

A Series Piston Accumulators

0.5 to 300 Litres, 250 and 350 bar

IN THIS SECTION

A Series Piston Accumulators

How to order	126
Dimensions	128



Bladder	EBV
	EHV
	Regulations
	O&G
Pistons	EHP
	ACP
	AP
	A
Pulsation Dampers	
Attenuators	
Diaphragm	
Accessories	
Gas Bottles	
Accumulator Stations	

A Series: How to order a Piston Accumulator

Series	Model	Type of Construction	Options	Volume Capacity	Working Pressure	Design Number	Seal Type	Port Size	Gas Port	Pre-Charge
A	4	E	S	0005	L	2	K	RF	S	/ 010
<p>A Series Accumulator B Bottle</p>										
<p>Code Bore Size (nominal) 2 50 A Series 3 75 A Series 4 100 A Series 5 127 A Series 6 150 A Series 8 200 A Series</p>										
<p>Code Approval Type E CE approved¹</p>										
<p>Code Valve Options S Cored-type gas valve (standard)² W Cored-type gas valve + water service F Cored-type gas valve + safety fuse G Cored-type gas valve + water service + safety fuse M Poppet-type gas valve L Poppet-type gas valve + water service P Poppet-type gas valve + safety fuse R Poppet-type gas valve + water service + safety fuse</p>										
<p>Please see Dimensions table on page 128</p>										
<p>Code Maximum Working Pressure³ L 250 bar (A2, A3, A4, A5, A6 & A8) H 350 bar (A2, A3, A4, A6)</p>										
<p>Code Port 1 Inch mounting + SAE port 2 Metric mounting + BSPP port (standard) 3 Special ports ### Specials (Parker assigned number)</p>										
<p>Code Service/Fluid K Nitrile (NBR) E Fluorocarbon Elastomer (FPM) H Hydrogenated nitrile (HNBR) D Ethylene Propylene (EPR)</p>		<p>Code Service/Fluid J Carboxilated nitrile (XNBR) Q Low temperature nitrile S Special - please specify</p>								
<p>Please see Fluid Port tables on page 127 (leave blank if standard)</p>										
<p>Gas Port Specification (where no valve supplied) ¹ Other approvals are available to order – please consult the factory. ² Where a gas port is specified, no gas valve will be supplied. ³ For other pressure ratings, please consult the factory.</p>					<p>Hydraulic and Gas Port Modifications For accumulators with non-standard ports, specify special gas and/or hydraulic ports and use the appropriate port code from page 8. A typical model number for an accumulator with ISO 6149 hydraulic and gas ports would be: A - 3 - T - M - 0090 - D - 2 - K - YE/YE</p>					
<p>Code Pre-Charge (for example) 010 10 bar</p>		<p>Code Pre-Charge (for example) 020 20 bar</p>								

Port Options

Fluid Ports - Standard

Port Type	Code	A2		A3		A4		A5	A6		A8
		250 bar	350 bar	250 bar	350 bar	250 bar	350 bar	250 bar	250 bar	350 bar	250 bar
G 3/4 BSPP	Leave Blank	•	•	•	•						
G 1 BSPP	Leave Blank					•	•	•		•	
G 1 1/2 BSPP	Leave Blank								•		
G 2 BSPP	Leave Blank										•

Optional Threaded Ports

BSPP ¹			Metric to DIN 3852-1			Metric to ISO 6149-1			SAE Thread		
Thread Size	From Model	Code	Thread Size	From Model	Code	Thread Size	From Model	Code	Thread Size	From Model	Code
G 3/4	A2	RC	M14	A2	GA	M14	A2	YA	#5	A2	TA
G 1	A3	RD	M18	A2	GB	M18	A2	YB	#6	A2	TB
G 1 1/4	A3	RE	M22	A2	GC	M22	A2	YC	#8	A2	TC
G 1 1/2	A4	RF	M27	A2	GD	M27	A2	YD	#10	A2	TI
G 2	A4	RG	M33	A3	GE	M33	A3	YE	#12	A2	TD
-	-	-	M42	A3	GF	M42	A3	YF	#16	A3	TE
-	-	-	-	-	-	-	-	-	#20	A3	TF
-	-	-	-	-	-	-	-	-	#24	A3	TG

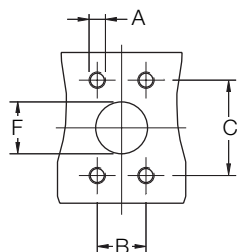
¹ Where the required fluid port is the standard BSPP size for the accumulator bore diameter chosen (see dimension D, page 102), the fluid port field in the order code on page 100 should be left blank.

Optional Flanged Ports

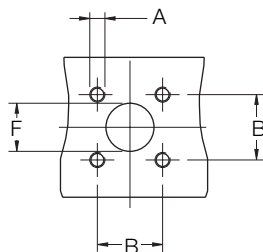
A Series Piston Accumulators are available with metric flange ports to ISO 6162/3000 psi and ISO 6164/6000 psi as shown in the tables. Inch pattern flange ports and flange ports for higher pressure operation are also available, please consult the factory for details.

Flange Ports to ISO 6162/3000 psi						
Flange Size	From Model	A *	B ± 0.25	C ± 0.25	F	Code
DN13	A3	M8	17.5	38.1	13	MT
DN19	A3	M10	22.3	47.6	19	MU
DN25	A3	M10	26.2	52.4	25	MV
DN32	A3	M10	30.2	58.7	32	MW
DN38	A4	M12	35.7	69.9	38	MJ
DN51	A4	M12	42.9	77.8	51	ML
DN64	A6	M12	50.8	88.9	64	MM
DN76	A8	M16	61.9	106.4	76	MN

ISO 6162 Flanged Port Dimensions

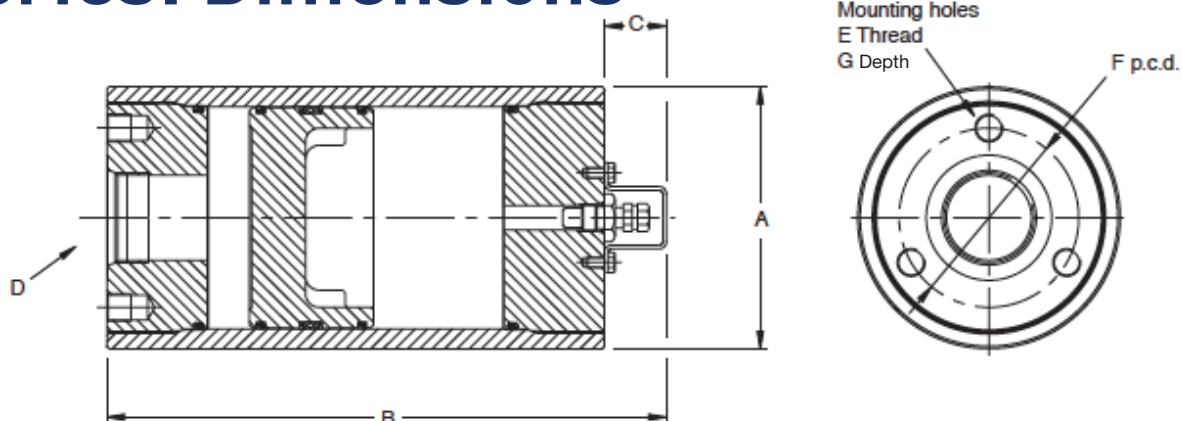


ISO 6164 Flanged Port Dimensions



Flange Ports to ISO 6164/6000 psi					
Flange Size	From Model	A	B ± 0.25	F +0.0 -1.5	Code
DN10	A2	M6 x 1	24.7	10.0	SD
DN13	A2	M8 x 1.25	29.7	13.0	SE
DN19	A3	M8 x 1.25	35.4	19.0	SF
DN25	A3	M10 x 1.5	43.8	25.0	SG
DN32	A3	M12 x 1.75	51.6	32.0	SH
DN38	A4	M16 x 2	60.1	38.0	SP
DN51	A4	M16 x 2	69.3	51.0	SQ
DN56	A6	M20 x 2.5	83.4	56.0	SX
DN63	A6	M24 x 3	102.5	63.0	SR
DN70	A6	M24 x 3	113.1	70.0	SY
DN80	A8	M30 x 3.5	123.7	80.0	SZ

A Series: Dimensions



250 and 350 Bar Models, Capacities and Dimensions

Model	Code	Bore ø	Fluid Volume Litres	Gas Volume Litres	250 bar			350 bar			C mm	E ²	F mm	G mm	250 bar Weight Kg	350 bar Weight Kg	
					A mm	B mm	D BSPP	A mm	B mm	D BSPP							
A2	0005	51.4	0.1	0.1	61	172	G 3/4	64	172	G 3/4	27 ¹	-	-	-	1.8	2.7	
	0010		0.15	0.2		211			211						2	3	
	0015		0.25	0.25		250			250						2.5	3.3	
	0029		0.5	0.5		360			360						3	4.3	
	0058		1	1		590			590						4.4	6.2	
A3	0029	76.2	0.5	0.55	91	260	G 3/4	96	260	G 3/4	29 ¹	M10	60	15	9	9	
	0058		1	1		364			364						11	11	
	0090		1.5	1.5		481			481						13	13	
	0116		2	2		573			573						14	15	
	0183		3	3		814			814						16	20	
A4	0058	102.4	1	1.1	121	295	G 1	127	306	G 1	29 ¹	M12	82	18	15	18	
	0116		2	2		411			422						18	22	
	0231		3.8	4		640			651						23	30	
	0347		5.7	5.9		872			883						29	38	
	0578		9.5	9.6		1330			1341						41	54	
A5	0058	127	1	1.3	153	272	G 1	-	-	-	29 ¹	M12	100	18	22	-	
	0116		2	2.2		346									346		26
	0231		3.8	4.1		496									496		32
	0347		5.7	6		645									645		39
	0578		9.5	9.8		943									943		52
A6	0231	146.9	3.8	4.3	175	442	G 1 1/2	180	487	G 1	29 ¹	M12	110	18	35	53	
	0347		5.7	6.2		554			600						42	60	
	0578		9.5	10		778			824						54	74	
	0924		15	15.7		1113			1159						73	96	
	1155		19	19.4		1337			1383						85	110	
	1733		28.5	28.9		1896			1941						112	148	
	2310		38	38.4		2454			2500						147	183	
A8	0578	200	9.5	10.7	230	629	G 2	-	-	-	42	M16	170	24	98	-	
	1155		19	20.2		931									931		122
	1733		28.5	29.7		1232									1232		146
	2310		38	39.1		1532									1532		170
	2772		45	46.2		1774									1774		189
	2888		47	48.2		1834									1834		194
	3465		57	58		2136									2136		217
	4620		76	77.2		2738									2738		266

¹ Where the optional poppet-type gas valve is fitted (see page 104), dimension C should be increased by 13mm.

² A Series piston accumulators are supplied as standard with the metric threaded mounting holes shown in the table. They are also available with inch pattern mounting holes, indicated by the Design Number in the model code – see page 100.

A Series 250 bar, Volume 0.5 to 300 Litres

Standard version, Nitrile Seals, CE
 Part numbers

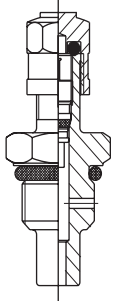
Bore	Volume (Litres)	Port	Part number
50	0.75	SAE#12	A2ES0045L1H
50	0.75	G3/4	A2ES0045L2K
50.8	0.15	G3/4	A2ES0010L2K
50.8	0.25	G3/4	A2ES0015L2K
50.8	0.50	G3/4	A2ES0029L2K
50.8	1.00	G3/4	A2ES0058L2K
75	1.00	G3/4	A3ES0058L2H
76.2	0.50	G3/4	A3ES0029L2K
76.2	1.00	G3/4	A3ES0058L2K
76.2	1.50	G3/4	A3ES0090L2K
76.2	2.00	G3/4	A3ES0116L2K
76.2	3.00	G3/4	A3ES0183L2K
100	2.00	G1	A4ES0116L2H
100	3.00	G1	A4ES0183L2K
100	6.00	SAE#20	A4ES0347L1K
100	8.00	G1	A4ES0488L2K
101.6	1.00	G1	A4ES0058L2K
101.6	2.00	G1	A4ES0116L2K
101.6	3.80	G1	A4ES0231L2K
101.6	5.70	G1	A4ES0347L2K
101.6	9.50	G1	A4ES0578L2K
127	1.00	G1	A5ES0058L2K
127	2.00	G1	A5ES0116L2K
127	3.80	G1	A5ES0231L2K
125	4.00	G1	A5ES0231L2H
127	5.70	G1	A5ES0347L2K
127	9.50	G1	A5ES0578L2K
150	8.00	G1.1/2	A6ES0488L2K
150	10.00	G1.1/2	A6ES0578L1K
150	40.00	G1.1/2	A6ES2310L2H
152.4	3.80	G1.1/2	A6ES0231L2K
152.4	5.70	G1.1/2	A6ES0347L2K
152.4	9.50	G1.1/2	A6ES0578L2K
152.4	15.00	G1.1/2	A6ES0924L2K
152.4	19.00	G1.1/2	A6ES1155L2K
152.4	28.50	G1.1/2	A6ES1733L2K
152.4	38.00	G1.1/2	A6ES2310L2K
200	9.50	G2	A8ES0578L2K
200	19.00	G2	A8ES1155L2K
200	28.50	G2	A8ES1733L2K
200	38.00	G2	A8ES2310L2K
200	45.00	G2	A8ES2772L2K
200	47.00	G2	A8ES2888L2K
200	57.00	G2	A8ES3465L2K
200	76.00	G2	A8ES4620L2K

Bore	Volume (Litres)	Port	Part number
180	6.00	G1.1/2	AP180EM006L2K
180	8.00	G1.1/2	AP180EM008L2K
180	10.00	G1.1/2	AP180EM010L2K
180	15.00	G1.1/2	AP180EM015L2K
180	20.00	G1.1/2	AP180EM020L2K
180	25.00	G1.1/2	AP180EM025L2K
180	30.00	G1.1/2	AP180EM030L2K
180	40.00	G1.1/2	AP180EM040L2K
180	50.00	G1.1/2	AP180EM050L2K
180	60.00	G1.1/2	AP180EM060L2K
180	80.00	G1.1/2	AP180EM080L2K
250	30.00	G1.1/2	AP250EM030L2K
250	40.00	G1.1/2	AP250EM040L2K
250	50.00	G1.1/2	AP250EM050L2K
250	60.00	G1.1/2	AP250EM060L2K
250	80.00	G1.1/2	AP250EM080L2K
250	100.00	G1.1/2	AP250EM100L2K
250	150.00	G1.1/2	AP250EM150L2K
360	100.00	G1.1/2	AP360EM100L2K
360	150.00	G1.1/2	AP360EM150L2K
360	200.00	G1.1/2	AP360EM200L2K
360	250.00	G1.1/2	AP360EM250L2K
360	300.00	G1.1/2	AP360EM300L2K

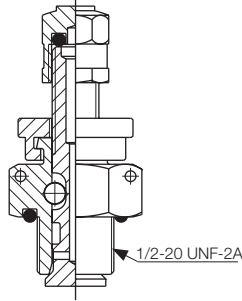
Volumes are nominal
 AP type includes Heavy duty Gas Valve

Gas Valves

The standard gas charging valve fitted to A Series 250 and 350 bar piston accumulators is a cored-type gas valve, rated at 350 bar. A mechanically opened and closed poppet-type gas valve cartridge, also rated at 350 bar, is available as an option.



Standard Cored-Type Gas Valve



Optional Poppet-Type Gas Valve

Piston Accumulator Seal Kits

Seal kits are available for all A Series accumulator models however it is recommended to buy a piston assembly with seal already assembled.

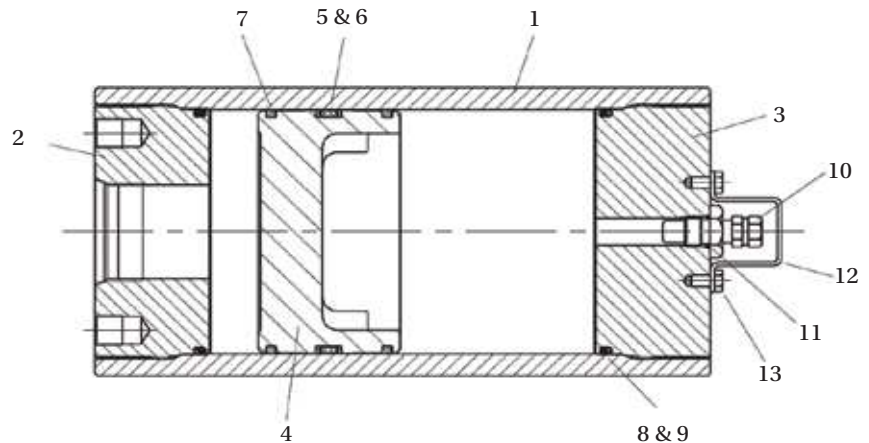
When ordering seal kits, please supply the complete model number from the identification plate and specify the fluid type and the temperature at which the accumulator is to be used.

Seal Kit Numbers

The seal kits listed contain items 4 (including 5,6 & 7) and 11.

Parts List

- 1. Shell
- 2. Hydraulic cap
- 3. Gas cap
- 4. Piston
- 5. V-O-ring
- 6. V-O-ring back-up washers
- 7. PTFE bearing ring (piston)
- 8. O-ring
- 9. O-ring back-up washer
- 10. Gas valve
- 11. Gas valve O-ring
- 12. Gas valve protector
- 13. Gas valve protector screw



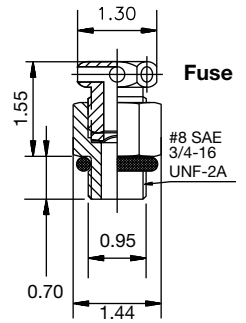
Seal Kits

Seal Kit Part Numbers with piston seals assembled (remove the P for a Seal Kit without piston seal assembled)

Model	Nitrile NBR	Fluorocarbon Elastomer FPM	Ethylene Propylene EPR	Hydrogenated Nitrile HNBR	Carboxylated Nitrile XNBR	Low Temp. Nitrile NBR
A2	RK0200K000P	RK0200E000P	RK0200D000P	RK0200H000P	RK0200J000P	RK0200Q000P
A3	RK0300K000P	RK0300E000P	RK0300D000P	RK0300H000P	RK0300J000P	RK0300Q000P
A4	RK0400K000P	RK0400E000P	RK0400D000P	RK0400H000P	RK0400J000P	RK0400Q000P
A5	RK0500K000P	RK0500E000P	RK0500D000P	RK0500H000P	RK0500J000P	RK0500Q000P
A6	RK0600K000P	RK0600E000P	RK0600D000P	RK0600H000P	RK0600J000P	RK0600Q000P
A8	RK0800K000P	RK0800E000P	RK0800D000P	RK0800H000P	RK0800J000P	RK0800Q000P

Safety Fuses (Burst Discs)

Safety fuses are available on A Series accumulators to prevent over-pressurization of gas due to external heat or excess hydraulic pressure. They comprise a housing incorporating a disc which is calibrated to rupture at a pre-determined pressure, to be specific by the customer at the time of ordering. Please contact the factory for further information.



Available Options

If your application requires a piston accumulator, gas bottle, or special option that falls outside of Parker's broad offering, consult your local distributor, Parker representative, or the factory with your specific requirements. Parker has the manufacturing and engineering expertise to design and build piston accumulators to your exacting requirements, from simple modifications of standard units to complete designs. Some example of Parker's past special designs include:

- High Pressures
- Special and Stainless Steel Materials
- Piston Position and Velocity Sensors and Switches
- Water Service
- Non-Standard Capacities
- Extreme Temperatures