



Bladder Accumulators Oil & Gas

690 to 760 bar range

aerospace
climate control
electromechanical
filtration
fluid & gas handling
hydraulics
pneumatics
process control
sealing & shielding



ENGINEERING YOUR SUCCESS.

Design Features and Benefits

1 Shell

Seamless shell, designed and manufactured to PED 97/23/EEC and CE marked. Material - Chromium-molybdenum steel. Working pressure 690 bar and 760 bar.

2 Label

With assembly specification and installation details.

3 Material Certification

Available on request for all major pressure loaded parts to EN 10204 3.1

4 Finish

One coat primer paint as standard. Special paints available.

5 Bladder

Totally enclosed construction with an extensive range of elastomers available. See page 7 for Bladder details.

6 Fluid Port Assembly

Integral port and poppet valve assembly with an anti-extrusion ring. For options see page 3.

7 Safety

All gas-loaded accumulators are pressurised vessels and it is recommended that safety consideration be given to the application in which they are used. A relief valve should always be fitted to the hydraulic system with the option of a burst disc to protect the accumulator. See Installation and Servicing data sheet for information regarding installation of accumulators.

8 Pressure Testing

A hydro static pressure test is carried out on all our accumulator shells during the manufacturing process. We can carry out additional pressure testing witnessed by a specified Inspection Authority and/or customer as an optional extra if required.

We can also carry out a hydro-pneumatic pressure test on the complete assembly as an optional extra if required. Again this can be witnessed by a specified inspection authority and/or customer.

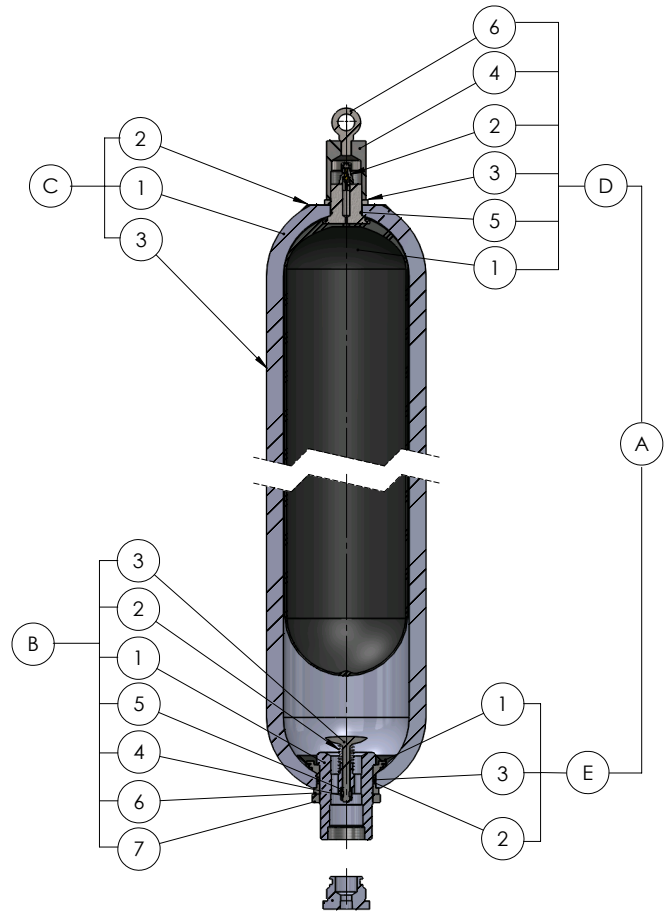
9 Accessories

A complete range of accumulator accessories are available from Parker Olaer.

10 Spare Parts

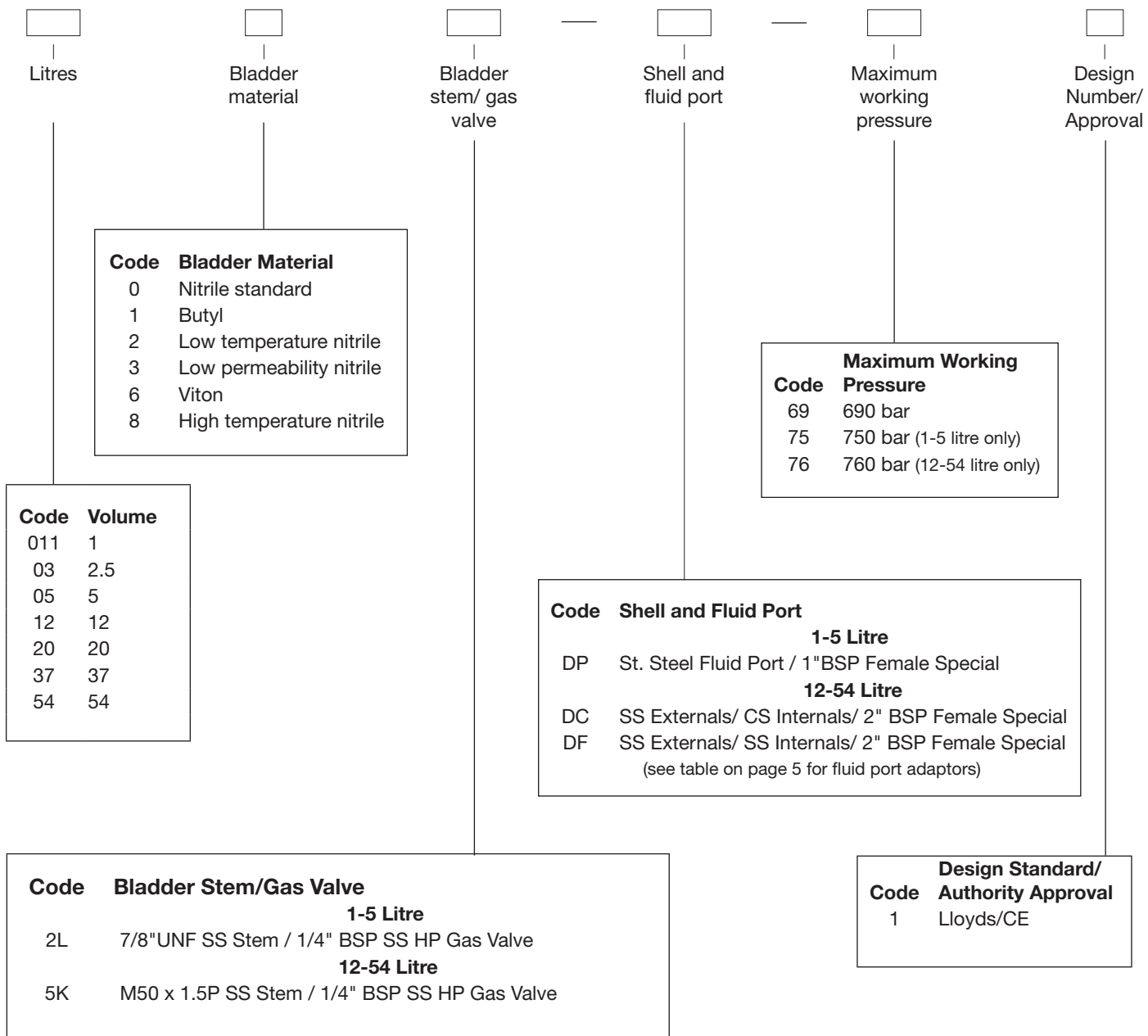
Available on request.

Please Note: The information in this datasheet is subject to change without prior notice.



Fluid Port Adaptor
(see table on page 5)

A	Bladder Kit comprising:
D	Bladder assembly
D1	Bladder
D2	Gas valve assembly
D3	Locknut
D4	Protective cap
D5	'O' ring stem
E	Anti extrusion ring assembly
E1	Anti extrusion ring
E2	'O' ring fluid port*
E3	Back-up ring
B	Fluid port assembly comprising
B1	Fluid port body
B2	Spring
B3	Poppet valve
B4	Collett
B5	Piston
B6	Flanged washer
B7	Lock ring
C	Shell assembly comprising:
C1	Shell
C2	Label
C3	Label warning



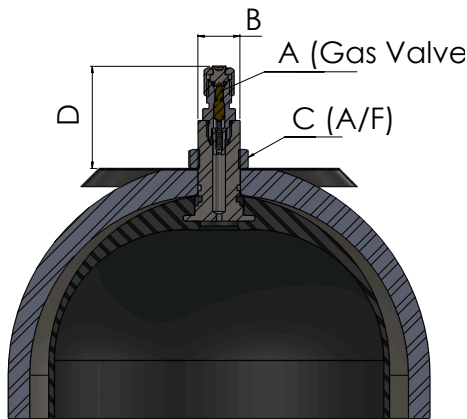
Example: 0502L-DP-691

Litres:	5
Bladder Material:	Nitrile Standard
Bladder Stem/ Gas Valve:	7/8"UNF SS Stem / 1/4" BSP SS HP Gas Valve
Shell & Fluid Port:	Stainless Steel / 1" BSP Female Special
Maximum working pressure:	690 bar
Design Number/Approval:	Lloyds/CE

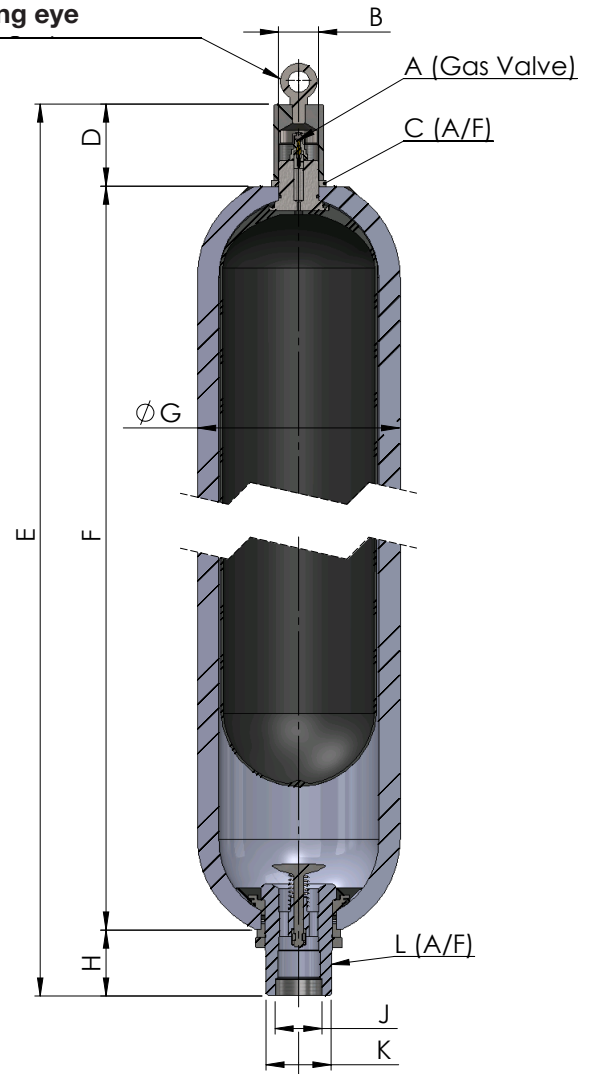
Features and Dimensions

Nominal Capacity Litres	Effective Gas vol. Litres	Work press. bar	Q Max (l/min)	Weight Dry Kilo	Dimensions in mm unless stated otherwise and subject to manufacturer's tolerances										
					A Inches	B Inches	C	D	E	F	G	H	J	K	L
1	1.1	690	240	9	See Below	7/8" UNF	33	69	376	239	122	68	See Page 5	48	45
3	2.4	690	240	15		7/8" UNF	33	69	551	414	122	68		48	45
5	5	690	240	29		7/8" UNF	33	69	900	763	122	68		48	45
12	9.4	690	749	97		M50x1.5P	69	166	768	518	267	84		82	77
12	9.4	760	749	97		M50x1.5P	69	166	768	518	267	84		82	77
20	18.8	690	749	134		M50x1.5P	69	166	978	728	267	84		82	77
20	18.8	760	749	134		M50x1.5P	69	166	978	728	267	84		82	77
37	35.2	690	749	227		M50x1.5P	69	166	1500	1250	267	84		82	77
37	35.2	760	749	227		M50x1.5P	69	166	1500	1250	267	84		82	77
54	49.2	690	749	318		M50x1.5P	69	166	2015	1765	267	84		82	77
54	49.2	760	749	318	M50x1.5P	69	166	2015	1765	267	84	82	77		

1 - 5 Litre



12 Litre and above accumulators include a lifting eye



Dimension A - Blader Stem/Gas Valve

Code	1 - 5 Litre	12 - 54 Litre
2L	7/8" UNF SS Stem / 1/4" BSP SS HP Gas Valve	
5K		M50x1.5P SS Stem / 1/4" BSP SS HP Gas Valve

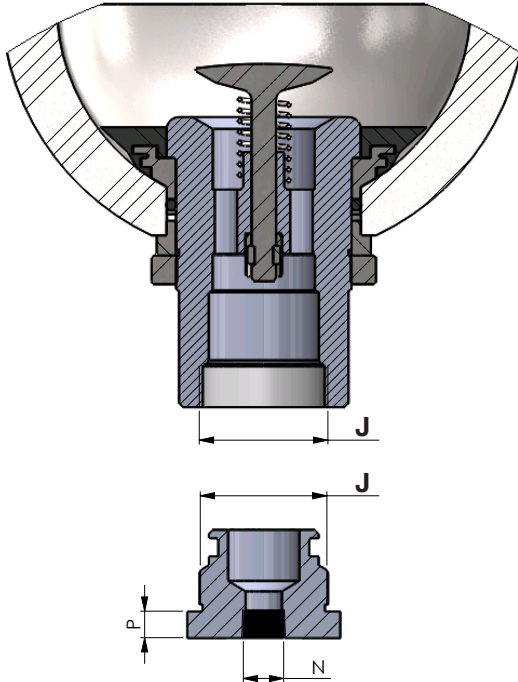
Dimension J - Shell and Fluid Port

Code	1 - 5 Litre	12 - 54 Litre
DP	Stainless Steel / 1" BSP Female Special	
DC		SS Externals/CS Internals / 2" BSP Female Special
DF		SS Externals/SS Internals / 2" BSP Female Special

Note: Dimensions are based on current stock and are subject to change without prior notice.

Fluid Port Adaptors

Nominal Capacity (Litres)	Dimensions			Part Number
	J	N	P (mm)	
1 - 5 litres	1" BSP	1/4" BSP	10	52799-XXX
	1" BSP	3/8" BSP	10	55456-XXX
	1" BSP	1/2" BSP	30	54260-XXX
	1" BSP	3/4" BSP	30	52762-XXX
	1" BSP	1/4" NPT	30	55712-XXX
	1" BSP	1/2" NPT	30	51059-XXX
	1" BSP	3/4" NPT	30	52113-XXX
	1" BSP	3/8" MP Autoclave	30	56002-XXX
	1" BSP	9/6" MP Autoclave	30	52722-XXX
12 - 54 litres	2" BSP	1/4" BSP	13	55374-XXX
	2" BSP	3/8" BSP	13	55375-XXX
	2" BSP	1/2" BSP	13	55376-XXX
	2" BSP	3/4" BSP	13	55377-XXX
	2" BSP	1/4" NPT	13	55369-XXX
	2" BSP	3/8" NPT	13	55370-XXX
	2" BSP	1/2" NPT	13	55371-XXX
	2" BSP	3/4" NPT	13	55372-XXX
	2" BSP	1/4" MP Autoclave	38	54116-XXX
	2" BSP	3/8" MP Autoclave	38	55873-XXX



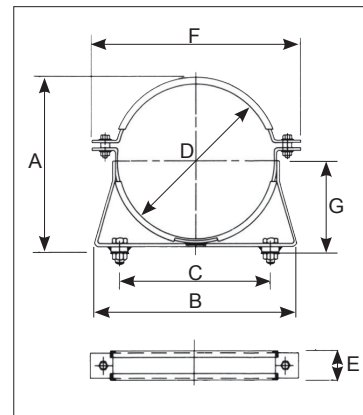
Note: Dimensions are based on current stock and are subject to change without prior notice.

Accessories

Clamps

Part Number	Accumulator Capacity (Litres)	Dimensions in mm				
		A	B	C	D	
11060-DEE	12 - 54 HP200	270	280	220	256 - 261	
		E	F	G (ref)	H	I
		40	345	140	10.5	10.5

Mounting Bolts: M10 x 50
 Mass: 2kg

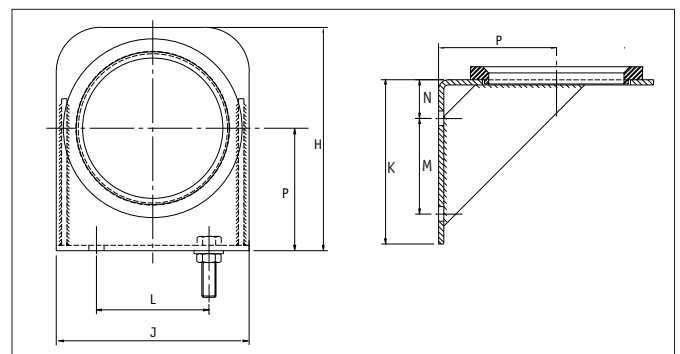


Brackets

Brackets are manufactured from carbon steel

Support bracket assembly (c/w cushion ring)
 Mounting bolts - M16 X 70

Spare cushion rings:
 10 to 54L part number: 48473-A00



Model Number	Accumulator Capacity (L)	Dimensions						
		H	J	K	L	M	N	P
11061	12 - 54	250	240	191	108	111	45	140

Mass: 7kg

Charging Sets

A charging set is an indispensable instrument for the verification, pressurization and nitrogen bleeding of most of the hydraulic accumulators available on the market. To use this unit, it is screwed on the gas charging valve of the accumulator and connected via a high pressure hose to the nitrogen source, equipped with a pressure regulator. If only the nitrogen pressure is to be controlled or reduced, this hose is not necessary.

Charging Sets (no case)

Specification

Part Number

10503 Composing:

- Carbon steel body
- Hose including fixed nitrogen adaptor (5/8" BSP Male)
- Bleed valve
- Pressure gauge
- Connection: 1/4" BSP male coned to suit hose assembly



Charging Hose: 11774
Maximum Working Pressure: 345 Bar
End Termination: 5/8" BSP male bullnose
Length: 2.5 metres



For assembly WITHOUT hose, part numbers become 10500-02, 10500-03 etc.

Part No	Pressure Range (bar)	Charging Set Contents		
		Pressure Gauge(s)		Charging Hose
		Pressure (bar)	Part No	
10500-02	0-25	0-25	45053-099	n/a
10500-03	0-60	0-60	45084-099	n/a
10500-04	0-160	0-160	45085-099	n/a
10500-05	0-250	0-250	45086-099	n/a
10500-07	0-400	0-400	45087-099	n/a
10503-02	0-25	0-25	45053-099	11774
10503-03	0-60	0-60	45084-099	11774
10503-04	0-160	0-160	45085-099	11774
10503-05	0-250	0-250	45086-099	11774
10503-07	0-400	0-400	45087-099	11774
10520-10	0-690	0-1000	45140-099	n/a
10523-10	0-690	0-1000	45140-099	55354-099

Optional Extras

Country	Part No.	Description
UK	50094-099	Nitrogen Cylinder Adaptor 1/4"BSP (M) x 5/8"BSP (M)
	50096-099	Charging Hose 1/4"BSP (F) 345 bar x 2.5m long 1/4"
	50097-099	both ends
	55354-099	Extension Adaptor for Charging Hose 345 bar
Accessories	50032-V10	Charging Hose Adaptor 1/4"BSP (M) x 1/4"NPT (F)
	43183	Charging Set Carrier Box
	10127	Charging Block Elbow 1/4"BSP (M)
	10128	Charging Block Elbow .302" x 32 TPI (M)
	11015	Tool Kit

Charging Kits (with case)

Specification

Universal Charging Set:

10691-XX Composing:

- Charging set body
- Pressure Gauge (refer to table below)
- 1 x Charging Hose (refer to table below)



Charging Hose: 50096-099
Maximum Working Pressure: 345 Bar
End Termination: 1/4" BSP female swivel
Length: 2.5 metres



Charging Hose: 54248-099
Maximum Working Pressure: 690 Bar
End Termination: 1/4" BSP female swivel
Length: 2.5 metres



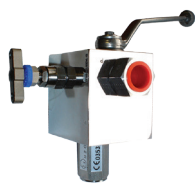
Part No	Pressure Range (bar)	Set/ Kit Contents			
		Pressure Gauge(s)		Charging Hose	Case
		Pressure (bar)	Part No		
10690-02	0-25	0-25	45053-099	50096-099	43183
10690-03	0-60	0-60	45084-099	50096-099	43183
10690-04	0-160	0-160	45085-099	50096-099	43183
10690-05	0-250	0-250	45086-099	50096-099	43183
10690-07	0-400	0-400	45087-099	50096-099	43183

10691-02	0-25	0-25	45053-099	11774	43183
10691-03	0-60	0-60	45084-099	11774	43183
10691-04	0-160	0-160	45085-099	11774	43183
10691-05	0-250	0-250	45086-099	11774	43183
10691-07	0-400	0-400	45087-099	11774	43183

10520-10	0-690	0-1000	45140-099	n/a	n/a
10693-10	0-690	0-1000	45140-099	54248-099	n/a
10694-10	0-690	0-1000	45140-099	n/a	43183
10692-10	0-690	0-1000	45140-099	54248-099	43183

Safety Blocks

Stainless Steel Safety Block (345 bar & 690 bar)



Materials: 316 Stainless steel. All blocks are fully tested.

Seals: Nitrile fitted as standard. Viton and other options also available.

Connections:

- Pressure gauge connection (M port).
- Wide range of adaptors for accumulator connection.
- All G threads (BSP) to BS2779 1986.
- For 760 bar only - All NPT to ANSI/ASME B.1.20.1 1983
- Performance data available.

Other:

- Pressure relief valve for the protection of accumulator.
- Manual dump to tank valve as standard.

Burst Discs and Permanent Charging Heads

Parker Olaer burst disc assemblies and/or permanent charging heads are available for most accumulators. For the Oil & Gas range of accumulators, we use a specially designed stainless steel adaptor which can be filled with gas volume, burst disc and pressure gauge in numerous combinations.

Burst discs are a safety device which releases the gas pressure independent of the pressure being caused by a fire or a failure of other safety equipment in the system. This is a secondary safety device, and it should be set higher than the normal hydraulic safety devices in the system.



Bladder Details

Bladder Kit

Comprises of:

- Bladder assembly (bladder, integral stem, gas valve, protective cap*, stem 'O' seal)
 - Anti-extrusion ring
 - 'O' fluid port ring
 - Back-up ring
 - Seal and bleed plug*
- *4 Litres capacity and above

Always quote full part number e.g. 5410A-00 54L, capacity, Butyl Rubber, 1/4" BSP.

Material According to Temperature Range

Material Code	Bladder Material	Temperature Range (°C)			
		Static		Dynamic	
0	Nitrile	-20	100	-15	100
1	Butyl	-15	120	-15	120
2	Low Temp Nitrile	-40	70	-25	70
3	Low Permeability Nitrile	0	105		
6	Fluorocarbon (Viton)	-20	130		
7	High Aromatic Nitrile	0	105		
8	High Temp Nitrile	0	150		
9	EPI - Chlorohydrin 100	-20	120		
A	Ethylene Propylene (EP)	-20	120		
B	EPI - Chlorohydrin 200	-40	120		
K	Special Low Temp Nitrile	-79	100	-59	100
L	Peroxide Cured EPDM	Please contact us for details			
M	High Temperature Fluorocarbon	-10	200		
N	Low Temp Nitrile	-45	70		

Note: Models 1/54 litres detailed above. Models 0.6 litres have Gas Valve assembly integral with bladder stem without protective cap fitted. * Not fitted on all models

Bladder Capacity / Overall Dimensions

Accumulator Capacity (L) Nominal	Dimension				
	H	D	5/8" (16mm)	7/8" (22mm)	2" (50mm)
0.16	154	41	•		
0.6	132	73	•		
1.15 (1.25)	147	91	•	•	
3	335	100	•	•	
4	203	142		•	
5	680	100		•	
6	305	142		•	
9 (10)	570	142		•	
12.5	655	142		•	
10	283	198		•	•
12	406	198			•
20	610	198		•	•
24.5	719	198			•
28	880	198		•	
37	1128	198		•	•
42	1280	198		•	
54	1603	198		•	•



Note: Dimensions are based on current stock and are subject to change without prior notice.

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