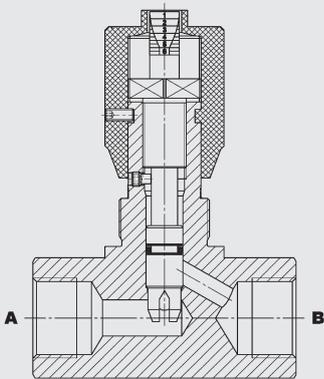


up to 300 l/min
up to 350 bar

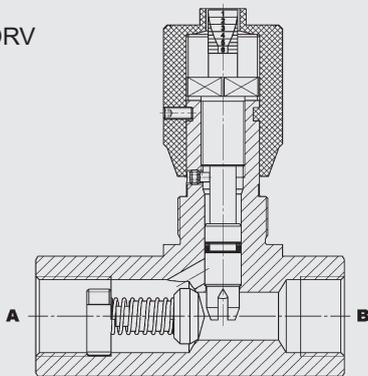
Needle Valves with and without Reverse Flow Check direct-acting Inline Mounted - 350 bar DV- / DRV- 20 to 40

FUNCTION

DV



DRV



The DV is an inline mounted flow control valve which controls the flow by adjusting the cross-section. The flow rate is therefore dependent on the pressure differential and viscosity. Starting with the throttle spindle in the fully closed position, the flow rate increases in accordance with the appropriate curve as the control knob is turned. The flow is controlled in both directions. The scale and coloured rings on the top of the control knob enable accurate repeat setting.

The DRV is a flow control valve in the same design which also allows the same fine flow adjustment, but in one direction only. Unrestricted flow in the reverse direction is via the built-in check valve (cracking pressure 0.5 bar).

FEATURES

- For regulating the speed of loads
- For fine adjustment and shut-off of the flow
- For system-related damping in hydraulic circuits
- To release pressure from accumulator systems
- As an emergency drain for lowering a load without a dead man's circuit
- Spindle secured before complete loosening
- An Allen set-screw locks the setting of the knob
- Choice of four sizes for optimum adaptability to the system
- Nickel-plated version available as an option

SPECIFICATIONS*

Operating pressure:	max. 350 bar	
Nominal flow:	DV- / DRV-20 max. 300 l/min DV- / DRV-25 max. 300 l/min DV- / DRV-30 max. 300 l/min DV- / DRV-40 max. 300 l/min	
Cracking pressure (DRV):	0.5 bar	
Media operating temperature range:	min. -20 °C to max. +80 °C	
Ambient temperature range:	min. -20 °C to max. +80 °C	
Operating fluid:	Hydraulic oil to DIN 51524 part 1, 2 and 3	
Viscosity range:	min. 2.8 mm ² /s to max. 800 mm ² /s	
Filtration:	Class 21/19/16 according to ISO 4406 or cleaner	
MTTF _d :	150 - 1200 years, according to DIN EN ISO 13849-1	
Installation:	no orientation restrictions, preferably horizontal	
Materials:	Valve body:	steel
	Piston:	hardened and ground steel
	Seals:	FKM (standard)
	Back-up rings:	PTFE
Weight:	DV-20 = 2.1 kg	DRV-20 = 2.4 kg
	DV-25 = 2.8 kg	DRV-25 = 3.5 kg
	DV-30 = 3.5 kg	DRV-30 = 4.6 kg
	DV-40 = 5.5 kg	DRV-40 = 7.7 kg

* see "Conditions and instructions for valves" in brochure 53.000

MODEL CODE

DRV - 20 - 01 . X / 0

Basic model

DV = Needle valve
 DRV = Needle valve with reverse flow check

Size

20, 25, 30, 40

Type

01 = standard (housing phosphated)
 12 = housing zinc-nickel coated (seawater-resistant),
 fine throttle spindle in steel,
 with protective dome nut
 - adjustment with tool (not for size 40)
 17 = housing zinc-plated (not for size 40)
 Other types on request

Series

(determined by manufacturer)

Threaded connection

0 = BSP thread,
 threaded connection Form X to DIN 3852 Part 2
 5 = NPT thread
 12 = UNF thread

Note: Spindle slightly open on delivery.

Standard models

Model code	Part No.
DV-20-01.X/0	705062
DV-25-01.X/0	705074
DV-30-01.X/0	705086
DV-40-01.X/0	705098
DRV-20-01.X/0	705562
DRV-25-01.X/0	705574
DRV-30-01.X/0	705586
DRV-40-01.X/0	705598

Other models on request

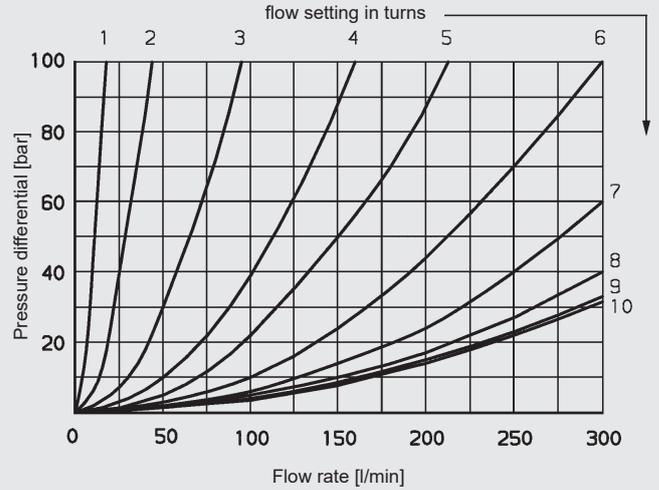
TYPICAL PERFORMANCE

Pressure drop, dependent on flow rate

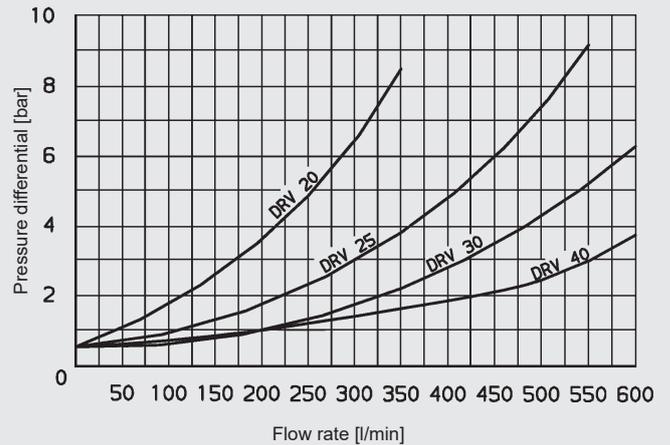
DV = flow direction A → B corresponds with B → A
 DRV = flow direction A → B

Pressure differential Δp measured against flow rate Q ,
 measured at constant flow setting, $v = 54 \text{ mm}^2/\text{s}$ and $T_{oil} = 36 \text{ }^\circ\text{C}$

DV- / DRV-20 to 40 flow direction A → B



DRV Flow direction B → A

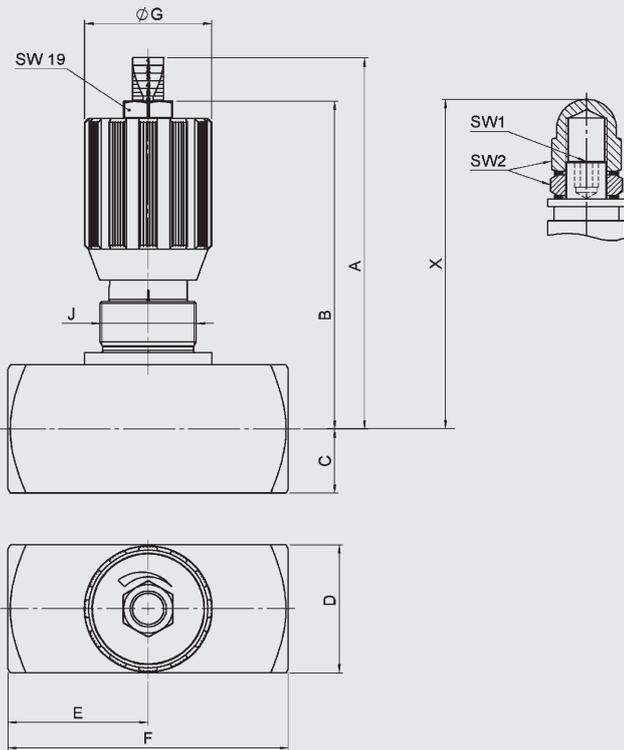


DIMENSIONS

DV

Type 01 and 11

12



millimeter (inch)
subject to technical modifications

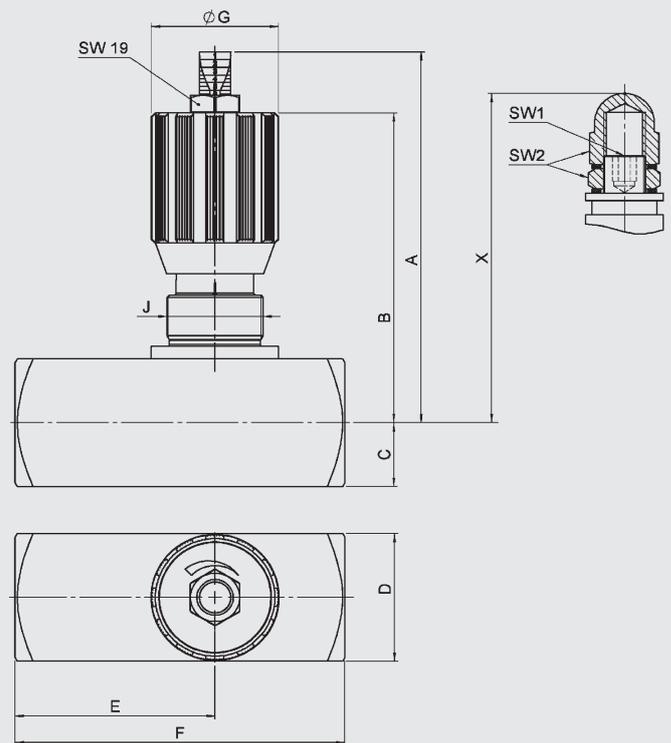
Nominal size	Threaded connection	A	B	C	D	E
20	G1	145	128	25	50	54
25	G1½	150	133	30	60	54
30	G1½	155	138	35	70	54
40	G2	165	148	45	90	65

F	G	J	SW1	SW2	X	Weight [kg]
108	49	Pg29	8	24	129	2.10
108	49	Pg29	8	24	134	2.80
108	49	Pg29	8	24	139	3.50
130	49	Pg29	-	-	-	5.50

DRV

Type 01 and 11

12



millimeter (inch)
subject to technical modifications

Nominal size	Threaded connection	A	B	C	D	E
20	G1	145	128	25	50	77
25	G1½	150	133	30	60	93
30	G1½	155	138	35	70	108
40	G2	165	148	45	90	130

F	G	J	SW1	SW2	X	Weight [kg]
127	49	Pg29	8	24	129	2.40
143	49	Pg29	8	24	134	3.50
143	49	Pg29	8	24	139	4.60
165	49	Pg29	-	-	-	7.70

NOTE

The information in this brochure relates to the operating conditions and applications described.
For applications or operating conditions not described, please contact the relevant technical department.
Subject to technical modifications.

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