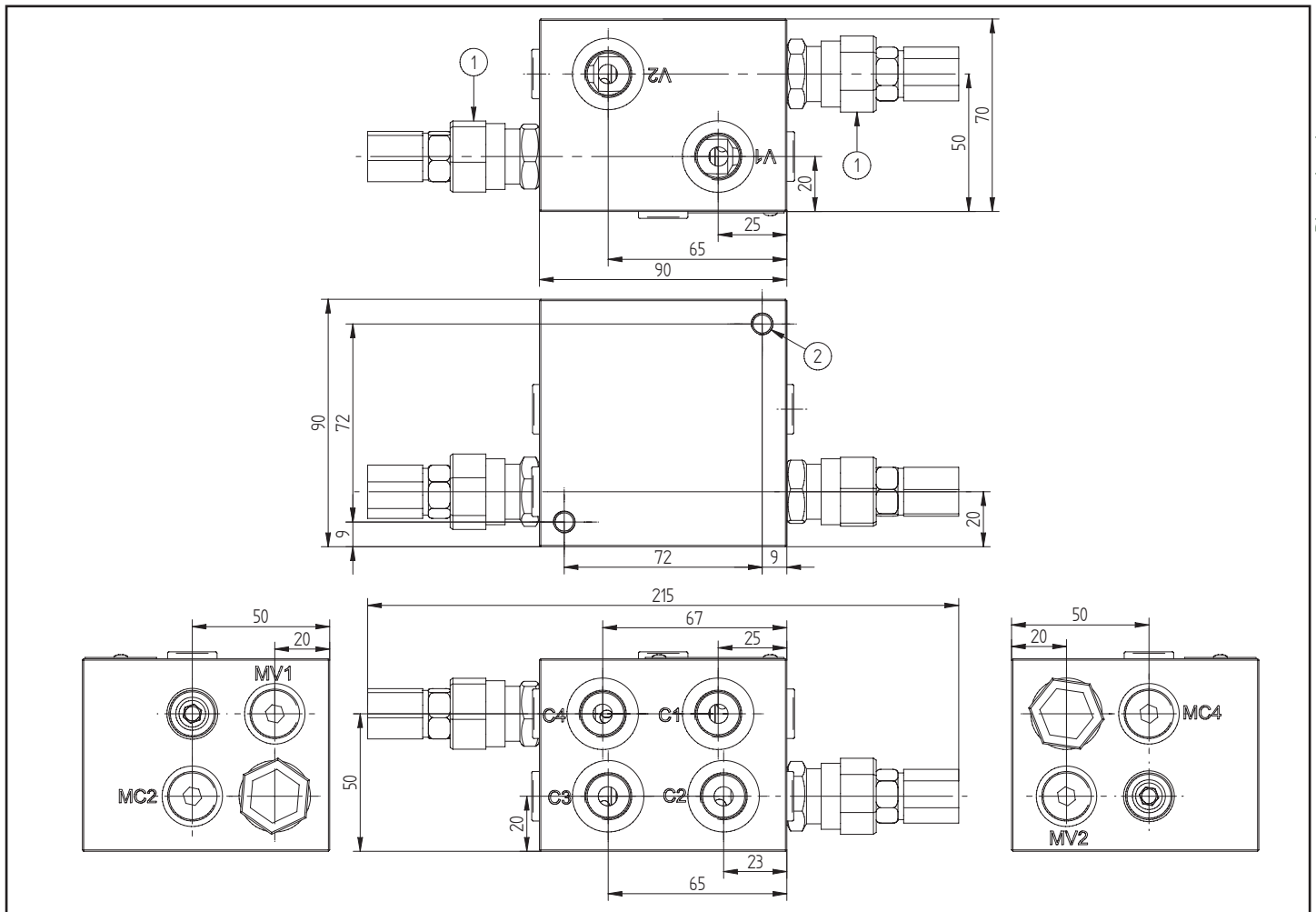


# 97 SERIES

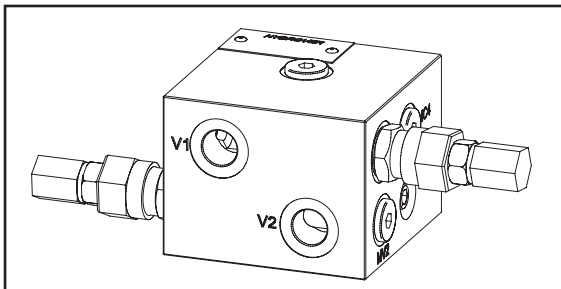
## Multifunctional integrated circuits



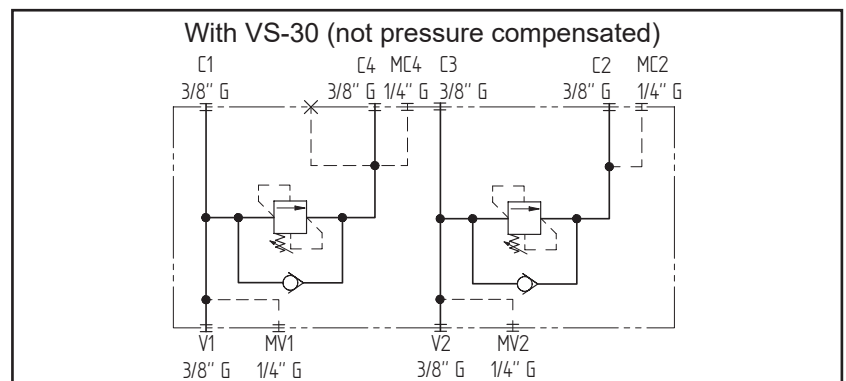
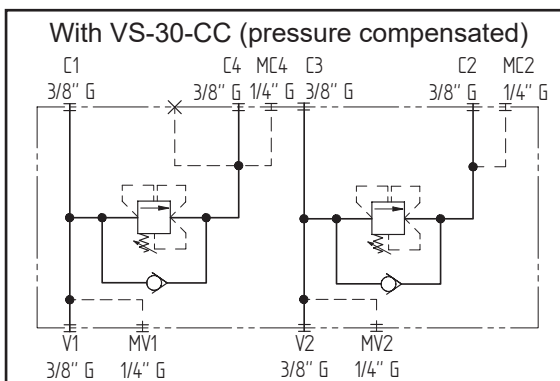
Integrated circuit with two sequence circuits 3/8" G **H97001**



*Dimensions in mm*



Technical data	
Max. pressure	250 bar
Max. flow per circuit	30 lpm *
Weight	2 Kg
Manifold material	Aluminium
MV1 / MV2 / MC2 / MC4 ports	1/4" G
V1 / V2 / C1 / C2 / C3 / C4 ports	3/8" G



N°	Description	Q.ty
1	Bosch Rexroth sequence valve <b>VS-30-CC</b> * (as depicted) or Bosch Rexroth relief valve <b>VS-30</b> *	2
2	M8x15 thread for mounting	2

*\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue*



Ordering code

H	9	7	0	0	1	A	-	-	-	-	-	-
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Hydrover product

Product series  
97 series - Multifunctional  
integrated circuits

Product ID

Manifold material  
Aluminium

Adjustment type for valve on V1\*  
Screw = S  
Knob (only for VS-30) = K

Pressure range adjustment for valve on V1 \*  
5-50 bar = 0  
30-100 bar = 1  
50-210 bar = 2  
100-350 bar = 3

V2 valve type \*  
S = VS-30-CC  
M = VS-30

Pressure range adjustment  
for valve on V2 \*  
0 = 5-50 bar  
1 = 30-100 bar  
2 = 50-210 bar  
3 = 100-350 bar

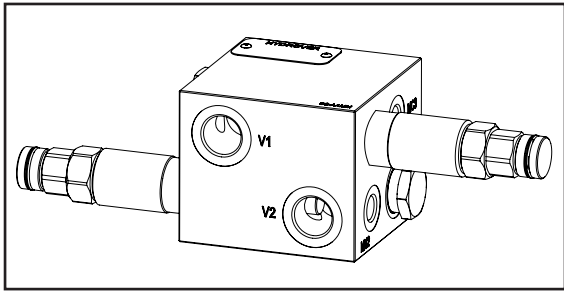
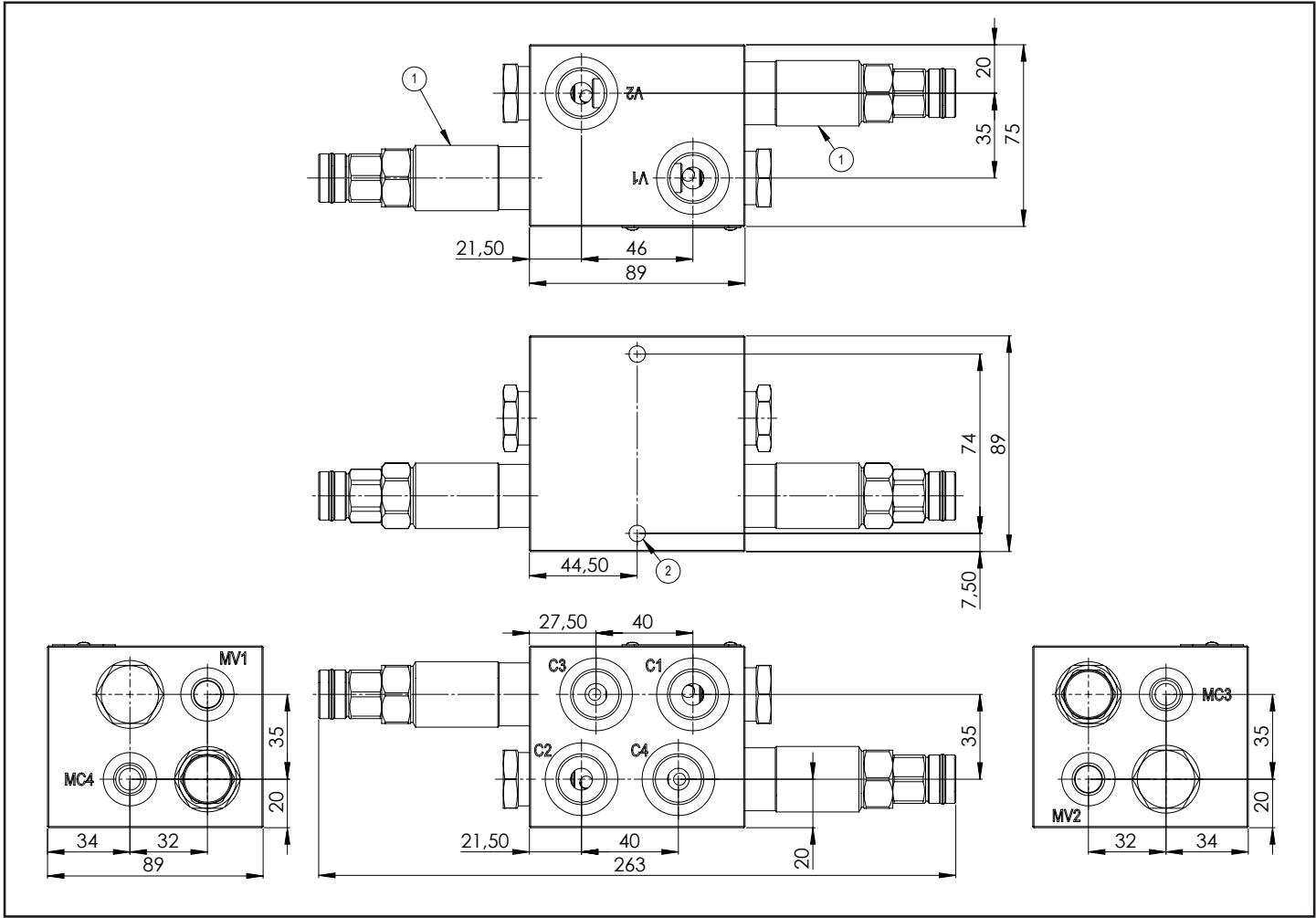
Adjustment type  
for valve on V2\*  
S = Screw  
K = Knob (only for VS-30)

V1 valve type \*  
S = VS-30-CC  
M = VS-30

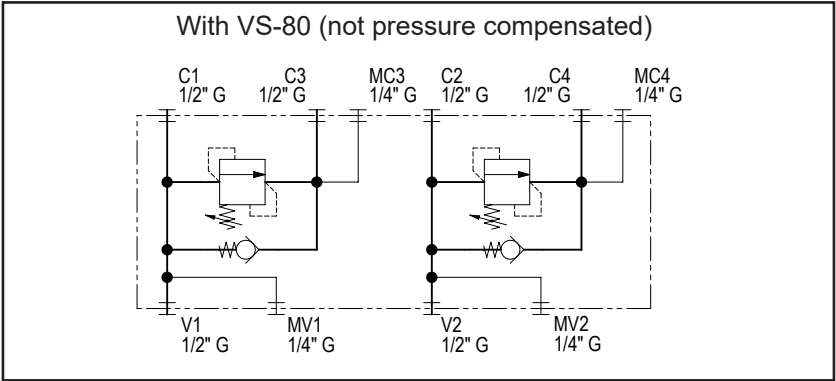
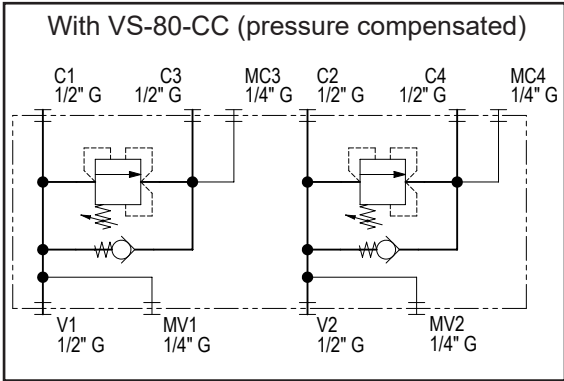
\* Omit if not required. To order the product without valves, omit their options: H97001A.  
The manifold will still be provided with the corresponding cavities.

Integrated circuit with two sequence circuits 1/2" G **H97063**

Dimensions in mm



Technical data	
Max. pressure	250 bar
Max. flow per circuit	80 lpm *
Weight	3 Kg
Manifold material	Aluminium
MV1 / MV2 / MC2 / MC4 ports	1/4" G
V1 / V2 / C1 / C2 / C3 / C4 ports	1/2" G



N°	Description	Q.ty
1	Sequence valve VS-80-CC * (as depicted) or Bosch Rexroth relief valve <b>VS-80</b> *	2
2	M8x15 thread for mounting	2

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

Ordering code

H	9	7	0	6	3	A	-	-	-	-	-	-
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Hydrover product

Product series  
97 series - Multifunctional integrated circuits

Product ID

Manifold material  
Aluminium

Adjustment type for valve on V1\*  
Screw = S  
Knob (only for VS-80) = K

Pressure range adjustment for valve on V1 \*  
VS-80-CC  
5-50 bar = 0  
25-100 bar = 1  
60-210 bar = 2  
100-350 bar = 3  
VS-80  
5-50 bar = 0  
30-100 bar = 1  
80-250 bar = 2  
140-350 bar = 3

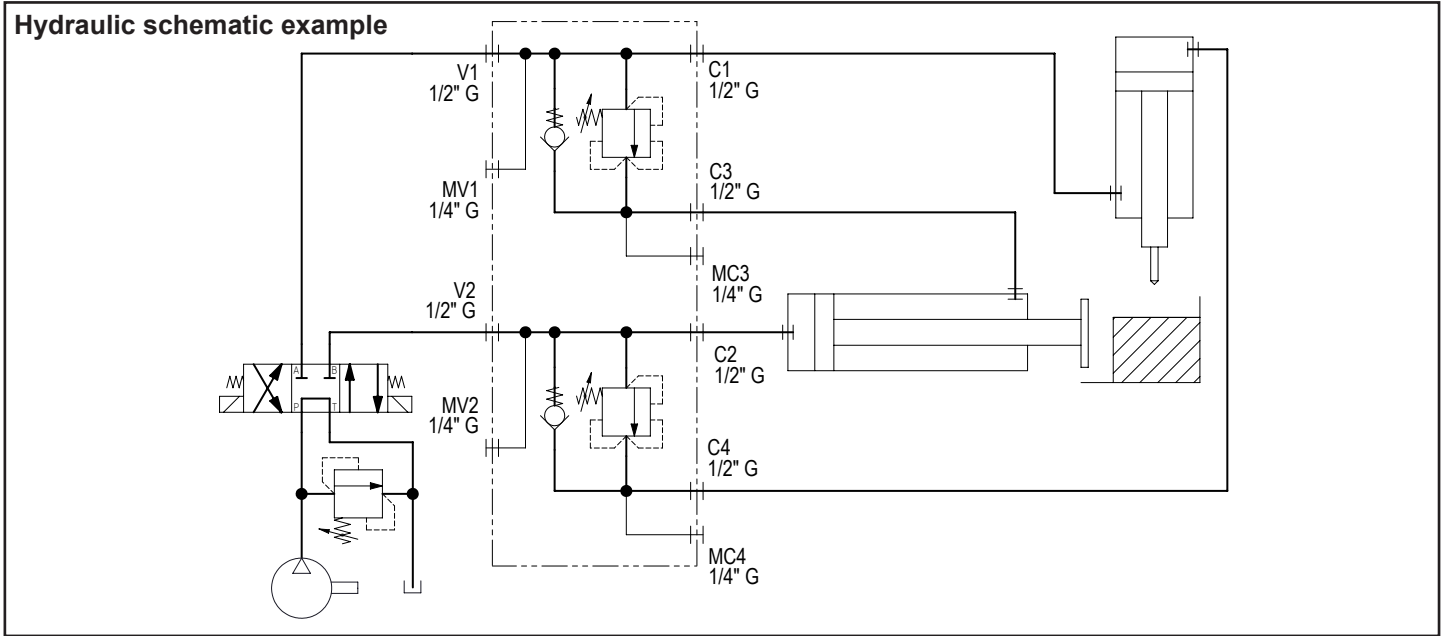
V2 valve type \*  
S = VS-80-CC  
M = VS-80

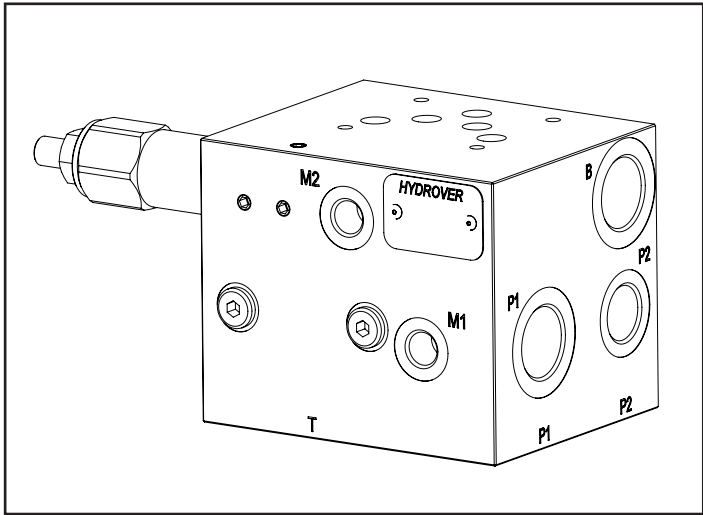
Pressure range adjustment for valve on V2 \*  
VS-80-CC  
0 = 5-50 bar  
1 = 25-100 bar  
2 = 60-210 bar  
3 = 100-350 bar  
VS-80  
0 = 5-50 bar  
1 = 30-100 bar  
2 = 80-250 bar  
3 = 140-350 bar

Adjustment type for valve on V2\*  
S = Screw  
K = Knob (only for VS-80)

V1 valve type \*  
S = VS-80-CC  
M = VS-80

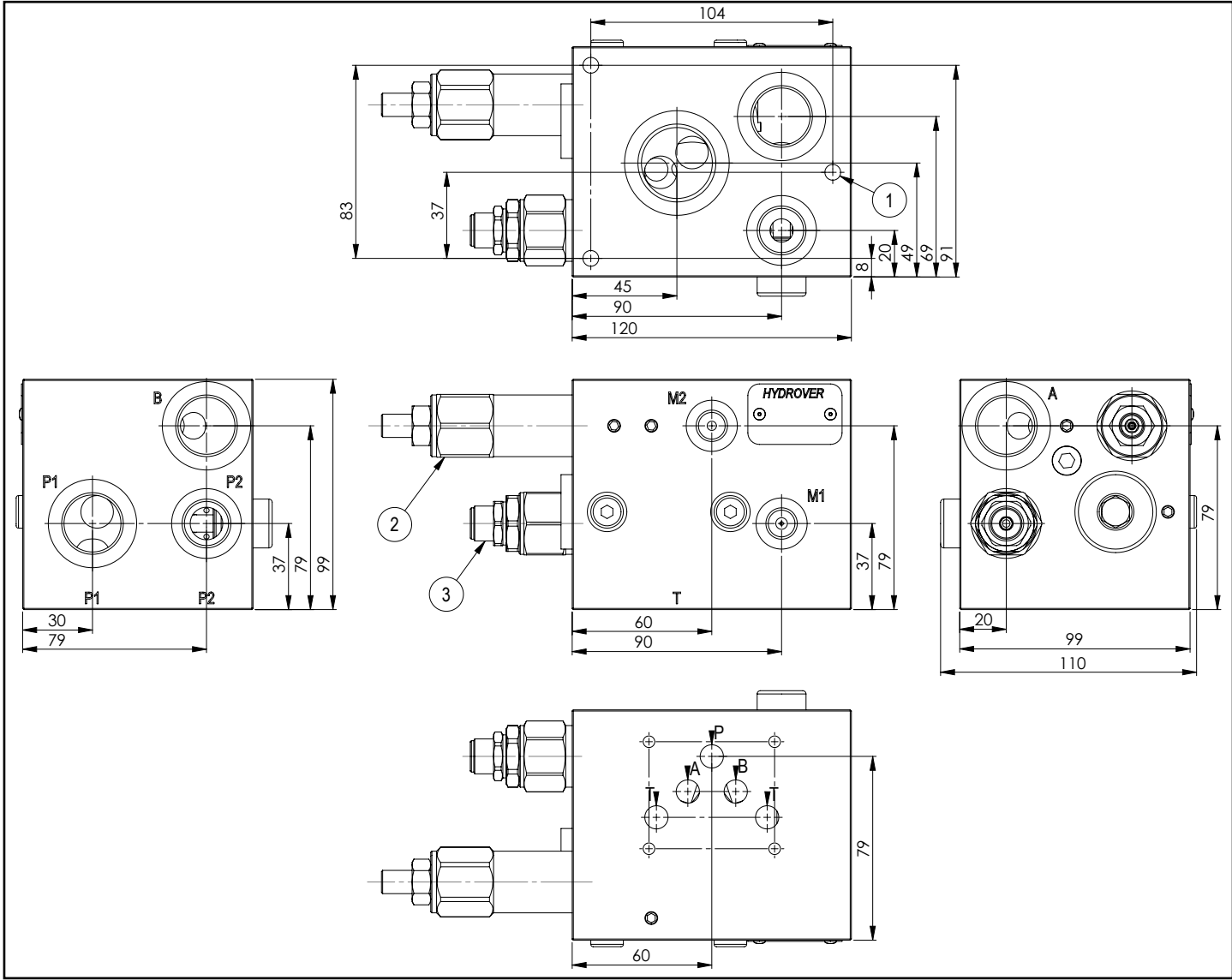
\* Omit if not required. To order the product without valves, omit their options: H97063A.  
The manifold will still be provided with the corresponding cavities.





Technical data	
Max. pressure	350 bar
P1 max. flow	80 lpm *
P2 max. flow	40 lpm *
Weight	8,3 Kg
Manifold material	Steel
M1 / M2 ports	1/4" G
P2/ P2 ports	1/2" G
P1/ P1 / A / B ports	3/4" G
T port	1" G
* The sum of the two pumps must not exceed 100 lpm.	

Dimensions in mm



N°	Description	Q.ty
1	M8x12 for mounting	3
2	Cutoff valve 20-180 bar	1
3	Bosch Rexroth relief valve <b>VMD1.040</b> *	2

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

Ordering code

H	9	7	0	3	9	S	-	-	-
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Hydrover product

Product series  
97 series - Multifunctional integrated circuits

Product ID

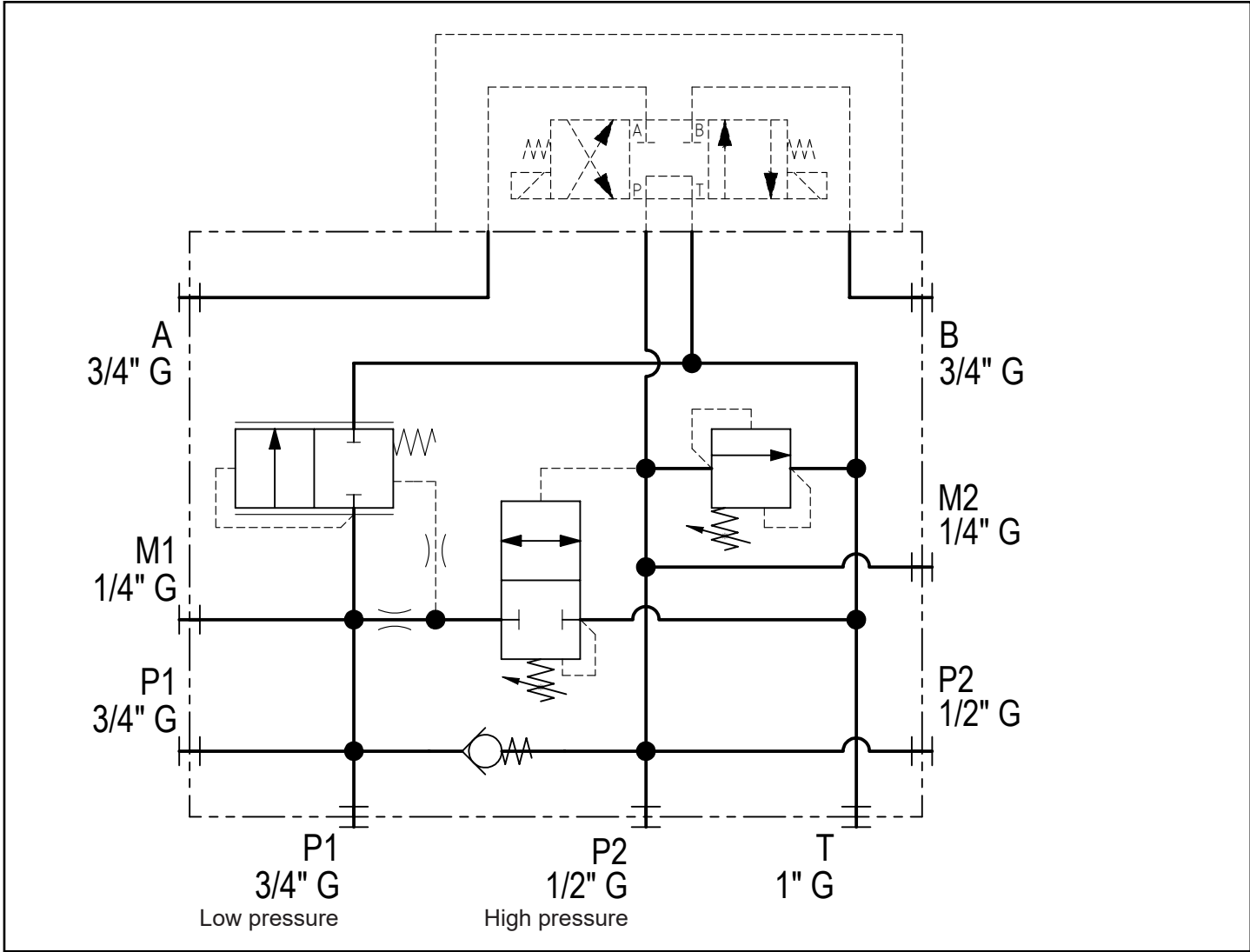
Manifold material  
Steel

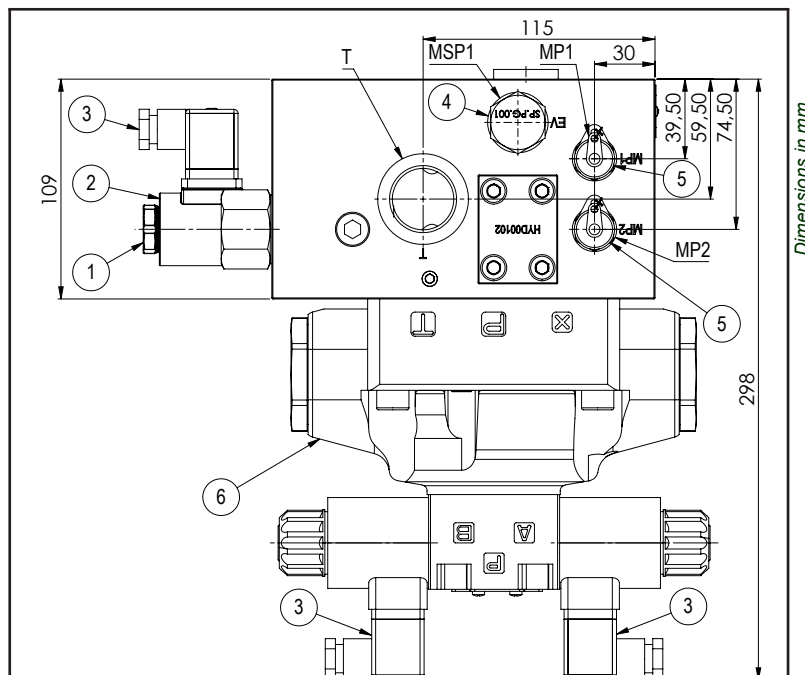
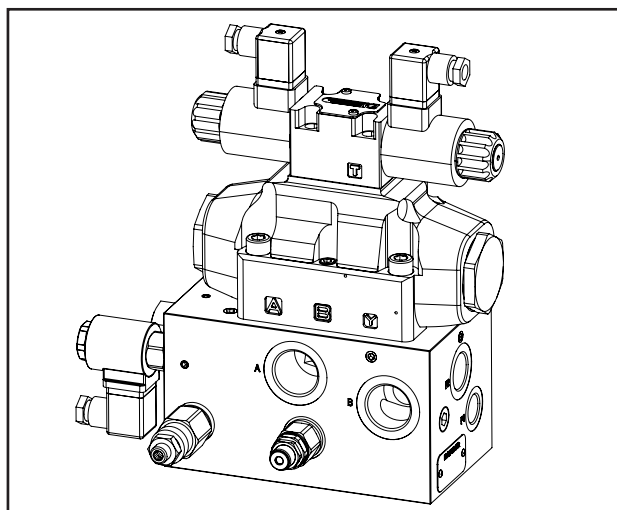
Relief valve  
adjustment pressure range

1 =	25-120 bar
2 =	40-200 bar
3 =	200-350 bar

Relief valve  
adjustment type

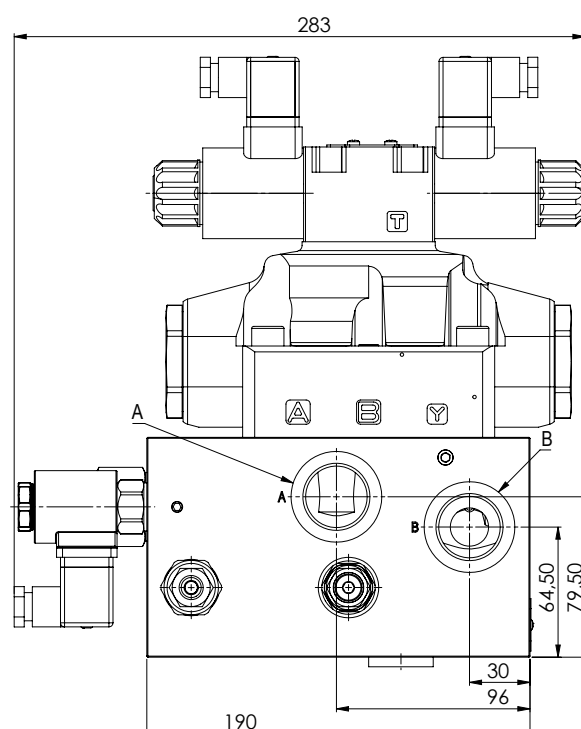
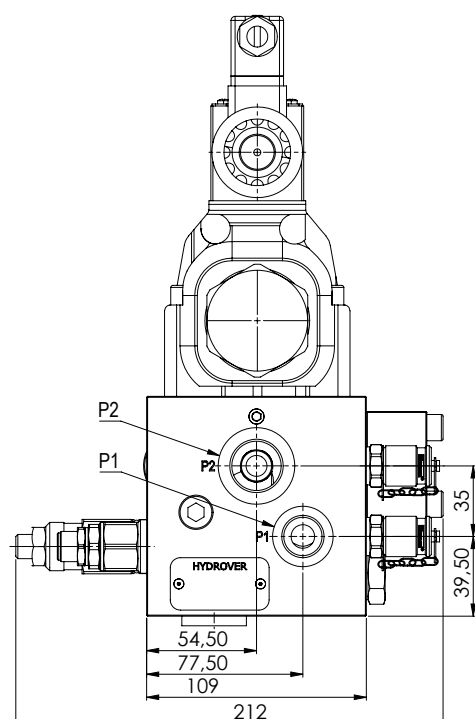
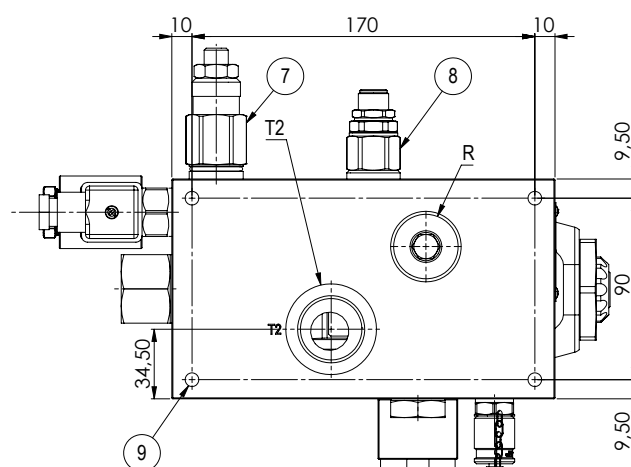
S = Screw

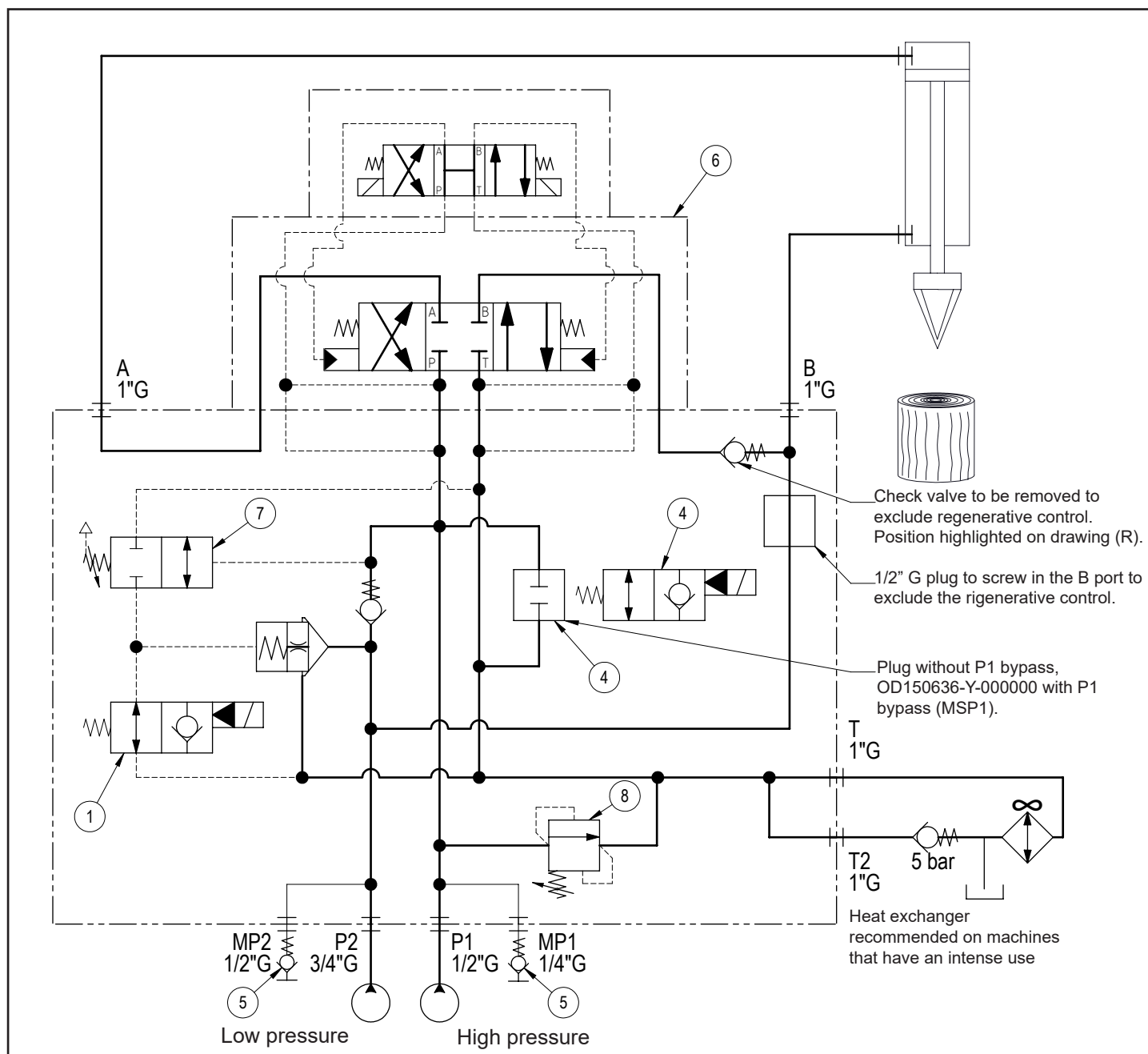




Dimensions in mm

Technical data	
Max. pressure	350 bar
P1 max. flow	25 lpm without MSP1 60 lpm with MSP1 *
P2 max. flow	100 lpm **
Weight	26 Kg
Manifold material	Steel
MP1 / MP2 ports	1/4" G
P1 port	1/2" G
P2 port	3/4" G
A / B / T1 / T2 ports	1" G
* Depending of the system power	
** Depending of the cylinder dimensions and the system power	





Ordering code

H 9 7 0 0 9 S - - - - - - - - - -														
<div>Hydrover product</div> <div>Product series 97 series - Multifunctional integrated circuits</div> <div>Product ID</div> <div>Manifold material Steel</div> <div>Rigenerative control Switchable = E No = 0</div> <div>P2 unloading valve adjustment type Screw = S</div> <div>P2 unloading valve adjustment pressure range 14-70 bar = 2 70-210 bar = 4</div> <div>Solenoid valves coil connection 1 = DIN 43650 ISO 4400</div> <div>Solenoid valves coil voltage * OB = 12V DC OC = 24V DC OU = 110V RAC AH = 230V RAC</div> <div>Manual override unloading solenoid valve on P2 E0 = Without EP = Push EG = Push and twist</div> <div>Unloading solenoid valve on P1 / manuale override TL = Without valve (with plug) E0 = With valve without override EP = With valve with push override EG = With valve with push and twist override</div>														

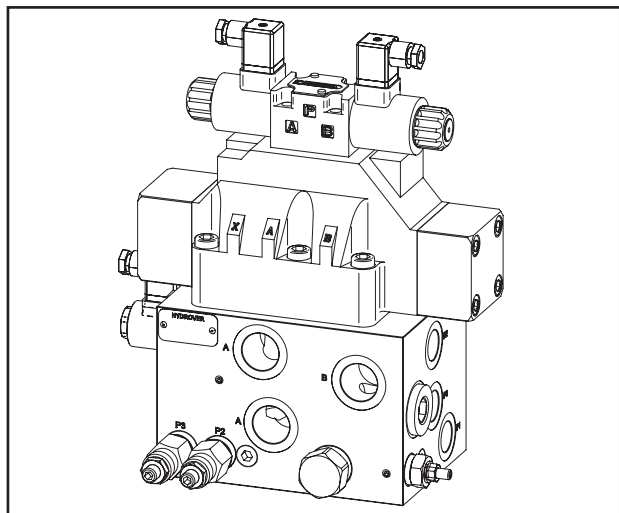
Dimensions in mm

N°	Description	Q.ty
1	Bosch Rexroth solenoid valve <b>VEI-16 OD.15.06.18-Y-000000</b> depicted without manual override *	1
2	Bosch Rexroth coil <b>D36</b> - CLASS H DIN 43650 ISO 4400 *	1
3	Connector DIN 43650 ISO 4400	3
4	SP.PG.001 (depicted) o Bosch Rexroth unloading solenoid valve on P1 <b>VEI-16-10A-NA OD.15.06.36-Y-000000</b> * with Bosch Rexroth <b>D36</b> coil - CLASS H DIN 43650 ISO 4400 *	1
5	1/4"G test coupling	2
6	Pilot operated distributor	1
7	P2 unloading valve	1
8	Relief valve HCMM03-S3 50-350 bar	1
9	M10x15 for mounting	4

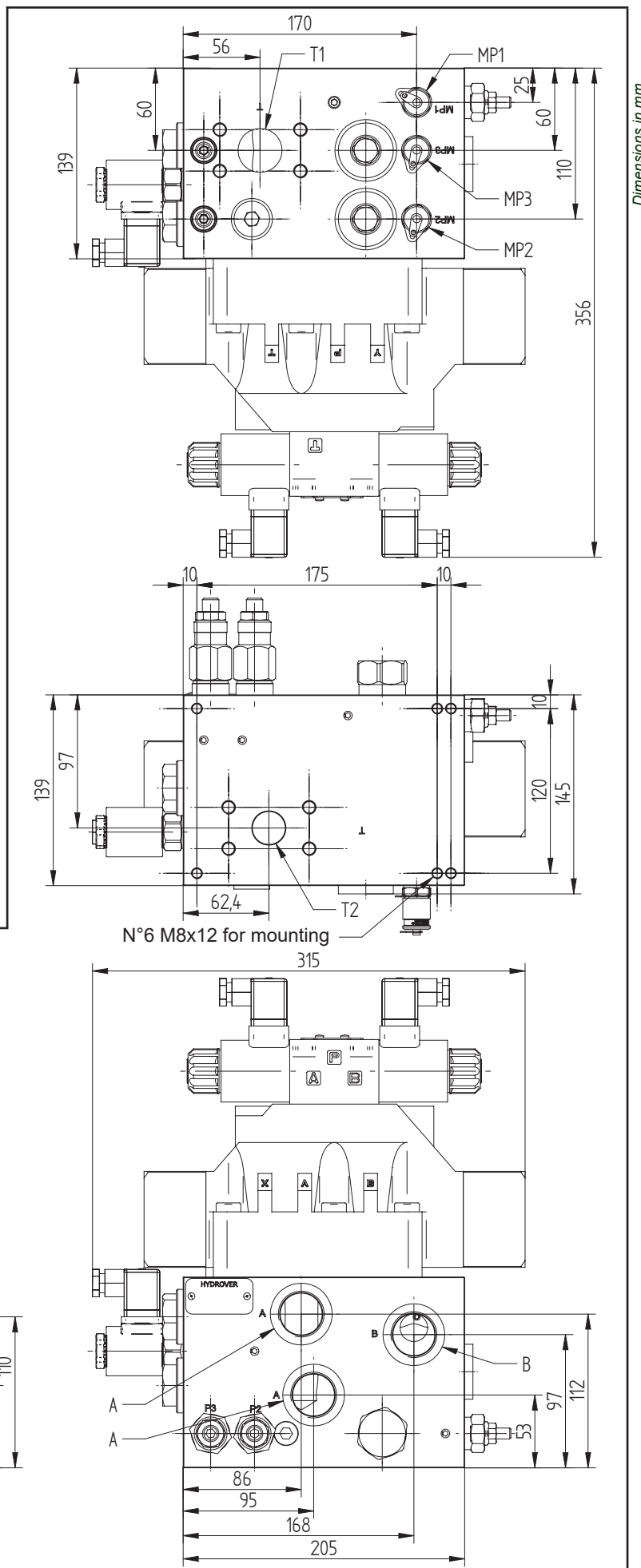
\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue



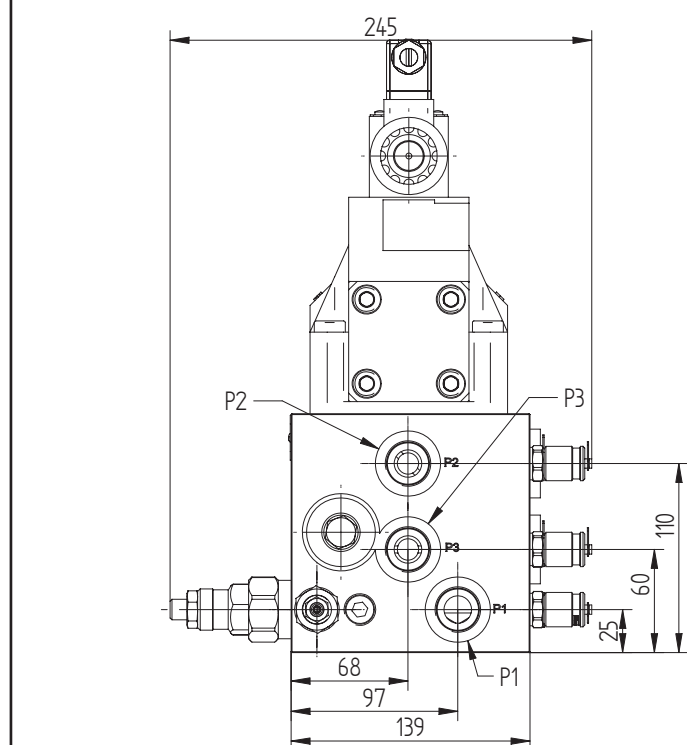




Technical data	
Max. pressure	280 bar
P1 max. flow	50 lpm *
P2 max. flow	100 lpm **
P3 max. flow	150 lpm **
Weight	43,9 Kg
Manifold material	Steel
MP1 / MP2 / MP3 ports	1/4" G
P1 / P2 / P3 ports	3/4" G
A / B ports	1" G
T1 / T2 ports	SAE 3000 1 1/4 flange
* Depending of the system power	
** Depending of the cylinder dimensions and the system power	



Dimensions in mm



Ordering code

H	9	7	0	0	5	S	-	-	-
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Hydrover product

Product series

97 series - Multifunctional integrated circuits

Product ID

Manifold material

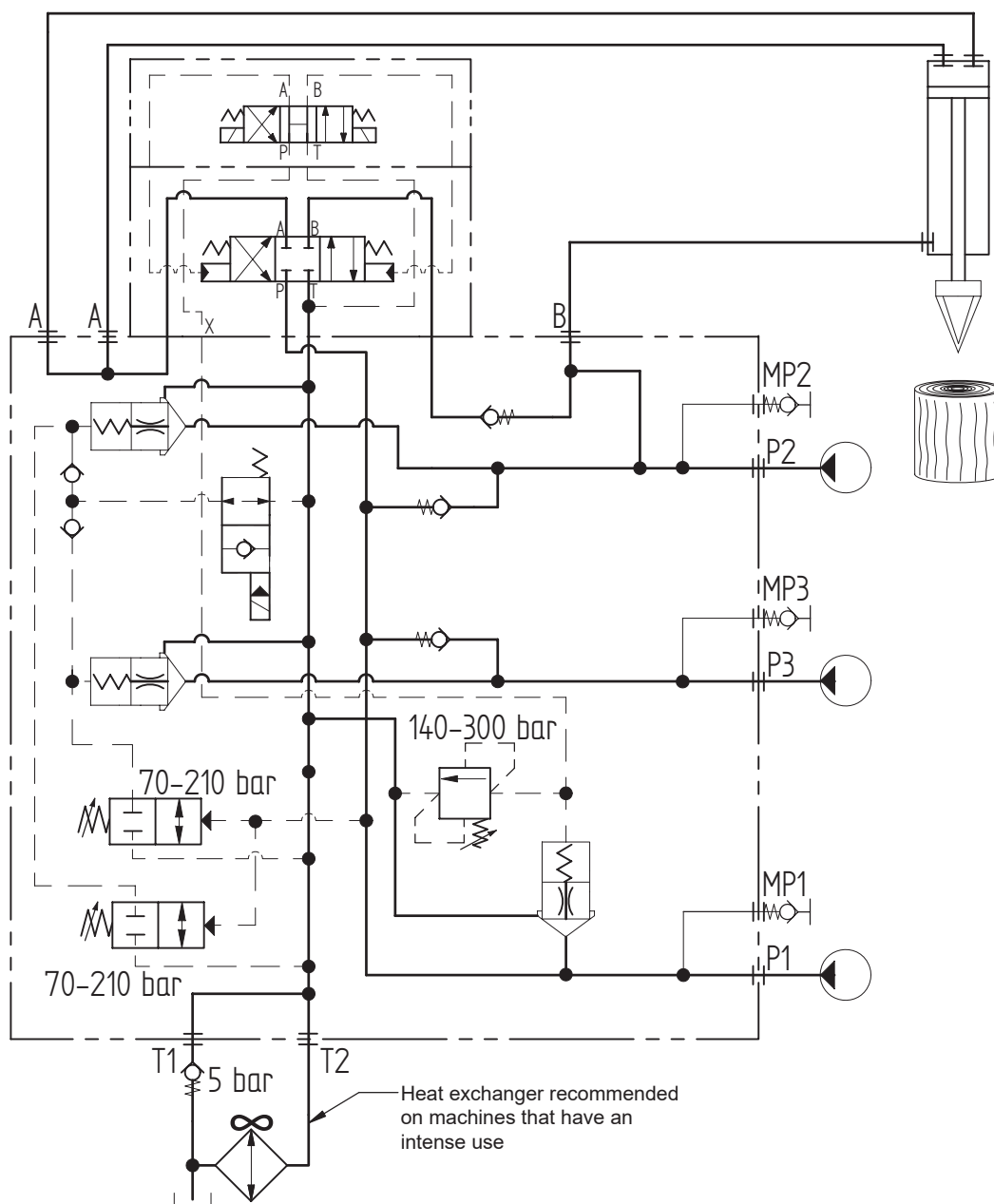
Steel

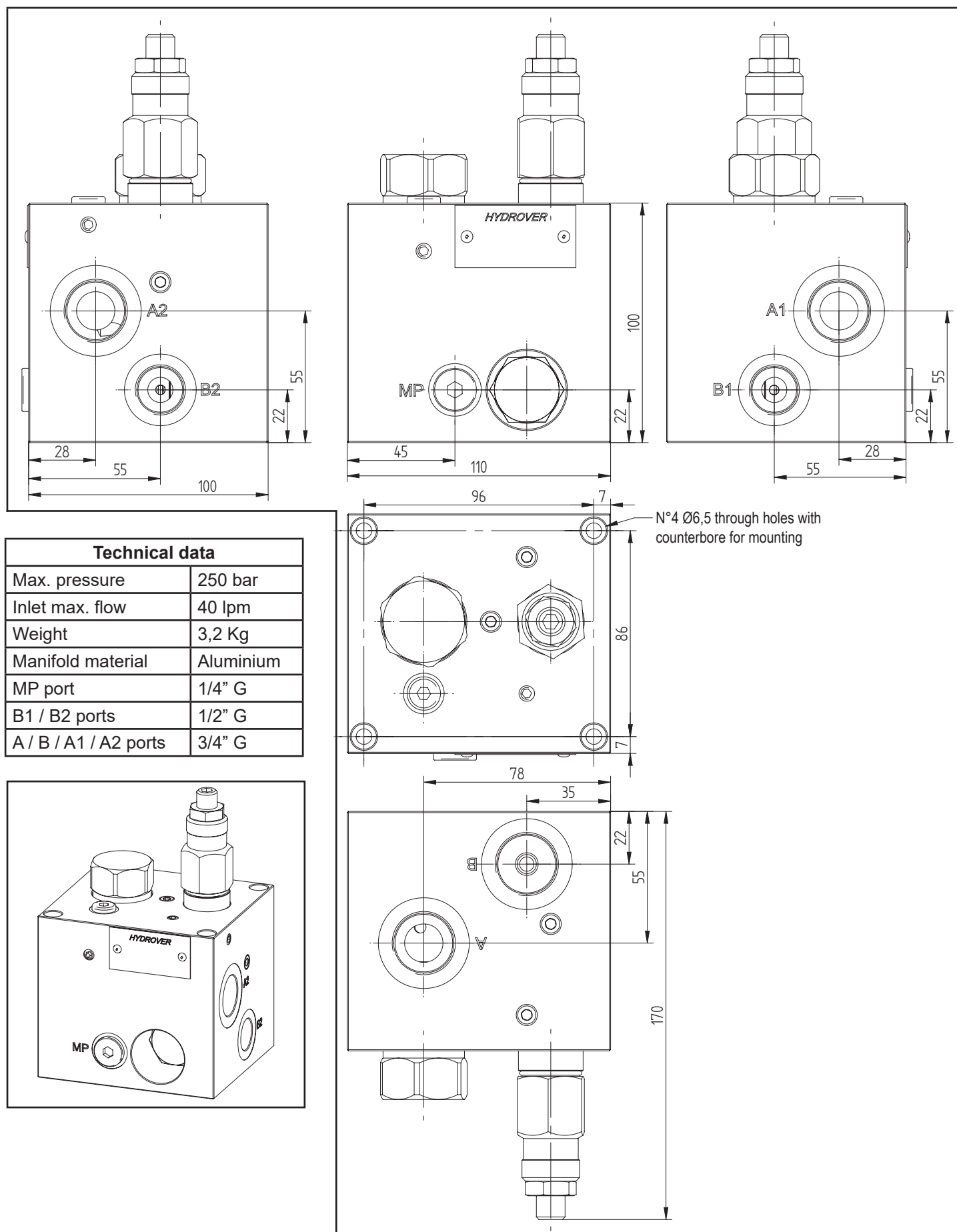
Solenoid valves  
coil connection

1 = DIN 43650 ISO 4400

Solenoid valves  
coil voltage \*

OB =	12V DC
OC =	24V DC
OU =	110V RAC
AH =	230V RAC





Ordering code

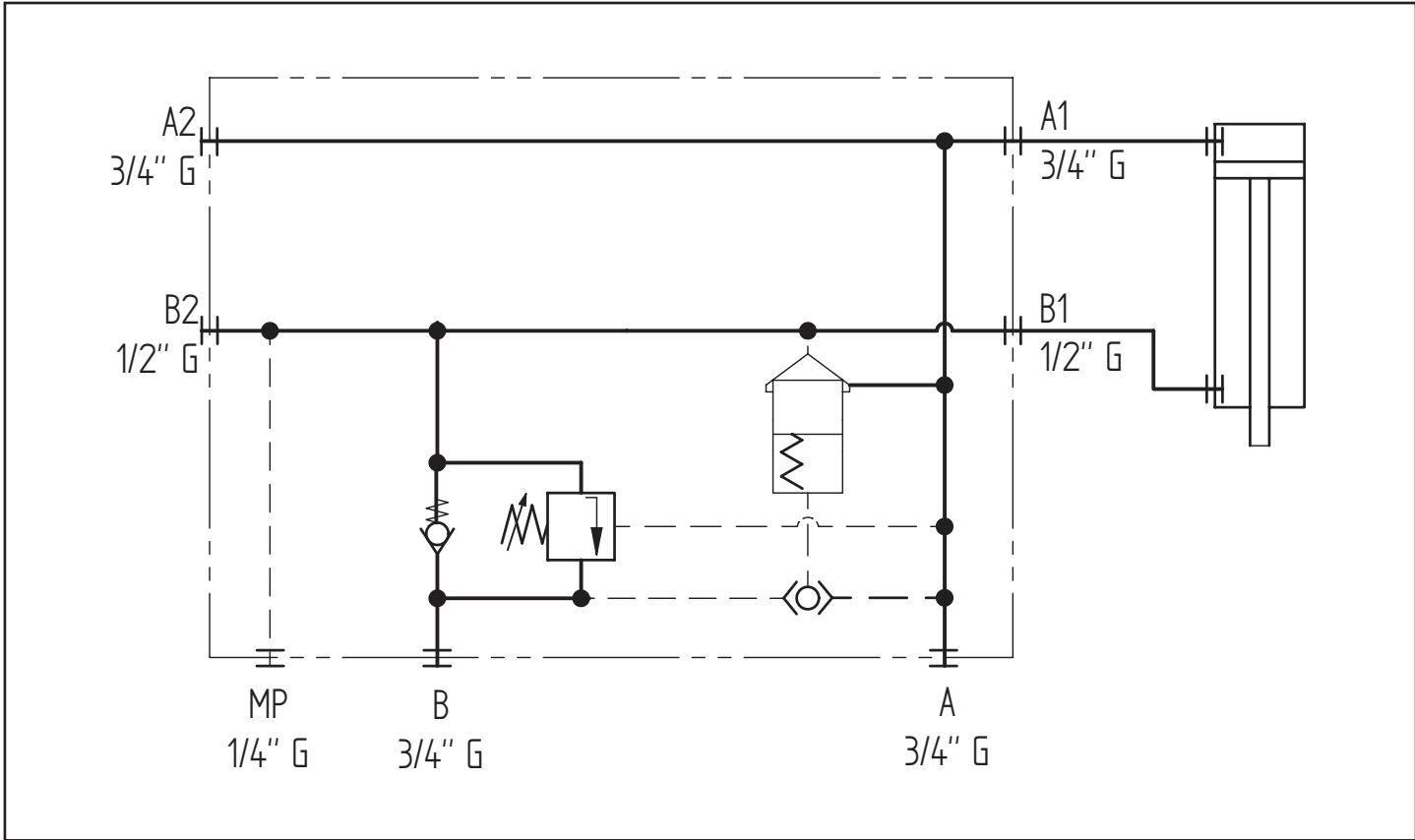
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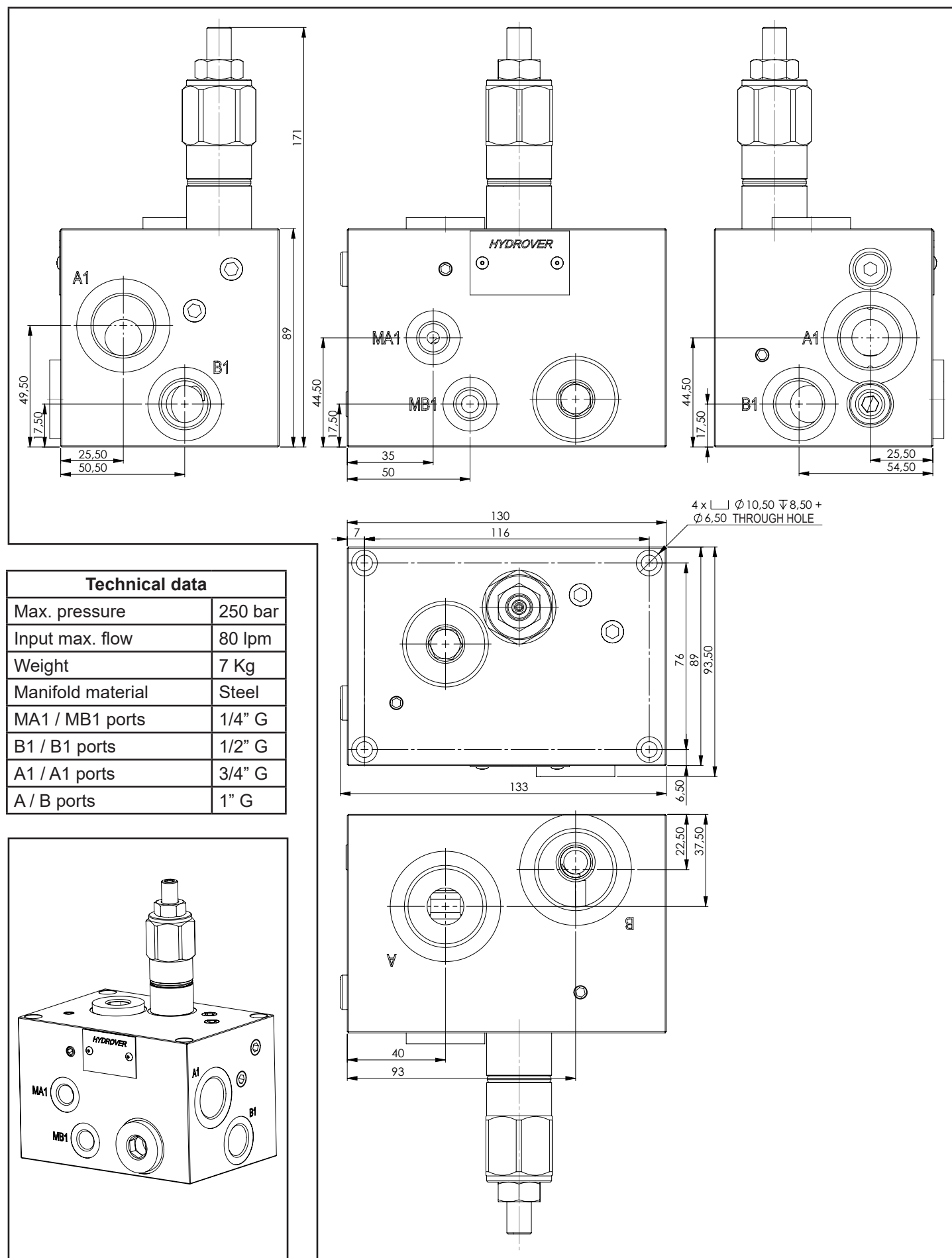
Hydrover product

Manifold material  
Aluminium

Product series  
97 series - Multifunctional integrated circuits

Product ID





Ordering code

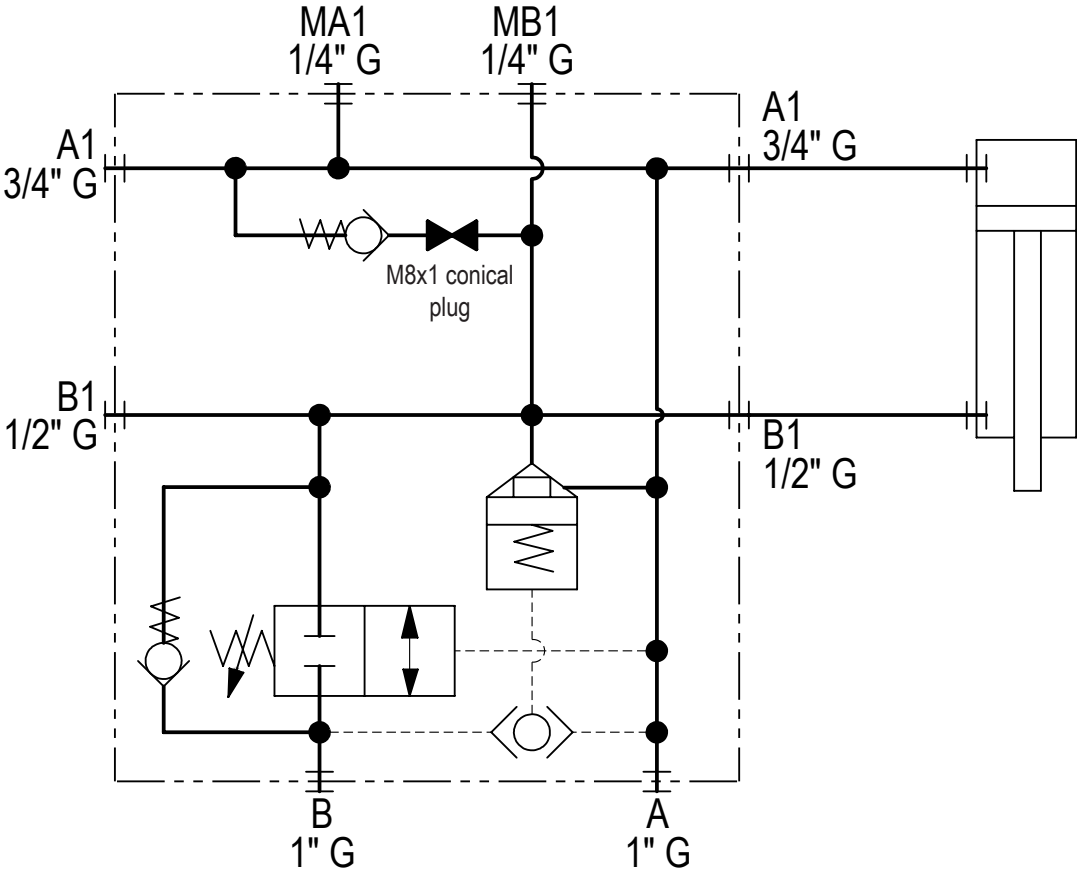
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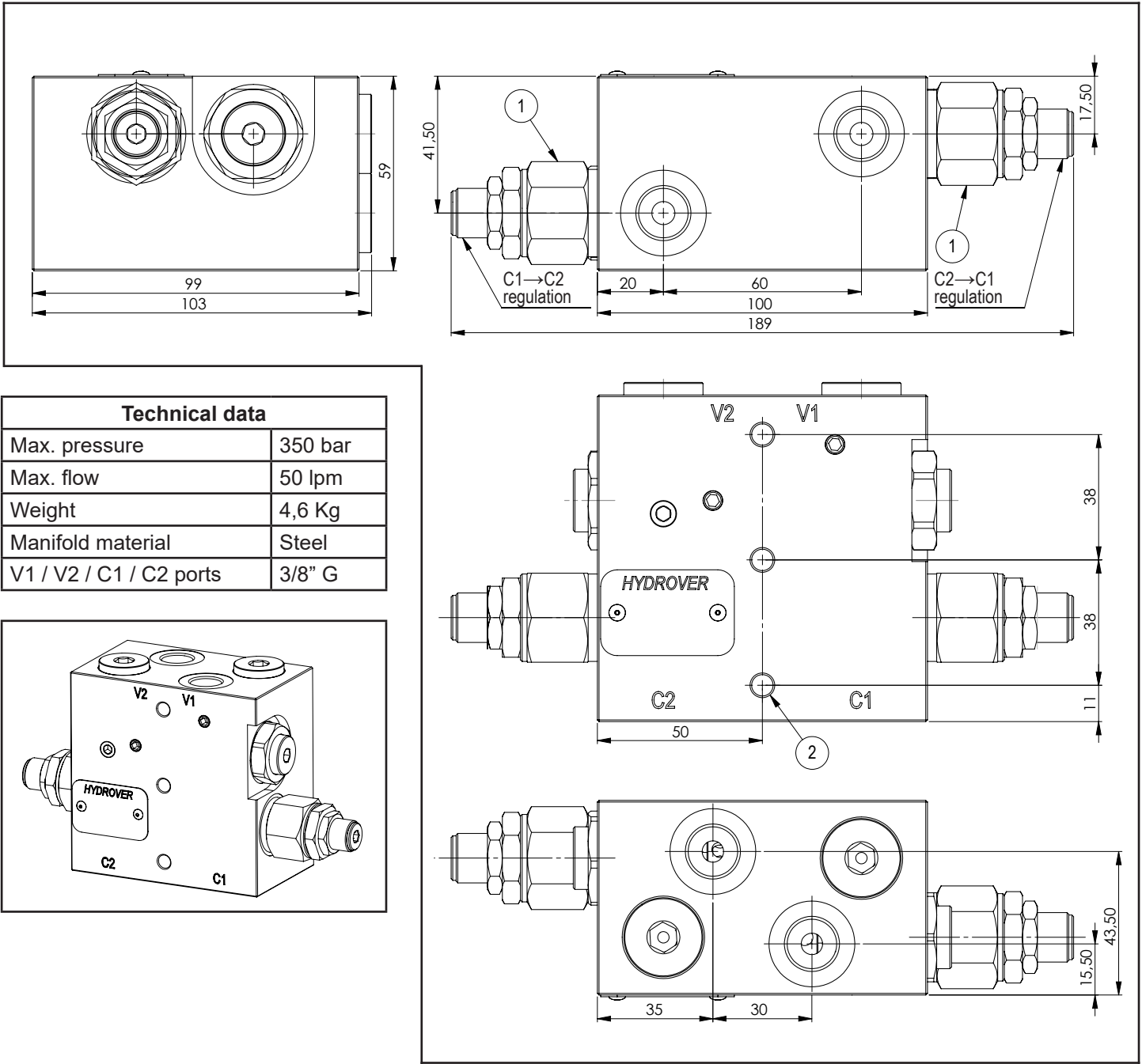
Hydrover product

Manifold material  
Steel

Product series  
97 series - Multifunctional integrated circuits

Product ID





N°	Description	Q.ty
1	Bosch Rexroth relief valve <b>VMD1.070</b> *	2
2	Ø 6,5 through hole for mounting	3

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue



## Ordering code

H	9	7	0	1	7	S	-	-	-	-
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Hydrover product

## Product series

97 series - Multifunctional integrated circuits

## Product ID

## Manifold material

Steel

## Relief valve

## adjustment type C1→C2 \*

Screw

= S

## Relief valve adjustment pressure range C2→C1 \*

0 =	10-60 bar
1 =	40-110 bar
2 =	110-220 bar
3 =	220-260 bar

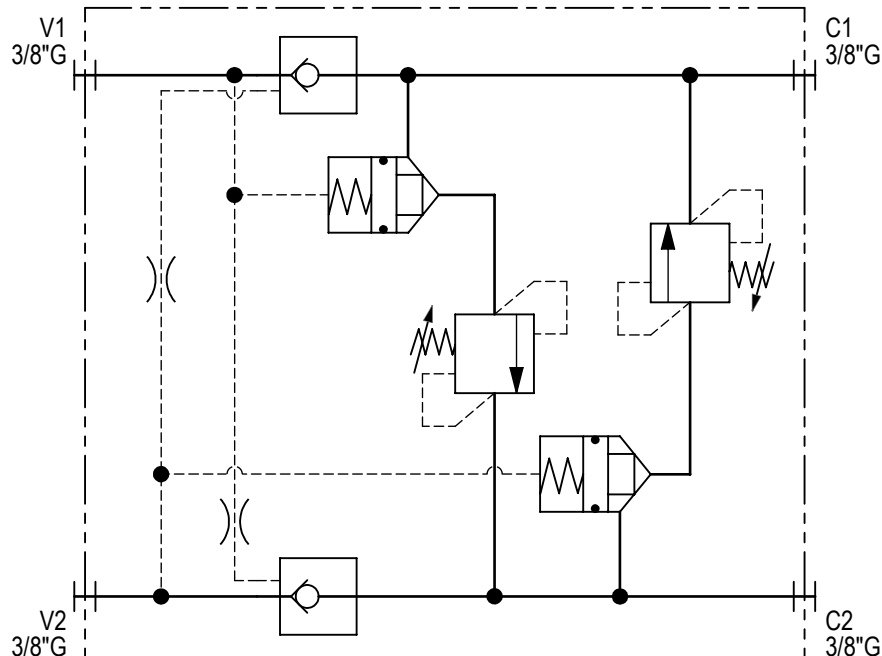
## Relief valve adjustment type C2→C1 \*

S = Screw

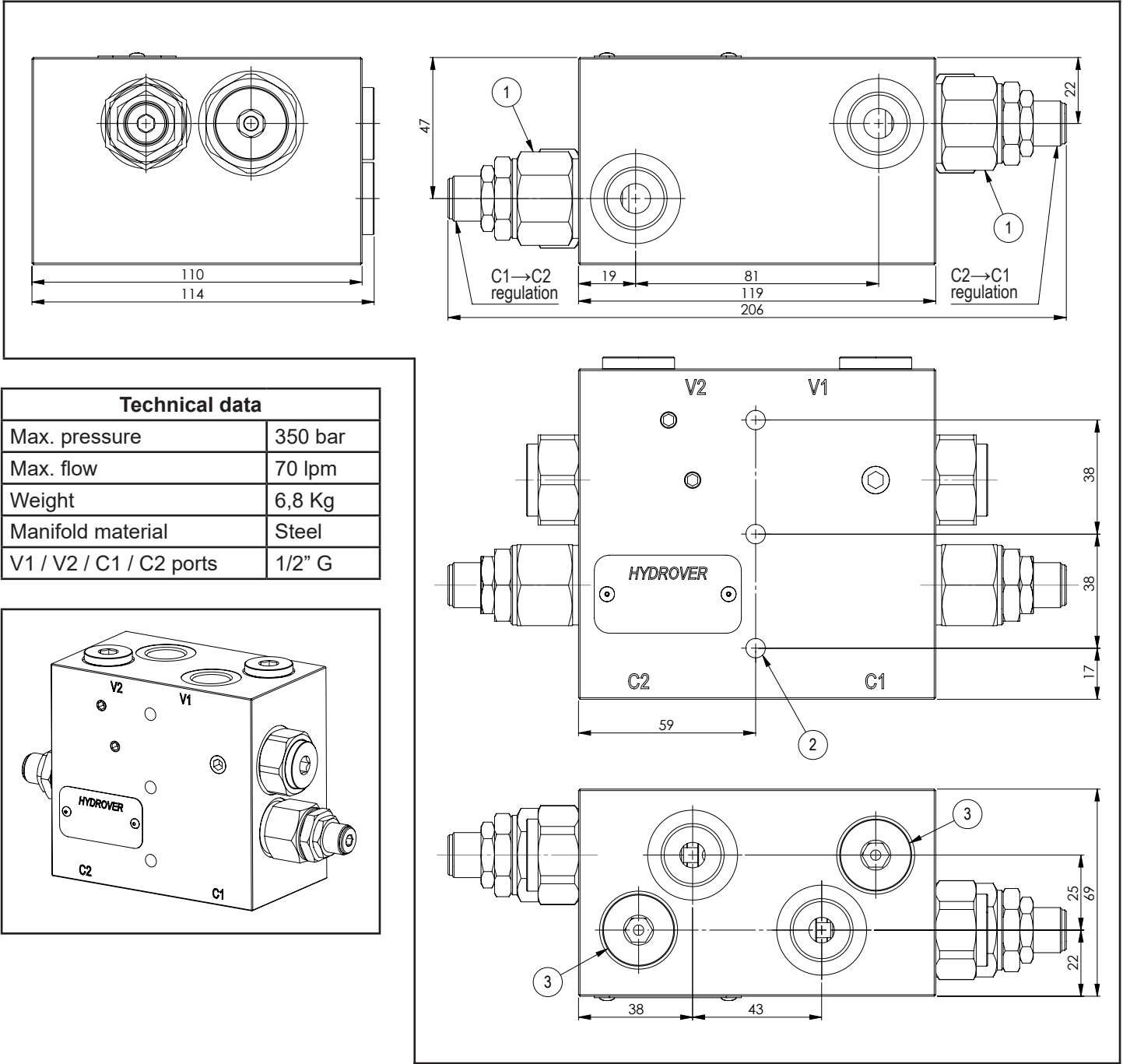
## Relief valve adjustment pressure range C1→C2 \*

0 =	10-60 bar
1 =	40-110 bar
2 =	110-220 bar
3 =	220-260 bar

\* Omit if not required. To order the product without the pressure relief cartridge valves, omit the pressure range and the adjustment type options: H97017S. The manifold will still be provided with the corresponding cavities.



This device is intended for all machines equipped with arm and rotating turret driven by hydraulic motor or rack actuator. It is constituted by a check valve with double effect hydraulic release with dampened piloting (avoids oscillations) and by a double braking valve to discharge cross-inhibited by the oil input to the V1 V2 ports. This peculiarity allows to obtain the maximum pressure in the cue (general maximum pressure valve) and a reduced brake pressure and can be calibrated at the time of the movement.



Technical data	
Max. pressure	350 bar
Max. flow	70 lpm
Weight	6,8 Kg
Manifold material	Steel
V1 / V2 / C1 / C2 ports	1/2" G

N°	Description	Q.ty
1	Bosch Rexroth relief valve <b>VMD1.070</b> *	2
2	Ø 6,5 through hole for mounting	3
3	Logic element	2

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

Ordering code

H	9	7	0	4	9	S	-	-	-	-
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Hydrover product

Product series  
97 series - Multifunctional integrated circuits

Product ID

Manifold material  
Steel

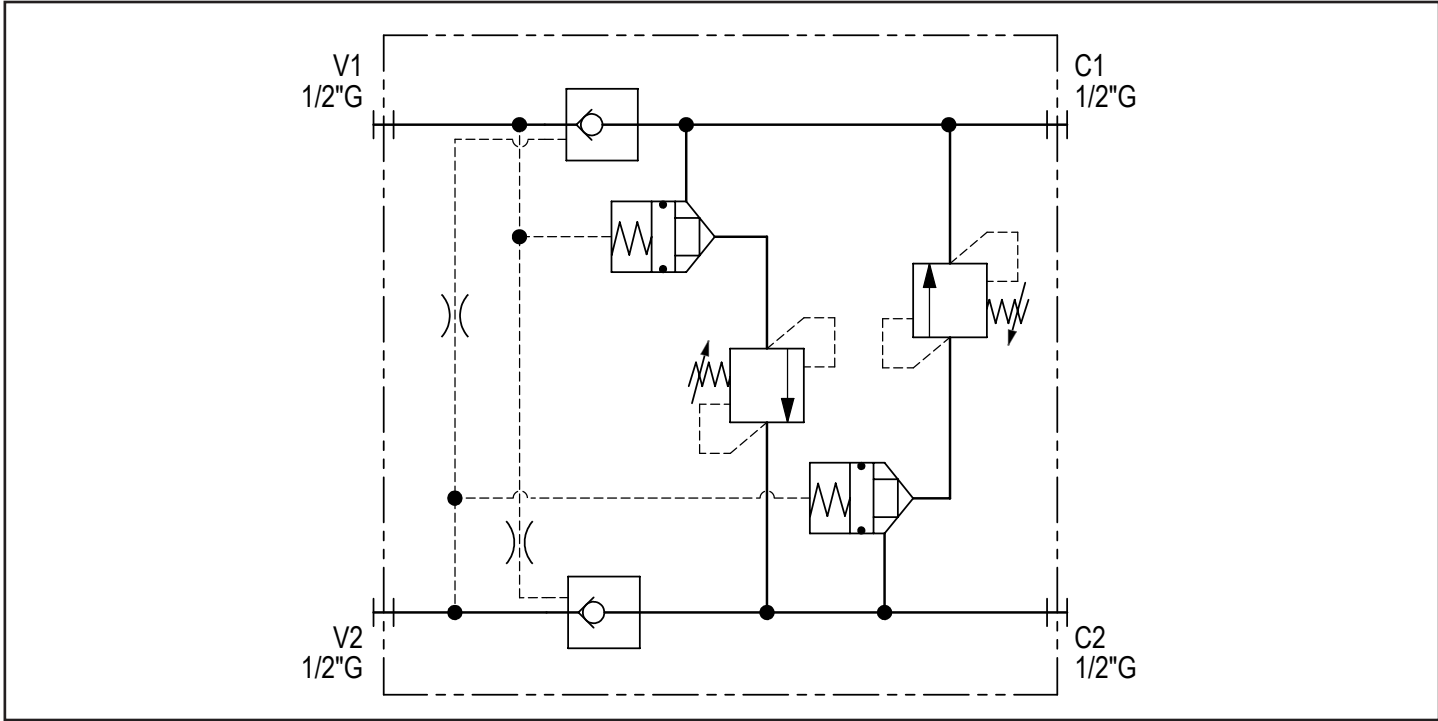
Relief valve  
adjustment type C1→C2 \*  
Screw = S

Relief valve adju  
pressure range C2→C1 \*  
0 = 10-60 bar  
1 = 40-110 bar  
2 = 110-220 bar  
3 = 220-260 bar

Relief valve  
adjustment type C2→C1 \*  
S = Screw

Relief valve  
adjustment pressure range C1→C2\*  
0 = 10-60 bar  
1 = 40-110 bar  
2 = 110-220 bar  
3 = 220-260 bar

\* Omit if not required. To order the product without the pressure relief cartridge valves, omit the pressure range and the adjustment type options: H97049S. The manifold will still be provided with the corresponding cavities.



This device is intended for all machines equipped with arm and rotating turret driven by hydraulic motor or rack actuator. It is constituted by a check valve with double effect hydraulic release with dampened piloting (avoids oscillations) and by a double braking valve to discharge cross-inhibited by the oil input to the V1 V2 ports. This peculiarity allows to obtain the maximum pressure in the cue (general maximum pressure valve) and a reduced brake pressure and can be calibrated at the time of the movement.

# Management block for simultaneous feeds with a variable displacement pump 1/2" G

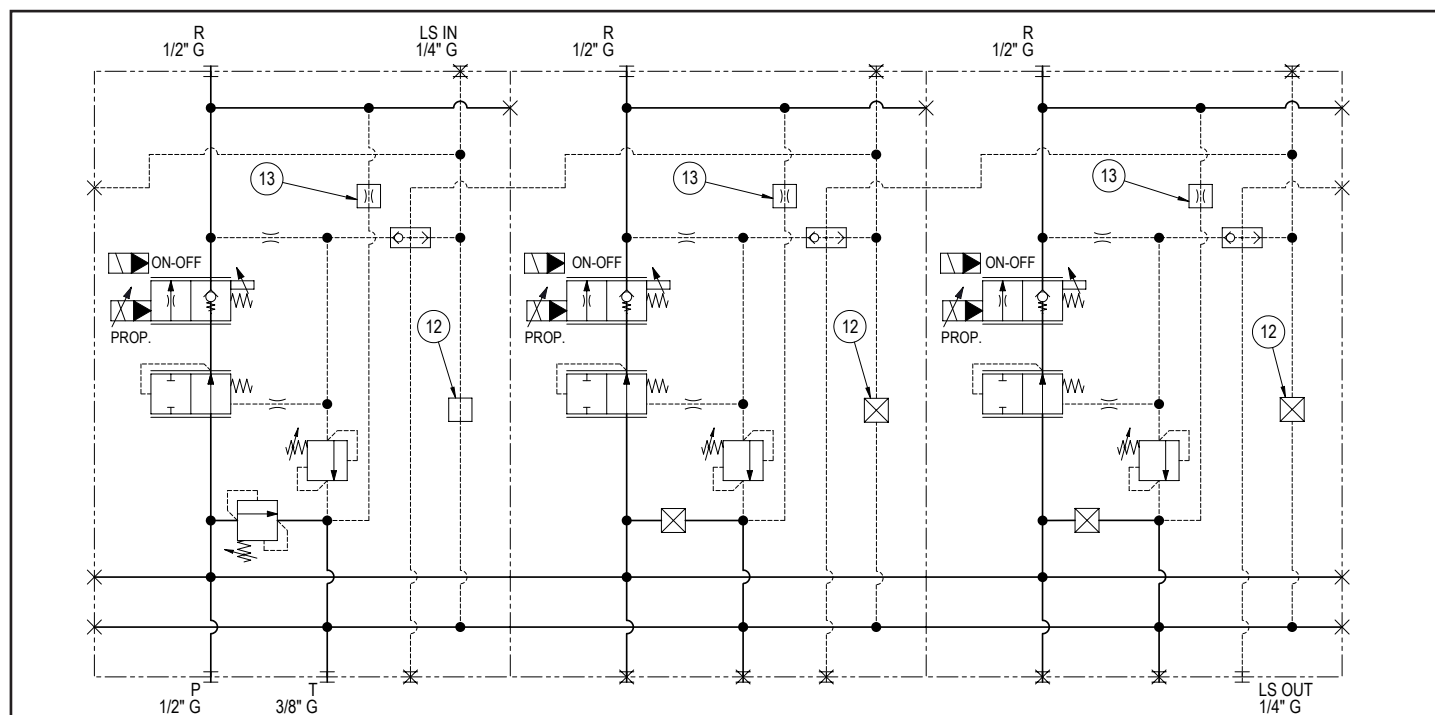
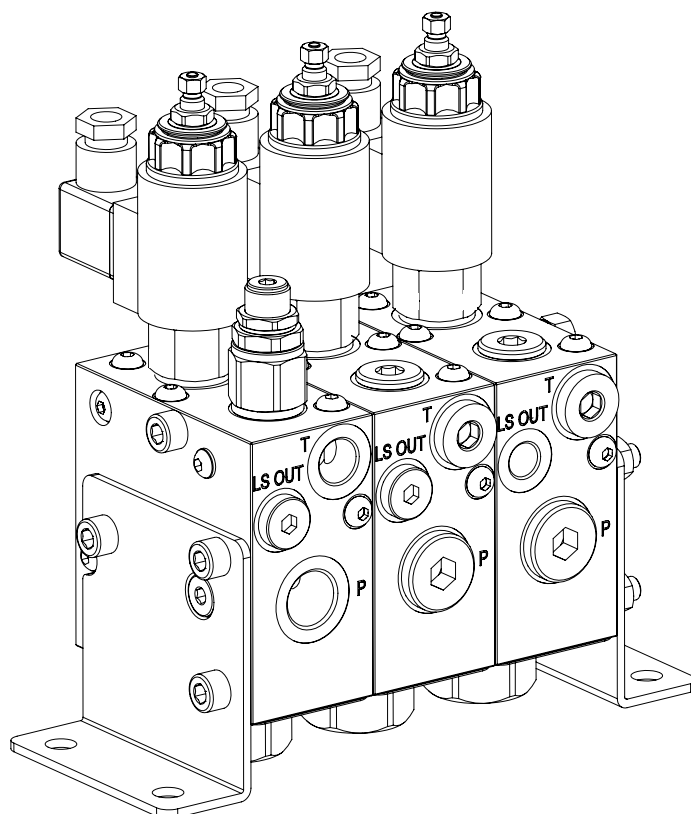
**H97133**

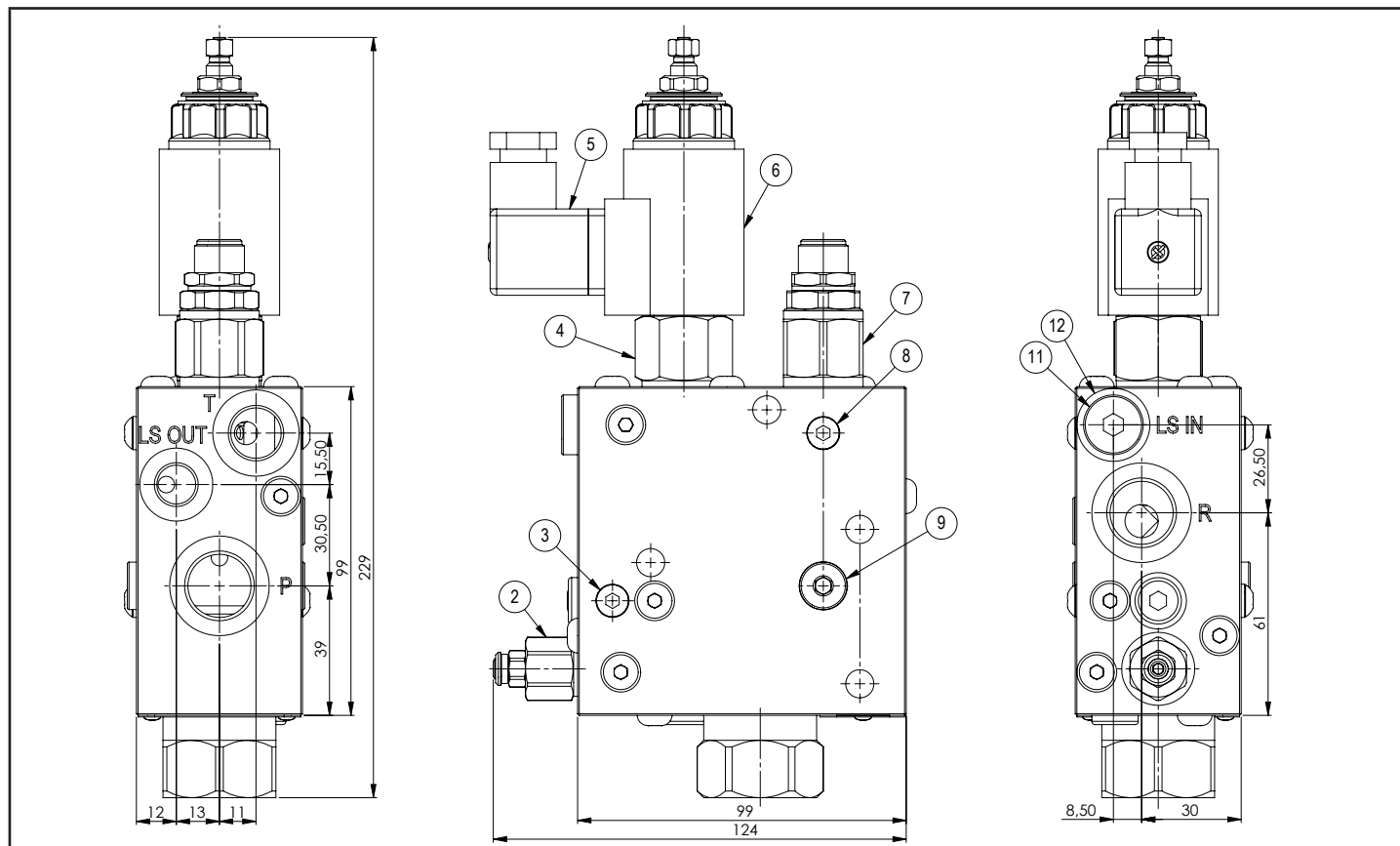
This equipment allows to set different flow rates and different pressures for multiple outputs connected to the same variable displacement pump. On each section the electrically operated cartridge is the same in on-off and proportional. It is equipped with a manual stroke limitation to use with the on-off coil. The same function is done electrically by adopting a proportional coil. The flow rates and pressures set are also respected for contemporary uses.

To offer greater flexibility in warehouse management, the different types of sections, input / intermediate / closing, use the same manifold. So they can be transformed into another type of section by adding / removing a few components (see bill of materials for details). The LS OUT (towards the pump) must be on the closing section, a potential LS IN (coming from a distributor, for example) on the inlet section.

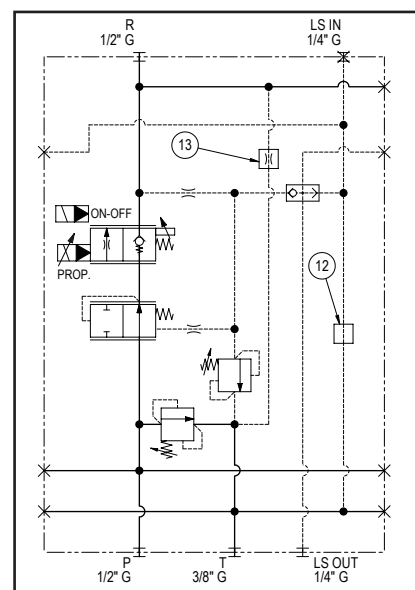
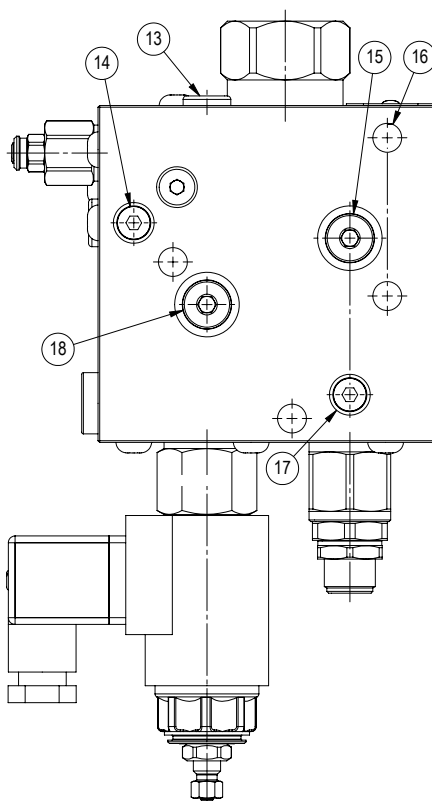
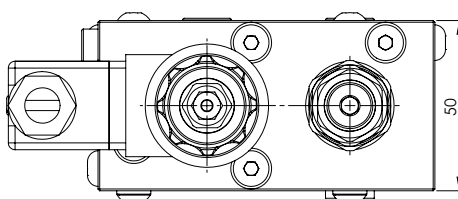
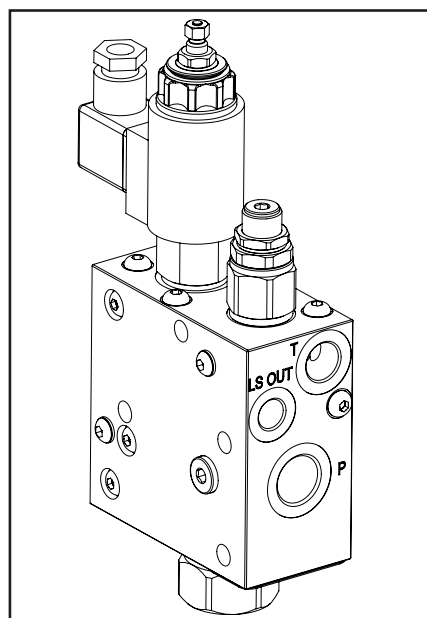
If you need only one section use the stand alone one.

Dimensions in mm



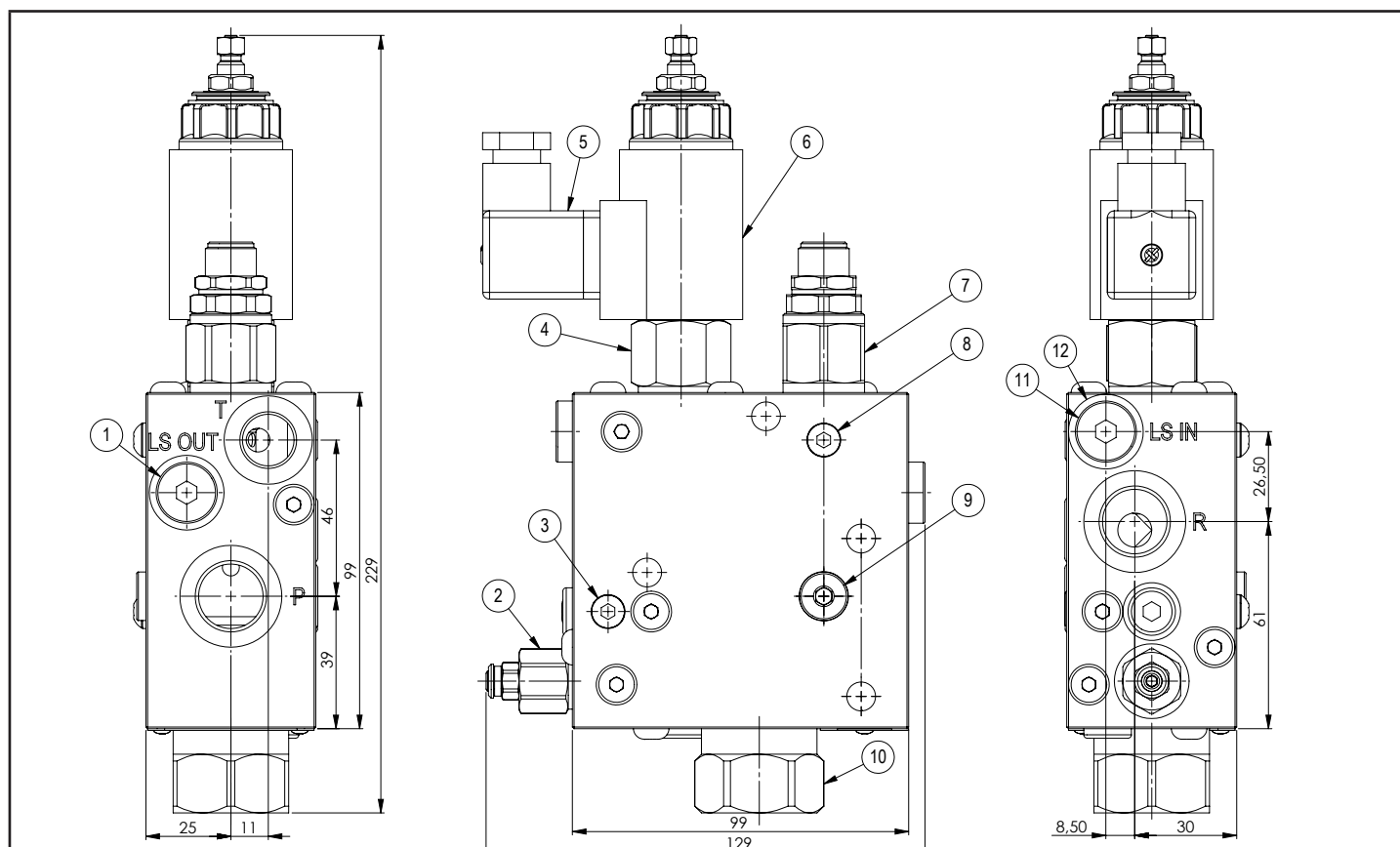
**Management block for simultaneous feeds  
with a variable displacement pump 1/2" G - Stand alone section**
**H97133**

**Technical data**

Inlet max. flow	100 lpm	
Regulated max. flow	6 bar spring 50 lpm	12 bar spring 80 lpm
LS IN / LS OUT ports	1/4" G	
T port	3/8" G	
P / R ports	1/2" G	
Man. material	Aluminium	Steel
Max. pressure	250 bar	350 bar
Weight	2,5 Kg	4,4 Kg

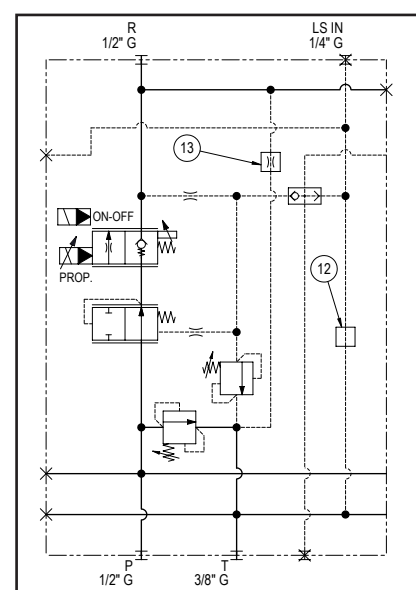
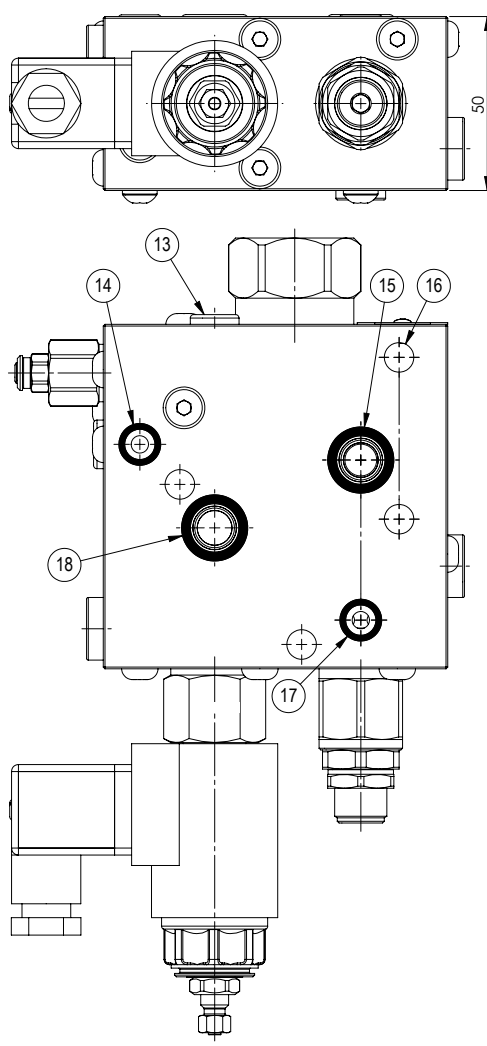
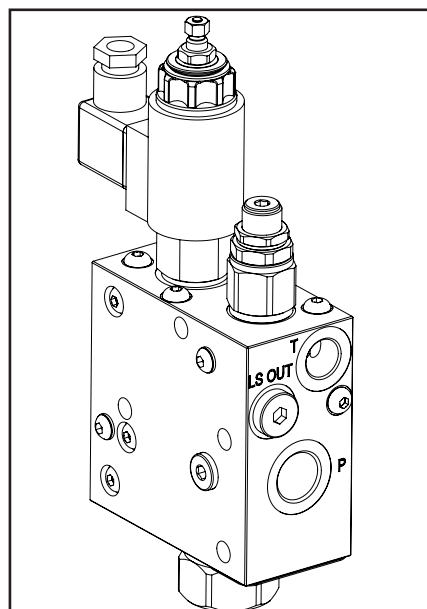


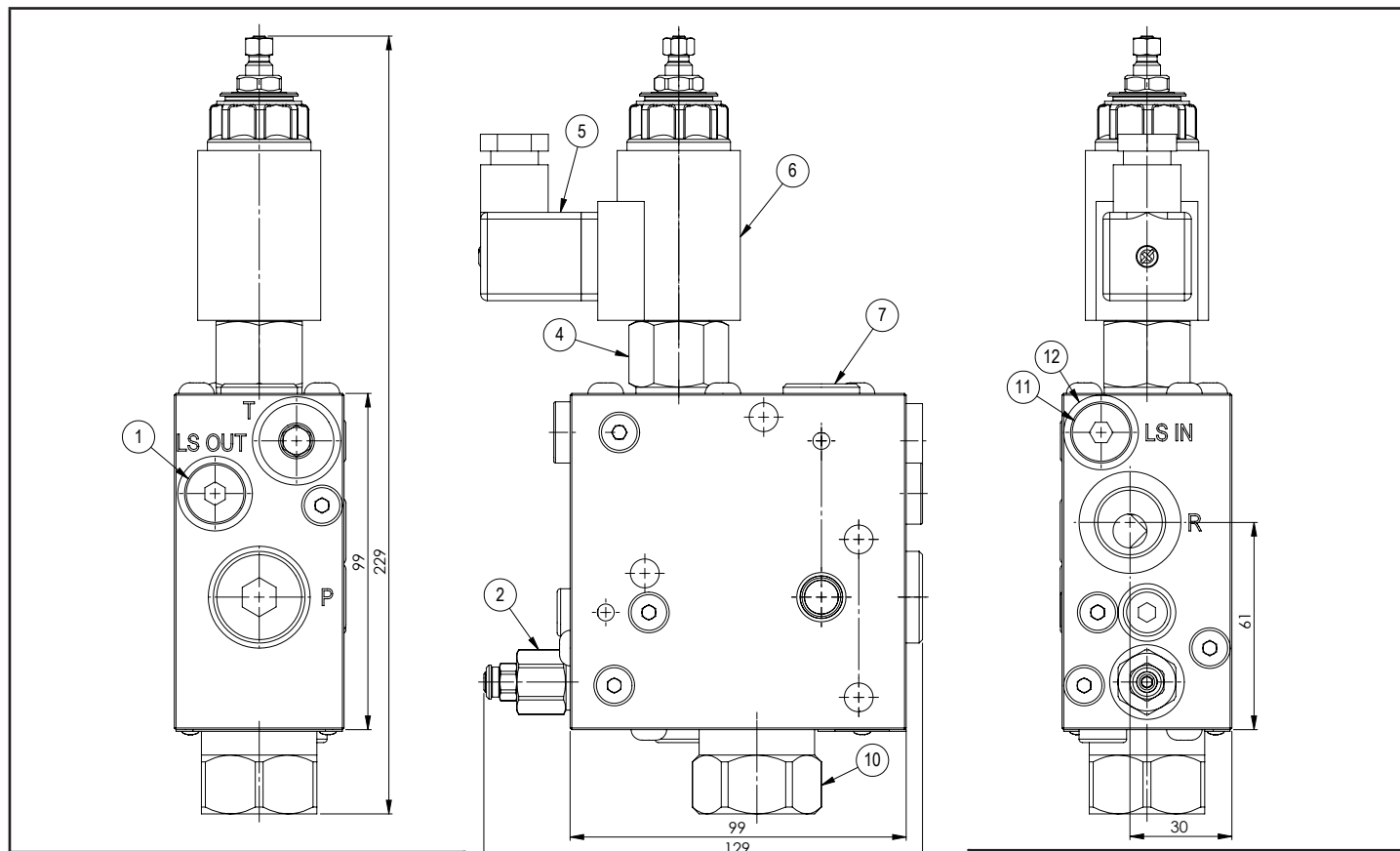
**Management block for simultaneous feeds  
with a variable displacement pump 1/2" G - Inlet section**
**H97133**

Dimensions in mm

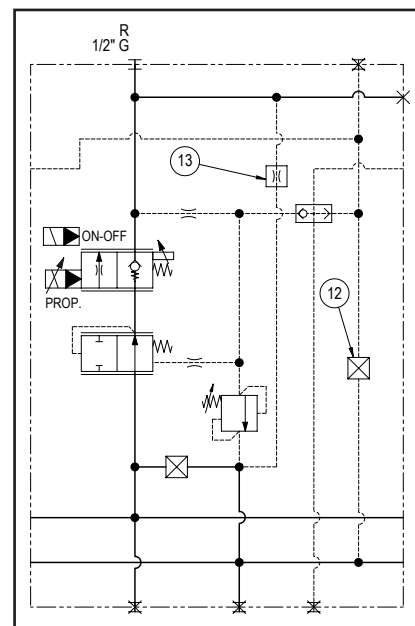
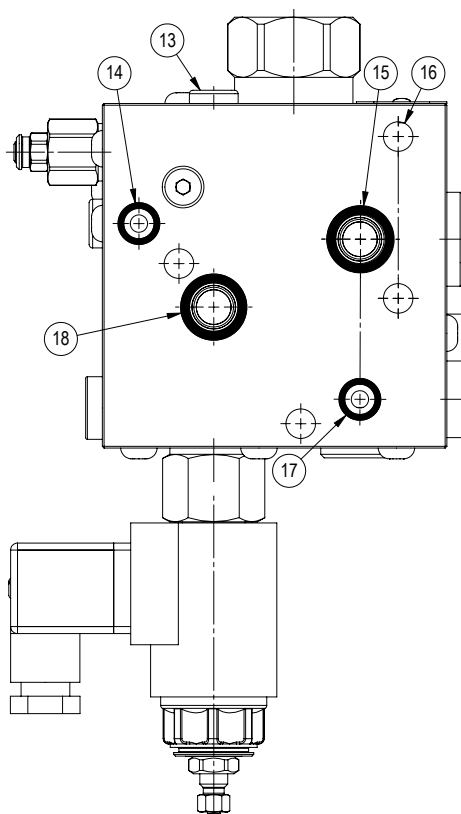
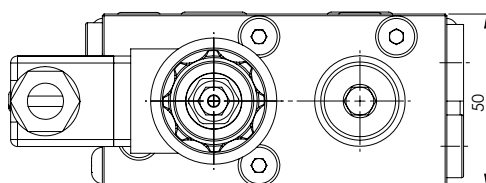
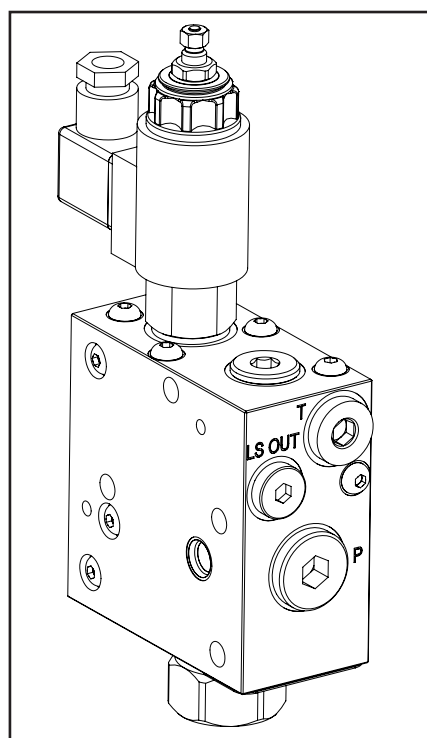

**Technical data**

Inlet max. flow	100 lpm	
Regulated max. flow	6 bar spring 50 lpm 12 bar spring 80 lpm	
LS IN port	1/4" G	
T port	3/8" G	
P / R ports	1/2" G	
Man. material	Aluminium	Steel
Max. pressure	250 bar	350 bar
Weight	2,5 Kg	4,4 Kg



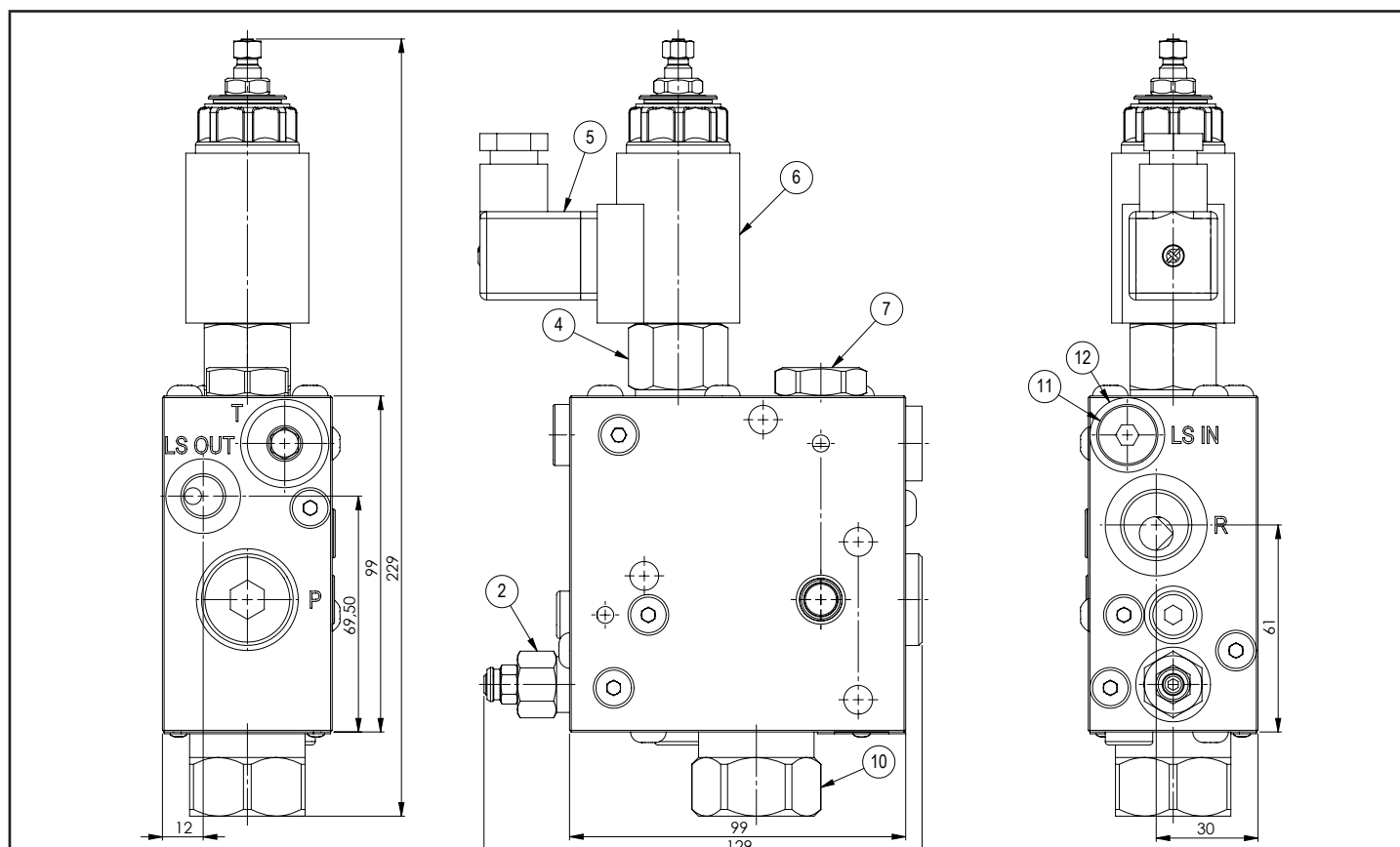
**Management block for simultaneous feeds  
with a variable displacement pump 1/2" G - Intermediate section**
**H97133**

**Technical data**

Regulated max. flow	6 bar spring 50 lpm 12 bar spring 80 lpm	
R port	1/2" G	
Man. material	Aluminium	Steel
Max. pressure	250 bar	350 bar
Weight	2,4 Kg	4,3 Kg

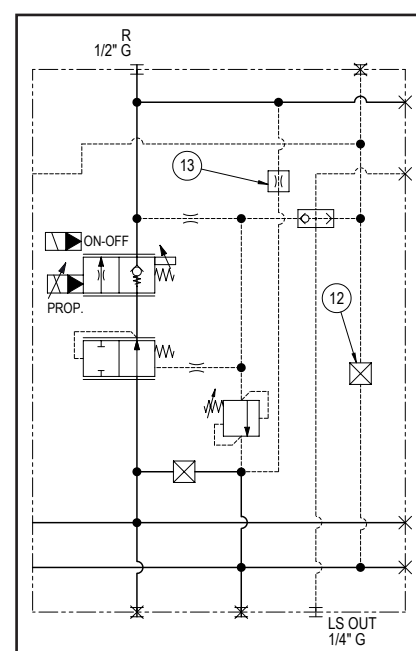
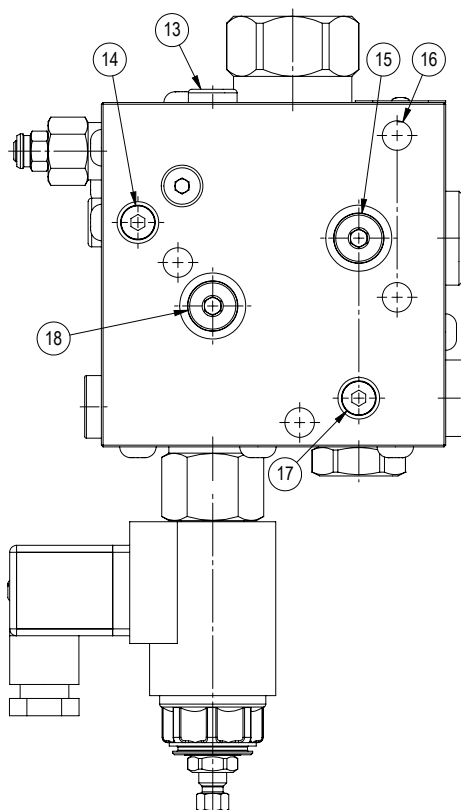
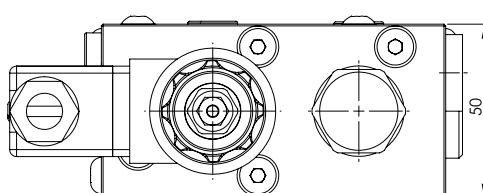
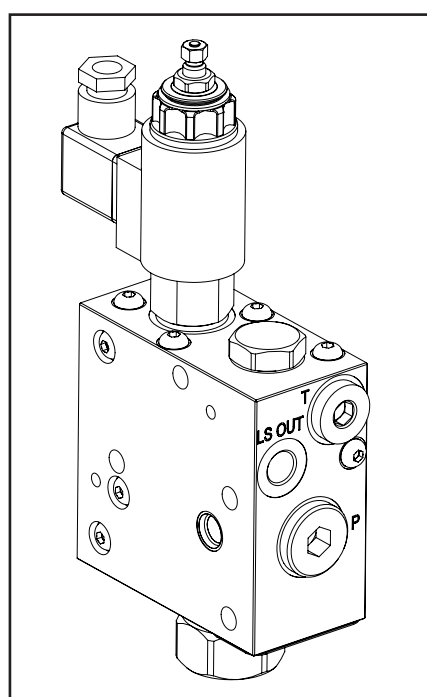


**Management block for simultaneous feeds  
with a variable displacement pump 1/2" G - Closing section**
**H97133**

Dimensions in mm


**Technical data**

Regulated max. flow	6 bar spring 50 lpm	12 bar spring 80 lpm
LS OUT port	1/4" G	
R port	1/2" G	
Man. material	Aluminium	Steel
Max. pressure	250 bar	350 bar
Weight	2,4 Kg	4,3 Kg





Ordering code

H	9	7	1	3	3	-	-	-	-	-	-	-	-	-	-	-	-
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Hydrover  
product

Product series  
97 series - Multifunctional integrated circuits

Product ID

Manifold material  
Aluminium =A  
Steel =S

Compensator spring  
6 bar (standard) = 6  
12 bar = 1

Section type  
Stand alone = U  
Inlet = E  
Intermediate = I  
Closing = C

Plugs configuration  
LS IN and R decompression (E and U sections) = 1  
LS IN without R decompression (E and U sections) = 2  
R decompression = 3  
Without R decompression = 4

Solenoid valve coil connection  
1 = DIN 43650  
ISO 4400

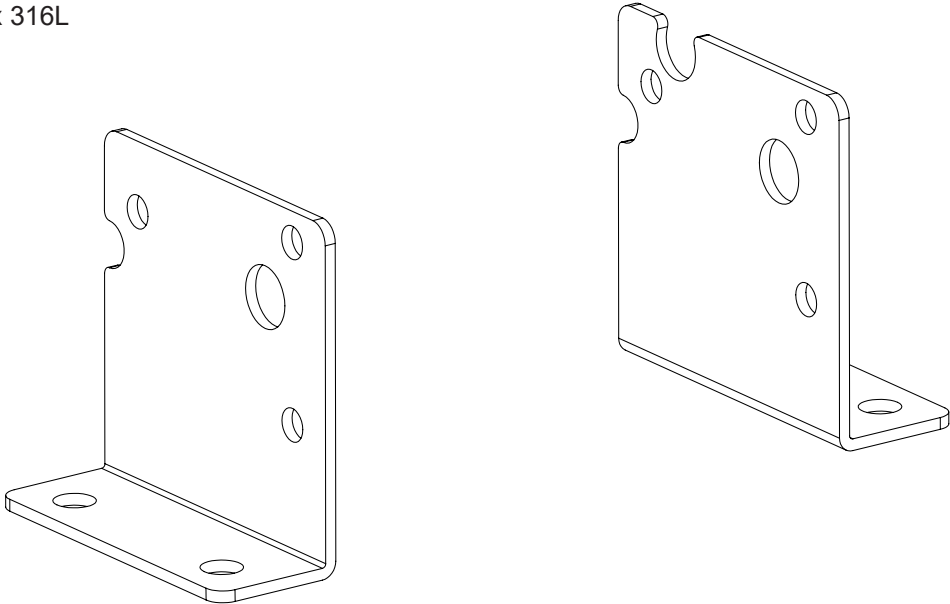
Solenoid valve coil voltage  
OB = 12V DC  
OC = 24V DC

Solenoid valve coil type  
OF = On-off  
PR = Proporzionale

Relief valve adjustment pressure range \*  
2 = 100-250 bar  
3 = 250-600 bar

Relief valve adjustment type  
S = Screw

HKS01S - Brackets kit in zinc plated steel  
HKS01X - Brackets kit in inox 316L



N°	Descrizione	Q.ty
1	TPCLG-14G (LS OUT) - On inlet and intermediate sections	1
2	Relief valve with filter for the R port	1
3	TBEIB 6x8 on the inlet section (LS)	1
4	On-off/proportional flow restrictor with manual stroke limitation	1
5	Connector DIN 43650 ISO 4400	1
6	On-off or proportional coil class H DIN 43650 ISO 4400	1
7	Anti shock valve 120-350 bar on the inlet section, plug R932003194 on the other sections	1
8	TBEIB 6x8 on inlet and stand alone sections (T)	1
9	TPCLOR7/16"UNF on inlet and stand alone sections (P)	1
10	Pressure compensator	1
11	TPCLG-14G (LS IN) - To be removed to connect an LS IN on inlet and stand alone sections.	1
12	TPCN 6 - In the LS IN port - On the intermediate and closing section. To add on inlet and stand alone sections if a LS IN is connected.	1
13	Under 1/8"G plug - TPCN 6 without R decompression (plugs configuration 2 and 4) DIAFRM6D0.4 with R decompression (1 and 2 plug configuration)	1
14	TBEIB 6x8 on closing and stand alone sections, OR 108 Ø i. 8,73 c. s. 1,78 on the other sections (LS)	1
15	TPCLOR7/16"UNF on closing and stand alone sections, OR 3056 Ø i. 13,95 c. s. 2,62 on the other sections (P)	1
16	Ø 8,5 through hole for tie rod	4
17	TBEIB 6x8 on closing and stand alone sections, OR 108 Ø i. 8,73 c. s. 1,78 on the other sections (T)	1
18	TPCLOR7/16"UNF on closing and stand alon sections, OR 3056 Ø i. 13,95 c.s. 2,62 on the other sections (side R, used for other types of sections like for managing single acting cylinders).	1

Dimensions in mm



# Management block for simultaneous feeds with a variable displacement pump 3/4" G

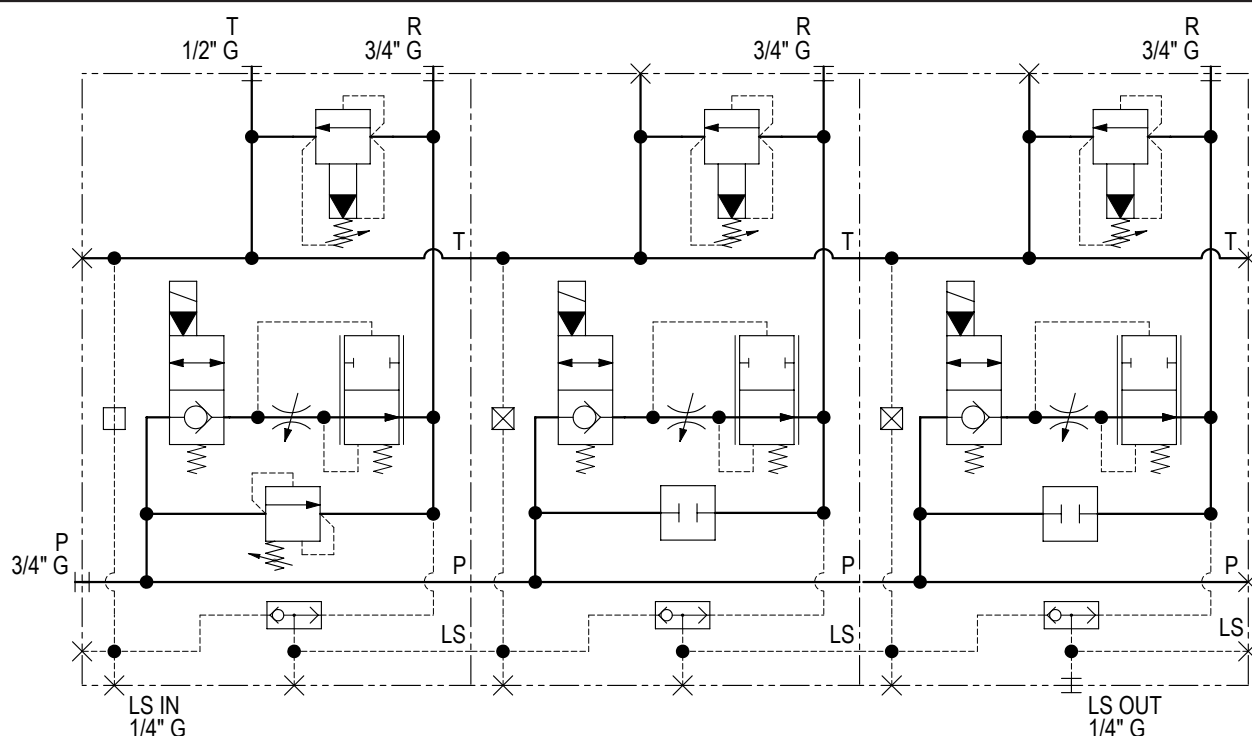
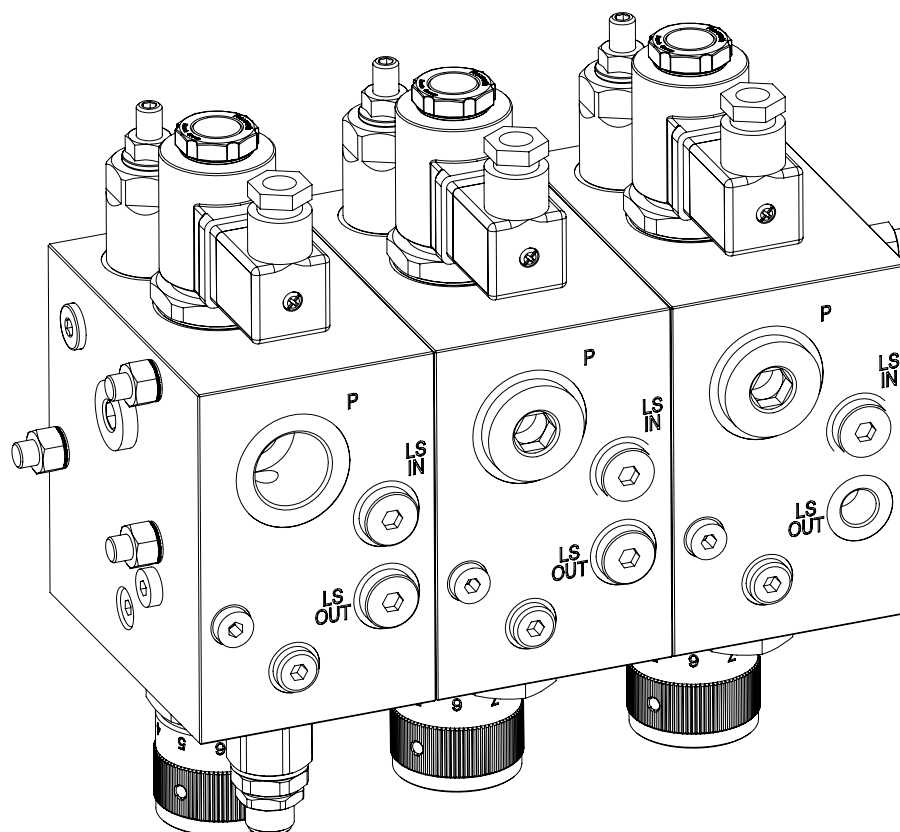
**H97101**

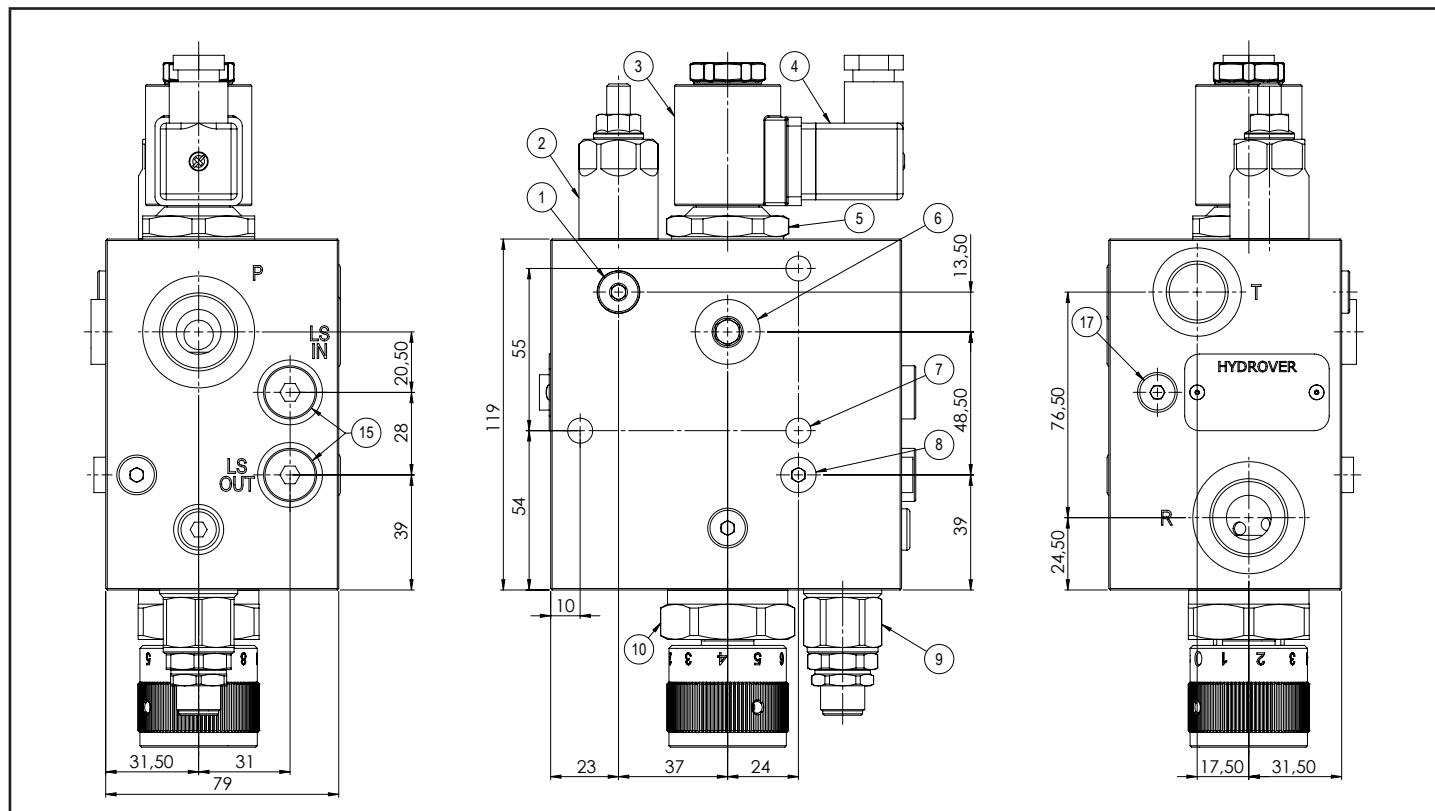
This equipment allows to set different flow rates and different pressures for multiple outputs connected to the same variable displacement pump. The flow rates and pressures set are also respected for contemporary uses.

To offer greater flexibility in warehouse management, the different types of sections, input / intermediate / closing, use the same manifold. As a result, they can be transformed into another type of section by adding / removing a few components (see separate components for details). The LS OUT (towards the pump) must be on the closing section, a potential LS IN (coming from a distributor, for example) on the inlet section.

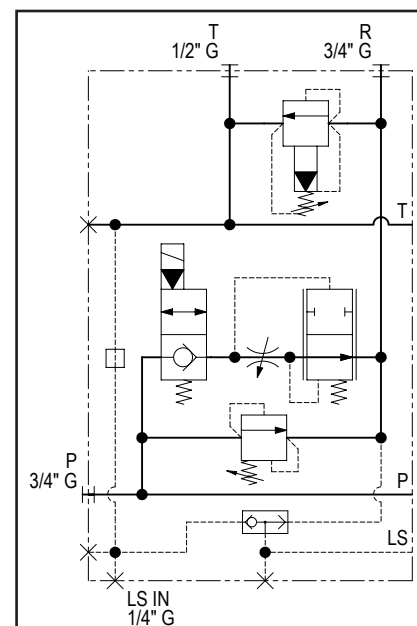
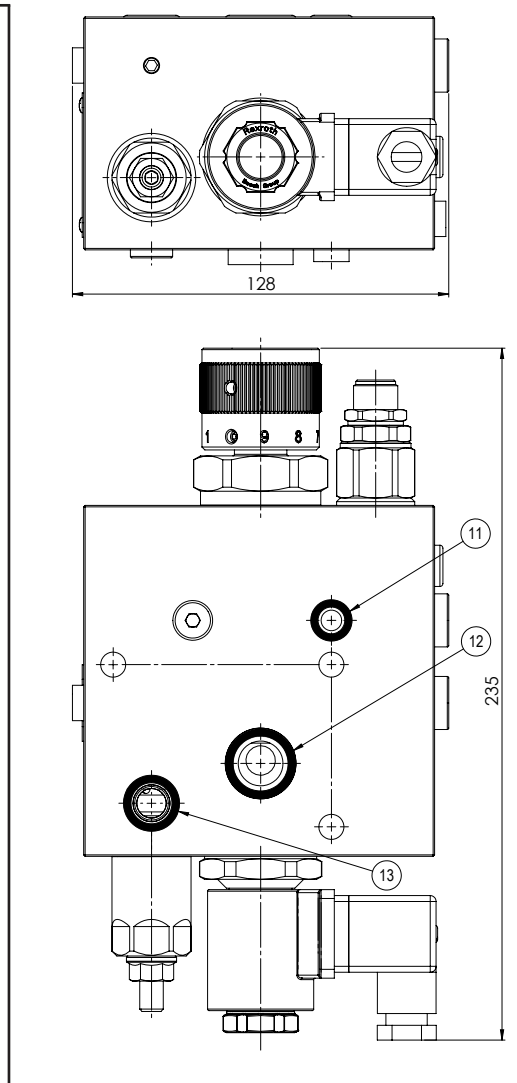
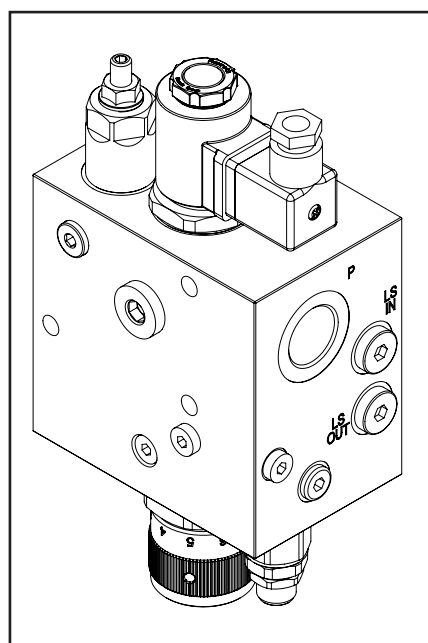
The inlet section can be used stand alone.

Dimensions in mm



**Management block for simultaneous feeds  
with a variable displacement pump 3/4" G - Inlet section**
**H97101**

**Technical data**

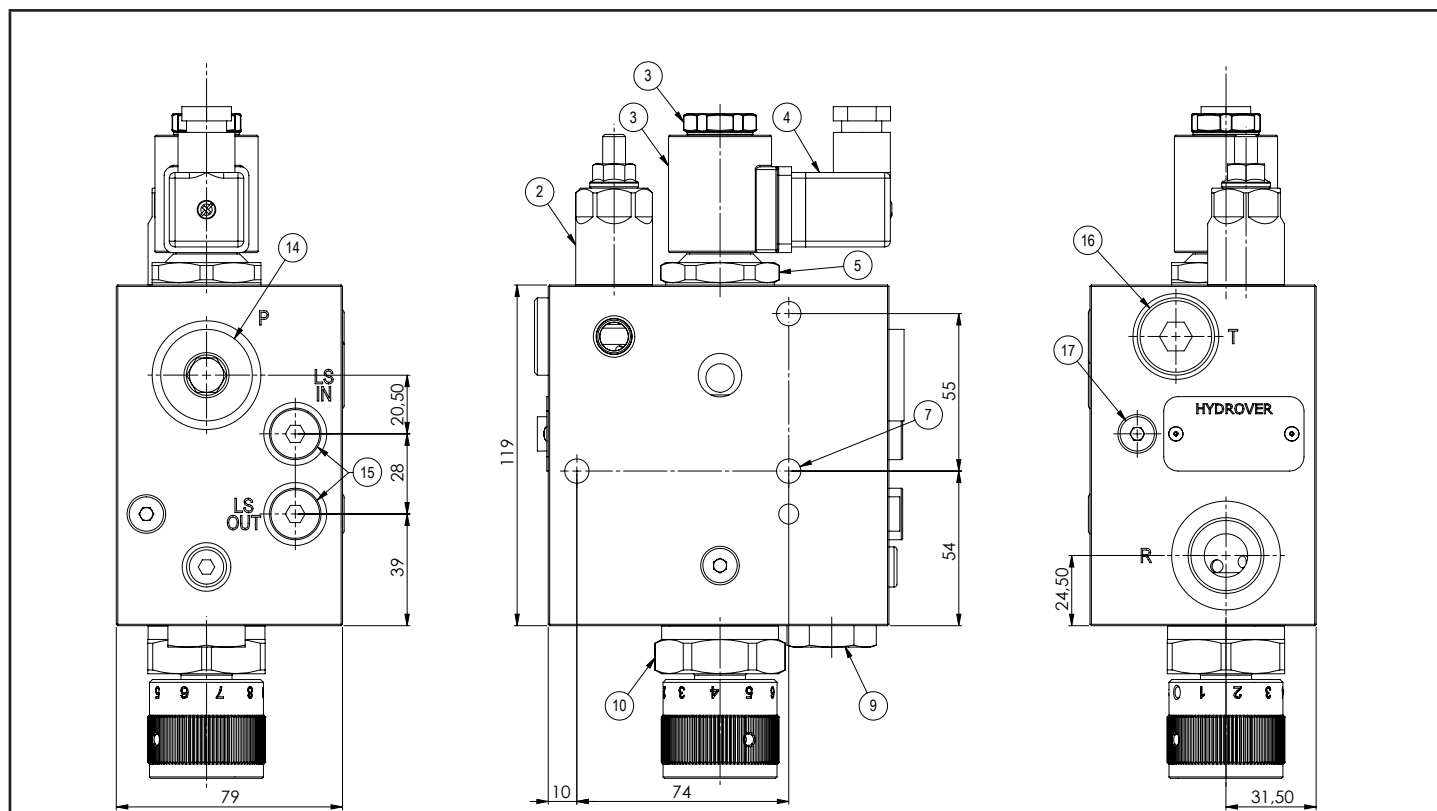
Inlet max. flow	150 lt/1	
Regulated max. flow	100 lt/1	
LS IN / LS OUT ports	1/4" G	
T port	1/2" G	
P / R ports	3/4" G	
Man. material	Aluminium	Steel
Max. pressure	250 bar	350 bar
Weight	4 Kg	8,5 Kg



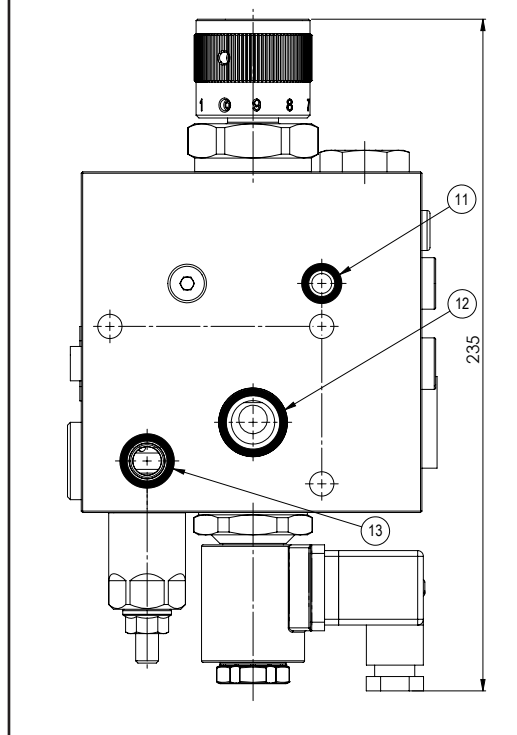
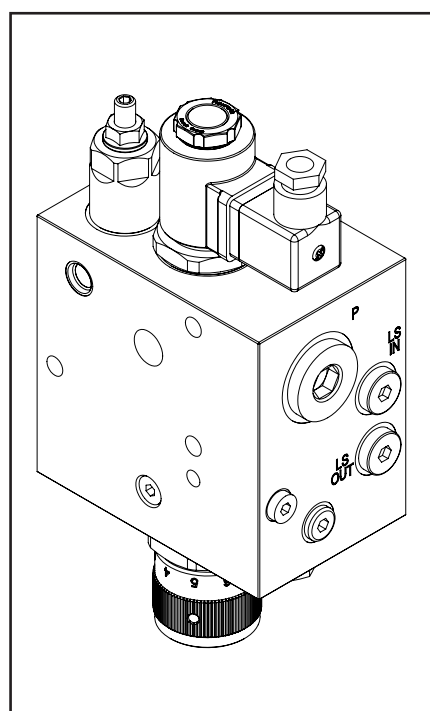
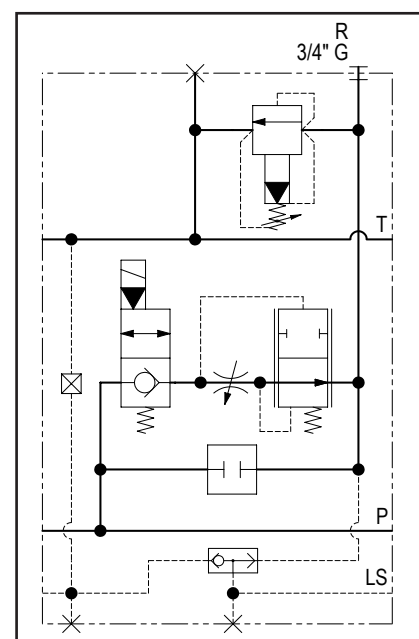
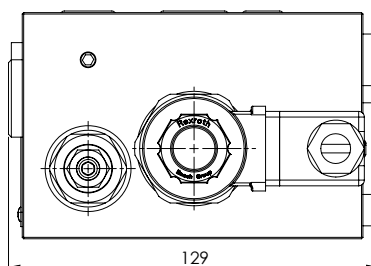
Management block for simultaneous feeds  
with a variable displacement pump 3/4" G - Intermediate section

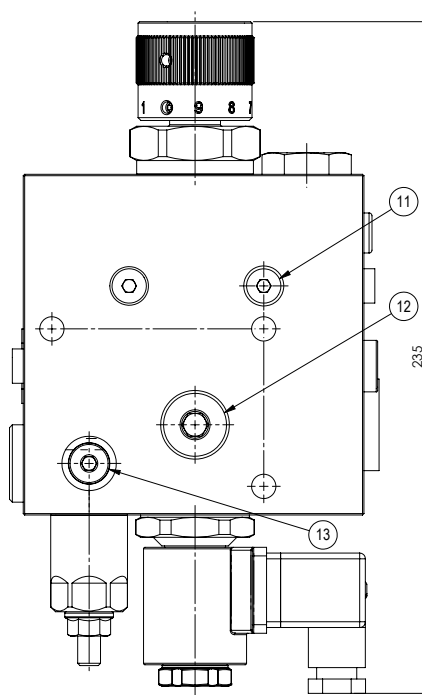
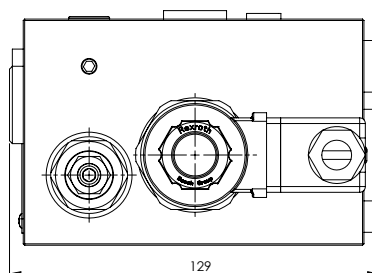
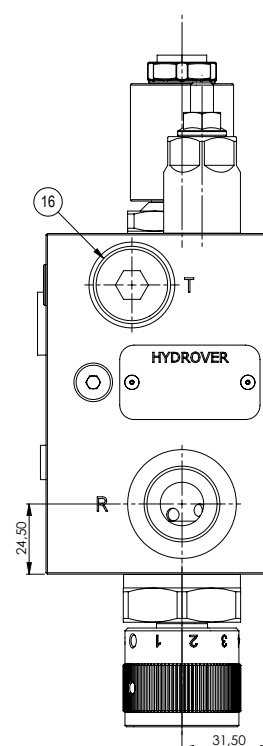
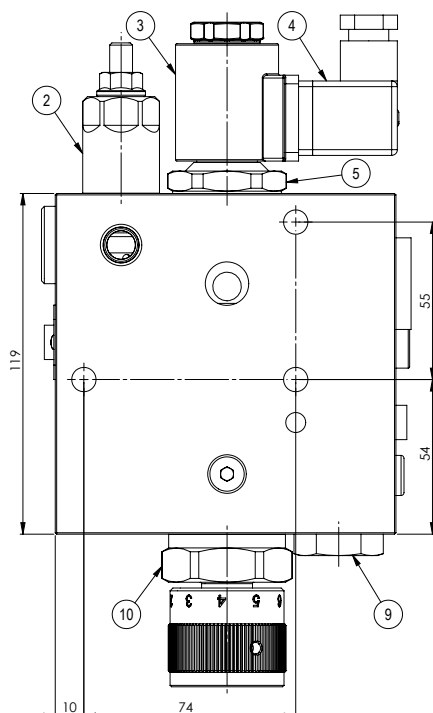
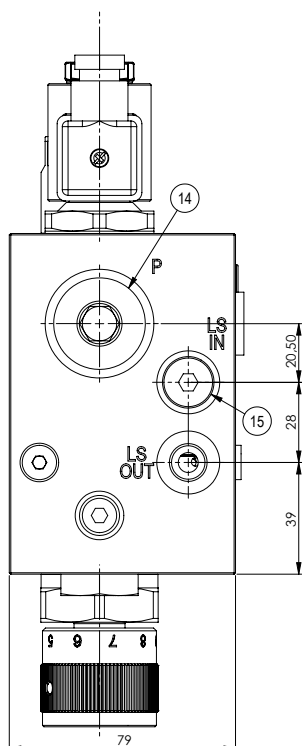
**H97101**

Dimensions in mm

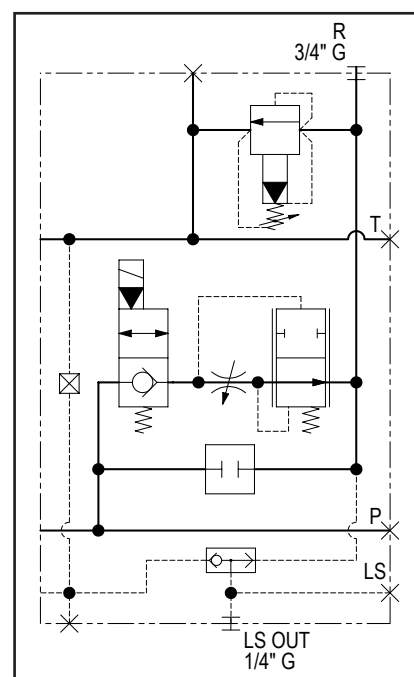
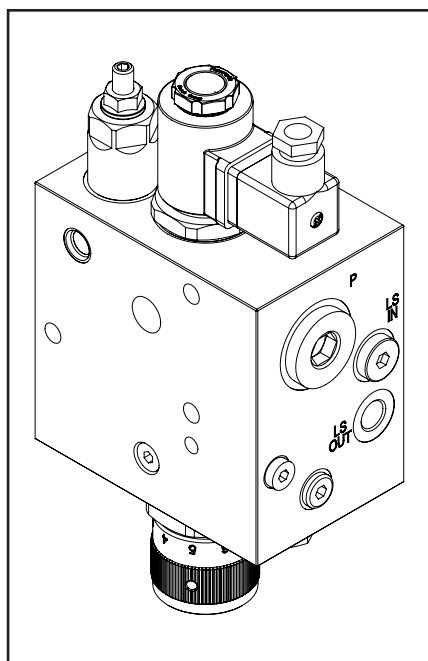

**Technical data**

Regulated max. flow			100 lt/1
R port			3/4" G
Manifold material	Aluminium	Steel	
	250 bar	350 bar	
Maximum pressure			
Weight	4 Kg	8,5 Kg	



**Management block for simultaneous feeds  
with a variable displacement pump 3/4" G - Closing section**
**H97101**


Technical data		
Regulated max. flow	100 lt/1	
LS OUT port	1/4" G	
R port	3/4" G	
Manifold material	Aluminium	Steel
Maximum pressure	250 bar	350 bar
Weight	4 Kg	8,5 Kg



Ordering code

H	9	7	1	0	1			-			-			-			
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**Hydrover  
product**

**Product series**  
97 series - Multifunctional  
integrated circuits

Product ID

## Manifold material

Aluminium =A  
Steel =S

### Section type

Inlet	= E
Intermediate	= I
Closing	= C

### Relief valve adjustment type on R \*

Screw = S  
Knob = K

**Solenoid valve  
coil**

**connection \***  
1 = DIN 43650  
ISO 4400

**Solenoid valve  
coil voltage \***

OB =	12V DC
OC =	24V DC
OD =	48V DC
OU =	110V RAC
AH =	230V RAC

**Solenoid valve  
manual override \***

E0 =	Without
EV =	Screw

### Relief valve adjustment pressure range on R \*

1 = 35-140 bar  
2 = 70-280 bar  
3 = 140-420 bar  
3 = 35-350 bar (adj. knob)

N°	Description	Q.ty
1	TPCLOR7/16"UNF on the inlet section (T)	1
2	Bosch Rexroth relief valve on R <b>VSPN-10A</b> * depicted with screw adjustment	1
3	Bosch Rexroth coil <b>D36</b> - CLASS H DIN 43650 ISO 4400 *	1
4	Connector DIN 43650 ISO 4400	1
5	Bosch Rexroth solenoid valve <b>OD.15.05.21-Y-00000</b> depicted without manual override *	1
6	TPCLG-38G on the inlet section (P)	1
7	Ø 8,5 through hole for tie rod	3
8	TPCLG8X1 on the inlet section (LS)	1
9	HCMM03-S3 50-350 bar anti-shock valve on the inlet plate, <b>0489A2008500000</b> plug on the other sections.	1
10	Flow regulator	1
11	TPCLG8X1 on the closing section, OR 109 Ø i. 9,13 c. s. 2,62 on the other sections (LS)	1
12	TPCLG-38G on the closing section, OR 3075 Ø i. 18.72 c. s. 2,62 on the other sections (P)	1
13	TPCLOR7/16"UNF on the closing section, OR 3056 Ø i. 13.95 c. s. 2,62 on the other sections (T)	1
14	TPCLG-34G on the intermediate and closing sections (P)	1
15	TPCLG-14G on the inlet and intermediate sections (LS OUT), on all sections (LS IN)	1
16	TPCLG-12G on the intermediate and closing sections (T)	1
17	TPCN 6 under the TPCLG-M8X1 on intermediate and closing sections. To add on the inlet section if a LS IN is connected.	1

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

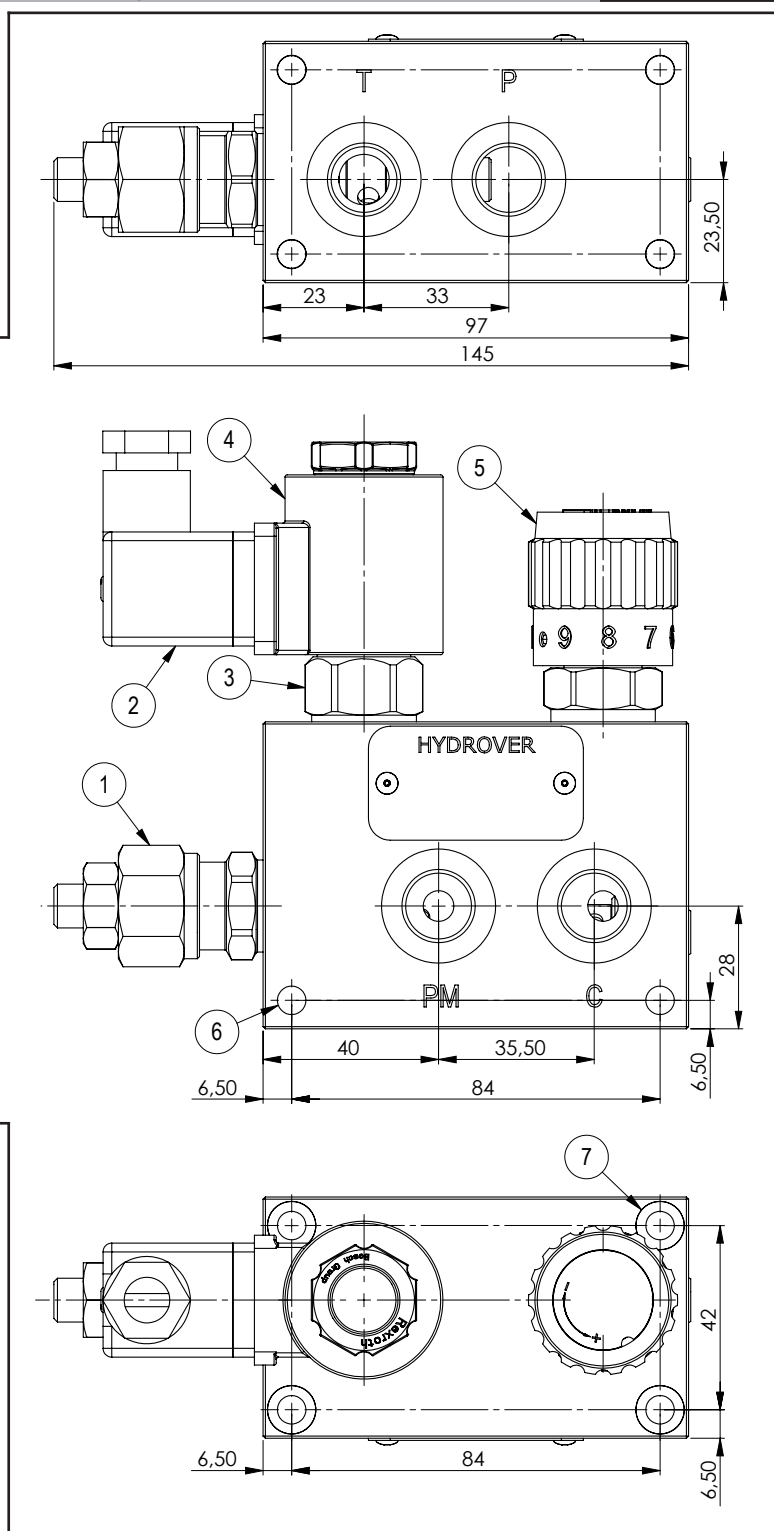




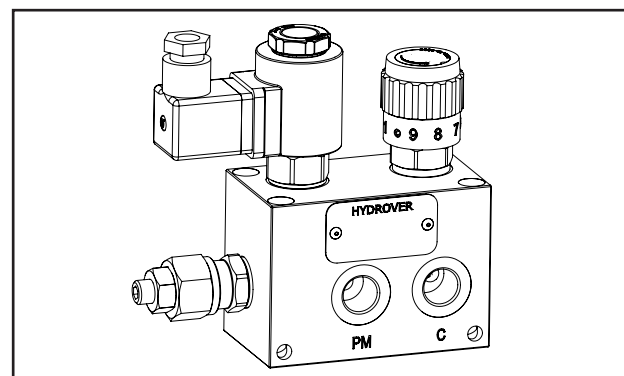
Integrated circuit for single acting cylinder with 2 way compensated  
flow regulator and relief valve 3/8" G

**H97121**
**Technical data**

Max. pressure	250 bar
Max. flow from P to C	30 lpm
Max. flow from C to T	15 lpm
Weight	1,6 Kg
Manifold material	Aluminium
C / P / PM / T ports	3/8" G



Dimensions in mm



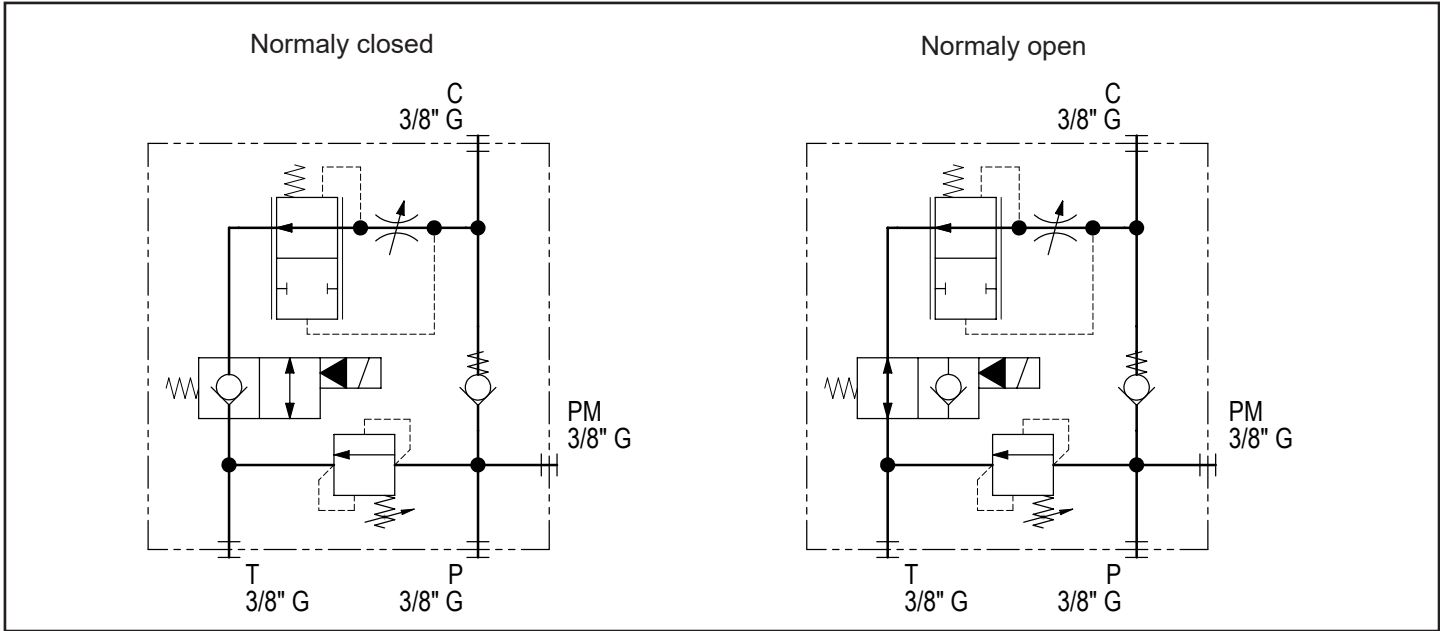
N°	Description	Q.ty
1	Bosch Rexroth relief valve <b>VS-30</b> * depicted with screw adjustment	1
2	Connector DIN 43650 ISO 4400	1
3	Bosch Rexroth solenoid valve <b>VEI-16-08A-NC OD.15.05.18-Y-000000</b> (normally closed) o <b>VEI-16-08A-NA OD.15.06.18-Y-000000</b> (normally open) depicted without manual override *	1
4	Bosch Rexroth coil <b>D36 CLASS H</b> DIN 43650 ISO 4400 *	1
5	2 way compensated flow regulator (available also not compensated)	1
6	Ø 6,5 through hole for mounting	2
7	Ø 6,5 through hole for mounting with counterbore	4

\* for complete technical information, click on the blue link or go to the components section at the end of the catalogue

Ordering code

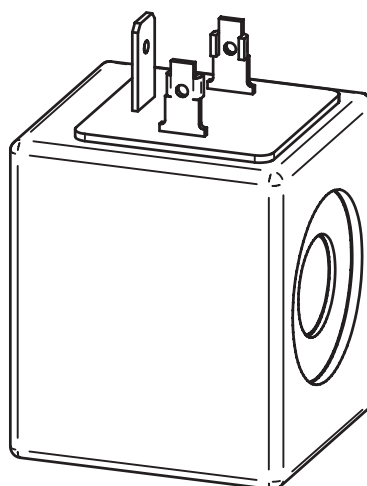
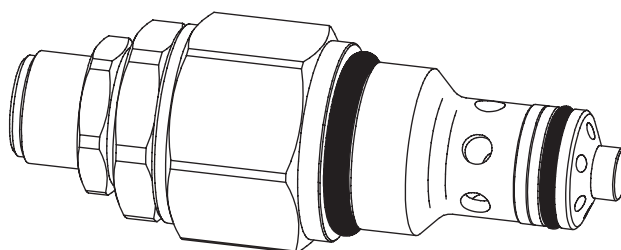
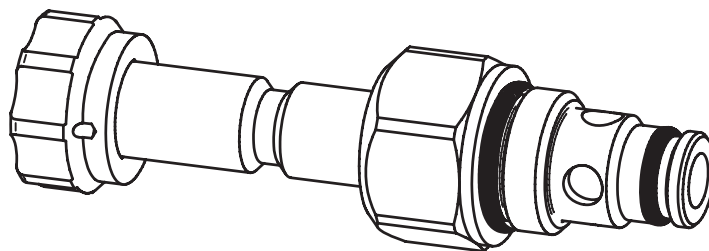
H 9 7 1 2 1 A _ _ C Q - _ _ - _ _																													
<div>Hydrover product</div>															<div>Solenoid valves coil connection * 1 = DIN 43650 ISO 4400</div>														
<div>Product series 17 series - Inline valves</div>																													
<div>Product ID</div>															<div>Solenoid valve coil voltage * OB = 12V DC OC = 24V DC OD = 48V DC OU = 110V RAC AH = 230V RAC</div>														
<div>Manifold material Aluminium</div>																													
<div>Relief valve adjustment type * Screw = S Knob = K</div>															<div>Solenoid valve manual override * E0 = Without EP = Push (NA) EV = Screw (NC) EG = Push and twist (NA)</div>														
<div>Relief valve adjustment pressure range * 5-50 bar = 0 30-100 bar = 1 50-210 bar = 2 100-350 bar = 3</div>															<div>Solenoid valve spool type * NA = Normally open NC = Normally closed</div>														
<div>Flow regulator adjustment type Calibrated knob</div>																													

\* Omit if not required. For example, to order the product without the solenoid cartridge valves, omit the coil connection, coil voltage, max. flow and manual override options: H97121AS2CQ.  
The manifold will still be provided with the corresponding cavities.





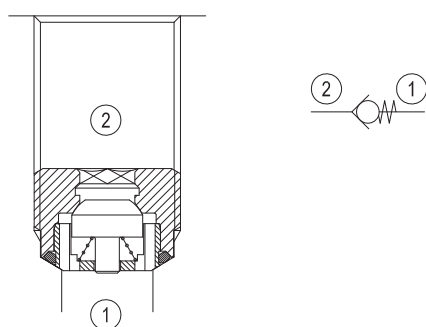
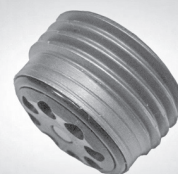
# COMPONENTS



# Insert type Check, poppet type

VUB1

0T.U3.01.00 - Y - Z

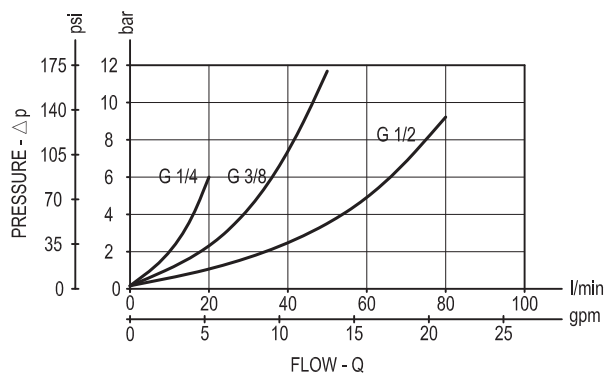


## Description

When pressure at 2 rises above the spring bias pressure, the poppet is lifted and flow allowed from 2 to 1. The valve is closed (checked) from 1 to 2. Precision machining and hardening processes allow virtually leak-free performance in the checked condition.

**Note:** UNF and Metric versions available on request. Consult factory.

## Performance

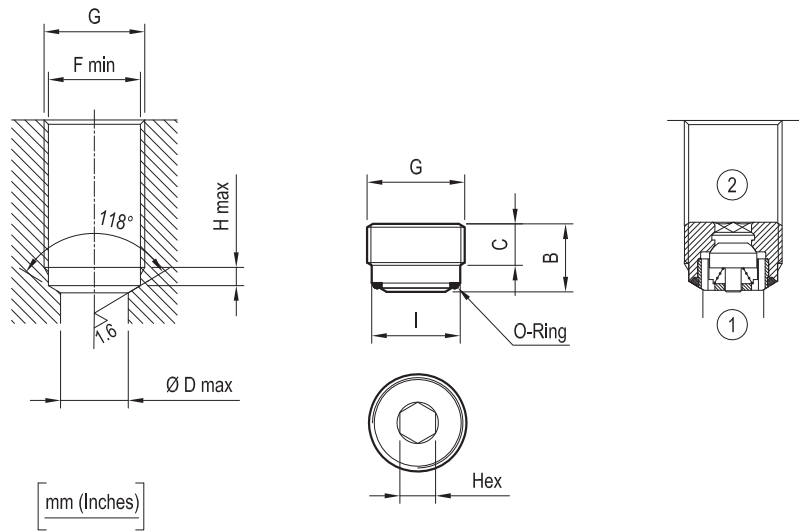


## Technical data

Max. operating pressure	bar (psi)	350 (5000)
Max. flow	l/min. (gpm)	see "performance" graph
Max. internal leakage	drops/min.	5
Fluid temperature range	°C (°F)	-30 to 100 (-22 to 212)
Installation torque	Nm (ft-lbs)	see "Dimensions" table
Weight	kg (lbs)	see "Dimensions" table
Special cavity		see "Dimensions"
Seal kit (*)	code material no.	see "Dimensions" table
Fluids		Mineral-based or synthetics with lubricating properties at viscosities of 5 to 800 mm <sup>2</sup> /s (cSt)
Filtration		Nominal value max. 10µm (NAS 8) ISO 4406 19/17/14
Other Technical Data		See data sheet RE 18350-50

(\*) Only external seals for 10 valves

Dimensions



G	B	C	Hex.	D	I	F	O-Ring dimensions	O-Ring codes	H	Weight kg (lbs)	Inst. torque Nm (ft-lbs)	Flow max. l/min. (gpm)
G 1/4	10 (0.39)	6 (0.24)	6 (0.24)	7 (0.28)	11.5 (0.45)	11.6 (0.46)	Ø 9 x 1 (0.35x0.04)	RG09UB010000100 R931002410	3 (0.12)	0.005 (0.011)	15 (11)	20 (5)
G 3/8	11.5 (0.45)	7 (0.28)	6 (0.24)	9 (0.35)	14.95 (0.59)	15.1 (0.6)	Ø 11x1.5 (0.43x0.06)	RG02UB010000100 R931002408	3 (0.12)	0.015 (0.033)	20 (15)	50 (13)
G 1/2	13.5 (0.53)	8 (0.32)	8 (0.32)	12 (0.47)	18.7 (0.74)	18.8 (0.74)	Ø 14x1.5 (0.55x0.06)	RG03UB020000100 R931002409	3 (0.12)	0.020 (0.044)	20 (15)	80 (21)

Ordering code

0T.U3.01.00	Y	Z	*
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Insert type - Check, poppet type

Series 0/A to L  
unchanged performances and dimensions

Port sizes

- = 09 G 1/4
- = 02 G 3/8
- = 03 G 1/2

SPRINGS

Cracking pressure bar (psi)

= 00

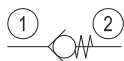
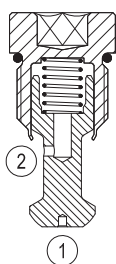
< 0.5 (7)

# Insert type Check, poppet type

Special cavity, 808

VUM1.060

0T.U6.02.00.99 - Z



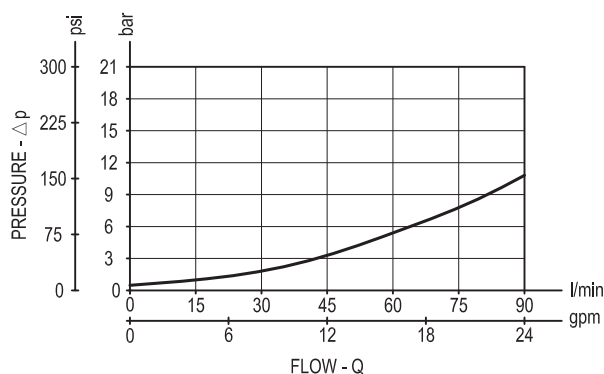
## Description

When pressure at 1 rises above the spring bias pressure, the poppet is lifted and flow allowed from 1 to 2. The valve is closed (checked) from 2 to 1. Precision machining and hardening processes allow virtually leak-free performance in the checked condition.

**Note:** to obtain a good leak proof performance coin the cavity seat using a loose valve poppet (P/N 0F.S2.014) as a coining tool.

Impact energy:  $5 \pm 2$  Nm.

## Performance



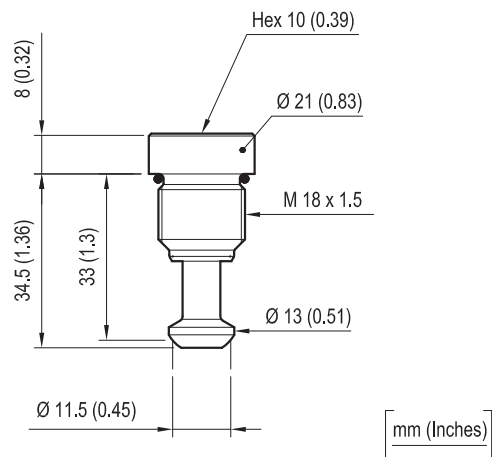
## Technical data

Max. operating pressure	bar (psi)	380 (5500)
Max. flow	l/min. (gpm)	90 (24)
Max. internal leakage	drops/min.	5
Fluid temperature range	°C (°F)	-30 to 100 (-22 to 212)
Installation torque	Nm (ft-lbs)	35-40 (26-30)
Weight	kg (lbs)	0.06 (0.13)
Special cavity		808
Seal kit (*)	code material no.	RG0730020000100 R931002406
Fluids		Mineral-based or synthetics with lubricating properties at viscosities of 5 to 800 mm <sup>2</sup> /s (cSt)
Filtration		Nominal value max. 10µm (NAS 8) ISO 4406 19/17/14
Installation		No restrictions
Other Technical Data		See data sheet RE 18350-50

(\*) Only external seals for 10 valves



Dimensions



Ordering code

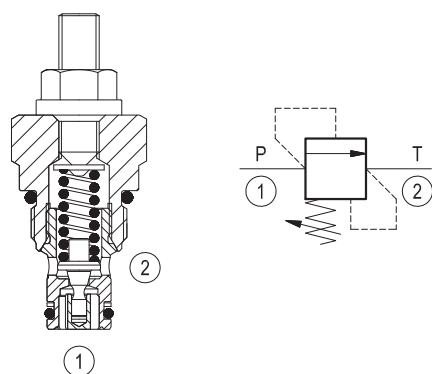
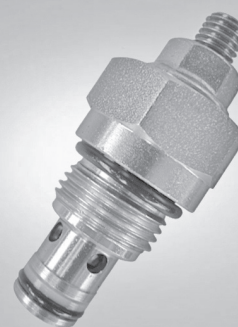
0T.U6.02.00.99		Z	*
Insert type - Check, poppet type		Series 0/A to L unchanged performances and dimensions	
Special cavity, 808		SPRINGS	
		Cracking pressure bar (psi)	
		= 00	0.5 (7)

# Relief, direct acting guided poppet type

Common cavity, Size 08

VSBN-08A

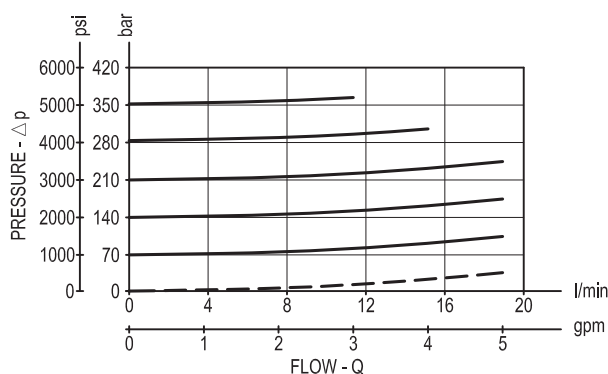
04.11.49 - X - 56 - Z



## Description

Flow is blocked from 1 to 2 until pressure increases to meet the selected valve setting, lifting the poppet from its seat and allowing relief flow through port 2 to tank. Pressure at port 2 is additive to the relief setting of the valve. The unique Bosch Rexroth Oil Control poppet design provides enhanced stability at all flows and pressures.

## Performance



## Technical data

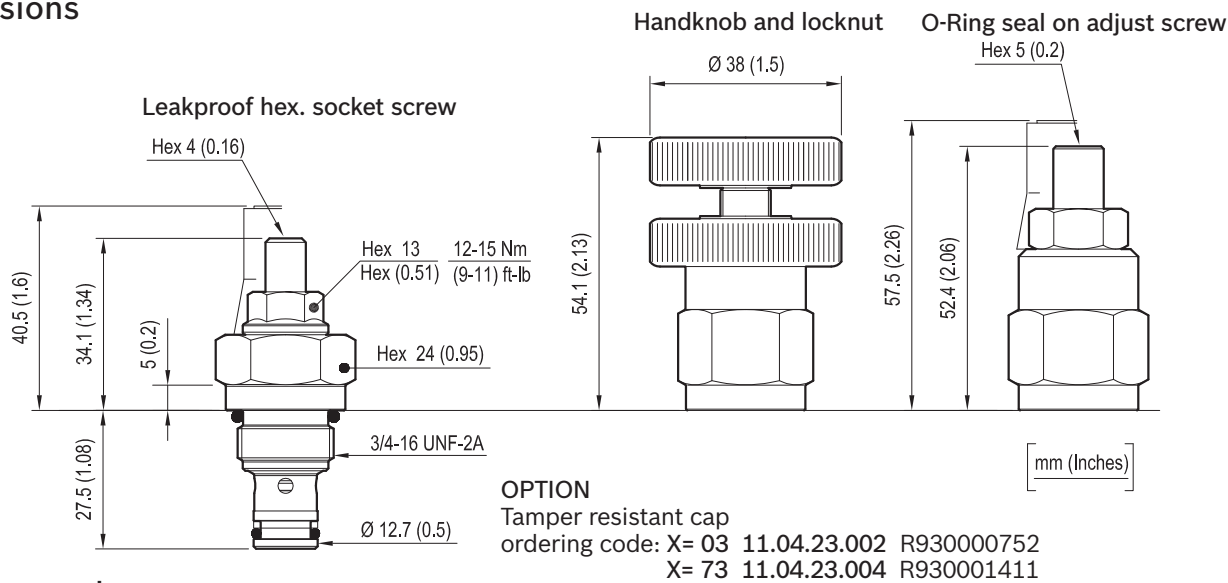
Max. operating pressure port 1 (P)	bar (psi)	350 (5000)
Max. pressure admitted port 2 (T)	bar (psi)	140 (2000)
Max. flow	l/min. (gpm)	20 (5.3)
Max. internal leakage (*)	drops/min.	15
Fluid temperature range	°C (°F)	-30 to 100 (-22 to 212)
Installation torque	Nm (ft-lbs)	34-41 (25-30)
Weight (**)	kg (lbs)	0.09 (0.2)
Cavity	CA-08A-2N see data sheet RE 18325-70	
Seal kit (***)	code material no.	RG08A2010520100 R901101437
Fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm <sup>2</sup> /s (cSt)	
Filtration	Nominal value max. 10µm (NAS 8) ISO 4406 19/17/14	
Installation	No restrictions	
Other general technical data	See data sheet RE 18350-50	

(\*) Max. to 80% of nominal setting

(\*\*) Standard version X=03 type

(\*\*\*) Only external seals for 10 valves

Dimensions



Ordering code

04.11.49	X	56	Z	00	*
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Series 0/A to L  
unchanged performances and dimensions

Relief, direct acting guided  
poppet type

Version and options standard

Adjustments

- = 03 Leakproof hex.socket screw
- = 04 Handknob and locknut
- = 73 O-Ring seal on adjust screw

Common cavity, size 08

SPRINGS				
		Adj. pressure range bar (psi)	Pres. increase bar/turn (psi/turn)	Std. setting bar (psi) Q=5 l/min
for X=03	= 05	10-70 (*) (145-1000)	26 (375)	50 (725)
	= 10	35-140 (500-2000)	50 (725)	100 (1450)
	= 20	105-210 (1500-3000)	79 (1145)	200 (2900)
	= 35	175-350 (2500-5000)	170 (2465)	350 (5000)
for X=04	= 35	35-350 (500-5000)	72 (1044)	200 (2900)
for X=73	= 35	35-350 (500-5000)	72 (1044)	200 (2900)

Note: Special settings available. Contact factory authorized  
representative for ordering code  
(\*) minimum pressure setting intended with Q=5 l/min (1.3 gpm)

Relief, direct acting guided  
poppet type  
Special cavity, 008

VS-30

04.11.18 - X - 99 - Z

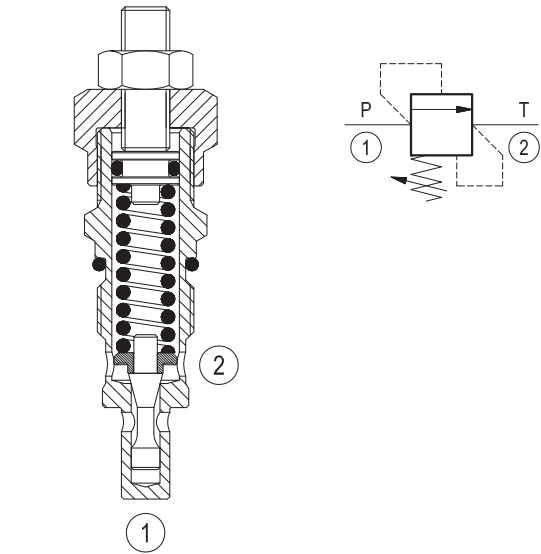
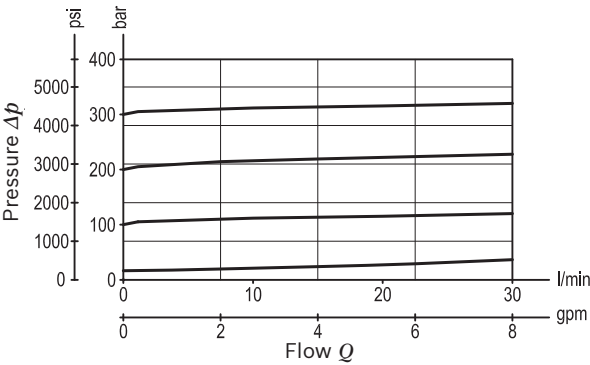
**RE 18318-23**  
Edition: 03.2016  
Replaces: 07.2010



Technical data	
Max. operating pressure port 1 (P)	350 bar (5000 psi)
Max. pressure admitted port 2 (T)	140 bar (2000 psi)
Max. flow	30 l/min (8 gpm)
Max. internal leakage <sup>1)</sup>	15 drops/min.
Fluid temperature range	-30 to 100 °C (-22 to 212 °F)
Installation torque	45 - 50 Nm (33 - 37 ft-lbs)
Weight <sup>2)</sup>	0.17 kg (0.38 lbs)
Special cavity	008 (see data sheet 18325-75)
Lines bodies and standard assemblies	Please refer to section “Hydraulic integrated circuit” or consult factory
Seal kit <sup>3)</sup>	Code: RG0008010000100 material no: R930001692
Fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm²/s (cSt)
Recommended degree of fluid contamination	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14
Installation position	No restrictions
Other Technical Data	See data sheet 18350-50

- 1) At 80% of pressure setting
- 2) Standard version 03 type
- 3) Only external seals for 10 valves

Characteristic curve



Ordering code

04.11.18	X	99	Z	00	*
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Series 0/A to L  
unchanged performances and dimensions

Version and options standard

SPRINGS			
	Adj. press. range bar (psi)	Pressure increase bar/turn (psi/turn)	Std. setting bar (psi) Q=5 l/min
05	* 5-50 (75-725)	12 (174)	50 (725)
10	30-100 (435-1450)	24 (348)	100 (1450)
20	50-210 (725-3000)	47 (682)	200 (2900)
35	100-350 (1450-5000)	82 (1189)	350 (5000)

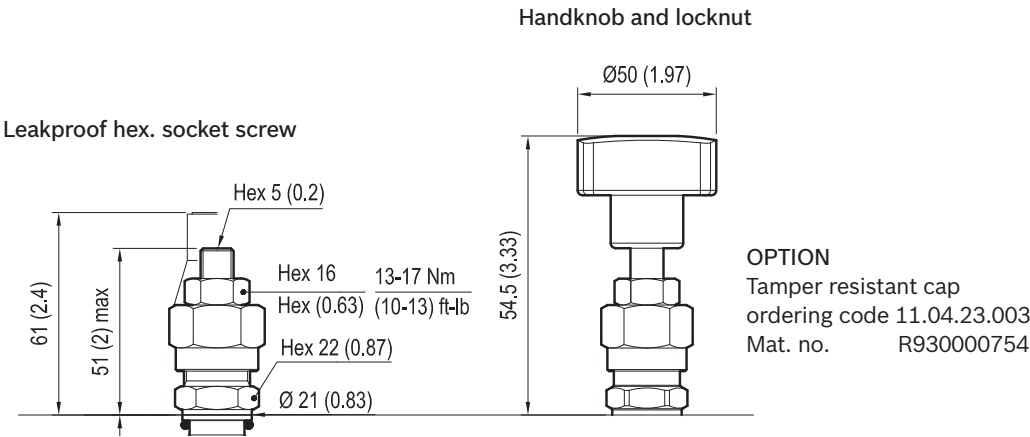
Note: Special settings available. Contact factory authorized representative for ordering code.  
\* minimum pressure setting intended with Q=5 l/min

Preferred types

Type	Material number
041118039905000	R901113613
041118039910000	R901113614
041118039920000	R901226876
041118039935000	R901113617

Type	Material number
041118049905000	R930000148
041118049910000	R930000149
041118049920000	R901127942
041118049935000	R930000151

Dimensions

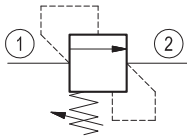
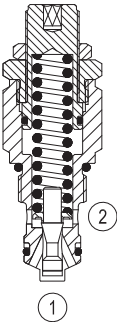


# Relief, direct acting guided poppet type

## Special cavity, Size 019-E

VMD1.025

OT.M1.02 - X - 99 - Z



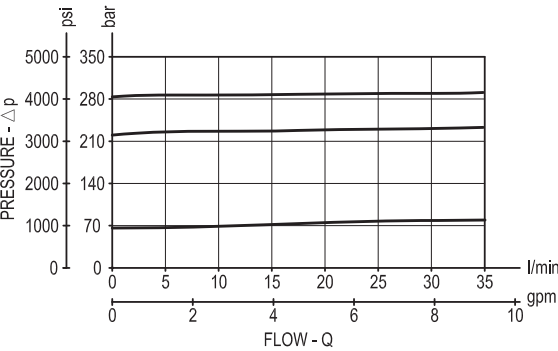
Description

Flow is blocked from 1 to 2 until pressure increases to meet the selected valve setting, lifting the poppet from its seat and allowing relief flow through port 2 to tank. Pressure at port 2 is additive to the relief setting of the valve. The unique Bosch Rexroth Oil Control poppet design provides enhanced stability at all flows and pressures.

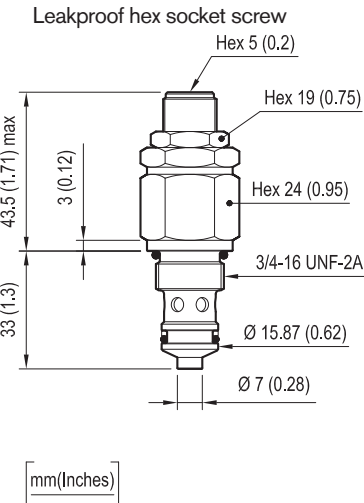
Technical data

Max pressure	bar (psi)	350 (5000)
Max flow	l/min (gpm)	35 (9)
Installation torque	Nm (ft-lb)	40-45 (30-33)
Special Cavity		019-E
Weight	kg (lbs)	0.13 (0.29)
Fluid temperature range	°C (°F)	between -30 (-22) and +100 (+212)

Performance



Dimensions



Ordering code

OT.M1.02	X	99	Z
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Relief, direct acting guided poppet type

Adjustments  
= 03 Leakproof hex. socket screw

Special cavity Size 019-E

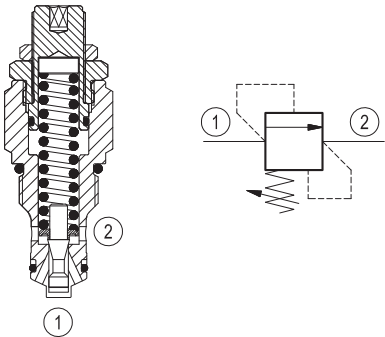
	SPRINGS		
	Adj. press. range bar (psi)	Press. increase bar/turn (psi/turn)	Std. setting press. bar (psi) (Q=5 l/min)
= 10	25-120 (350-1750)	16.5 (239)	100 (1450)
= 20	40-200 (580-2900)	26.5 (384)	180 (2600)
= 35	200-350 (2900-5000)	51 (740)	350 (5000)

# Relief, direct acting guided poppet type

## Common cavity, Size 10

VMD1.040

0T.M1.03 - X - 99 - Z



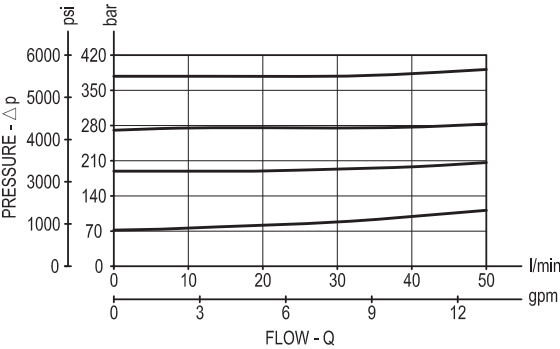
Description

Flow is blocked from 1 to 2 until pressure increases to meet the selected valve setting, lifting the poppet from its seat and allowing relief flow through port 2 to tank. Pressure at port 2 is additive to the relief setting of the valve. The unique Bosch Rexroth Oil Control poppet design provides enhanced stability at all flows and pressures.

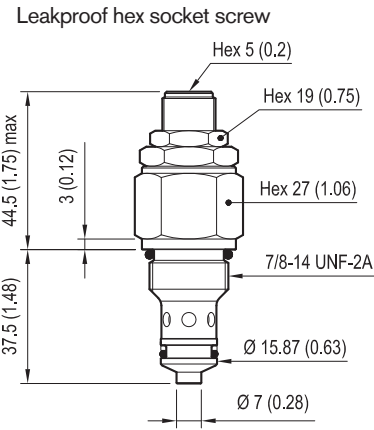
Technical data

Max pressure	bar (psi)	350 (5000)
Max flow	l/min (gpm)	50 (13)
Installation torque	Nm (ft-lb)	55-65 (41-48)
Cavity		CA-10A-2N
Weight	kg (lbs)	0.17 (0.38)
Fluid temperature range	°C (°F)	between -30 (-22) and +100 (+212)

Performance



Dimensions



Ordering code

0T.M1.03	X	99	Z
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Relief, direct acting  
guided poppet type

Adjustments  
= 03 Leakproof hex. socket  
screw

Common cavity Size 10

SPRINGS

	Adj. press. range bar (psi)	Press. increase bar/turn (psi/turn)	Std. setting press. bar (psi) (Q=5 l/min)
= 10	25-120 (350-1750)	16.5 (239)	100 (1450)
= 20	40-200 (580-2900)	26.5 (384)	180 (2600)
= 35	200-350 (2900-5000)	51 (740)	350 (5000)

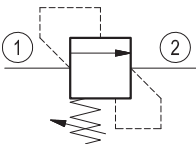
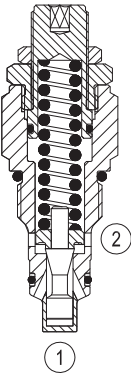
mm(Inches)

# Relief, direct acting guided poppet type

## Common cavity, Size 10

VMD1.070

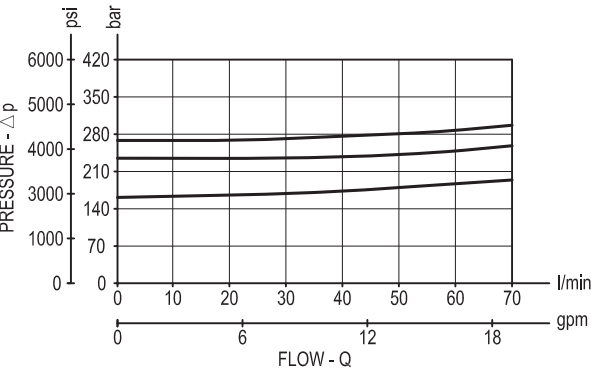
OT.M1.04 - X - 99 - Z



Description

Flow is blocked from 1 to 2 until pressure increases to meet the selected valve setting, lifting the poppet from its seat and allowing relief flow through port 2 to tank. Pressure at port 2 is additive to the relief setting of the valve. The unique Bosch Rexroth Oil Control poppet design provides enhanced stability at all flows and pressures.

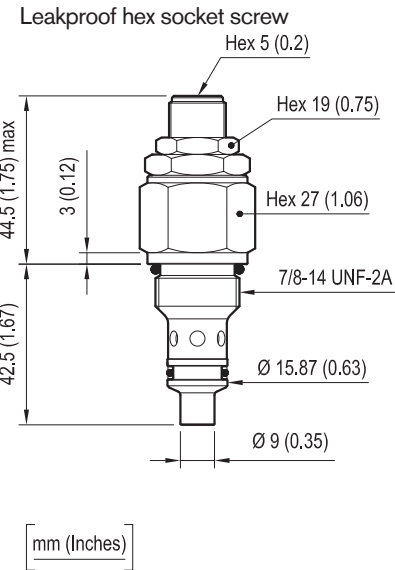
Performance



Technical data

Max pressure	bar (psi)	260 (3800)
Max flow	l/min (gpm)	70 (19)
Installation torque	Nm (ft-lb)	55-65 (41-48)
Cavity		CA-10A-2N
Weight	kg (lbs)	0.18 (0.4)
Fluid temperature range	°C (°F)	between -30 (-22) and +100 (212)

Dimensions



Ordering code

OT.M1.04	X	99	Z
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Relief, direct acting guided poppet type

Adjustments  
= 03 Leakproof hex. socket screw

Common cavity Size 10

SPRINGS			
	Adj. press. range bar (psi)	Press. increase bar/turn (psi/turn)	Std. setting press. bar (psi) (Q=5 l/min)
= 05	10-60 (145-870)	10 (145)	50 (725)
= 10	40-110 (580-1600)	17 (247)	100 (1450)
= 20	110-220 (1600-3200)	31.5 (457)	200 (2900)
= 35	220-260 (3200-3800)	37 (537)	250 (3600)

Type	Material number
OTM104039905000	R901099575
OTM104039910000	R901099604
OTM104039920000	R901116269

Type	Material number
OTM104039935000	R901099642



# Relief, direct acting guided poppet type

## Special cavity, 009

VS-80

04.11.05 - X - 99 - Z

**RE 18318-25**

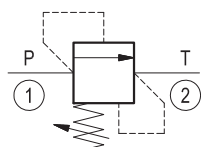
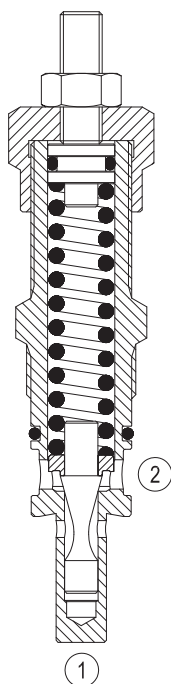
Edition: 01.2019

Replaces: 07.2018



### Description

Flow is blocked from 1 to 2 until pressure increases to meet the selected valve setting, lifting the poppet from its seat and allowing relief flow through 2 to tank. Pressure at 2 is additive to the relief setting of the valve. The unique Bosch Rexroth Oil Control poppet design provides enhanced stability at all flows and pressures.



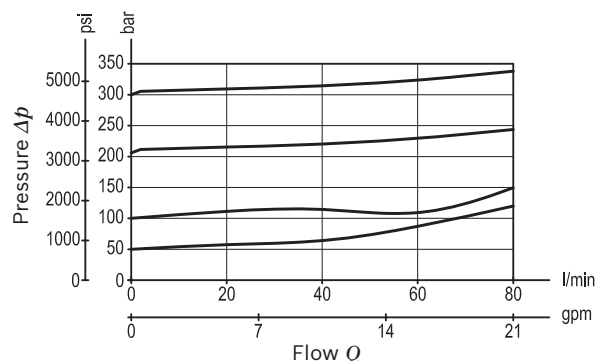
### Technical data

Max. operating pressure port 1 (P)	350 bar (5000 psi)
Max. pressure admitted port 2 (T)	140 bar (2000 psi)
Max. flow	80 l/min (21 gpm)
Max. internal leakage <sup>1)</sup>	15 drops/min.
Fluid temperature range	-30 to 100 °C (-22 to 212 °F)
Installation torque	83 - 92 Nm (61 - 68 ft-lbs)
Weight	0.35 kg (0.77 lbs)
MTTFD	150 years see RE 18350-51
Special cavity	009 (see data sheet 18325-75)
Lines bodies and standard assemblies	Please refer to section "Hydraulic integrated circuit" or consult factory
Seal kit <sup>2)</sup>	Code: RG0009010000100 material no: R930001694
Fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm <sup>2</sup> /s (cSt)
Recommended degree of fluid contamination	Nominal value max. 10µm (NAS 8) / ISO 4406 20/18/15
Installation position	No restrictions
Other Technical Data	See data sheet 18350-50

1) At 80% of pressure setting

2) Only external seals for 10 valves

### Characteristic curve



Ordering code

04.11.05	X	99	Z	00	*
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Series O/A to L  
unchanged performances and dimensions

Relief, direct acting guided  
poppet type

Version and options standard

Adjustments

- 03 Leakproof hex. socket screw
- 04 Handknob and locknut

99 Special cavity, 009

SPRINGS			
	Adj. press. range bar (psi)	Pressure increase bar/turn (psi/turn)	Std. setting bar (psi) Q=5 l/min
05	* 5-50 (75-725)	6 (87)	50 (725)
10	30-100 (435-1450)	12 (174)	100 (1450)
20	80-250 (1160-3600)	27 (392)	200 (2900)
35	140-350 (2000-5000)	62 (899)	350 (5000)

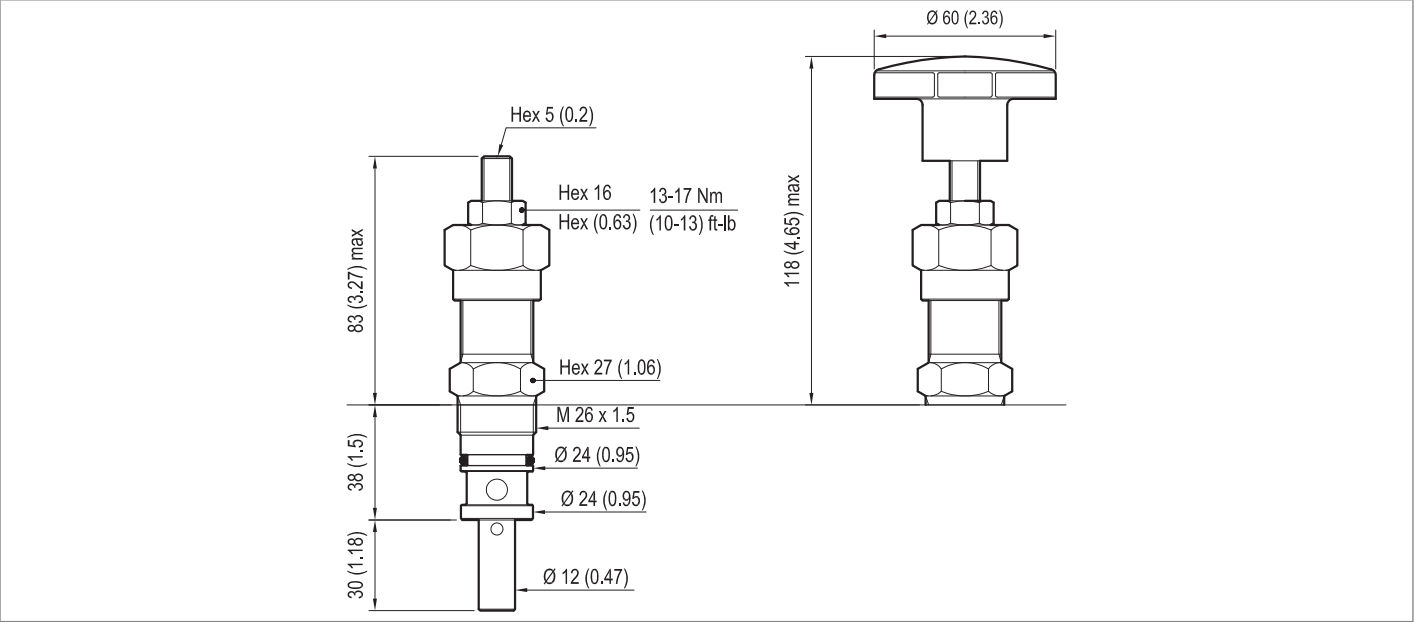
Note: Special settings available. Contact factory authorized representative for ordering code.  
\* minimum pressure setting intended with Q=5 l/min

Preferred types

Type	Material number
041105039905000	R930000117
041105039910000	R930000119
041105039920000	R901113620
041105049910000	R930000121

Type	Material number
041105049920000	R930000122
041105039935000	R930008396

Dimensions



# Relief, pilot operated spool type

## Common cavity, Size 10

VSPN-10A

04.12.08 - X - 85 - Z

**RE 18318-08**

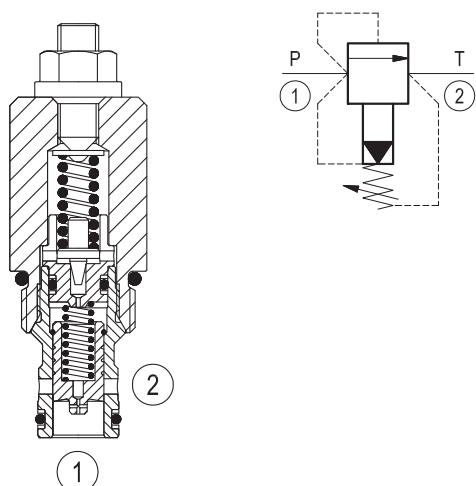
Edition: 03.2016

Replaces: 11.2015



### Description

Flow is blocked from 1 to 2 until pressure increases to meet the selected valve setting, lifting the conical, pilot-stage poppet from its seat. This action exhausts oil above the main-stage piston (spool type), allowing it to shift and provide relief flow through 2 to tank. Pressure at 2 is additive to the relief setting of the valve.



### Technical data

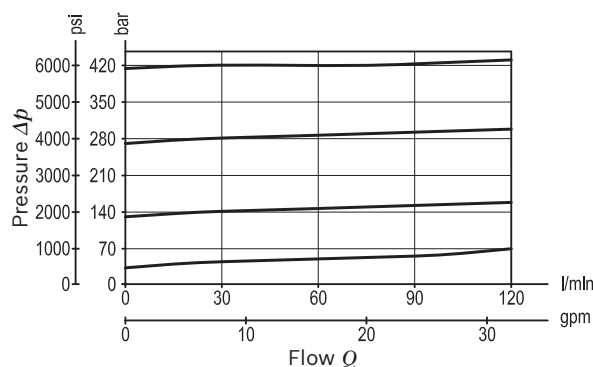
Max. operating pressure port 1 (P)	420 bar (6000 psi)
Max. pressure admitted port 2 (T)	350 bar (5000 psi) for version 03 210 bar (3000 psi) for version 04
Flow range	3 - 120 l/min (1 - 32 gpm)
Max. internal leakage <sup>1)</sup>	200 cm <sup>3</sup> /min. (12 cu.in./min.)
Fluid temperature range	-30 to 100 °C (-22 to 212 °F)
Installation torque	41 - 47 Nm (30 - 35 ft-lbs)
Weight <sup>2)</sup>	0.21 kg (0.46 lbs)
Cavity	CA-10A-2N (see data sheet 18325-70)
Lines bodies and standard assemblies	Please refer to section "Hydraulic integrated circuit" or consult factory
MTTFd	150 years see data sheet 18350-51
Seal kit <sup>3)</sup>	Code: RG10A2010530100 material no: R901111366
Fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm <sup>2</sup> /s (cSt)
Recommended degree of fluid contamination	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14
Installation position	No restrictions
Other Technical Data	See data sheet 18350-50

1) Measured at 200 bar (2900 psi)

2) Standard version X=03 type

3) Only external seals for 10 valves

### Characteristic curve



Ordering code

04.12.08	X	85	Z	00	*
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Series 0/A to L  
unchanged performances and dimensions

Relief, pilot operated spool type

Version and options standard

Adjustments

03 Leakproof hex. socket screw

04 Handknob and locknut

85 Common cavity, Size 10

SPRINGS				
		Adj. press. range bar (psi)	Pressure increase bar/turn (psi/turn)	Std. setting bar (psi) Q=5 l/min
for X= 03	10	35-140 (500-2000)	48 (696)	100 (1450)
	20	70-280 (1000-4000)	88 (1276)	200 (2900)
	35	140-420 (2000-6000)	140 (2030)	350 (5000)
for X= 04	35	35-350 (500-5000)	68 (986)	350 (5000)

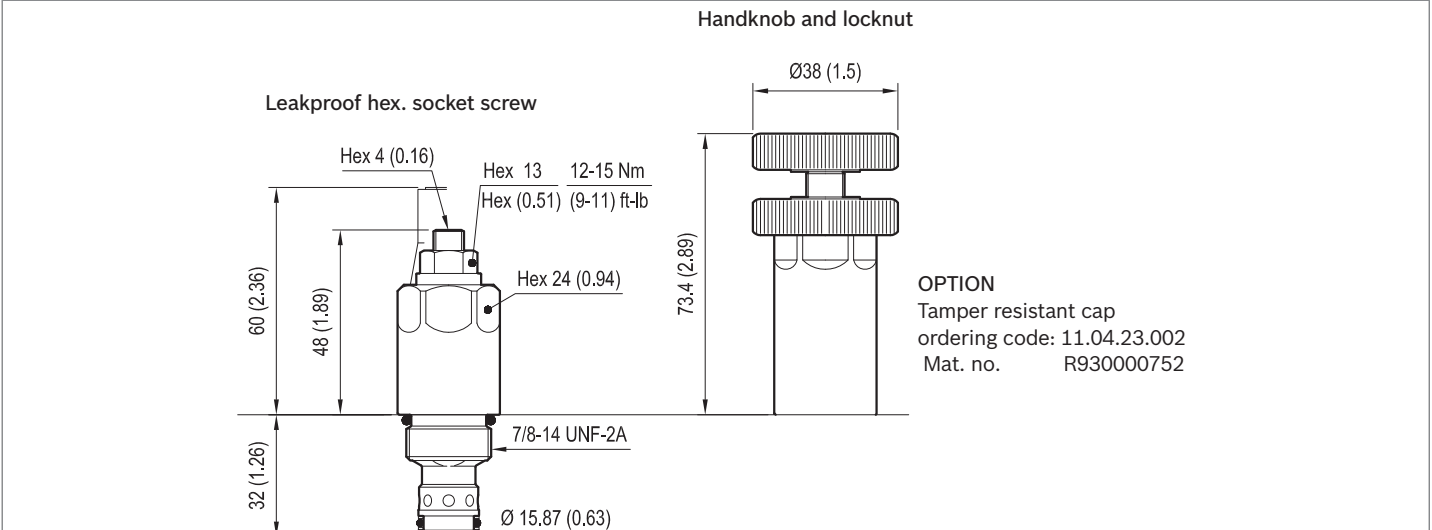
Note: Special settings available. Contact factory authorized representative for ordering code.

Preferred types

Type	Material number
041208038510000	R901097726
041208038520000	R901097722
041208038535000	R901104103
041208048535000	R901104104

Type	Material number

Dimensions



RELIEF, PILOT OPERATED SPOOL TYPE  
SPECIAL CAVITY

VSP-150

04.12.04 - X - 99 - Z

Technical drawing of the VSP-150 valve. The front view shows dimensions: 2.80 max (71 max) for the top section, .32 (8) for the middle section, and 2.22 (56.5) for the bottom section. It also shows a diameter of 1.49 (Ø 38) for the top and .78 (Ø 19.05) for the bottom. Hex specifications include Hex .19 Hex (5), Hex .67 Hex (17) with a torque of 15-16 ft-lb (20-22) Nm, Hex 1.06 Hex (27), Hex 1.18 Hex (30), and 1-14 UNS. The side view shows a spool type valve with a pilot stage and a main stage. A scale bar indicates 1 inch = 25.4 mm.

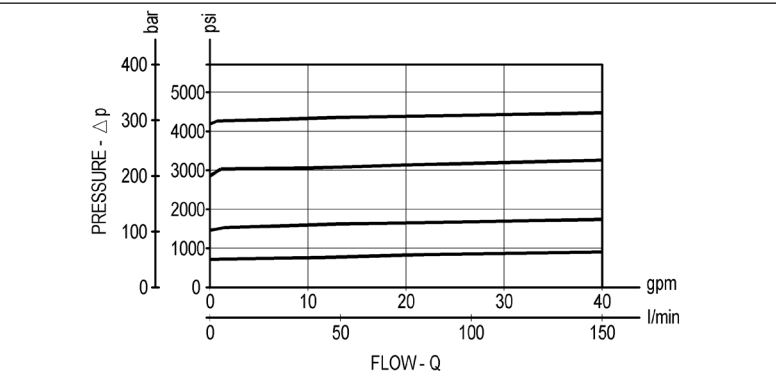
Flow is blocked from 1 to 2 until pressure increases to meet the selected valve setting, lifting the pilot-stage ball check from its seat. This action exhausts oil above the main-stage piston (spool type), allowing it to shift and provide relief flow through 2 to tank. Pressure at 2 is additive to the relief setting of the valve.

Schematic diagram of the VSP-150 valve. It shows a spool type valve with a pilot stage and a main stage. Port P is the pressure port, T is the tank port, 1 is the inlet port, and 2 is the outlet port. The diagram shows the valve in a closed position, with flow blocked from 1 to 2.

**TECHNICAL DATA**

Max. pressure:	6000 psi	(420 bar)
Max. flow:	40 gpm	(150 l/min)
Leakage at max relief setting ave. :	0.03 gpm	(0.10 l/min)
Special cavity :	065 (see page CT.S.002.U)	
Installation torque :	89-98 ft-lb	(121-133 Nm)
Weight:	0.617 lbs	(0.280 Kg)

Note: suitable for application where "T" line pressure never exceeds "P" line pressure.



X	ADJUSTMENTS	
03	Leakproof hex. socket screw	
04	Handknob and locknut	

Z	SPRINGS			
	Adj. press. range psi (bar)	Press. increase psi / turn (bar/turn)	Standard setting psi (bar) (Q=5 l/min)	
05	44-1000 (3-70)	290 (20)	725 (50)	
10	100-1500 (7-105)	377 (26)	1450 (100)	
20	145-3000 (10-210)	508 (35)	2900 (200)	
40	500-6000 (35-420)	1668 (115)	5075 (350)	

OPTIONS	
Ordering code	Description
11.04.23.004	 Tamper resistant cap

Special settings available. Contact factory authorized representative for ordering code.

# Pressure relief pilot operated poppet type and anti-cavitation valve Special cavity, FC

VMR2-22-FC

VMR2.240.NG

**RE 18318-37**

Edition: 06.2017

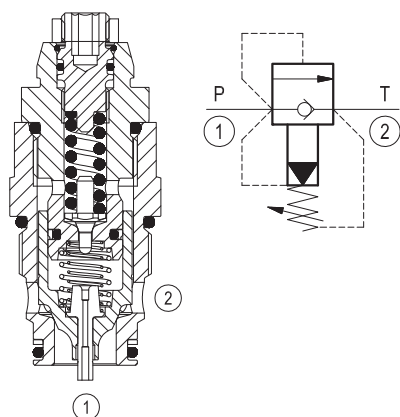
Replaces: 11.2016



## Description

Flow is blocked from 1 to 2 until pressure increases to meet the selected valve setting, lifting the conical, pilot-stage poppet from its seat. This action exhausts oil above the main-stage poppet (low-leakage, seat type), allowing it to shift and provide relief flow through 2 to tank. Pressure at 2 is additive to the relief setting of the valve.

The anti-cavitation function makes up for lacking oil volumes caused, for example, by leakage when pressure valves respond or in the case of leading loads. If the pressure at main port 1 is lower than the one at main port 2, the spool will be lifted out of its seat. Hydraulic fluid flows from main port 2 to main port 1.



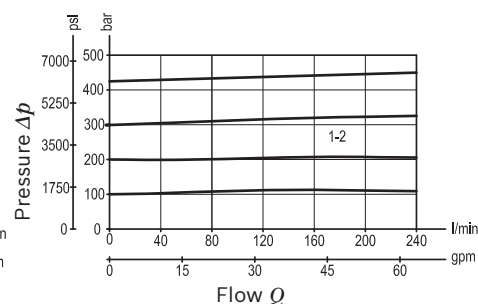
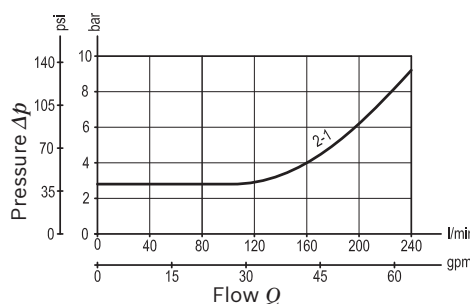
## Technical data

Max. operating pressure port 1 (P)	420 bar (6000 psi)
Max. pressure admitted port 2 (T)	50 bar (725 psi)
Max. flow	240 l/min (63 gpm)
Max. internal leakage <sup>1)</sup>	45 drops/min.
Fluid temperature range	-30 to 100 °C (-22 to 212 °F) (Buna N) -20 to 120 °C (-4 to 248 °F) (Viton)
Installation torque <sup>2)</sup>	100 Nm (74 ft-lbs)
Weight	0.24 kg (0.53 lbs)
MTTFd	150 years see RE 18350-51
Special cavity	FC (see data sheet 18325-75)
Lines bodies and standard assemblies	Please refer to section "Hydraulic integrated circuit" or consult factory
Seal kit (Viton)	Code: RG22R2040520100 material no: R930052887
Fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 380 mm <sup>2</sup> /s (cSt)
Recommended degree of fluid contamination	Nominal value max. 10µm (NAS 9) / ISO 4406 20/18/15
Installation position	No restrictions
Other Technical Data	See data sheet 18350-50
Without surface protection	In case of need of surface protection, please consult factory.

1) At 80% of pressure setting.

2) Torque value valid for installation in cast iron and steel manifolds.  
In case of different body materials, please consult factory.

## Characteristic curve



2     **VMR2-22-FC** | Pressure relief pilot operated poppet type, and anti-cavitation valve

Dimensions [mm (inches)]

Ordering code

<b>VMR2.240.NG</b>	<b>*</b>
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Pressure relief pilot operated poppet type  
and anti-cavitation valve

	SPRINGS		O-RING
	Adj. press. range bar (psi)	Pressure increase bar/turn (psi/turn)	Material
<b>000</b>	100-420 (1450-6090)	300 (4350)	Buna N (NBR)
<b>010</b>	100-420 (1450-6090)	300 (4350)	Viton (FKM)

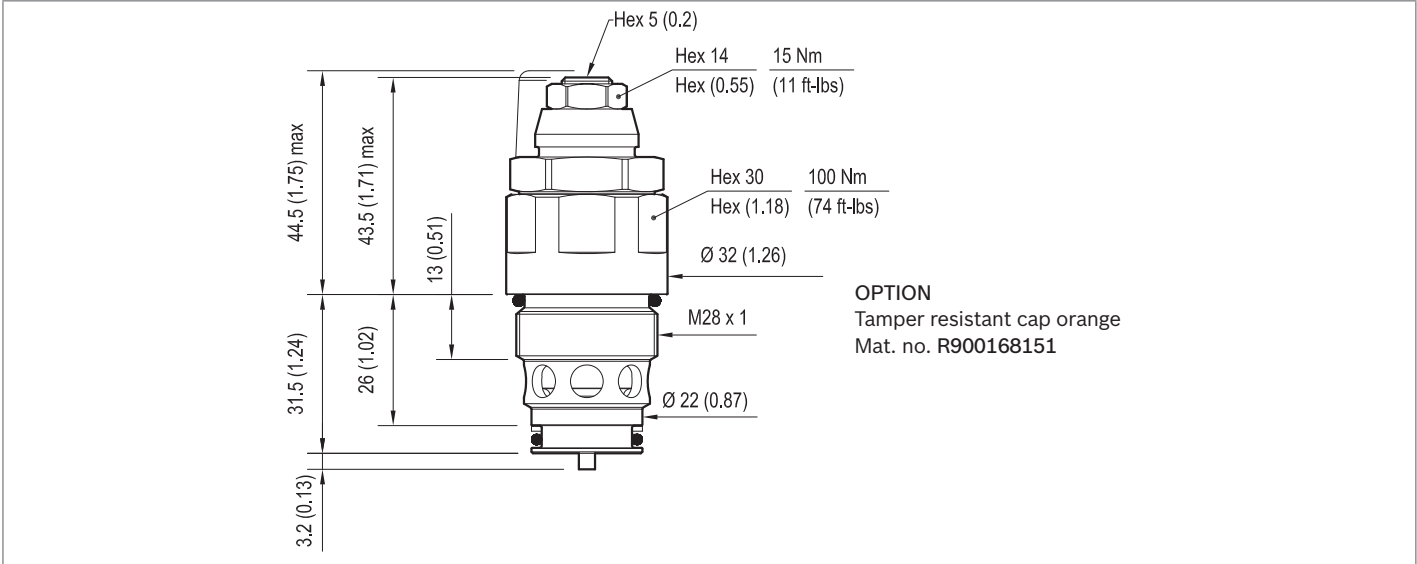
\* Valves are delivered set at pressure setting <25 bar and with adjustment device not tighten. Fine setting to be done by customer. For case of request of factory set valve, please consult factory.

Preferred types

Type	Material number
VMR2.240.NG.000	R930057206
VMR2.240.NG.010	R930052892

Type	Material number

Dimensions

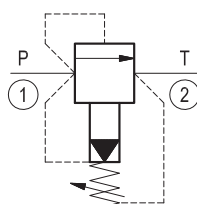
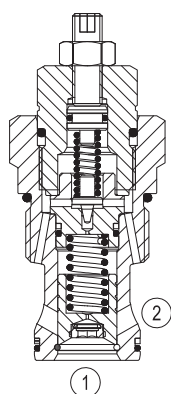


# Relief, pilot operated spool type

## Common cavity, Size 16

VSPN-16A

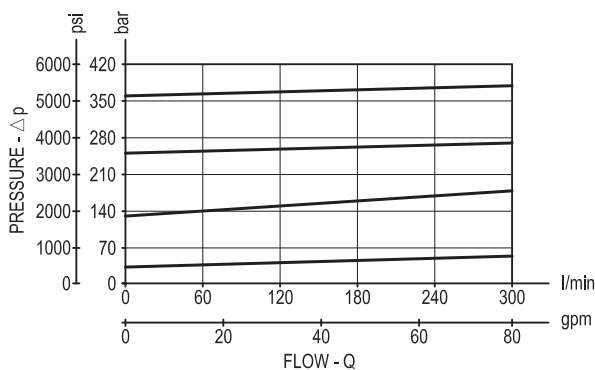
04.12.11 - X - 27 - Z



### Description

Flow is blocked from 1 to 2 until pressure increases to meet the selected valve setting, lifting the conical, pilot-stage poppet from its seat. This action exhausts oil above the main-stage piston (spool type), allowing it to shift and provide relief flow through 2 to tank. Pressure at 2 is additive to the relief setting of the valve. Pilot operation is protected from contamination by a filter screen at the bottom of the main piston.

### Performance



### Technical data

Max. operating pressure port 1 (P)	bar (psi)	420 (6000)
Max. pressure admitted port 2 (T)	bar (psi)	140 (2000)
Flow range	l/min. (gpm)	8-300 (2-79)
Max. internal leakage (*)	cm <sup>3</sup> /min. (cu.in./min.)	350 (21)
Fluid temperature range	°C (°F)	-30 to 100 (-22 to 212)
Installation torque	Nm (ft-lbs)	108-122 (80-90)
Weight (**)	kg (lbs)	0.45 (0.99)
Cavity		CA-16A-2N see data sheet RE 18325-70
Seal kit (***)	code material no.	RG16A2010520100 R901111386
Fluids		Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm <sup>2</sup> /s (cSt)
Filtration		Nominal value max. 10µm (NAS 8) ISO 4406 19/17/14
Installation		No restrictions
Other general technical data		See data sheet RE 18350-50

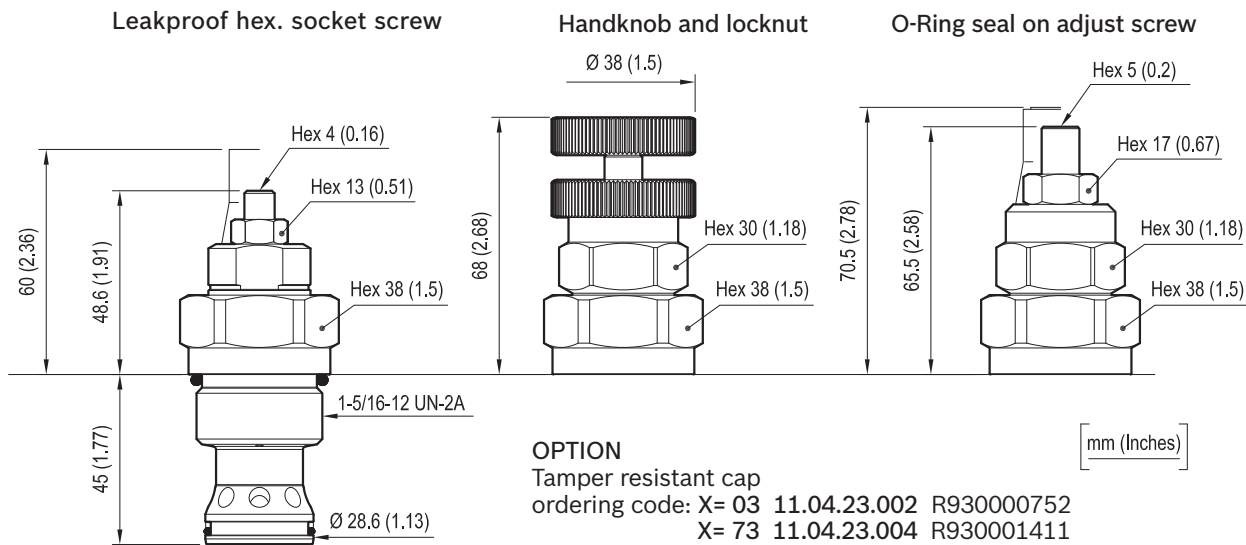
(\*) Measured at 200 bar (2900 psi)

(\*\*) Standard version X=03 type

(\*\*\*) Only external seals for 10 valves



Dimensions



Ordering code

04.12.11		X	27	Z	00	*																															
Relief, pilot operated spool type		Series 0/A to L unchanged performances and dimensions																																			
Adjustments		Version and options standard																																			
= 03 Leakproof hex. socket screw		<table><tr><th colspan="4">SPRINGS</th></tr><tr><th colspan="2">Adj. pressure range bar (psi)</th><th>Pres. increase bar/turn (psi/turn)</th><th>Std. setting bar (psi) Q=5 l/min</th></tr><tr><td rowspan="3">for X=03</td><td>= 10</td><td>35-140 (500-2000)</td><td>48 (696)</td><td>100 (1450)</td></tr><tr><td>= 20</td><td>70-280 (1000-4000)</td><td>88 (1276)</td><td>200 (2900)</td></tr><tr><td>= 35</td><td>140-420 (2000-6000)</td><td>140 (2030)</td><td>350 (5000)</td></tr><tr><td>for X=04</td><td>= 35</td><td>35-350 (500-5000)</td><td>66 (957)</td><td>350 (5000)</td></tr><tr><td>for X=73</td><td>= 35</td><td>35-350 (500-5000)</td><td>66 (957)</td><td>350 (5000)</td></tr></table>					SPRINGS				Adj. pressure range bar (psi)		Pres. increase bar/turn (psi/turn)	Std. setting bar (psi) Q=5 l/min	for X=03	= 10	35-140 (500-2000)	48 (696)	100 (1450)	= 20	70-280 (1000-4000)	88 (1276)	200 (2900)	= 35	140-420 (2000-6000)	140 (2030)	350 (5000)	for X=04	= 35	35-350 (500-5000)	66 (957)	350 (5000)	for X=73	= 35	35-350 (500-5000)	66 (957)	350 (5000)
SPRINGS																																					
Adj. pressure range bar (psi)		Pres. increase bar/turn (psi/turn)	Std. setting bar (psi) Q=5 l/min																																		
for X=03	= 10	35-140 (500-2000)	48 (696)	100 (1450)																																	
	= 20	70-280 (1000-4000)	88 (1276)	200 (2900)																																	
	= 35	140-420 (2000-6000)	140 (2030)	350 (5000)																																	
for X=04	= 35	35-350 (500-5000)	66 (957)	350 (5000)																																	
for X=73	= 35	35-350 (500-5000)	66 (957)	350 (5000)																																	
= 04 Handknob and locknut																																					
= 73 O-Ring seal on adjust screw																																					
Common cavity, Size 16																																					

Note: Special settings available. Contact factory authorized representative for ordering code

# Relief, direct acting poppet type pressure compensated Special cavity, 008

VS-30-CC

04.11.27 - X - 99 - Z

**RE 18318-26**

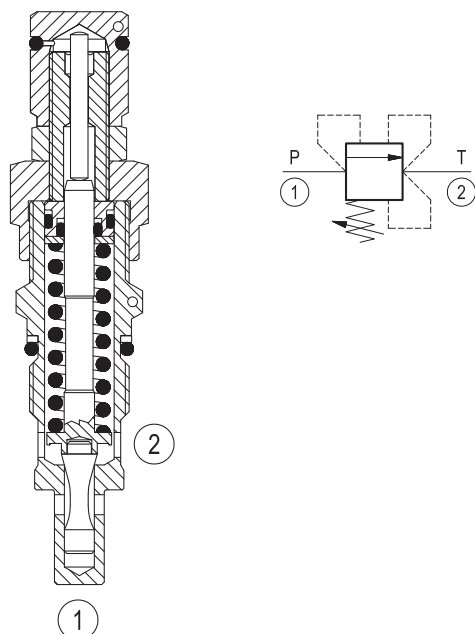
Edition: 03.2016

Replaces: 07.2012



## Description

Flow is blocked from 1 to 2 until pressure increases to meet the selected valve setting, lifting the poppet from its seat and allowing relief flow through 2 to tank. The valve applies a balanced piston design allowing consistent relief operation at the valve setting independent of back-pressure at 2. The unique Bosch Rexroth Oil Control poppet design provides enhanced stability at all flows and pressures.



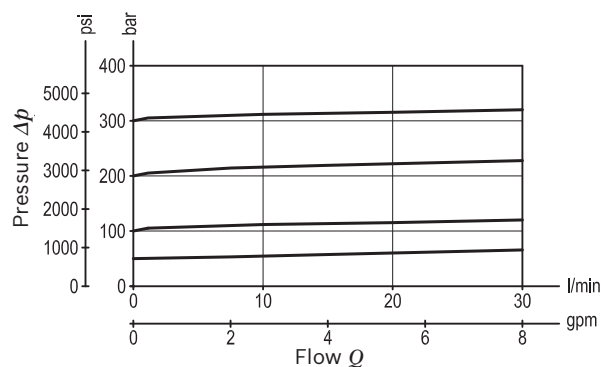
## Technical data

Max. operating pressure	350 bar (5000 psi)
Max. flow	30 l/min (8 gpm)
Max. internal leakage <sup>1)</sup>	15 drops/min.
Fluid temperature range	-30 to 100 °C (-22 to 212 °F)
Installation torque	46 - 51 Nm (34 - 38 ft-lbs)
Weight	0.17 kg (0.38 lbs)
Special cavity	008 (see data sheet 18325-75)
Lines bodies and standard assemblies	Please refer to section "Hydraulic integrated circuit" or consult factory
Seal kit <sup>2)</sup>	Code: RG0008010520100 material no: R930001693
Fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm <sup>2</sup> /s (cSt)
Recommended degree of fluid contamination	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14
Installation position	No restrictions
Other Technical Data	See data sheet 18350-50

1) At 80% of pressure setting

2) Only external seals for 10 valves

## Characteristic curve



Ordering code

04.11.27	X	99	Z	00	*
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Series 0/A to L  
unchanged performances and dimensions

Relief, direct acting poppet type  
pressure compensated

Version and options standard

Adjustments

03 Leakproof hex. socket screw

99 Special cavity, 008

SPRINGS			
	Adj. press. range bar (psi)	Pressure increase bar/turn (psi/turn)	Std. setting bar (psi) Q=5 l/min
05	* 5-50 (75-725)	11 (160)	50 (725)
10	30-100 (435-1450)	23 (334)	100 (1450)
20	50-210 (725-3000)	47 (682)	200 (2900)
35	100-350 (1450-5000)	82 (1189)	350 (5000)

Note: Special settings available. Contact factory authorized representative for ordering code.

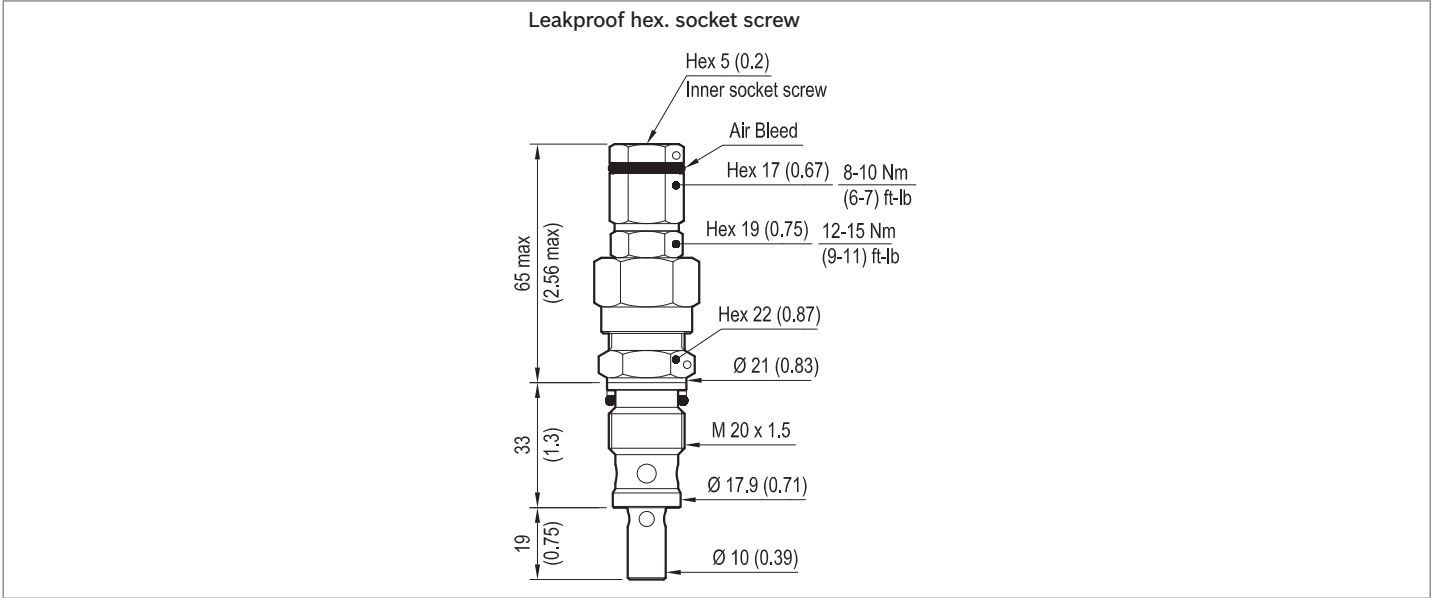
\* minimum pressure setting intended with Q=5 l/min

Preferred types

Type	Material number
04112703990500D	R930006231
04112703991000D	R930006233
04112703992000D	R930006234
04112703993500D	R930006239

Type	Material number

Dimensions



# Priority unloading pilot operated

## Common cavity, Size 08

VMSN-08A

04.75.21 - X - 56 - Z

**RE 18318-16**

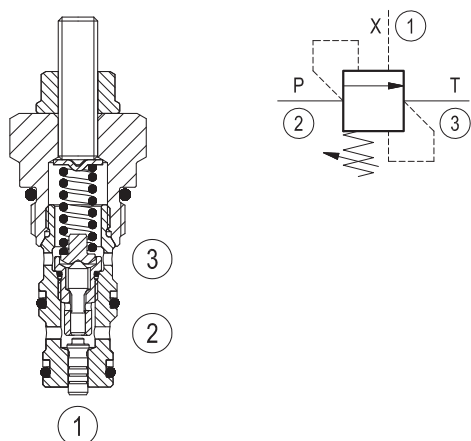
Edition: 03.2016

Replaces: 12.2011



### Description

Flow is blocked from 2 to 3 until pressure increases to meet the selected valve setting, lifting the small, pilot-stage poppet from its seat. This action exhausts oil above the main-stage piston (spool type), allowing it to shift fully and unload flow from 2 through 3 with minimal pressure drop. Similarly, when remote pilot pressure at 1 exceeds the pressure setting, a secondary piston lifts the pilot-stage poppet from its seat, again exhausting fluid from 2 through 3.



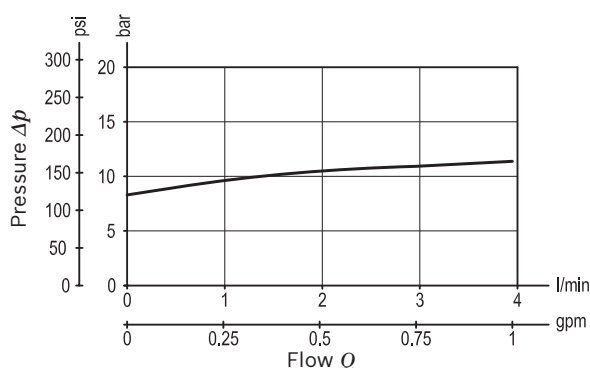
### Technical data

Max. operating pressure port 1-2	350 bar (5000 psi)
Max. pressure admitted port 3	50 bar (750 psi)
Max. flow	3 l/min (1 gpm)
Max. internal leakage <sup>1)</sup>	15 drops/min.
Fluid temperature range	-30 to 100 °C (-22 to 212 °F)
Installation torque	34 - 41 Nm (25 - 30 ft-lbs)
Weight	0.14 kg (0.31 lbs)
Cavity	CA-08A-3N (see data sheet 18325-70)
Lines bodies and standard assemblies	Please refer to section "Hydraulic integrated circuit" or consult factory
Seal kit <sup>2)</sup>	Code: RG08A3010520100 material no: R930000861
Fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm <sup>2</sup> /s (cSt)
Recommended degree of fluid contamination	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14
Installation position	No restrictions
Other Technical Data	See data sheet 18350-50

1) At 80% of pressure setting

2) Only external seals for 10 valves

### Characteristic curve



Ordering code

04.75.21	X	56	Z	00	*
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Priority unloading pilot operated

Differential unload / reload

05 Re-seat at (57 ± 2.5) % of pressure setting

06 Re-seat at (66 ± 2.5) % of pressure setting

08 Re-seat at (80 ± 2.5) % of pressure setting

56 Common cavity, Size 08

Series 0/A to L  
unchanged performances and dimensions

Version and options standard

SPRINGS		
	Adj. press. range bar (psi)	Std. setting bar (psi) Q=1 l/min.
03 *	20-40 (290-580)	30 (435)
05 *	35-70 (500-1000)	50 (725)
10 *	70-140 (1000-2000)	100 (1450)
20	105-210 (1500-3000)	200 (2900)
35	175-350 (2500-5000)	350 (5000)

\* Available only for x=05 and x=06

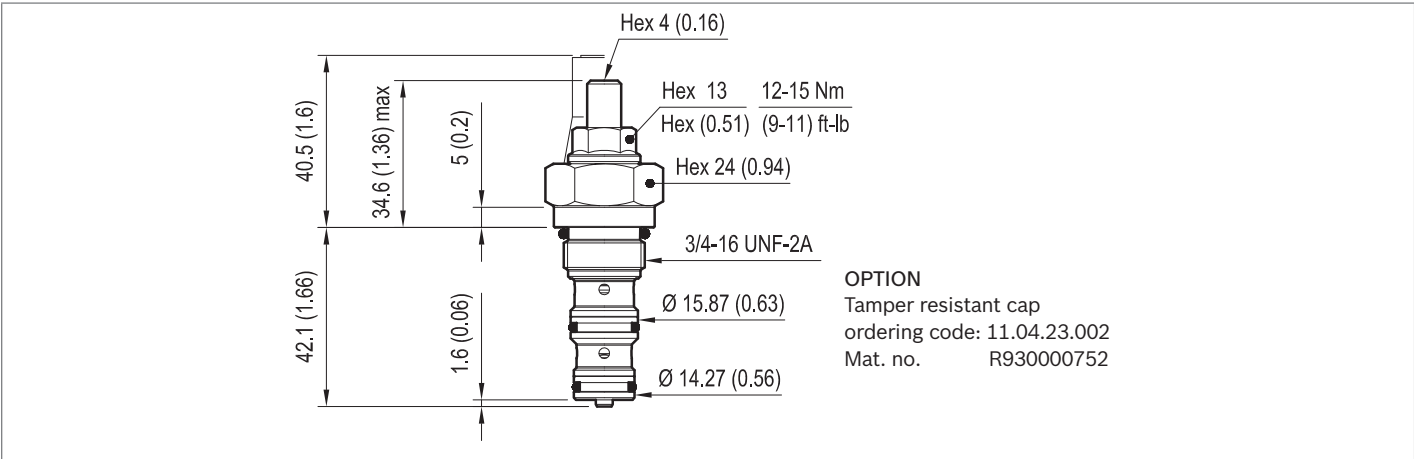
Note: Special settings available. Contact factory authorized representative for ordering code.

Preferred types

Type	Material number
047521055603000	R930006649
047521055605000	R930006650
047521055610000	R930006651
047521055620000	R930006647
047521055635000	R930006648
047521065603000	R901109763
047521065605000	R901109764

Type	Material number
047521065610000	R901109765
047521065620000	R901109766
047521065635000	R901109767
047521085620000	R930055341
047521085635000	R930055303

Dimensions

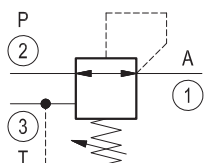
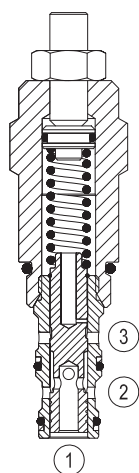


# Pressure reducing and relieving, direct acting spool type

Common cavity, Size 10

VRPR-10A

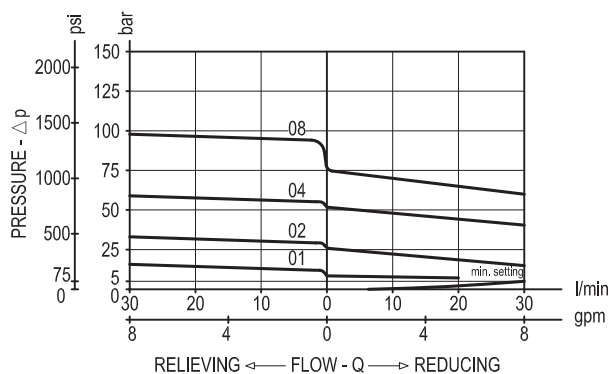
04.95.04 - X - 85 - Z



## Description

Initially, flow passes freely from 2 to 1. When the pressure at 1 exceeds the pressure setting, the valve acts to restrict input flow at 2. This increases the pressure drop through the valve and maintains consistent pressure at 1. The spring chamber is drained at 3 to prevent a build-up of back-pressure against the spool. Additionally, if pressure at 1 rises above the pressure setting, flow is relieved to 3 until the setting is re-attained.

## Performance



## Technical data

Max. operating pressure port 2 (P)	bar (psi)	350 (5000) 210 (3000) for version Z=01
Max. pressure admitted port 1 (A)	bar (psi)	105 (1500)
Max. flow	l/min. (gpm)	30 (8)
Max. internal leakage (*)	cm <sup>3</sup> /min. (cu.in./min.)	50 (3)
Fluid temperature range	°C (°F)	-30 to 100 (-22 to 212)
Installation torque	Nm (ft-lbs)	41-47 (30-35)
Weight (**)	kg (lbs)	0.26 (0.57)
Cavity		CA-10A-3N see data sheet RE 18325-70
Seal kit (***)	code material no.	RG10A3010520100 R901111369
Fluids		Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm <sup>2</sup> /s (cSt)
Filtration		Nominal value max. 10µm (NAS 8) ISO 4406 19/17/14
Installation		No restrictions
Other general technical data		See data sheet RE 18350-50

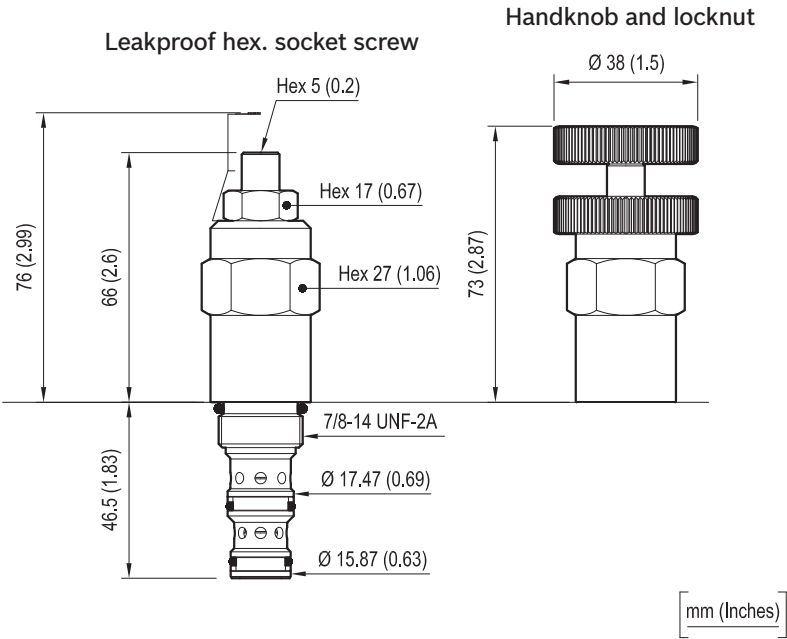
(\*) 1 - 3 to 80% of pressure setting

(\*\*) Standard version X=03 type

(\*\*\*) Only external seals for 10 valves

Dimensions

OPTION  
Tamper resistant cap  
ordering code 11.04.23.004  
Mat. no. R930001411



Ordering code

04.95.04	X	85	Z	00	*
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Pressure reducing and relieving,  
direct acting spool type

Adjustments

= 03 Leakproof hex. socket screw

= 04 Handknob and locknut

Common cavity, Size 10

Series 0/A to L  
unchanged performances and dimensions

Version and options standard

SPRINGS			
	Adj. press. range bar (psi)	Pressure increase bar/turn (psi/turn)	Std. setting bar (psi) (reduc. mode)
= 01	2-14 (30-200)	2 (29)	8-10 (115-145)
= 02	2-25 (30-350)	3 (44)	7-10 (100-145)
= 04	10-50 (145-725)	7 (102)	35-40 (500-580)
= 08	28-80 (400-1160)	14 (203)	45-50 (650-725)

Note: Special settings available. Contact factory  
authorized representative for ordering code

# Pressure reducing and relieving, pilot operated spool type Common cavity, Size 10

VRPX-10A

04.93.07 - X - 85 - Z

**RE 18318-56**

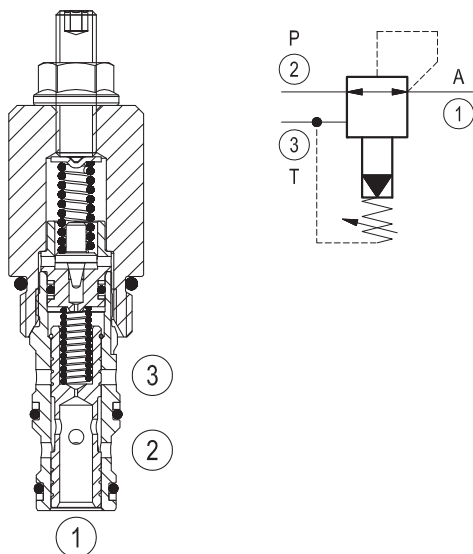
Edition: 03.2016

Replaces: 07.2012



## Description

Initially, flow passes freely from 2 to 1. When the pressure at 1 exceeds the pressure setting, the conical poppet in the upper, pilot stage is lifted from its seat. This allows the main-stage piston to shift, restricting input flow at 2. This increases the pressure drop through the valve and maintains consistent pressure at 1. The spring chamber is drained at 3 to prevent a build-up of back-pressure against the spool. Additionally, if pressure at 1 rises above the pressure setting, flow is relieved to 3 until the setting is re-attained.



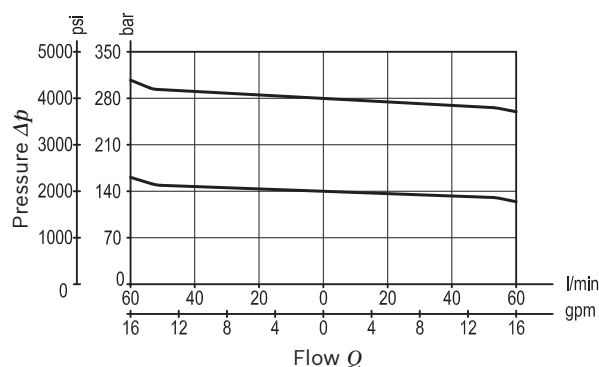
## Technical data

Max. operating pressure port 2 (P)	350 bar (5000 psi)
Max. pressure admitted port 1 (A)	280 bar (4000 psi)
Max. flow	60 l/min (16 gpm)
Standard internal pilot orifice diameter	0.6 mm
Fluid temperature range	-30 to 100 °C (-22 to 212 °F)
Installation torque	41 - 47 Nm (30 - 35 ft-lbs)
Weight <sup>1)</sup>	0.2 kg (0.44 lbs)
Cavity	CA-10A-3N (see data sheet 18325-70)
Lines bodies and standard assemblies	Please refer to section "Hydraulic integrated circuit" or consult factory
Seal kit <sup>2)</sup>	Code: RG10A3010520100 material no: R901111369
Fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm <sup>2</sup> /s (cSt)
Recommended degree of fluid contamination	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14
Installation position	No restrictions
Other Technical Data	See data sheet 18350-50

1) Standard version X=03 type

2) Only external seals for 10 valves

## Characteristic curve





Ordering code

04.93.07	X	85	Z	00	*
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Series 0/A to L  
unchanged performances and dimensions

Version and options standard

Pressure reducing and relieving,  
pilot operated spool type

Adjustments

03	Leakproof hex. socket screw
04	Handknob and locknut

85 Common cavity, Size 10

		SPRINGS		
		Adj. press. range bar (psi)	Pressure increase bar/turn (psi/turn)	Std. setting bar (psi) (reduc mode)
for X= 03	05	25-100 (360-1450)	31 (450)	50 (725)
	10	35-140 (500-2000)	48 (696)	100 (1450)
	20	70-280 (1000-4000)	88 (1276)	200 (2900)
for X= 04	35	35-350 (500-5000)	68 (986)	350 (5000)

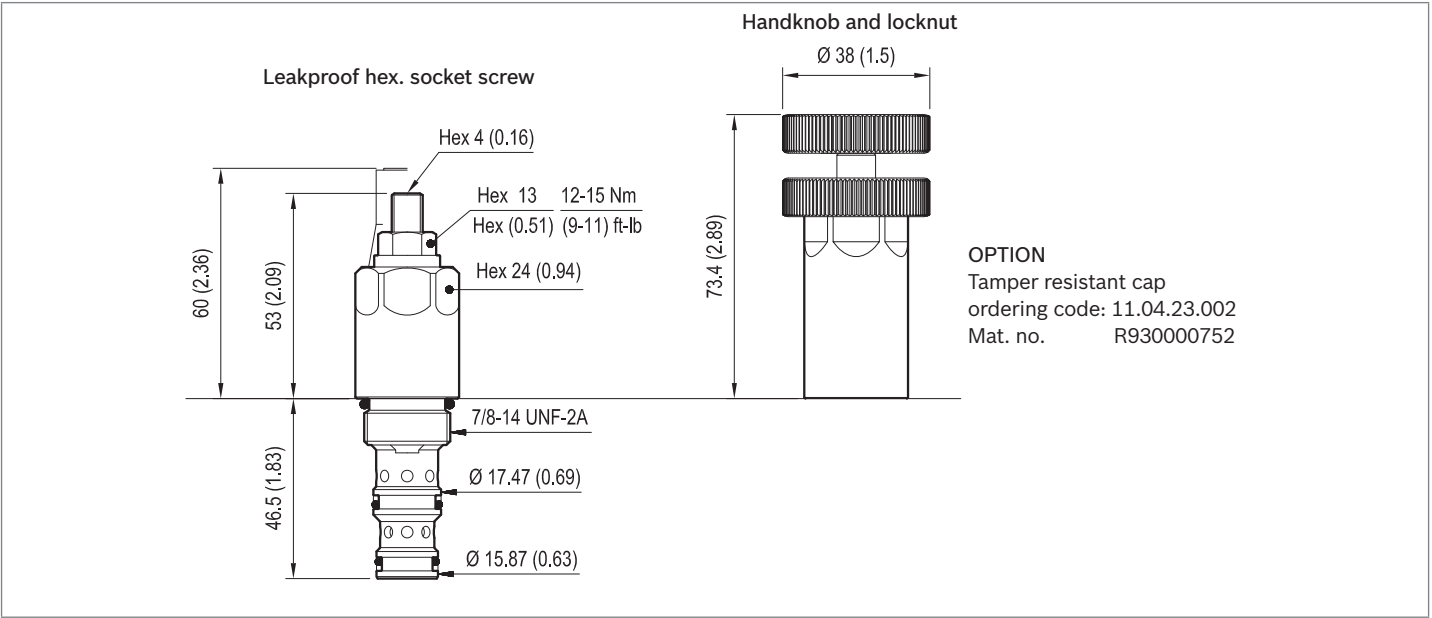
Note: Special settings available. Contact factory authorized  
representative for ordering code.

Preferred types

Type	Material number
049307038505000	R930006982
049307038510000	R901104118
049307038520000	R901106468
049307048535000	R930005596

Type	Material number

Dimensions



## Counterbalance, standard guided poppet type

## Common cavity, Size 08

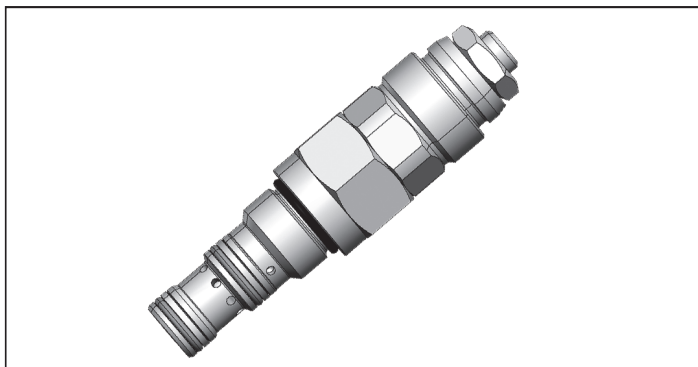
VBSN-08AA

04.52.20 - X - 56 - Z

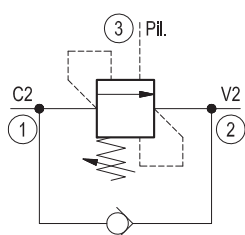
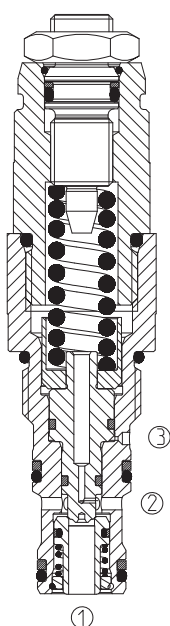
**RE 18320-01**

Edition: 07.2021

Replaces: 01.2021

**Description**

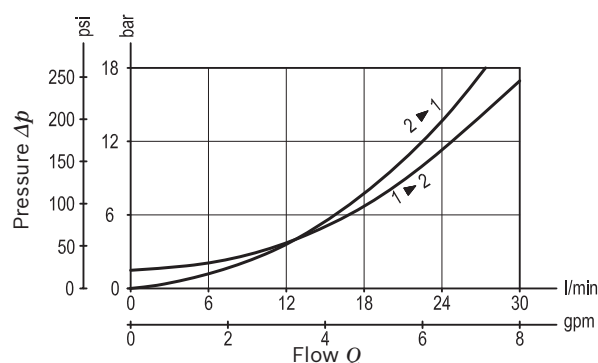
When pressure at 2 rises above the spring bias pressure, the check seat is pushed away from the piston and flow is allowed from 2 to 1. When load pressure at 1 rises above the pressure setting, the direct-acting, relief function is activated and flow is relieved from 1 to 2. With pilot pressure at 3, the pressure setting is reduced in proportion to the stated ratio of the valve, until fully open with free-flow from 1 to 2. The spring chamber is drained to 2, and any back-pressure at 2 is additive to the pressure setting in all functions. Valve design prevents spring going solid and complete unscrewing during adjusting.

**Technical data**

Max. operating pressure	350 bar (5000 psi)
Max. flow	30 l/min (8 gpm)
Max. internal leakage <sup>1)</sup>	5 drops/min.
Fluid temperature range	-30 to 100 °C (-22 to 212 °F)
Installation torque	34 - 41 Nm (25 - 30 ft-lbs)
Weight	0.18 kg (0.4 lbs)
MTTFD	150 years see RE 18350-51
Cavity	CA-08A-3C (see data sheet 18325-70)
Adjustment	according to ISO 4413 with sealed adjustment screw to prevent oil leakage during adjustment
Salt spray test	500h according to DIN EN ISO 9227:2017-07
Lines bodies and standard assemblies	Please refer to section "Hydraulic integrated circuit" or consult factory
Seal kit <sup>2)</sup>	Code: RG08A9010520100 material no: R901101592
Fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm <sup>2</sup> /s (cSt)
Recommended degree of fluid contamination	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14
Installation position	No restrictions
Other Technical Data	See data sheet 18350-50

Pressure setting: at least 1.3 times the load induced pressure and maximum 1.5 times catalogue max nominal setting.

- 1) At 70% of pressure setting
- 2) Only external seals for 10 valves

**Characteristic curve**

Ordering code

04.52.20	X	56	Z	*	*
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Series M to Z  
unchanged performances and dimensions

Counterbalance,  
standard guided poppet type  
poppet type

00 Standard (Buna)  
V0 Viton (FKM)

Pilot ratio

03 4:1 Without sealed pilot piston  
33 4:1

56 Common cavity, Size 08

SPRINGS			
	Adj. press. range bar (psi)	Pressure increase bar/turn (psi/turn)	Std. setting bar (psi) Q=5 l/min.
15	70-150 (1000-2200)	72.5 (1051)	150 (2200)
20	100-210 (1450-3000)	109 (1581)	200 (2900)
35	200-350 (2900-5000)	137 (1987)	350 (5000)

Note: Special settings available with optional tamperproof cap. Contact  
factory authorized representative for ordering code.

Preferred types

Type	Material number
04522033563500M	R930081365
04522003561500M	R930081219
04522003562000M	R930081221
04522003563500M	R930081224

Type	Material number
04522033562000M	R930081227

Dimensions

Technical drawing of a Rexroth valve assembly. The drawing shows a vertical assembly with various hexagonal and threaded components. Dimensions are given in millimeters (mm) and inches (in). Hexagonal sizes are given in millimeters (mm) and inches (in). Torque specifications are given in Nm and ft-lb.

Dimensions:

- 56 (2.2) max.
- 54.5 (2.14) max.
- 6 (0.24)
- 39 (1.54)

Hex specifications:

- Hex 5 (0.2)
- Hex 16 (0.63) 15 Nm (11) ft-lb
- Hex 22 (0.87)
- Hex 24 (0.94)

Thread specification:

- 3/4-16 UNF-2A

Other dimensions:

- Ø15.87 (0.63)
- Ø14.27 (0.56)

OPTION 1  
Protection cap orange  
Mat. no. R900168151

OPTION 2  
Tamperproof cap red (without  
Rexroth logo)  
Mat. no. R93xxxxxxx

# Counterbalance, standard poppet type differential area Common cavity, Size 10

VBSN-10A

04.52.31 - X - 85 - Z

**RE 18320-02**

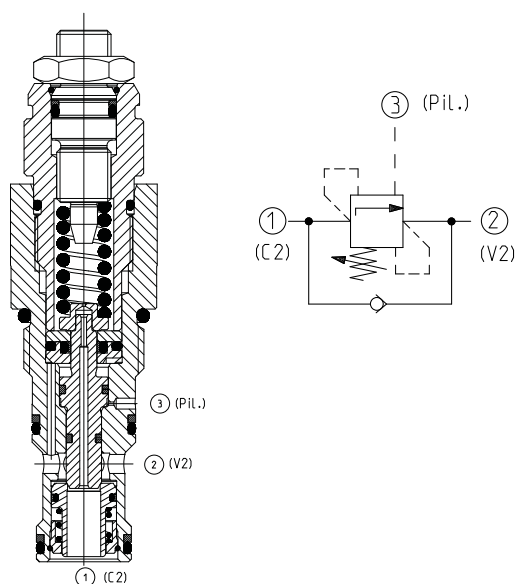
Edition: 01.2021

Replaces: 06.2019



## Description

When pressure at 2 rises above the spring bias pressure, the check seat is pushed away from the piston and flow is allowed from 2 to 1. When load pressure at 1 rises above the pressure setting, the direct-acting, differential area relief function is activated and flow is relieved from 1 to 2. With pilot pressure at 3, the pressure setting is reduced in proportion to the stated ratio of the valve, until fully open with free-flow from 1 to 2. The spring chamber is drained to 2, and any back-pressure at 2 is additive to the pressure setting in all functions. Valve design prevents spring going solid and complete unscrewing during adjusting.



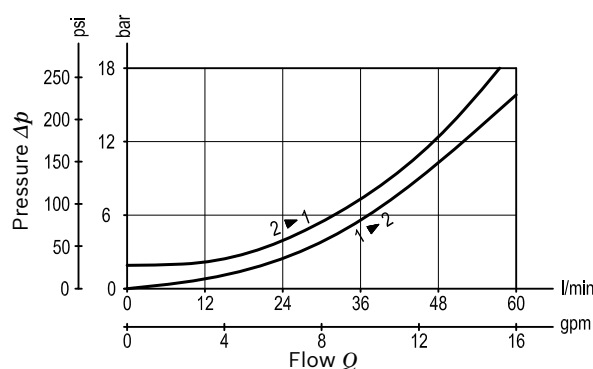
## Technical data

Max. operating pressure	350 bar (5000 psi)
Max. flow	60 l/min (16 gpm)
Max. internal leakage <sup>1)</sup>	15 drops/min.
Fluid temperature range	-30 to 100 °C (-22 to 212 °F)
Installation torque	41 - 47 Nm (30 - 35 ft-lbs)
Weight	0.2 kg (0.44 lbs)
MTTFD	150 years see RE 18350-51
Cavity	CA-10A-3C (see data sheet 18325-70)
Adjustment	according to ISO 4413 with sealed adjustment screw to prevent oil leakage during adjustment
Salt spray test	500h according to DIN EN ISO 9227:2017-07
Lines bodies and standard assemblies	Please refer to section "Hydraulic integrated circuit" or consult factory
Seal kit <sup>2)</sup>	Code: RG10A9010520100 material no: R901111367
Fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm <sup>2</sup> /s (cSt)
Recommended degree of fluid contamination	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14
Installation position	No restrictions
Other Technical Data	See data sheet 18350-50

Pressure setting: at least 1.3 times the load induced pressure and maximum 1.5 times catalogue max nominal setting.

- 1) At 70% of pressure setting
- 2) Only external seals for 10 valves

## Characteristic curve



Ordering code

04.52.31	X	85	Z	*	*
----------	---	----	---	---	---

Series M to Z  
unchanged performances and dimensions

Counterbalance,  
standard poppet type, differential area

00 Standard (Buna)  
V0 Viton (FKM)

Pilot ratio

03 3:1

10 8:1

31 1.5:1

Without sealed pilot piston.

85 Common cavity, Size 10

		SPRINGS		
		Adj. press. range bar (psi)	Pressure increase bar/turn (psi/turn)	Std. setting bar (psi) Q=5 l/min
for X= 03	<b>20</b>	70-210 (1000-3000)	135 (1958)	200 (2900)
	<b>35</b>	140-350 (2000-5000)	196 (2842)	350 (5000)
for X= 10	<b>20</b>	70-210 (1000-3000)	52 (754)	200 (2900)
	<b>35</b>	140-350 (2000-5000)	89 (1291)	350 (5000)
for X= 31	<b>35</b>	140-350 (2000-5000)	89 (1291)	350 (5000)

Note: Special settings available with optional tamperproof cap.  
Contact factory authorized representative for ordering code.

Preferred types

Type	Material number
04523131853500M	R930080592
04523103852000M	R930081264
04523103853500M	R930081266
04523110852000M	R930081267

Type	Material number
04523110853500M	R930081268

Dimensions

Technical drawing of a Rexroth valve assembly. Dimensions and specifications are as follows:

- Hex 5 (0.2)
- Hex 16 15 Nm / Hex (0.63) (11) ft-lb
- Hex 27 (1.06)
- 7/8-14 UNF-2A
- Ø19.05 (0.75)
- Ø17.47 (0.69)
- 52.5 (2.08) max
- 51.5 (2.02) max
- 8 (0.32)
- 46.5 (1.83)

OPTION 1  
Protection cap orange  
Mat. no. R900168151

OPTION 2  
Tamperproof cap red (without  
Rexroth logo)  
Mat. no. R93xxxxxxx

# Counterbalance, standard poppet type

## differential area

## Common cavity, Size 12

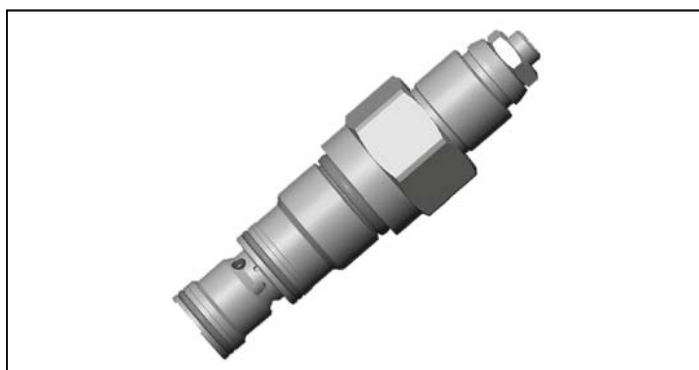
VBSN-12A

04.52.28 - X - 57 - Z

**RE 18320-03**

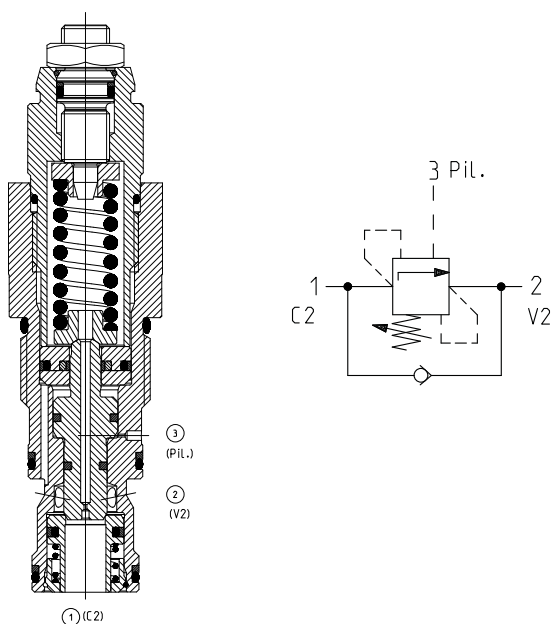
Edition: 01.2021

Replaces: 06.2019



### Description

When pressure at 2 rises above the spring bias pressure, the check seat is pushed away from the piston and flow is allowed from 2 to 1. When load pressure at 1 rises above the pressure setting, the direct-acting, differential area relief function is activated and flow is relieved from 1 to 2. With pilot pressure at 3, the pressure setting is reduced in proportion to the stated ratio of the valve, until fully open with free-flow from 1 to 2. The spring chamber is drained to 2, and any back-pressure at 2 is additive to the pressure setting in all functions. Valve design prevents spring going solid and complete unscrewing during adjusting.



### Technical data

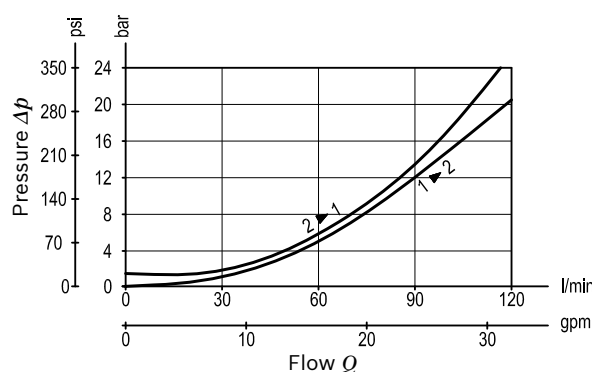
Max. operating pressure	350 bar (5000 psi)
Max. flow	120 l/min (32 gpm)
Max. internal leakage <sup>1)</sup>	15 drops/min.
Fluid temperature range	-30 to 100 °C (-22 to 212 °F)
Installation torque	81 - 95 Nm (60 - 70 ft-lbs)
Weight	0.39 kg (0.86 lbs)
MTTFD	150 years see RE 18350-51
Cavity	CA-12A-3C (see data sheet 18325-70)
Adjustment	according to ISO 4413 with sealed adjustment screw to prevent oil leakage during adjustment
Salt spray test	500h according to DIN EN ISO 9227:2017-07
Lines bodies and standard assemblies	Please refer to section "Hydraulic integrated circuit" or consult factory
Seal kit <sup>2)</sup>	Code: RG12A9010520100 material no: R901111379
Fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm <sup>2</sup> /s (cSt)
Recommended degree of fluid contamination	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14
Installation position	No restrictions
Other Technical Data	See data sheet 18350-50

Pressure setting: at least 1.3 times the load induced pressure and maximum 1.5 times catalogue max nominal setting.

1) At 70% of pressure setting

2) Only external seals for 10 valves

### Characteristic curve



Ordering code

04.52.28	X	57	Z	*	*
----------	---	----	---	---	---

Series M to Z  
unchanged performances and dimensions

Counterbalance,  
standard poppet type, differential area

00 Standard (Buna)  
V0 Viton (FKM)

Pilot ratio

03 4:1

10 8:1

Without sealed pilot piston.

57 Common cavity, Size 12

		SPRINGS		
		Adj. press. range bar (psi)	Pressure increase bar/turn (psi/turn)	Std. setting bar (psi) Q=5 l/min
for X= 03	<b>20</b>	70-210 (1000-3000)	50 (725)	200 (2900)
	<b>35</b>	140-350 (2000-5000)	159 (2306)	350 (5000)
for X= 10	<b>20</b>	70-210 (1000-3000)	42 (609)	200 (2900)
	<b>35</b>	140-350 (2000-5000)	67 (972)	350 (5000)
	<b>40</b>			

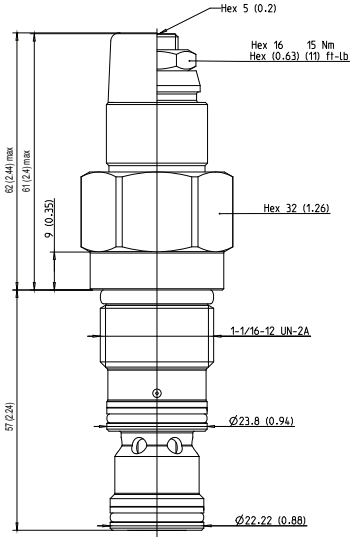
Note: Special settings available with optional tamperproof cap.  
Contact factory authorized representative for ordering code.

Preferred types

Type	Material number
04522803572000M	R930081269
04522803573500M	R930081270
04522810572000M	R930081273
04522810573500M	R930081274

Type	Material number
04522810574000M	R930081275

Dimensions



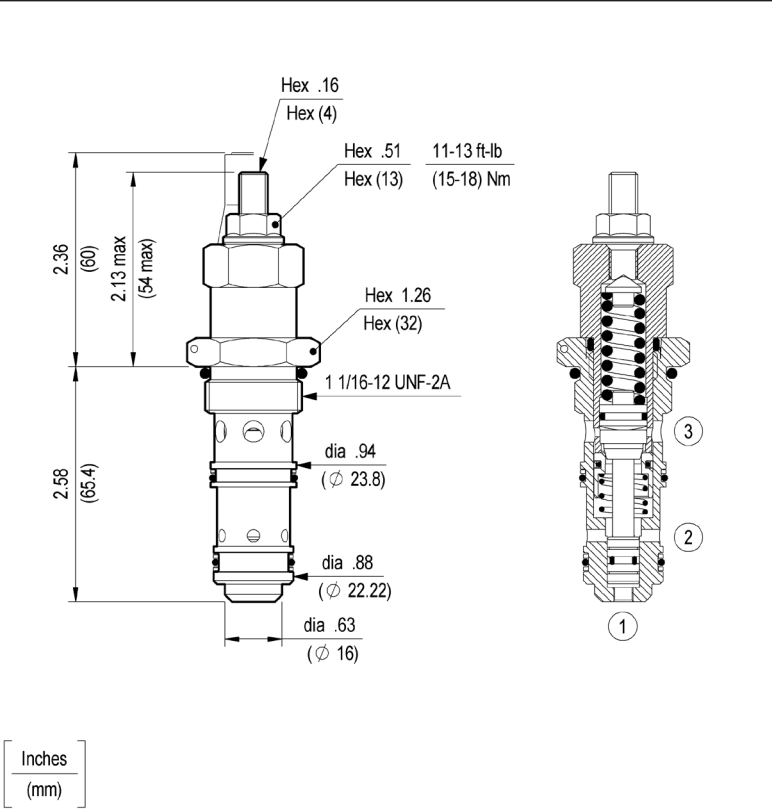
OPTION 1  
Protection cap orange  
Mat. no. R900168151

OPTION 2  
Tamperproof cap red (without  
Rexroth logo)  
Mat. no. R93xxxxxxx

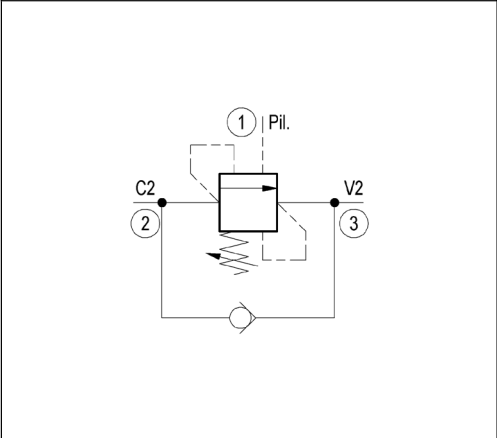
COUNTERBALANCE, STANDARD POPPET TYPE  
DIFFERENTIAL AREA  
SPECIAL CAVITY

VBSO-SEC-30

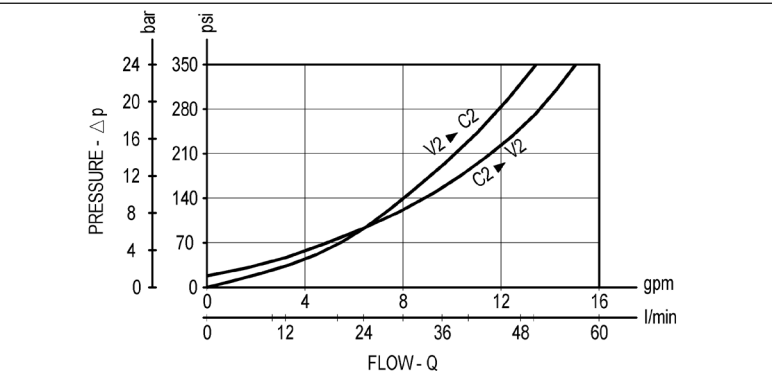
04.52.04 - X - 99 - Z



When pressure at 3 rises above the spring bias pressure, the check seat is pushed away from the piston and flow is allowed from 3 to 2. When load pressure at 2 rises above the pressure setting, the direct-acting, differential area relief function is activated and flow is relieved from 2 to 3. With pilot pressure at 1, the pressure setting is reduced in proportion to the stated ratio of the valve, until fully open with free-flow from 2 to 3. The spring chamber is drained to 3, and any back-pressure at 3 is additive to the pressure setting in all functions.




TECHNICAL DATA		
Max. pressure:	5000 psi	(350 bar)
Max. flow:	16 gpm	(60 l/min)
Special cavity : 063 (see page CT.S.002.U)		
Installation torque :	86-95 ft-lb	(116-128 Nm)
Weight:	0.551 lbs	(0.250 Kg)
Pressure setting: at least 1.3 times the load induced pressure		

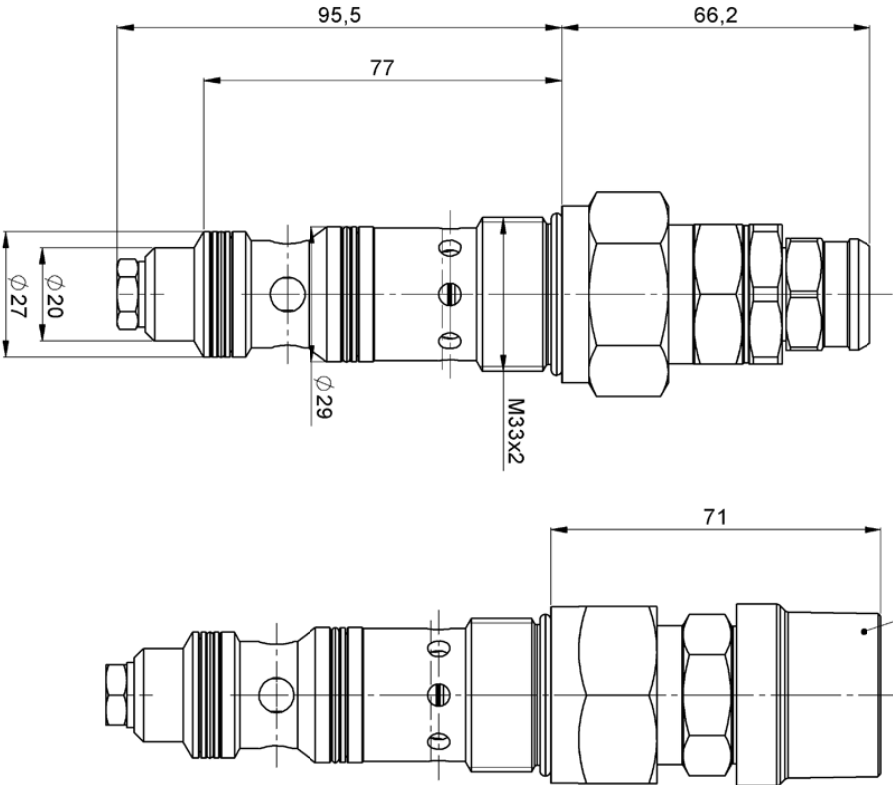


X	PILOT RATIO
03	4.2 : 1

Z	SPRINGS				
	Adj. press. range psi (bar)	Press. increase psi / turn (bar/turn)	Standard setting psi (bar) (Q=5 l/min)		
20	870-3000 (60-210)	812 (56)	2900 (200)		
35	1450-5000 (100-350)	2001 (138)	5000 (350)		

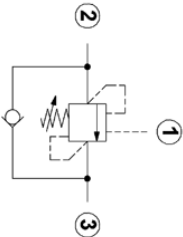
OPTIONS	
Ordering code	Description
11.04.23.002	 Sealing cap
Special settings available. Contact factory authorized representative for ordering code.	





Technical data:

Max.pressure:	350 bar
Max.flow:	150 l/min
Pilot ratio:	4:1
Special cavity:	CC063A-01
Installation torque:	148-167 Nm
Weight:	0.700 kg
Setting adj.range:	100-350 bar
Pressure increase:	110 bar/turn
Standard setting (5 l/min):	350



All dimensions : mm

Denominazione / Denomination		<b>Rexroth</b> Bosch Group	
VBSO-SEC-33-35-4:1-91		Bosch Rexroth Oil Control S.p.A.	
Specifiche / Specifications		Ufficio Tecnico DC-IMA/EC01	
Max Pressure/Pressione Max 350 bar		Gerarchia Prodotto 871307201	
Max Flow/Portata Max 150 l/min		Kit guarniz.	
Pilot Ratio/Rapporto di pilotaggio 4:1		Seal kit	
Massa / Mass (kg) 0,700		Modifiche Changes	
Richiesta / Request UT119650		Sostituisce Replaces	
Tipo cavità Cavity type CC063A-01		Disegnato / Designed by Moretti	
A3		Data / Date 04/07/14	
Studio di riferimento / Reference study		Verificato / Checked by Tagliazucchi	
Num. schema idraulico / Hydraulic scheme no.		Scala / Scale 1:1	
Cliente e codice articolo Customer and article code		Direttore del file Cad / Cad file directory	
bs_0170		K:\Design\Cad 3D\lingom\tr0452119199350001	
Material number		R930006744	

Rev. 01 del 15/12/09

# Flow control, cartridge restrictor Common cavity, Size 08

ST-C-06

OD.21.01 - X - 56

**RE 18321-26**

Edition: 03.2016

Replaces: 11.2015



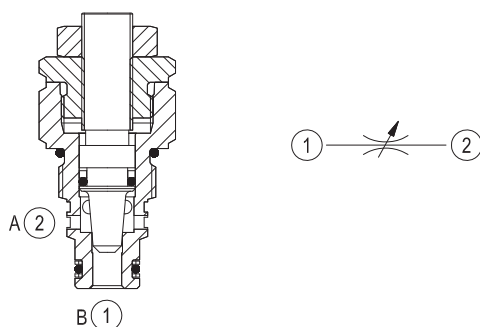
## Description

Increasing the orifice value from fully closed to fully open, flow is permitted and regulated bi-directional from 1 to 2 and from 2 to 1. With valve fully closed no leakage permitted between ports 1 and 2.

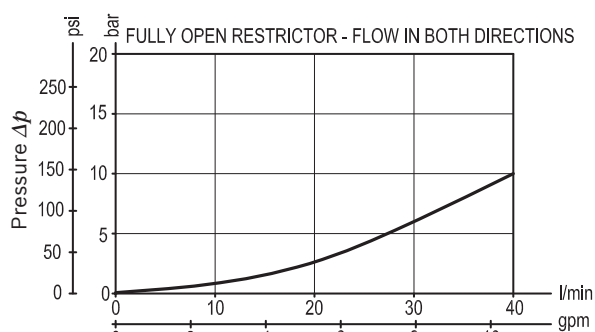
## Technical data

Max. operating pressure	350 bar (5000 psi)
Rated flow	40 l/min. (11 gpm)
Fluid temperature range	-30 to 100 °C (-22 to 212 °F)
Installation torque	39 - 51 Nm (29 - 38 ft-lbs)
Weight	0.09 kg (0.2 lbs)
Cavity	CA-08A-2N (see data sheet 18325-70)
Lines bodies and standard assemblies	Please refer to section "Hydraulic integrated circuit" or consult factory
Seal kit <sup>1)</sup>	Code: RG08A2010530100 material no: R901101544
Fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm <sup>2</sup> /s (cSt)
Recommended degree of fluid contamination	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14
Installation	No restrictions
Other Technical Data	See data sheet 18350-50

<sup>1)</sup> Only external seals for 10 valves



## Characteristic curve



Ordering code

OD.21.01	X	56
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Flow control, cartridge restrictor

Adjustments

03 Leakproof hex. socket screw

04 Handknob and locknut

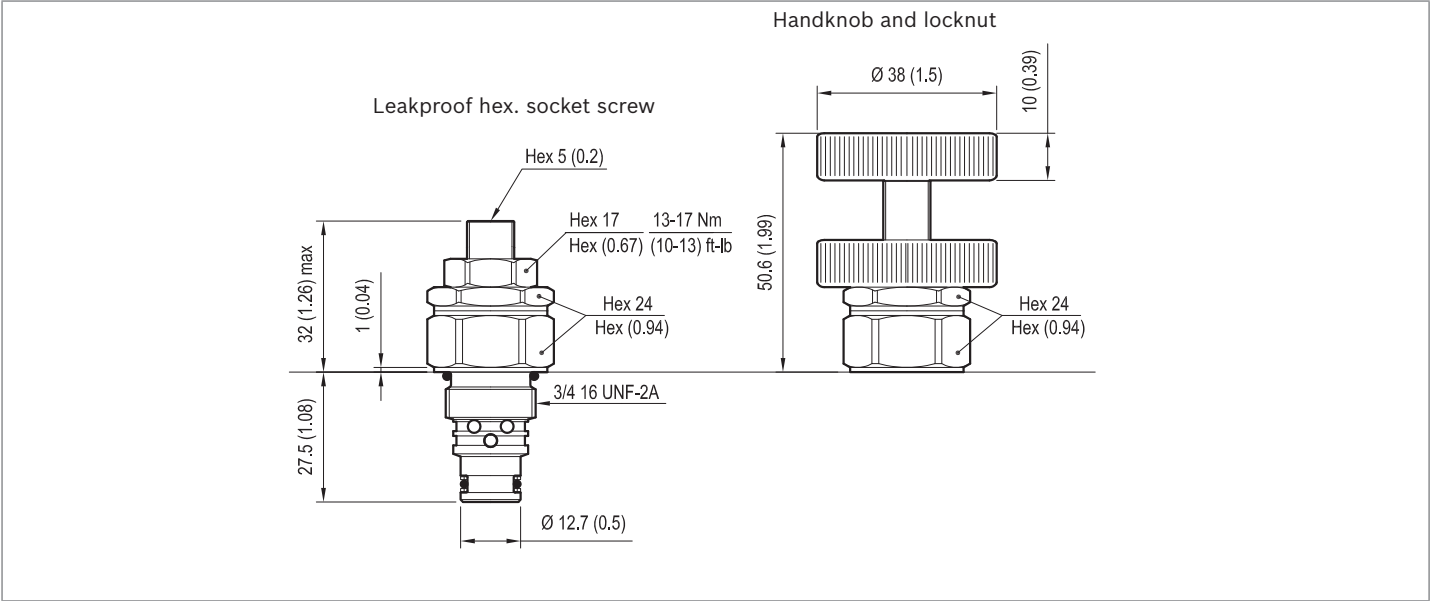
56 Common cavity, Size 08

Preferred types

Type	Material number
OD21010356	R901109366
OD21010456	R901109367

Type	Material number

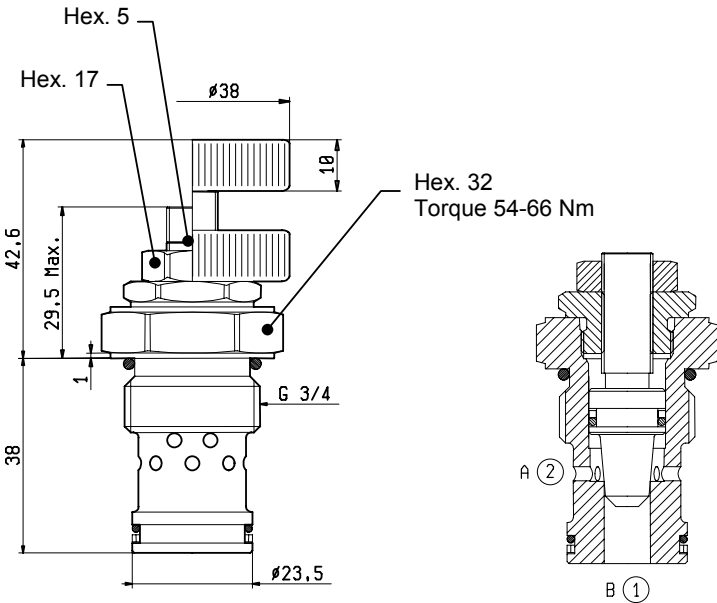
Dimensions



FLOW CONTROL VALVES  
CARTRIDGE RESTRICTORS

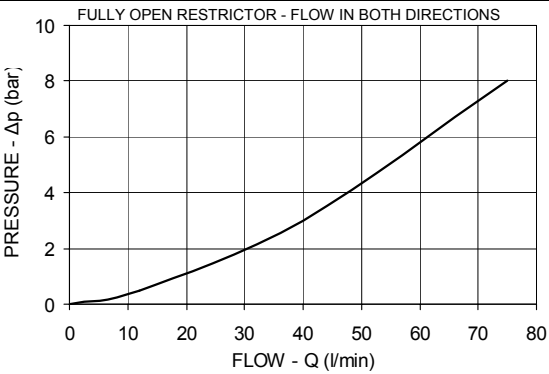
ST-C-09

OD.21.01 - X - 04



TECHNICAL DATA

Maximum Operating Pressure	350	bar
Rated Flow	70	l/min
Cavity - Tooling (017-E)	page 7.01.100	
Weight	0.180	kg
Fluids - Temperatures	page 7.01.040	
Testing Conditions - Seals	page 7.01.040	
Internal Leakage	page 7.01.040	
Filtration : 25 $\mu$ m nominal or better	page 7.01.050	
Adjustment Torque at 10 bar	1	Nm
Adjustment Torque at 350 bar	10	Nm
Mounting Position	unrestricted	

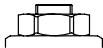


X

ORDERING OPTIONS

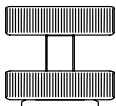
03

Socket Screw



04

Handknob and Locknut



# Flow control, cartridge restrictor Common cavity, Size 10

ST-C-10

OD.21.01 - X - 36

**RE 18321-27**

Edition: 03.2016

Replaces: 02.2011



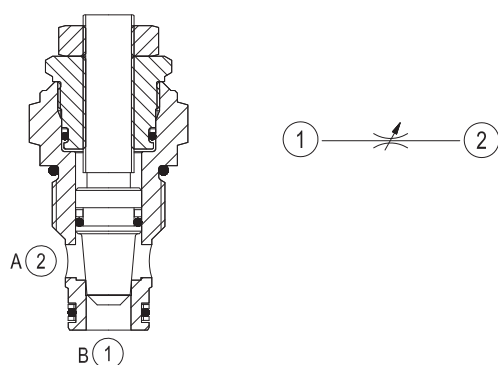
## Description

Increasing the orifice value from fully closed to fully open, flow is permitted and regulated bi-directional from 1 to 2 and from 2 to 1. With valve fully closed no leakage permitted between ports 1 and 2.

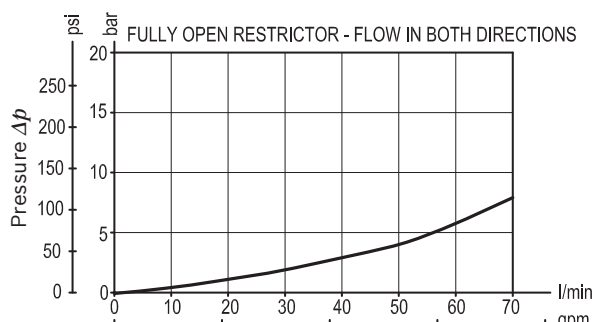
## Technical data

Max. operating pressure	350 bar (5000 psi)
Rated flow	70 l/min. (19 gpm)
Fluid temperature range	-30 to 100 °C (-22 to 212 °F)
Installation torque	44 - 56 Nm (33 - 41 ft-lbs)
Weight	0.18 kg (0.4 lbs)
Cavity	CA-10A-2N (see data sheet 18325-70)
Lines bodies and standard assemblies	Please refer to section "Hydraulic integrated circuit" or consult factory
Seal kit <sup>1)</sup>	Code: RG10A2010530100 material no: R901111366
Fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm <sup>2</sup> /s (cSt)
Recommended degree of fluid contamination	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14
Installation	No restrictions
Other Technical Data	See data sheet 18350-50

1) Only external seals for 10 valves



## Characteristic curve



Ordering code

OD.21.01	X	36	00	*
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Flow control, cartridge restrictor

Adjustments

03 Leakproof hex. socket screw

04 Handknob and locknut

36 Common cavity, Size 10

Series 0/A to L  
unchanged performances and dimensions

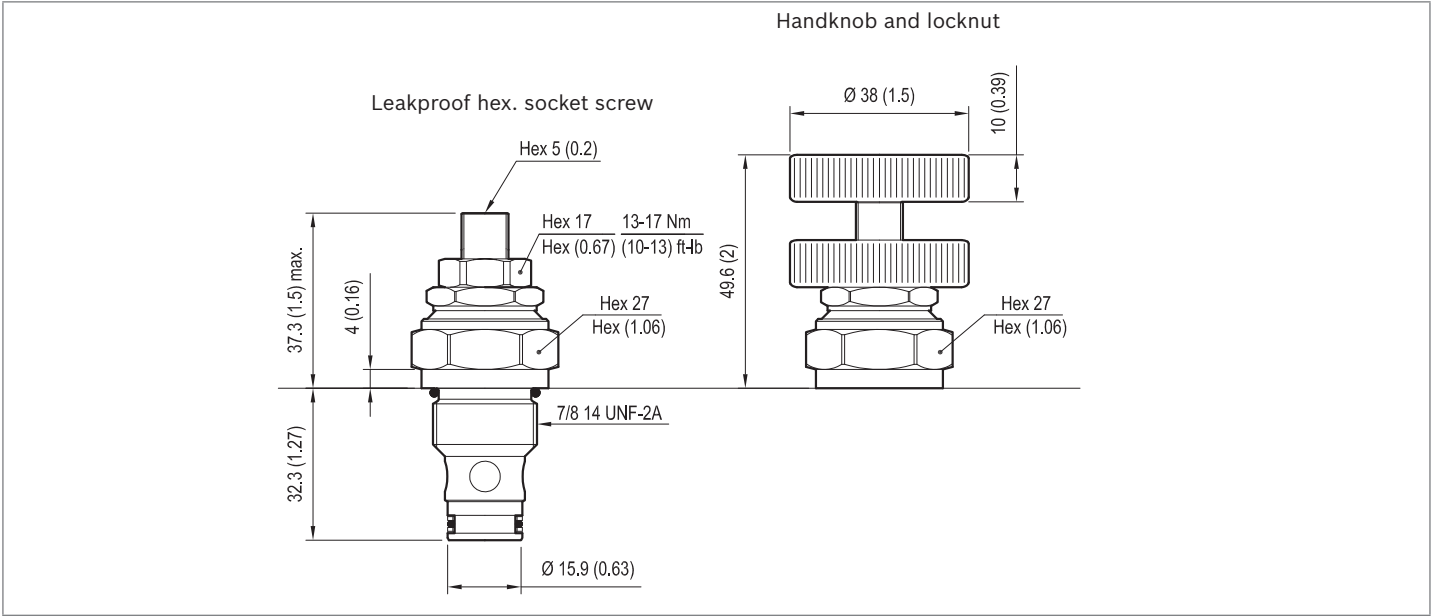
Version and options standard

Preferred types

Type	Material number
OD210103360000	R901109830
OD210104360000	R901109831

Type	Material number

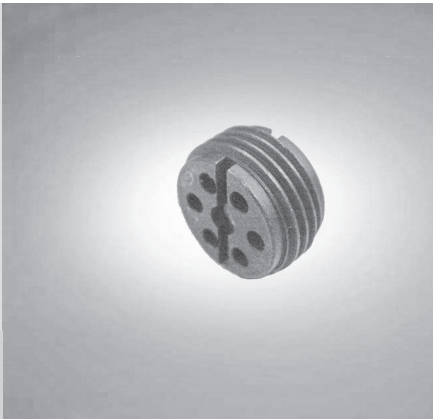
Dimensions



# Insert type

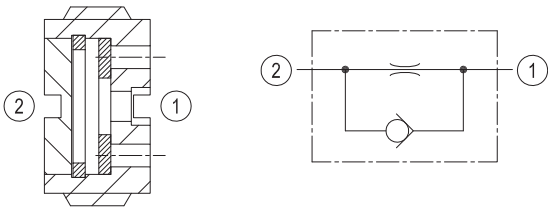
## Flow control, restrictor with reverse flow check

GSU1

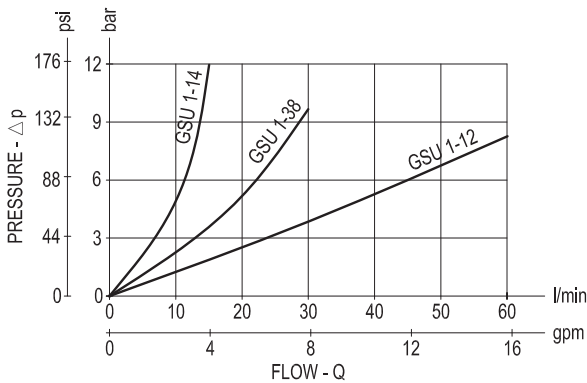


### Description

The "B-A" flow is restricted by a calibrated orifice while flow "A-B" is always allowed through the incorporated check valve. Pressure compensation is not provided and flow depends from pressure drop and viscosity. The GSU1 cartridge is available in different orifice sizes.



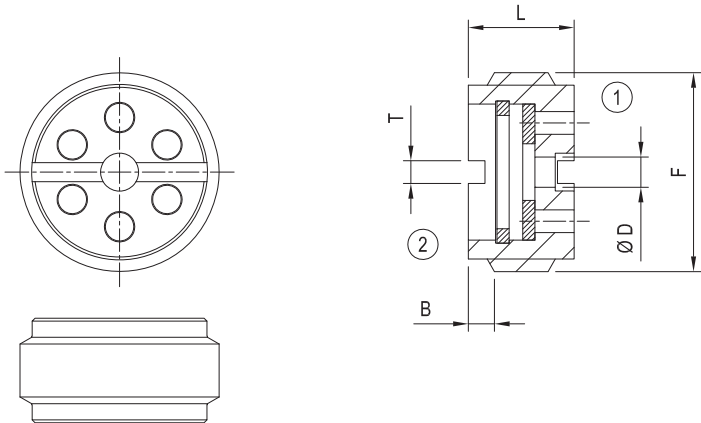
### Performance



### Technical data

Max. operating pressure	bar (psi)	300 (4300)
Max. flow	l/min. (gpm)	see "Regulated flow range" table
Fluid temperature range	°C (°F)	-30 to 100 (-22 to 212)
Weight	kg (lbs)	see "Dimensions" table
Special cavity		see "Dimensions"
Lines bodies and standard assemblies		Please refer to section "Hydraulic integrated circuit" or consult factory
Fluids		Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm²/s (cSt)
Recommended degree of fluid contamination		Nominal value max. 10µm (NAS 8) ISO 4406 20/18/15
Installation		No restrictions
Other Technical Data		See data sheet RE 18350-50

Dimensions



F	L	B	T	Weight kg (lbs)	Flow max. l/min. (gpm)
G 1/4	7 (0.28)	1.1 (0.04)	2 (0.08)	0.005 (0.011)	15 (4)
G 3/8	8.5 (0.33)	1.5 (0.06)	1.5 (0.06)	0.009 (0.02)	30 (8)
G 1/2	11 (0.43)	2 (0.08)	1.5 (0.06)	0.018 (0.04)	70 (18)

Note: available also as “Sleeve valve for line mounting”  
See data sheet RE 18316-02

Ordering code

GSU1				.		.		
Insert type - Restrictor with reverse flow check					Standard hole diameter ØD mm (inches)			
					for port = 14	for port = 38	for port = 12	
Port sizes					= 000	wihout hole	wihout hole	wihout hole
					= 030	0.3 (0.012)	-	-
= 14 G 1/4					= 040	0.4 (0.016)	-	-
= 38 G 3/8					= 050	0.5 (0.02)	0.5 (0.02)	-
= 12 G 1/2					= 060	0.6 (0.024)	0.6 (0.024)	-
					= 065	0.65 (0.026)	-	-
					= 075	0.75 (0.03)	0.75 (0.03)	-
					= 080	0.8 (0.031)	0.8 (0.031)	-
					= 100	1 (0.039)	1 (0.039)	1 (0.039)
					= 110	1.1 (0.043)	-	-
					= 120	1.2 (0.047)	-	-
					= 125	1.25 (0.049)	1.25 (0.049)	-
					= 130	-	-	1.3 (0.051)
					= 150	1.5 (0.059)	1.5 (0.059)	1.5 (0.059)
					= 160	1.6 (0.063)	1.6 (0.063)	-
					= 170	1.7 (0.067)	-	-
					= 190	-	-	1.9 (0.075)
					= 200	2 (0.079)	2 (0.079)	2 (0.079)
					= 220	-	2.2 (0.087)	-
					= 250	2.5 (0.098)	2.5 (0.098)	2.5 (0.098)
					= 300	-	-	3 (0.12)



# Needle restrictor, free reverse flow Common cavity, Size 08

STVU-08A

04.01.03 - X - 56.00

**RE 18321-10**

Edition: 03.2016

Replaces: 11.2009



## Description

With flow from 2 to 1, the valve provides a fully adjustable orifice restriction. Free flow is permitted from 1 to 2, regardless of valve adjustment, by when pressure overcomes the spring bias of the valve's check function.

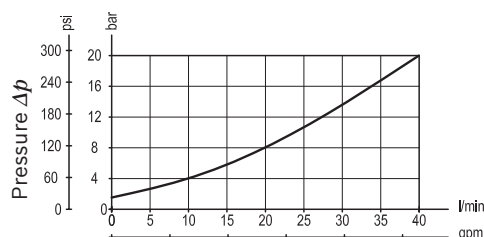
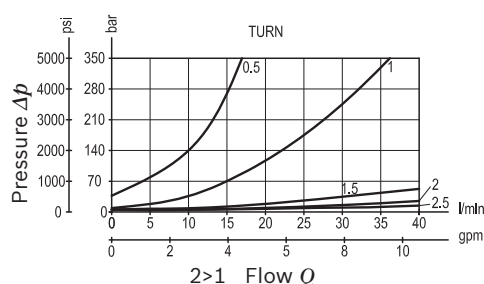
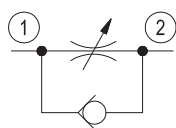
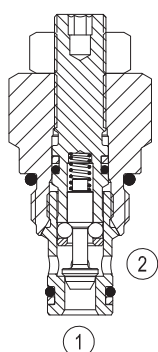
## Technical data

Max. operating pressure	350 bar (5000 psi)
Max. flow	40 l/min. (11 gpm)
Max. internal leakage <sup>1)</sup>	15 drops/min. closed
Fluid temperature range	-30 to 100 °C (-22 to 212 °F)
Installation torque	34 - 41 Nm (25 - 30 ft-lbs)
Weight	0.16 kg (0.35 lbs)
Cavity	CA-08A-2N (see data sheet 18325-70)
Lines bodies and standard assemblies	Please refer to section "Hydraulic integrated circuit" or consult factory
Seal kit <sup>2)</sup>	Code: RG08A2010520100 material no: R901101437
Fluids	Mineral-based or synthetics with lubricating properties at viscosities of 5 to 800 mm <sup>2</sup> /s (cSt)
Recommended degree of fluid contamination	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14
Installation	No restrictions
Other Technical Data	See data sheet 18350-50

1) Measured at 200 bar (2900 psi)

2) Only external seals for 10 valves

## Characteristic curve



2     **STVU-08A** | Needle restrictor, free reverse flow

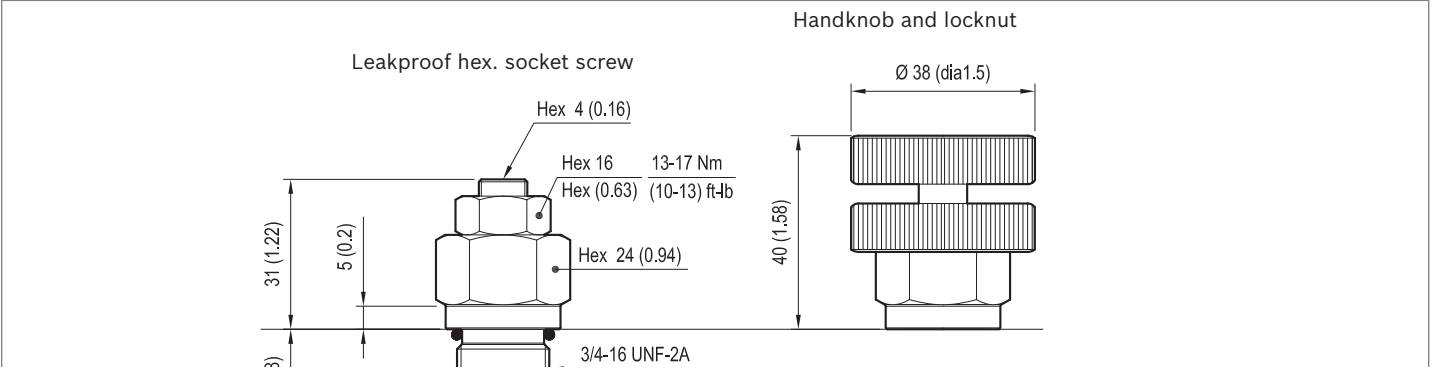
Dimensions [mm (inches)]

Ordering code					
04.01.03	X	56	00	00	*
Needle restrictor, free reverse flow		Series 0/A to L unchanged performances and dimensions			
Adjustments		Version and options standard			
03 Leakproof hex. socket screw					
04 Handknob and locknut					
56 Common cavity, Size 08					

Preferred types

Type	Material number	Type	Material number
040103035600000	R930000002		
040103045600000	R930000003		

Dimensions

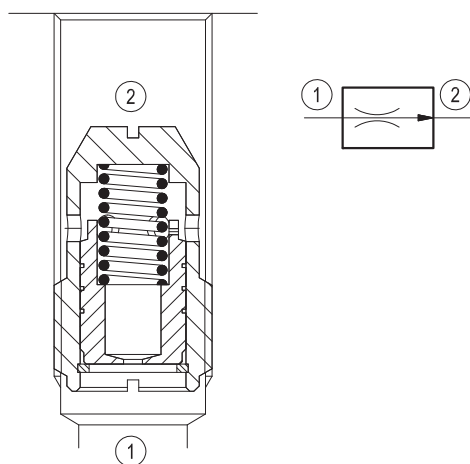


# Insert type

## Flow control, 2-way pressure compensated fixed setting

SFC1

0T.F1.01.00 - Y - Z



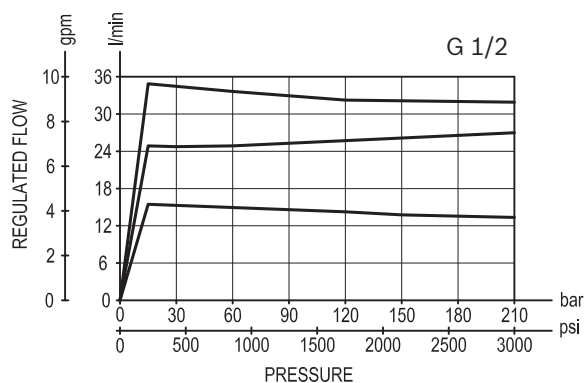
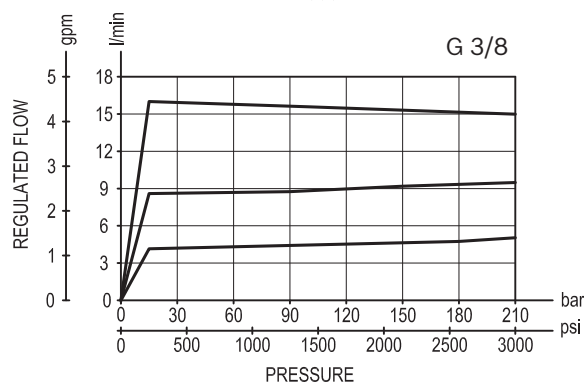
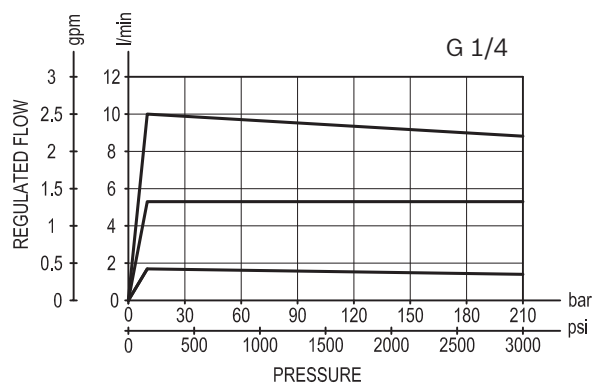
### Description

A constant flow rate, regardless of system pressures, is established from 1 to 2 while a minimum pressure differential of 145 psi exists between the two ports. The valve cannot be adjusted for variable flow output. Flow from 2 to 1 is limited by the diameter of the selected control orifice and is not pressure compensated.

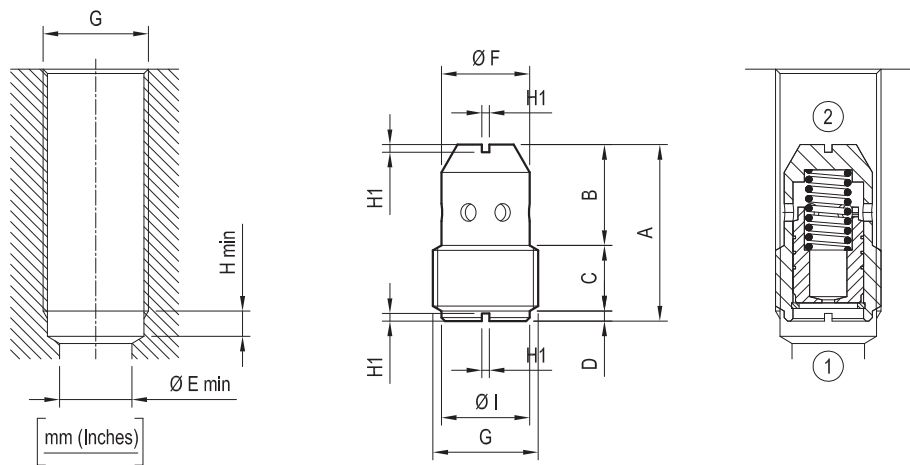
### Technical data

Max. operating pressure	bar (psi)	210 (3000)
Max. flow	l/min. (gpm)	see "Regulated flow range" table
Fluid temperature range	°C (°F)	-30 to 100 (-22 to 212)
Weight	kg (lbs)	see "Dimensions" table
Special cavity		see "Dimensions"
Fluids		Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm <sup>2</sup> /s (cSt)
Filtration		Nominal value max. 10µm (NAS 8) ISO 4406 19/17/14
Installation		No restrictions
Other Technical Data		See data sheet RE 18350-50

### Performance



Dimensions



G	A	B	C	D	E	F	I	H	H1	Weight kg (lbs)	Flow max. l/min. (gpm)
G 1/4	25.5 (1)	13.5 (0.53)	8.5 (0.34)	3 (0.12)	8 (0.32)	10 (0.39)	11 (0.43)	5 (0.2)	1.5 (0.6)	0.011 (0.024)	10 (3)
G 3/8	28 (1.1)	15 (0.59)	10.5 (0.41)	2 (0.08)	11 (0.43)	14 (0.55)	14.5 (0.57)	5 (0.2)	1.5 (0.6)	0.024 (0.053)	16 (4)
G 1/2	35 (1.38)	19.5 (0.77)	13 (0.52)	2 (0.08)	14 (0.55)	17.5 (0.69)	17.5 (0.69)	5 (0.2)	1.5 (0.6)	0.048 (0.106)	40 (11)

Ordering code

OT.F1.01.00

Y

Z

\*

Insert type - Flow control,  
2-way pressure compensated  
fixed setting

Port sizes

= 09 G 1/4

= 02 G 3/8

= 03 G 1/2

Note: available also as “Sleeve valve for line mounting”  
See data sheets RE 18316-12 and RE 18316-13

Series O/A to L unchanged performances and dimensions										
Regulated flow range l/min. (gpm)										
	= 01	= 02	= 03	= 04	= 05	= 06	= 07	= 08	= 09	= 10
for Y=09	1 (0.3) ± 20%	2 (0.5) ± 20%	3 (0.8) ± 20%	4 (1.1) ± 15%	5 (1.3) ± 15%	6 (1.6) ± 15%	7 (1.9) ± 15%	8 (2.1) ± 15%	9 (2.4) ± 15%	10 (2.6) ± 15%
for Y=02	4 (1.1) ± 15%	5 (1.3) ± 15%	6 (1.6) ± 15%	8 (2.1) ± 15%	10 (2.6) ± 15%	12 (3.2) ± 15%	14 (3.7) ± 10%	16 (4.2) ± 10%	-	-
for Y=03	12 (3.2) ± 15%	16 (4.2) ± 10%	20 (5.3) ± 10%	25 (6.6) ± 10%	30 (7.9) ± 10%	35 (9.3) ± 10%	40 (10.6) ± 10%	-	-	-

# Flow control, 2-way pressure compensated, fully adjustable Common cavity, Size 10

VRFB-10A

04.02.02 - X - 85 - Z

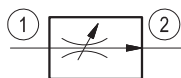
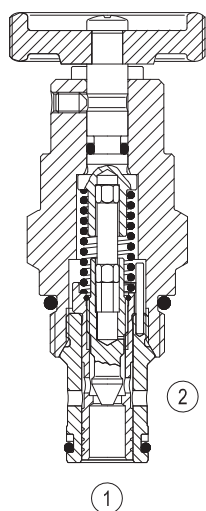
**RE 18321-16**

Edition: 03.2016

Replaces: 09.2009

**Description**

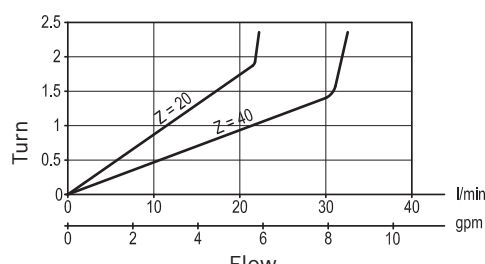
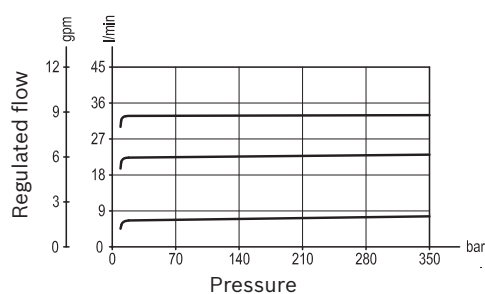
constant flow rate, regardless of system pressures, is established from 1 to 2 while a minimum pressure differential of 14 bar (200 psi) exists between the two ports. Output flow can be varied from closed to the nominal maximum rating for the valve. Flow from 2 to 1 is limited by the diameter of the selected control orifice and is not pressure compensated.



Technical data	
Pressure min. - max.	14 - 350 bar (200 - 5000 psi)
Flow range	see "Regulated flow range" table
Fluid temperature range	-30 to 100 °C (-22 to 212 °F)
Installation torque	41 - 47 Nm (30 - 35 ft-lbs)
Weight <sup>1)</sup>	0.27 kg (0.59 lbs)
Cavity	CA-10A-2N (see data sheet 18325-70)
Lines bodies and standard assemblies	Please refer to section "Hydraulic integrated circuit" or consult factory
Seal kit <sup>2)</sup>	Code: RG10A2010520100 material no: R901111363
Fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm <sup>2</sup> /s (cSt)
Recommended degree of fluid contamination	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14
Installation	No restrictions
Other Technical Data	See data sheet 18350-50

1) Standard version X=04 type

2) Only external seals for 10 valves

**Characteristic curve**

2      **VRFB-10A** | Flow control, 2-way pressure compensated

Dimensions [mm (inches)]

Ordering code

04.02.02	X	85	Z	00	*
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Flow control, 2-way pressure compensated  
fully adjustable

Adjustments
<b>04</b> Handknob
<b>40</b> Calibrated handknob

**85** Common cavity, Size 10

Series 0/A to L  
unchanged performances and dimensions  
Version and options standard

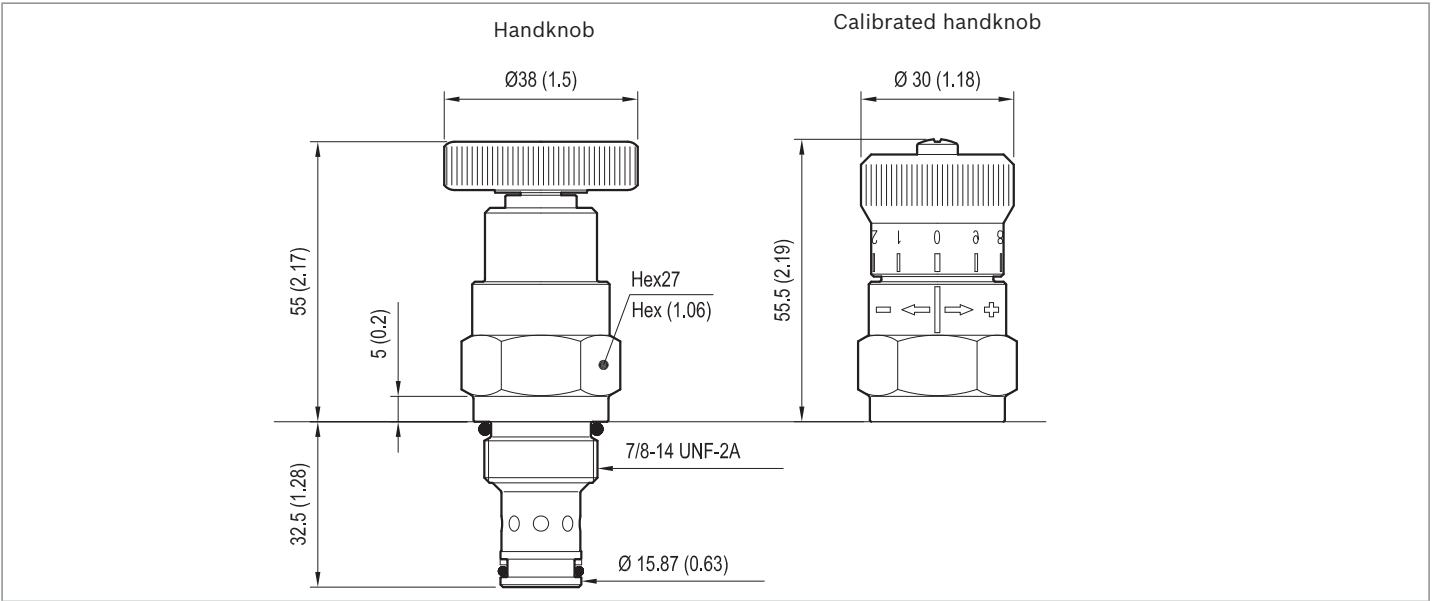
Regulated flow range l/min. (gpm)	
<b>20</b>	0.1-20 (0.03-5.28)
<b>40</b>	0.2-30 (0.05-7.93)

Preferred types

Type	Material number
04020204852000A	R930055368
04020204854000A	R930055371

Type	Material number
04020240852000A	R930055372
04020240854000A	R930055373

Dimensions



# Flow control, 3-way pressure compensated, combination type fully adjustable Common cavity, Size 10

VRFD-10A

04.04.02 - X - 85 - Z

**RE 18321-20**

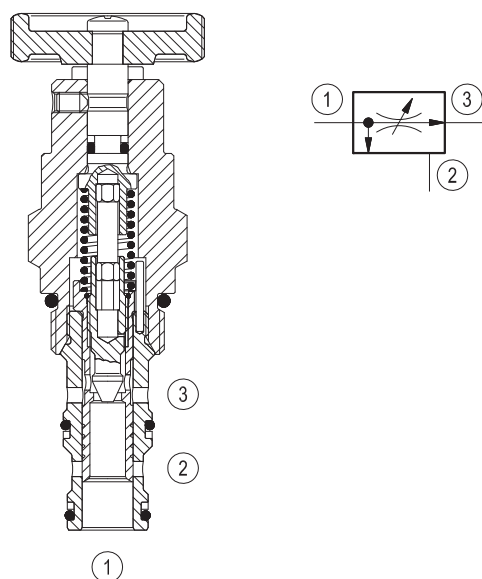
Edition: 03.2016

Replaces: 09.2009



## Description

A constant flow rate, regardless of system pressures, is established from 1 to 3 while a minimum pressure differential of 14 bar (200 psi) exists between the two ports. Input flow supplied to 1 in excess of the regulated output at 3 is by-passed to 2. Output flow can be varied from closed to the nominal maximum rating for the valve. Flow from 3 to 1 is limited by the diameter of the selected control orifice and is not pressure compensated. Flow from 2 to 1 is not permitted.



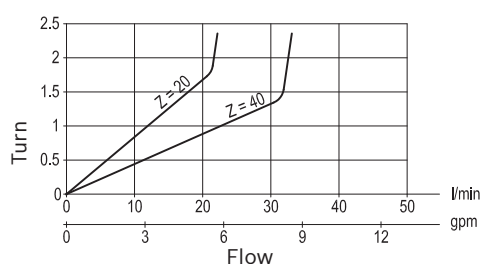
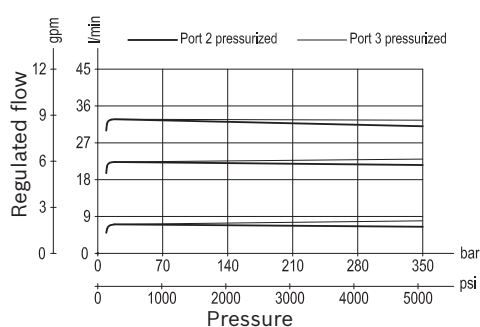
## Technical data

Pressure min. - max.	14 - 350 bar (200 - 5000 psi)
Max. inlet flow	60 l/min. (16 gpm)
Flow range	see "Regulated flow range" table
Fluid temperature range	-30 to 100 °C (-22 to 212 °F)
Installation torque	41 - 47 Nm (30 - 35 ft-lbs)
Weight <sup>1)</sup>	0.26 kg (0.57 lbs)
Cavity	CA-10A-3N (see data sheet 18325-70)
Lines bodies and standard assemblies	Please refer to section "Hydraulic integrated circuit" or consult factory
Seal kit <sup>2)</sup>	Code: RG10A3010520100 material no: R901111369
Fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm <sup>2</sup> /s (cSt)
Recommended degree of fluid contamination	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14
Installation	No restrictions
Other Technical Data	See data sheet 18350-50

1) Standard version X=04 type

2) Only external seals for 10 valves

## Characteristic curve



Ordering code

04.04.02	X	85	Z	00	*
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Flow control, 3-way pressure compensated combination type fully adjustable

Series 0/A to L  
unchanged performances and dimensions

Version and options standard

Adjustments

04 Handknob

40 Calibrated handknob

85 Common cavity, Size 10

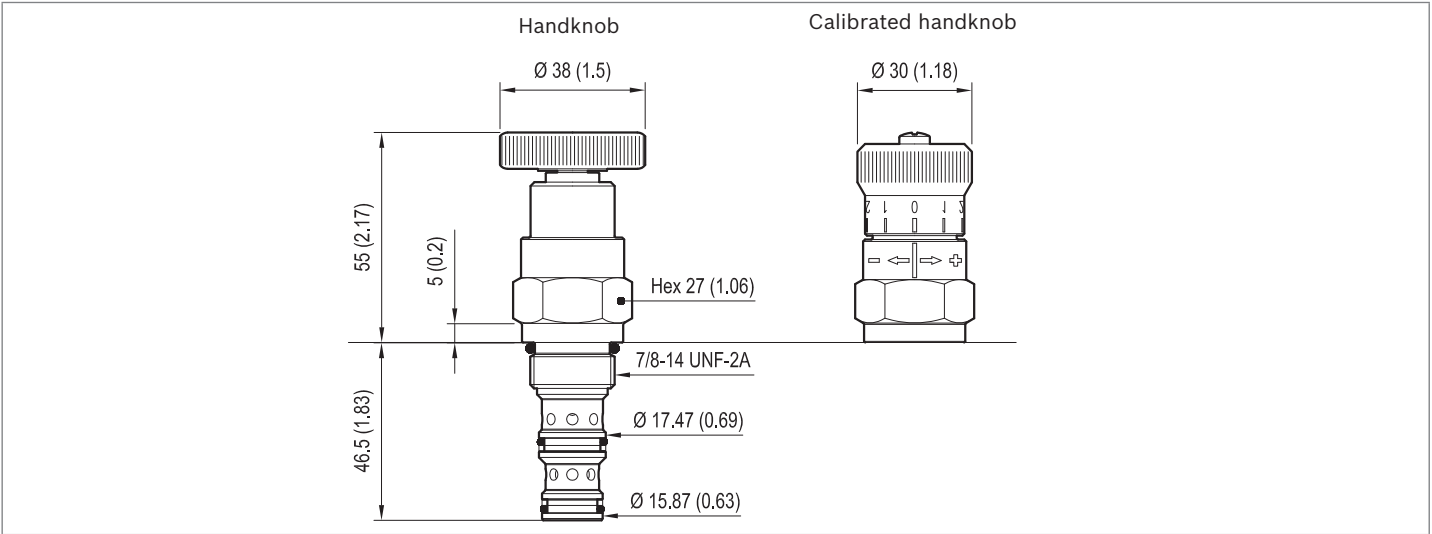
Regulated flow range l/min. (gpm)	
20	0.1-20 (0.03-5.28)
40	0.2-30 (0.05-7.93)

Preferred types

Type	Material number
04040204852000A	R930055365
04040204854000A	R930055362
04040240852000A	R930055366
04040240854000A	R930055363

Type	Material number

Dimensions



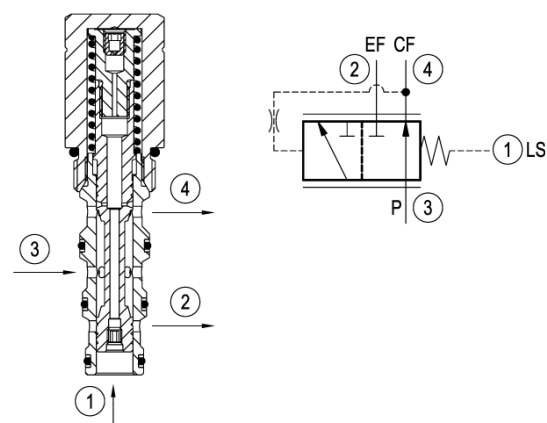


# Logic element, pressure compensator with static load sense

Common cavity, Size 10

VRLA-10A-S

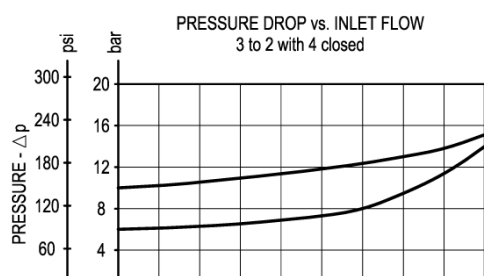
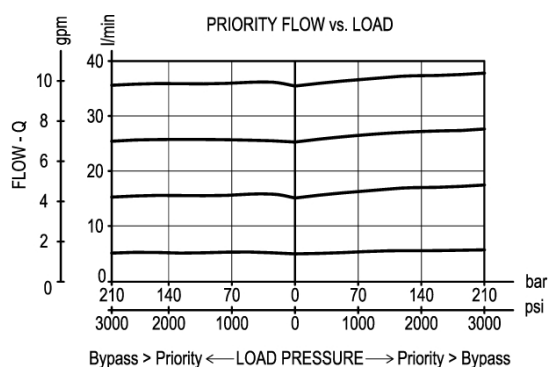
04.84.09.00 - 85 - Z



## Description

The valve delivers priority flow, from 0 to max. available, on demand to port 4, while compensating for load changes downstream. In neutral, all input flow at 3 is given to the priority port 4. Pressure at 4 is applied to the spool against a spring force so that increasing pressure causes increasing by-pass of input flow to port 2. Load sense pressure at port 1, obtained between the downstream control and the load, assists the spring, and moves the spool back toward supplying priority flow. Comparison between priority outlet and LS pressure seeks a constant differential pressure over the control valve. As load and flow control change, the priority flow is increased or decreased to satisfy the demand establishing that differential.

## Performance

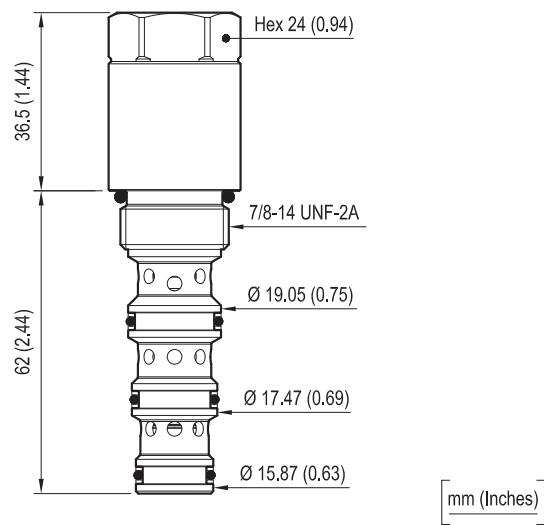


## Technical data

Max. operating pressure	bar (psi)	350 (5000)
Max. intel flow	l/min. (gpm)	45 (12)
Max. priority flow	l/min. (gpm)	30 (8) for Z=05 version 40 (11) for Z=10 version
Fluid temperature range	°C (°F)	-30 to 100 (-22 to 212)
Installation torque	Nm (ft-lbs)	41-47 (30-35)
Weight	kg (lbs)	0.22 (0.49)
Cavity		CA-10A-4N see data sheet RE 18325-70
Seal kit (*)	code material no.	RG10A4010530100 R901111373
Fluids		Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm <sup>2</sup> /s (cSt)
Filtration		Nominal value max. 10µm (NAS 8) ISO 4406 19/17/14
Installation		No restrictions
Other Technical Data		See data sheet RE 18350-50

(\*) Only external seals for 10 valves

Dimensions



Ordering code

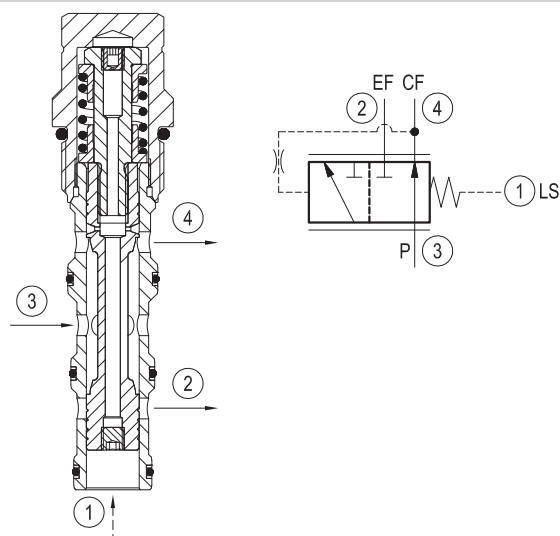
04.84.09.00	85	Z	00	*
Logic element, pressure compensator with static load sense		Series 0/A to L unchanged performances and dimensions		
Common cavity, Size 10		Version and options standard		
		SPRINGS		
		Bias spring bar (psi)		
		= 05	5.5 (80) ± 20%	
		= 10	10 (145) ± 15%	

# Logic element, pressure compensator with static load sense

Common cavity, Size 12

VRLA-12A-S

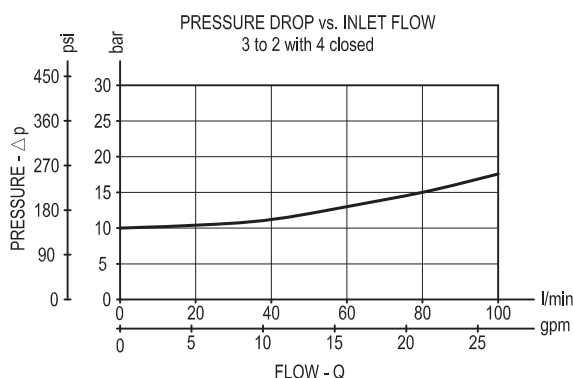
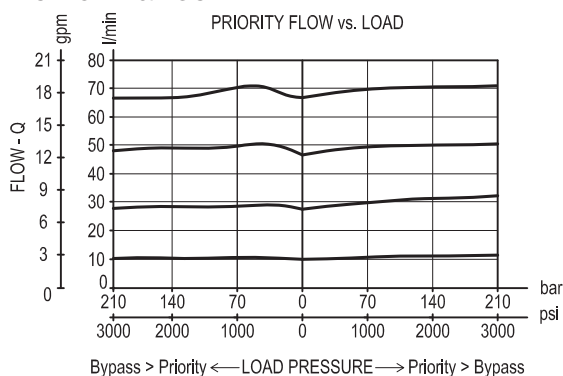
04.84.09.00 - 57 - Z



## Description

The valve delivers priority flow, from 0 to max. available, on demand to port 4, while compensating for load changes downstream. In neutral, all input flow at 3 is given to the priority port 4. Pressure at 4 is applied to the spool against a spring force so that increasing pressure causes increasing by-pass of input flow to port 2. Load sense pressure at port 1, obtained between the downstream control and the load, assists the spring, and moves the spool back toward supplying priority flow. Comparison between priority outlet and LS pressure seeks a constant differential pressure over the control valve. As load and flow control change, the priority flow is increased or decreased to satisfy the demand establishing that differential.

## Performance

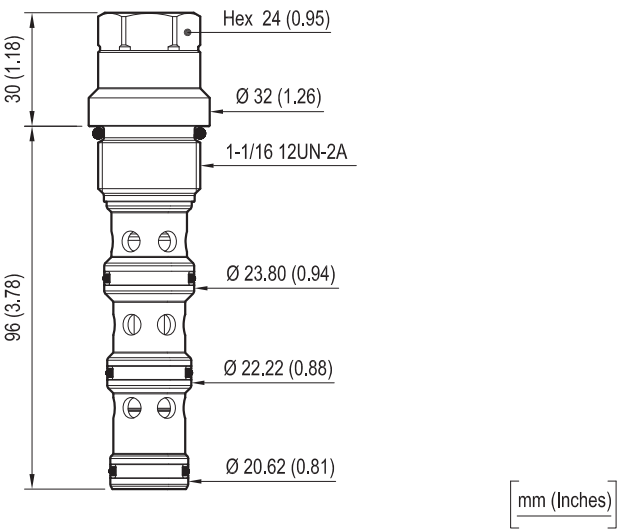


## Technical data

Max. operating pressure	bar (psi)	350 (5000)
Max. intel flow	l/min. (gpm)	100 (26)
Max. priority flow	l/min. (gpm)	80 (21)
Fluid temperature range	°C (°F)	-30 to 100 (-22 to 212)
Installation torque	Nm (ft-lbs)	81-95 (60-70)
Weight	kg (lbs)	0.32 (0.71)
Cavity		CA-12A-4N see data sheet RE 18325-70
Seal kit (*)	code material no.	RG12A4010530100 R930001660
Fluids		Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm <sup>2</sup> /s (cSt)
Filtration		Nominal value max. 10µm (NAS 8) ISO 4406 19/17/14
Installation		No restrictions
Other Technical Data		See data sheet RE 18350-50

(\*) Only external seals for 10 valves

Dimensions



Ordering code

04.84.09.00	57	Z	00	*								
Logic element, pressure compensator with static load sense		Series 0/A to L unchanged performances and dimensions										
Common cavity, Size 12		Version and options standard										
		<table><tr><th colspan="2">SPRINGS</th></tr><tr><th colspan="2">Bias spring bar (psi)</th></tr><tr><td>= 05</td><td>5.5 (80) ±20%</td></tr><tr><td>= 10</td><td>10 (145) ±15%</td></tr></table>			SPRINGS		Bias spring bar (psi)		= 05	5.5 (80) ±20%	= 10	10 (145) ±15%
SPRINGS												
Bias spring bar (psi)												
= 05	5.5 (80) ±20%											
= 10	10 (145) ±15%											

# Solenoid operated valves pilot operated poppet type

## 2-way normally closed

### Common cavity, Size 08

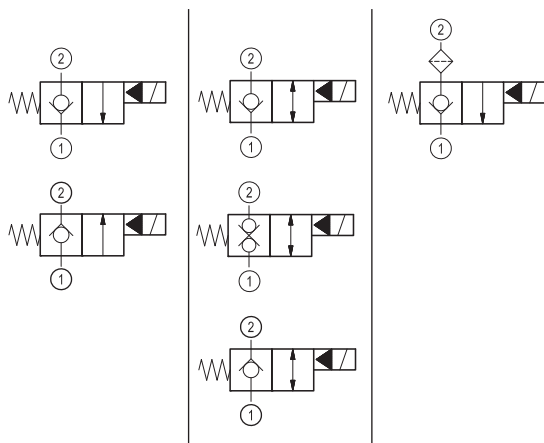
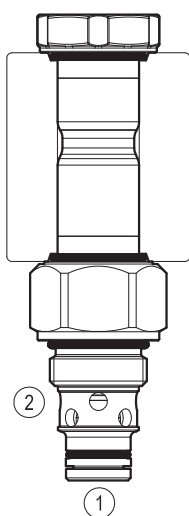
VEI-16-08A-NC

OD.15 - X - 18 - Y - Z

**RE 18323-25**

Edition: 04.2017

Replaces: 03.2017

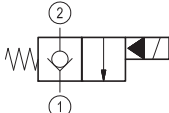
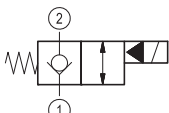
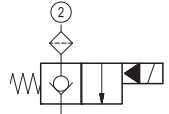
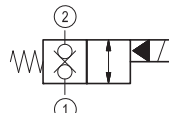
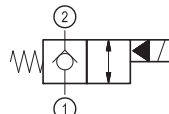
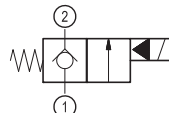
**PATENT PENDING****Technical data**

New VEI-16 family incorporates a new solenoid concept providing excellent performance and enables cartridges to work in severe environment. Cartridges also incorporate advanced design of hydraulic parts providing excellent hydraulic performance.

**Technical data**

General	
Weight	0.15 kg (0.33 lbs)
Installation orientation	Unrestricted
Ambient temperature range	-30 to 90 °C (-22 to 194 °F)
Hydraulic	
Max. operating pressure	350 bar (5000 psi)
Flow range	0.5 - 40 l/min (0.1 - 11 gpm)
Fatigue cycle life	2 million cycles at 350 bar 150000 cycles at 420 bar
Max. internal leakage:	5 drops/min. for X= 01,05,07 20 drops/min. for X= 31,03,09
Switching time	Opening ≤ 50 ms Closing ≤ 100 ms
Fluid temperature range	-20 to 80 °C (-4 to 176 °F)
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 20 to 380 mm <sup>2</sup> /s (cSt)	
Installation torque	39 - 51 Nm (29 - 38 ft-lbs)
Recommended degree of fluid contamination	Nominal value max. 10 µm (NAS 8) ISO 4406 19/17/14
MTTFd	150 years see RE 18350-51
Cavity	CA-08A-2N see 18325-70
Seal kit for X=01,05,07	code material no. RG08A2010520100 R901101437
Seal kit for X=31,03,09	code material no. RG08A2010530100 R901101544
Seal kit coil	code material no. RG01Z0010000100 R930058940
Other technical data	See data sheet 18350-50
Electrical	
Type of voltage	DC voltage
Coil type	D36
Supply voltage	See data sheet 18325-90
Voltage tolerance against ambient temperature	See characteristic curve
Power consumption	20 W
Type of protection	See data sheet 18325-90
Note: Coils must be ordered separately	

## Ordering code

OD.15	X	18	Y	Z	0000	*
Solenoid operated valves pilot operated poppet type 2-way normally closed						Series 0/A to L unchanged performances and dimensions
monodirectional type	01	05	07	31	03	09
						
bidirectional type						
						
monodirectional type with filter						
						
bidirectional type	31	03	09	01	05	07
						
bidirectional type						
						
monodirectional type	09	01	05	07	31	03
						

0 = With buna seal  
 8 = With buna seal and extra spring only for **05**  
 V = With Viton seal  
 P = With buna seal and protective cap for override version **D**  
 T = With Viton seal and protective cap for override version **D**

A = Standard  
 D = Knob style manual override  
 E = Pull style manual override  
 F = Hand operated pull style manual override

Common cavity: CA-08A-2N

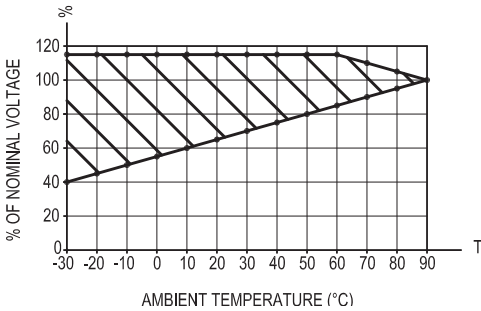
## Preferred types

Type	Material number
OD150118A000000	R930058697
OD150118D000000	R930059941
OD150518A000000	R930058427
OD150518D000000	R930058344
OD150518DP00000	R930059757
OD150718A000000	R930058338
OD150718D000000	R930058336
OD150718DP00000	R930058529
OD150118E000000	R930060958
OD150518E000000	R930060966

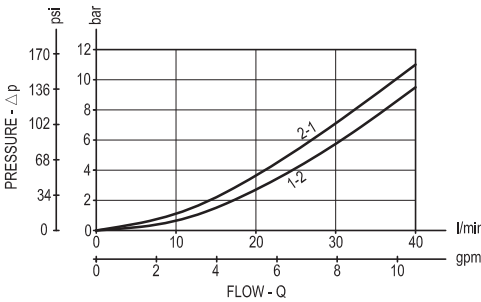
Type	Material number
OD150718E000000	R930060973
OD153118A000000	R930058334
OD153118D000000	R930058898
OD153118E000000	R930065030
OD150518A800000	R930063229
OD150318A000000	R930062828
OD150918A000000	R930064361
OD153118DP00000	R930066685
OD150518D800000	R930063959

Characteristic curves

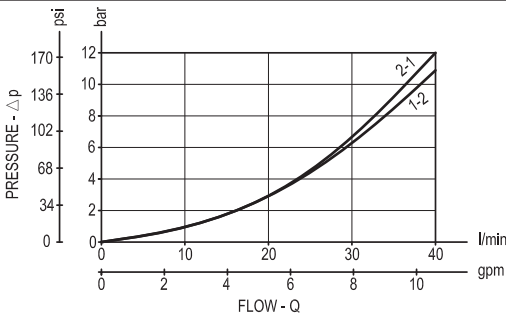
All Versions - Admissible supply voltage Vs. Ambient temperature at 100% duty cycle



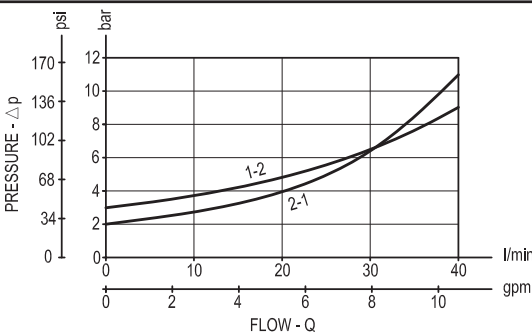
Versions 01, 05, 07



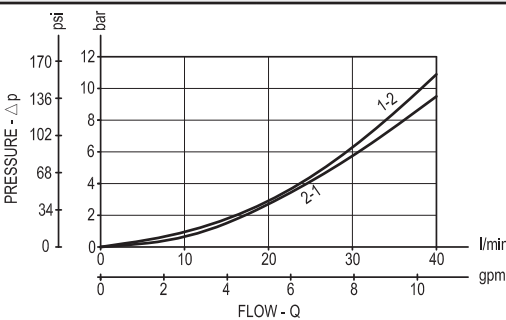
Version 31



Version 05 with extra spring

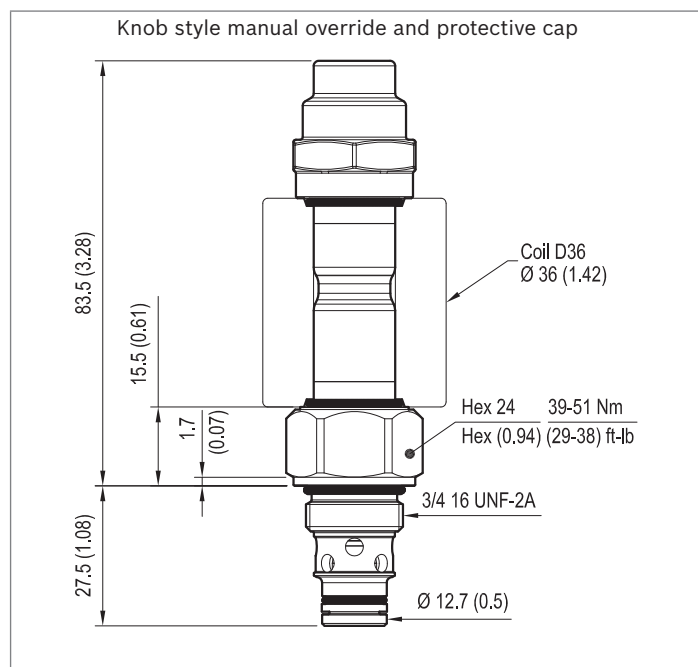
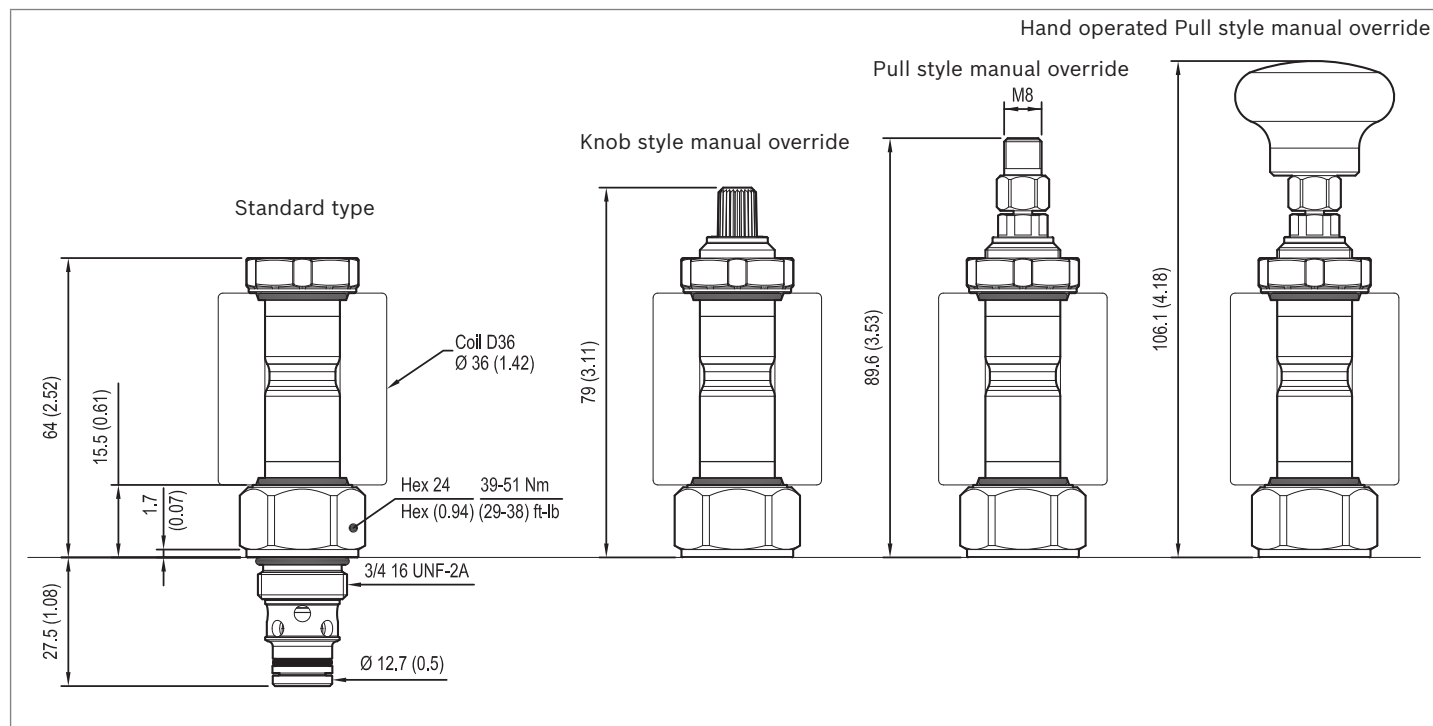


Versions 03, 09



## Dimensions

### Solenoid operated valves, poppet 2-way normally closed





# Solenoid operated valves pilot operated poppet type

## 2-way normally open

### Common cavity, Size 08

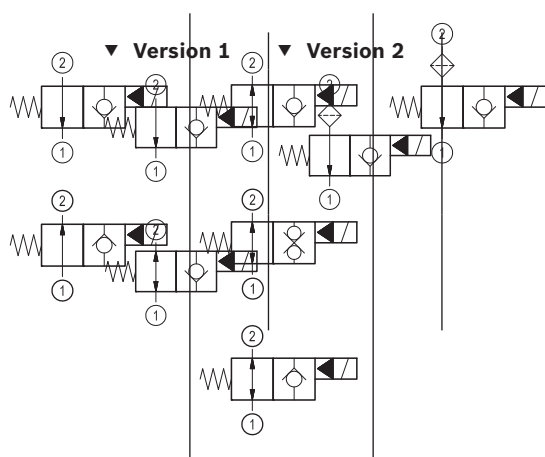
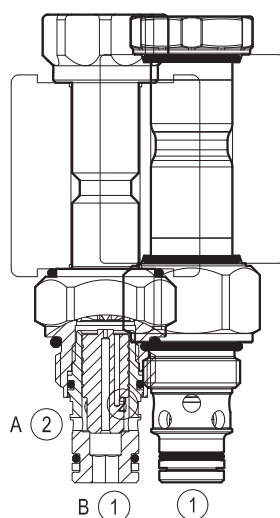
VEI-8I-06-NA

OD.15 - X - 18 - Y - S0

**RE 18323-05**

Edition: 01.2016

Replaces: 10.2013

**PATENT PENDING****Technical data**

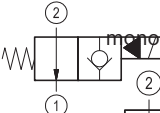

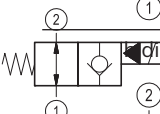
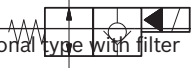
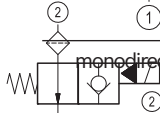
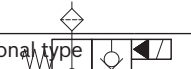
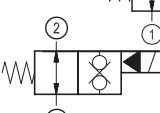
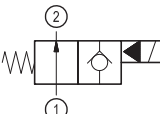
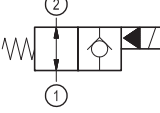
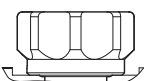

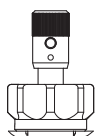
**Technical data** family incorporates a new solenoid concept providing excellent performance and enables cartridges to be used in a wide range of applications.

Weight	0.15 kg (0.33 lbs)
Installation orientation	Optional
Ambient temperature range	-30 to 60 °C (-22 to 140 °F)

<b>Hydraulic</b>	
Max. operating pressure	350 bar (5000 psi)
Max. proof pressure	420 bar (6000 psi)
Ambient temperature range	-30 to 80 °C (-22 to 194 °F)
Flow range	0.5 - 30 l/min (0.1 - 8 gpm)
Fatigue cycle life	1 million cycles at 350 bar
Max. internal leakage	350 drops/min (5000 psi)
Flow range	0.5 - 40 l/min (0.1 - 11 gpm)
Fatigue cycle life	2 million cycles at 350 bar
Fluids: Mineral based or synthetics with lubricating properties at viscosities of 20 to 380 mm <sup>2</sup> /s (cSt)	150000 cycles at 420 bar
Max. internal leakage:	5 drops/min for X= 02, 06, 08
Installation torque:	20 Nm (15 ft-lbs) for X= 32, 10, 04
Recommended degree of fluid	Nominal value max. 10 µm
Switching time	≤ 30 ms
MTTFd	150 years see RE 18350-51
Fluid temperature range	-20 to 80 °C (-4 to 176 °F)
Fluids: Mineral based or synthetics with lubricating properties at viscosities of 20 to 380 mm <sup>2</sup> /s (cSt)	Please refer to section "Hydraulic integrated circuit"
Installation torque	39 Nm (29 ft-lbs)
Recommended degree of fluid contamination	code material no. R901101544
Seal kit coil	code material no. R901101544
Cavity	code material no. R901101544
Other technical data	code material no. R901101544

<b>Electrical</b>	
Type of coil	code material no. R901101544
Coil type	code material no. R901101544
Supply voltage	code material no. R901101544
Nominal voltage	± 10%
Other technical data	See data sheet 18350-50
Power consumption	20 W
Duty cycle coil	See characteristic curves %
Type of voltage	DC voltage
Type of protection	See data sheet 18325-90
Coil type	D36
Note: Coils must be ordered separately	
Supply voltage	See data sheet 18325-90
Voltage tolerance against ambient temperature	See characteristic curve
Power consumption	20 W
Type of protection	See data sheet 18325-90
Note: Coils must be ordered separately	

Ordering code

	OD.15	X	18	Y	Z	0000	*
Solenoid operated valves							
pilot operated poppet type	OD.15	X	18	Y		S0	
2-way normally open							
Solenoid operated valves							
pilot operated poppet type							
monodirectional type							
2-way normally open							
							
monodirectional type							
02							
							
bidirectional type							
02							
							
monodirectional type							
06							
							
monodirectional type with filter							
06							
							
monodirectional type with filter							
08							
							
bidirectional type							
08							
							
monodirectional type							
32							
							
monodirectional type							
10							
							
bidirectional type							
04							
Series O/A to L unchanged performances and dimensions							
0 = With buna seal V = With Viton seal P = With buna seal and protective cap for override version <b>B</b> and <b>C</b> T = With Viton seal and protective cap for override version <b>B</b> and <b>C</b>							
standard type							
1I							
knob style manual override							
A = Standard B = Push style manual override C = Push and twist style manual override							
Cable operated pull style override							
1M							
Common cavity: CA-08A-2N							
Common cavity: CA-08A-2N							

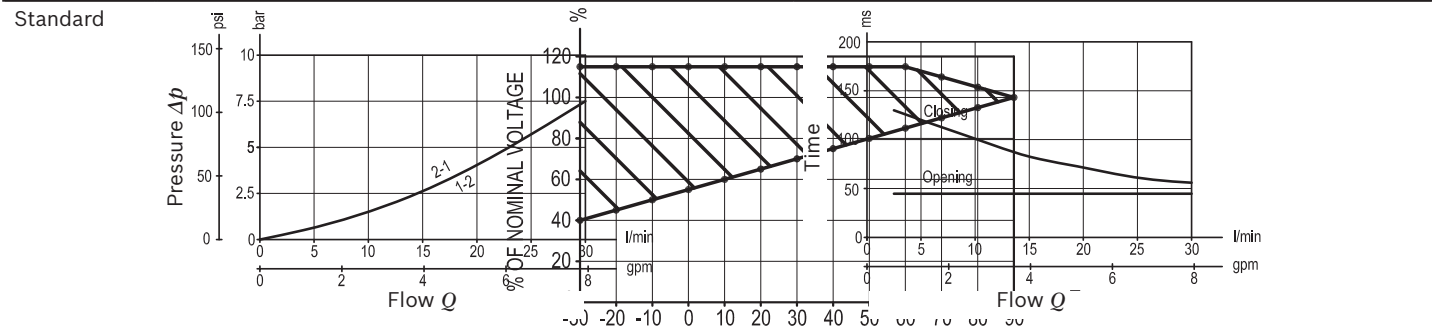
Preferred types

Type	Material number
OD150218A000000	R930059442
Type	Material number
OD150218A000000	R990080103
OD150218C000000	R990080104
OD150218CP00000	R990080598
OD150618A000000	R990081433
OD150618B000000	R990081434
OD150618C000000	R990080125
OD150818A000000	R930058337
OD150818B000000	R930058340
OD150818C000000	R930060583

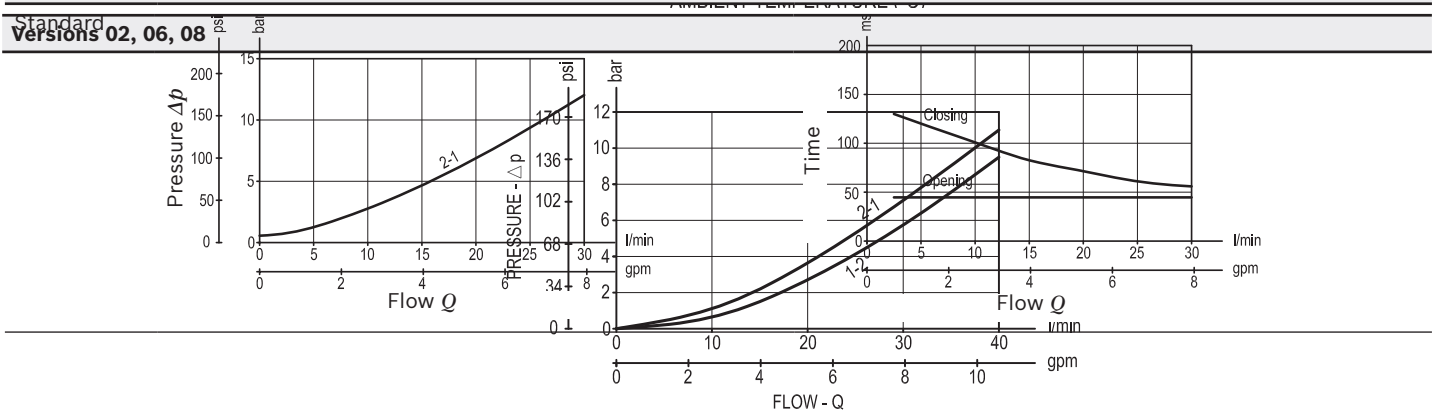
Type	Material number
OD153218A000000	R930064101
Type	Material number
OD150218C000000	R990080104
OD150418A000000	R990081349
OD150418B000000	R990081184
OD150418C000000	R930066185
OD150618CP00000	R930060905
OD153218CP00000	R930065328
OD151018B000000	R930066186
OD151018C000000	R930066187
OD150618AV00000	R930060900

Characteristic curves

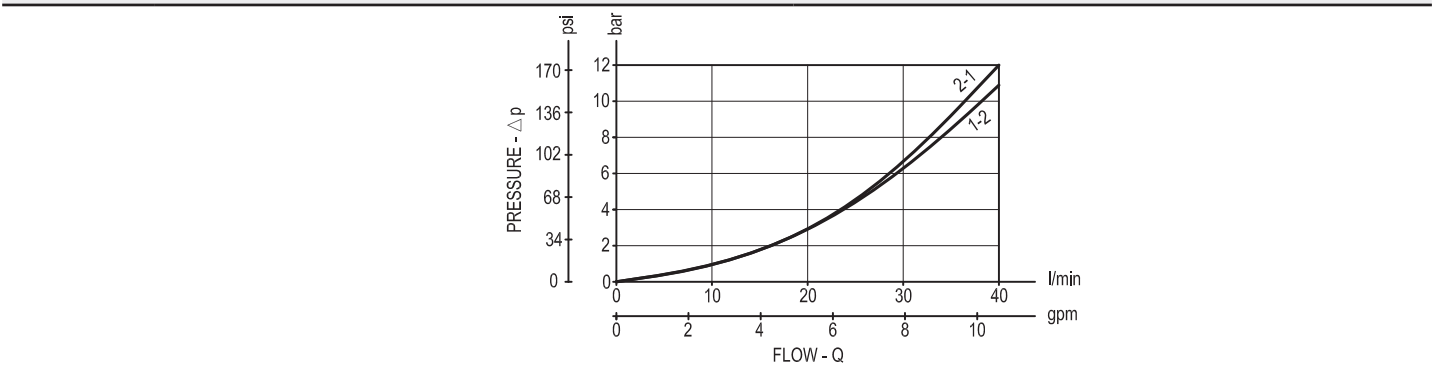
Version 1



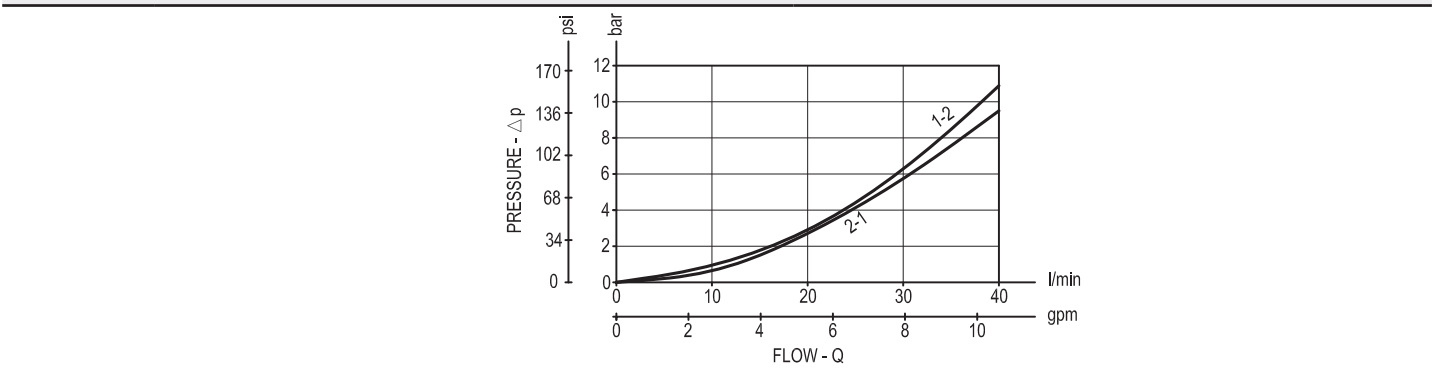
Version 2



Version 32



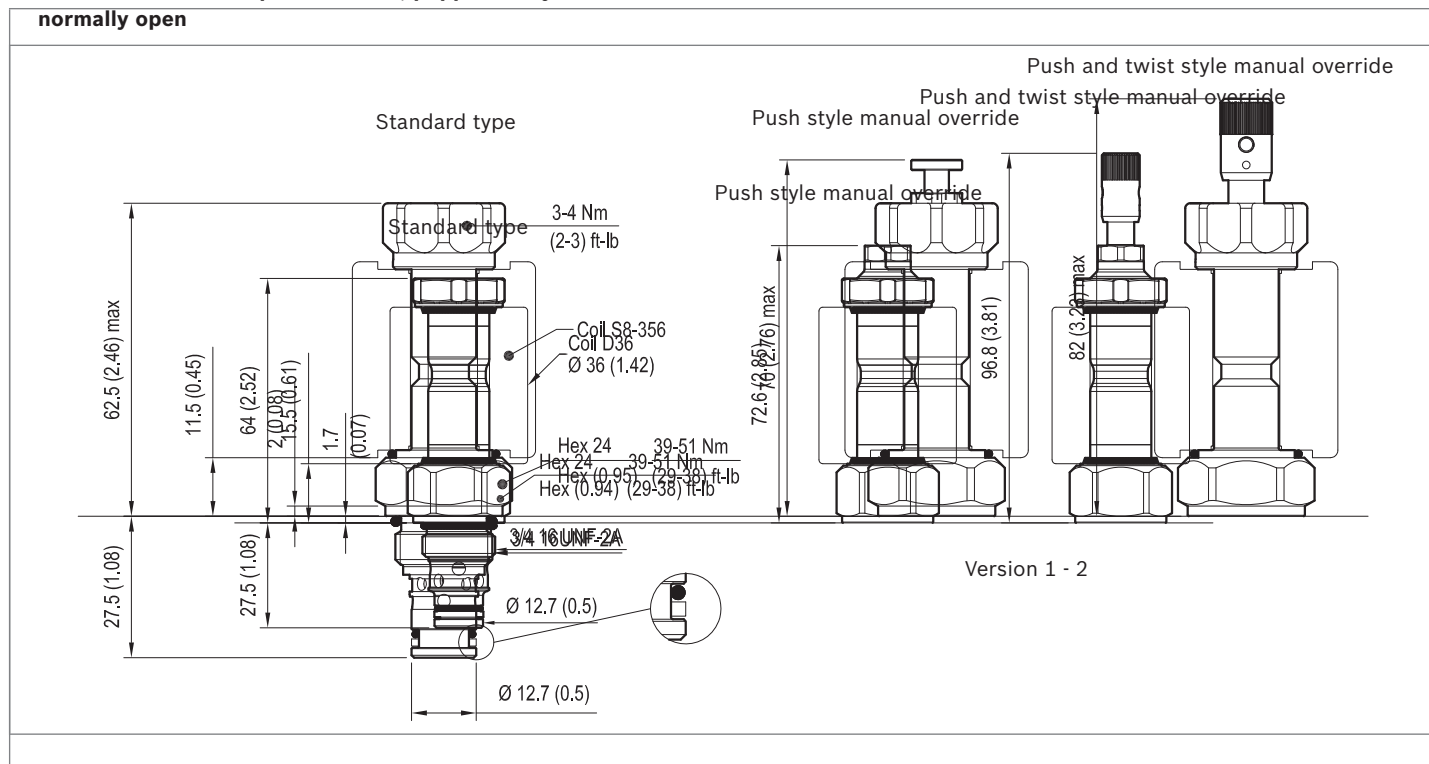
Version 04, 10



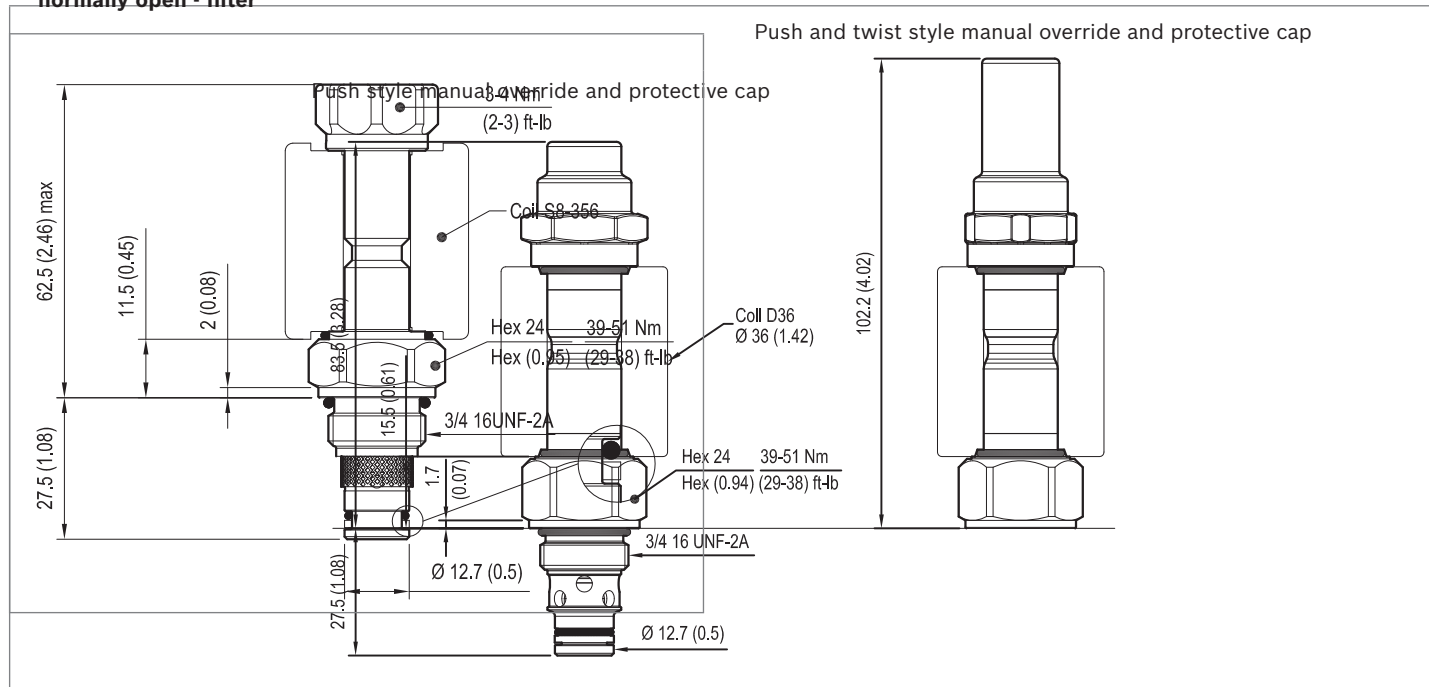
## Dimensions

### Solenoid operated valves, poppet 2-way

#### Version 1: Solenoid operated valve, poppet 2-way normally open



#### Version 2: Solenoid operated valve, poppet 2-way normally open - filter



# Solenoid operated valves pilot operated poppet type

## 2-way normally closed

### Special cavity, 017-E

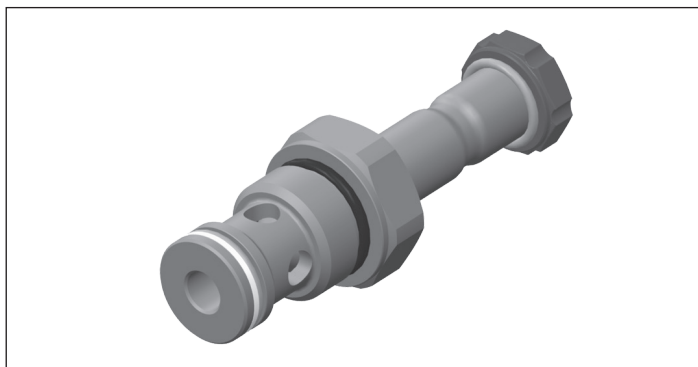
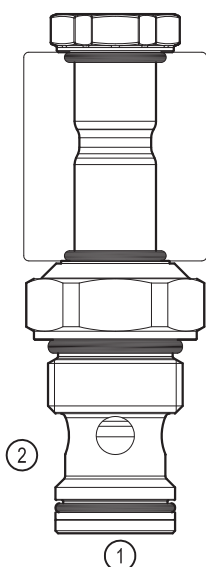
VEI-16-NC

OD.15 - X - 17 - Y - Z

**RE 18323-34**

Edition: 10.2017

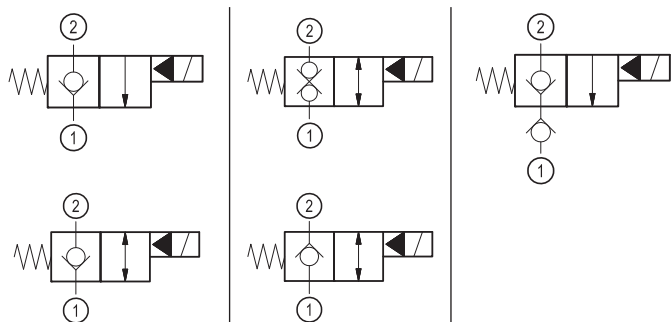
Replaces: 09.2017

**PATENT PENDING****Technical data**

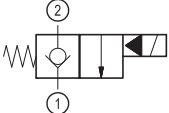
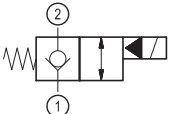
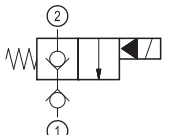
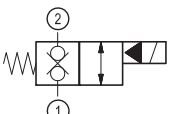
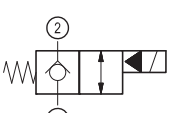
New VEI-16 family incorporates a new solenoid concept providing excellent performance and enables cartridges to work in severe environment. Cartridges also incorporate advanced design of hydraulic parts providing excellent hydraulic performance.

**Technical data**

General		
Weight		0.25 kg (0.55 lbs)
Installation orientation		Unrestricted
Ambient temperature range		-30 to 90 °C (-22 to 194 °F)
Hydraulic		
Max. operating pressure		350 bar (5000 psi)
Flow range		2 - 70 l/min (0.53 - 18 gpm)
Fatigue cycle life		2 million cycles at 350 bar
Max. internal leakage:		20 drops/min.
Installation torque		54 - 66 Nm (40 - 49 ft-lbs)
Switching time		Opening ≤ 50 ms
		Closing ≤ 100 ms
Fluid temperature range		-20 to 80 °C (-4 to 176 °F)
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 20 to 380 mm²/s (cSt)		
Recommended degree of fluid contamination		Nominal value max. 10 µm (NAS 8) ISO 4406 19/17/14
MTTFD		150 years see RE 18350-51
Special cavity		017-E see 18325-75
Seal kit for X= 01,05,11	code material no.	RG17E201052010 R934003562
Seal kit for X= 03,31	code material no.	RG17E201053010 R934003563
Seal kit coil	code material no.	RG01Z0010000100 R930058940
Other technical data		See data sheet 18350-50
Electrical		
Type of voltage		DC voltage
Coil type		D36
Supply voltage		See data sheet 18325-90
Voltage tolerance against ambient temperature		See characteristic curve
Power consumption		20 W
Type of protection		See data sheet 18325-90
Note: Coils must be ordered separately		



Ordering code

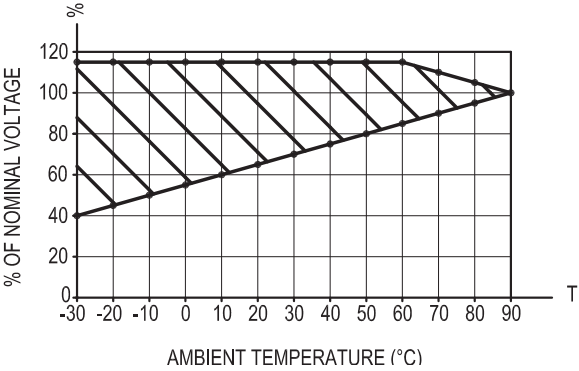
OD.15	X	17	Y	Z	0000	*
Solenoid operated valves pilot operated poppet type 2-way normally closed						Series 0/A to L unchanged performances and dimensions
monodirectional type 	01					0 = With buna seal V = With Viton seal P = With buna seal and protective cap for override version <b>D</b> T = With Viton seal and protective cap for override version <b>D</b>
bidirectional type 	05					
monodirectional type with check 	11					A = Standard D = Knob style manual override E = Pull style manual override F = Hand operated pull style manual override
bidirectional type 	31					Special cavity: 017-E
bidirectional type 	03					

Preferred types

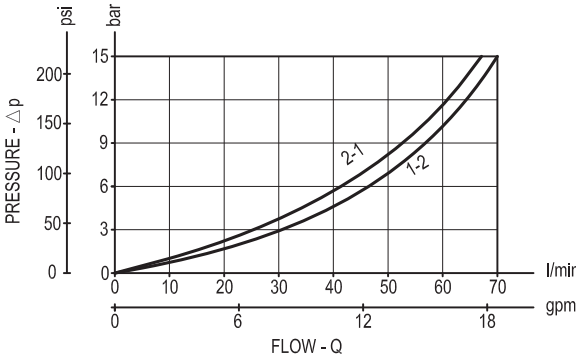
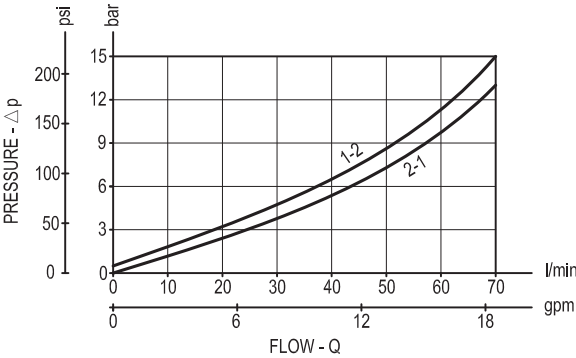
Type	Material number	Type	Material number
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OD150117D000000	R930065472	OD150317D000000	R930066967
OD150517A000000	R930062338		
OD150517D000000	R930064099		
OD151117A000000	R930064362		
OD150517DP000000	R930066439		
OD153117A000000	R930065028		
OD153117D000000	R930067162		

Characteristic curves

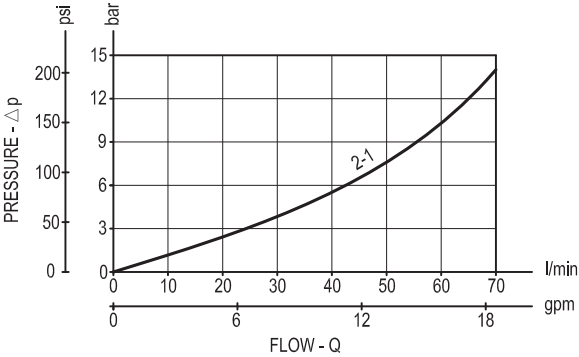
All Versions - Admissible supply voltage Vs. Ambient temperature at 100% duty cycle



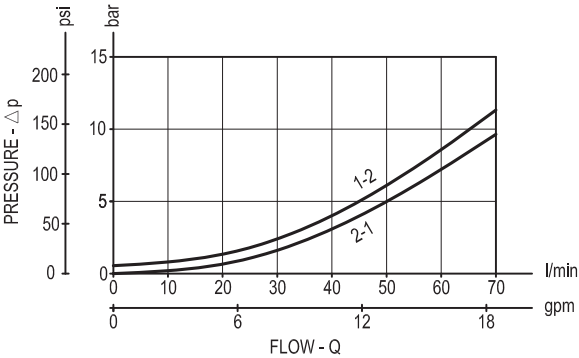
Versions 01, 05      Version 03



Version 11

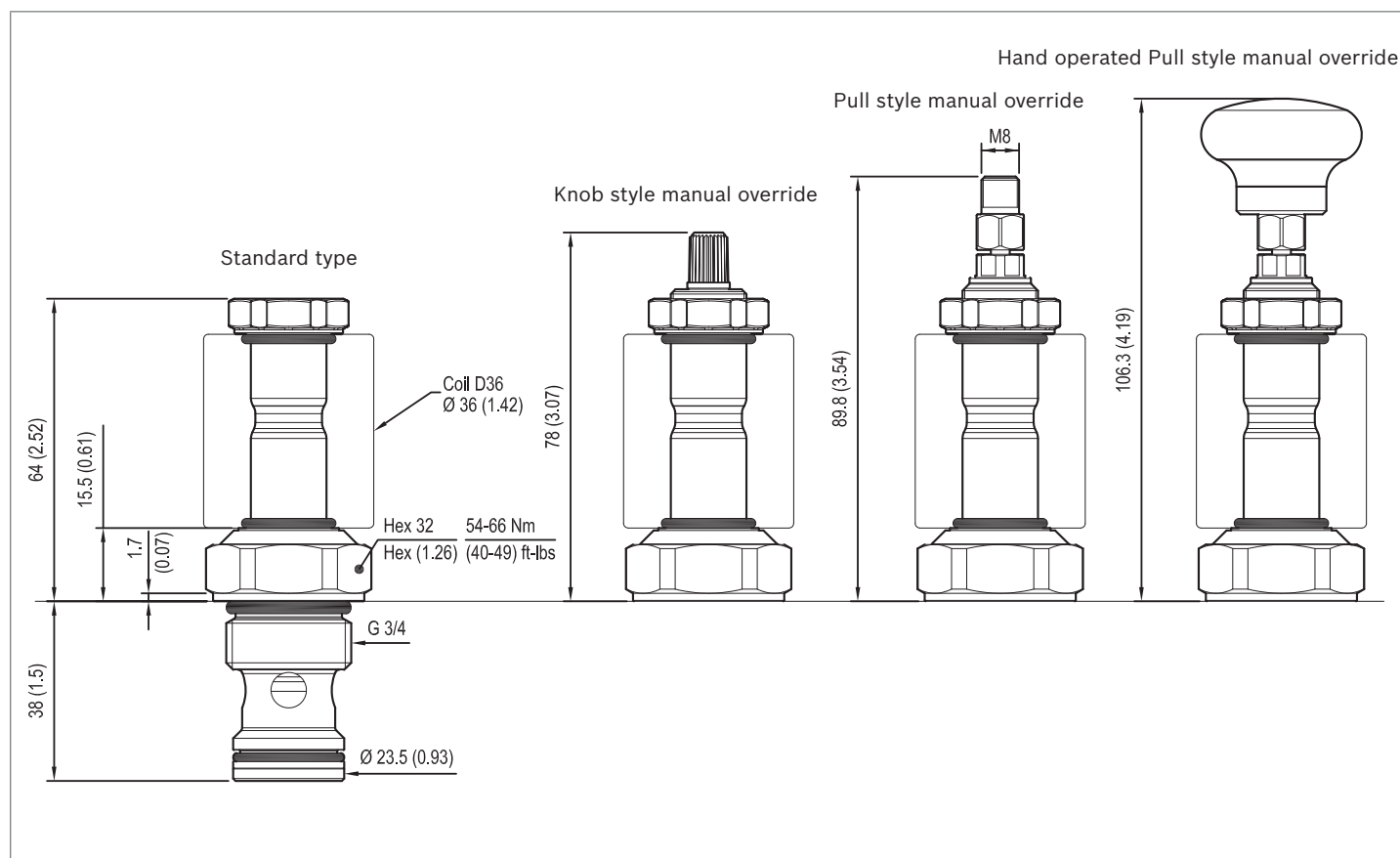


Version 31



## Dimensions

**Solenoid operated valves pilot operated poppet type**  
**2-way normally closed**





# Solenoid operated valves pilot operated poppet type

## 2-way normally open

### Special cavity, 017-E

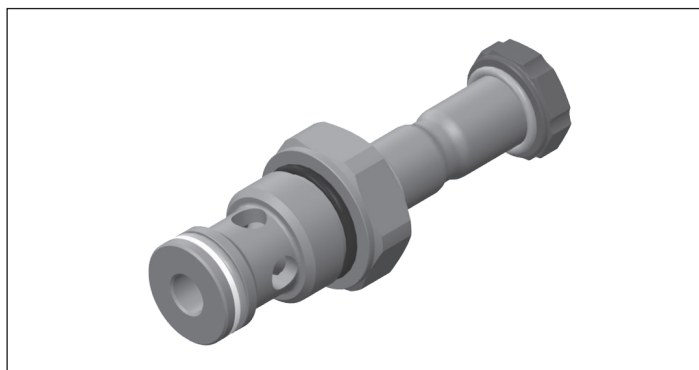
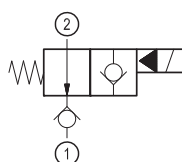
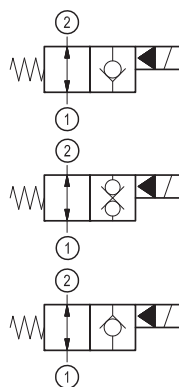
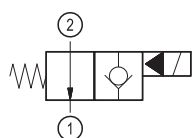
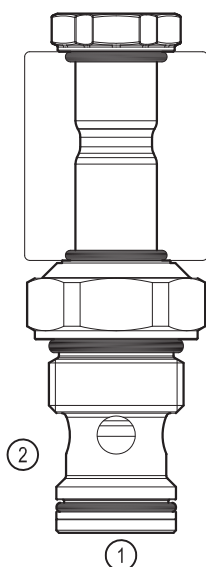
VEI-16-NA

OD.15 - X - 17 - Y - Z - 00

**RE 18323-35**

Edition: 12.2017

Replaces: 11.2017

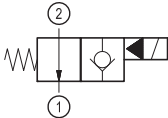
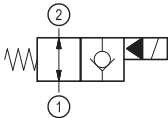
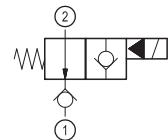
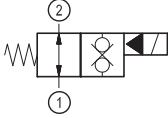
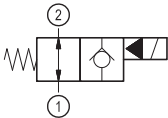
**PATENT PENDING****Technical data**

New VEI-16 family incorporates a new solenoid concept providing excellent performance and enables cartridges to work in severe environment. Cartridges also incorporate advanced design of hydraulic parts providing excellent hydraulic performance.

**Technical data**

General		
Weight		0.25 kg (0.55 lbs)
Installation orientation		Unrestricted
Ambient temperature range		-30 to 90 °C (-22 to 194 °F)
Hydraulic		
Max. operating pressure		350 bar (5000 psi)
Flow range		2 - 70 l/min (0.53 - 18 gpm)
Fatigue cycle life		2 million cycles at 350 bar
Max. internal leakage:		20 drops/min.
Installation torque		54 - 66 Nm (40 - 49 ft-lbs)
Switching time		Opening ≤ 50 ms
		Closing ≤ 100 ms
Fluid temperature range		-20 to 80 °C (-4 to 176 °F)
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 20 to 380 mm <sup>2</sup> /s (cSt)		
Recommended degree of fluid contamination		Nominal value max. 10 µm (NAS 8) ISO 4406 19/17/14
MTTFd		150 years see RE 18350-51
Special cavity		017-E see 18325-75
Seal kit for X= 02,06,12	code	RG17E201052010
	material no.	R934003562
Seal kit for X= 04,32	code	RG17E201053010
	material no.	R934003563
Seal kit coil and standard cap	code	RG02Z0010000100
	material no.	R930067869
Seal kit coil and protective cap only for Y=B,C	code	RG03Z0010000100
	material no.	R930067870
Other technical data		See data sheet 18350-50
Electrical		
Type of voltage		DC voltage
Coil type		D36
Supply voltage		See data sheet 18325-90
Voltage tolerance against ambient temperature		See characteristic curve
Power consumption		20 W
Type of protection		See data sheet 18325-90
Note: Coils must be ordered separately		

Ordering code

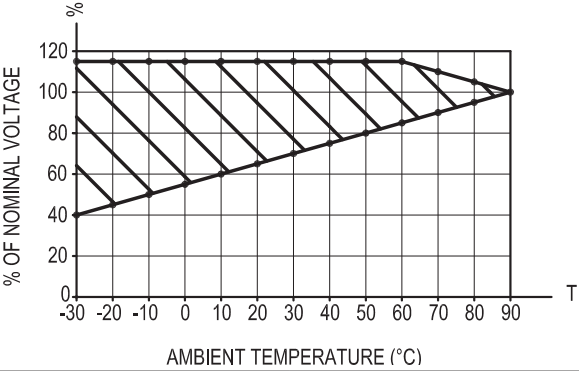
OD.15	X	17	Y	Z	0000	*
Solenoid operated valves pilot operated poppet type 2-way normally open						Series 0/A to L unchanged performances and dimensions
monodirectional type 	02					0 = With buna seal V = With Viton seal P = With buna seal and protective cap for override version <b>B</b> and <b>C</b> T = With Viton seal and protective cap for override version <b>B</b> and <b>C</b>
bidirectional type 	06					
monodirectional type with check 	12					A = Standard B = Push style manual override C = Push and twist style manual override
bidirectional type 	32					Special cavity: 017-E
bidirectional type 	04					

Preferred types

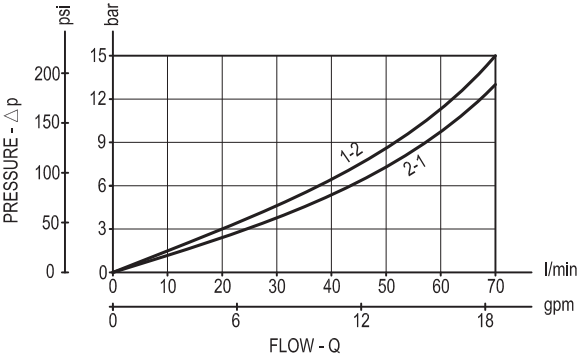
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OD150617A000000	R930064265	OD153217CP00000	R930067157
OD150617B000000	R930064334	OD150417A000000	R930066966
OD150617C000000	R930063423		
OD151217A000000	R930063907		
OD153217A000000	R930064102		
OD153217B000000	R930067161		

Characteristic curves

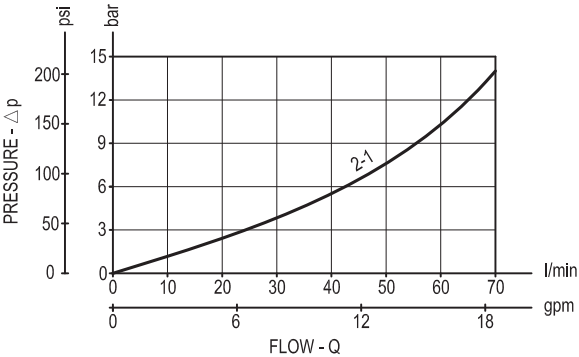
All Versions - Admissible supply voltage Vs. Ambient temperature at 100% duty cycle



Versions 02, 06

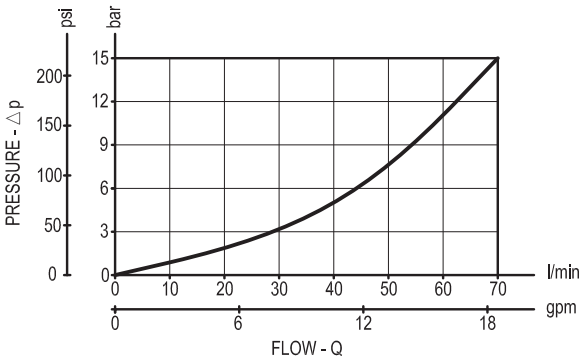
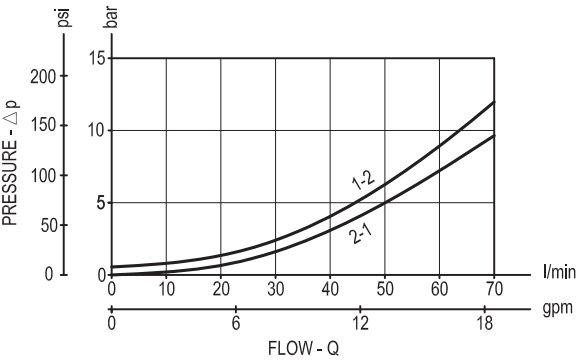


Version 12



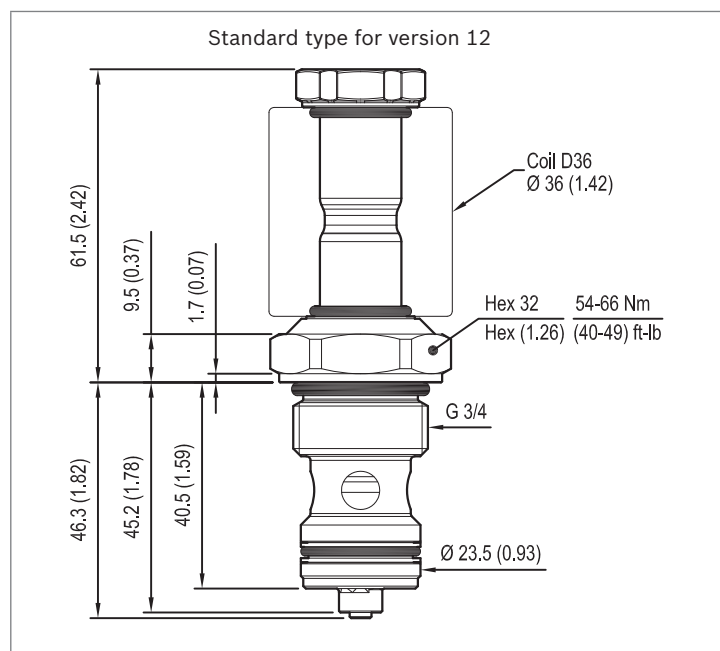
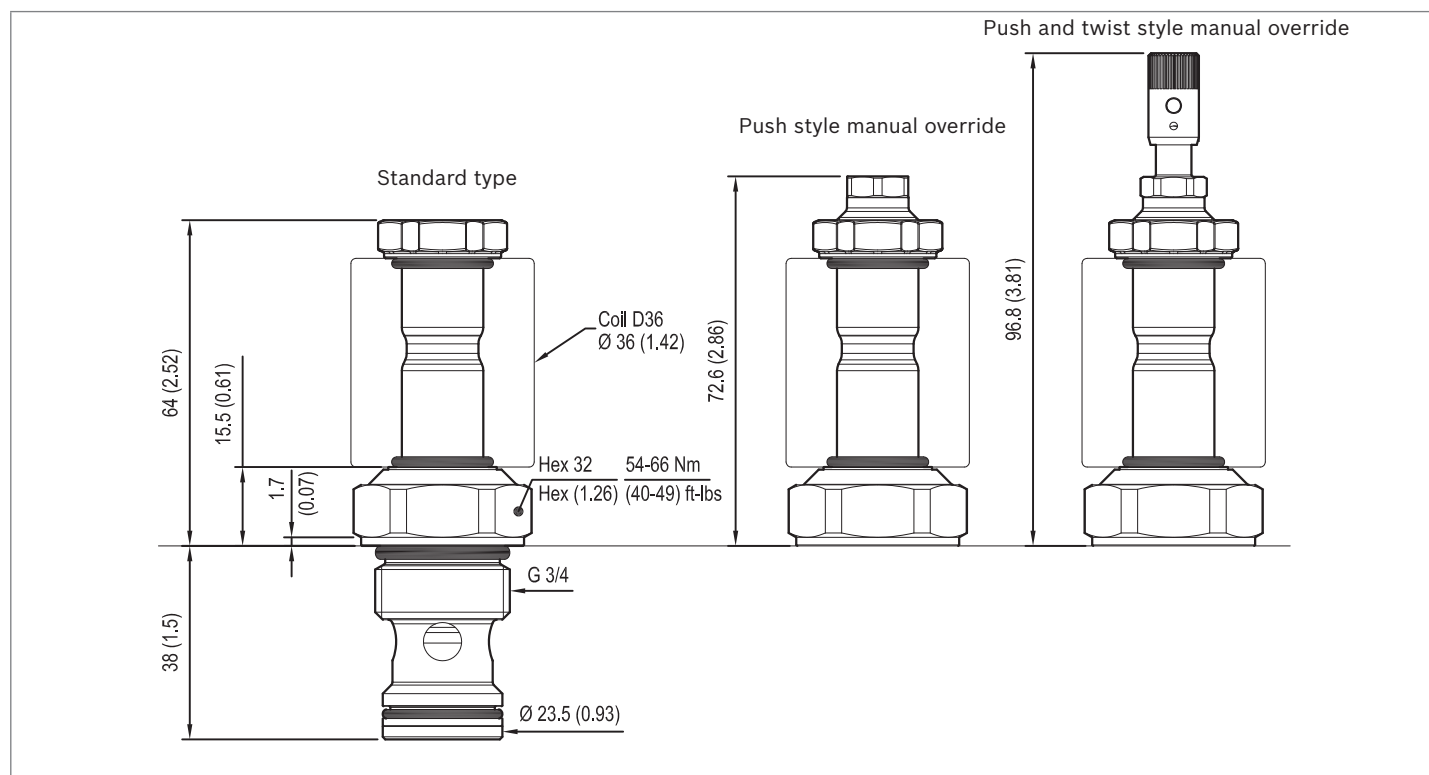
Version 32

Version 04



## Dimensions

### Solenoid operated valves, poppet 2-way normally open



# Solenoid operated valves pilot operated poppet type

## 2-way normally closed

### Common cavity, Size 10

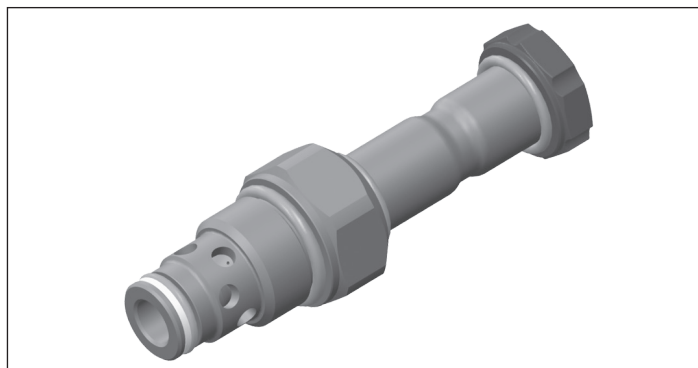
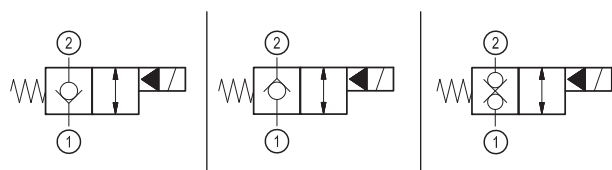
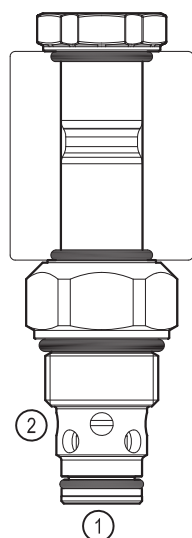
VEI-16-10A-NC

OD.15 - X - 36 - Y - Z

**RE 18323-32**

Edition: 11.2017

Replaces: 10.2017

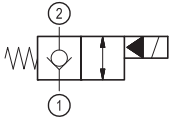
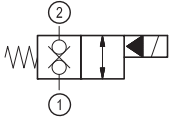
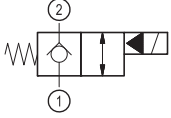
**PATENT PENDING****Technical data**

New VEI-16 family incorporates a new solenoid concept providing excellent performance and enables cartridges to work in severe environment. Cartridges also incorporate advanced design of hydraulic parts providing excellent hydraulic performance.

**Technical data**

General		
Weight		0.25 kg (0.55 lbs)
Installation orientation		Unrestricted
Ambient temperature range		-30 to 90 °C (-22 to 194 °F)
Hydraulic		
Max. operating pressure		350 bar (5000 psi)
Flow range		2 - 70 l/min (0.53 - 18 gpm)
Fatigue cycle life		2 million cycles at 350 bar
Max. internal leakage:		20 drops/min.
Switching time		Opening ≤ 50 ms
		Closing ≤ 100 ms
Fluid temperature range		-20 to 80 °C (-4 to 176 °F)
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 20 to 380 mm <sup>2</sup> /s (cSt)		
Installation torque		44 - 56 Nm (33 - 41 ft-lbs)
Recommended degree of fluid contamination		Nominal value max. 10 µm (NAS 8) ISO 4406 19/17/14
MTTFd		150 years see RE 18350-51
Cavity		CA-10A-2N see 18325-70
Seal kit for X=05	code	RG10A2010520100
	material no.	R901111363
Seal kit for X=03, 31	code	RG10A2010530100
	material no.	R901111366
Seal kit coil and standard cap	code	RG02Z0010000100
	material no.	R930067869
Seal kit coil and protective cap only for Y=D	code	RG03Z0010000100
	material no.	R930067870
Other technical data		See data sheet 18350-50
Electrical		
Type of voltage		DC voltage
Coil type		D36
Supply voltage		See data sheet 18325-90
Voltage tolerance against ambient temperature		See characteristic curve
Power consumption		20 W
Type of protection		See data sheet 18325-90
Note: Coils must be ordered separately		

Ordering code

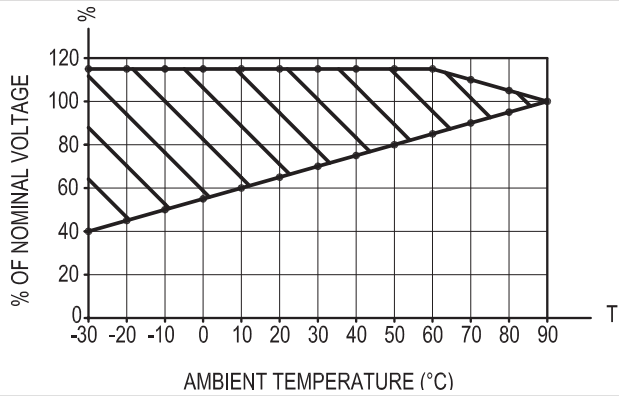
OD.15	X	36	Y	Z	0000	*
Solenoid operated valves pilot operated poppet type 2-way normally closed						Series 0/A to L unchanged performances and dimensions
bidirectional type 	05					0 = With buna seal 8 = With buna seal and extra spring V = With Viton seal P = With buna seal and protective cap for override version <b>D</b> T = With Viton seal and protective cap for override version <b>D</b>
bidirectional type 	31					A = Standard D = Knob style manual override E = Pull style manual override F = Hand operated pull style manual override
bidirectional type 	03					
Common cavity: CA-10A-2N						

Preferred types

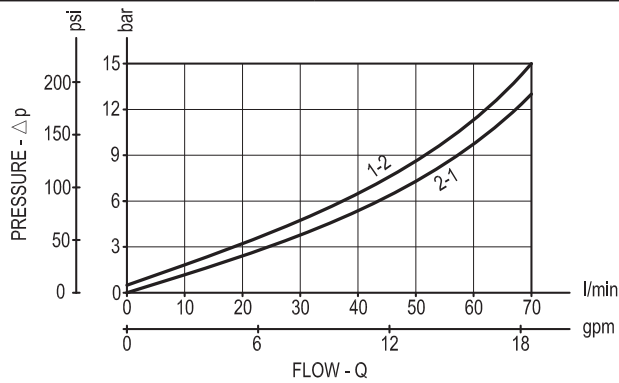
Type	Material number	Type	Material number
OD150536A000000	R930063002		
OD150536D000000	R930062969		
OD150536E000000	R930062947		
OD150536F000000	R930062967		
OD150536DP00000	R930062946		
OD153136A000000	R930065511		
OD153136D000000	R930066658		
OD150336A000000	R930065691		

Characteristic curves

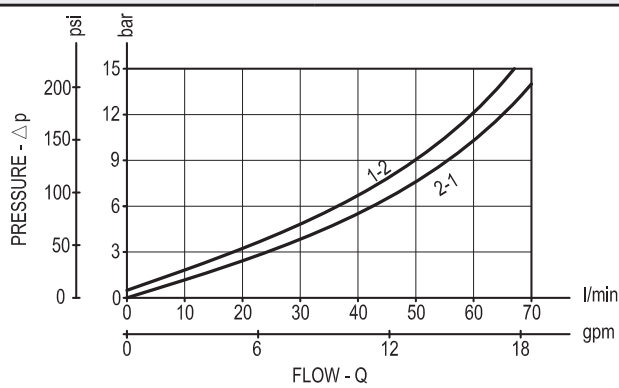
All Versions - Admissible supply voltage Vs. Ambient temperature at 100% duty cycle



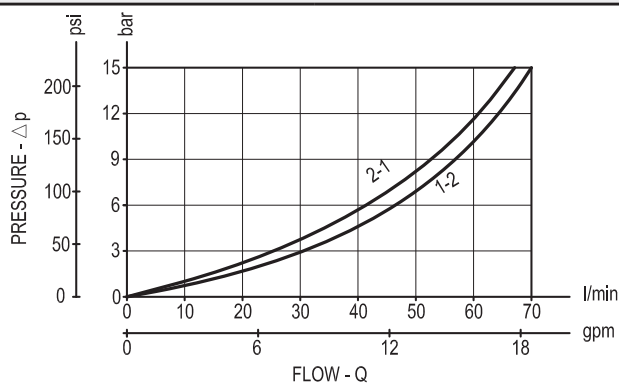
Version 05



Version 31

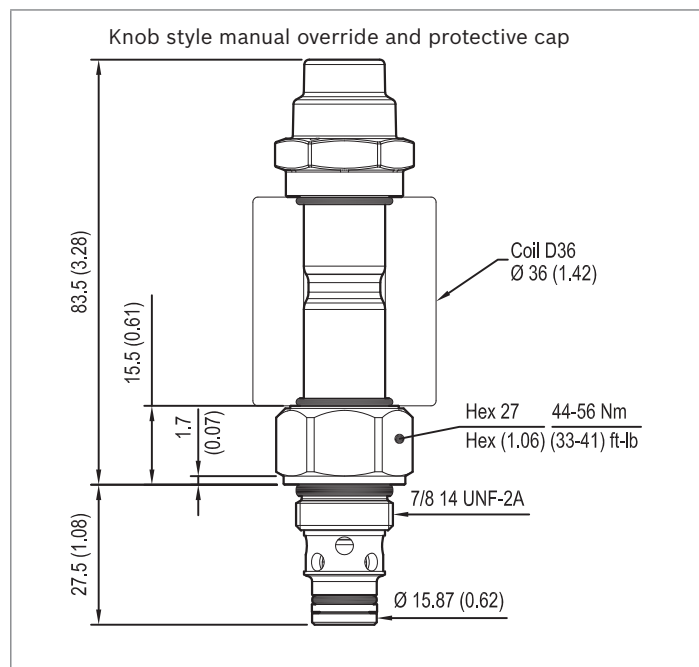
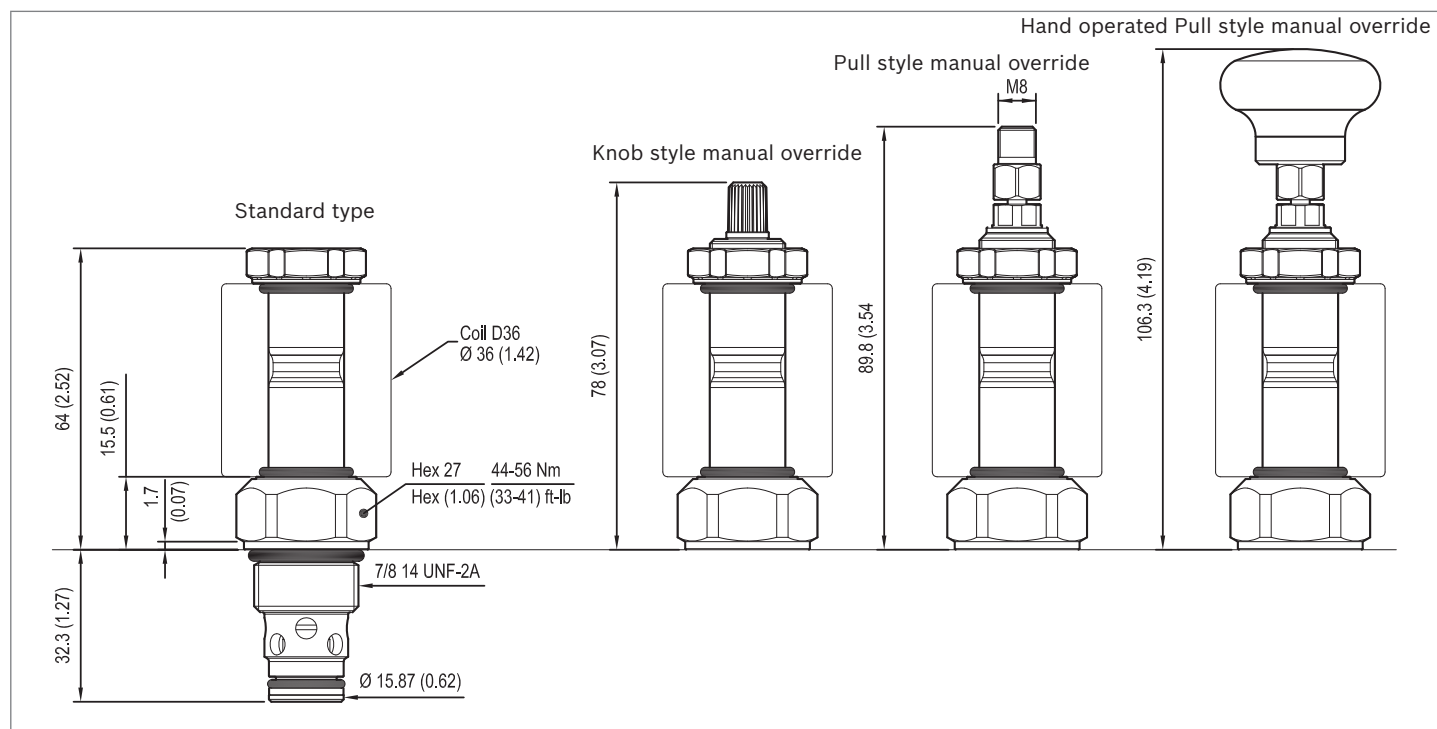


Version 03



## Dimensions

### Solenoid operated valves, poppet 2-way normally closed





# Solenoid operated valves pilot operated poppet type

## 2-way normally open

### Common cavity, Size 10

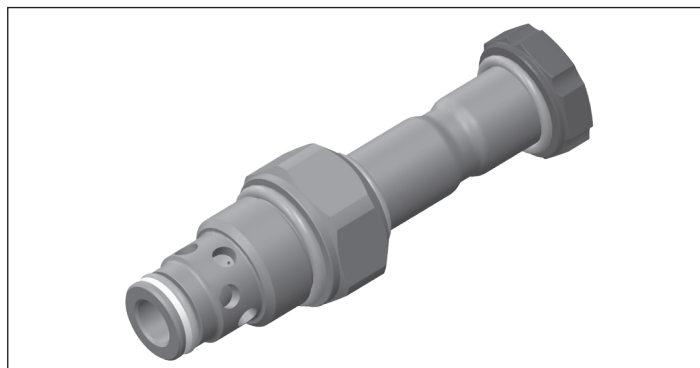
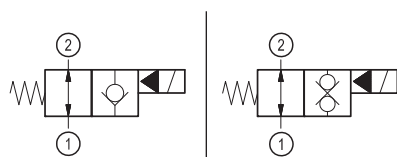
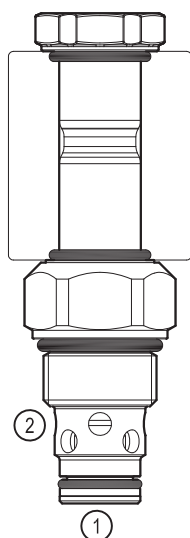
VEI-16-10A-NA

OD.15 - X - 36 - Y - Z - 00

**RE 18323-33**

Edition: 09.2017

Replaces: 04.2017

**PATENT PENDING****Technical data**

New VEI-16 family incorporates a new solenoid concept providing excellent performance and enables cartridges to work in severe environment. Cartridges also incorporate advanced design of hydraulic parts providing excellent hydraulic performance.

**Technical data**

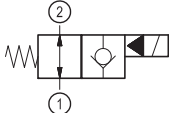
General		
Weight		0.16 kg (0.35 lbs)
Installation orientation		Unrestricted
Ambient temperature range		-30 to 90 °C (-22 to 194 °F)
Hydraulic		
Max. operating pressure		350 bar (5000 psi)
Flow range		2 - 70 l/min (0.53 - 18 gpm)
Fatigue cycle life		2 million cycles at 350 bar
Max. internal leakage:		20 drops/min.
Switching time		Opening ≤ 50 ms
		Closing ≤ 100 ms
Fluid temperature range		-20 to 80 °C (-4 to 176 °F)
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 20 to 380 mm <sup>2</sup> /s (cSt)		
Installation torque		44 - 56 Nm (33 - 41 ft-lbs)
Recommended degree of fluid contamination		Nominal value max. 10 µm (NAS 8) ISO 4406 19/17/14
MTTFd		150 years see RE 18350-51
Cavity		CA-10A-2N see 18325-70
Seal kit for X=06	code material no.	RG10A2010520100 R901111363
Seal kit for X=32	code material no.	RG10A2010530100 R901111366
Seal kit coil	code material no.	RG01Z0010000100 R930058940
Other technical data		See data sheet 18350-50
Electrical		
Type of voltage		DC voltage
Coil type		D36
Supply voltage		See data sheet 18325-90
Voltage tolerance against ambient temperature		See characteristic curve
Power consumption		20 W
Type of protection		See data sheet 18325-90
Note: Coils must be ordered separately		

Ordering code

OD.15	X	36	Y	Z	0000	*
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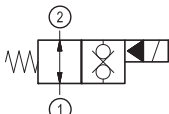
Solenoid operated valves  
pilot operated poppet type  
2-way normally open

bidirectional type



06

bidirectional type



32

Series 0/A to L  
unchanged performances and dimensions

0 = With buna seal  
V = With Viton seal  
P = With buna seal and protective cap for override version **B** and **C**  
T = With Viton seal and protective cap for override version **B** and **C**

A = Standard  
B = Push style manual override  
C = Push and twist style manual override

Common cavity: CA-10A-2N

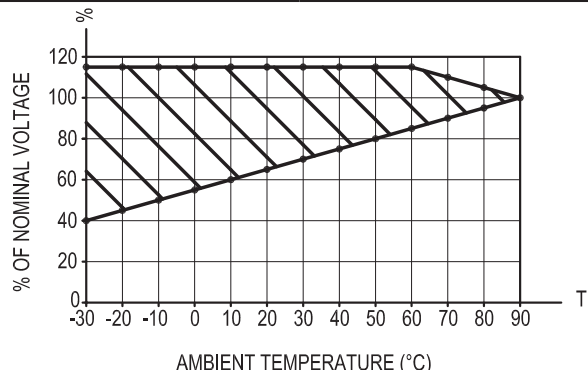
Preferred types

Type	Material number
OD150636A000000	R930061730
OD150636B000000	R930062932
OD150636C000000	R930062933
OD150636BP00000	R930062936
OD150636CP00000	R930062937

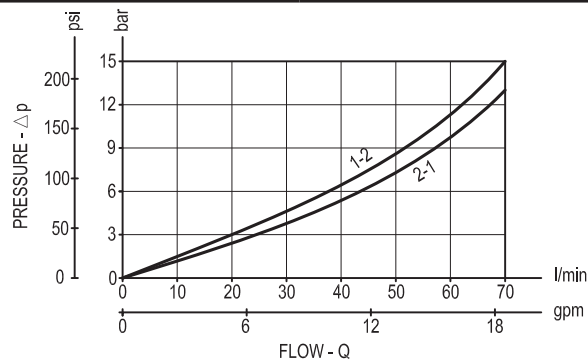
Type	Material number

Characteristic curves

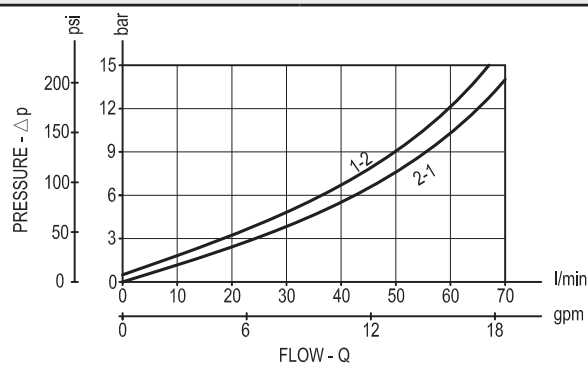
All Versions - Admissible supply voltage Vs. Ambient temperature at 100% duty cycle



Version 06

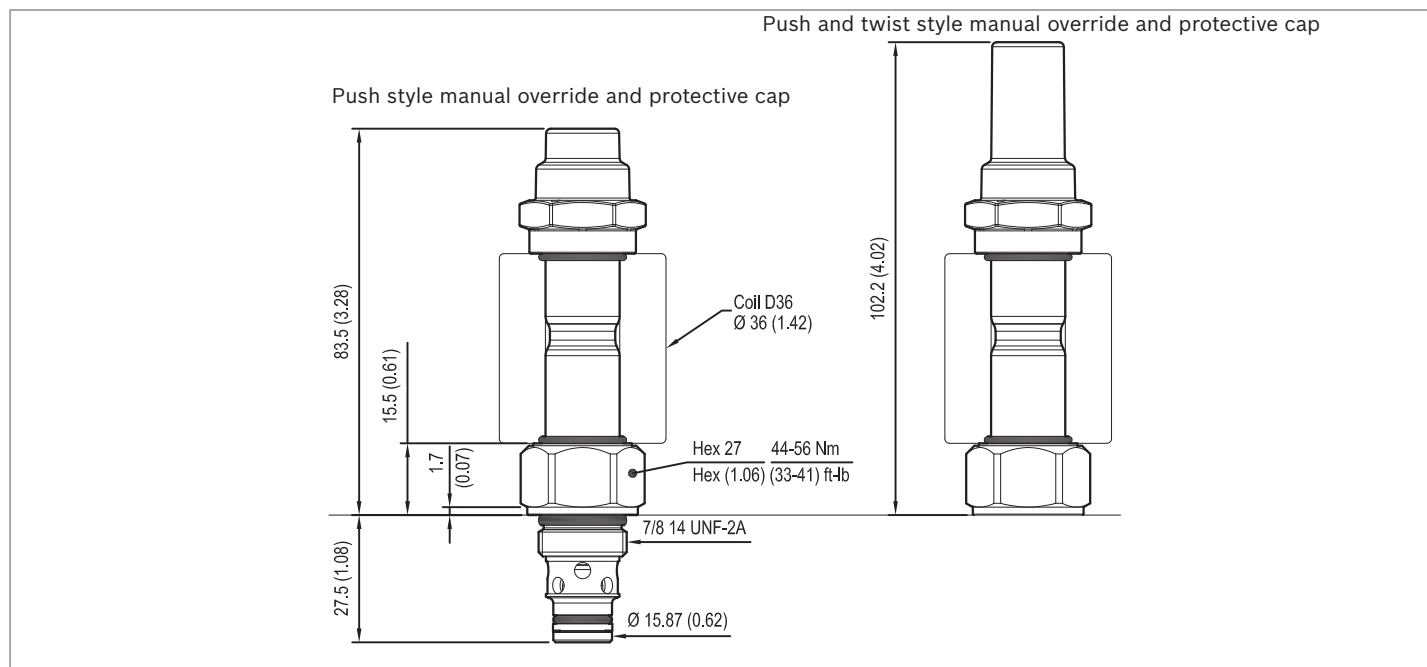
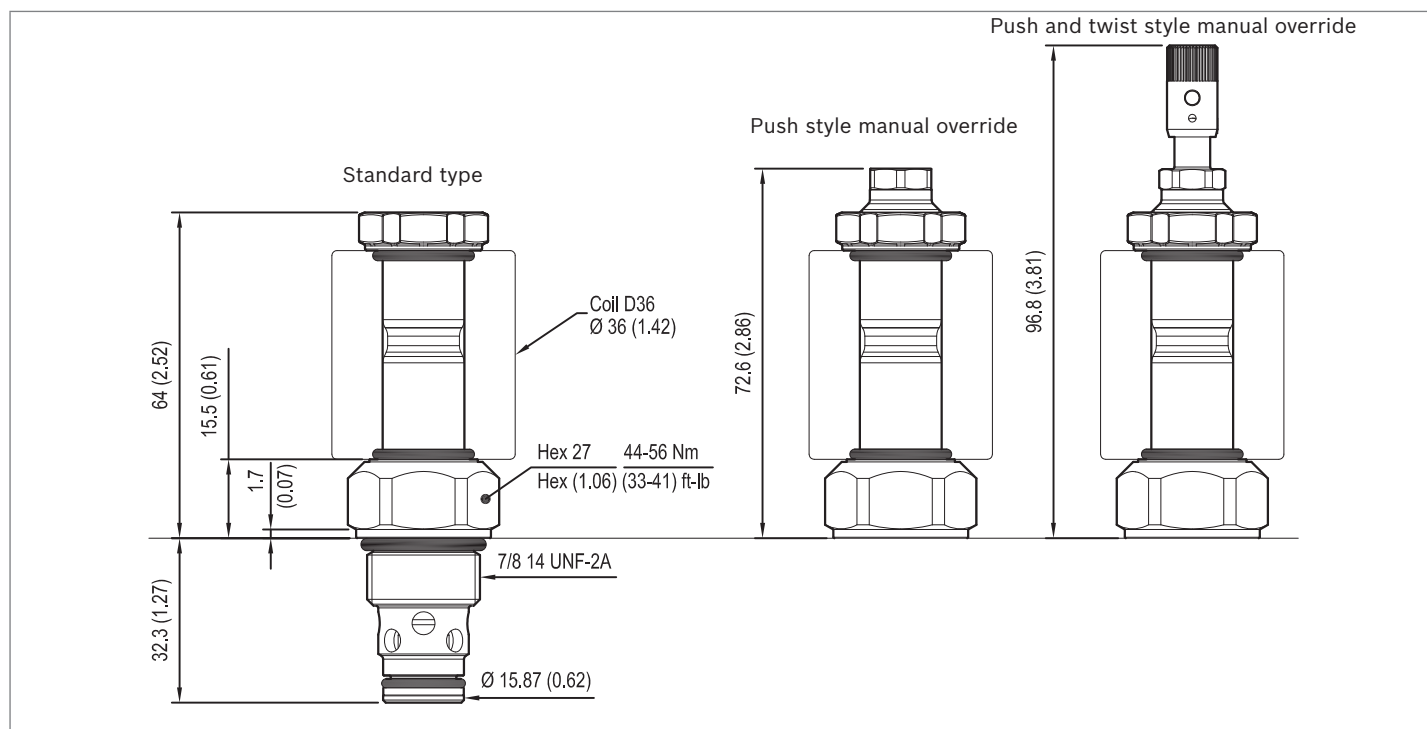


Version 32



## Dimensions

### Solenoid operated valves, poppet 2-way normally open



# Solenoid operated valves pilot operated poppet type

## 2-way normally closed

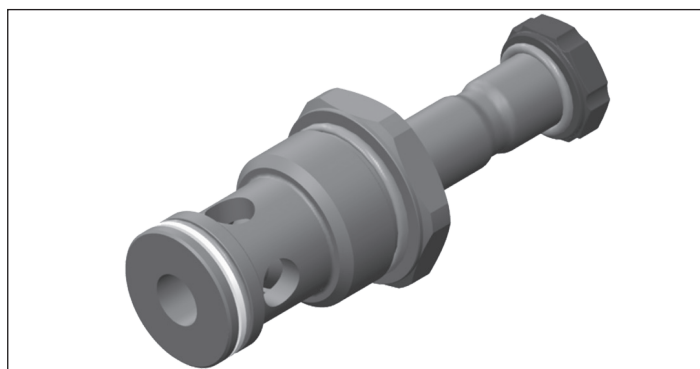
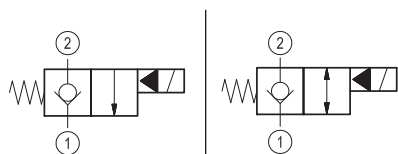
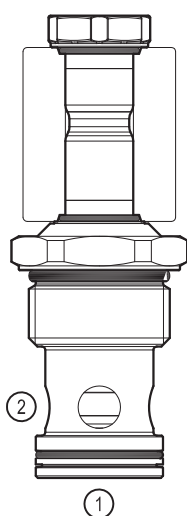
### Special cavity, 021-E

VEI-16-021-NC

OD.15 - X - 21 - Y - Z

**RE 18323-37**

Edition: 12.2017

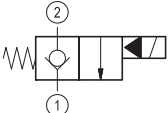
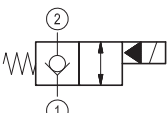
**PATENT PENDING****Technical data**

New VEI-16 family incorporates a new solenoid concept providing excellent performance and enables cartridges to work in severe environment. Cartridges also incorporate advanced design of hydraulic parts providing excellent hydraulic performance.

**Technical data**

General		
Weight		0.35 kg (0.77 lbs)
Installation orientation		Unrestricted
Ambient temperature range		-30 to 90 °C (-22 to 194 °F)
Hydraulic		
Max. operating pressure		350 bar (5000 psi)
Flow range		5 - 150 l/min (1 - 40 gpm)
Fatigue cycle life		1 million cycles at 350 bar
Max. internal leakage:		20 drops/min. for X= 01,05
Switching time		Closing ≤ 100 ms
		Opening ≤ 50 ms
Fluid temperature range		-20 to 80 °C (-4 to 176 °F)
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 20 to 380 mm <sup>2</sup> /s (cSt)		
Installation torque		130 - 150 Nm (96 - 111 ft-lbs)
Recommended degree of fluid contamination		Nominal value max. 10 µm (NAS 8) ISO 4406 19/17/14
MTTFd		150 years see RE 18350-51
Special cavity		021-E see 18325-75
Seal kit for X=01,05	code	RG21E201052010
	material no.	R934003566
Seal kit coil and standard cap	code	RG02Z0010000100
	material no.	R930067869
Seal kit coil and protective cap only for Y=D	code	RG03Z0010000100
	material no.	R930067870
Other technical data		See data sheet 18350-50
Electrical		
Type of voltage		DC voltage
Coil type		D36
Supply voltage		See data sheet 18325-90
Voltage tolerance against ambient temperature		See characteristic curve
Power consumption		20 W
Type of protection		See data sheet 18325-90
Note: Coils must be ordered separately		

Ordering code

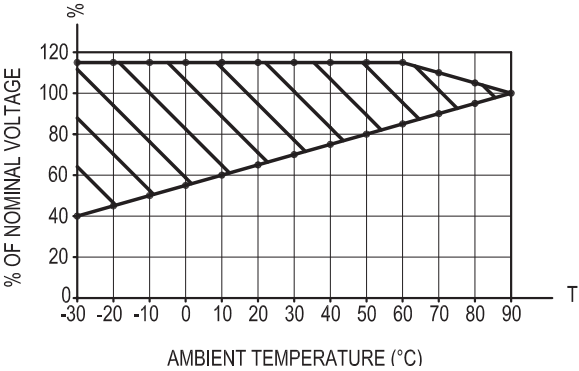
<b>OD.15</b>	<b>X</b>	<b>21</b>	<b>Y</b>	<b>Z</b>	<b>0000</b>	<b>*</b>
Solenoid operated valves pilot operated poppet type 2-way normally closed						Series 0/A to L unchanged performances and dimensions
monodirectional type						0 = With buna seal 8 = With buna seal and extra spring only for <b>05</b> V = With Viton seal P = With buna seal and protective cap for override version <b>D</b> T = With Viton seal and protective cap for override version <b>D</b>
		<b>01</b>				
bidirectional type						A = Standard D = Knob style manual override E = Pull style manual override F = Hand operated pull style manual override
		<b>05</b>				
						Special cavity: 021-E

Preferred types

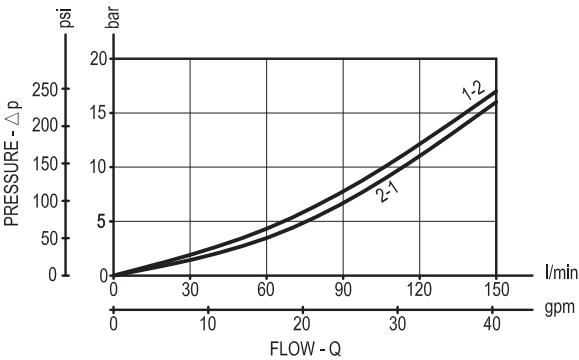
Type	Material number	Type	Material number
OD150121A000000	R930064100		
OD150521A000000	R930064472		
OD150521A800000	R930065846		
OD150521D000000	R930066968		

Characteristic curves

All Versions - Admissible supply voltage Vs. Ambient temperature at 100% duty cycle

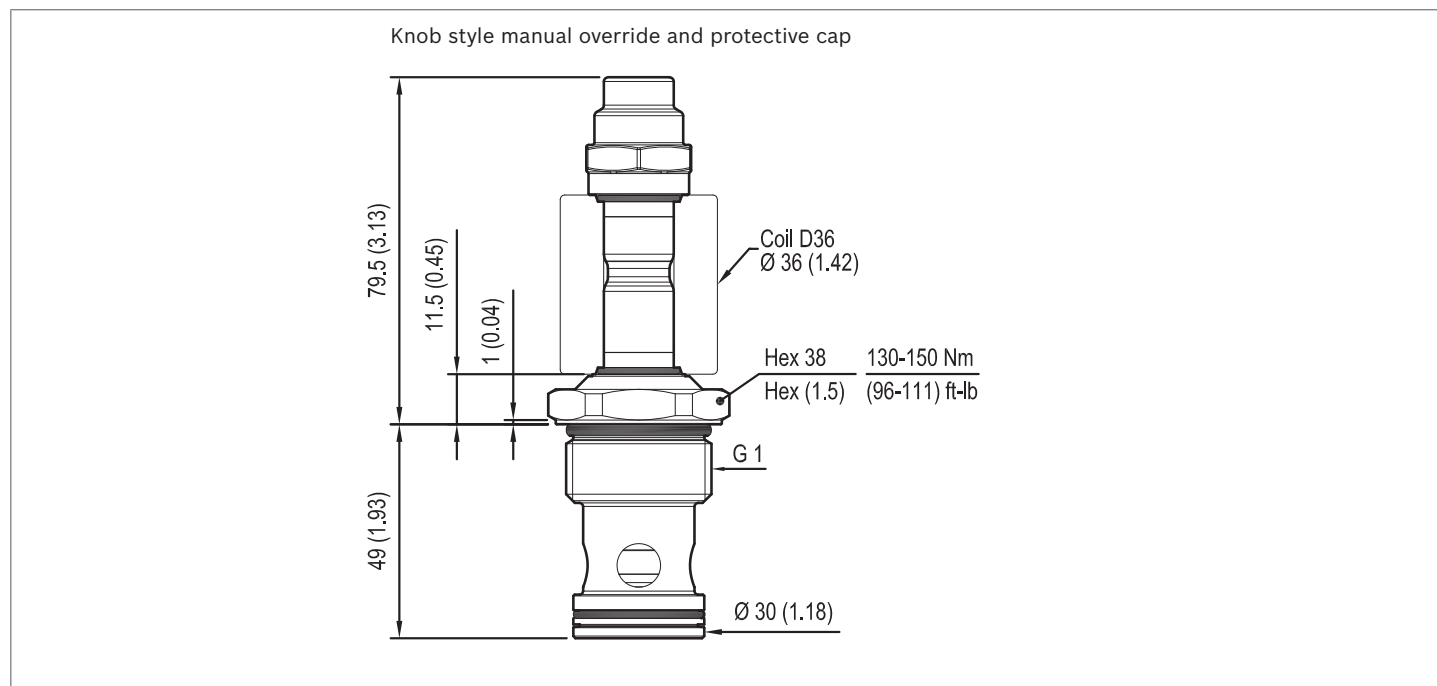
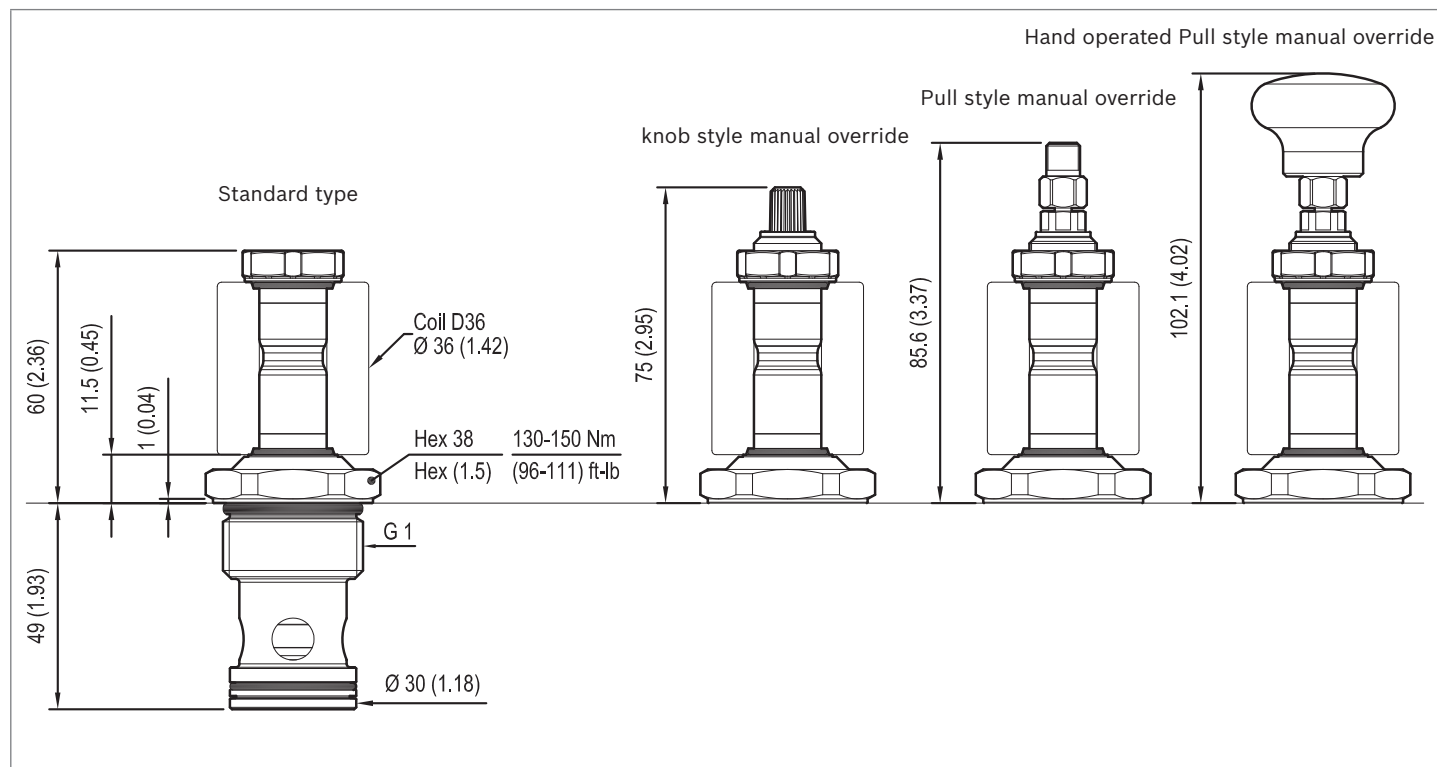


Versions 01, 05



## Dimensions

Solenoid operated valves, poppet 2-way  
normally closed





# Solenoid operated valves pilot operated poppet type

## 2-way normally open

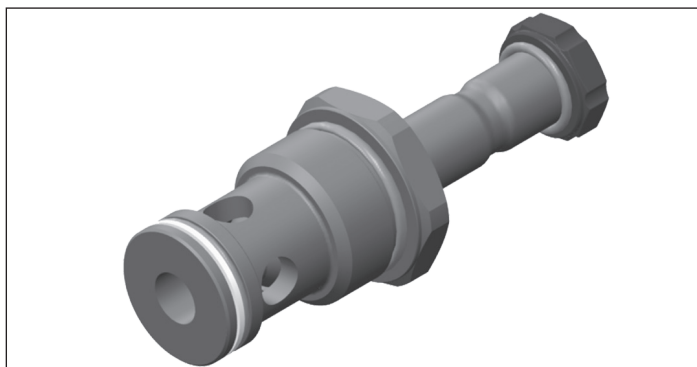
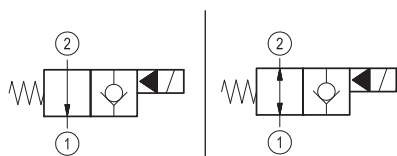
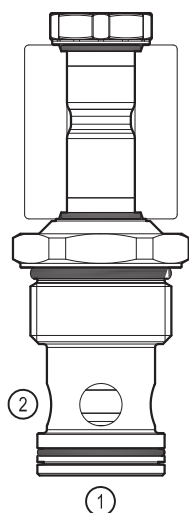
### Special cavity, 021-E

VEI-16-021-NA

OD.15 - X - 21 - Y - Z - 00

**RE 18323-38**

Edition: 12.2017

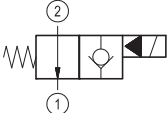
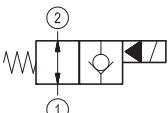
**PATENT PENDING****Technical data**

New VEI-16 family incorporates a new solenoid concept providing excellent performance and enables cartridges to work in severe environment. Cartridges also incorporate advanced design of hydraulic parts providing excellent hydraulic performance.

**Technical data**

General	
Weight	0.35 kg (0.77 lbs)
Installation orientation	Unrestricted
Ambient temperature range	-30 to 90 °C (-22 to 194 °F)
Hydraulic	
Max. operating pressure	350 bar (5000 psi)
Flow range	5 - 150 l/min (1 - 40 gpm)
Fatigue cycle life	1 million cycles at 350 bar
Max. internal leakage:	20 drops/min. for X= 02,06
Switching time	Closing ≤ 100 ms
	Opening ≤ 50 ms
Fluid temperature range	-20 to 80 °C (-4 to 176 °F)
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 20 to 380 mm <sup>2</sup> /s (cSt)	
Installation torque	130 - 150 Nm (96 - 111 ft-lbs)
Recommended degree of fluid contamination	Nominal value max. 10 µm (NAS 8) ISO 4406 19/17/14
MTTFd	150 years see RE 18350-51
Special cavity	021-E see 18325-75
Seal kit for X=02,06	code RG21E201052010
	material no. R934003566
Seal kit coil and standard cap	code RG02Z0010000100
	material no. R930067869
Seal kit coil and protective cap only for Y=B,C	code RG03Z0010000100
	material no. R930067870
Other technical data	See data sheet 18350-50
Electrical	
Type of voltage	DC voltage
Coil type	D36
Supply voltage	See data sheet 18325-90
Voltage tolerance against ambient temperature	See characteristic curve
Power consumption	20 W
Type of protection	See data sheet 18325-90
Note: Coils must be ordered separately	

Ordering code

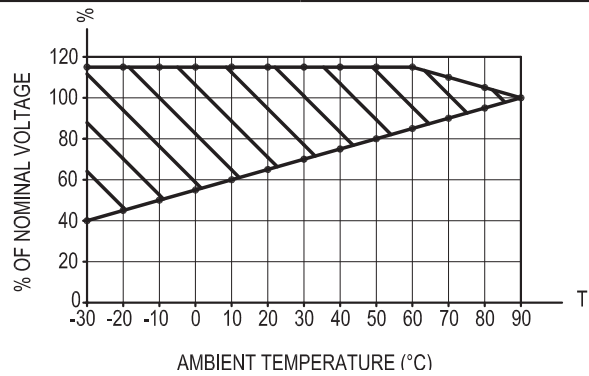
<b>OD.15</b>	<b>X</b>	<b>21</b>	<b>Y</b>	<b>Z</b>	<b>0000</b>	<b>*</b>
Solenoid operated valves pilot operated poppet type 2-way normally open						Series 0/A to L unchanged performances and dimensions
monodirectional type						0 = With buna seal V = With Viton seal P = With buna seal and protective cap for override version <b>B</b> and <b>C</b> T = With Viton seal and protective cap for override version <b>B</b> and <b>C</b>
		02				
bidirectional type						A = Standard B = Push style manual override C = Push and twist style manual override
		06				
						Special cavity: 021-E

Preferred types

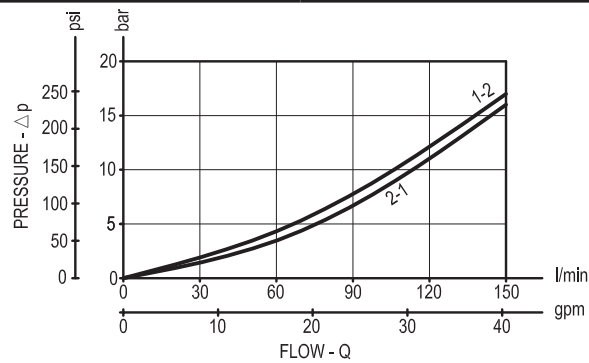
Type	Material number	Type	Material number
OD150221A000000	R930063874		
OD150621A000000	R930066964		
OD150621C000000	R930066969		

Characteristic curves

All Versions - Admissible supply voltage Vs. Ambient temperature at 100% duty cycle

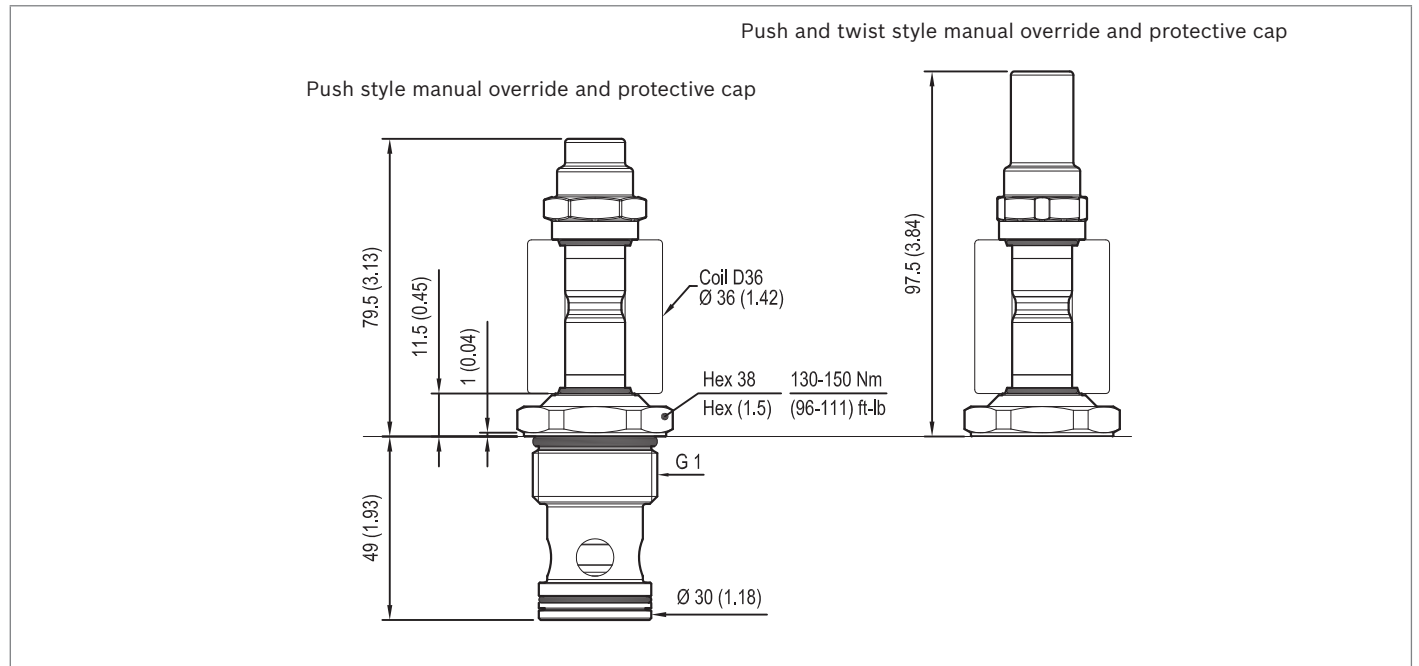
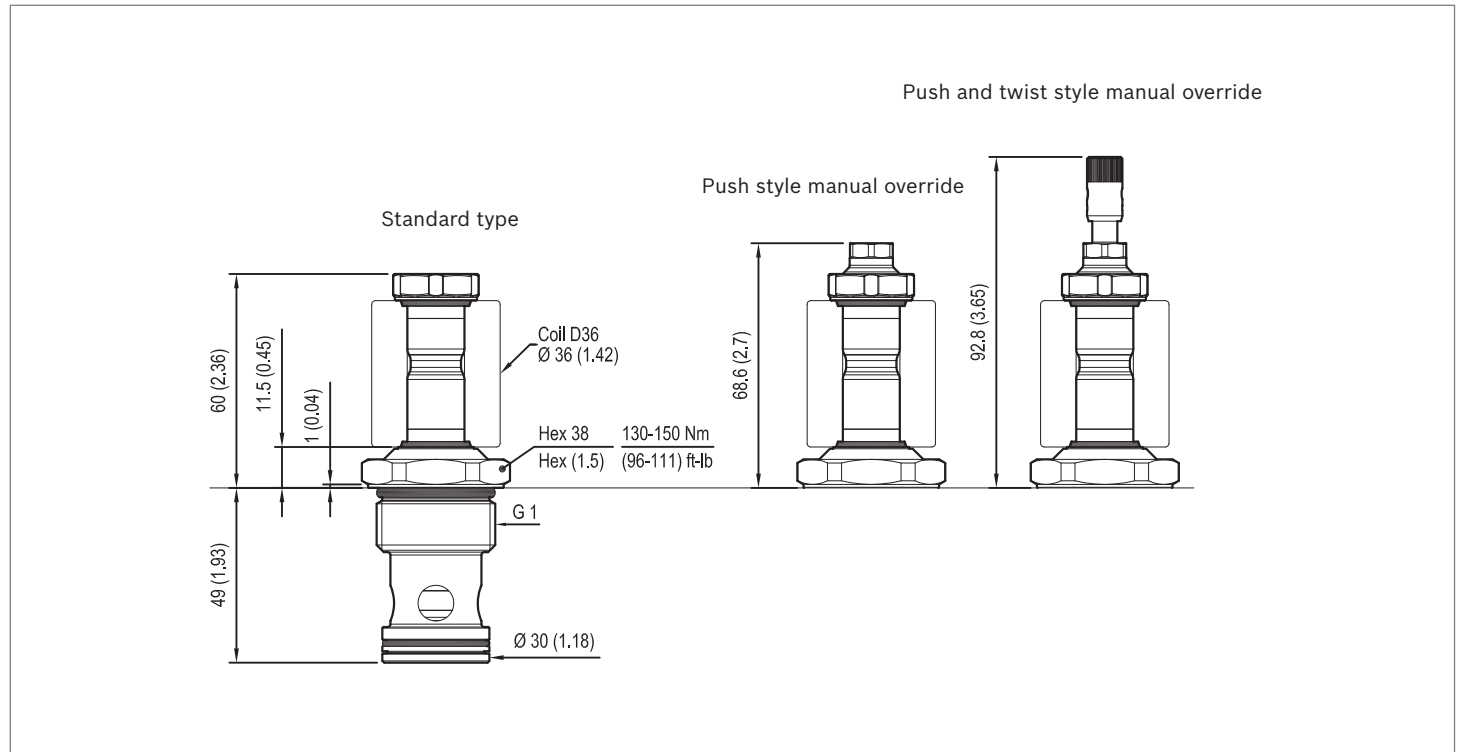


Versions 02, 06



## Dimensions

Solenoid operated valves, poppet 2-way  
normally open



# Solenoid operated valves pilot operated poppet type

## 2-way normally open

## Common cavity, Size 12

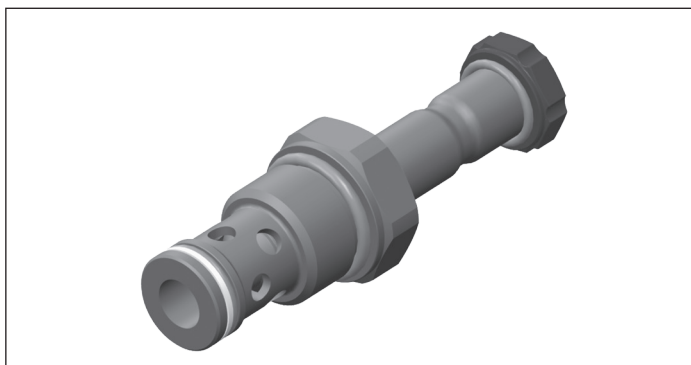
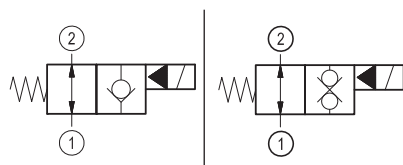
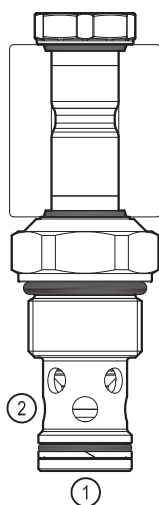
VEI-16-NA

OD.15 - X - 89 - Y - Z - 00

**RE 18323-40**

Edition: 06.2018

Replaces: 05.2018

**PATENT PENDING****Technical data**

New VEI-16 family incorporates a new solenoid concept providing excellent performance and enables cartridges to work in severe environment. Cartridges also incorporate advanced design of hydraulic parts providing excellent hydraulic performance.

**Technical data**

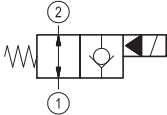
General	
Weight	0.25 kg (0.55 lbs)
Installation orientation	Unrestricted
Ambient temperature range	-30 to 90 °C (-22 to 194 °F)
Hydraulic	
Max. operating pressure	350 bar (5000 psi)
Flow range	5 - 150 l/min (1 - 40 gpm)
Max. internal leakage:	20 drops/min. for X= 02,06
Switching time	Closing ≤ 100 ms
	Opening ≤ 50 ms
Fluid temperature range	-20 to 80 °C (-4 to 176 °F)
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 20 to 380 mm <sup>2</sup> /s (cSt)	
Installation torque	54 - 66 Nm (40 - 49 ft-lbs)
Recommended degree of fluid contamination	Nominal value max. 10 µm (NAS 8) ISO 4406 19/17/14
MTTFd	150 years see RE 18350-51
Common cavity	CA-12A-2N see 18325-70
Seal kit for X=06	code RG12A2010520100 material no. R901111377
Seal kit for X=32	code RG12A2010530100 material no. R930003374
Seal kit coil and standard cap	code RG02Z0010000100 material no. R930067869
Seal kit coil and protective cap only for Y=B	code RG03Z0010000100 material no. R930067870
Seal kit coil and protective cap only for Y=C	code RG04Z0010000100 material no. R930069171
Other technical data	See data sheet 18350-50
Electrical	
Type of voltage	DC voltage
Coil type	D36
Supply voltage	See data sheet 18325-90
Voltage tolerance against ambient temperature	See characteristic curve
Power consumption	20 W
Type of protection	See data sheet 18325-90
Note: Coils must be ordered separately	

Ordering code

<b>OD.15</b>	<b>X</b>	<b>89</b>	<b>Y</b>	<b>Z</b>	<b>0000</b>	<b>*</b>
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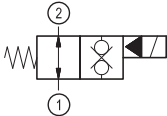
Solenoid operated valves  
pilot operated poppet type  
2-way normally open

bidirectional type



**06**

bidirectional type



**32**

Series 0/A to L  
unchanged performances and dimensions

0 = With buna seal  
V = With Viton seal  
P = With buna seal and protective cap for override version **B** and **C**  
T = With Viton seal and protective cap for override version **B** and **C**

A = Standard  
B = Push style manual override  
C = Push and twist style manual override

Common cavity: CA-12A-2N

Preferred types

Type	Material number	Type	Material number
OD150689A000000	R930063151		
OD150689B000000	R930068531		
OD150689C000000	R930069635		
OD153289A000000	R930066971		
OD153289C000000	R930069395		

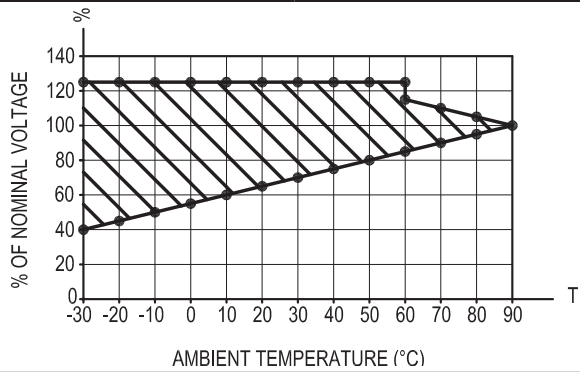
712

General catalogue

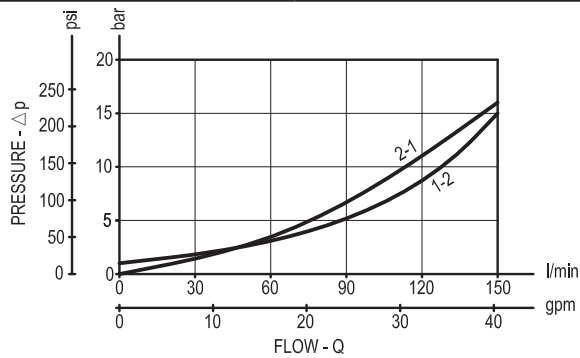
May 2025 edition

Characteristic curves

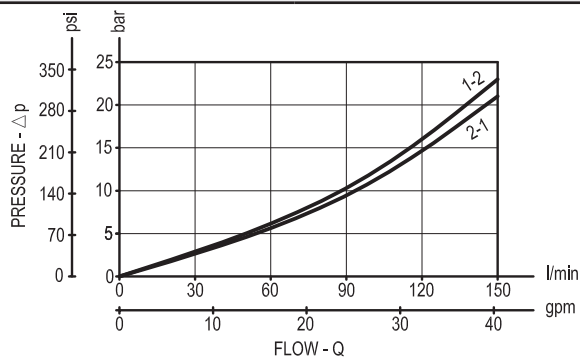
All Versions - Admissible supply voltage Vs. Ambient temperature at 100% duty cycle



Versions 06

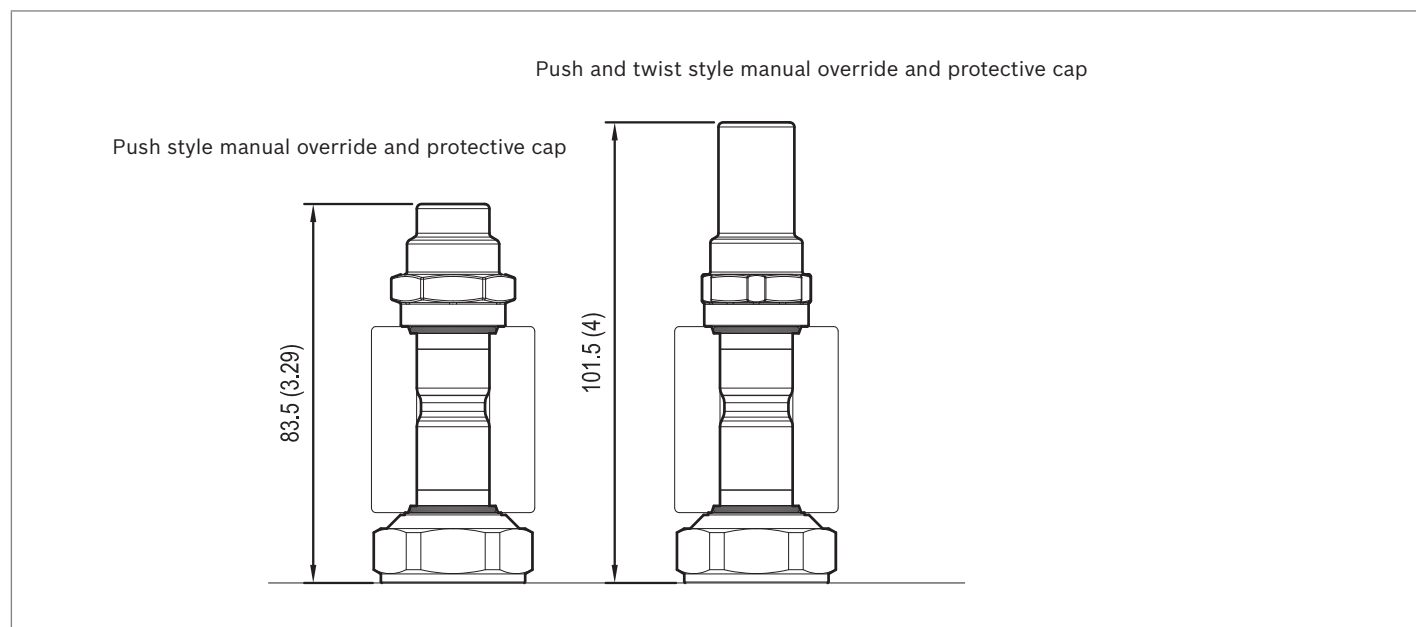
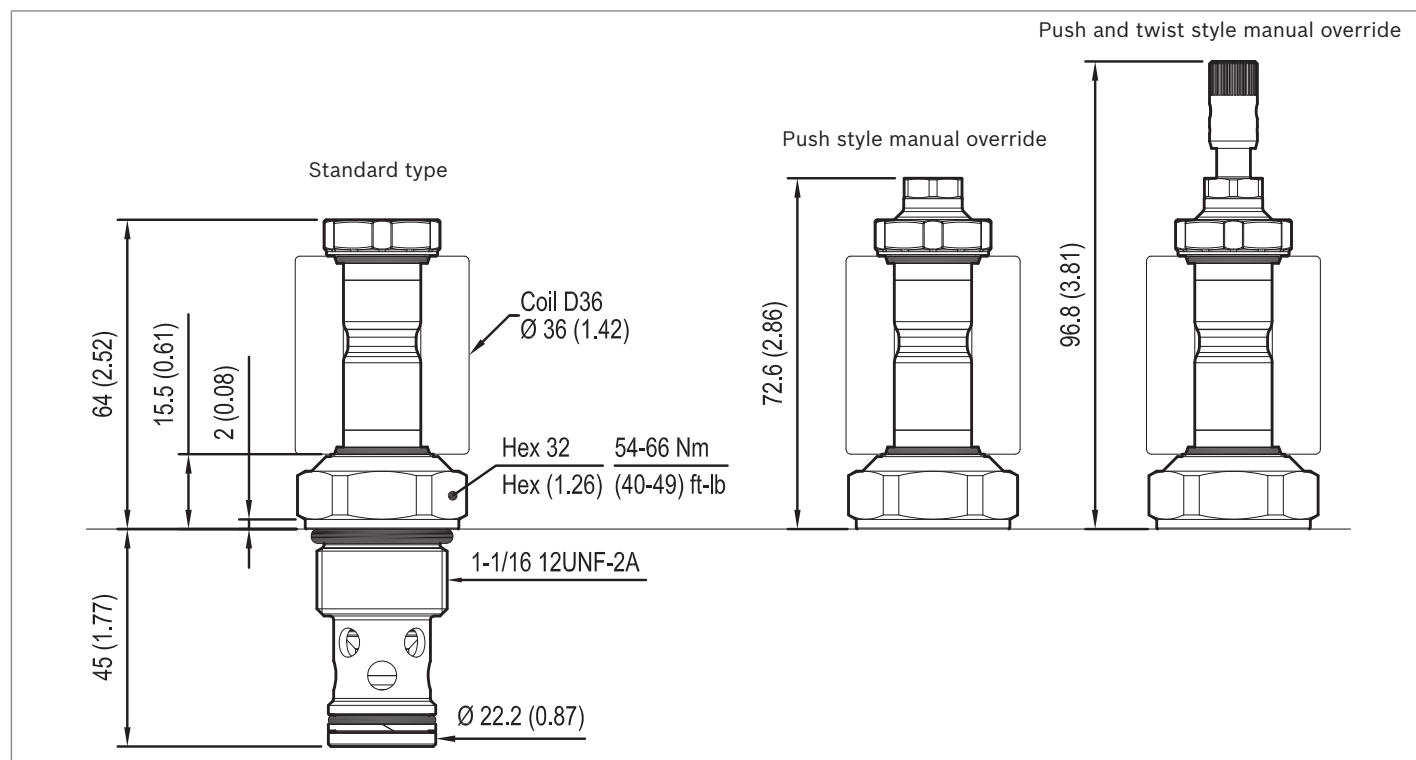


Versions 32



**Dimensions**

**Solenoid operated valves, poppet 2-way  
normally open**



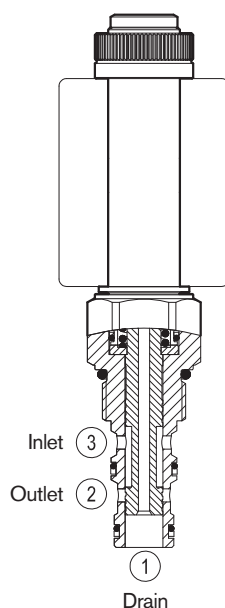


# Proportional valves not compensated flow regulator

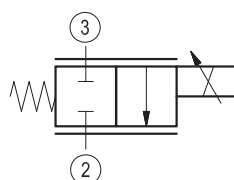
Common cavity, Size 10

VEP-5A-2Q-09

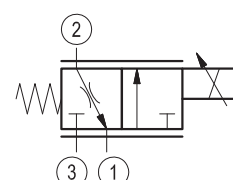
OD.92 - X - 77 - Y - Z



Version 03



Version 05



Version 03: port 1 not used.

## General

Weight	kg (lbs)	0.32 (0.71)
Installation orientation		Optional
Ambient temperature range	°C (°F)	-30 to 60 (-22 to 140)

## Hydraulic

Max. operating pressure	bar (psi)	210 (3000)
Flow range	l/min.(gpm)	see flow diagram
Max. internal leakage (*)	cm <sup>3</sup> /min. (cu.in./min.)	100 (6)
Fluid temperature range	°C (°F)	-20 to 80 (-4 to 176)
Fluids		Mineral-based or synthetics with lubricating properties at viscosities of 15 to 380 mm <sup>2</sup> /s (cSt)
Installation torque	Nm (ft-lbs)	44-56 (33-41)
Filtration		Nominal value max. 10µm (NAS 8) ISO 4406 19/17/14
Cavity		CA-10A-3N see RE 18325-70
Line bodies		See data sheet RE 18325-85
Seal kit	code material no.	RG10A3010520100 R901111369
Seal kit coil	code material no.	RG19A1PNBR7000 R934003569
Other technical data		See data sheet RE 18325-90

(\*) Measure at 210 bar (3000 psi). Oil at 46 cSt.

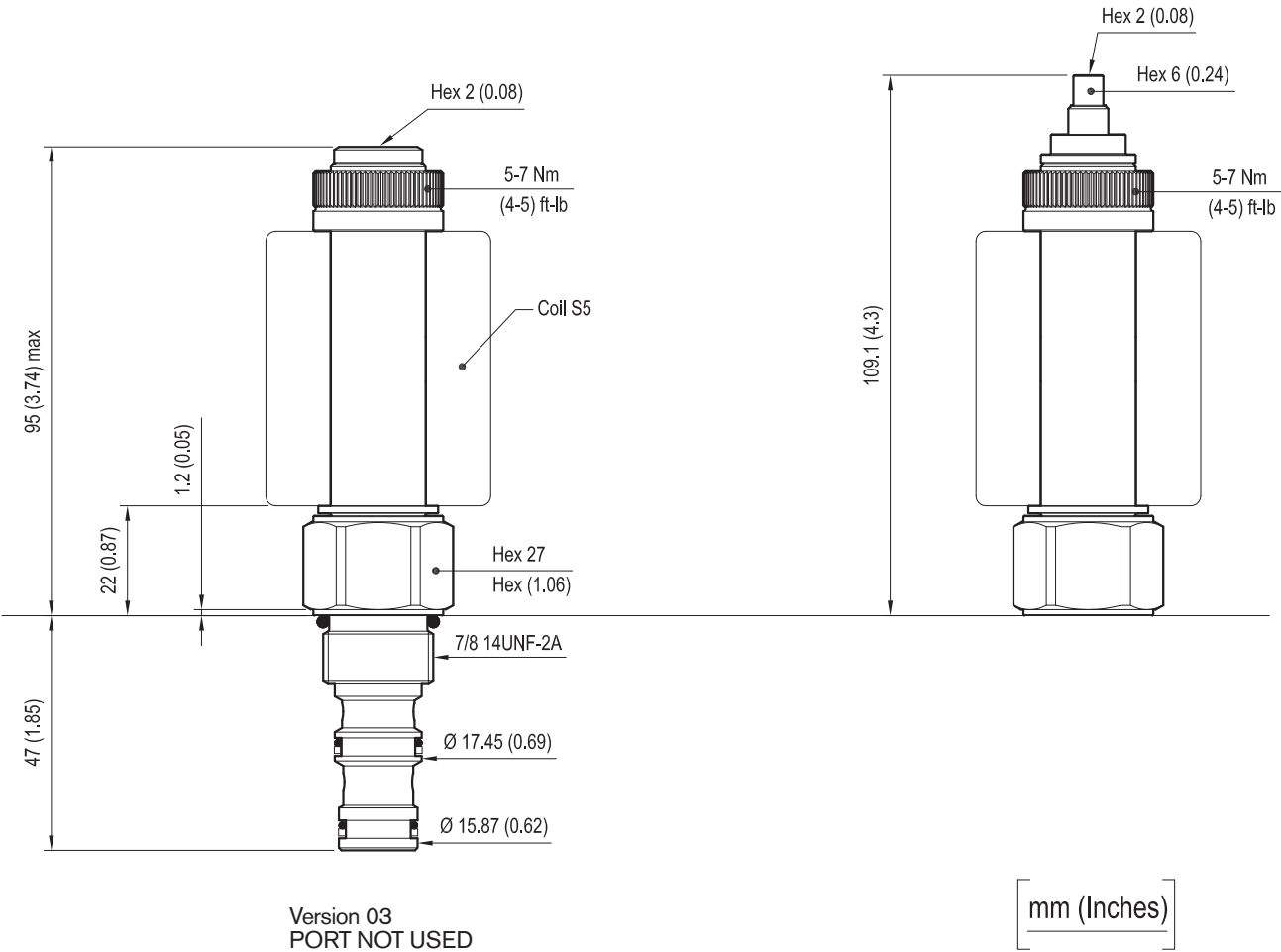
## Electrical

Type of voltage	DC voltage
Coil type	S5
Supply voltage	12 DC
Nominal voltage	± 10%
Power consumption	W 23
Duty cycle	% 100
Type of protection	See data sheet RE 18325-90

**Note: Coils must be ordered separately.**

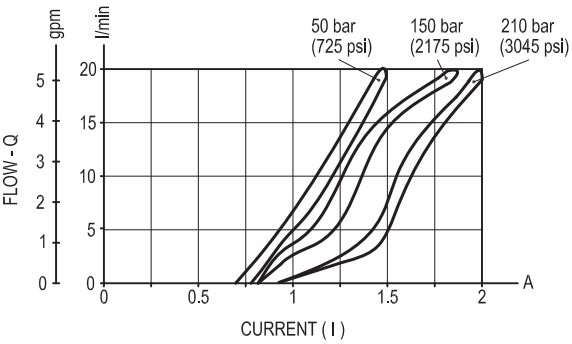
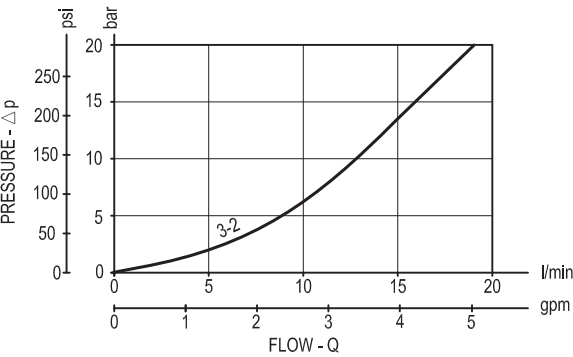
Dimensions

Proportional valves not compensated flow regulator

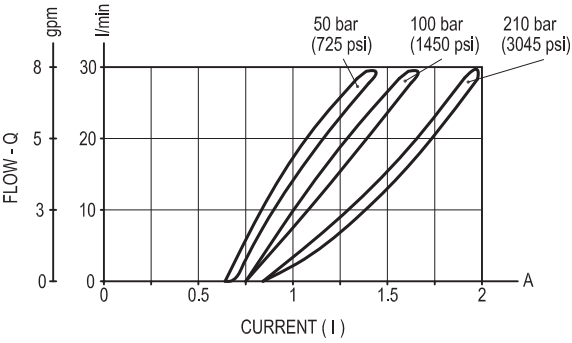
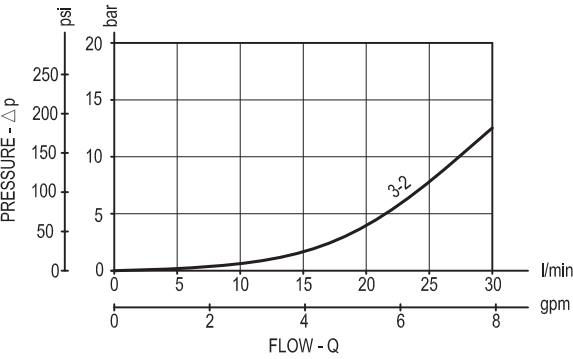


Performance graphs

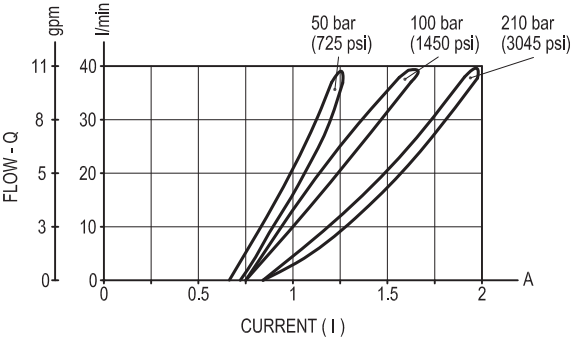
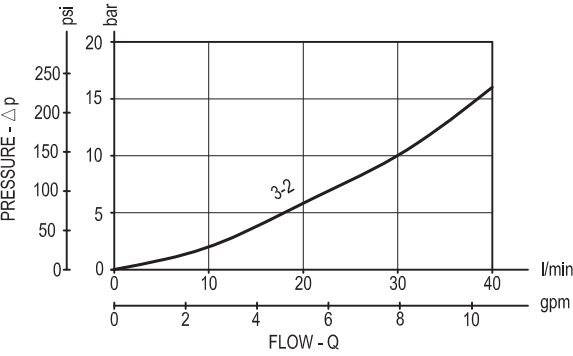
Z= 01



Z= 02



Z= 03



PMW Frequency: 120-150 Hz

Hysteresis: < 5%

Note: It is recommended to use coil 12 DC.

Ordering code

Proportional valves noT compensated flow regulator

= 03

= 05

Common cavity: CA-10A-3N

OD.92	X	77	Y	Z
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Operating range			
	Rated flow max l/min (gpm)	I Min. A (±10%)	I Max. A (±10%)
= 01	20 (6)	0.9	2
= 02	30 (8)	0.8	2
= 03	40 (11)	0.8	2

standard type

03 =

knob style manual override

04 =

718

General catalogue

May 2025 edition

# Proportional valves poppet type not compensated flow regulator Common cavity, Size 12

VEPN-12A

OD.95.06.89.72.00

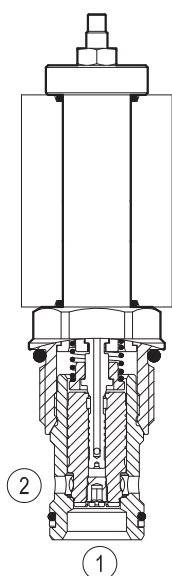
**RE 18323-69**

Edition: 01.2016

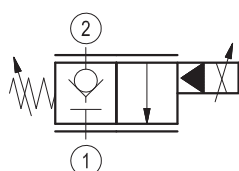
Replaces: 05.2015

**Technical data**

General		
Weight		0.29 kg (0.64 lbs)
Installation orientation		Optional
Ambient temperature range		-30 to 90 °C (-22 to 194 °F)
Hydraulic		
Max. operating pressure		210 bar (3000 psi)
Flow range		5 - 60 l/min. (1 - 16 gpm)
Max. internal leakage		10 cm <sup>3</sup> /min. (0.6 cu.in/min.)
Fluid temperature range		-20 to 80 °C (-4 to 176 °F)
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 15 to 380 mm <sup>2</sup> /s (cSt)		
Installation torque		51 - 55 Nm (38 - 41 ft-lbs)
Recommended degree of fluid contamination		Nominal value max. 10 µm (NAS 8) ISO 4406 19/17/14
Cavity		CA-12A-2N see 18325-70
Lines bodies and standard assemblies		Please refer to section "Hydraulic integrated circuit" or consult factory
Seal kit	code	RG12A2010520100
	material no.	R901111377
Seal kit coil	code	RG16A1PMVQ0010
	material no.	R934003962
Other technical data		See data sheet 18350-50
Electrical		
Type of voltage		12 DC voltage
Coil type		R7
Supply voltage		12 DC
Nominal voltage		± 10%
Power consumption		18 W
Duty cycle coil		100
Type of protection		See data sheet 18325-90
Note: Coils must be ordered separately		



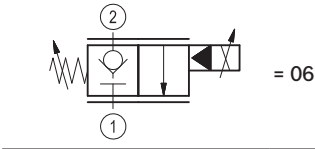
▼ Version 06



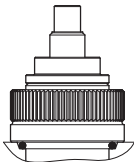
Ordering code

OD.95	06	89	72	00	00
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Proportional valves poppet type  
not compensated flow regulator



72 = Manual setting off set



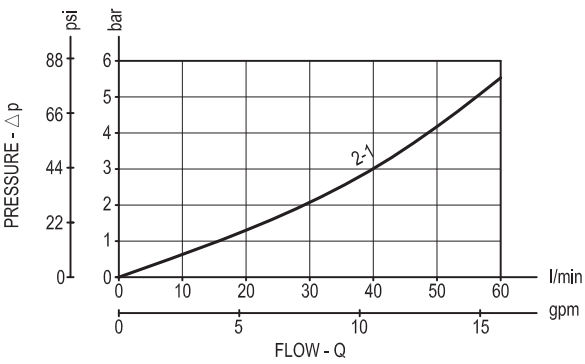
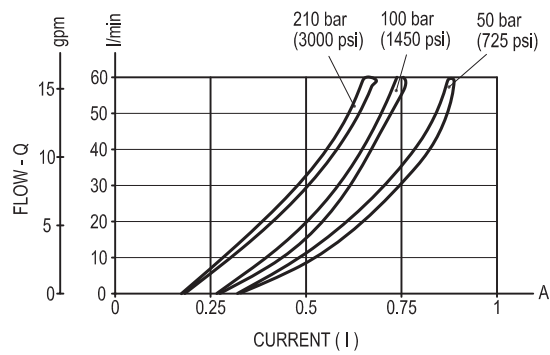
Common cavity: CA-12A-2N

Preferred types

Type	Material number
OD950689720000	R934001162

Type	Material number

Characteristic curves

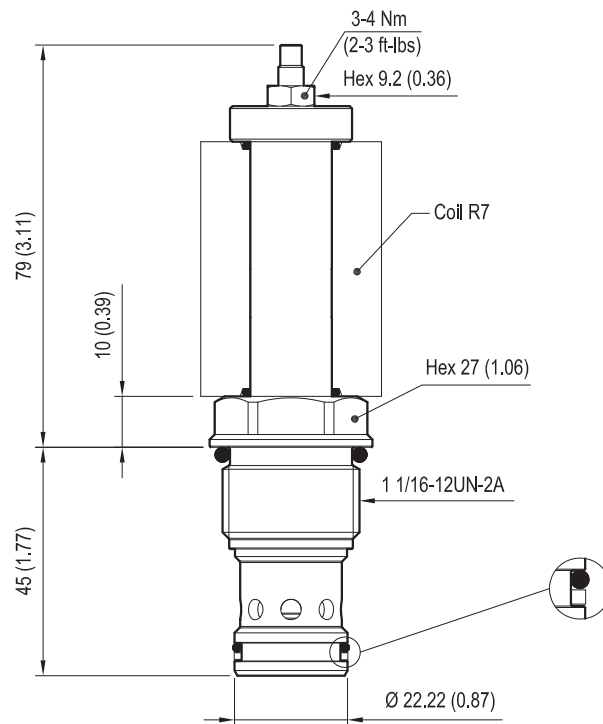


	I	P bar (psi)	Coils
I min:	0.2	210 (3000)	12 DC
I max:	0.65	210 (3000)	12 DC
PMW Frequency: 120-150 Hz			
Hysteresis: < 5%			

Note: It is recommended to use coil 12 DC.

**4 VEPN-12A | Proportional valves poppet type not compensated flow regulator**

Dimensions [mm (inches)]

**Dimensions**
**▼ Proportional valves poppet type  
not compensated flow regulator**


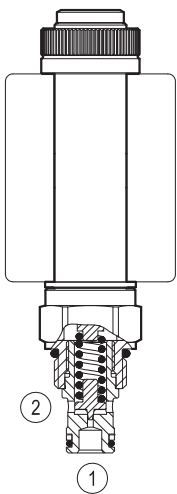


# Proportional valves direct acting relief

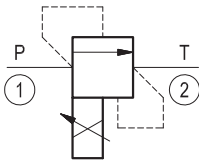
Common cavity, Size 08

VEP-5B-2S-D

OD.94.01.18 - Y - Z



Version 01



General

Weight	kg (lbs)	0.23 (0.51)
Installation orientation		Optional
Ambient temperature range	°C (°F)	-30 to 60 (-22 to 140)

Hydraulic

Max. operating pressure	bar (psi)	350 (5000)
Flow range	l/min.(gpm)	See flow diagram
Max. internal leakage (*)	cm³/min. (cu.in./min.)	5 (0.3)
Fluid temperature range	°C (°F)	-20 to 80 (-4 to 176)
Fluids		Mineral-based or synthetics with lubricating properties at viscosities of 15 to 380 mm²/s (cSt)
Installation torque	Nm (ft-lbs)	39-51 (29-38)
Filtration		Nominal value max. 10µm (NAS 8) ISO 4406 19/17/14
Cavity		CA-08A-2N see RE 18325-70
Line bodies		See data sheet RE 18325-85
Seal kit	code	RG08A2010520100
	material no.	R901101437
Seal kit coil	code	RG19A1PNBR7000
	material no.	R934003569
Other technical data		See data sheet RE 18325-90

(\*) at 20% of pressure setting. Oil at 46 cSt

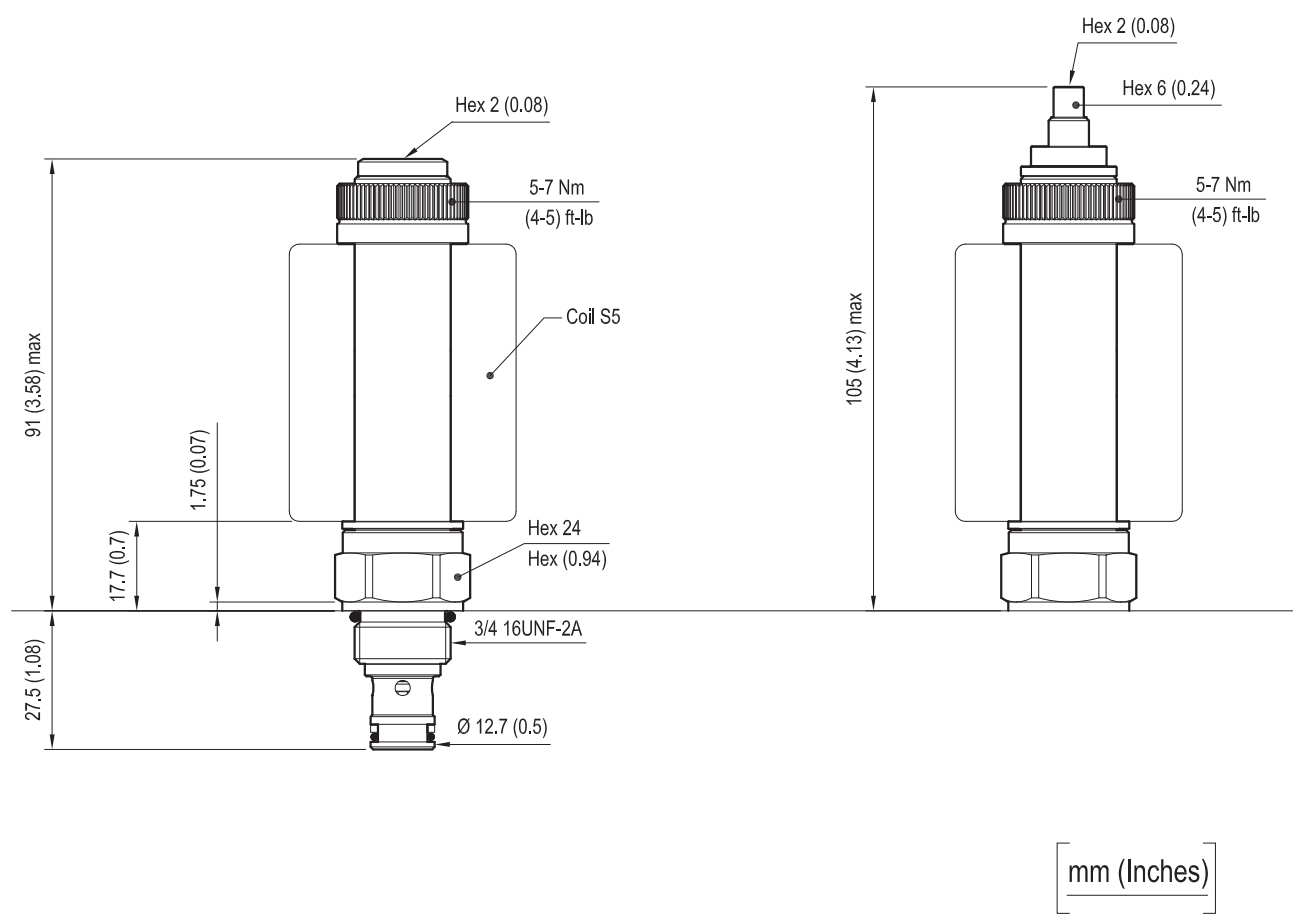
Electrical

Type of voltage	DC voltage
Coil type	S5
Supply voltage	12 DC
Nominal voltage	± 10%
Power consumption	W 23
Duty cycle	% 100
Type of protection	See data sheet RE 18325-90

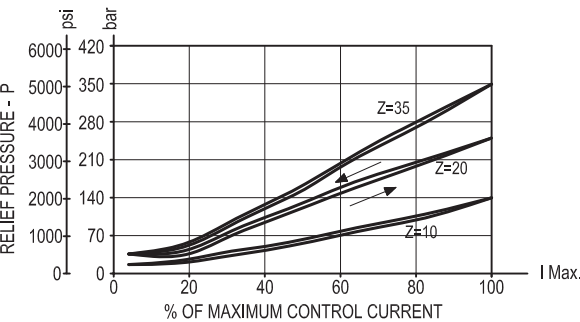
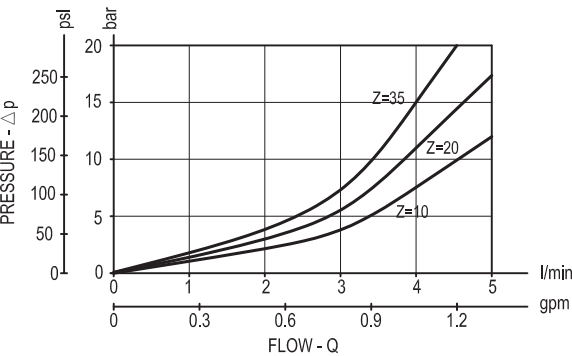
**Note: Coils must be ordered separately.**

Dimensions

Proportional valves direct acting relief



Performance graphs



		I	P bar (psi)	Coils
Z=10	I min:	0.2 A	15 (218)	12 DC
	I max:	1.5 A	140 (2030)	12 DC
Z=20	I min:	0.15 A	30 (435)	12 DC
	I max:	1.7 A	250 (3625)	12 DC
Z=30	I min:	0.2 A	30 (435)	12 DC
	I max:	1.7 A	350 (5075)	12 DC
PMW Frequency: 120-150 Hz				
Hysteresis: < 5%				

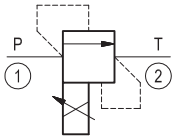
Note (1): It is recommended to use coil 12 DC.

Note (2): It is recommended to bleed air carefully before operation.

Ordering code

OD.94	01	18	Y	Z
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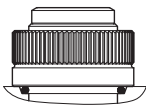
Proportional valves direct  
acting relief



Operating range					
	Pressure range bar (psi)	Voltage V	I Min. A (±10%)	I Max. A (±10%)	Internal orifice mm (Inch)
= 10	15-140 (220-2000)	12	0.25	1.8	2.5 (0.9)
= 20	30-250 (440-3600)	12	0.25	1.8	1.8 (0.7)
= 35	30-350 (440-5000)	12	0.25	1.8	1.5 (0.6)

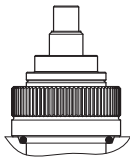
standard type

03 =



knob style manual override

04 =



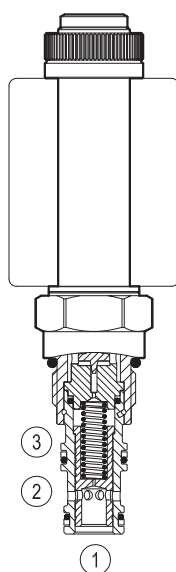
Common cavity: CA-08A-2N

# Proportional valves pilot operated pressure reducing

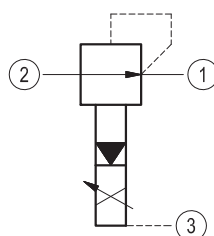
Common cavity, Size 10

VEP-5A-2R-06-P

OD.91.06.77 - Y - 00



Version 06



## General

Weight	kg (lbs)	0.3 (0.66 )
Installation orientation		Optional
Ambient temperature range	°C (°F)	-30 to 60 (-22 to 140)

## Hydraulic

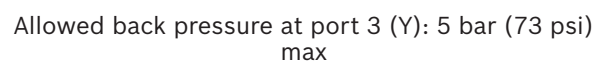
Max. operating pressure	bar (psi)	250 (3600)
Flow range	l/min.(gpm)	2-60 (0.5-16)
Max. internal leakage	cm³/min. (cu.in./min.)	50 (3)
Fluid temperature range	°C (°F)	-20 to 80 (-4 to 176)
Fluids		Mineral-based or synthetics with lubricating properties at viscosities of 15 to 380 mm²/s (cSt)
Installation torque	Nm (ft-lbs)	44-56 (33-41)
Filtration		Nominal value max. 10µm (NAS 8) ISO 4406 19/17/14
Cavity		CA-10A-3N see RE 18325-70
Seal kit	code material no.	RG10A3010520100 R901111369
Seal kit coil	code material no.	RG19A1PNBR7010 R934003964
Other technical data		See data sheet RE 18325-90

## Electrical

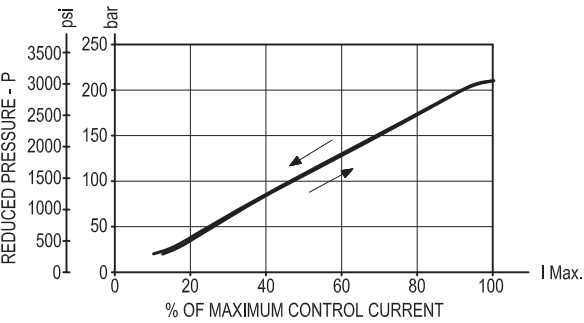
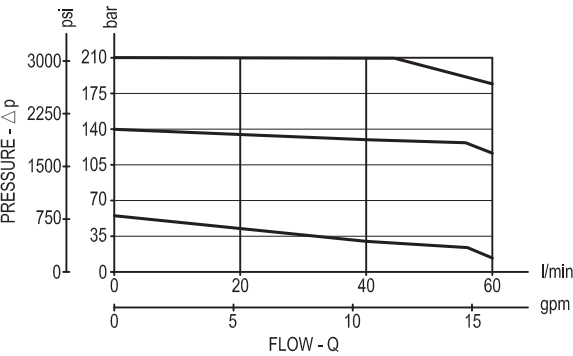
Type of voltage	12 DC voltage
Coil type	S5
Supply voltage	See data sheet RE 18325-90
Nominal voltage	± 10%
Power consumption	W 23
Duty cycle	% 100
Type of protection	See data sheet RE 18325-90

Note: Coils must be ordered separately.

### Proportional valves pilot operated pressure reducing



Performance graphs



	I	P bar (psi)	Coils
I min:	0.1 A	15 (218)	12 DC
I max:	1.3 A	210 (3045)	12 DC
PMW Frequency: 120-150 Hz			
Hysteresis: < 5%			

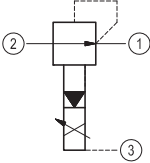
Note (1): It is recommended to use coil 12 DC.

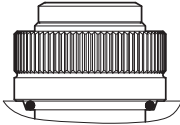
Note (2): It is recommended to bleed air carefully before operation.

Ordering code

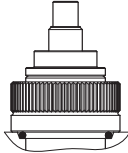
OD.91	06	77	Y	00
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Proportional valves pilot operated pressure reducing



03 = 

knob style manual override

04 = 

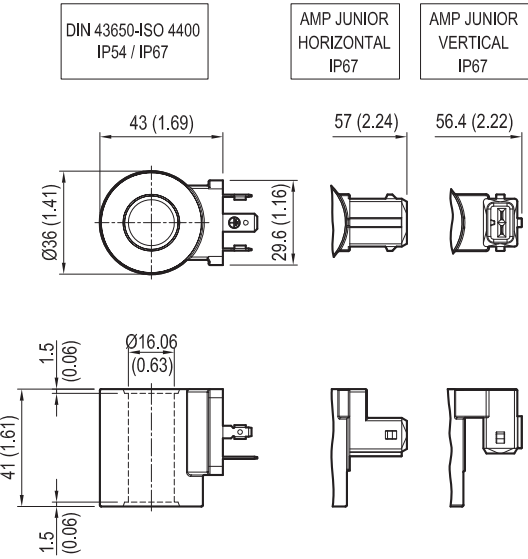
Common cavity: CA-10A-3N



COIL D36 - CLASS H - 20 W

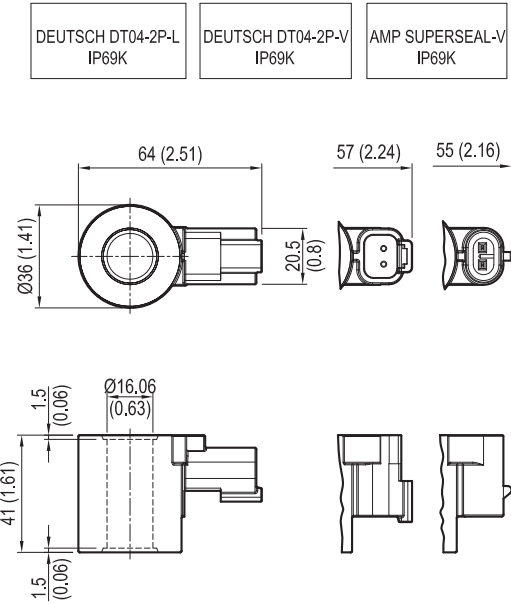
OD.02.36 - X - Y - Z

TECHNICAL DATA  
Weight: 0.18 kg (0.40 lbs)  
Power: 20 W  
Heat insulation Class H: 180°C (356°F)  
Ambient temperature range: -30/+90°C (-22/+194°F)  
Further performance limits in terms of temperature and voltage fluctuations: please refer to data sheet of the solenoid valve where D36 coil is mounted.



X	Y	Connections	Circuit	Voltage
01	30	DIN 43650 - ISO 4400	Standard	DC
07	30	AMP JUNIOR H	Standard	DC
07	3P	AMP JUNIOR V	Standard	DC
14	30	DIN 43650 - ISO 4400	Bidirectional Diode	DC
15	30	AMP JUNIOR H	Bidirectional Diode	DC
15	3P	AMP JUNIOR V	Bidirectional Diode	DC

[ mm / Inches ]

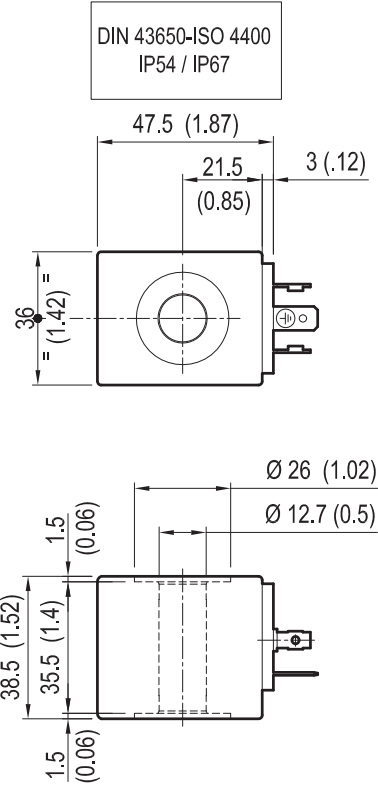


X	Y	Connections	Circuit	Voltage
20	30	DEUTSCH DT04-2P-L	Standard	DC
20	3P	DEUTSCH DT04-2P-V	Standard	DC
30	3P	AMP SUPERSEAL-V	Standard	DC
22	30	DEUTSCH DT04-2P-L	Bidirectional Diode	DC
22	3P	DEUTSCH DT04-2P-V	Bidirectional Diode	DC
32	3P	AMP SUPERSEAL-V	Bidirectional Diode	DC

[ mm / Inches ]

COIL S8-356 - G2 - CLASS H - 19.5 W

OD.02.28 - X - Y - Z



TECHNICAL DATA

Weight DC: 0.20 kg (0.44 lbs)

Weight RAC: 0.19 kg (0.42 lbs)

Heat insulation Class H: 180°C (356°F)

Ambient temperature range: -30/+60°C (-22/+140°F)

Inlet voltage fluctuations must not exceed ±10%

X	Y	Connections	Circuit	Voltage
01	30	DIN 43650 - ISO 4400	Standard	DC - RAC

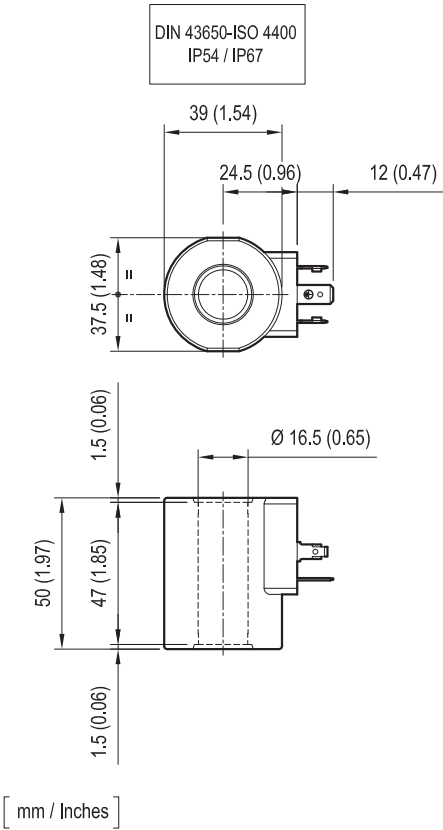
Z	Voltage V	Resistance Ohm (±7%)	Power W	Current A		ΔT °C (°F) 1 hour energized at Ta=20-25°C (68-77°F) Nominal voltage
	Nominal	Ta = 20-25°C (68-77°F)	Cold coil	Cold coil	Hot coil	
GV	230 DC	2697.73	19.5	* 0.075	* 0.058	95-100 (205-215)
GA	230 RAC	2179.39	19.5	* 0.087	* 0.064	

\* Note: current valves with Ta= 60 °C (140 °F)

[ mm / Inches ]

COIL R7 - CLASS H - 18 W

OD.02.21 - X - Y - Z - 00



TECHNICAL DATA

Weight: 0.31 kg (0.71 lbs)  
Heat insulation Class H: 180°C (356°F)  
Ambient temperature range: -30/+80°C (-22/+284°F)  
Inlet voltage fluctuations must not exceed ±15% of nominal voltage to obtain correct operation and long life coils.

X	Y	Connections	Circuit	Voltage
01	30	DIN 43650 - ISO 4400	Standard	DC

Z	Voltage V	Resistance Ohm (±7%)	Power W	Current A		ΔT °C (°F)
	Nominal	Ta = 20-25°C (68-77°F)	Cold coil	Cold coil	Hot coil	1 hour energized at Ta=20-25°C (68-77°F) Nominal voltage
OB	12 DC	7.9	18	1.5	1.1	90-105 (194-221)

SOLENOID OPERATED VALVES  
CONTINUOUS DUTY COILS - ED 100%

S5 SERIES

OD.02.09.01.30 - Z - 01

S5-H  
DIN 43650 - ISO 4400

Technical drawing of S5-H solenoid valve showing front and top views with dimensions in inches and mm.

Front view dimensions: Total height 2.17 (55), Coil height 2.05 (52), Flange thickness .06 (1.5), Flange outer diameter 1.77 (45), Flange inner diameter 1.26 (32), Flange hole diameter .89 (22.5), Total width 2.15 (54.5).

Top view dimensions: Total width 2.15 (54.5), Coil width 1.26 (32), Flange outer diameter 1.77 (45), Flange inner diameter 1.26 (32), Flange hole diameter .89 (22.5).

**TECHNICAL DATA**

General coil information page 7.01.010

Weight 0.728 lbs (0.330 kg)

Encapsulating material IXEF

**HEAT INSULATION CLASS H** 356 °F (180 °C)

Ambient temperature range -86 +140 °F (-30 +60 °C)

Available on request : Different Voltages - Working Duty ED 50%

Inlet voltage fluctuations must not exceed ± 10% of nominal voltage to obtain correct operation and long life of coils.


Z	Voltage V	Resistance Ω (±7%)	Power W	Current A		ΔT °F (°C)
	Nominal	Ta = 68-77 °F (20-25 °C)	Cold Coil	Cold Coil	Hot Coil	1 hour energized at Ta = 68-77 °F (20-25 °C) Nominal Voltage
OB	12 DC	6.2	23	1.92	1.41	198-205 (92-96)
OC	24 DC	24.9	23	0.96	0.71	

The present catalogue cancels and supersedes all the previous issues.

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