

LOW PRESSURE BLADDER ACCUMULATORS  
 HIGH PRESSURE BLADDER ACCUMULATORS  
 REGULATIONS  
 ANTI-CORROSION  
 BLADDER MATERIALS AND TYPES  
 PISTON ACCUMULATORS  
 ATTENUATORS  
 PULSATION DAMPERS  
 DIAPHRAGM ACCUMULATORS  
 CLAMPS  
 SUPPORT BRACKETS  
 MOUNTING FRAMES  
 CHARGING SET VGU  
 SAFETY BLOCKS  
 GAS BOTTLES



## Accumulators, Accessories and Spares Catalogue

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

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Bladder Accumulators	EBV
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	Regulations
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	ACP
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Pulsation Dampers	DC
	EHP
Attenuators	
Diaphragms	
Accessories	
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Accumulator Stations	
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# Introduction

Solutions developed by Parker Olaer are used in a large number of industrial sectors: aeronautics, chemistry, defence, mining, railway construction, Formula 1, machine tools, agriculture, oil and gas, metallurgy, renewable energies, etc.

This variety of applications requires extensive knowledge of the products and their major components, particularly the bladder. For either a standard application or design solutions for a specific requirement, Parker ACDE engineers have the experience in sizing and design.



We provide cost effective solutions based upon our customer's needs. Parker ACDE utilizes comprehensive tools and resources including an applications database, CAD/CAM, finite element analysis, reliability studies and sizing simulation software which enable us to optimize design and performance.

## Parker ACDE Paris (Colombes, France)

### Manufacture:

- Bladder Accumulators
  - EBV Series (Low pressure) up to 80 bar
  - EHV Series (High Pressure) up to 690 bar
- Diaphragm accumulators (ELM Series)
- Attenuators
- Accumulators for Aerospace and Motor Sport
- Accessories
- Accumulator Systems

Focus on: Industrial, Wind Power, Aerospace, Motor Sport  
Approvals: CE Approval (Europe), SELO approval (China) others under development.

## Parker ACDE Hellaby (Rotherham, UK)

### Manufacture:

- Crimped Piston Accumulators - ACP Series (275 bar < 20 Litres)
- Piston Accumulators
  - A Series (up to 350 bar)
  - AP Series (up to 350 bar)
  - EHP Series (up to 250 bar)
- Safety blocks
- Accessories

Focus on: Industrial & Mobile  
Approvals: CE Approval – others under development.



## **Parker ACDE Sandycroft (Chester, UK)**

### **Manufacture:**

- Bladder Accumulators
  - UK Series (up to 420 bar)
  - Oil & Gas Series (up to 760 bar)
- Piston Accumulators (up to 3000 bar)
- Pulsation Dampers
- Pressure Compensators
- Safety Blocks – Carbon Steel and Stainless Steel
- Accumulator Accessories & Systems

Focus on: Oil & Gas and bespoke Bladder & Piston Accumulators

Approvals: Large variety of approvals. Special pressure vessel approvals available.



## **Parker ACDE Leini (Turin, Italy)**

### **Manufacture:**

- Bladder Accumulators
  - EBV Series (Low pressure) up to 35 bar
  - EHV Series (High Pressure) up to 110 bar
- Piston Accumulators
- Piston / Bladder accumulator systems.
- Gas bottles

Focus on: Oil & Gas, Industrial, Special welded pressure vessels/tanks

Approvals: Large variety of approvals (PED & ASME most requested)

# General Information Accumulators

Olaer, pioneer of high pressure equipment, was founded in 1938 by Jean Mercier. Using his experience, passion for research and extensive knowledge of hydraulics in the demanding field of aeronautics, Mr. Mercier engineered the first gas loaded bladder accumulator. This has led to Olaer becoming the indisputable international leader in this field.

This variety of applications requires extensive knowledge of the products and their major components, particularly the bladder. In order to reinforce its position, Olaer is the co-owner of its main bladder supplier. For either a standard application or designing solutions for a specific requirement, Parker ACDE engineers have the experience in elastomers and knowledge of the latest technological developments in metal and composite shells. This allows Parker ACDE to propose reduced weight accumulators and other design innovations.



We provide cost effective solutions based upon our customer's needs. Parker ACDE utilizes comprehensive tools and resources including an applications database, CAD/CAM, finite element analysis, reliability studies and simulation software which enable us to optimize design and performance.

## Applications

The Parker ACDE gas loaded accumulator is an essential component for the optimum operation of a hydraulic circuit. In hydraulic circuits, the accumulator enables:

- **Energy Storage:** saves energy without loss and redistributes when required therefore reducing installed power.
- **Pressure compensation:** absorbs pressure spikes from pumps or other components to control pressure and flow-rates in a hydraulic circuit.
- **Volume Control:** absorbs fluid volume variations induced by temperature changes in a closed hydraulic circuit and maintains a rated pressure.
- **Maintains Fluid Flow Rate:** an accumulator can maintain the fluid flow rate in case of pump failure and can also be used as a mobile fluid reserve under pressure.
- **Emergency Energy Storage:** in case of failure of the main energy source, an accumulator can provide sufficient energy to complete an operation or to realize a full hydraulic cycle.
- **Prevents mixing of fluids:** Transfer of energy from a fluid to another fluid without any risk of mixing
- **Shock absorber:** suppresses shocks and vibrations in hydraulic systems of lifting vehicles (e.g. Forklift trucks) and maintains real suspension of the load on a gas spring.

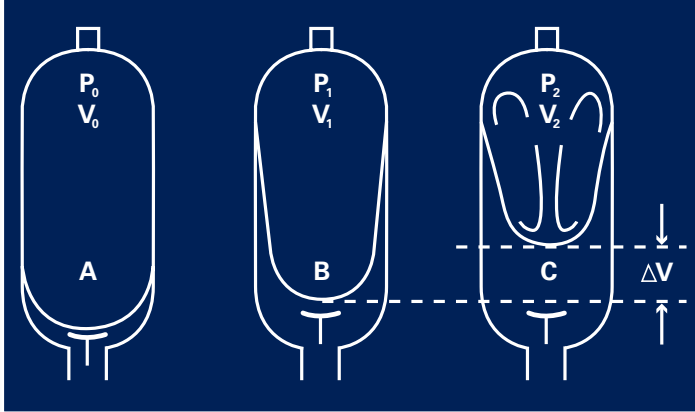
## Advantages/Your benefits

- **Reduction in working costs**
  - Energy reserve
  - Reduces installed electrical power
- **Increase lifetime of equipment**
  - Reduces pulsations
  - Protects against pressure peaks
- **Reduction in maintenance cost**
  - Reduces wear of hydraulic components
  - Requires minimum maintenance of the installation
- **Emergency Energy Back-up**
  - Energy reserve

# Operating Principle

Operation of the gas loaded bladder accumulator is based on the considerable difference in compressibility between a gas and a liquid, enabling a large quantity of energy to be stored in an extremely compact form. This enables a liquid under pressure to be accumulated, stored and recovered at any time.

## Bladder Accumulator



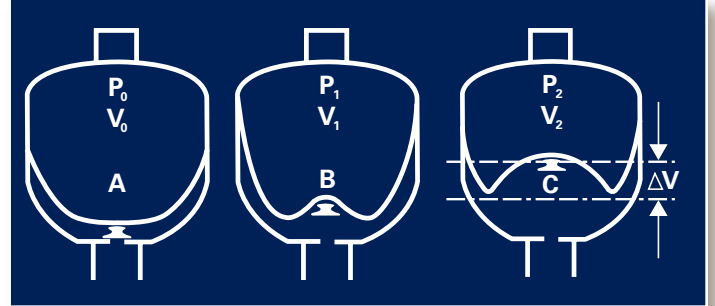
**A** - Bladder in the Pre-charge position, which means that the accumulator only contains nitrogen. The anti-extrusion system closes the hydraulic orifice which prevents the destruction of the bladder. In low pressure accumulators the bladder rests against the grid.

**Maximum pressure differential ( $P_2/P_0$ ): 4:1**

**B** - Position at the minimum operating pressure. There must be a certain amount of fluid between the bladder and the hydraulic orifice, such that the anti-extrusion system does not close the hydraulic orifice.

**C** - Position at the maximum operating pressure. The volume difference between the minimum and maximum positions of the operating pressures represents the working fluid quantity.

## Diaphragm Accumulator

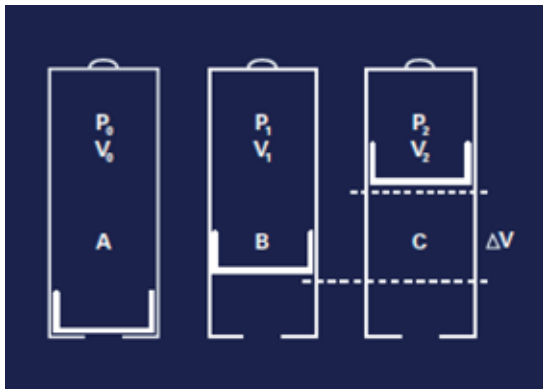


**A** - The diaphragm is in the Pre-charge position, which means that it is only filled with nitrogen. The knob closes the hydraulic orifice and prevents the destruction of the diaphragm.

**B** - Position at the minimum operating pressure : there must be a certain amount of fluid between the diaphragm and the hydraulic orifice, such that the knob does not close the hydraulic orifice. Thus,  $P_0$  must always be  $< P_1$ .

**C** - Position at the maximum operating pressure: the volume change  $\Delta V$  between the minimum and maximum positions of the operating pressures represents the fluid quantity stored.

## Piston Accumulator



When fluid under pressure enters the fluid side of the accumulator, the piston is pushed towards the gas side and the Nitrogen gas is compressed.

**V<sub>0</sub>** = Capacity in nitrogen of the accumulator  
**V<sub>1</sub>** = Gas volume at the minimum hydraulic pressure  
**V<sub>2</sub>** = Gas volume at the maximum hydraulic pressure  
**ΔV** = Returned and/or stored volume of working fluid between  $P_1$  and  $P_2$   
**P<sub>0</sub>** = Initial preload of the accumulator  
**P<sub>1</sub>** = Gas pressure at the minimum hydraulic pressure  
**P<sub>2</sub>** = Gas pressure at the maximum hydraulic pressure

# Technical Characteristics

Parker can offer a wide range of options for the 3 key accumulator technologies (bladder, piston and diaphragm) depending on the application where the product is used. Two of the most important parameters for selecting an accumulator are:

- The application
- The minimum and maximum operating temperature of the system.
- The fluid type in the system.

Shell material options include standard carbon steel, alloyed steel, stainless steel, aluminium, titanium and composites. The main requirement is that the material is suitable and approved for use in pressure vessels. The elastomers used are the key working components, and also where we have focused resources selecting the correct type and material.

Depending on the customer application, our engineers will choose the most optimum solution.

Taking into account the different needs of various applications Parker proposes different corrosion protections external or internal: bare metal, electroless nickel plating, standard primer, epoxy, paint, Rilsan.

# Regulations & Approvals

Parker designs and manufactures gas loaded accumulators for use in all countries, as well as other industry specific approvals including Oil & Gas, Naval and Nuclear. The main regulations in force are PED for European market, ASME for US market and SELO for Chinese market.

As a service, Parker Olaer can recommend the appropriate regulations applicable if customers know the country where the accumulator will be installed. When operating in dangerous and explosive environments, Parker has developed high-tech solutions. Some of these regulations call for the use of safety devices to protect the accumulator against over pressure. Solutions may include hydraulic safety blocks, relief valves or gas side safety devices such as burst discs and fuse plugs. Parker has designed and proposed a complete range of safety devices suitable for the applicable regulations.

To meet the needs of our customers, Parker can supply accumulators with multiple approvals. With regard to environmental concerns Parker's product range complies with REACH regulations. Each accumulator is delivered with the certificate of conformity. The website portal has been created and permits to find in any time these documents



**How to size**

# How to size?

## Accumulator Sizing Software

Parker Olaer has developed very sophisticated simulation software to optimise accumulator sizing recommendations. The behaviour of accumulators used in applications such as pulsation dampening, surge arrestor, thermal expansion and energy storage can be simulated. Our software can



You may also contact your local Parker Sales Company for sizing assistance.

The graph below is useful to estimate the size of an accumulator used to store or deliver a specific volume of liquid within a given pressure range. These curves are the graphic representation of an adiabatic cycle (fast cycling rate -  $N = 1.4$  perfect gas assumption) or isothermal cycle for an accumulator working at 20°C with a Pre-charge  $P_0 = 0,9 P_1$ .

They do not take into consideration the real gas compression correction factor, the real adiabatic coefficient and the polytropic rate of the application. Depending on the application data, the influence of these factors may be significant, and require that some calculations adjustments be made. The Parker Olaer simulation software takes all these factors into account.

**Sizing of an accumulator** to be installed in the following example conditions:

- P2 : Maximum available pressure : 210 Bar
- P1 : Minimum working pressure : 100 Bar
- P0 : Nitrogen Pre-charge : 90 Bar
- $\Delta V$  : Volume to be stored : 14L
- Condition : Isothermal (No temperature variation)

**A/Compression ratio**  $\infty = P_2/P_1 = 210/100 = 2,1$

**B/From the value 2,1** on the  $\infty$  axis, draw a vertical line that intersects the isothermal reference curve in A.

**C/From the value 14** on the  $\Delta V$  axis, draw a vertical line. The intersection point of this line with the horizontal line meeting A indicates a required accumulator size of 32 L.

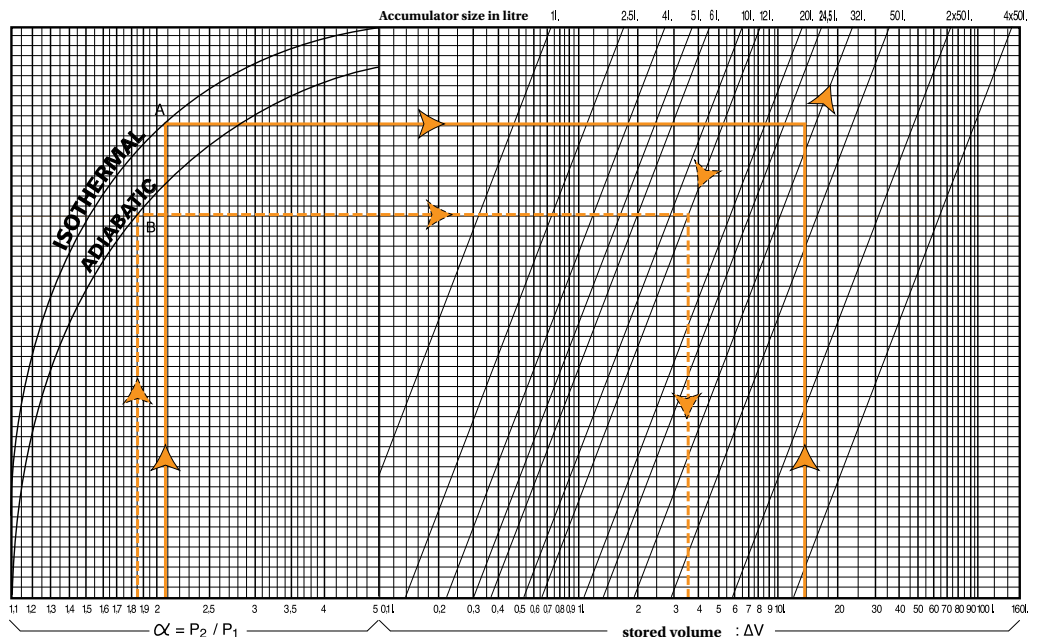
Calculation of the volume drawn off from an accumulator.  
 Accumulator size = 12 L

- P2 = 185 Bar; P1 = 100 Bar;
- P0 = 90 Bar; Adiabatic condition
- $\infty = P_2/P_1 = 185/100 = 1,85$
- $\Delta V$  : 3,5 litres

**\*Reminder**

**Isothermal:** The transformation is said to be isothermal when the compression or expansion of the gas occurs at a rate slow enough to allow a good thermal exchange, allowing the gas to remain at constant temperature.

**Adiabatic:** The transformation is said to be adiabatic when the cycle is quick and does not allow a temperature exchange with the ambient media.



**Basic sizing chart for accumulator used in energy storage.**



## Top Repairable Accumulators

This accumulator type can be serviced from both the fluid side or the gas side. The design utilizes many standard accumulator parts, but is unique in that it does not have to be removed from the system in order to change the bladder. This can in many applications be a great advantage. The gas end adaptor mechanically locks to prevent disassembly under pressure.



## High Flow Bladder Accumulators

Parker Olaer has several versions of bladder accumulators for high flow applications, depending on how high the flow requirements will be. The first step up from our standard is a high flow version with a 2" fluid port, where the internal geometrics of the port body and poppet valve are specifically designed for that purpose. The next step is a 2 1/2" fluid port which will provide even higher flows. For ultimate demands a 4" fluid port can also be provided. Please note that the last two solutions require shells with larger openings, and are not always available in all shell sizes. Parker Olaer can tailor-make the different parts to suit your technical needs.



## Transfer Barrier Accumulators

This range is a special adaptation of the bladder accumulator, with a pipe connected to the gas side of the accumulator. The most common application is to use the transfer accumulator in energy storage applications. The accumulator is connected to an additional volume of nitrogen, for example a gas cylinder. This increases the total volume of the system. Such systems are often mounted together in a battery or rack type installation.

A Transfer Barrier Accumulator can also be used to separate two liquids or a gas and liquid. It is usually a question of separating two liquids, one of which is aggressive or contaminated. To limit the number of parts in contact with the aggressive liquid, it is common practice to put the aggressive fluid inside the bladder and therefore connect on what is normally the gas side.

Dependant upon the accumulator volume, the displaced volume must not exceed 80% of the volume of the transfer accumulator.

# EBV Series Bladder Accumulators

EBV - ELG Series, up to 80 bar

## IN THIS SECTION

### Low Pressure - Carbon Steel

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EBV Series 100 to 575 Litres, 20 bar	16
EBV Series 100 to 575 Litres, 35 bar	18

### Low Pressure - Stainless Steel

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Bladder Accumulators	EBV
	EHV
Piston Accumulators	Regulations
	O&G
Pulsation Dampers	ACP
	A
	AP
	DC
	EHP
Attenuators	
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# EBV Series

## Technical Characteristics

The accumulator comprises a forged or welded steel shell, a rubber bladder and anti-extrusion system.

- Shell material options include alloyed steel, stainless steel, aluminium, titanium and composites.
- Various bladder materials available which are compatible with a wide range of fluids and temperatures.
- Anti-extrusion system: perforated bushing.

Item	Spare parts
1	Spare Parts Kit
2*	Bladder Assembly
3*	Valve nut
4*	Gas valve Assembly
5*	Snap ring
6*	Sealing ring
7*	Brushing assembly

\* These parts are delivered in the spare parts kit (complete repair kit)

In standard versions : steel shell, bladder and rings in nitrile for operation with mineral oils.

Others constructions protections and bladders mixes consult pages 66 & 67

Operating temperature : e.g working temperature determination following drawing

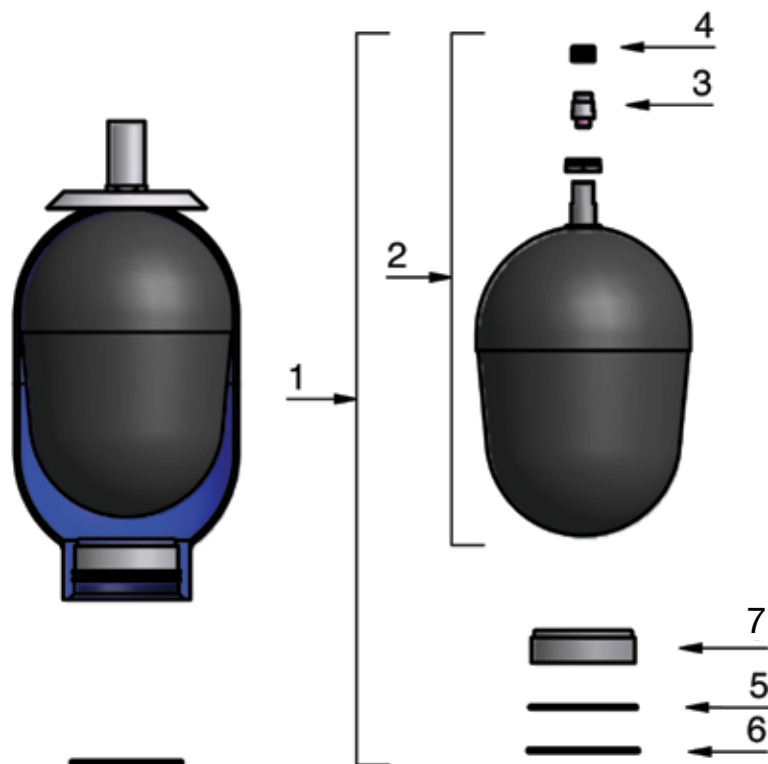
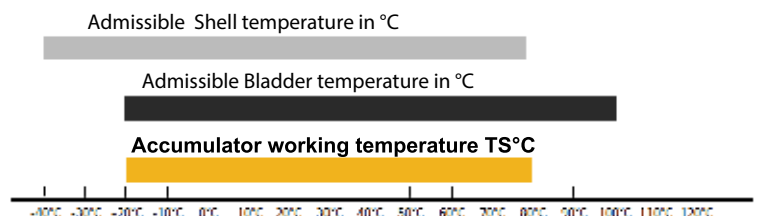
Special constructions : please consult Parker

Volume: from 0.5 to 575 Litres

Pressure: from 14 to 80 Bar

Nitrogen gas pressure : Never precharge accumulator at a pressure exceeding 20 bar at maximum working temperature with nitrogen purity > 99,8% N2

Accumulator working temperature determination example :



# EBV Series: How to order a low pressure accumulator

**EBV 10-40 /90-A25GA-200/020**

**Product Type**

EBV : Low pressure bladder  
 ETBV : Low pressure transfer bladder

**Volume in L (up to 4 Characters)**

0.5 - for 0,5 Liter  
 20 - for 20 Liters  
 100 - for 100 Liters

**Maximum Working Pressure According to CE\***

20 - for 20 bar max working pressure  
 40 - for 40 bar max working pressure  
 80 - for 80 bar max working pressure  
 \* - If the product is not CE, use highest MWP according to regulation relevant to the product (see Approvals 63&64)

**Approvals\***

00 - According to the PED2014/68/EU, article 4.3 for the volumes from 0.5 to 1L  
 48 - According ASME  
 71 - According CUIR 032/2013 \* (Please refer to Regulations Pages 64&65 )  
 86 - According CE/ASME/SELO  
 88 - According CE/SELO  
 90 - According to the PED  
 94 - According CE/ASME

**Material (Shell and Fluid Port)**

A - All parts in carbon steel with Epoxy paint for shell only (11)  
 B - Carbon Steel shell + Internal Protection Epoxy 80 µm + stainless steel fluid port and valve (20)  
 C - Carbon Steel shell + Int- Ext Protection Kanigen 50 µm + stainless steel fluid port and valve (50)  
 D - Carbon Steel shell + Int- Ext Protection Blue Rilsan 200-300 µm + carbon steel fluid port and valve (85)  
 E - Carbon Steel shell + stainless steel fluid port and valve (22)  
 F - Carbon steel shell + Internal Protection Teflon 40-50 µm (27)  
 I - All parts in stainless steel for range EBV  
 R - Carbon  
 Z - Special

**Bladder Mix**

02 - For Mix 02 [-32°C;+115°C] Hydrin C  
 10 - For Mix 10 [-28°C;+70°C] Nitrile Low Temperature  
 20 - For Mix 20 [-6°C;+110°C] Nitrile Heavy Duty  
 25 - For Mix 25 [-20°C;+100°C] Nitrile standard  
 30 - For Mix 30 [-5°C;+115°C] Nitrile Low Permeability  
 35 - For Mix 35 [0°C;+130°C] Nitrile high temperature  
 37 - For Mix 37 [-59°C;+110°C] Nitrile Extreme Low Temp  
 40 - For Mix 40 [-15°C;+120°C] Butyl  
 47 - For Mix 47 [-40°C;+120°C] EPDM  
 80 - For Mix 80 [-20°C;+140°C] Viton

**Fluid Port Configuration**

G - Gas cyl. 2" (max flow rate: 900L/min)  
 K - Gas cyl.2"(max flow rate : 450L/min )  
 L - Gas cyl.3"1/2  
 P - Metric M 205x3  
 Z - Special

**Gas Valve Configuration**

0 - No gas valve  
 A - Gas Valve Type - 5/8"- 18 UNF  
 B - Gas Valve Type - 7/8"- 14 UNF  
 C - Gas Valve Type- 7/8" -14 UNF integrated  
 D - Gas Valve Type - 5/8"- 18 UNF integrated  
 Z - Special

**Fluid Type**

0 - Not applicable  
 1 - Fluid Type 1 CE Fluid Group 1  
 2 - Fluid Type 2 - CE Fluid Group 2

**Special**

00 - No Special features or configuration  
 EX - ATEX  
 EZ - ATEX with other special configuration  
 EU - All components sourced in EU  
 SP - Special painting  
 D1 - Standard documentation + Leak test report  
 D2 - Standard documentation + Descriptive statement + Design calculation note  
 D3 - xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx  
 ZZ - Special configuration or several options

**Precharge @ 20°C in Bar**

When at storage pressure (Keep empty)  
 20 - From 0 to 20 Bar precharge MAXI example

# EBV Series 40, 50 & 80 bar, 0.5 to 200 Litres

Standard version (**Carbon Steel** shell/NBR mix) for mineral oils. According to PED 2014/68/EU(\*\*), Fluid Group 2

*Part numbers, Accessories, Dimensions*

Type	Valve	Pre-charge	Adaptor	Flange		Clamps	Support Bracket	Lifting Eye on gas side	Complete Repair KIT
Part number	see drawing	1 - 20 bar	Threaded	Model	Model	Model (quantity) Part number	Model Part number	Model Part number	Model Part number
EBV0.5-50/00-A25GD-200* 10383101125	D	751052	G 1" cyl 04557000223	1½" ANSI 150 lbs 04542000123		E95 (1) 20250803648			KIT EBV 0.5-50/00-A25GD 19002900225
EBV 1-80/00-A25GC-200* 10909801125	C	751053	G 1" cyl 04557000223	1½" ANSI 150 lbs 04542000123	1½" ANSI 300 lbs 04524100123	E114 (1) 20251003648	CE 89 20151903620		KIT EBV 1-80/00-A25GC 19044300225
EBV 2.5-80/90-A25GC-200 10909901125	C	751054	G 1" cyl 04557000223	1½" ANSI 150 lbs 04542000123	1½" ANSI 300 lbs 04524100123	E114 (2) 20251003648	CE 89 20151903620		KIT EBV 2.5-80/90-A25GC 19044400225
EBV 5-80/90-A25GC-200 10910001125	C	751056	G 1" cyl 04557000223	1½" ANSI 150 lbs 04542000123	1½" ANSI 300 lbs 04524100123	E114 (2) 20251003648	CE 89 20151903620		KIT EBV 5-80/90-A25GC 19044500225
EBV 10-40/90-A25LA-200 10910401125	A	751057	G 2" cyl 04570300223	4" ANSI 150 lbs 04500300123	4" ANSI 300 lbs 04520800123	D215 (2) 20251403648	CE 159A 20109003620	10912700200	KIT EBV 10-40/90-A25LA 19043900225
EBV 20-40/90-A25LA-200 10910501125	A	751058	G 2" cyl 04570300223	4" ANSI 150 lbs 04500300123	4" ANSI 300 lbs 04520800123	D215 (2) 20251403648	CE 159A 20109003620	10912700200	KIT EBV 20-40/90-A25LA 19044000225
EBV 32-40/90-A25LA-200 10910601125	A	751059	G 2" cyl 04570300223	4" ANSI 150 lbs 04500300123	4" ANSI 300 lbs 04520800123	D215 (2) 20251403648	CE 159A 20109003620	10912700200	KIT EBV 32-40/90-A25LA 19044100225
EBV 50-40/90-A25LA-200 11077501125	A	751060	G 2" cyl 04570300223	4" ANSI 150 lbs 04500300123	4" ANSI 300 lbs 04520800123	D215 (2) 20251403648	CE 159A 20109003620	10912700200	KIT EBV 50-40/90-A25LA 19054700225
EBV 100-40/90-A20PA-200 10918001120	A	751061		8" ANSI 150 lbs 04500800123	8" ANSI 300 lbs 04500900123	D368 (2) 20127403625	CE 300 20150800100		KIT EBV 100-40/90-A20PA 19044600220
EBV 200-40/90-A20PA-200 10918101120	A	751062		8" ANSI 150 lbs 04500800123	8" ANSI 300 lbs 04500900123	D368 (2) 20127403625	CE 300 20150800100		KIT EBV 200-40/90-A20PA 19044700220

Accumulators are delivered with the nitrogen pre-charge 3 bar.

The charging pressure for low pressure accumulators must never exceed **20 bar** at the maximum operating temperature.

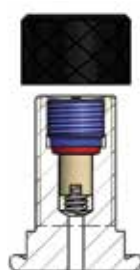
\* From 07/2016 PED 97/23/EC Article 3.3 becomes PED 2014/68/EU Article 4.3

\*\* From 07/2016 PED 97/23/EC becomes PED 2014/68/EU

Model of valve stem  
5/8" 18 UNF  
(A)



Model of valve stem  
integrated  
7/8"14 UNF  
(C)



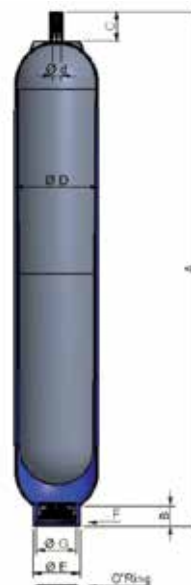
Model of valve stem  
integrated  
5/8" 18 UNF  
(D)



Type	Effective Gas vol. Litres	Max. Working pressure (PS) bar	Max. Flow Rate l/min	Admissible accumulator Temp. min/max °C (1)	Max. Weight kg	Gas Connection	Dimensions in mm							
							A max height	B	C	øD max	ød	øe	F on flats	G connection
EBV0.5-50/00-A25GD-200*	0.5	50	450	- 20/100	3	5/8" 18 UNF	245	52	28	90	16	68	-	G2"
EBV 1-80/00-A25GC-200*	1	80	450	- 20/100	5	7/8"14 UNF	310	47	66	116	22.5	68	-	G2"
EBV 2.5-80/90-A25GC-200	2.3	80	450	- 20/100	10	7/8"14 UNF	484	47	66	116	22.5	68	-	G2"
EBV 5-80/90-A25GC-200	5	80	450	- 20/100	17	7/8"14 UNF	867	47	66	116	22.5	68	-	G2"
EBV 10-40/90-A25LA-200	10	40	900	- 20/100	13	5/8" 18 UNF	454	51	75	212	22.5	120	112	G3½"
EBV 20-40/90-A25LA-200	18	40	900	- 20/100	22	5/8" 18 UNF	776	51	75	212	22.5	120	112	G3½"
EBV 32-40/90-A25LA-200	34	40	900	- 20/100	37	5/8" 18 UNF	1309	51	75	212	22.5	120	112	G3½"
EBV 50-40/90-A25LA-200	50	40	900	- 20/100	51	5/8" 18 UNF	1824	51	75	212	22.5	120	112	G3½"
EBV 100-40/90-A20PA-200	90	40	3000	- 6/110	124	5/8" 18 UNF	1318	158	93	371	80	224	-	M205x3
EBV 200-40/90-A20PA-200	202	40	3000	- 6/110	215	5/8" 18 UNF	2529	158	93	371	80	224	-	M205x3

(1)Temperature range can change depending on shell and elastomer material. Please see bladder materials and Type (page 67)

Above dimensions are in mm and are subject to manufacturing tolerances.



# EBV Series 20 bar, 100 to 575 Litres

Standard version (**Carbon Steel** shell/NBR mix) for mineral oils. According to PED 2014/68/EU(\*\*), Fluid Group 2

*Part numbers, Accessories, Dimensions*

Type	Pre-charge	Adaptor	Flange		Clamps	Support Bracket	Lifting Eye on gas side	Complete Repair Kit
Part number	Jan-20	Threaded Part number	Model Part number	Model Part number	Model (quantity) Unit Part number	Model Part number	Model Part number	Model Part number
EBV 100-20/90-A20LA-200 10962101120								KIT EBV 100-20/90-A20LA 19050400225
EBV 150-20/90-B20LA-200 10962201120								KIT EBV 150-20/90-B20LA 19050500225
EBV 200-20/90-A20LA-200 10962301120								KIT EBV 200-20/90-B20LA 19050600220
EBV 300-20/90-B30LA-200 10962401130								KIT EBV 300-20/90-B30LA 19050700230
EBV 375-20/90-A25LA-200 10962501125								KIT EBV 375-20/900-A25LA 19050800225
EBV 475-20/90-A25LA-200 10962601125								KIT EBV 475-20/90-A25LA 19050900225
EBV 530-20/90-A20LA-200 10962701125								KIT EBV 500-20/90-A25LA 19051000225
EBV 575-20/90-A20LA-200 10962801120								KIT EBV 575-20/90-A25LA 19051100220

Accumulators are delivered with the nitrogen pre-charge 3 bar.

The charging pressure for low pressure accumulators must never exceed 20 bar at the maximum operating temperature.

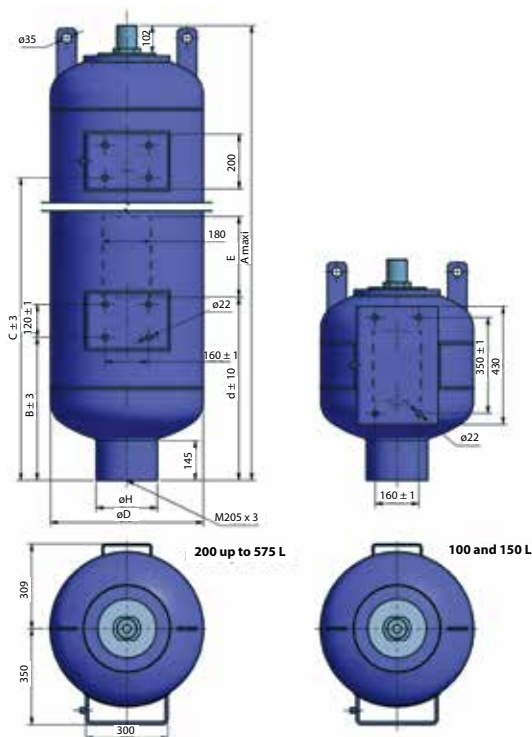
\*\* From 07/2016 PED 97/23/EC becomes PED 2014/68/EU

Model of valve stem  
5/8" 18 UNF  
(A)



Type	Effective Gas vol. Litres	Max. Working pressure (PS) bar	Max. Flow rate (l/mn)	Admissible accumulator Temp. min/ max °C (1)	Max Weight kg	Gas connection	Dimensions in mm							
							A max height	B	C	øD max	ød	øE	G connection	øH
EBV 100-20/90-A20LA-200	93	20	3000	- 6/80	145	5/8" 18 UNF	824	244	-	561	291.5	255	M205x3	224
EBV 150-20/90-B20LA-200	139	20	3000	- 6/80	170	5/8" 18 UNF	1027	345.5	-	561	373	295	M205x3	224
EBV 200-20/90-A20LA-200	207	20	3000	- 6/80	208	5/8" 18 UNF	1326	465	752	561	600	295	M205x3	224
EBV 300-20/90-B30LA-200	293	20	3000	- 5/80	253	5/8" 18 UNF	1702	522	1128	561	668	295	M205x3	224
EBV 375-20/90-A25LA-200	379	20	3000	- 20/80	300	5/8" 18 UNF	2083	522	1509	561	1049	295	M205x3	224
EBV 475-20/90-A25LA-200	473	20	3000	- 20/80	350	5/8" 18 UNF	2497	522	1923	561	1463	295	M205x3	224
EBV 530-20/90-A20LA-200	532	20	3000	- 20/80	380	5/8" 18 UNF	2756	522	2182	561	1722	295	M205x3	224
EBV 575-20/90-A20LA-200	565	20	3000	- 6/80	400	5/8" 18 UNF	2905	522	2231	561	1871	295	M205x3	224

(1) Temperature range can change depending on shell and elastomer material. Please see bladder materials and Type (page 67)





# IBV Series 35 bar, 100 to 575 Litres

Standard version (**Carbon Steel** shell/bladder for mineral oils)

According to ASME VIII Division I U STAMPED

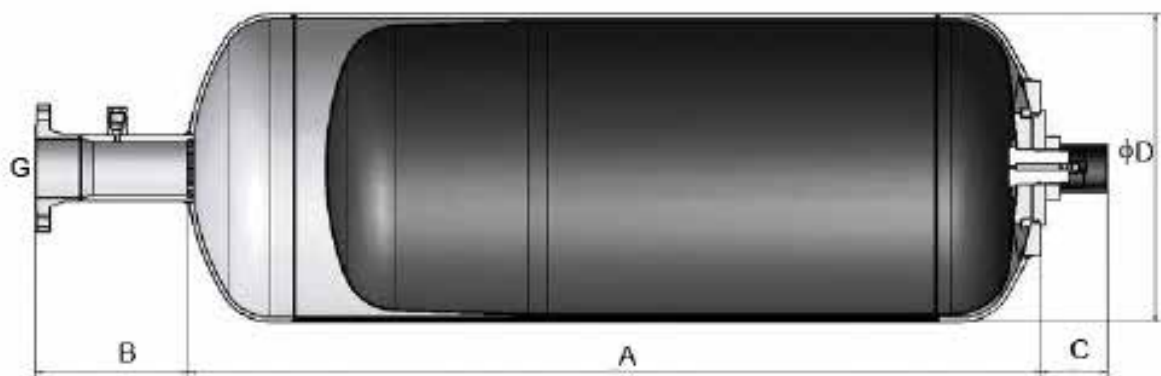
*Product Prices, Part numbers, Accessories, Dimensions*

Type Part Number	Flange	Complete Repair Kit
		Part number
IBV 100.35/90 J41000355419R25	Welded flange 4"#150RF other available upon request.	8590009-xxyy
IBV 150.35/90 J41500355419R25		8590010-xxyy
IBV 200.41/90 U22000415A25920		8590011-xxyy
IBV 300.35/90 J43000355419R25		8590013-xxyy
IBV 375.35/90 J43750355419R25		8590014-xxyy
IBV 475.35/90 J44750355419R25		8590015-xxyy
IBV 575.35/90 J45750355419R25		8590017-xxyy

Available in PED 2014/68/EU version Fluid Group 1 or 2

Available in stainless steel, Duplex and Superduplex

Type	Effective Gas vol. Litres	Max.Working pressure (PS) bar	Admissible accumulator Temp. min/max °C	Max Weight kg	Dimensions in mm				
					A max height	B	C	øD max	G connection
IBV 100.35/90	103	35	- 20°C +100°C	188	556	260	175	560	4"
IBV 150.35/90	154	35	- 20°C +100°C	220	759	260	175	560	4"
IBV 200.41/90	205	41	- 20°C +100°C	271	1058	260	175	560	4"
IBV 300.35/90	303	35	- 20°C +100°C	339	1448	260	175	560	4"
IBV 375.35/90	377	35	- 20°C +100°C	397	1815	260	175	560	4"
IBV 475.35/90	478	35	- 20°C +100°C	463	2230	260	175	560	4"
IBV 575.35/90	579	35	- 20°C +100°C	525	2638	260	175	560	4"



# IBV Series 14 bar, 10 to 50 Litres

Standard version (**Stainless Steel** shell/bladder for mineral oils).

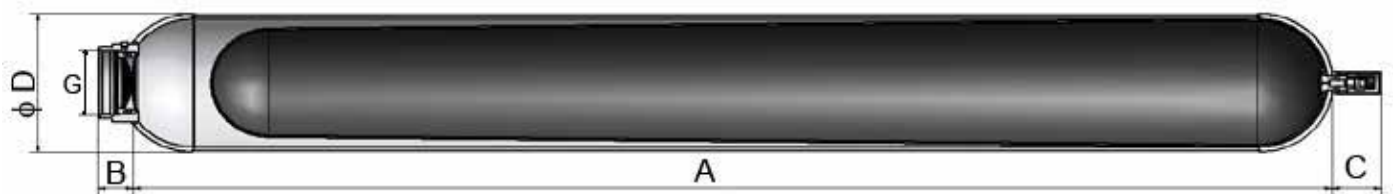
According to ASME VIII Division I U STAMPED

Type Part number	Adaptor	Flange	Clamps	Support Bracket	Complete Repair Kit
			Model (quantity) Unit Part number	Model Part number	Part number
IBV 10.14 J4010014500XR25	Various adaptors and flanges available <a href="#">Consult Division</a>		D215 (2) 20251403648	CE 159A 20109003620	8590001-xyxy
IBV 12.14 J4012014500XR25			D215 (2) 20251403648	CE 159A 20109003620	8590002-xyxy
IBV 20.14 J4020014500XR25			D215 (2) 20251403648	CE 159A 20109003620	
IBV 24,5.14 J4245014500XR25			20251403648	20109003620	8590004-xyxy
IBV 32.14 J4032014500XR25			D215 (2) 20251403648	CE 159A 20109003620	8590005-xyxy
IBV 50.14 J4050014500XR25			D215 (2) 20251403648	CE 159A 20109003620	8590006-xyxy

Available in PED 2014/68/EU version Fluid Group 1 or 2

Available in carbon steel, Duplex and Superduplex

Type	Effective Gas vol. Litres	Max.Working pressure (PS) bar	Admissible accumulator Temp. min/max °C	Max Weight kg	Dimensions in mm					
					A max height	B	C	øD max	G connection	Or fluid size
IBV 10.14	9	14	- 20/100	16	324	215	57	66	3"1/2	96x3
IBV 12.14	11	14	- 20/100	20	435	215	57	66	3"1/2	96x3
IBV 20.14	18	14	- 20/100	27	645	215	57	66	3"1/2	96x3
IBV 24,5.14	22.5	14	- 20/100	32	815	215	57	66	3"1/2	96x3
IBV 32.14	32	14	- 20/100	44	1180	215	57	66	3"1/2	96x3
IBV 50.14	48.5	14	- 20/100	62	1695	215	57	66	3"1/2	96x3



# IBV Series 14 bar, 100 and 200 Litres

Standard version (Stainless Steel shell/bladder for mineral oils)

According to ASME VIII Division I U STAMPED

*Product Prices, Part numbers, Accessories, Dimensions*

Type Part number	Adaptor	Flange	Clamps	Support Bracket	Complete Repair Kit
			Model (quantity) Part number	Model Part number	Part number
IBV 100.14 J41000146419H20	Various adaptors and flanges available		D368 (2) 20127403625	CE 300 20150800100	8590007-xyyy
IBV 200.14 J62000145419R25			D368 (2) 20127403625	CE 300 20150800100	8590008-xyyy

Available in PED 2014/68/EU version Fluid Group 1 or 2

Available in carbon steel, Duplex and Superduplex

Type	Effective Gas vol. Litres	Max. Working pressure (PS) bar	Admissible accumulator Temp. min/max °C	Max Weight kg	Dimensions in mm				
					A max height	B	øD max	G connection	Or fluid size
IBV 100.14	97	14	6/100	85	1215	95	368	M205x3	196 x 3
IBV 200.14	196.5	14	6/100	154	2427	95	368	M205x3	196 x 3



# IBV Series 14 bar, 100 to 575 Litres

Standard version (Stainless Steel shell/bladder for mineral oils).

According to ASME VIII Division I U STAMPED

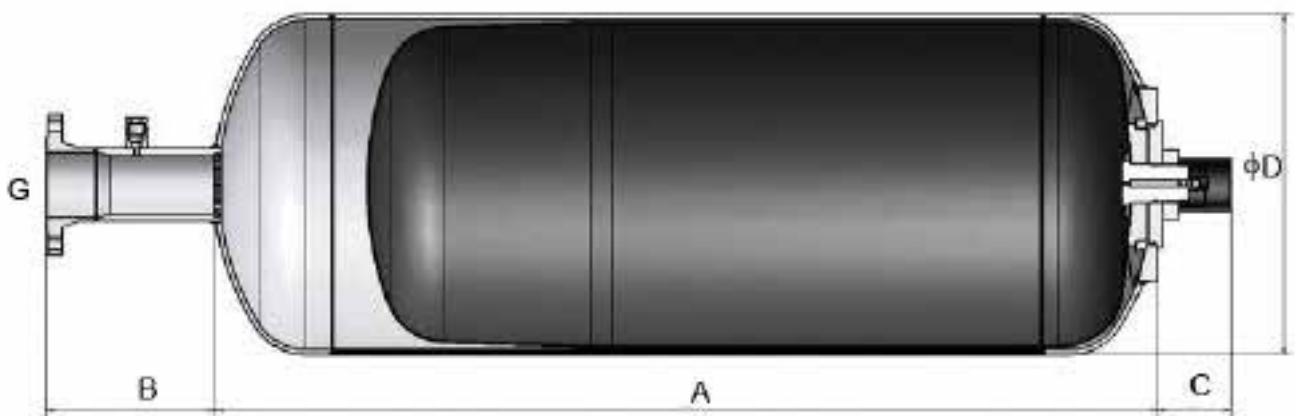
Product Prices, Part numbers, Accessories, Dimensions

Type Part number		Flange	Complete Repair Kit
			Part number
IBV 100.14 J41000145419R25	Welded flange 4"#150RF other available upon request. Consult Division		8590009-xyy
IBV 150.14 J41500145419R25		8590010-xyy	
IBV 200.14 J42000145419R25		8590011-xyy	
IBV 300.14 J43000145419R25		8590013-xyy	
IBV 375.14 J43750145419R25		8590014-xyy	
IBV 475.14 J44750145419R25		8590015-xyy	
IBV 575.14 J45750145419R25		8590017-xyy	

Accumulators shall be provided with Welded brackets or legs.

Available in PED 2014/68/EU version Fluid Group 1 or 2

Type	Effective Gas vol. Litres	Max. Working pressure (PS) bar	Admissible accumulator Temp. min/max °C	Max Weight kg	Dimensions in mm				
					A max height	B	C	øD max	G connection
IBV 100.14	103	14	-20/100	129	556	260	175	560	4"
IBV 150.14	154	14	-20/100	153	759	260	175	560	4"
IBV 200.14	205	14	-20/100	187	1058	260	175	560	4"
IBV 300.14	303	14	-20/100	234	1448	260	175	560	4"
IBV 375.14	377	14	-20/100	274	1815	260	175	560	4"
IBV 475.14	478	14	-20/100	320	2230	260	175	560	4"
IBV 575.14	579	14	-20/100	365	2638	260	175	560	4"





# EBV Series 20 & 40 bar, 0,5 to 200 Litres

Standard Version (Stainless Steel/NBR Mix). According to PED 2014/68/EU (\*\*), Fluid Group 2

*Product Prices, Part numbers, Accessories*

Type Part number	Valve	Pre-charge	Adaptor	Flange		Clamps	Support Bracket	Lifting Eye on gas side	Complete Repair Kit
	see drawing	1 - 20 bar	Threaded Part number	Model Part number	Model Part number	Model Part number	Model Part number	Model Part number	Model Part number
EBV0,5-40/00-I25GD-200* 10929001925	D	751052	G 1" cyl 04557001423	-	-	10957	-	-	KIT EBV 0.5-40/00-I25GD 19010401725
EBV 1-40/00-I25GC-200* 10929101925	C	751052	G 1" cyl 04557001423	1½" ANSI 150 lbs 04542001423	1½" ANSI 300 lbs 04524101423	10981	CE 89 20151901220	-	KIT EBV 1-40/00-I20GC 19044301720
EBV 2,5-40/90-I25GC-200 10929201925	C	751052	G 1" cyl 04557001423	1½" ANSI 150 lbs 04542001423	1½" ANSI 300 lbs 04524101423	10981	CE 89 20151901220	-	KIT EBV 2.5-40/90-I20GC 19044401720
EBV 5-40/90-I25GC-200 10929301925	C	751052	G 1" cyl 04557001423	1½" ANSI 150 lbs 04542001423	1½" ANSI 300 lbs 04524101423	10981	CE 89 20151901220	-	KIT EBV 5-40/90-I25GC 19044501725
EBV 10-40/90-I25LA-200 10910401925	A	751057	G 2" cyl 04570301423	4" ANSI 150 lbs 04500301423	4" ANSI 300 lbs 04520801423	-	CE 159A 20109001220	10912701200	KIT EBV 10-40/90-I25LA 19043901725
EBV 20-40/90-I25LA-200 10910501925	A	751058	G 2" cyl 04570301423	4" ANSI 150 lbs 04500301423	4" ANSI 300 lbs 04520801423	-	CE 159A 20109001220	10912701200	KIT EBV 20-40/90-I25LA 19044001725
EBV 32-40/90-I25LA-200 10910601925	A	751059	G 2" cyl 04570301423	4" ANSI 150 lbs 04500301423	4" ANSI 300 lbs 04520801423	-	CE 159A 20109001220	10912701200	KIT EBV 32-40/90-I25LA 19044101725
EBV 50-40/90-I25LA-200 11077501925	A	751060	G 2" cyl 04570301423	4" ANSI 150 lbs 04500301423	4" ANSI 300 lbs 04520801423	-	CE 159A 20109001220	10912701200	KIT EBV 50-40/90-I25LA 19054701725
EBV 100-20/90-I20PA-200 10951901920	A	751061	-	8" ANSI 150 lbs 04500801423	8" ANSI 300 lbs 04500901423	-	CE 300	-	KIT EBV 100-40/90-I20PA 19044601220
EBV 200-20/90-I20PA-200 10952001920	A	751062	-	8" ANSI 150 lbs 04500801423	8" ANSI 300 lbs 04500901423	-	CE 300	-	KIT EBV 200-40/90-I20PA 19044701220

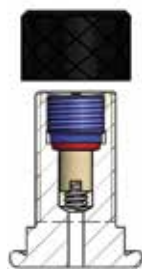
\* From 07/2016 PED 97/23/EC Article 3.3 becomes PED 2014/68/EU Article 4.3

\*\* From 07/2016 PED 97/23/EC becomes PED 2014/68/EU

Model of valve stem  
5/8" 18 UNF  
(A)



Model of valve stem  
integrated  
7/8"14 UNF  
(C)



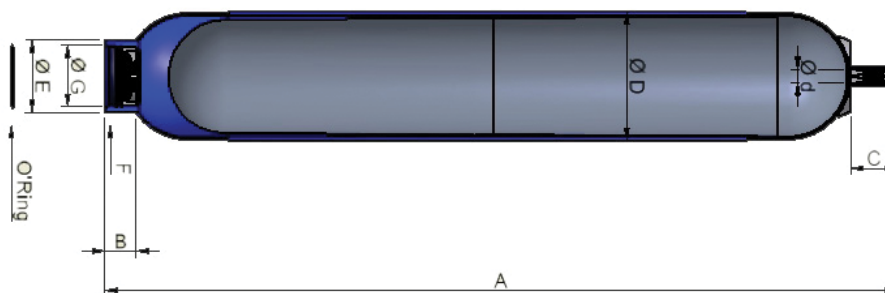
Model of valve stem  
integrated  
5/8" 18 UNF  
(D)



Type	Effective Gas volume Litres	Max. Working pressure (PS) bar	Max. Flow rate (l/ mn)	Admissible Accumulator Temp. min/max °C (1)	Max Weight kg	Gas connection	Dimensions in mm							
							A max height	B	C	øD max	ød	ØE	F on flats	G connection
EBV0,5-40/00-I25GD-200*	0.5	40	450	-6+110	1.2	5/8" 18 UNF	246	52	30	91	16	70	-	G2"
EBV 1-40/00-I25GC-200*	1	40	450	- 20/100	1.7	7/8" 14 UNF	312	52	75	110	22.5	70	-	G2"
EBV 2,5-40/90-I25GC-200	2.5	40	450	- 20/100	3.5	7/8" 14 UNF	486	51	75	110	22.5	70	-	G2"
EBV 5-40/90-I25GC-200	5	40	450	- 20/100	6.5	7/8" 14 UNF	869	51	75	110	22.5	70	-	G2"
EBV 10-40/90-I25LA-200	10	40	900	- 20/80	13	5/8" 18 UNF	454	51	75	212	22.5	120	112	G3½"
EBV 20-40/90-I25LA-200	18	40	900	- 20/80	22	5/8" 18 UNF	776	51	75	212	22.5	120	112	G3½"
EBV 32-40/90-I25LA-200	34	40	900	- 20/80	37	5/8" 18 UNF	1309	51	75	212	22.5	120	112	G3½"
EBV 50-40/90-I25LA-200	50	40	900	- 20/80	51	5/8" 18 UNF	1829	51	75	212	22.5	120	112	G3½"
EBV 100-20/90-I20PA-200	90	20	3000	- 6/80	92	5/8" 18 UNF	1317	158	93	371	80	224	-	M205 x 3
EBV 200-20/90-I20PA-200	202	20	3000	- 6/80	171	5/8" 18 UNF	2528	158	93	371	80	224	-	M205 x 3

(1)Temperature range can change depending on shell and elastomer material. Please see bladder materials and Type (page 67)

Above dimensions are in mm and are subject to manufacturing tolerances.



## Adaptors EBV Carbon Steel

Accumulator model	Connection of accumulator ø F	Connection ø I	Part Number
EBV 0,5 to 5 Litres 50 & 80 Bar	G 2"	G1"	04557000223
		Blind	04502400223
EBV 10 to 50 Litres 40 Bar	G 3 1/2"	G2"	04570300223
		Blind	04500500223
EBV 100 to 200 Litres 40 Bar	M205 x 3	G2"	04565600223
		Blind	04500600123

## Adaptors EBV Stainless Steel

Accumulator model	Connection of accumulator ø F	Connection ø I	Part Number
EBV 0,5 to 5 Litres 50 & 80 Bar	G 2"	G1"	04557001423
		Blind	04502401423
EBV 10 to 50 Litres 40 Bar	G 3 1/2"	G2"	04570301423
		Blind	04500501423
EBV 100 to 200 Litres 20 Bar	M205 x 3	G2"	04565601423
		Blind	04500601423

(1) 2 holes dia 8,5 x 10

## Flanges EBV Carbon Steel

Accumulator model	Connection of accumulator ø G	Flange Model	Part Number	K
EBV 1 to 5 Litres 40 Bar	G 2"	1 1/2" ANSI 150 lbs	04542000123	22
		1 1/2" ANSI 300 lbs	04524100123	25
EBV 10 to 50 Litres 40 Bar	G 3 1/2"	4" ANSI 150 lbs	04500300123	28
		4" ANSI 300 lbs	04520800123	37
EBV 100 to 575 Litres 40 Bar	M205 x 3	8" ANSI 150 lbs	04500800123	142
		8" ANSI 300 lbs	04500900123	151

## Flanges EBV Stainless Steel

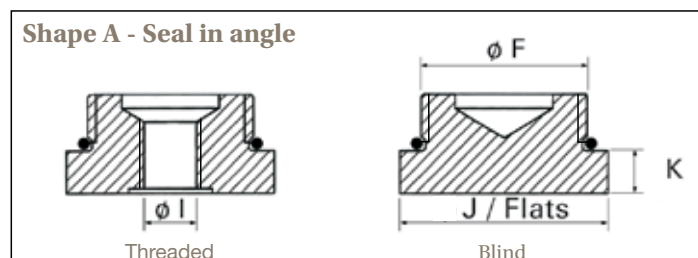
Accumulator model	Connection of accumulator ø G	Flange Model	Part Number	K
EBV 1 to 5 Litres 80 Bar	G 2"	1 1/2" ANSI 150 lbs	04542001423	22
		1 1/2" ANSI 300 lbs	04524101423	25
EBV 10 to 50 Litres 40 Bar	G 3 1/2"	4" ANSI 150 lbs	04500301423	28
		4" ANSI 300 lbs	04520801423	37

These accessories are designed to perfectly fit Parker ACDE accumulators. They meet the latest regulations and are compliant with the CETOP standard.

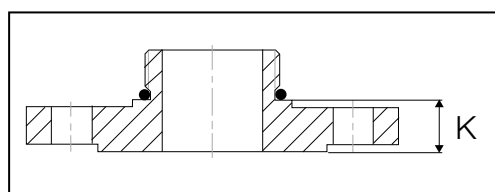
Shape	J/Flats	K	O-ring & Back-up Ring
A	65	13	A. O-Ring 54 x 3
A	65	13	O-Ring 54 x 3
A	112	20	O-Ring 96 x 4
A	112	20	O-Ring 96 x 4
A	2x Ø8,5x10	20	O-Ring 196,21 x 5,33
A	2x Ø8,5x10	20	O-Ring 196,21 x 5,33

Shape	J/Flats	K	O-ring & Back-up Ring
A	-	13	A. O-Ring 54 x 3
A	65	13	O-Ring 54 x 3
A	112	20	O-Ring 96 x 4
A	112	20	O-Ring 96 x 4
A	-	20	O-Ring 196,21 x 5,33
A	-	20	O-Ring 196,21 x 5,33

## Adaptors EBV



## Flanges EBV



These accessories are designed to perfectly fit Parker ACDE accumulators. They meet the latest regulations and are compliant with the CETOP standard.

# ELG and OLG Series, 20 & 50 bar

Standard Version (Steel shell or Stainless steel/ NBR mix) for mineral oils

According to PED 2014/68/EU(\*\*), EN 14359 Fluid Group 2

Product Prices, Part numbers, Accessories, Dimensions

Type Part number	Pre-charge	Clamps
	1 - 20 bar	Model (quantity) Part number
OLG 0.13-50/00 (1) 10268401925	751011	
OLG 1-20/00 (2) 10411901125	751053	E106 (1) 20250903648
ELG 4-20/90 3/4" (3) 10931201925	751012	E155 (1) 20251203648
ELG 4-20/90 2" (3) 10931301925	751012	E155 (1) 20251203648

(\*\*) From 07/2016 PED 97/23/EC Article 3.3 becomes PED 2014/68/EU

1) From 07/2016 PED 97/23/EC Article 3.3 becomes PED 2014/68/EU Article 4.3 stainless steel version

2) From 07/2016 PED 97/23/EC Article 3.3 becomes PED 2014/68/EU Article 4.3

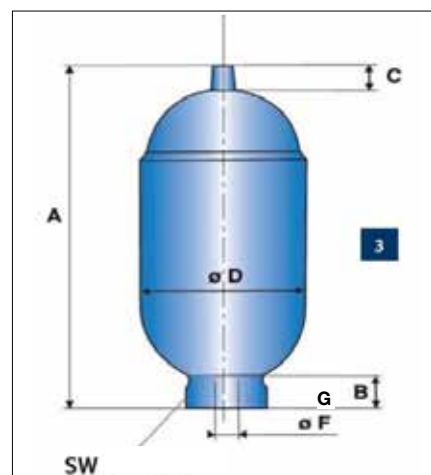
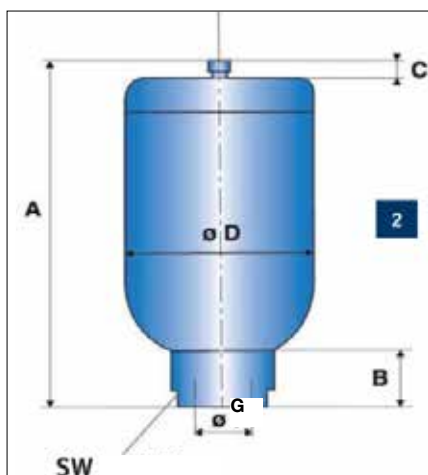
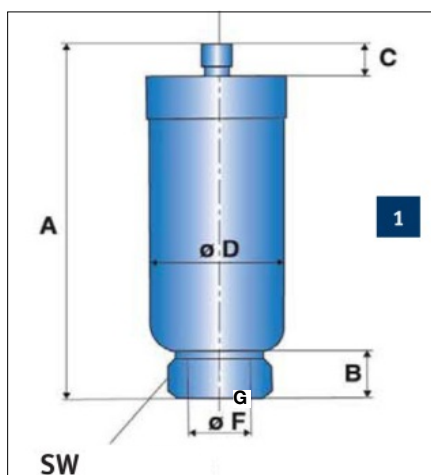
3) according to the PED 97/23/EC becomes PED 2014/68/EU stainless steel version

4) suitable with connection 3/4" gas cylinder.

Type	Effective Gas vol. Litres	Max. Working pressure (PS) bar	Admissible Accumulator Temp. min/ max °C (1)	Weight kg	Gas Connection	Dimensions in mm						
						A max height	B	C	øD max	ø Spot facing x depth	SW	G connection
OLG 0.13-50/00 (1)	01	50	- 15/100	0.30	8V1	136	16	13	50	33 x 0.5	6 flats 36 A/F	G 3/4" (4)
OLG 1-20/00 (2)	1	20	- 15/100	1.60	8V1	210	31	11	107	-	2 flats 46 A/F	G 1" (4)
ELG 4-20/90 3/4" (3)	3.8	20	- 15/100	3.50	8V1	337	28	16	155	73 x 1.5	2 flats 82 A/F	G 3/4" (4)
ELG 4-20/90 2" (3)	3.8	20	- 15/100	3.70	8V1	340	40	16	155	73 x 1.5	2 flats 82 A/F	G 2" (4)

Above dimensions are in mm and are subject to manufacturing tolerances.

**The charging pressure for low pressure accumulators must never exceed 20 bar at the maximum operating pressure**



# EHV Series Bladder Accumulators

High Pressure, 250 to 690 bar

## IN THIS SECTION

### High Pressure - Carbon Steel

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### High Pressure - Stainless Steel

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EHV Series 10 - 50 Litres, 110 bar	52
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Sizing Questionnaires	Accumulator Stations	Gas Bottles	Accessories	Diaphragms	Attenuators	Pulsation Dampers	Piston Accumulators				Bladder Accumulators		
							EHP	DC	AP	A	ACP	O&G	Regulations

# EHV Series: General Information Bladder Accumulators

## Technical Characteristics

The accumulator comprises a forged or welded steel shell, a rubber bladder and anti-extrusion system.

- Shell material options include alloyed steel, stainless steel, aluminium, titanium and composites.
- Various bladder materials available which are compatible with a wide range of fluids and temperatures.
- Anti-extrusion system: perforated bushing.

**In standard versions** : steel shell, bladder and rings in nitrile for operation with mineral oils.

Others constructions protections and bladders mixes consult pages 64 & 65

**Operating temperature** : e.g working temperature determination following drawing

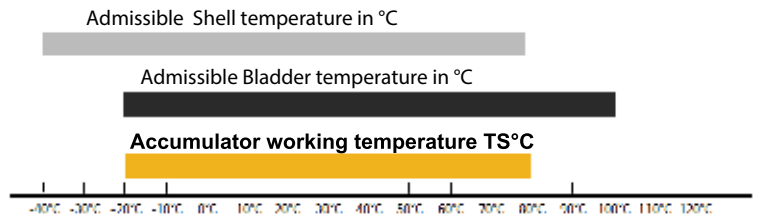
**Volume**: from 0.2 to 57 Litres

**Pressure**: from 70 to 690 Bars

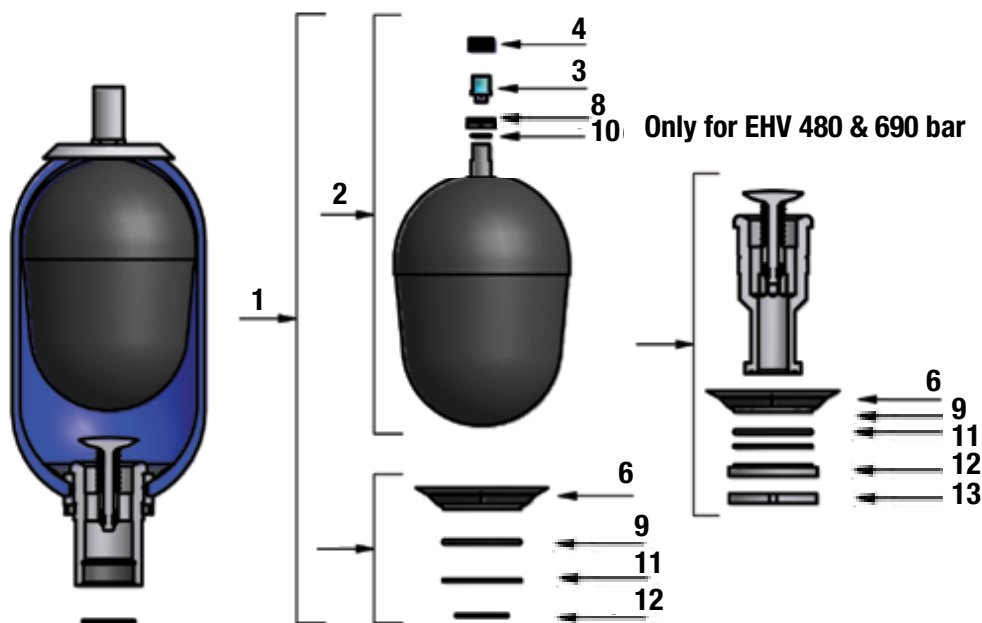
**Nitrogen gas pressure** : The maximum pressure (PS) with nitrogen purity > 99.8% N<sub>2</sub>, is indicated on the accumulator. Check that the maximum allowable pressure is greater than that of the hydraulic system.

Item	Spare parts
1	Spare Parts Kit
2*	Bladder Assembly
3*	Valve nut
4*	Gas valve Assembly
5*	Snap ring
6*	Sealing ring
7*	Brushing assembly
8*	Valve nut
9*	Fluid port seal
10*	Back up ring (depending on the model)
11*	Seal
12	Spacer
13	Locking nut

Accumulator working temperature determination example :



\* These parts are delivered in the spare parts kit (complete repair kit)



# EHV Series: How to order a high pressure accumulator

**EHV 24,5- 330 /90-A25GA-200/100**

**Product Type**

- EHV High pressure bladder
- ETHV High pressure transfer bladder
- EHVF High pressure bladder flanger

**Volume in L (up to 4 Characters)**

- 0,2 for 0,5 Liter
- 20 for 20 Liters
- 24,5 for 24.5 Liters

**Maximum Working Pressure**

- 120 for 120 bar max working pressure (stainless steel range)
- 330 for 330 bar max working pressure
- 350 for 350 bar max working pressure
- 690 for 690 bar max working pressure

\*If the product is not CE, use highest MWP according to regulation relevant to the product (see Approvals PAGES 64&65)

**Approvals\***

- 0 According to the PED2014/68/EU, article 4.3 for the volumes from 0.5 to 1L
- 48 According ASME
- 71 According CUTR 032/2013
- 86 According CE/ASME/SELO
- 88 According CE/SELO
- 90 According to the PED 2014/68/EU
- 94 According CE/ASME
- \* (Please refer to Approvals PAGES 63&64 )

**Material (Shell and Fluid Port)**

- A All parts in carbon steel with Epoxy paint for shell only
- B Carbon Steel shell + Internal Protection Epoxy 80 µm + stainless steel fluid port and valve
- C Carbon Steel shell + Int- Ext Protection Kanigen 50 µm + stainless steel fluid port and valve
- D Carbon Steel shell + Int- Ext Protection Blue Rilsan 200-300 µm + carbon steel fluid port and valve
- E Carbon Steel shell + stainless steel fluid port and valve
- F Carbon steel shell + Internal Protection Teflon 40-50 µm
- I All parts in stainless steel
- R Carbon Steel shell + Int- Ext Protection Blue Rilsan 200-300 µ + stainless steel fluid port and valve
- Z Special

**Bladder Mix**

- 2 For Mix 02 [-32°C;+115°C] Hydrin C
- 10 For Mix 20 [-6°C;+110°C] Nitrile Heavy Duty
- 20 For Mix 10 [-28°C;+70°C] Nitrile Low Temperature
- 25 For Mix 25 [-20°C;+100°C] Nitrile standard
- 30 For Mix 30 [-5°C;+115°C] Nitrile Low Permeability
- 35 For Mix 35 [0°C;+130°C] Nitrile high temperature
- 37 For Mix 37 [-59°C;+110°C] Nitrile Extreme Low Temp
- 40 For Mix 40 [-15°C;+120°C] Butyl
- 47 For Mix 47 [-40°C;+120°C] EPDM
- 80 For Mix 80 [-20°C;+140°C] Viton

**Fluid Port Configuration**

- |  |  |  |
|--|--|--|
| A Gas cyl. 1/2" (max flow rate: 120L/min       | G Gas cyl. 2" (max flow rate: 900L/min)        | R Flange BR 400-38 (max flow rate: 900L/min, EHV 10L to 57L)   |
| B Gas cyl. 3/4" (max flow rate: 240L/min       | H Gas cyl.2" DA (max flow rate: 1200L/min)     | S Flange BR 400-25 (max flow rate: 450L/min, EHV 2,5L to 10L ) |
| C Gas cyl. 1" (max flow rate: 360L/min         | J Gas cyl.2" 1/2 GD (max flow rate 1800 L/min) | Z Special  |
| D Gas cyl. 1" 1/4" (max flow rate: 450L/min    | M Metric M40 x1.5                              |  |
| E Gas cyl. 1" 1/4" DA (max flow rate: 570L/min | N Metric M50 x1.5                              |  |

**Gas Valve Configuration**

- |  |   |
|--|---|
| 0 No gas valve                               | F Gas Valve Type - 5/8" - 18 UNF + Burst disc             |
| A Gas Valve Type - 5/8" - 18 UNF             | G Gas Valve Type - 7/8" - 14 UNF + Burst disc             |
| B Gas Valve Type - 7/8" - 14 UNF             | H Gas Valve Type- 7/8" -14 UNF integrated + Burst disc    |
| C Gas Valve Type- 7/8" -14 UNF integrated    | I Gas Valve Type - 5/8" - 18 UNF integrated + Burst disc  |
| D Gas Valve Type - 5/8" - 18 UNF integrated  | J Gas Valve Type- 7/8" -14 UNF high pressure + Burst disc |
| E Gas Valve Type- 7/8" -14 UNF high pressure | Z Special   |

**Fluid Type**

- 0 Not applicable
- 1 Fluid Type 1 CE Fluid Group 1
- 2 Fluid Type 2 - CE Fluid Group 2

**Special**

- |  |   |  |
|--|---|--|
| 00 No Special features or configuration  | D1 Standard documentation + Leak test report                                | <i>ASME certified accumulator according to ASME VIII Div.1 :</i> |
| EX ATEX                                  | D2 Standard documentation + Descriptive statement + Design calculation note |  |
| EZ ATEX with other special configuration | ZZ Special configuration or several options                                 |  |
| EU All components sourced in EU          |   |  |
| SP Special painting                      |   |  |
- 30 MWP = 3000 psi (207 bar)
  - 36 MWP = 3600 psi (248 bar)
  - 40 MWP = 4000 psi (276 bar)
  - 50 MWP = 5000 psi (345 bar)

**Precharge @ 20°C in Bar**

When at storage pressure (Keep empty)

**100** When at storage (keep empty) example for 100 Bar precharge



# EHV Series 330 bar, 10 to 57 Litres

Standard version (Carbon Steel shell/NBR mix) for mineral oils.

According to PED 2014/68/EU (\*\*), EN 14359 Fluid Group 2

Product Prices, Part numbers, Accessories

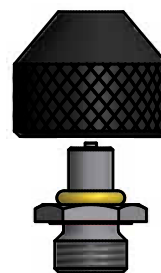
Type Part number	Valve	Pre-charge			Adaptor	Clamps	Support Bracket	Mounting Frame	Lifting Eye on gas side	Complete Repair Kit
	see drawing	1 - 109 bar	110 - 209 bar	210 - 300 bar	Threaded Part number	Model (quantity) Part number	Model Part number	Model Part number	Model Part number	Model Part number
EHV 10-330/90-A25GA-200 10837001125	A				G 1" cyl	D226 (2)	CE159A	EF2		KIT EHV 10-330/90-A25GA 19028900225
EHV 10-330/90-A25GB-200 10865401125	B	751016	751023	751038	04557000223	20251503648	20109003620	20217600125	10912700200	KIT EHV 10-330/90-A25GB 19035800225
EHV 12-330/90-A25GA-200 10867101125	A				G 1" cyl	D226 (2)	CE159A	EF2		KIT EHV 12-330/90-A25GA 19032100225
EHV 12-330/90-A25GB-200 10867401125	B	751016	751023	751038	04557000223	20251503648	20109003620	20217600125	10912700200	KIT EHV 12-330/90-A25GB 19035900225
EHV 20-330/90-A25GA-200 10837101125	A				G 1" cyl	D226 (2)	CE159A	EF2		KIT EHV 20-330/90-A25GA 19029000225
EHV 20-330/90-A25GB-200 10865501125	B	751005	751024	751039	04557000223	20251503648	20109003620	20217600125	10912700200	KIT EHV 20-330/90-A25GB 19036000225
EHV 24.5-330/90-A25GA-200 10837201125	A				G 1" cyl	D226 (2)	CE159A	EF2		KIT EHV 24.5-330/90-A25GA 19029400225
EHV 24.5-330/90-A25GB-200 10865601125	B	751017	751025	751040	04557000223	20251503648	20109003620	20217600125	10912700200	KIT EHV 24.5-330/90-A25GB 19036300225
EHV 32-330/90-A25GA-200 10837301125	A				G 1" cyl	D226 (2)	CE159A	EF3		KIT EHV 32-330/90-A25GA 19029100225
EHV 32-330/90-A25GB-200 10865701125	B	751006	751026	751041	04557000223	20251503648	20109003620	20217700125	10912700200	KIT EHV 32-330/90-A25GB 19036100225
EHV 42-330/90-A25GA-200 11112301125	A				G 1" cyl	D226 (2)	CE159A	EF3		KIT EHV 42-330/90-A25GA 19060800225
EHV 42-330/90-A25GB-200 11123601125	B	751212	751213	751214	04557000223	20251503648	20109003620	20217700125	10912700200	KIT EHV 42-330/90-A25GB 19061100225
EHV 50-330/90-A25GA-200 11076701125	A				G 1" cyl	D226 (2)	CE159A	EF3		KIT EHV 50-330/90-A25GA 19054100225
EHV 50-330/90-A25GB-200 11076801125	B	751007	751027	751042	04557000223	20251503648	20109003620	20217700125	10912700200	KIT EHV 50-330/90-A25GB 19054200225
EHV 57-330/90-A25GA-200 11112401125	A				G 1" cyl	D226 (2)	CE159A	EF3		KIT EHV 57-330/90-A25GA 19060900225
EHV 57-330/90-A25GB-200 11123801125	B	751215	751216	751217	04557000223	20251503648	20109003620	20217700125	10912700200	KIT EHV 57-330/90-A25GB 19061200225

\*For more adaptor options see page 58

\*\* From 07/2016 PED 97/23/EC becomes PED 2014/68/EU

Model of valve stem  
5/8" 18 UNF  
(A)

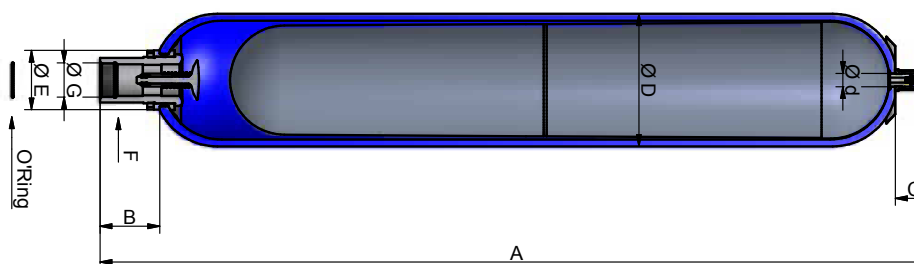
Model of valve stem  
7/8" 14 UNF  
(B)



Type	Effective Gas vol. Litres	Max. Working pressure (PS) bar	Max Flow Rate l/min	Admissible Accumulator Temperature min/max (°C) (1)	Weight kg	Gas connection	Dimensions in mm							
							A max Height	B	C	øD	ød	øE	F on flats	G connection
EHV 10-330/90-A25GA	9.2	330	900	-20/+80	31	5/8" 18 UNF	587	103	66	226	22.5	101	70	G2"
EHV 10-330/90-A25GB						7/8" 14 UNF								
EHV 12-330/90-A25GA	11	330	900	-20/+80	36	5/8" 18 UNF	687	103	66	226	22.5	101	70	G2"
EHV 12-330/90-A25GB						7/8" 14 UNF								
EHV 20-330/90-A25GA	17.8	330	900	-20/+80	49	5/8" 18 UNF	897	103	66	226	22.5	101	70	G2"
EHV 20-330/90-A25GB						7/8" 14 UNF								
EHV 24.5-330/90-A25GA	22.5	330	900	-20/+80	56	5/8" 18 UNF	1032	103	66	226	22.5	101	70	G2"
EHV 24.5-330/90-A25GB						7/8" 14 UNF								
EHV 32-330/90-A25GA	32	330	900	-20/+80	81	5/8" 18 UNF	1420	103	66	226	22.5	101	70	G2"
EHV 32-330/90-A25GB						7/8" 14 UNF								
EHV 42-330/90-A25GA	42	330	900	-20/+80	87	5/8" 18 UNF	1562	103	66	226	22.5	101	70	G2"
EHV 42-330/90-A25GB						7/8" 14 UNF								
EHV 50-330/90-A25GA	48.5	330	900	-20/+80	110	5/8" 18 UNF	1936	103	66	226	22.5	101	70	G2"
EHV 50-330/90-A25GB						7/8" 14 UNF								
EHV 57-330/90-A25GA	51	330	900	-20/+80	116	5/8" 18 UNF	2032	103	66	226	22.5	101	70	G2"
EHV 57-330/90-A25GB						7/8" 14 UNF								

(1) Temperature range can change depending on shell and elastomer material. Please see bladder materials and Type (page 67)

Above dimensions are in mm and are subject to manufacturing tolerances.



# EHV Series 350 bar, 0.2 to 10 Litres

Standard Version (Carbon Steel shell/NBR mix) for mineral oils.

According to PED 2014/68/EU (\*\*), EN 14359, Fluid Group 2

Product Prices, Part numbers, Accessories

Type Part number	Valve see drawing	Pre-charge			Adaptor Threaded Part number	Clamps Model (quantity) Part number	Support Bracket Model Part number	Mounting Frame Model Part number	Lifting Eye on gas side Model Part number	Complete Repair Kit Model Part number
		1 - 109 bar	110 - 209 bar	210 - 300 bar						
EHV 0.2-350/00-A20AD-200* 10876301120	D	751013	751028	751043	G 1/4" cyl 4556500223	A56 (1) 20149203625				KIT EHV 0.2-350/00-A20AD 19001000220
EHV 0.5-350/00-A25BD-200* 10876401125	D	751000	751029	751044	G 3/8" cyl 4556400223	E95 (1) 20250803648				KIT EHV 0.5-350/00-A25BD 19001100225
EHV 1-350/00-A25BC-200* 10845601125	C				G 3/8" cyl	E114 (1)	CE 89			KIT EHV 1-350/00-A25BC 19029700225
EHV 1-350/00-A25BB-200* 10866901125	B	751001	751030	751045	04556400223	20251003648	20151903620			KIT EHV 1-350/00-A25BB 19036400225
EHV 1.6-350/90-A25BC-200 10998301125	C				G 3/8" cyl	E114 (1)	CE 89			KIT EHV 1.6-350/90-A25BC 19060700225
EHV 1.6-350/90-A25BB-200 11123501125	B	751014	751019	751034	04556400223	20251003648	20151903620			KIT EHV 1.6-350/90-A25BB 19061000225
EHV 2.5-350/90-A25DC-200 10854701125	C				G 3/4" cyl	E114 (2)	CE 89			KIT EHV 2.5-350/90-A25DC 19029800225
EHV 2.5-350/90-A25DB-200 10866601125	B	751002	751031	751046	04555200223	20251003648	20151903620	10912700200		KIT EHV 2.5-350/90-A25DB 19036500225
EHV 4-350/90-A25DC-200 10845401125	C				G 3/4" cyl	E168 (1)	CE108	EF1		KIT EHV 4-350/90-A25DC 19029900225
EHV 4-350/90-A25DB-200 10866101125	B	751012	751020	751035	04555200223	20251303648	20118703620	20217500125	10912700200	KIT EHV 4-350/90-A25DB 19036600225
EHV 5-350/90-A25DC-200 10861201125					G 3/4" cyl	E114 (2)	CE 89			KIT EHV 5-350/90-A25DC 19030000225
EHV 5-350/90-A25DB-200 10866701125	B	751003	751032	751047	04555200223	20251003648	20151903620	10912700200		KIT EHV 5-350/90-A25DB 19036700225
EHV 6-350/90-A25DC-200 10857401125	C				G 3/4" cyl	E168 (2)	CE108	EF1		KIT EHV 6-350/90-A25DC 19030100225
EHV 6-350/90-A25DB-200 10866201125	B	751015	751021	751036	04555200223	20251303648	20118703620	20217500125	10912700200	KIT EHV 6-350/90-A25DB 19036800225
EHV 10-350/90-A25DC-200 10859701125	C				G 3/4" cyl	E168 (2)	CE108	EF1		KIT EHV 10-350/90-A25DC 19030200225
EHV 10-350/90-A25DB-200 10866301125	B	751004	751022	751037	04555200223	20251303648	20118703620	20217500125	10912700200	KIT EHV 10-350/90-A25DB 19036900225

\* From 07/2016 PED 97/23/EC Article 3.3 becomes PED 2014/68/EU Article 4.3

\*\* From 07/2016 PED 97/23/EC becomes PED 2014/68/EU

\*\*\* For more adaptor options see page 58.

Model of valve stem  
7/8" 14 UNF  
(B)



Model of valve stem  
integrated  
7/8" 14 UNF  
(C)



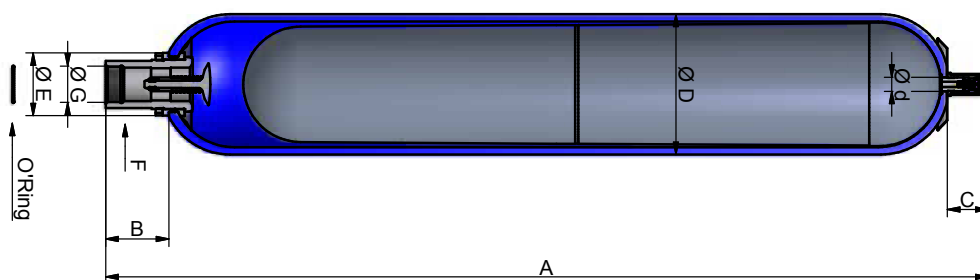
Model of valve stem  
integrated  
5/8" 18 UNF  
(D)



Type Part number	Effective Gas vol. Litres	Max. Working pressure (PS) bar	Max Flow Rate l/min	Admissible Accumulator Temperature min/max (°C) (1)	Weight kg	Gas connection	Dimensions in mm							
							A max Height	B	C	øD	ød	øE	F on flats	G connection
EHV 0.2-350/00-A20AD-200* 10876301120	0.17	350	120	- 6/+80	2.5	5/8" 18 UNF	268	38	27	58	16	39	24	G 1/2"
EHV 0.5-350/00-A25BD-200* 10876401125	0.6	350	240	- 20/+80	3	5/8" 18 UNF	260	54	27	91	16	50	32	G 3/4"
EHV 1-350/00-A25BC-200* 10845601125	1	350	240	- 20/+80	6	7/8" 14 UNF	330	54	66	116	22.5	50	32	G 3/4"
EHV 1-350/00-A25BB-200* 10866901125						7/8" 14 UNF								
EHV 1.6-350/90-A25BC-200 10998301125	1.6	350	240	- 20/+80	8	7/8" 14 UNF	442	54	66	116	22.5	50	32	G 3/4"
EHV 1.6-350/90-A25BB-200 11123501125						7/8" 14 UNF								
EHV 2.5-350/90-A25DC-200 10854701125	2	350	450	- 20/+80	11	7/8" 14 UNF	549	66	66	116	22.5	68	50	G 1 1/4"
EHV 2.5-350/90-A25DB-200 10866601125						7/8" 14 UNF								
EHV 4-350/90-A25DC-200 10845401125	3.7	350	450	- 20/+80	15	7/8" 14 UNF	434	65	66	170	22.5	68	50	G 1 1/4"
EHV 4-350/90-A25DB-200 10866101125						7/8" 14 UNF								
EHV 5-350/90-A25DC-200 10861201125	5	350	450	- 20/+80	17	7/8" 14 UNF	898	66	66	116	22.5	68	50	G 1 1/4"
EHV 5-350/90-A25DB-200 10866701125						7/8" 14 UNF								
EHV 6-350/90-A25DC-200 10857401125	6.0	350	450	- 20/+80	20	7/8" 14 UNF	560	65	66	170	22.5	68	50	G 1 1/4"
EHV 6-350/90-A25DB-200 10866201125						7/8" 14 UNF								
EHV 10-350/90-A25DC-200 10859701125	10	350	450	- 20/+80	31	7/8" 14 UNF	825	65	66	170	22.5	68	50	G 1 1/4"
EHV 10-350/90-A25DB-200 10866301125						7/8" 14 UNF								

(1) Temperature range can change depending on shell and elastomer material. Please see bladder materials and Type (page 67)

Above dimensions are in mm and are subject to manufacturing tolerances.



# EHV Series 480 bar, 10 to 50 Litres

Standard Version (Carbon Steel shell/NBR mix) for mineral oils.

According to PED 2014/68/EU (\*\*), Fluid Group 2

Product Prices, Part numbers, Accessories

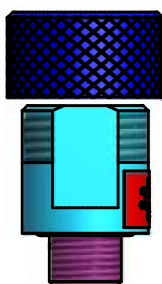
Type Part number	Pre-charge			Adaptor Threaded Part number	Clamps Model (quantity) Part number	Support Bracket Model Part number	Mounting Frame Model Part number	Complete Repair Kit Model Part number
	1 - 109 bar	110 - 209 bar	210 - 300 bar					
EHV 10-480/90-A25GE-200 11218201125	751016	751023	751038	G 1" cyl 04557000223	D226 (2) 20251503648	CE159A 20109003620	EF2 20217600125	KIT EHV 10-480/90-A25GE 19055702525
EHV 12-480/90-A25GE-200 11218301125	751016	751023	751038	G 1" cyl 04557000223	D226 (2) 20251503648	CE159A 20109003620	EF2 20217600125	KIT EHV 12-480/90 19063002525
EHV 20-480/90-A25GE-200 11218401125	751005	751024	751039	G 1" cyl 04557000223	D226 (2) 20251503648	CE159A 20109003620	EF2 20217600125	KIT EHV 20-480/90-A25GE 19050002525
EHV 32-480/90-A25GE-200 11218501125	751006	751026	751041	G 1" cyl 04557000223	D226 (2) 20251503648	CE159A 20109003620	EF3 20217700125	KIT EHV 32-480/90-A25GE 19051302525
EHV 50-480/90-A25GE-200 11218601125	751007	751027	751042	G 1" cyl 04557000223	D226 (2) 20251503648	CE159A 20109003620	EF3 20217700125	KIT EHV 50-480/90-A25GE 19050302525

For pre-charge over 300 bar please consult Division

\* For more adaptor options see page 58.

\*\* From 07/2016 PED 97/23/EC becomes PED 2014/68/EU

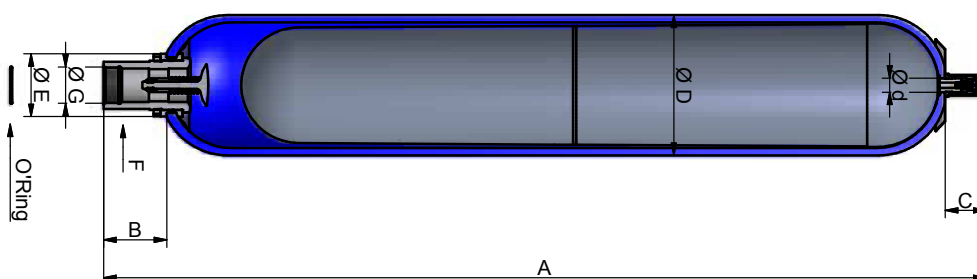
Model of valve stem  
7/8" 14 UNF  
(E)



Type	Effective Gas vol. Litres	Max. Working pressure (PS) bar	Max Flow Rate l/min	Admissible Accumulator Temperature min/max (°C) (1)	Weight kg	Gas connection	Dimensions in mm							
							A max Height	B	C	øD	ød	øE	F on flats	G connection
EHV 10-480/90-A25GE-200	9.2	480	900	- 20/+80	33	7/8" 14 UNF	593	103	74	228	22.5	101	70	G 2"
EHV 12-480/90-A25GE-200	11	480	900	- 20/+80	43	7/8" 14 UNF	693	103	74	228	22.5	101	70	G 2"
EHV 20-480/90-A25GE-200	17.8	480	900	- 20/+80	63	7/8" 14 UNF	903	103	74	228	22.5	101	70	G 2"
EHV 32-480/90-A25GE-200	32	480	900	- 20/+80	97	7/8" 14 UNF	1428	103	74	228	22.5	101	70	G 2"
EHV 50-480/90-A25GE-200	48.5	480	900	- 20/+80	132	7/8" 14 UNF	1968	103	99	228	22.5	101	70	G 2"

(1)Temperature range can change depending on shell and elastomer material. Please see bladder materials and Type (page 67)

Above dimensions are in mm and are subject to manufacturing tolerances.



# EHV Series 690 bar, 1 to 54 Litres

Standard Version (Carbon Steel shell/NBR mix) for mineral oils.

According to PED 2014/68/EU(\*\*), EN 14359, Fluid Group 2

*Product Prices, Part numbers, Accessories, Dimensions*

Type Part number	Pre-charge			Adaptor	Clamps	Support Bracket	Lifting Eye on gas side	Complete Repair Kit
	1 - 109 bar	110 - 209 bar	210 - 300 bar	Threaded Part number	Model (quantity) Part number	Model Part number	Model Part number	Model Part number
EHV 1-690/00-A25CE-200* 10910101125	751001	751030	751045	04579500223	20251003648	20151903620	10912700200	KIT EHV 1-690/00-A25CE 19043500225
EHV 2.5-690/90-A25CE-200 10910201125	751002	751031	751046	04579500223	20251003648	20151903620	10912700200	KIT EHV 2,5-690/00-A25CE 19043600225
EHV 5-690/90-A25CE-200 10910301125	751003	751032	751047	04579500223	20251003648	20151903620	10912700200	KIT EHV 5-690/00-A25CE 19043700225

Type Part number	Pre-charge			Adaptor	Clamps	Support Bracket	Lifting Eye on gas side	Complete Repair Kit
	1 - 109 bar	110 - 209 bar	210 - 300 bar	Threaded Part number	Model (quantity) Part number	Model Part number	Model Part number	Model Part number
EHV 12-690/90-A25GE-200 1203V-DC-691	751016	751023	751038					KIT EHV 12-690/90-A25GE 19048200225
EHV 20-690/90-A25GE-200 2003V-DC-691	751005	751024	751039					KIT EHV 20-690/90-A25GE 19048300225
EHV 37-690/90-A25GE-200 3703V-DC-691	751006	751026	751041					KIT EHV 32-690/90-A25GE 19048400225
EHV 54-690/90-A25GE-200 5403V-DC-691	751007	751027	751042					KIT EHV 50-690/90-A25GE 19048500225

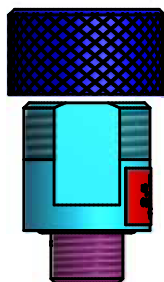
For pre-charge over 300 bar please consult Division

\* From 07/2016 PED 97/23/EC Article 3.3 becomes PED 2014/68/EU Article 4.3

\*\* From 07/2016 PED 97/23 EC becomes PED 2014/68/EU

\*\*\* For more adaptor options see page 58. For lifting eye consult page 176

Model of valve stem  
7/8" 14 UNF  
(E)



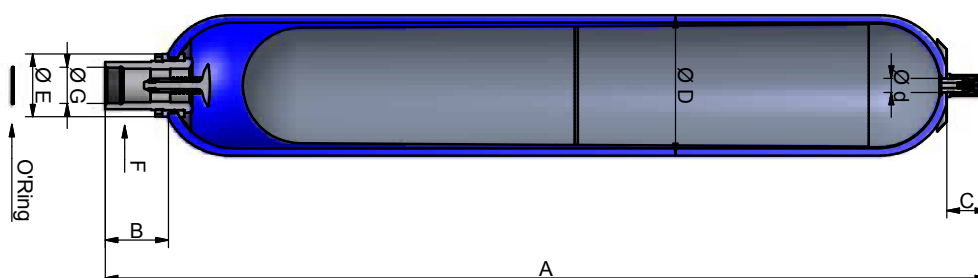
Type	Effective Gas vol. Litres	Max. Working pressure (PS) bar	Max Flow Rate l/min	Admissible Accumulator Temperature min/max (°C) (1)	Weight kg	Gas connection	Dimensions in mm							
							A max Height	B	C	øD	ød	øE	F on flats	G connection
EHV 1-690/00-A25CE-200*	1.1	690	360	- 20/+80	9	7/8" 14 UNF	376	68	69	122	22.5	68	45	G 1"
EHV 2.5-690/90-A25CE-200	2.4	690	360	- 20/+80	15	7/8" 14 UNF	551	68	69	122	22.5	68	45	G 1"
EHV 5-690/90-A25CE-200	5	690	360	- 20/+80	29	7/8" 14 UNF	900	68	69	122	22.5	68	45	G 1"

\*\* special adapter

Type	Effective Gas vol. Litres	Max. Working pressure (PS) bar	Max Flow Rate l/min	Admissible Accumulator Temperature min/max (°C) (1)	Weight kg	Gas connection	Dimensions in mm							
							A max Height	B	C	øD	ød	øE	F on flats	G connection**
EHV 12-690/90-A25GE-200	11	690	900	- 20/+80	97	7/8" 14 UNF	682	84	166	267	50	110	77	G 2"
EHV 20-690/90-A25GE-200	16.5	690	900	- 20/+80	134	7/8" 14 UNF	892	84	166	267	50	110	77	G 2"
EHV 37-690/90-A25GE-200	33.4	690	900	- 20/+80	227	7/8" 14 UNF	1417	84	166	267	50	110	77	G 2"
EHV 54-690/90-A25GE-200	48	690	900	- 20/+80	318	7/8" 14 UNF	1932	84	166	267	50	110	77	G 2"

(1)Temperature range can change depending on shell and elastomer material. Please see bladder materials and Type (page 67)

Above dimensions are in mm and are subject to manufacturing tolerances.





# EHVF Series 330 bar, 10 to 57 Litres

## Flanged Fluid Port

Standard Version (Carbon Steel shell/NBR mix) for mineral oils

According to PED 2014/68/EU (\*\*), EN 14359, Fluid Group 2

*Product Prices, Part numbers, Accessories, Dimensions*

Type Part number	Pre-charge			Flange*	Clamps	Support Bracket	Mounting Frame	Lifting Eye on gas side	Complete Repair Kit
	1 - 109 bar	110 - 209 bar	210 - 300 bar	Type Part number	Model (quantity) Part number	Model Part number	Model Part number	Model Part number	Model Part number
EHVF 10-330/90-A25RA-200 10844901125				BR 400-38 35132400123	D226 (2) 20251503648	CE 159A 20109003620	EF2 20217600125		KIT EHVF 10-330/90-A25RA 19034600225
EHVF 12-330/90-A25RA-200 10867301125				BR 400-38 35132400123	D226 (2) 20251503648	CE 159A 20109003620	EF2 20217600125		KIT EHVF 12-330/90-A25RA 19034700225
EHVF 20-330/90-A25RA-200 10845001125				BR 400-38 35132400123	D226 (2) 20251503648	CE 159A 20109003620	EF2 20217600125		KIT EHVF 20-330/90-A25RA 19034800225
EHVF 24,5-330/90-A25RA-200 10845101125				BR 400-38 35132400123	D226 (2) 20251503648	CE 159A 20109003620	EF2 20217600125		KIT EHVF 24.5-330/90-A25RA 19035100225
EHVF 32-330/90-A25RA-200 10845201125				BR 400-38 35132400123	D226 (2) 20251503648	CE 159A 20109003620	EF3 20217700125		KIT EHVF 32-330/90-A25RA 19034900225
EHVF 42-330/90-A25RA-200 11132501125				BR 400-38 35132400123	D226 (2) 20251503648	CE 159A 20109003620	EF3 20217700125		KIT EHVF 50-330/90-A25RA 19062200225
EHVF 50-330/90-A25RA-200 11077001125				BR 400-38 35132400123	D226 (2) 20251503648	CE 159A 20109003620	EF3 20217700125		KIT EHVF 50-330/90-A25RA 19054400225
EHVF 57-330/90-A25RA-200 11132601125				BR 400-38 35132400123	D226 (2) 20251503648	CE 159A 20109003620	EF3 20217700125		KIT EHVF 57-330/90-A25RA 19062300225

\* see page 60

\*\* From 07/2016 PED 97/23/EC becomes PED 2014/68/EU

For mounting frame see page 176

Model of valve stem  
 5/8" 18 UNF  
 (A)



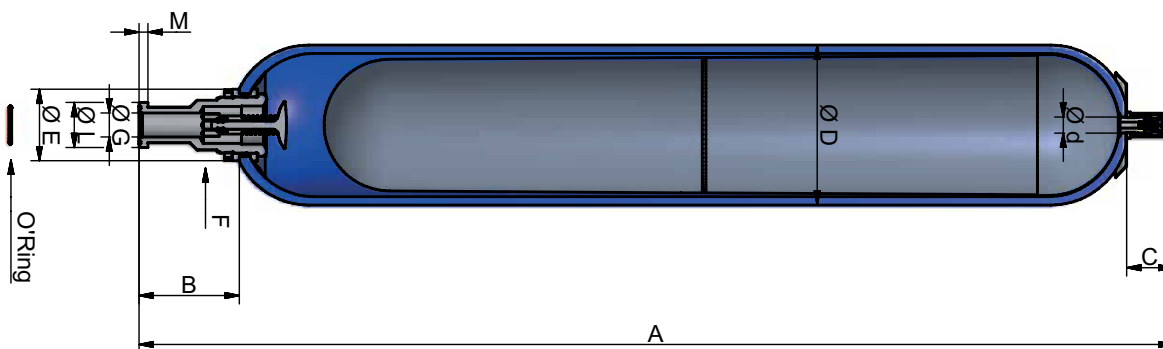
Type	Effective Gas vol. Litres	Max. Working pressure (PS) bar	Max Flow Rate l/min	Admissible Accumulator Temperature min/max (°C) (1)	Weight kg	Gas connection	Dimensions in mm									
							A max Height	B	C	øD	ød	øE	F on flats	G connection**	ØL	M
EHVF 10-330/90-A25RA-200	9.2	330	900	- 20/80	31	5/8"18 UNF	627	143	66	226	22.5	101	70	34	63.8	12.5
EHVF 12-330/90-A25RA-200	11	330	900	- 20/80	36	5/8"18 UNF	727	143	66	226	22.5	101	70	34	63.8	12.5
EHVF 20-330/90-A25RA-200	17.8	330	900	- 20/80	49	5/8"18 UNF	937	143	66	226	22.5	101	70	34	63.8	12.5
EHVF 24,5-330/90-A25RA-200	22.5	330	900	- 20/80	56	5/8"18 UNF	1072	143	66	226	22.5	101	70	34	63.8	12.5
EHVF 32-330/90-A25RA-200	32	330	900	- 20/80	81	5/8"18 UNF	1460	143	66	226	22.5	101	70	34	63.8	12.5
EHVF 42-330/90-A25RA-200	42	330	900	- 20/80	87	5/8"18 UNF	1602	143	66	226	22.5	101	70	34	63.8	12.5
EHVF 50-330/90-A25RA-200	48.5	330	900	- 20/80	110	5/8"18 UNF	1976	143	66	226	22.5	101	70	34	63.8	12.5
EHVF 57-330/90-A25RA-200	51	330	900	- 20/80	116	5/8"18 UNF	2072	143	66	226	22.5	101	70	34	63.8	12.5

Note: Connection (norme ISO 6162): 1 1/2" SAE 6000 PSI

PN400 DN38.

(1)Temperature range can change depending on shell and elastomer material. Please see bladder materials and Type (page 67)

Above dimensions are in mm and are subject to manufacturing tolerances.



# EHV Series 350 bar, 2.5 to 10 Litres

## Flanged Fluid Port

Standard Version (Carbon Steel shell/NBR mix) for mineral oils

According to PED 2014/68/EU (\*\*), EN 14359, Fluid Group 2

*Product Prices, Part numbers, Accessories, Dimensions*

Type Part number	Pre-charge			Flange*	Clamps	Support Bracket	Mounting Frame	Lifting Eye on gas side	Complete Repair Kit
	1 - 109 bar	110 - 209 bar	210 - 300 bar	Type Part number	Model (quantity) Part number	Model Part number	Model Part number	Model Part number	Model Part number
EHV 2.5-350/90-A25SC 10861501125	751002	751031	751046	BR 400-25 35132600123	E114 (2) 20251003648	CE89 20151903620	-	10912700200	KIT EHV 2.5-350/90-A25SC 19035300225
EHV 4-350/90-A25SC 10857601125	751012	751020	751035	BR 400-25 35132600123	E168 (1) 20251303648	CE108 20118703620	EF1 20217500125	10912700200	KIT EHV 4-350/90-A25SC 19035400225
EHV 5-350/90-A25SC 10861601125	751003	751032	751047	BR 400-25 35132600123	E114 (2) 20251003648	CE89 20151903620	-	10912700200	KIT EHV 5-350/90-A25SC 19035500225
EHV 6-350/90-A25SC 10857701125	751015	751021	751036	BR 400-25 35132600123	E168 (1) 20251303648	CE108 20118703620	EF1 20217500125	10912700200	KIT EHV 6-350/90-A25SC 19035600225
EHV 10-350/90-A25SC 10859901125	751004	751022	751037	BR 400-25 35132600123	E168 (2) 20251303648	CE108 20118703620	EF1 20217500125	10912700200	KIT EHV 10-350/90-A25SC 19035700225

\*see flanges page 60

\*\* From 07/2016 PED 97/23/EC becomes PED 2014/68/EU

Model of valve stem  
 integrated  
 7/8"14 UNF  
 (C)

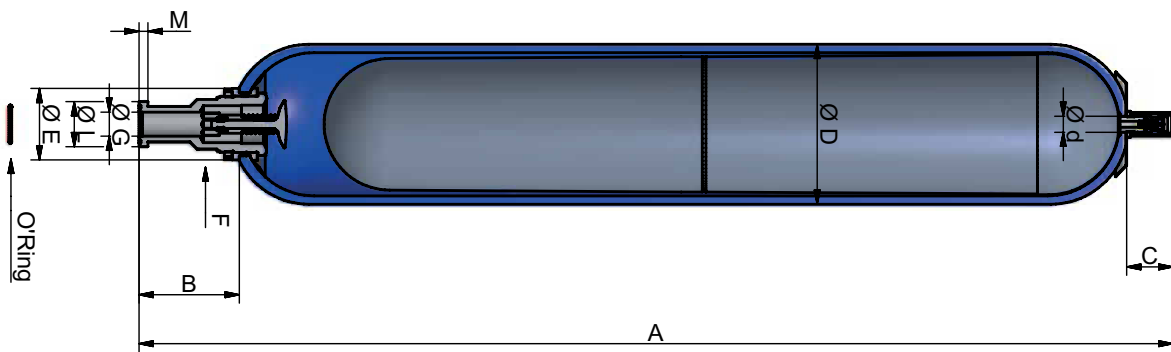


Type	Effective Gas vol. Litres	Max. Working pressure (PS) bar	Max Flow Rate l/min	Admissible Accumulator Temperature min/max (°C) (1)	Weight kg	Gas connection	Dimensions in mm									
							A max Height	B	C	øD	ød	øE	F on flats	G connection **	øL	M
EHVF 2.5-350/90-A25SC	2.4	350	450	- 20/80	11	7/8" 14 UNF	595	111	66	116	22.5	68	50	22	47.9	9.5
EHVF 4-350/90-A25SC	3.7	350	450	- 20/80	15	7/8" 14 UNF	480	110	66	170	22.5	68	50	22	47.9	9.5
EHVF 5-350/90-A25SC	5.0	350	450	- 20/80	17	7/8" 14 UNF	944	111	66	116	22.5	68	50	22	47.9	9.5
EHVF 6-350/90-A25SC	6.0	350	450	- 20/80	20	7/8" 14 UNF	606	110	66	170	22.5	68	50	22	47.9	9.5
EHVF 10-350/90-A25SC	10	350	450	- 20/80	31	7/8" 14 UNF	871	110	66	170	22.5	68	50	22	47.9	9.5

Note: Connection (norme ISO 6162): 1" SAE 6000 PSI. PN400 DN25

(1)Temperature range can change depending on shell and elastomer material. Please see bladder materials and Type (page 67)

Above dimensions are in mm and are subject to manufacturing tolerances.



# EHV Series 330 bar, 10 to 57 Litres

## High Flow fluid port, 1200 l/min

Standard version (Carbon Steel shell/NBR mix) for mineral oils

For high flow (up to 1200 Litres/min), According to PED 2014/68/EU (\*\*), EN 14359, Fluid Group 2

*Product Prices, Part numbers, Accessories, Dimensions*

Type Part number	Pre-charge			Adaptor*	Clamps	Support Bracket	Mounting Frame	Lifting Eye on gas side	Complete Repair Kit
	1 - 109 bar	110 - 209 bar	210 - 300 bar						
EHV 10-330/90-A25HA-200 10874801125	751016	751023	751038	G 1" cyl 04557000223	D226 (2) 20251503648	CE 159A 20109003620	EF2 20217600125	10912700200	KIT EHV 10-330/90-A25HA-200 19028900225
EHV 12-330/90-A25HA-200 10874901125	751016	751023	751038	G 1" cyl 04557000223	D226 (2) 20251503648	CE 159A 20109003620	EF2 20217600125	10912700200	KIT EHV 12- 330/90-A25HA-200 19032100225
EHV 20-330/90-A25HA-200 10846301125	751005	751024	751039	G 1" cyl 04557000223	D226 (2) 20251503648	CE 159A 20109003620	EF2 20217600125	10912700200	KIT EHV 20- 330/90-A25HA-200 19029000225
EHV 24.5-330/90-A25HA-200 10875001125	751017	751025	751040	G 1" cyl 04557000223	D226 (2) 20251503648	CE 159A 20109003620	EF2 20217600125	10912700200	KIT EHV 24.5-330/90-A25HA-200 19029400225
EHV 32-330/90-A25HA-200 10846501125	751006	751026	751041	G 1" cyl 04557000223	D226 (2) 20251503648	CE 159A 20109003620	EF3 20217700125	10912700200	KIT EHV 32-330/90-A25HA-200 19029100225
EHV 42-330/90-A25HA-200 11145201125	751212	751213	751214	G 1" cyl 04557000223	D226 (2) 20251503648	CE 159A 20109003620	EF3 20217700125	10912700200	KIT EHV 42-330/90-A25HA-200 19060800225
EHV 50-330/90-A25HA-200 11091501125	751007	751027	751042	G 1" cyl 04557000223	D226 (2) 20251503648	CE 159A 20109003620	EF3 20217700125	10912700200	KIT EHV 50-330/90-A25HA-200 19054100225
EHV 57-330/90-A25HA-200 11145401125	751215	751216	751217	G 1" cyl 04557000223	D226 (2) 20251503648	CE 159A 20109003620	EF3 20217700125	10912700200	KIT EHV 57-330/90-A25HA-200 19060900225

\* For more adaptor options see pages 58 & 59.

\*\* From 07/2016 PED 97/23/EC becomes PED 2014/68/EU

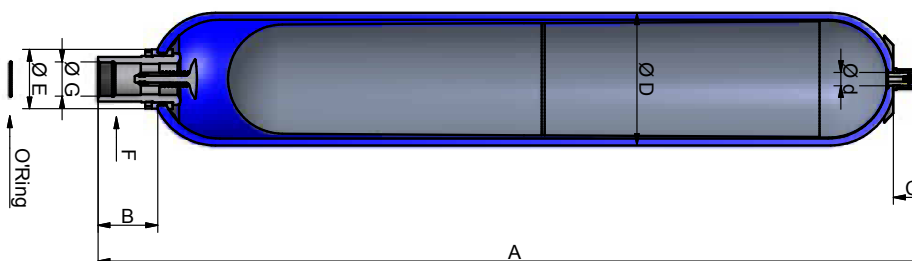
Model of valve stem  
 5/8" 18 UNF  
 (A)



Type	Effective Gas vol. Litres	Max. Working pressure (PS) bar	Max Flow Rate l/min	Admissible Accumulator Temperature min/max (°C) (1)	Weight kg	Gas connection	Dimensions in mm							
							A max Height	B	C	øD	ød	øE	F on flats	G connection
EHV 10-330/90-A25HA-200	9.2	330	1200	- 20/80	31	5/8"18 UNF	587	103	66	226	22.5	101	70	G 2"
EHV 12-330/90-A25HA-200	11	330	1200	- 20/80	36	5/8"18 UNF	687	103	66	226	22.5	101	70	G 2"
EHV 20-330/90-A25HA-200	17.8	330	1200	- 20/80	49	5/8"18 UNF	897	103	66	226	22.5	101	70	G 2"
EHV 24.5-330/90-A25HA-200	22.5	330	1200	- 20/80	56	5/8"18 UNF	1032	103	66	226	22.5	101	70	G 2"
EHV 32-330/90-A25HA-200	32	330	1200	- 20/80	81	5/8"18 UNF	1420	103	66	226	22.5	101	70	G 2"
EHV 42-330/90-A25HA-200	42	330	1200	- 20/80	87	5/8"18 UNF	1562	103	66	226	22.5	101	70	G 2"
EHV 50-330/90-A25HA-200	48.5	330	1200	- 20/80	110	5/8"18 UNF	1936	103	66	226	22.5	101	70	G 2"
EHV 57-330/90-A25HA-200	51	330	1200	- 20/80	116	5/8"18 UNF	2032	103	66	226	22.5	101	70	G 2"

(1)Temperature range can change depending on shell and elastomer material. Please see bladder materials and Type (page 67)

Above dimensions are in mm and are subject to manufacturing tolerances.



# EHV-DA Series 350 bar, 2.5 to 10 Litres

## High Flow fluid port, 570 l/min

Standard Version (Carbon Steel shell/NBR mix) for mineral oils

For high flow (up to 570 Litres/min), According to PED 2014/68/EU (\*\*), EN 14359, Fluid Group 2

Type Part number	Pre-charge			Adaptor*	Clamps	Support Bracket	Mounting Frame	Lifting Eye	Complete Repair Kit
	1 - 109 bar	110 - 209 bar	210 - 300 bar	Threaded Part number	Model (quantity) Part number	Model Part number	Model Part number	Model Part number	Model Part number
EHV 2.5-350/90-A25EC-200 10846101125	751002	751031	751046	G 3/4" cyl 04555200223	E114 (2) 20251003648	CE 89 20151903620	-	-	KIT EHV 2.5-350/90-A25EC 19029800225
EHV 4-350/90-A25EC-200 10846701125	751012	751020	751035	G 3/4" cyl 04555200223	E168 (2) 20251303648	CE108 20118703620	EF1 20217500125	-	KIT EHV 4-350/90-A25EC 19029900225
EHV 5-350/90-A25EC-200 10874601125	751003	751032	751047	G 3/4" cyl 04555200223	E114 (2) 20251003648	CE 89 20151903620	-	-	KIT EHV 5-350/90-A25EC 19030000225
EHV 6-350/90-A25EC-200 10874701125	751015	751021	751036	G 3/4" cyl 04555200223	E168 (2) 20251303648	CE108 20118703620	EF1 20217500125	-	KIT EHV 6-350/90-A25EC 19030100225
EHV 10-350/90-A25EC-200 10845901125	751004	751022	751037	G 3/4" cyl 04555200223	E168 (2) 20251303648	CE108 20118703620	EF1 20217500125	10912700200	KIT EHV 10- 350/90-A25EC 19030200225

\* For more adaptor options see pages 58 & 59.

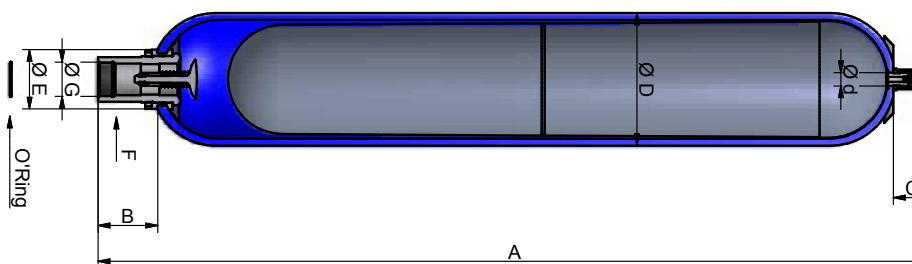
\*\* From 07/2016 PED 97/23/EC becomes PED 2014/68/EU

Model of valve stem  
 integrated  
 7/8"14 UNF  
 (C)



Type	Effective Gas vol. Litres	Max. Working pressure (PS) bar	Max Flow Rate l/min	Admissible Accumulator Temperature min/max (°C) (1)	Weight kg	Gas connection	Dimensions in mm							
							A max Height	B	C	øD	ød	øE	F on flats	G connection
EHV 2.5-350/90-A25EC-200	2.4	350	570	- 20/+80	11	7/8" 14 UNF	549	66	66	116	22.5	68	50	G 1¼"
EHV 4-350/90-A25EC-200	3.7	350	570	- 20/+80	15	7/8" 14 UNF	434	65	66	170	22.5	68	50	G 1¼"
EHV 5-350/90-A25EC-200	5	350	570	- 20/+80	17	7/8" 14 UNF	898	66	66	116	22.5	68	50	G 1¼"
EHV 6-350/90-A25EC-200	6	350	570	- 20/+80	20	7/8" 14 UNF	560	65	66	170	22.5	68	50	G 1¼"
EHV 10-350/90-A25EC-200	10	350	570	- 20/+80	31	7/8" 14 UNF	825	65	66	170	22.5	68	50	G 1¼"

(1)Temperature range can change depending on shell and elastomer material. Please see bladder materials and Type (page 67)  
 Above dimensions are in mm and are subject to manufacturing tolerances.





# IHV Series 70 bar, 10 to 50 Litres

Standard version (Stainless Steel shell/bladder for mineral oils)

According to ASME VIII Division I U STAMPED

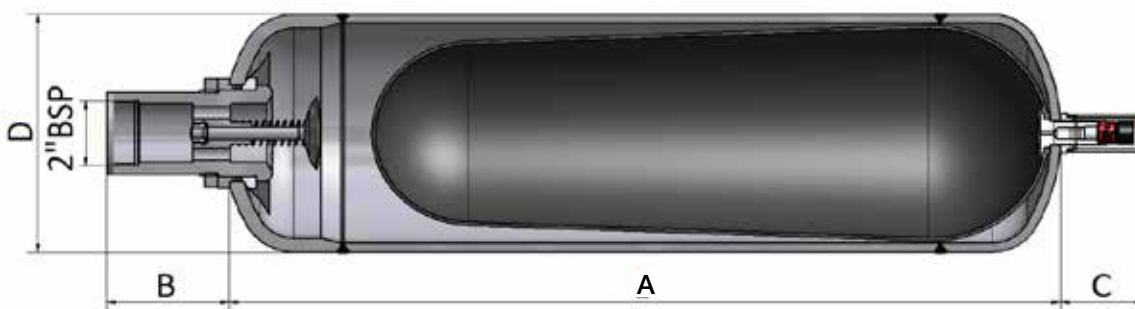
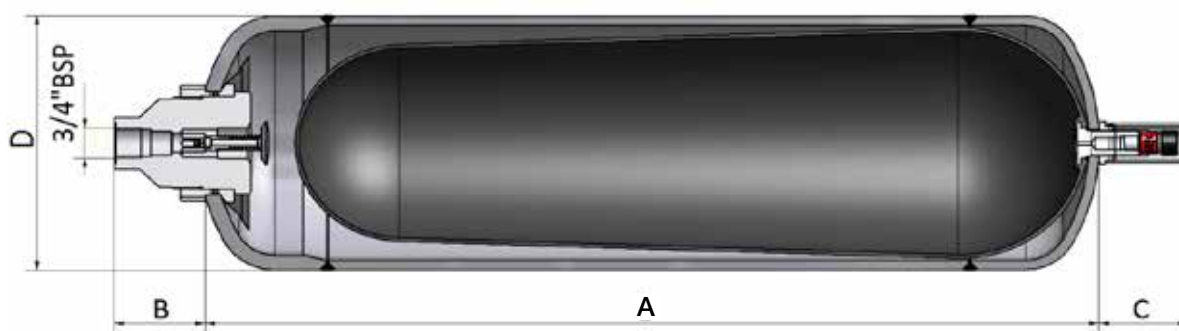
*Product Prices, Part numbers, Accessories, Dimensions*

Type Part number	Part Number	Adaptor	Flange	Clamps	Support Bracket	Complete Repair Kit
		Threaded Part number	Threaded Part number	Model (quantity) Part number	Model Part number	Model Part number
IHV 10-70	J30100706169R80EX	Various adaptors and flanges available Consult Division		D226 (2) 20251503648	CE159A 20109003620	8590018-xyyy 8590019-xyyy
IHV 12-70	JN301207052CXR25			D226 (2) 20251503648	CE159A 20109003620	8590020-xyyy 8590021-xyyy
	JN30120705CCXR25					
IHV 20-70	JN302007052CXR25			D226 (2) 20251503648	CE159A 20109003620	8590022-xyyy 8590023-xyyy
	KNPC20#1500NBR25					
IHV 24,5-70	JN302407052CXR25			D226 (2) 20251503648	CE159A 20109003620	8590024-xyyy 8590025-xyyy
	JN30240705CCXR25					
IHV 32-70	JN303207052CXR25	D226 (2) 20251503648	CE159A 20109003620	8590026-xyyy 8590027-xyyy		
	U10320704000025					
IHV 50-70	JN305007052CXR25	D226 (2) 20251503648	CE159A 20109003620	8590028-xyyy 8590029-xyyy		
	U10500706C63T25FCH					

Available in PED 2014/68/EU (EHV version)

Possibility in carbon steel material, Duplex and Superduplex

Type	Effective Gas vol. Litres	Max. Working pressure (PS) bar	Admissible Accumulator Temperature min/max (°C)	Weight kg	Dimensions in mm				
					A max Height	øD	B (G2")	B (3/4" BSP)	C
IHV 10.70	11.5	70	-20/100	27	394	220	103	-	66
							-	68	
IHV 12.70	14.5	70	-20/100	32	493	220	103	-	66
								68	
IHV 20.70	21.2	70	-20/100	41	703	220	103	-	66
							-	68	
IHV 24,5.70	25.5	70	-20/100	50	851	220	103	-	66
								68	
IHV 32.70	38.0	70	-20/100	65	1225	220	103	-	66
							-	68	
IHV 50.70	54.5	70	-20/100	87	1740	220	103	-	66
							-	68	



# IHV Series 110 bar, 10 to 50 Litres

Standard version (Stainless Steel shell/bladder for mineral oils)

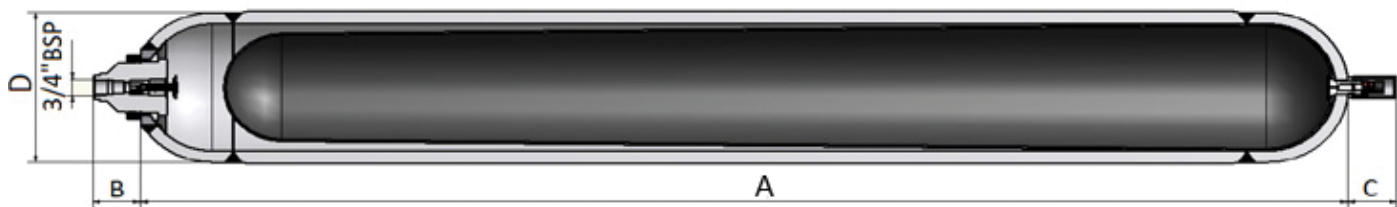
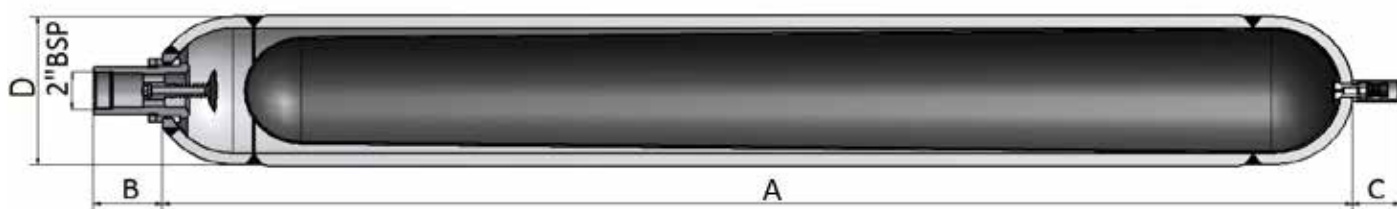
According to ASMEVIII Division I U STAMPED

Type	Part Number	Adaptor	Flange	Clamps	Support Bracket	Complete Repair Kit
				Model (quantity) Part number	Model Part number	Model Part number
IHV 10-120	JL301011052CXR25 0104012R15102	Various adaptors and flanges available Consult Division		D226 (2) 20251503648	CE159A 20109003620	8590018-xyy 8590019-xyy
IHV 12-110	JL301211052CXR25 JL30121105CCXR25			D226 (2) 20251503648	CE159A 20109003620	8590020-xyy 8590021-xyy
IHV 20-122	JL302011052CXR25 01050122U01125FCH			D226 (2) 20251503648	CE159A 20109003620	8590022-xyy 8590023-xyy
IHV 24,5-110	JL302411052CXR25 JL30241105CCXR25			D226 (2) 20251503648	CE159A 20109003620	8590024-xyy 8590025-xyy
IHV 32-129	JL30321105CCXR25 K1032129500XT40			D226 (2) 20251503648	CE159A 20109003620	8590026-xyy 8590027-xyy
IHV 50-122	JL305011052CXR25 01070122U01025FCH			D226 (2) 20251503648	CE159A 20109003620	8590028-xyy 8590029-xyy

Available in PED 2014/68/EU (EHV version)

Available in carbon steel version, Duplex and Superduplex

Type	Effective Gas vol. Litres	Max. Working pressure (PS) bar	Admissible Accumulator Temperature min/max (°C)	Weight kg	Dimensions in mm				
					A max Height	øD	B (G2")	B (3/4" BSP)	C
IHV 10-120	10.3	110	-20/100	48	405	226	103 -	- 68	66
IHV 12-110	13.1	110	-20/100	59	504	226	103 -	- 68	66
IHV 20-122	19.7	110	-20/100	82	714	226	103 -	- 68	66
IHV 24,5-110	23.9	110	-20/100	90	862	226	103 -	- 68	66
IHV 32-129	36.1	110	-20/100	123	1233	226	103 -	- 68	66
IHV 50-122	52.2	110	-20/100	157	1752	226	103 -	- 68	66



# IHV Series 110 bar, 10 to 50 Litres

Standard version (Stainless Steel shell/bladder for mineral oils).

According to ASME VIII Division I U STAMPED

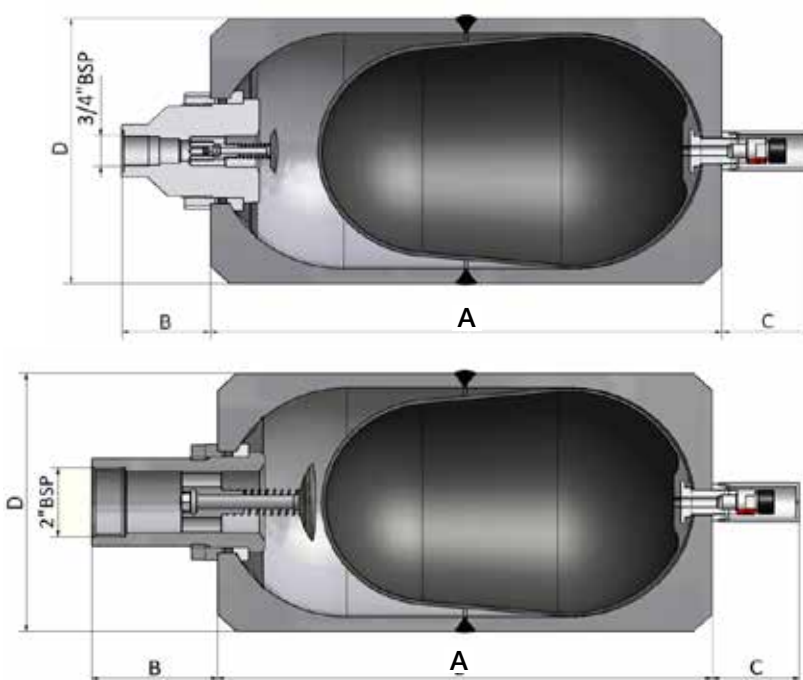
Product Prices, Part numbers, Accessories, Dimensions

Type	Part Number	Adaptor	Flange	Clamps	Support Bracket	Complete Repair Kit
				Model (quantity) Part number	Model Part number	Model Part number
IHV 10-110	JS301011052CXR25	Various adaptors and flanges available Consult Division		D226 (2)	CE159A	8590018-xyy
	JS30101105CCXR25			20251503648	20109003620	8590019-xyy
IHV 12-110	JS301211052CXR25			D226 (2)	CE159A	8590020-xyy
	JS30121105CCXR25			20251503648	20109003620	8590021-xyy
IHV 20-110	JS302011052CXR25			D226 (2)	CE159A	8590022-xyy
	JS30201105CCXR25			20251503648	20109003620	8590023-xyy
IHV 24,5-110	JS302411052CXR25			D226 (2)	CE159A	8590024-xyy
	JS30241105CCXR25			20251503648	20109003620	8590025-xyy
IHV 32-110	JS303211052CXR25			D226 (2)	CE159A	8590026-xyy
	JS30321105CCXR25			20251503648	20109003620	8590027-xyy
IHV 50-110	JS305011052CXR25			D226 (2)	CE159A	8590028-xyy
	JS30501105CCXR25			20251503648	20109003620	8590029-xyy

Available in PED 2014/68/EU (EHV version)

Possibility in carbon steel material, Duplex and Superduplex

Type	Effective Gas vol. Litres	Max. Working pressure (PS) bar	Admissible Accumulator Temperature min/max (°C)	Weight kg	Dimensions in mm				
					A max Height	øD	B (G2")	B (3/4" BSP)	C
IHV 10-110	10.3	110	-20/100	46	400	226	103	-	66
							-	68	
IHV 12-110	13.1	110	-20/100	58	498	226	103	-	66
							-	68	
IHV 20-110	19.7	110	-20/100	70	708	226	103	-	66
							-	68	
IHV 24,5-110	23.9	110	-20/100	80	856	226	103	-	66
							-	68	
IHV 32-110	36.1	110	-20/100	105	1227	226	103	-	66
							-	68	
IHV 50-110	52.2	110	-20/100	138	1754	226	103	-	66
							-	68	



# EHV Series 120 bar, 1 to 5 Litres

Stainless Version (Stainless Steel shell/NBR mix) for mineral oils

According to PED 2014/68/EU (\*\*), EN 14359, Fluid Group 1 or 2

*Product Prices, Part numbers, Accessories, Dimensions*

Type Part number	Pre-charge		Adaptor*	Clamps	Support Bracket	Complete Repair Kit
	1 - 109 bar	110 - 209 bar	Threaded Part number	Part number	Model Part number	Model Part number
EHV 1-120/00-I25DC-200* 10953701925	751001	751030	G 3/4" cyl 04555201723	10981	CE 89 20151901220	KIT 1-120/00-I25DC 19039501725
EHV 2.5-120/90-I25DC-200 10953401925	751002	751031	G 3/4" cyl 04555201723	10981	CE 89 20151901220	KIT 2.5-120/90-I25DC 19029801725
EHV 5-120/90-I25DC-200 10953501925	751003	751032	G 3/4" cyl 04555201723	10981	CE 89 20151901220	KIT EHV 5-120/90-I25DC 19030001725

\*From 07/2016 PED 97/23/EC Article 3.3 becomes PED 2014/68/EU Article 4.3

\*\* From 07/2016 PED 97/23/EC becomes PED 2014/68/EU

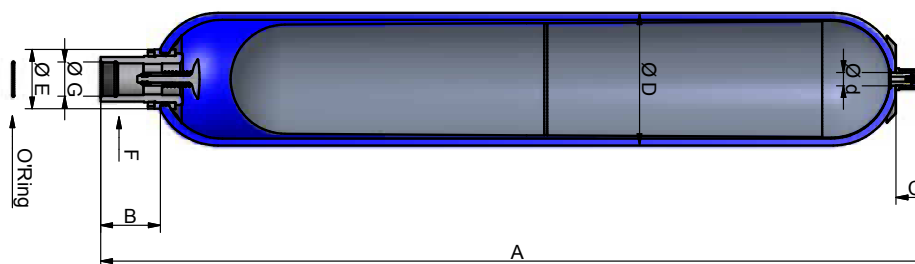
For more adaptor options see pages 58 & 59.

Model of valve stem  
 integrated  
 7/8"14 UNF  
 (C)



Type	Effective Gas vol. Litres	Max. Working pressure (PS) bar	Max Flow Rate l/min	Admissible Accumulator Temperature min/max (°C) (1)	Weight kg	Gas connection	Dimensions in mm							
							A max Height	B	C	øD	ød	øE	F on flats	G connection
EHV 1-120/00-I25DC-200*	1	120	450	- 20/80	6	7/8" 14 UNF	345	67	66	116	22.5	68	50	G 11/4"
EHV 2.5-120/90-I25DC-200 EHV 5-120/90	2.4 5	120 120	450 450	- 20/80	11 17	7/8" 14 UNF	542 891	67	66	116	22.5	68	50	G 11/4"
EHV 5-120/90-I25DC-200	5	120	450	- 20/80	17	7/8" 14 UNF	891	67	66	116	22.5	68	50	G 11/4"

(1)Temperature range can change depending on shell and elastomer material. Please see bladder materials and Type (page 67)  
 Above dimensions are in mm and are subject to manufacturing tolerances.

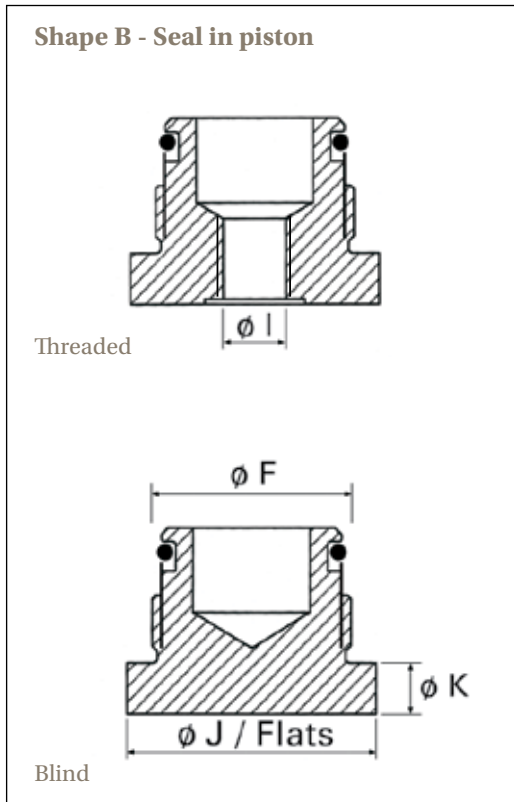
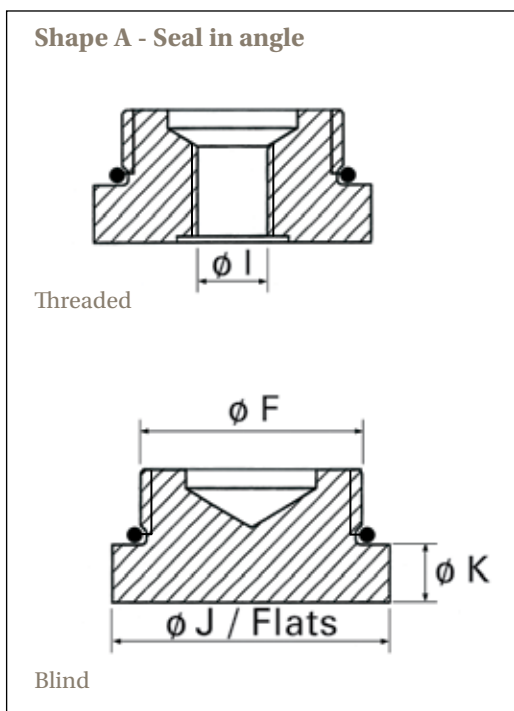




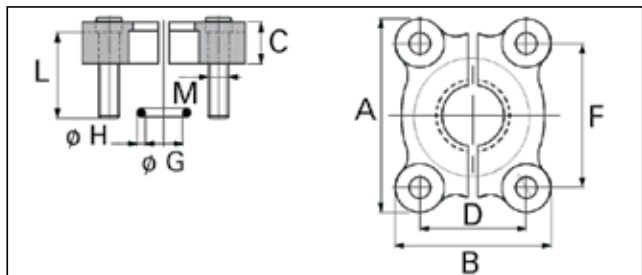
# Adaptors EHV Carbon Steel

Accumulator model	Connection ØF gas cylinder	Connection ØI gas cylinder	P/N
EHV 0,2 Litre 350 bar	G 1/2"	G 1/4"	04556500223
		Blind	04501800223
EHV 0,5 & 1 & 1,6 Litres 350 bar	G 3/4"	G 3/8"	04556400223
			04556100223
		Blind	04502000223
			04558200223
EHV 1 to 5 Litres 690 bar	G1"	G 1/2"	04579500223
		Blind	04579600223
EHV 2,5 to 10 Litres 350 bar	G1"1/4	G 1/2"	04555100233
			04555800233
		G 3/4"	04555200223
			04555900223
		G 1"	04583100223
		Blind	04502200223
		04558300233	
EHV 10 to 57 Litres 330 bar	G2"	G 1/2"	04556800223
			04557700223
		G 3/4"	04556900223
			04557800223
		G 1"	04557000223
			04557900233
		G 1"1/4	04557100223
		Blind	04502400223
		04558400223	
EHV 10 to 50 Litres 480 bar	G2"	G 1/2"	04556802523
			04557702523
		G 3/4"	04556902523
			04557802523
		G 1"	04557002523
			04557902523
		G 1"1/4	04557102523
		Blind	04502402523
		04558402523	
EHV 12 to 54 Litres 690 bar	G2"	G 1"	04579002523
		Blind	04579202523

Shape	J/Flats	K	O-Ring / Back-up ring
A	27	8	O-ring 18x2
A	27	8	O-ring 18x2
A	32	8	O-ring 21,3x2,4
B	32	8	O-ring 16,9x2,7
A	32	8	O-ring 21,3x2,4
B	32	8	O-ring 16,9x2,7
B	41	10	O-ring 21,3x3,6 / BUR 22x28x0,69*2
B	41	10	O-ring 21,3x3,6 / BUR 22x28x0,69*2
A	50	10	O-ring 36,2x3
B	50	10	O-ring 30x3
A	50	10	O-ring 36,2x3
B	50	10	O-ring 30x3
A	50	40	O-ring 36,2x3
A	50	10	O-ring 36,2x3
B	50	10	O-ring 30x3
A	65	13	O-ring 54x3
B	65	13	O-ring 48x3
A	65	13	O-ring 54x3
B	65	13	O-ring 48x3
A	65	13	O-ring 54x3
B	65	13	O-ring 48x3
A	65	13	O-ring 54x3
B	65	13	O-ring 48x3
A	65	13	O-ring 54x3
B	65	13	O-ring 48x3
A	65	13	O-ring 54x3
B	65	13	O-ring 48x3
A	65	13	O-ring 54x3
B	65	13	O-ring 48x3
A	65	13	O-ring 54x3
B	65	13	O-ring 48x3
A	65	13	O-ring 54x3
B	65	13	O-ring 48x3
B	65	15	O-ring 43,82x5,33 / BUR 45x54x0,85*2
B	65	15	O-ring 43,82x5,33 / BUR 45x54x0,85*2



# Flanges EHVF Carbon Steel



Accumulator model	Type	Part Number	A	B	C	D	F	øG	ØH	L	M
EHVF 2,5 to 10 Litres	<b>FLANGE KIT BR 400-25</b>	35132600123	81	70	24	27.75	57.15	32.92	3.53	40	M12
EHVF 10 to 57 Litres	<b>FLANGE KIT BR 400-38</b>	35132400123	113	95	30	36.5	79.4	47.22	3.53	50	M16

## Additional Regulations

Destination	Regulation	Regulation code		Comments
EUROPE	PED	00		Product is compliance with directive PED 2014/68/EU and classified as art 4.3 (Sound Engineering Practice). No CE marking is stamped on product.
EUROPE	PED	90		Approval is based on the directive PED 2014/68/EU rules. The CE marking will be applied on the product for Pressure Vessel risk category $\geq$ I
USA	ASME	15 or 48	Base ASME VIII div 1 with-out or with appendix 22	This regulation is based on the design code ASME VIII div 1 with or without appendix 22. To be conform to this regulation, products must be followed all the rules defined in this design code.
CHINA	SELO	88	Base PED	SELO regulation is only applicable for pressure vessels where : maximum working pressure $\geq$ 0.1 Mpa internal volume $\geq$ 30L and inner diameter $\geq$ 150 mm
CANADA	CRN	92	Base ASME	Approval is based on ASME VIII div 1 design code. Others countries as example Alaska require a CRN registration. Also, each province and territories of Canada has its own CRN rules, So, thank you to indicate the concerned province for quotation.
AUSTRALIA	AS1210	83 or 91	Base PED or ASME	Australian regulation is applicable for pressure vessels which maximum working pressure (MPa) X volume (internal volume in L) is higher than 30 MpaL in size.
JAPAN	JIS	95	Base ASME	Approval is based on ASME VIII div 1 design code (version 1998) and taking into account specific corrosion allowance value. JIS is applicable only for pressure vessels which internal diameter is higher than six inches.
BRASIL	NR13	AA or AE	Base PED or ASME	NR13 regulation is only applicable for pressure vessels which maximum working pressure in KPa x V (internal volume in m3) is higher than 8. Also, technical documentation packaging must be established and joined to the equipment. And special marking has to be done on the pressure vessel according to NR13 requirements.
RUSSIA, KAZAKHSTAN, BELARUS	CUTR 032/2013	71		CUTR DoC or CoC must be established and joined to the equipment for delivery depending on risk category for pressure vessel. Technical passport could be established if customer requires it. Special nameplate (@ minima english and russian languages) must be put on the pressure equipment to be compliance with this certification.
MARINE - OFFSHORE	DNV	24 or 43 (*)		Marine activities are very various. The marine and off shore application have to respect some kinds of classifications associated to third party (Notified body). This classification is often decided by the owner of the installation and will depend on the insurance he has on it. All classification companies give almost the same approval process (design and manufacturing assessment). So, to see in details if the scope of these several marine approvals are compatible with your application, please contact PARKER for accurate quotation.
	BUREAU VERITAS MARINE	11 or 13		
	ABS AMERICAN BUREAU OF SHIPPING	23 or 41		
	LLOYDS REGISTER OF SHIPPING (LROS)	10		
	GERMANISHER LLOYDS	BE (*)		
	RINA	26		
France	NUCLEAR	90		Approval is based on RCCM design code and dedicated only to France market. For other countries out of France, ASME III div 1 is more recognized for nuclear plant activities.
EUROPE & USA	NUCLEAR	AZ		Approval is based on ASME III division 1, mainly on subsection NC for components class 2.

For these specific regulations (and/or) if your destination is not mentioned in this table, please contact PARKER for further information.

(\*) DNV and GL merged on the 13th of september 2013 and one company DNV GL is now existing. That means, current type approval certificates (DNV or GL), delivered before the date, are now mutually recognized and applicable for these both classified societies DNV and GL (mutual cross use).

**Mutli-approval codification examples\***

**How to include the right regulation in your order ?**

Code	Regulations
<b>90 EX</b>	<b>PED+ATEX</b>
<b>94</b>	<b>PED+ASME</b>
<b>88</b>	<b>PED+SELO</b>
<b>86</b>	<b>PED+ASME+SELO</b>

Accumulator denomination example :

EHV 20-330 / **xx**



**For other regulations, please contact PARKER**

# Regulations for EBV and EHV Bladder Accumulators

Regulations available from Parker Olaer. Additional prices over standard for bladder accumulators.\*

Designation	EUROPE			Max. Working Pressure (bar)	USA		CHINA		CANADA		AUSTRALIA	
	/90	/90	/90 EX		/15 /48	Max. Working Pressure Psi (bar)	/85	Max. Working Pressure bar	/92	Max. Working Pressure Psi (bar)	/83 /91	Max. Working Pressure (bar)
Approvals	PED Fluid Group 2 (EN 14359)	PED Fluid Group 1 (AD-2000)	ATEX	ASME VIII div 1	SELO	CRN	AS1210	Max. Working Pressure (bar)	AS1210	Max. Working Pressure (bar)	AS1210	Max. Working Pressure (bar)
Models												
EBV 0.5 L	x	x	x	40								
EBV 0.5 L	x	x	x	50								
EBV 1 to 5 L	x	x	x	40								
EBV 1 to 5 L	x	x	x	80								
EBV 10 to 20 L	x	x		16								
EBV 10 to 20 L	x	x	x	40	x	580 (40 Bar)						
EBV 32 to 50 L	x	x		16			x	16				
EBV 32 to 50 L	x	x	x	40	x	580 (40 Bar)	x	40				
EBV 100 to 200 L	x	x		16								
EBV 100 to 200 L	x	x	x	20	x	290 (20 Bar)	x	20				
EBV 100 to 200 L	x	x	x	40			x	40				
EBV 100 to 200 L	x	x		50			x	50				
EBV 100 to 575 L	x	x	x	8	x	290 (20 bar)	x	8				
EBV 100 to 575 L	x	x	x	16			x	16				
EBV 100 to 575 L	x	x	x	20			x	20				
EBV 100 to 575 L	x	x	x	40			x	40				
EHV 0,5L	x	x	x	350								
EHV 1 to 5 L	x	x	x	300								
EHV 1 to 5 L	x	x	x	350							x	350
EHV 1 to 5 L	x	x	x	690								
EHV 2.5L to 5 L	x	x	x	120								
EHV 4 - 6 - 10 L	x	x	x	210								
EHV 4 - 6 - 10 L	x	x	x	350	x	4000 (276 Bar)					x	320
EHV 4 to 60 L					x	5000 (345 bar)						
EHV 4 to 60 L					x	6000 (413 Bar)						
EHV 10 to 42 L		x		300	x	3000 (207 Bar)			x	3000 (207 Bar)		
EHV 10 to 42 L		x		330	x	3600 (248 Bar)			x	3600 (248 Bar)		
EHV 10 to 42 L		x		380	x	4000 (276 Bar)			x	4000 (276 Bar)		
EHV 10 to 24,5 L	x	x	x	690								
EHV 32 to 50 L	x	x	x	690			x	690				
EHV 10 to 57 L					x	3600 (248 Bar)					x	248
EHV 10 to 57 L					x	4000 (276 Bar)					x	276
EHV 10 to 24,5 L	x	x		480							x	400
EHV 32 to 57 L	x	x		480			x	480			x	400
EHV 10 to 24,5 L	x	x	x	300	x	3000 (207 Bar)						
EHV 32 to 60 L	x	x	x	300	x	3000 (207 Bar)	x	300				
EHV 10 to 24,5 L	x	x	x	330	x	3600 (248 Bar)						
EHV 32 to 60 L	x	x	x	330	x	3600 (248 Bar)	x	330				
EHV 10 to 24,5 L	x	x	x	480								
EHV 32 to 60 L	x	x	x	480			x	480				
EHV 50 to 57 L		x		330	x	3600 (248 Bar)			x	3600 (248 Bar)		
EHV 50 to 57 L		x		380	x	4000 (276 Bar)			x	4000 (276 Bar)		
EHVF 2.5 to 10 L	x	x		350								
EHVF 10 to 24,5 L	x	x		330								
EHVF 32 to 50 L	x	x		330			x	330				

Code	Regulation
90 EX	PED+ATEX
94	PED+ASME

Code	Regulation
88	PED+SELO
86	PED+ASME+SELO

# Carbon Steel & Stainless Steel

Other regulations or approvals available on request (ARH, DOSH, MOM, RI.N.A., RT)

BRASIL		RUSSIA, KAZAKHSTAN,BELARUS			MARINE - OFFSHORE						Designation
/AA /AE	Max. Working Pressure (bar)	/71	Max. Working Pressure (bar)	/AU	/43 /24	/13 /11	/23 /41	Max. Working Pressure (bar)	/ BE	Max. Working Pressure (bar)	Approvals
NR13		CUTR 032/2013		Max. Working Pressure Psi (bar)	DNV (Classification of Ships)	BV Marine (BUREAU VERITAS MARINE)	ABS (AMERICAN BUREAU OF SHIPPING)		GL (GERMANISCHER LLOYD'S)		Models
		N/A									EBV 0.5 L
		N/A									EBV 0.5 L
		x	80								EBV 1 to 5 L
x	80	x	40								EBV 1 to 5 L
x	16	x	16								EBV 10 to 50 L
x	40	x	40	580 (40 Bar)							EBV 10 to 50 L
x	16	x	16								EBV 10 to 50 L
x	40	x	40	580 (40 Bar)							EBV 10 to 50 L
x	16	x	16								EBV 100 to 200 L
x	20	x	20	290 (20 Bar)							EBV 100 to 200 L
x	40	x	40								EBV 100 to 200 L
x	50	x	50								EBV 100 to 200 L
x	8	x	8	290 (20 bar)							EBV 100 to 575 L
x	16	x	16								EBV 100 to 575 L
x	20	x	20								EBV 100 to 575 L
x	40	x	40								EBV 100 to 575 L
x	350	N/A			x		x	330	x	330	EHV 0,5L
x	300	x	350								EHV 1 to 5 L
x	350	x	690		x	x	x	350	x	350	EHV 1 to 5 L
x	690	x	300								EHV 1 to 5 L
x	120	x	120								EHV 2.5L to 5 L
x	210	x	350	4000 (276 Bar)							EHV 4 - 6 - 10 L
x	350	x	210		x	x	x	350	x	350	EHV 4 - 6 - 10 L
x	345	x		5000 (345 bar)							EHV 4 to 60 L
x	413	x		6000 (413 Bar)							EHV 4 to 60 L
x	207	x	300	3000 (207 Bar)							EHV 10 to 42 L
x	248	x	330	3600 (248 Bar)							EHV 10 to 42 L
x	276	x	380	4000 (276 Bar)							EHV 10 to 42 L
x	690	x	690								EHV 10 to 24,5 L
x	690	x	690								EHV 32 to 50 L
x	248	x		4000 (276 Bar)							EHV 10 to 57 L
x	276	x		3600 (248 Bar)							EHV 10 to 57 L
x	480	x	480						x	352	EHV 10 to 24,5 L
x	480	x	480						1292.19	352	EHV 32 to 57 L
x	300	x	330	3600 (248 Bar)							EHV 10 to 24,5 L
x	300	x	330	3600 (248 Bar)							EHV 32 to 60 L
x	330	x	300	3000 (207 Bar)	x	x	x	330	x	330	EHV 10 to 24,5 L
x	330	x	300	3000 (207 Bar)	x	x	x	330	x	330	EHV 32 to 60 L
x	480	x	480								EHV 10 to 24,5 L
x	480	x	480								EHV 32 to 60 L
x	248	x	330	3600 (248 Bar)							EHV 50 to 57 L
x	276	x	380	4000 (276 Bar)							EHV 50 to 57 L
x	350	x	350								EHVF 2.5 to 10 L
x	330	x	330								EHVF 10 to 24,5 L
x	330	x	330								EHVF 32 to 50 L

Multi Approvals are possible

## Anti-Corrosion Materials

Protections available from Parker Olaer. Additional prices over standard for bladder accumulators.

From EHV 4-350/90 PART NUMBER 1084540XX25

	EPOXY 80 microns Internal	NICKEL PLATING 50 microns Internal/ External	RILSAN® 200-300 microns Inter- nal/External		Marine Painting C3 170 microns External
Valve Stem, Fluid port, and Protec- tion Cap	Stainless Steel	Stainless Steel	Stainless Steel	Standard Steel	Standard Steel
<b>Codes</b>	<b>20</b>	<b>50</b>	<b>84</b>	<b>85</b>	<b>xx</b>
<b>Volume</b>	<b>All prices below are in addition (on top of) the standard construction carbon steel 11 on top of the complete base, accumulator cost when ordered complete as a bladder accumulator with special characteristics.</b>				
<b>0.2</b>	x	x	x	x	x
<b>0.5</b>	x	x	x	x	x
<b>1</b>	x	x	x	x	x
<b>1.6</b>	x	x	x	x	x
<b>2.5</b>	x	x	x	x	x
<b>4</b>	x	x	x	x	x
<b>5</b>	x	x	x	x	x
<b>6</b>	x	x	x	x	x
<b>10 (ø 170)</b>	x	x	x	x	x
<b>10 (ø 226)</b>	x	x	x	x	x
<b>12</b>	x	x	x	x	x
<b>20</b>	x	x	x	x	x
<b>24.5</b>	x	x	x	x	x
<b>32</b>	x	x	x	x	x
<b>42</b>	x	x	x	x	x
<b>50</b>	x	x	x	x	x
<b>57</b>	x	x	x	x	x
<b>100</b>	x	x	x	x	x
<b>200</b>	x	x	x	x	x

Depending on your application, fluid and the environment in which you install your systems/equipment, Parker can offer a variety of internal and external shell coatings for your bladder accumulator. Please contact our technical support or your local accumulator expert if you are uncertain what you may require or for more details on the various coatings.

*For the range concerning Consult Division.*



# Bladder Materials and Types

Bladder mixes available from Parker Olaer.

From EHV 4-350/90 PART NUMBER 108454011XX

	Standard Bladder									
Mix Number	Mix 25	Mix 02	Mix 10	Mix 20	Mix 30	Mix 35	Mix 37	Mix 40	Mix 47	Mix 80
Mix Name	Standard NBR (Nitrile)	Hydrin C	Low Temp Nitrile	Heavy Duty Nitrile	Low Nitrile Permeability	High Temp Nitrile	External Low Temp Nitrile	Butyl	EPDM	Viton
Max Admissible Temp °C	100	115	70	110	115	130	110	120	120	140
Min Admissible Temp °C	-20	-32	-30	-6	-5	0	-59	-15	-40	-20
Typical Fluid	Mineral Oil	Mineral Oil	Mineral Oil	Mineral Oil	Mineral Oil + Special fuels (not unleaded gasoline)	Mineral Oil	Consult Parker Olaer regarding fluid and application	Water based fluids	Phosphate esters	Aggressive fluids
Volume										
0.2	Standard, no extra costs.	x	x		x	x	x	x	x	x
0.5		x	x	x	x	x	x	x	x	x
1		x	x	x	x	x	x	x	x	x
1.6		x	x	x	x	x	x	x	x	x
2.5		x	x	x	x	x	x	x	x	x
4		x	x	x	x	x	x	x	x	x
5		x	x	x	x	x	x	x	x	x
6		x	x	x	x	x	x	x	x	x
10 (ø 170)		x	x	x	x	x	x	x	x	x
10 (ø 226)		x	x	x	x	x	x	x	x	x
12		x	x	x	x	x	x	x	x	x
20		x	x	x	x	x	x	x	x	x
24.5		x	x	x	x	x	x	x	x	x
32		x	x	x	x	x	x	x	x	x
42		x	x	x	x	x	x	x	x	x
50		x	x	x	x	x	x	x	x	x
57		x	x	x	x	x	x	x	x	x
100*	x	x		x	x	x	x	x	x	
200*	x	x		x	x	x	x	x	x	

\* Accumulators 100 & 200 Litres Standard Nitrile Mix 20

For the range concerning 100 to 575 L pages 14 to 18, 22 and 23: Consult Division.

# O&G Series Bladder Accumulators

High Pressure, 207 to 760 bar

## IN THIS SECTION

O&G series General Information	70
O&G series 207 to 420 bar	72
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O&G series 690 to 760 bar	79

The Parker O&G Series is a high pressure range of bladder accumulator ideally suited for the Oil & Gas market and other aggressive environments. Available in Carbon and Stainless Steel (up to 760 bar).



Sizing Questionnaires	Accumulator Stations	Gas Bottles	Accessories	Diaphragms	Attenuators	Pulsation Dampers	Bladder Accumulators					
							O&G	Regulations	EHV	EBV		
								Piston Accumulators				
								EHP	DC	AP	A	ACP

## General Information

The O&G series is specially designed and developed for the hazardous environments encountered within the Oil and Gas industry however they are also ideally suited for other highly demanding markets. They meet a wide range of approvals and are tailor made to meet your requirements (e.g. special coatings, IP-class and ATEX / Ex approvals).

## Features

- **Quality:** Our products have maintained excellent quality during field testing, confirming that the design will provide the kind of strength and durability required for heavy duty applications.

- **Reliability:** We understand the challenges that our customers face operating in remote locations where access to support is limited. Our oil and gas products are therefore built to last with optimum performance and minimum maintenance required.

- **Flexibility:** The O&G series is used in a wide range of applications throughout the Oil and Gas (both upstream and downstream) and general Industrial markets.

## Applications

### Topside Applications

- Installation and Workover Control Systems (IWOCS)
- Workover Control Systems (WOCS)
- Wellhead Control Panels (WHCP)
- Chemical Injection Skids
- Winch Systems
- A Frames
- Heave Compensation
- Davit Systems
- Cranes, Hydraulic Power Units (HPUs)
- Blow Out Preventers (BOP)

### Subsea Applications

- Christmas Trees
- Manifolds
- Blow Out Preventers (BOP)
- Subsea Accumulator Modules (SAMs)
- Subsea Control Modules (SCMs)

### Industrial

- Hydraulic Power Units (HPUs)
- Plastic Moulding Machines
- Hydraulic Presses

# Technical Characteristics

The accumulator comprises of:

## Shell

Forged seamless chrome molybdenum steel, designed and manufactured to PED 2014/68/EU and CE marked.

## Label

With assembly specification and installation details.

## Material Certification

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

## Finish

One coat primer paint as standard. Special paints available.

## Bladder

Totally enclosed construction with an extensive range of elastomers available.

## Fluid Port Assembly

Integral high-flow port and poppet valve assembly with an anti-extrusion ring.

## 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.

## 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.

## Accessories

A complete range of accumulator accessories are available from Parker.

## Spare Parts

Available on request.

## Bladder Details

Parker offer a wide range of bladder materials to suit most applications.

**Table 1 - Material according to temperature range.**

Range of bladder materials available with their corresponding working temperature range when handling non-aggressive fluids.

Material Code	Bladder Material	Temperature Range (Deg. 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		

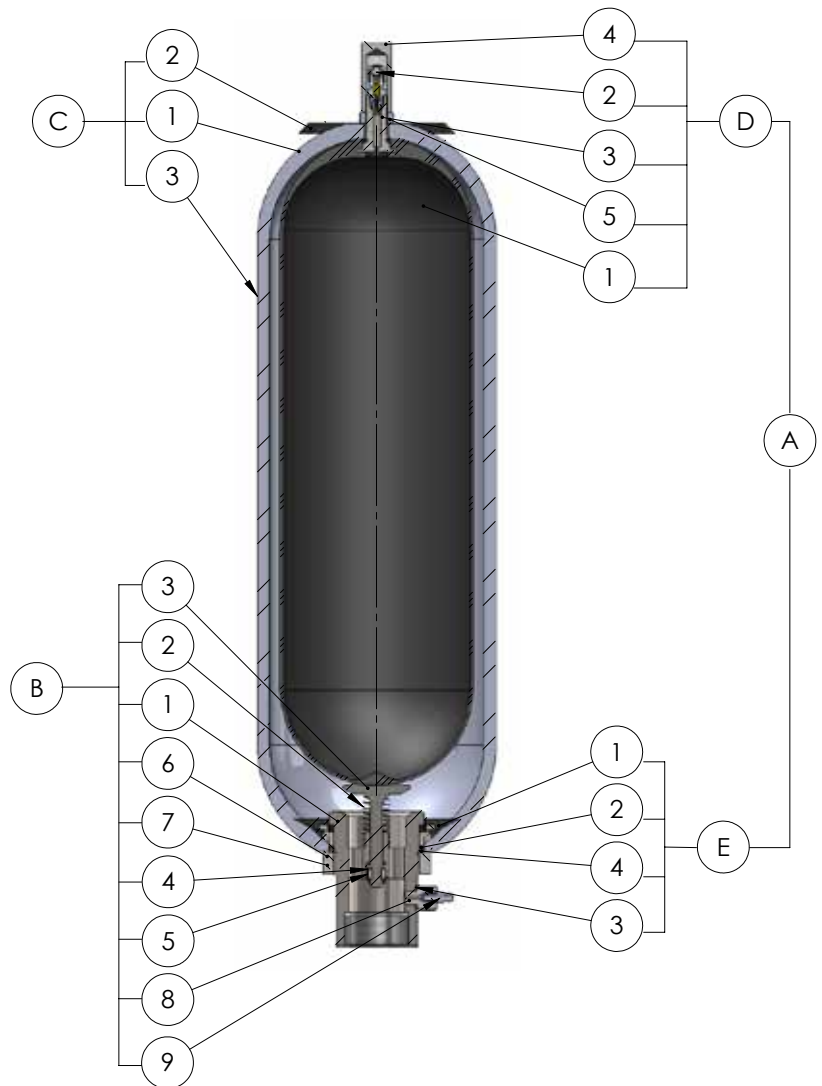
**Table 2 - Bladder capacity / overall dimensions**

Accumulator Capacity (Litres) Nominal	Dimension		Stem Diameters		
	"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		*	*

# O&G Series, 207 to 420 bar

<b>A</b>	<b>Bladder Kit comprising:</b>
<b>D</b>	<b>Bladder assembly</b>
D1	Bladder
D2	Gas valve assembly
D3	Locknut
D4	Protective cap
D5	'O' ring stem
<b>E</b>	<b>Anti extrusion ring assembly</b>
E1	Anti extrusion ring
E2	'O' ring fluid port
E3	Bonded seal*
E4	Back-up ring
<b>B</b>	<b>Fluid port assembly comprising</b>
B1	Fluid port body
B2	Spring
B3	Poppet valve
B4	Collett
B5	Piston
B6	Flanged washer
B7	Locking ring
B8	Bleed adaptor*
B9	Bleed valve*
<b>C</b>	<b>Shell assembly comprising:</b>
C1	Shell
C2	Label
C3	Label warning

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



# O&G Series 207 to 420 bar: How to order

**0400A-00-341**

**Volume in Litres**

OB: for 0.16 Litres            10: for 10 Litres  
 OF: for 0.6 Litres            20: for 20 Litres  
 O11: for 1 Litres            28: for 28 Litres  
 O3: for 2.5 Litres            37: for 37 Litres  
 O4: for 4 Litres            54: for 54 Litres

**Bladder Material**

0: Nitrile standard  
 1: Butyl  
 2: Low temperature nitrile  
 3: Low permeability nitrile  
 6: Viton  
 8: High temperature nitrile

**Bladder Stem/Gas Valve**

**0.16 to 3 Litres**

**0A:** 5/8"UNF CS Stem/ 1/4"BSP Brass Gas Valve  
**SA:** 5/8"UNF SS Stem/ 1/4"BSP SS Gas Valve  
**3F:** n/a  
**9A:** 5/8"UNF CS Stem/ 0.302"-32 Brass Gas Valve  
**4A:** n/a  
**6A:** n/a

**4-37 Litres**

7/8"UNF CS Stem/ 1/4"BSP Brass Gas Valve  
 7/8"UNF SS Stem/ 1/4"BSP Brass Gas Valve  
 7/8"UNF SS Stem/ 1/4"BSP SS Gas Valve  
 n/a  
 7/8"UNF CS Stem/ 0.302"-32 Brass Gas Valve  
 n/a

**54 Litres**

**0A:** M50x1.5P CS Stem/ 1/4"BSP Brass Gas Valve  
**SA:**M50x1.5P SS Stem/ 1/4"BSP Brass Gas Valve  
**3F:** M50x1.5P SS Stem/ 1/4"BSP SS Gas Valve  
**4A:** 7/8"UNF CS Stem/ 0.302"-32 Brass Gas Valve  
**6A:** M50x1.5P CS Stem/ 0.302"-32 Brass Gas Valve

**Shell and Fluid Port**

00: Oil service  
 02: Low/medium corrosive service (lined shell)  
 W6: Stainless steel externals, unlined shell  
 CZ: Stainless steel externals, unlined shell 1/2"NPT connection (10-54 litre only)  
 DW: Stainless steel externals, unlined shell 3/4"NPT connection (10-54 litre only)  
 DU: Stainless steel externals, unlined shell 1"NPT connection (10-54 litre only)  
 DL: Stainless steel externals, unlined shell 1/2"BSP connection (10-54 litre only)  
 EZ: Stainless steel externals, unlined shell 3/4"BSP "necked" connection (10-54 litre only)  
 13: Oil service (NPT connection)  
 14: Low/ medium corrosive service (lined shell, NPT connection)

**Maximum Working Pressure**

20: 207 bar  
 31: 310 bar  
 34: 345 bar  
 35: 350 bar  
 42: 420 bar (10-54L only)

**Maximum Working Pressure**

1: Lloyds/CE

# O&G Series 207 to 420 bar, 0.16 to 50 Litres

Standard version (**Carbon Steel** shell/Standard NBR Nitrile bladder for mineral oils)

According to PED 97/23/EC, Lloyds/CE

Part numbers

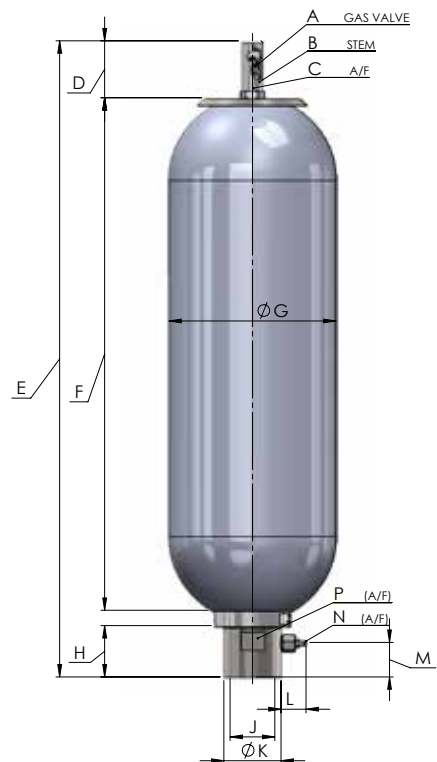
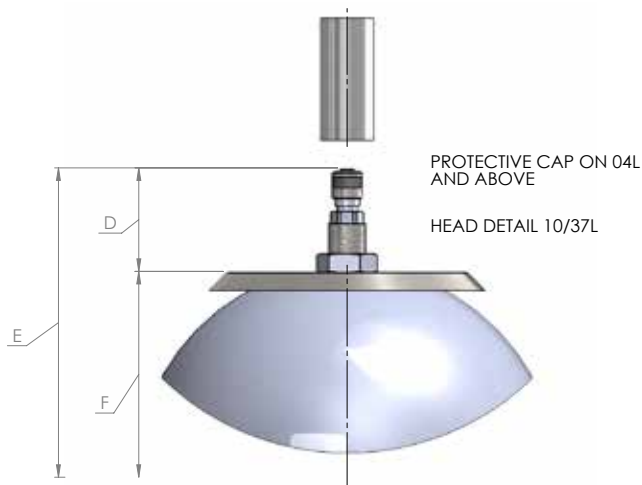
Part number	Valve	Adaptor	Clamps	Support Bracket	Lifting Eye	Complete Repair Kit
	Model	Part Number	Part Number	Part Number	Part Number	Part Number
100SA-CZ-341		N/A	10983	10961	FCH403922-3	100SA-CZ
200SA-CZ-341		N/A	10983	10961	FCH403922-3	200SA-CZ
280SA-CZ-341		N/A	10983	10961	FCH403922-3	280SA-CZ
370SA-CZ-341		N/A	10983	10961	FCH403922-3	370SA-CZ
540SA-CZ-341		N/A	10983	10961	10*5K-DC	540SA-CZ

Nominal Capacity Litres	Effective Gas vol. Litres	Work press. bar	Max Flow Rate lt/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 Inches	K	L	M	N	P
OB	0.16	345	27	2.00	¼ BSP	5/8 UNF	24	40	292	205	55	36	½ BSPF	26	-	-	-	23
OF	0.60	345	109	2.70	¼ BSP	5/8 UNF	24	40	266	175	90	37	¾ BSPF	35	-	-	-	32
011	1.15	207	109	5.4	¼ BSP	5/8 UNF	24	40	292	200	115	37	¾ BSPF	35	-	-	-	32
011	1.15	345	109	5.7	¼ BSP	5/8 UNF	23	40	292	200	115	37	¾ BSPF	35	-	-	-	32
03	2.5	345	215	10.00	¼ BSP	5/8 UNF	23	40	506	402	115	49	1 BSPF	44	5	32	15	41
04	3.8	207	477	15.20	¼ BSP	7/8 UNF	33	78	455	289	169	74	1 ¼ BSPF	60	36	39	9	55
04	3.8	345	477	15.20	¼ BSP	7/8 UNF	33	78	455	289	169	74	1 ¼ BSPF	60	36	39	9	55
10	9.4	207	749	35.00	¼ BSP	7/8 UNF	33	78	575	407	219	70	2 BSPF	76	36	46	9	69
10	9.4	310	749	35.00	¼ BSP	7/8 UNF	33	78	575	407	219	70	2 BSPF	76	36	46	9	69
10	9.4	345	749	35.00	¼ BSP	7/8 UNF	33	78	575	407	221	70	2 BSPF	76	36	46	9	69
10	9.4	420	749	34.00	¼ BSP	7/8 UNF	33	78	575	407	229	70	2 BSPF	76	36	46	9	69
20	18.8	207	749	55.00	¼ BSP	7/8 UNF	33	78	886	718	219	70	2 BSPF	76	36	46	9	69
20	18.8	310	749	55.00	¼ BSP	7/8 UNF	33	78	886	718	219	70	2 BSPF	76	36	46	9	69
20	18.8	345	749	55.00	¼ BSP	7/8 UNF	33	78	886	718	221	70	2 BSPF	76	36	46	9	69
20	18.8	420	749	54.00	¼ BSP	7/8 UNF	33	78	886	718	229	70	2 BSPF	76	36	46	9	69
28	25.8	207	749	61.00	¼ BSP	7/8 UNF	33	78	1158	990	221	70	2 BSPF	76	36	46	9	69
28	25.8	345	749	61.00	¼ BSP	7/8 UNF	33	78	1158	990	221	70	2 BSPF	76	36	46	9	69
37	35.2	207	749	91.00	¼ BSP	7/8 UNF	33	78	1407	1239	219	70	2 BSPF	76	36	46	9	69
37	35.2	310	749	91.00	¼ BSP	7/8 UNF	33	78	1407	1239	219	70	2 BSPF	76	36	46	9	69
37	35.2	345	749	91.00	¼ BSP	7/8 UNF	33	78	1407	1239	221	70	2 BSPF	76	36	46	9	69
37	35.2	420	749	86.00	¼ BSP	7/8 UNF	33	78	1407	1239	229	70	2 BSPF	76	36	46	9	69
54	49.2	207	749	130.00	¼ BSP	M50x 1.5	69	66	1922	1766	219	70	2 BSPF	76	36	46	9	69
54	49.2	310	749	130.00	¼ BSP	M50x 1.5	69	66	1922	1766	219	70	2 BSPF	76	36	46	9	69
54	49.2	345	749	130.00	¼ BSP	M50x 1.5	69	66	1922	1766	221	70	2 BSPF	76	36	46	9	69
54	49.2	420	749	119.00	¼ BSP	M50x 1.5	69	66	1922	1766	229	70	2 BSPF	76	36	46	9	69

**Capacities and Dimensions**

Part number	Vol. (Litres)	Max. Operating Pressure (bar)	Max. Flow Rate (lpm)	Min/Max-Operating Temp. (°C)	Weight (kg)	Height (mm)	Gas Valve Size (A) (Inch)	B	C	D	E	F	G	H	Fluid Port Connection (J)	K	L	M	N	P
100SA-CZ-341	10	345	749	-15/+80	35	575	G 1/4	7/8 UNF	33	78	575	407	221	70	2 BSPF	76	36	46	9	69
200SA-CZ-341	20	345	749	-15/+80	55	886	G 1/4	7/8 UNF	33	78	886	718	221	70	2 BSPF	76	36	46	9	69
280SA-CZ-341	28	345	749	-15/+80	61	1158	G 1/4	7/8 UNF	33	78	1158	990	221	70	2 BSPF	76	36	46	9	69
370SA-CZ-341	37	345	749	-15/+80	91	1407	G 1/4	7/8 UNF	33	78	1407	1239	221	70	2 BSPF	76	36	46	9	69
540SA-CZ-341	54	345	749	-15/+80	130	1922	G 1/4	M50x1.5	69	66	1922	1766	221	70	2 BSPF	76	36	46	9	69

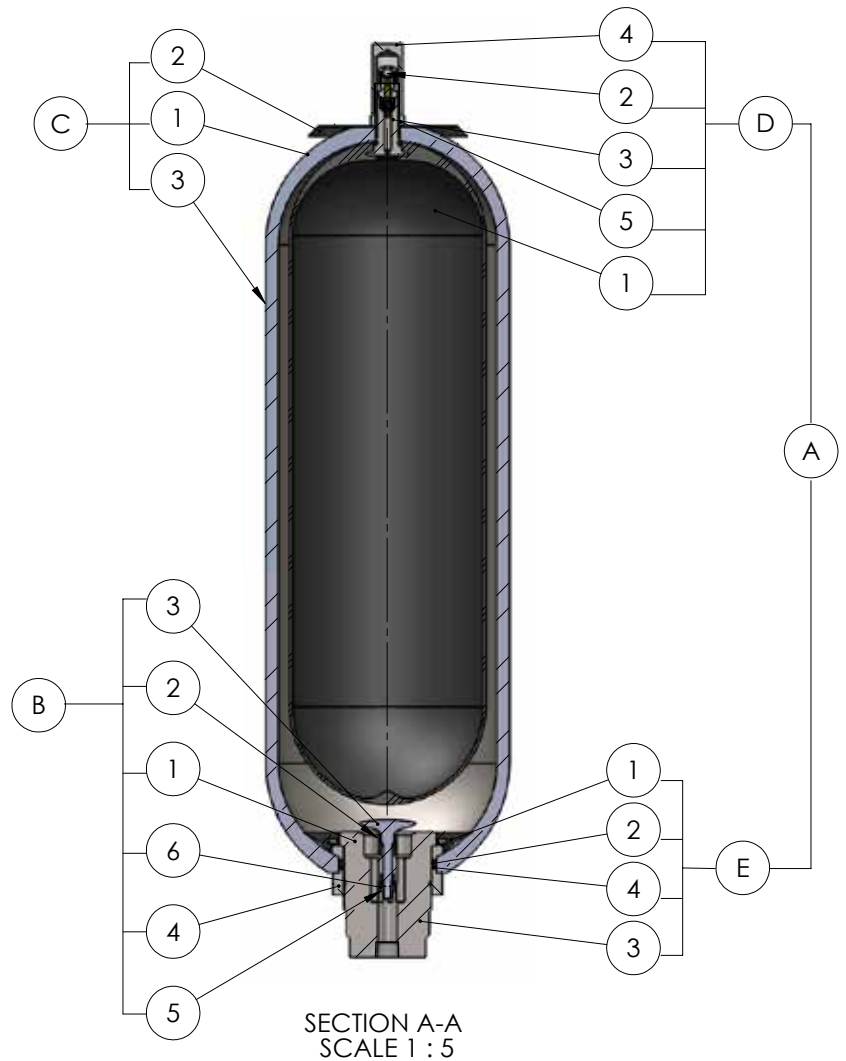
Note: Dimensions are based on current stock and are subject to change without prior notice.





# O&G Series, 480 & 517 bar

<b>A</b>	<b>Bladder Kit comprising:</b>
<b>D</b>	<b>Bladder assembly</b>
D1	Bladder
D2	Gas valve assembly
D3	Locknut
D4	Protective cap
D5	'O' ring stem
<b>E</b>	<b>Anti extrusion ring assembly</b>
E1	Anti extrusion ring
E2	'O' ring fluid port*
E3	Bonded seal
E4	Back-up ring
<b>B</b>	<b>Fluid port assembly comprising</b>
B1	Fluid port body
B2	Spring
B3	Poppet valve
B4	Collett
B5	Piston
B6	Flanged washer
<b>C</b>	<b>Shell assembly comprising:</b>
C1	Shell
C2	Label
C3	Label warning



# O&G Series 480 and 517 bar: Dimensions

## Capacities and Dimensions

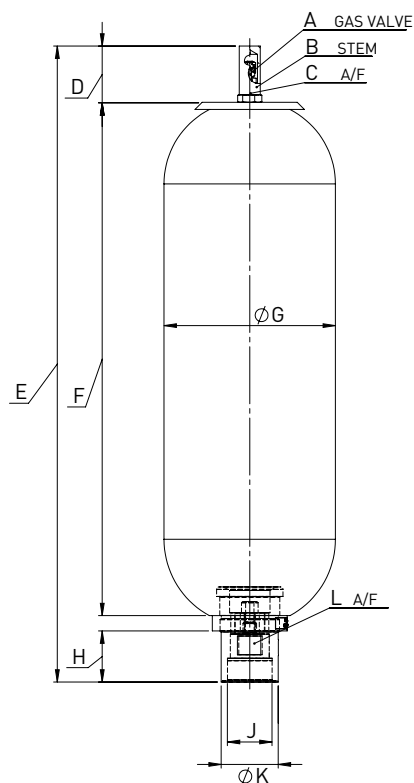
Nominal Capacity Litres	Effective Gas vol. Litres	Work press. bar	Max Flow Rate lt/min	Weight Dry Kilo	Dimensions in mm unless stated otherwise and subject to manufacturer's tolerances											
					A Inches	B Inches	C	D	E	F	G	H	J Inches	K	L	
10	9.4	480	215	34	¼ BSP	7/8 UNF	33	78	575	407	229	70	see table	76	69	
10	9.4	517	215	54	¼ BSP	7/8 UNF	33	78	575	407	243	70		76	69	
20	18.8	480	215	54	¼ BSP	7/8 UNF	33	78	886	718	229	70		76	69	
20	18.8	517	215	100	¼ BSP	7/8 UNF	33	78	886	718	243	70		76	69	
37	35.2	480	215	86	¼ BSP	7/8 UNF	33	78	1407	1239	229	70		76	69	
37	35.2	517	215	152	¼ BSP	7/8 UNF	33	78	1407	1239	243	70		76	69	
54	49.2	480	215	119	¼ BSP	M50x 1.5P	69	66	1922	1766	229	70		76	69	
57	54.5	517	215	220	¼ BSP	M50x 1.5P	69	66	1980	1824	243	70		76	69	

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

### Dimension J

Code	Shell and Fluid Port
EH	Stainless Steel - 1/2" NPT female (480 bar)
GC	Stainless Steel - 1/2" BSP female (517 bar)
GJ	Stainless Steel - 1/2" BSP female (480 bar)
JB	Stainless Steel - 1/2" NPT female (517 bar)

Other available on request.



# O&G Series 480 to 517 bar: How to order

**1001M-EH-48**

**Volume in Litres**

- 10: for 10 Litres
- 20: for 20 Litres
- 28: for 28 Litres
- 37: for 37 Litres (480 bar only)
- 54: for 54 Litres (517 bar only)

**Bladder Material**

- 0: Nitrile standard
- 1: Butyl
- 2: Low temperature nitrile
- 3: Low permeability nitrile
- 6: Viton
- 8: High temperature nitrile

**Bladder Stem/Gas Valve**

**10 to 37 Litres**

- 1M:** 7/8"UNF SS Stem / 1/4" BSP SS HP Gas Valve
- 3N:** 7/8"UNF SS Stem / 1/2" UNF Port (No Gas Valve/Pro Cap)

**54 Litres**

- 1M:** M50 x 1.5P SS Stem / 1/4" BSP SS HP Gas Valve
- 3N:** M50 x 1.5P SS Stem / 1/2" UNF Port (No Gas Valve/Pro Cap)

**Shell and Fluid Port**

- EH: St. Steel Fluid Port - 1/2" NPT female (480 bar)
- GC: St. Steel Fluid Port - 1/2" BSP female (517 bar)
- GJ: St. Steel Fluid Port - 1/2" BSP female (480 bar)
- JB: St. Steel Fluid Port - 1/2" NPT female (517 bar)

**Maximum Working Pressure**

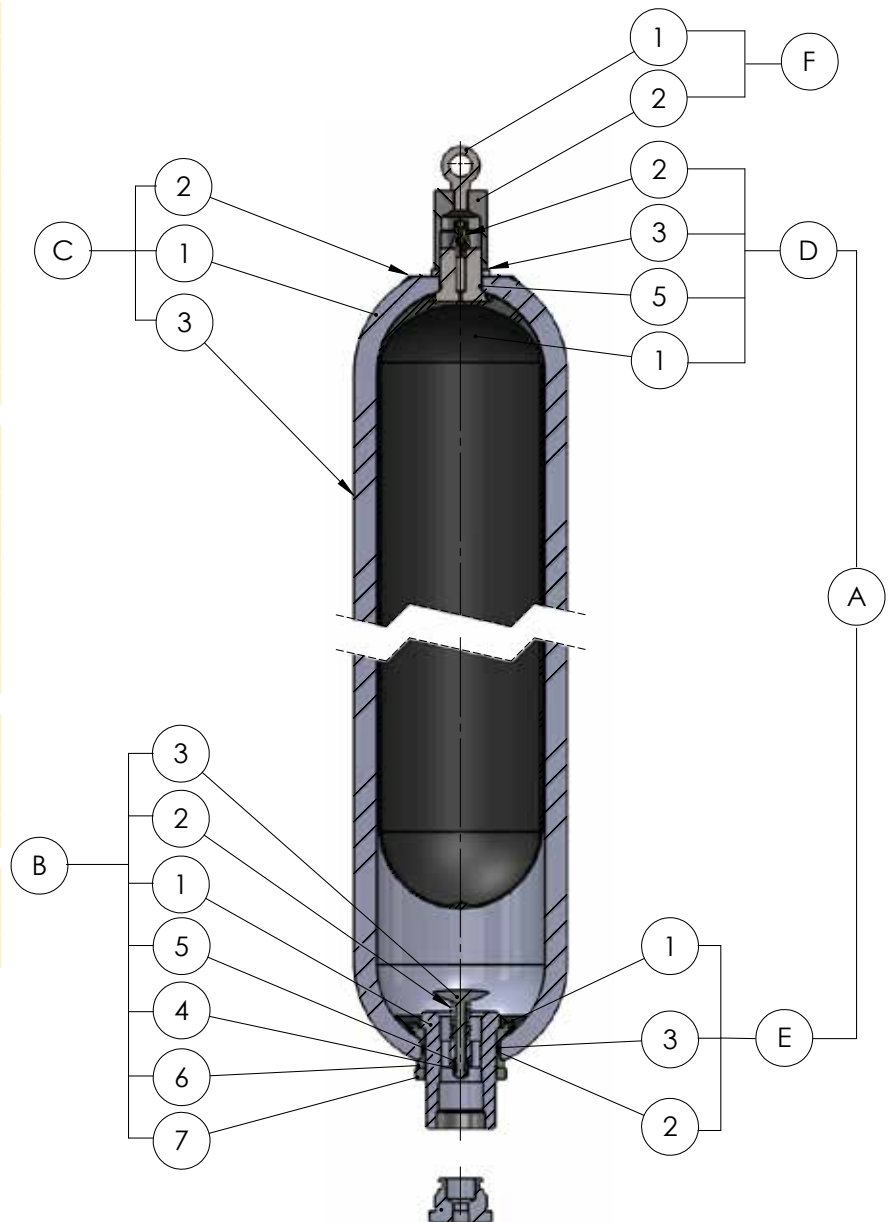
- 48: 480 bar
- 51: 517 bar

**Maximum Working Pressure**

- 1: Lloyds/CE

# O&G Series, 690 to 760 bar

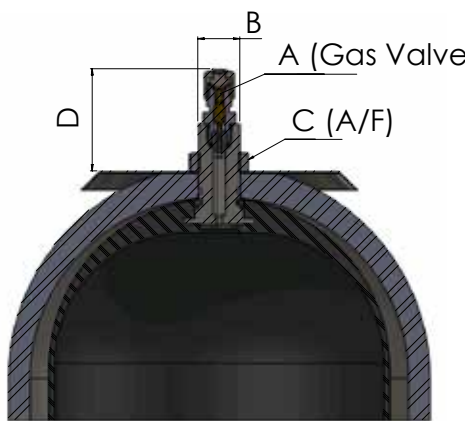
<b>A</b>	<b>Bladder Kit comprising:</b>
<b>D</b>	<b>Bladder assembly comprising of:-</b>
D1	Bladder
D2	Gas valve assembly
D3	Locknut
D4	Protective cap
D5	'O' ring stem
D6	Lifting Eye
<b>E</b>	<b>Anti extrusion ring assembly:-</b>
E1	Anti extrusion ring
E2	'O' ring fluid port*
E3	Back-up ring
<b>B</b>	<b>Fluid port assembly comprising:-</b>
B1	Fluid port body
B2	Spring
B3	Poppet valve
B4	Collett
B5	Piston
B6	Flanged washer
B7	Lock ring
<b>C</b>	<b>Shell assembly comprising:</b>
C1	Shell
C2	Label
C3	Label warning
<b>F</b>	<b>Lifting Eye Assembly:-</b>
F1	Protective cap
F2	Lifting Eye



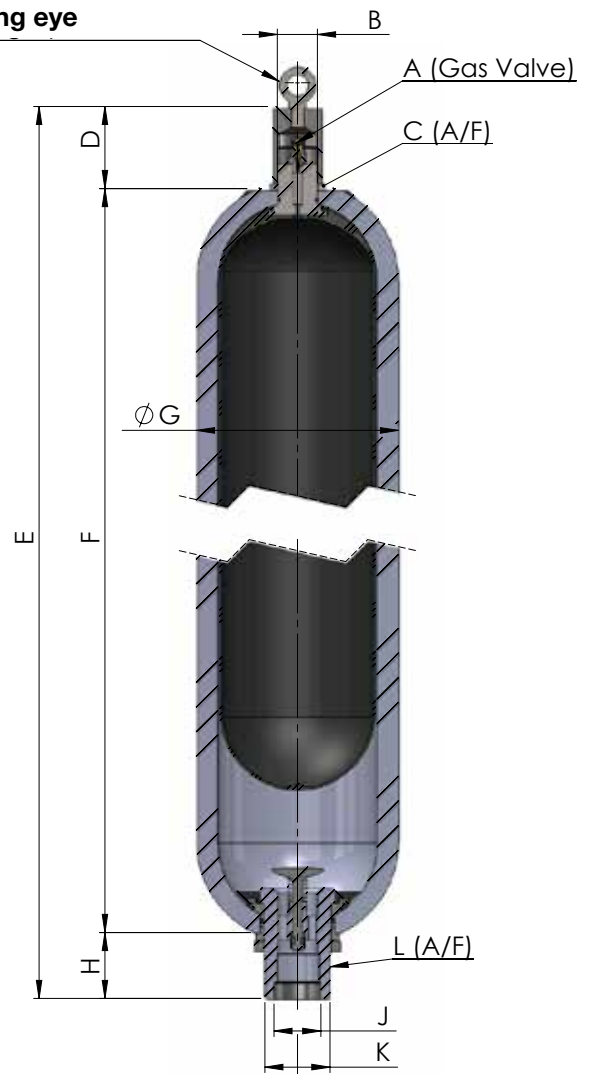
# O&G Series 690 to 760 bar: Dimensions

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 Below	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.

# O&G Series 690 to 760 bar: How to order

**0502L-DP-691**

**Volume in Litres**

011: for 1 Litres	20: for 20 Litres
03: for 2.5 Litres	37: for 37 Litres
05: for 5 Litres	54: for 54 Litres
12: for 12 Litres	

**Bladder Material**

0: Nitrile standard	3: Low permeability nitrile
1: Butyl	6: Viton
2: Low temperature nitrile	8: High temperature nitrile

**Bladder Stem/Gas Valve**

<b>1 - 5 Litres</b>	<b>12 - 54 Litres</b>
<b>2L:</b> 7/8"UNF SS Stem / 1/4" BSP SS HP Gas Valve	<b>5K:</b> M50 x 1.5P SS Stem / 1/4" BSP SS HP Gas Valve

**Shell and Fluid Port**

<b>1 - 5 Litres</b>	<b>12 - 54 Litres</b>
<b>DP:</b> St. Steel Fluid Port / 1" BSP Female Special	<b>DC:</b> SS Externals/ CS Internals/ 2" BSP Female Special
	<b>DF:</b> SS Externals/ SS Internals/ 2" BSP Female Special (see table on next page for fluid port adaptors)

**Maximum Working Pressure+**

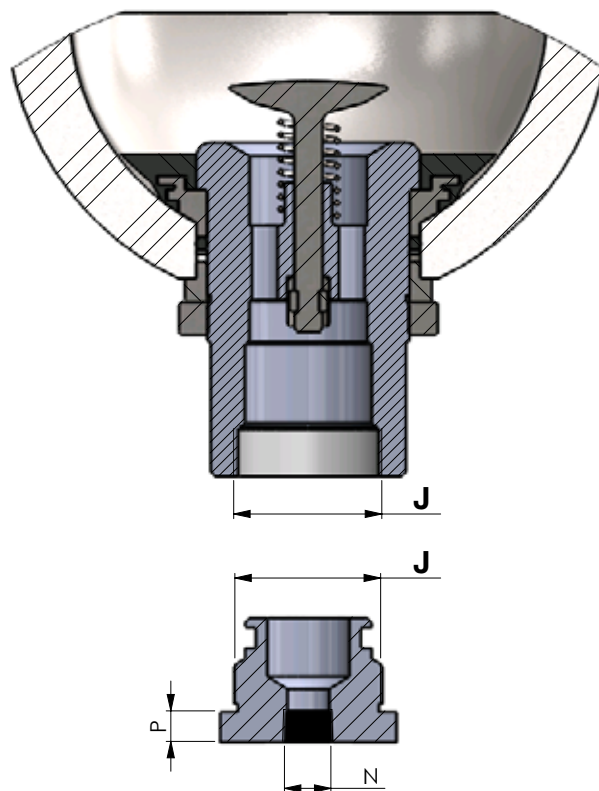
69: 690 bar  
 75: 750 bar (1-5 litre only)  
 76: 760 bar (12-54 litre only)

**Maximum Working Pressure**

1: Lloyds/CE

**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
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



# ACP Series Piston Accumulators

0.08 to 8 Litres, up to 275 bar

## IN THIS SECTION

### ACP Series Piston Accumulators

ACP Series: How to order	84
Part Numbers	86

The Parker ACP high-strength crimped piston offers long, reliable service life and is ideally suited for the mobile, construction and renewable markets. The ACP is available in Carbon Steel (up to 275 bar/ 12 Litres).

Rechargeable or Tamperproof Designs  
 ACP Series accumulators are available in two versions:

1. Rechargeable models allow the user to monitor and regulate the gas pre-charge to suit different operating conditions, and feature a Schrader-type gas valve cartridge to ISO 4570 8V1.

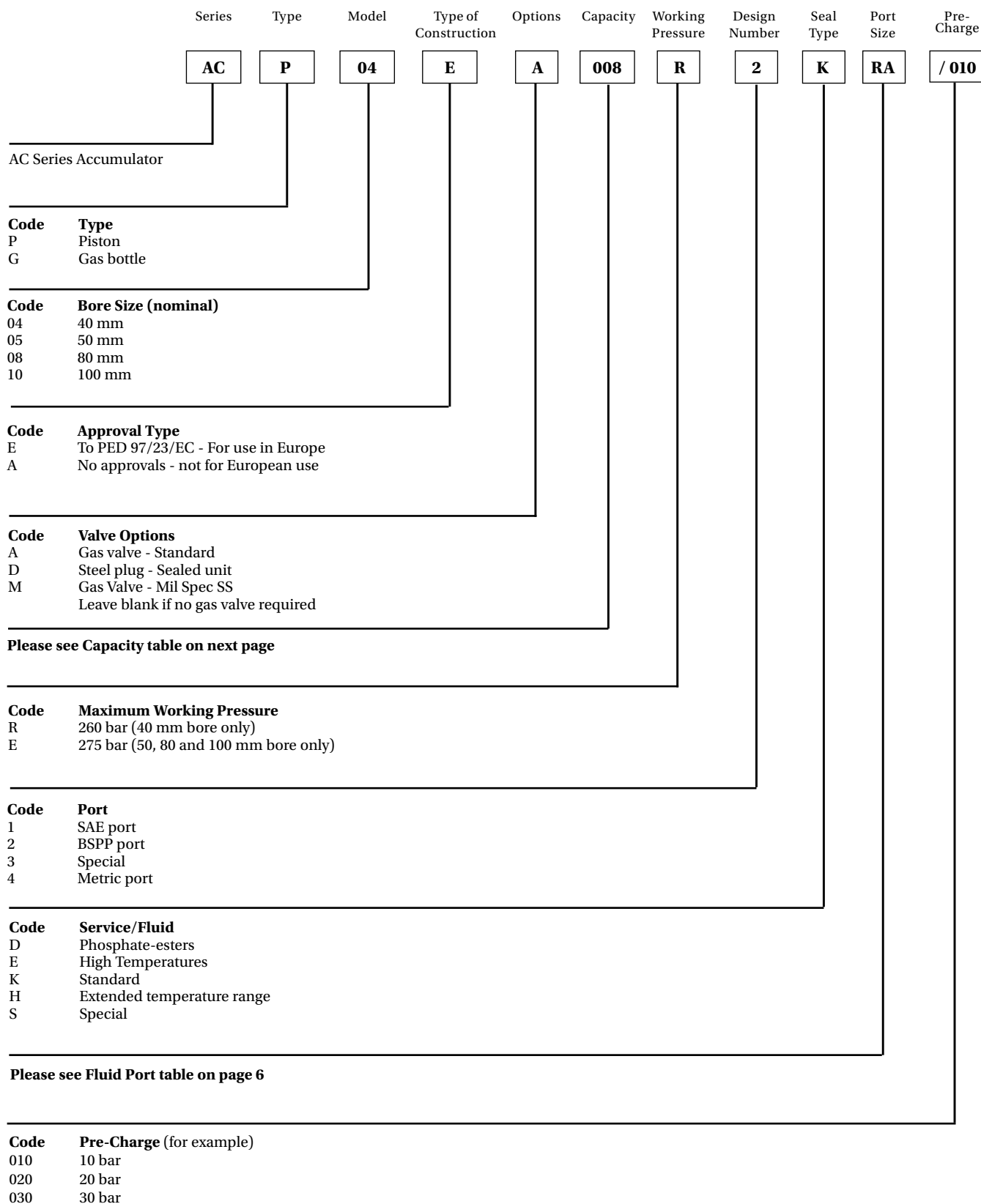
2. Tamperproof, sealed-for-life versions of the ACP are pre-charged on assembly to customer specification and are completely maintenance free.



Sizing Questionnaires	Accumulator Stations	Gas Bottles	Accessories	Diaphragms	Attenuators	Pulsation Dampers	Piston Accumulators					Bladder Accumulators		
							EHP	DC	AP	A	ACP	O&G	Regulations	EHV



# ACP Series: How to order



## Benefits

The ACP Series Piston Accumulator is designed with high strength, compact, rugged steel shell and cap material. The steel shell allows heat to dissipate effectively and is micro-finished for extended seal life. Although these accumulators are offered in standard capacities, the steel shell design affords an easy way to “custom” manufacture an accumulator to meet the exact capacity for any customer application.

- **Quality:** The high-strength crimped construction provides long, reliable service life.
- **Reliability:** The small piston seal area minimizes permeability and its sealed-for-life design provides a maintenance-free solution. The ACP Piston design prevents sudden accumulator failure and is customized to fit the application
- **Versatility** – The ACP series is available in a wide range of lengths and bore sizes which allows installation to be adapted to available space. Rechargeable and ‘tamperproof’ versions – available with gas valve for customer charging, or valveless
- Manufactured to EU Pressure Equipment Directive
- 97/23/EC – can be used in any European Union or EEA country without additional certification
- Custom sizes available for unique applications

## Fluid Ports

Port Type	Code	ACP04	ACP05	ACP08	ACP10
SAE6 Female	TB	•	•	•	•
SAE8 Female	TC		•	•	•
SAE10 Female	TI		•	•	•
SAE12 Female	TD			•	•
SAE16 Female	TE			•	•
SAE12 Male	AD	•	•	•	•
SAE16 Male	AE		•	•	•
G1/4	RH	•	•	•	•
G3/8	RA	•	•	•	•
G1/2	RB	•	•	•	•
G3/4	RC		•	•	•
G 1	RD		•	•	•
G3/4 Male	LC			•	•
G 1 Male	LD			•	•
M14 x 1.5 Female	GA	•	•	•	•
M18 x 1.5 Female	GB	•	•	•	•
M22 x 1.5 Female	GC		•	•	•
M18 x 1.5 Male	HB	•	•	•	•
M22 x 1.5 Male	HC	•	•	•	•

## Applications

### Fork lifts and cherry pickers

- pressure spike damping

### Transportation vehicles

- suspension and braking systems

### Construction and Mining

- suspension and load stabilising systems, emergency back-up steering, braking and pilot circuits

### Turbine Engines

- maintaining oil pressure for lubrication

### Machine Tools

- energy saving

### Hydrostatic Drives

- shock absorption when changing direction

### Assembly Automation

- reducing noise and smoothing pump pulsations

### Renewable Energy (Wind and Solar)

- Braking systems for wind turbines

## Capacity

### ACP08

Code	Model	Volume (Litres)
025	08	0.25
050	08	0.50
100	08	1.00
150	08	1.50
200	08	2.00
250	08	2.50
300	08	3.00
400	08	4.00
500	08	5.00
600	08	6.00
700	08	7.00
800	08	8.00

### ACP04

Code	Model	Volume (Litres)
002	04	0.02
008	04	0.08
016	04	0.16
050	04	0.5
075	04	0.75

### ACP05

Code	Model	Volume (Litres)
008	05	0.08
016	05	0.16
032	05	0.32
050	05	0.50
075	05	0.75
100	05	0.95
125	05	1.25
150	05	1.50
175	05	1.75
200	05	2.00

### ACP10

Code	Model	Volume (Litres)
070	10	0.70
100	10	1.00
150	10	1.50
200	10	2.00
300	10	3.00
400	10	4.00
500	10	5.00
1000	10	10.00
1100	10	11.00
1200	10	12.00

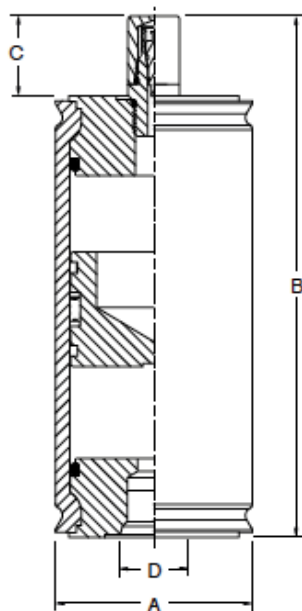
# ACP Series 275 bar(260 bar), 0.02 to 12 Litres

ACP - Crimped Piston Accumulators without Gas Valve (code D)

According to PED 2014/68/EU

Part number	Effective gas Volume (Litres)	Max. Working Pressure (PS) bar	Max Flow Rate l/mn	Temp. Min/Max (°C)	A	C	∅D	∅ Bore	G (BSPP) Female	G (BSPP) Male
ACP04AA002R2K	0.02	260	209	- 20/150	101	25.4	44.5	38.2	G3/8	G3/4
ACP04AA008R2K	0.08	260	209	- 20/150	155	25.4	44.5	38.2	G3/8	G3/4
ACP04AA016R2K	0.16	260	209	- 20/150	225	25.4	44.5	38.2	G3/8	G3/4
ACP04AA032R2K	0.32	260	209	- 20/150	365	25.4	44.5	38.2	G3/8	G3/4
ACP04AA050R2KRB	0.50	260	209	- 20/150	523	25.4	44.5	38.2	G3/8	G3/4
ACP04AA075R2K	0.75	260	209	- 20/150		25.4	44.5	38.2	G3/8	G3/4
ACP05EA008E2K	0.08	275	380	- 40/+150	138	25.4	60.5	51.4	G3/4	G1
ACP05EA016E2K	0.16	275	380	- 40/+150	177	25.4	60.5	51.4	G3/4	G1
ACP05EA032E2K	0.32	275	380	- 40/+150	254	25.4	60.5	51.4	G3/4	G1
ACP05EA050E2K	0.50	275	380	- 40/+150	341	25.4	60.5	51.4	G3/4	G1
ACP05EA075E2K	0.75	275	380	- 40/+150	461	25.4	60.5	51.4	G3/4	G1
ACP05EA100E2K	0.95	275	380	- 40/+150	558	25.4	60.5	51.4	G3/4	G1
ACP05EA125E2K	1.25	275	380	- 40/+150		25.4	60.5	51.4	G3/4	G1
ACP05EA150E2K	1.50	275	380	- 40/+150		25.4	60.5	51.4	G3/4	G1
ACP05EA175E2K	1.75	275	380	- 40/+150		25.4	60.5	51.4	G3/4	G1
ACP05EA200E2K	2.00	275	380	- 40/+150		25.4	60.5	51.4	G3/4	G1
ACP08EA025E2K	0.25	275	834	- 40/+150		25.4	90.4	80.0	G3/4	G1
ACP08EA032E2K	0.32	275	834	- 40/+150	196	25.4	90.4	76.2	G3/4	G1
ACP08EA050E2K	0.50	275	834	- 40/+150	235	25.4	90.4	76.2	G3/4	G1
ACP08EA100E2K	0.95	275	834	- 40/+150	335	25.4	90.4	76.2	G3/4	G1
ACP08EA150E2K	1.50	275	834	- 40/+150	455	25.4	90.4	76.2	G3/4	G1
ACP08EA200E2K	2.00	275	834	- 40/+150	564	25.4	90.4	76.2	G3/4	G1
ACP08EA250E2K	2.50	275	834	- 40/+150		25.4	90.4	76.2	G3/4	G1
ACP08EA300E2K	3.00	275	834	- 40/+150		25.4	90.4	76.2	G3/4	G1
ACP08EA400E2K	4.00	275	834	- 40/+150	1004	25.4	90.4	76.2	G3/4	G1
ACP08EA500E2K	5.00	275	834	- 40/+150		25.4	90.4	76.2	G3/4	G1
ACP08EA600E2K	6.00	275	834	- 40/+150	1443	25.4	90.4	76.2	G3/4	G1
ACP08EA700E2K	7.00	275	834	- 40/+150		25.4	90.4	76.2	G3/4	G1
ACP08EA800E2K	8.00	275	834	- 40/+150	1883	25.4	90.4	76.2	G3/4	G1

Part number	Effective gas Volume (Litres)	Max. Working Pressure (PS)bar	Max Flow Rate l/mn	Temp. Min/Max (°C)	A	C	øD	ø Bore	G (BSPP) Female	G (BSPP) Male
ACP10EA075E2K	0.70	275	1504	- 40/+150	241	25.4	120.9	102.4	G1	G1
ACP10EA100E2K	0.95	275	1504	- 40/+150	264	25.4	120.9	102.4	G1	G1
ACP10EA150E2K	1.50	275	1504	- 40/+150	331	25.4	120.9	102.4	G1	G1
ACP10EA200E2K	2.00	275	1504	- 40/+150	393	25.4	120.9	102.4	G1	G1
ACP10EA300E2K	3.00	275	1504	- 40/+150	513	25.4	120.9	102.4	G1	G1
ACP10EA400E2K	4.00	275	1504	- 40/+150	335	25.4	120.9	102.4	G1	G1
ACP10EA500E2K	5.00	275	1504	- 40/+150		25.4	120.9	102.4	G1	G1
ACP10EA600E2K	6.00	275	1504	- 40/+150	879	25.4	120.9	102.4	G1	G1
ACP10EA800E2K	8.00	275	1504	- 40/+150	1122	25.4	120.9	102.4	G1	G1
ACP10EA1000E2K	10.00	275	1504	- 40/+150		25.4	120.9	102.4	G1	G1
ACP10EA1100E2K	11.00	275	1504	- 40/+150		25.4	120.9	102.4	G1	G1
ACP10EA1200E2K	12.00	275	1504	- 40/+150	1606	25.4	120.9	102.4	G1	G1



# ACP Series 275 bar(260 bar) , 0.02 to 12 Litres

ACP - Crimped Piston Accumulators with Gas Valve (code A) Seals nitrile

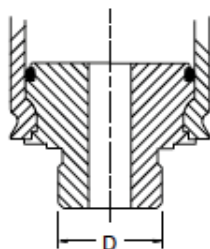
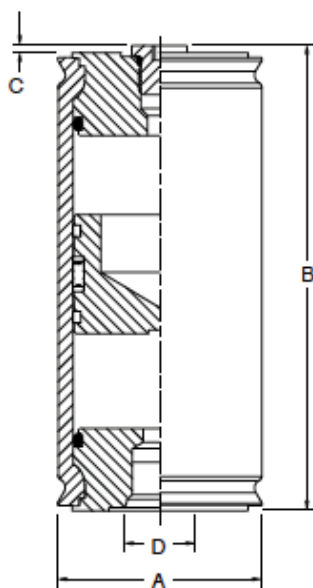
According to PED 2014/68/EU

Part number	Effective gas Volume (Litres)	Max. Working Pressure (PS) bar	Max Flow Rate l/mn	Temp. Min/Max (°C)	A	C	øD	ø Bore	G (BSPP) Female	G (BSPP) Male
ACP04AD002R2K	0.02	260	209	- 20/150		2.0	44.5	38.2	G3/8	G3/4
ACP04AD008R2K	0.08	260	209	- 20/150	132	2.0	44.5	38.2	G3/8	G3/4
ACP04AD016R2K	0.16	260	209	- 20/150	202	2.0	44.5	38.2	G3/8	G3/4
ACP04AD032R2K	0.32	260	209	- 20/150	342	2.0	44.5	38.2	G3/8	G3/4
ACP04AD050R2K	0.50	260	209	- 20/150	500	2.0	44.5	38.2	G3/8	G3/4
ACP04AD075R2K	0.75	260	209	- 20/150		2.0	44.5	38.2	G3/8	G3/4
ACP05ED008E2K	0.08	275	380	- 40/+150		2.0	60.5	51.4	G3/4	G1
ACP05ED016E2K	0.16	275	380	- 40/+150	154	2.0	60.5	51.4	G3/4	G1
ACP05ED032E2K	0.32	275	380	- 40/+150	231	2.0	60.5	51.4	G3/4	G1
ACP05ED050E2K	0.50	275	380	- 40/+150	318	2.0	60.5	51.4	G3/4	G1
ACP05ED075E2K	0.75	275	380	- 40/+150	438	2.0	60.5	51.4	G3/4	G1
ACP05ED100E2K	0.95	275	380	- 40/+150	534	2.0	60.5	51.4	G3/4	G1
ACP05ED125E2K	1.25	275	380	- 40/+150		2.0	60.5	51.4	G3/4	G1
ACP05ED150E2K	1.50	275	380	- 40/+150		2.0	60.5	51.4	G3/4	G1
ACP05ED175E2K	1.75	275	380	- 40/+150		2.0	60.5	51.4	G3/4	G1
ACP05ED200E2K	2.00	275	380	- 40/+150		2.0	60.5	51.4	G3/4	G1
ACP08ED025E2K	0.25	275	834	- 40/+150		2.0	90.4	80.0	G3/4	G1
ACP08ED032E2K	0.32	275	834	- 40/+150	171	2.0	90.4	76.2	G3/4	G1
ACP08ED050E2K	0.50	275	834	- 40/+150		2.0	90.4	76.2	G3/4	G1
ACP08ED100E2K	0.95	275	834	- 40/+150	309	2.0	90.4	76.2	G3/4	G1
ACP08ED150E2K	1.50	275	834	- 40/+150		2.0	90.4	76.2	G3/4	G1
ACP08ED200E2K	2.00	275	834	- 40/+150		2.0	90.4	76.2	G3/4	G1
ACP08ED250E2K	2.50	275	834	- 40/+150		2.0	90.4	76.2	G3/4	G1
ACP08ED300E2K	3.00	275	834	- 40/+150		2.0	90.4	76.2	G3/4	G1
ACP08ED400E2K	4.00	275	834	- 40/+150	978	2.0	90.4	76.2	G3/4	G1
ACP08ED500E2K	5.00	275	834	- 40/+150		2.0	90.4	76.2	G3/4	G1
ACP08ED600E2K	6.00	275	834	- 40/+150	1418	2.0	90.4	76.2	G3/4	G1
ACP08ED700E2K	7.00	275	834	- 40/+150		2.0	90.4	76.2	G3/4	G1
ACP08ED800E2K	8.00	275	834	- 40/+150	1857	2.0	90.4	76.2	G3/4	G1

ACP - Crimped Piston Accumulators without Gas Valve (code D) Seals nitrile

According to PED 2014/68/EU

Part number	Effective gas Volume (Litres)	Max. Working Pressure (PS) bar	Max Flow Rate l/ mn	Temp. Min/Max (°C)	A	C	øD	ø Bore	G (BSPP) Female	G (BSPP) Male
ACP10ED075E2K	0.70	275	1504	- 40/+150	215	2.0	120.9	102.4	G1	G1
ACP10ED100E2K	0.95	275	1504	- 40/+150		2.0	120.9	102.4	G1	G1
ACP10ED150E2K	1.50	275	1504	- 40/+150		2.0	120.9	102.4	G1	G1
ACP10ED200E2K	2.00	275	1504	- 40/+150	367	2.0	120.9	102.4	G1	G1
ACP10ED300E2K	3.00	275	1504	- 40/+150		2.0	120.9	102.4	G1	G1
ACP10ED400E2K	4.00	275	1504	- 40/+150		2.0	120.9	102.4	G1	G1
ACP10ED500E2K	5.00	275	1504	- 40/+150		2.0	120.9	102.4	G1	G1
ACP10ED600E2K	6.00	275	1504	- 40/+150	853	2.0	120.9	102.4	G1	G1
ACP10ED800E2K	8.00	275	1504	- 40/+150	1097	2.0	120.9	102.4	G1	G1
ACP10ED1000E2K	10.00	275	1504	- 40/+150		2.0	120.9	102.4	G1	G1
ACP10ED1100E2K	11.00	275	1504	- 40/+150		2.0	120.9	102.4	G1	G1
ACP10ED1200E2K	12.00	275	1504	- 40/+150	1606	2.0	120.9	102.4	G1	G1



**Features and Benefits**

**Lightweight Piston**

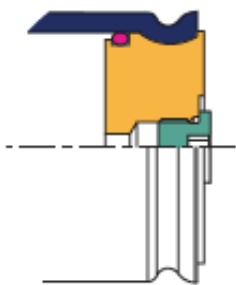
The ACP Series feature a dished, lightweight aluminium piston deep-walled for stability in the bore.

- High efficiency - fast response times
- Reduced system shock in rapid cycling applications
- Extra gas capacity

**Rugged Construction**

ACP Series accumulators feature high strength, compact, steel shell and caps, permanently joined and sealed by a revolutionary crimping process.

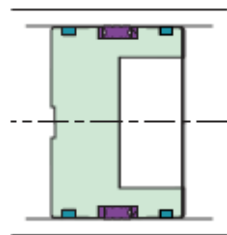
- Effective heat dissipation prevents fluid and seal degradation
- Superior fatigue life
- Micro-finished extended seal life



for

**Effective, Durable Sealing**

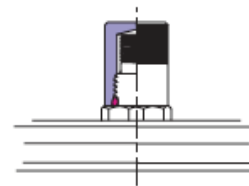
50mm bore models feature Parker's unique, patented five bladed V-O-ring piston seal. The 40mm model combines an elastomeric seal with a low friction PTFE piston ring. All models employ PTFE bearing rings to eliminate metal-to-metal contact between the tube and piston.



- Dependable, full pressure storage of hydraulic energy
- Effective separation of fluid and gas for long service intervals
- Reduced wear for extended service life
- Safe in operation - cannot suffer catastrophic failure

**Protective Steel Gas Cap**

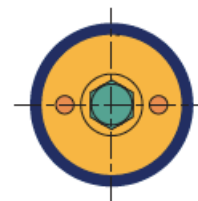
Models fitted with a gas valve are supplied with a protective steel cap. Tamperproof versions are fitted with a threaded plug which provides progressive release of pre-charge pressure prior to safe disposal.



- Steel cap reduces the risk of damage from external impact
- Security - cap provides a secondary seal

**Spanner Holes**

To permit easy installation hydraulic manifolds, or in areas where mounting space is restricted, spanner holes are provided on all models.



on

**External Coasting**

- Standard Black Paint according to AES-20
- Optional Nickel-plating
- Other options available upon request

**Cleanliness & Flushing**

- Maximum ISO Code Cleanliness Acceptable
- ISO 4406 18/16/13
- Customised flushing is available upon request

**Approvals**

Approvals	ACP04*	ACP05	ACP08	ACP10
PED 97/23/EC		•	•	•
CRN		•	•	•
AS 1210		•	•	•

\* ACP04 is manufactured in accordance with article 3.3 of PED

**Seals, Fluids and Temperature Ranges**

Code	ACP Seals	"Min Temp"	"Max Temp"	"Fluid Classification"	"Fluid Type"	Maximum Velocity (m/s)
K	"NBR (Nitrile)"	-29°C	74°C	"HFB-HFC HM-HV"	"Mineral Oils & Water Glycols"	4 m/s
H	"HNBR (Hydrogenated Nitrile)"	-32°C	150°C	"HFB-HFC HM-HV"	"Mineral Oils & Water Glycols"	4 m/s
E	"FPM (Fluorocarbon elastomer)"	-23°C	121°C	"HFB HM-HV"	"Synthetic Oils"	4 m/s
D	"EPDM (Ethylene Propylene)"	-40°C	121°C	HFD	"Ester Fluids"	4 m/s
Q	"LT-NBR (Low Temperature Nitrile)"	-45°C	71°C	HM-HV	"Mineral Oils"	4 m/s
X	"Low Friction T Seal Consult Parker ACDE"	-43°C	121°C	HM-HV	"Mineral Oils & Water Glycols"	4 m/s
S	"Special Consult Parker ACDE"			TBA	TBA	4 m/s

# A Series Piston Accumulators

## 0.5 to 300 Litres, 250 and 350 bar

### IN THIS SECTION

#### A Series Piston Accumulators

How to order	92
Part Numbers/Dimensions	94

The Parker A Series Piston Accumulators offer quality design and premium technical features which guarantee optimum performance life. This product is ideally suited for the Industrial, Marine, Automotive and Construction Markets (250 & 350 bar).



Bladder Accumulators	Regulations	EBV
	O&G	EHV
	ACP	
Piston Accumulators	A	
	AP	
	DC	
	EHP	
Pulsation Dampers		
Attenuators		
Diaphragms		
Accessories		
Gas Bottles		
Accumulator Stations		
Sizing Questionnaires		



# A Series: How to order

	Series	Model	Type of Construction	Options	Volume Capacity	Working Pressure	Design Number	Seal Type	Port Size	Gas Port	Pre-Charge
	<b>A</b>	<b>4</b>	<b>E</b>	<b>S</b>	<b>0005</b>	<b>L</b>	<b>2</b>	<b>K</b>	<b>RF</b>	<b>S</b>	<b>/ 010</b>
<b>A</b>	Series Accumulator										
<b>B</b>	Bottle										
<b>Code</b>	<b>Bore Size (nominal)</b>										
<b>2</b>	50 A Series										
<b>3</b>	75 A Series										
<b>4</b>	100 A Series										
<b>5</b>	127 A Series										
<b>6</b>	150 A Series										
<b>8</b>	200 A Series										
<b>Code</b>	<b>Approval Type</b>										
<b>E</b>	CE approved <sup>1</sup>										
<b>Code</b>	<b>Valve Options</b>										
<b>S</b>	Cored-type gas valve (standard) <sup>2</sup>										
<b>W</b>	Cored-type gas valve + water service										
<b>F</b>	Cored-type gas valve + safety fuse										
<b>G</b>	Cored-type gas valve + water service + safety fuse										
<b>M</b>	Poppet-type gas valve										
<b>L</b>	Poppet-type gas valve + water service										
<b>P</b>	Poppet-type gas valve + safety fuse										
<b>R</b>	Poppet-type gas valve + water service + safety fuse										
<b>Please see Dimensions table on page 94</b>											
<b>Code</b>	<b>Maximum Working Pressure<sup>3</sup></b>										
<b>L</b>	250 bar (A2, A3, A4, A5, A6 & A8)										
<b>H</b>	350 bar (A2, A3, A4, A6)										
<b>Code</b>	<b>Port</b>										
<b>1</b>	Inch mounting + SAE port										
<b>2</b>	Metric mounting + BSPP port (standard)										
<b>3</b>	Special ports										
<b>###</b>	Specials (Parker assigned number)										
<b>Code</b>	<b>Service/Fluid</b>					<b>Code</b>	<b>Service/Fluid</b>				
<b>K</b>	Nitrile (NBR)					<b>J</b>	Carboxilated nitrile (XNBR)				
<b>E</b>	Fluorocarbon Elastomer (FPM)					<b>Q</b>	Low temperature nitrile				
<b>H</b>	Hydrogenated nitrile (HNBR)					<b>S</b>	Special - please specify				
<b>D</b>	Ethylene Propylene (EPR)										
<b>Please see Fluid Port tables on page 93 (leave blank if standard)</b>											
<b>Gas Port</b> Specification (where no valve supplied)						<b>Hydraulic and Gas Port Modifications</b> 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					
<sup>1</sup> Other approvals are available to order - please consult the factory. <sup>2</sup> Where a gas port is specified, no gas valve will be supplied. <sup>3</sup> For other pressure ratings, please consult the factory.											
<b>Code</b>	<b>Pre-Charge (for example)</b>					<b>Code</b>	<b>Pre-Charge (for example)</b>				
<b>010</b>	10 bar					<b>020</b>	20 bar				

# 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 <sup>1</sup>			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

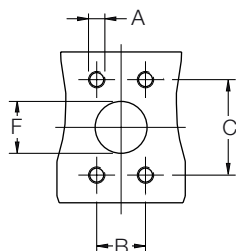
<sup>1</sup> Where the required fluid port is the standard BSPP size for the accumulator bore diameter chosen (see dimension D, page 94), the fluid port field in the order code on page 92 should be left blank.

## Optional Flanged Ports

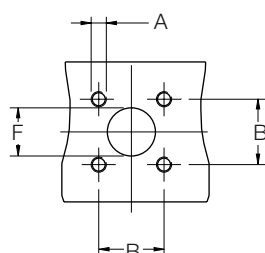
A Series Piston Accumulators are available with metric flange ports to ISO 6162/3000 psi and ISO 6164/6000 psi as shown in the tables. Inch pattern flange ports and flange ports for higher pressure operation are also available, please consult the factory for details.

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	A6	M16 x 2	69.3	51.0	SQ
DN56	A6	M20 x 2.5	83.4	56.0	SX

# A Series 250 bar, Volume 0.5 to 300 Litres

Standard version, Nitrile Seals, According to PED 2014/68/EU

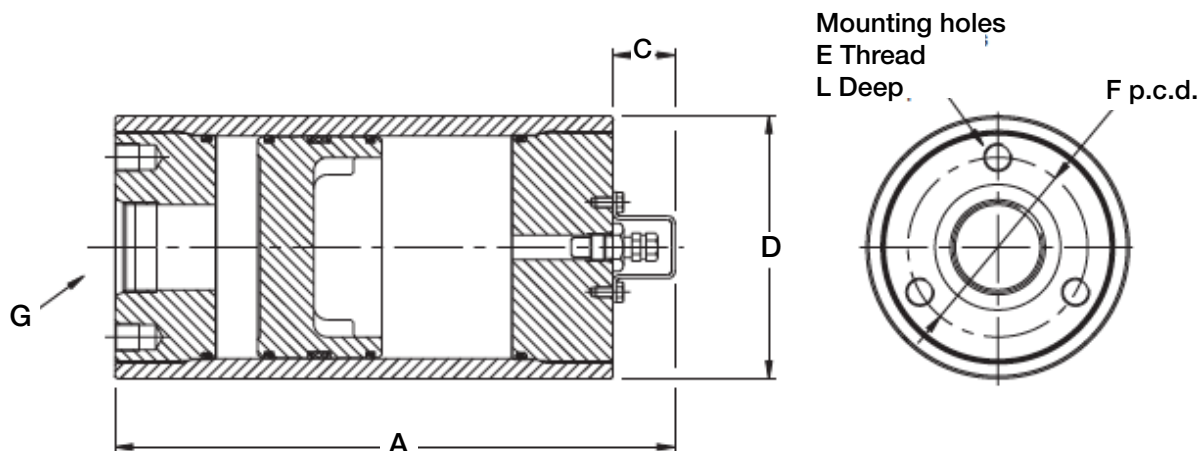
Part number	Model	Code	Bore ø	Fluid Volume	Gas Volume Litres	250 bar Maxi Weight Kg	350 bar Maxi Weight Kg	250 bar			350 bar			C mm	E2	F mm	L mm
								øD mm	A mm	G BSPP	øD mm	A mm	G BSPP				
A2ES0045L2K	A2	0005	51.4	0.10	0.10	18	27	61	172	G 3/4	64	172	G 3/4	27 (1)	-	-	-
A2ES0010L2K		0010		0.15	0.20	2	3		211			211					
A2ES0015L2K		0015		0.25	0.25	25	33		250			250					
A2ES0029L2K		0029		0.50	0.50	3	43		360			360					
A2ES0058L2K		0058		1.00	1.00	44	62		590			590					
A3ES0029L2K	A3	0029	76.2	0.50	0.55	9	9	91	260	G 3/4	96	260	G 3/4	29 (1)	M10	60	15
A3ES0058L2K		0058		1.00	1.00	11	11		364			364					
A3ES0090L2K		0090		1.50	1.50	13	13		481			481					
A3ES0116L2K		0116		2.00	2.00	14	15		573			573					
A3ES0183L2K		0183		3.00	3.00	16	20		814			814					
A4ES0058L2K	A4	0058	102.4	1.00	1.10	15	18	121	295	G 1	127	306	G 1	29 (1)	M12	82	18
A4ES0116L2K		0116		2.00	2.00	18	22		411			422					
A4ES0231L2K		0231		3.80	4.00	23	30		640			651					
A4ES0347L2K		0347		5.70	5.90	29	38		872			883					
A4ES0578L2K		0578		9.50	9.60	41	54		1330			1341					
A5ES0058L2K	A5	0058	127.0	1.00	1.30	22	-	153	272	G 1	-	-	-	29 (1)	M12	100	18
A5ES0116L2K		0116		2.00	2.20	26	-		346			-					
A5ES0231L2K		0231		3.80	4.10	32	-		496			-					
A5ES0347L2K		0347		5.70	6.00	39	-		645			-					
A5ES0578L2K		0578		9.50	9.80	52	-		943			-					
A6ES0231L2K	A6	0231	146.9	3.80	4.30	35	53	175	442	G 1 1/2	180	487	G 1	29 (1)	M12	110	18
A6ES0347L2K		0347		5.70	6.20	42	60		554			600					
A6ES0578L2K		0578		9.50	10.00	54	74		778			824					
A6ES0924L2K		0924		15.00	15.70	73	96		1113			1159					
A6ES1155L2K		1155		19.00	19.40	85	110		1337			1383					
A6ES1733L2K		1733		28.50	28.90	112	148		1896			1941					
A6ES2310L2K		2310		38.00	38.40	147	183		2454			2500					
A8ES0578L2K		A8		0578	200.0	9.50	10.70		98			-					
A8ES1155L2K	1155		19.00	20.20		122	-	931	-								
A8ES1733L2K	1733		28.50	29.70		146	-	1232	-								
A8ES2310L2K	2310		38.00	39.10		170	-	1532	-								
A8ES2772L2K	2772		45.00	46.20		189	-	1774	-								
A8ES2888L2K	2888		47.00	48.20		194	-	1834	-								
A8ES3465L2K	3465		57.00	58.00		217	-	2136	-								
A8ES4620L2K	4620		76.00	77.20		266	-	2738	-								

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

A Series Piston accumulator 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

Volumes are nominal

ΔP type includes Heavy duty Gas valve

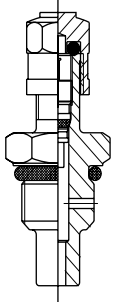


**Seals, Fluids and Temperature Ranges**

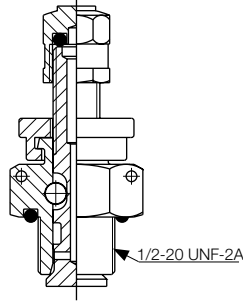
Code	Seal Type	"Min Temp"	"Max Temp"	"Fluid Classification"	"Fluid Type"	Maximum Velocity (m/s)
K	"NBR (Nitrile)"	-29°C	74°C	"HFB-HFC HM-HV"	"Mineral Oils & Water Glycols"	4 m/s
H	"HNBR (Hydrogenated Nitrile)"	-32°C	150°C	"HFB-HFC HM-HV"	"Mineral Oils & Water Glycols"	4 m/s
E	"FPM (Fluorocarbon elastomer)"	-23°C	121°C	"HFB HM-HV"	"Synthetic Oils"	4 m/s
D	"EPDM (Ethylene Propylene)"	-40°C	121°C	HFD	"Ester Fluids"	4 m/s
Q	"LT-NBR (Low Temperature Nitrile)"	-45°C	71°C	HM-HV	"Mineral Oils"	4 m/s
X	"Low Friction T Seal Consult Parker ACDE"	-43°C	121°C	HM-HV	"Mineral Oils & Water Glycols"	4 m/s
S	"Special Consult Parker ACDE"					4 m/s

**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

Both types of charging valve may be used with the Charging and Gauging Kit.

**Piston Accumulator Seal Kits**

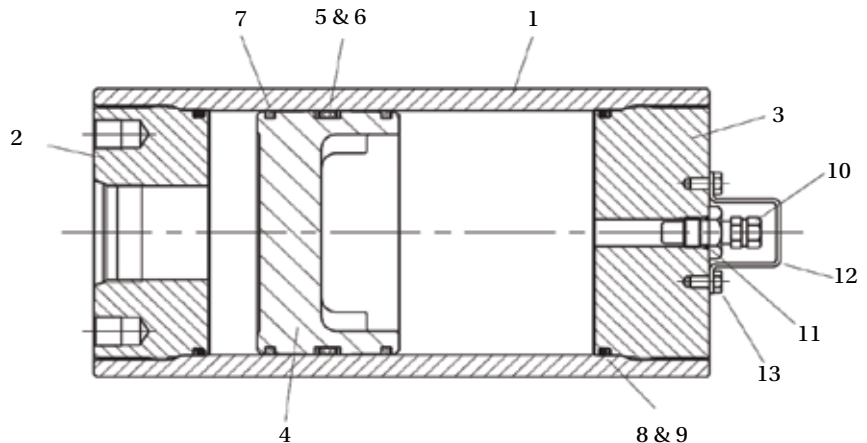
Seal kits are available for all A Series accumulator models however it is recommended to buy a piston assembly with seal already assembled.

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**

**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**

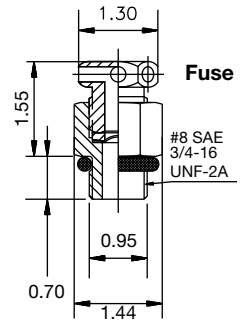
Seal Kit Part Numbers with piston seals assembled (remove the P for a Seal Kit without piston seal assembled)

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

The seal kits listed contain items 5, 6, 7, 8, 9 and 11.

**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

# AP Series Piston Accumulators

## 250 & 350 bar

### IN THIS SECTION

#### AP Series Piston Accumulators

How to order	98
Part Numbers and Dimensions	100

Parker's AP Series accumulators are a premium specification product designed for use in high performance applications such as die casting and plastic injection moulding, where large volumes of fluid have to be displaced at high speed (250 & 350 bar).



Bladder Accumulators	EBV
	EHV
	Regulations
	O&G
Piston Accumulators	ACP
	A
	AP
	DC
	EHP
Pulsation Dampers	
Attenuators	
Diaphragms	
Accessories	
Gas Bottles	
Accumulator Stations	
Sizing Questionnaires	

# AP Series: How to order

Series	Model	Type of Construction	Options	Capacity	Working Pressure	Design Number	Seal Type	Port Size	Gas Port	Pre-Charge
<b>AP</b>	<b>250</b>	<b>E</b>	<b>M</b>	<b>080</b>	<b>L</b>	<b>2</b>	<b>K</b>	<b>RF</b>	<b>S</b>	<b>/ 010</b>

**AP** Series Accumulator  
**B** Bottle

**Code Bore Size (nominal)**  
**180** 180 mm bore  
**250** 250 mm bore  
**360** 360 mm bore

**Code Approval Type**  
**E** According to PED 2014/68/EU  
 (From 07/2016 PED 97/23/EC becomes PED 2014/68/EU)

**Code Valve Options**  
**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

Code	Capacity	Model	Code	Capacity	Model
<b>006</b>	6.0	AP180 only	<b>050</b>	50	AP180 & AP250
<b>008</b>	8.0	AP180 only	<b>060</b>	60	AP180 & AP250
<b>010</b>	10	AP180 only	<b>080</b>	80	AP180 & AP250
<b>015</b>	15	AP180 only	<b>100</b>	100	AP250 & AP360
<b>020</b>	20	AP180 only	<b>150</b>	150	AP250 & AP360
<b>025</b>	25	AP180 only	<b>200</b>	200	AP360 only
<b>030</b>	30	AP180 & AP250	<b>250</b>	250	AP360 only
<b>040</b>	40	AP180 & AP250	<b>300</b>	300	AP360 only

**Code Maximum Working Pressure <sup>3</sup>**  
**L** 250 bar  
**H** 350 bar

**Code Port**  
**2** Metric mounting + BSPP port (standard)  
 ### Specials (Parker assigned number)

Please see Seals table on page 101

Please see Fluid Port tables on page 99

**Gas Port**  
 Specification (where no valve supplied)  
<sup>1</sup> Other approvals are available to order - please consult the factory.  
<sup>2</sup> Where a gas port is specified, no gas valve will be supplied.  
<sup>3</sup> For other pressure ratings, please consult the factory.

**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 99. 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

**Code Pre-Charge (for example)**  
 010 10 bar  
 020 20 bar  
 \*\* From 07/2016 PED 97/23/EC becomes PED 2014/68/EU

### Hydraulic and Gas Ports

The BSPP ports shown are supplied as standard at the fluid ends of AP Series 250 bar accumulators, and at the gas ends of these accumulators when ordered for use with gas bottles. A range of optional threaded and flanged ports is also available, as shown below. All ports are specified by adding the relevant code to the accumulator model number.

### BSPP Threaded Ports

Thread Size	From Model	Code
G1	All models	<b>RD</b>
G1 1/4		<b>RE</b>
G1 1/2 (standard)		<b>RF</b>
G2		<b>RG</b>

### Optional Flanged Ports

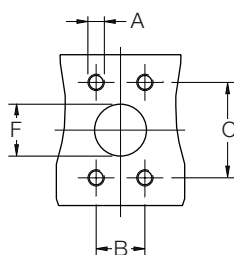
Bore Ø	ISO Port Style	DN10	DN13	DN19	DN25	DN32	DN38	DN51	DN56	DN63	DN70	DN80
180	ISO 6162		•	•	•	•	•	•				
	ISO 6164	•	•	•	•	•	•	•	•	•		
250	ISO 6162		•	•	•	•	•	•				
	ISO 6164	•	•	•	•	•	•	•	•	•	•	•
360	ISO 6162		•	•	•	•	•	•				
	ISO 6164	•	•	•	•	•	•	•	•	•	•	•

### Optional Flanged Ports

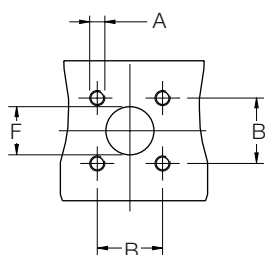
AP Series Piston Accumulators are available with metric flange ports to ISO 6162/3000 psi and ISO 6164/6000 psi as shown in the tables. Inch pattern flange ports and flange ports for higher pressure operation are also available, please consult the factory for details.

Flange Ports to ISO 6162/3000 psi						
Flange Size	From Model	A *	B ± 0.25	C ± 0.25	F	Code
DN13	180	M8	17.5	38.1	13	<b>MT</b>
DN19	180	M10	22.3	47.6	19	<b>MU</b>
DN25	180	M10	26.2	52.4	25	<b>MV</b>
DN32	180	M10	30.2	58.7	32	<b>MW</b>
DN38	180	M12	35.7	69.9	38	<b>MJ</b>
DN51	180	M12	42.9	77.8	51	<b>ML</b>
DN64	180	M12	50.8	88.9	64	<b>MM</b>
DN76	180	M16	61.9	106.4	76	<b>MN</b>

#### 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	180	M6 x 1	24.7	10.0	<b>SD</b>
DN13	180	M8 x 1.25	29.7	13.0	<b>SE</b>
DN19	180	M8 x 1.25	35.4	19.0	<b>SF</b>
DN25	180	M10 x 1.5	43.8	25.0	<b>SG</b>
DN32	180	M12 x 1.75	51.6	32.0	<b>SH</b>
DN38	180	M16 x 2	60.1	38.0	<b>SP</b>
DN51	180	M16 x 2	69.3	51.0	<b>SQ</b>
DN56	180	M20 x 2.5	83.4	56.0	<b>SX</b>
DN63	180	M24 x 3	102.5	63.0	<b>SR</b>
DN70	250	M24 x 3	113.1	70.0	<b>SY</b>
DN80	250	M30 x 3.5	123.7	80.0	<b>SZ</b>



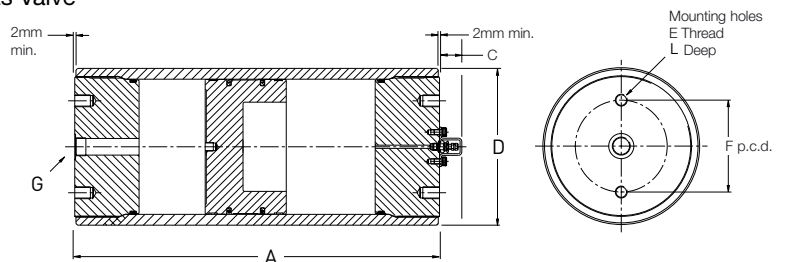
# AP Series 250 & 350 bar, Volume 6 to 300 Litres

Standard version, Nitrile Seals, According to PED 2014/68/EU

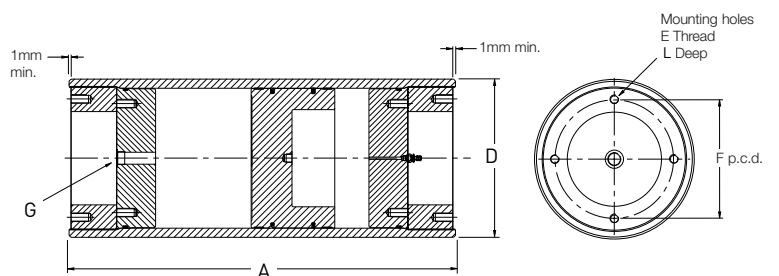
Model	Part number	Bore (mm)	Volume (Litres)	Weight (KG) for 250 bar	Weight (KG) for 350 bar	G Port BSP	ø D (mm) 250 bar	ø D (mm) 350 bar	A	C	E	F	L
AP180	AP180EM006H2K	180	6	83	102	G1.1/2	207	220	591	42	M16x2	140	20
	AP180EM008H2K	180	8	88	109	G1.1/2			669				
	AP180EM010H2K	180	10	93	117	G1.1/2			748				
	AP180EM015H2K	180	15	106	136	G1.1/2			944				
	AP180EM020H2K	180	20	118	155	G1.1/2			1141				
	AP180EM025H2K	180	25	131	175	G1.1/2			1337				
	AP180EM030H2K	180	30	143	194	G1.1/2			1534				
	AP180EM040H2K	180	40	168	232	G1.1/2			1927				
	AP180EM050H2K	180	50	193	270	G1.1/2			2320				
	AP180EM060H2K	180	60	218	309	G1.1/2			2713				
AP180EM080H2K	180	80	268	385	G1.1/2	3499							
AP250	AP250EM030H2K	250	30	245	317	G1.1/2	290	310	1041	42	M22x2.5	170	30
	AP250EM040H2K	250	40	271	359	G1.1/2			1245				
	AP250EM050H2K	250	50	298	401	G1.1/2			1449				
	AP250EM060H2K	250	60	325	442	G1.1/2			1652				
	AP250EM080H2K	250	80	379	526	G1.1/2			2060				
	AP250EM100H2K	250	100	432	609	G1.1/2			2467				
	AP250EM150H2K	250	150	566	817	G1.1/2			3486				
AP360	AP360EM100H2K	360	100	639	903	G1.1/2	407	436	1657 (1)	N/A	M22x2.5	304	45
	AP360EM150H2K	360	150	742	1083	G1.1/2			2149 (1)				
	AP360EM200H2K	360	200	845	1264	G1.1/2			2640 (1)				
	AP360EM250H2K	360	250	948	1445	G1.1/2			3131 (1)				
	AP360EM300H2K	360	300	1051	1626	G1.1/2			3622 (1)				

Volumes are nominal AP type includes Heavy duty Gas Valve

**250 Bar and 350 Bar  
 AP Series  
 180mm and 250mm Bore  
 with CE Approval**



**250 Bar and 350 Bar  
 AP Series  
 250mm and 360mm Bore  
 with CE Approval**



### 250 and 350 Bar Pressure Ranges

AP Series industrial accumulators are available in two different pressure ratings, to suit maximum working pressures of 250 and 350 bar. The same premium quality design and technical features guarantee optimum performance and service life from every AP Series accumulator model, while differing wall thicknesses allow the designer to specify precisely the right performance envelope for the application.

### Available Options

A wide variety of options are available for AP Series accumulators, including:

- Port styles and sizes
- Seal compounds
- High flow gas ports for use with remote gas storage bottles
- Water service versions
- Safety fuses
- Mounting systems
- Precharge/piston position sensors
- Certifications to suit different market requirements

### Water Service

AP

Series piston accumulators are available for use with water as the fluid medium. Modifications include plating of all working surfaces. Please consult the factory for details.

### Operating Temperatures, Seals and Fluids

Standard and optional seal combinations for AP Series accumulators are shown below. Other seals are also available for use in exceptional conditions – please consult the factory with details of the application. The shells of Parker’s AP Series accumulators are CE approved for operation at temperatures between -25°C and +150°C.

### Filtration

For maximum component life, the system should be

protected from contamination by effective filtration. Fluid cleanliness should be in accordance with ISO 4406. The quality of filters should be in accordance with the appropriate ISO standards.

The rating of the filter media depends on the system components and the application. The minimum required for hydraulic systems should be class 19/15 to ISO 4406, which equates to 25µ (β10≥75) to ISO 4572.

### Safety

Charging must be carried out by qualified personnel. Before taking any readings or pressurizing with nitrogen, the accumulator must be isolated from the hydraulic system and the fluid side discharged in order to depressurize it. Use only nitrogen (N<sub>2</sub>) to pressurize the accumulator.

### Danger of Explosion – Never Charge with Oxygen

The types of nitrogen permitted are: type S (99.8% pure); type R (99.99% pure); type U (99.993% pure).

### Approvals

Approvals	AP180	AP250	AP360
PED 97/23/EC	•	•	•

### Mounting

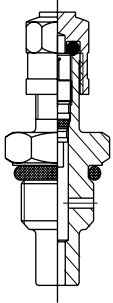
The optimum mounting orientation is vertical however angled and horizontal mountings are permissible if the hydraulic fluid is kept clean; high levels of contaminants in the fluid can result in uneven or accelerated seal wear.

### Seals, Fluids and Temperature Ranges

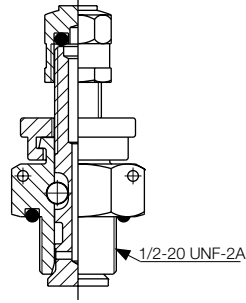
Code	Seal Type	"Min Temp"	"Max Temp"	"Fluid Type"
K	"NBR (Nitrile)"	-30°C	75°C	General purpose, petroleum-based fluids
E	"FPM (Fluorocarbon elastomer)"	-25°C	150°C	High temperature and/or synthetic fluids
D	"EPDM (Ethylene Propylene)"	-25°C	120°C	Phosphate-esters
H	"HNBR (Hydrogenated Nitrile)"	-30°C	130°C	Most oil-based and biodegradable fluids
J	"NBR (Nitrile and filled PTFE)"	-30°C	75°C	Water glycol, high water content fluids
Q	"LT-NBR (Low Temperature Nitrile)"	-45°C	71°C	General purpose fluids at low temperatures

**Gas Valves**

The standard gas charging valve fitted to AP 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

Both types of charging valve may be used with the Charging and Gauging Kit.

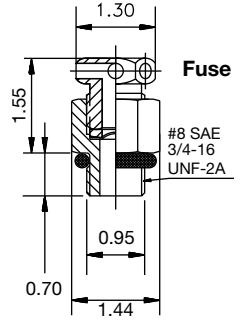
**Piston Accumulator Seal Kits**

Seal kits are available for all AP Series accumulator models. 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. Installation and maintenance are described in Bulletin 1240-M1.

The seal kits listed below contain a piston with the appropriate seals ready fitted, to minimize the risk of damage during assembly. Seal kits contain items 5, 6, 7, 8, 9, 10 and 12.

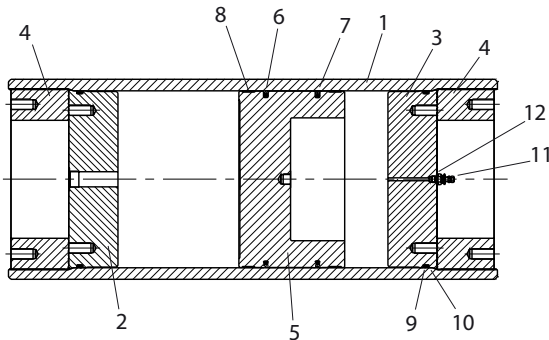
**Safety Fuses (Burst Discs)**

Safety fuses are available on AP 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.

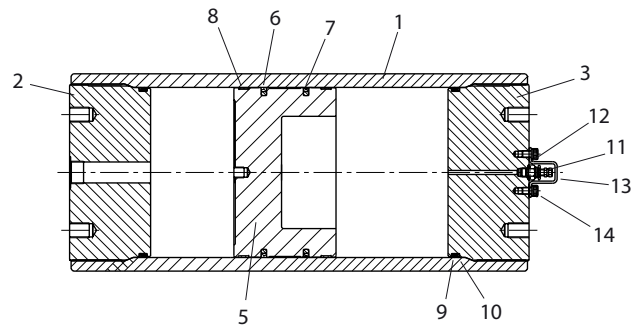


**Parts List**

1. Shell
2. Hydraulic cap
3. Gas cap
4. Retaining ring (AP360 only)
5. Piston
6. Piston oil seal assembly
7. Piston gas seal assembly
8. Piston bearing ring
9. Cap O-ring
10. Cap O-ring back-up washer
11. Gas valve
12. Gas valve O-ring
13. Gas valve protector (not AP360)
14. Gas valve protector screw (not AP360)



360mm Bore Piston Accumulator



180mm and 250mm Bore Piston Accumulators

**Seal Kits**

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

Model	Seal Material + Filled PTFE					
	Nitrile NBR	Fluorocarbon Elastomer FPM	Ethylene Propylene EPR	Hydrogenated Nitrile HNBR	Nitrile (HWBF) NBR	Low Temp. Nitrile NBR
AP180	PK180APKWP	PK180APEWP	PK180APDWP	PK180APHWP	PK180APJWP	PK180APQWP
AP250	PK250APKWP	PK250APEWP	PK250APDWP	PK250APHWP	PK250APJWP	PK250APQWP
AP360	PK360APKWP	PK360APEWP	PK360APDWP	PK360APHWP	PK360APJWP	PK360APQWP

# Die Casting Series Piston Accumulators

250 & 350 bar

## IN THIS SECTION

### DC Series Piston Accumulators

How to order	105
Part Numbers and Dimensions	106

Parker's AP Series accumulators are a premium specification product designed for use in high performance applications such as die casting and plastic injection moulding, where large volumes of fluid have to be displaced at high speed (250 & 350 bar).



Bladder Accumulators	EBV
	EHV
	Regulations
Piston Accumulators	O&G
	ACP
	A
	AP
	DC
Pulsation Dampers	EHP
Attenuators	
Diaphragms	
Accessories	
Gas Bottles	
Accumulator Stations	
Sizing Questionnaires	

Parker presents the new DC Series of high speed piston accumulators specially designed for DieCasting and Press applications. A wide range of bladder accumulators, gas bottles and accessories complete the Parker offering.

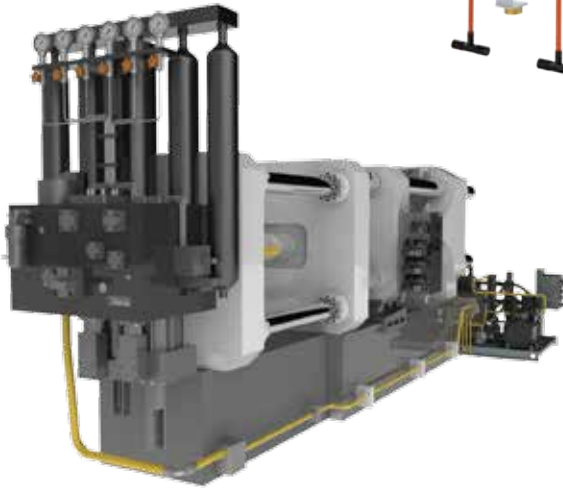


## Safety

- **High Test Pressures**
  - High Grade Carbon Steel Tube and End Caps
  - 4:1 Maximum Pressure Safety Factor
  - CE / Pressure Equipment Directive Approved
- **Qualified for High Stress and Fatigue**
- **Proven Reliability - over 10 years in Die Casting**
- **Additional Safety Fuse / Burst Disc Available**

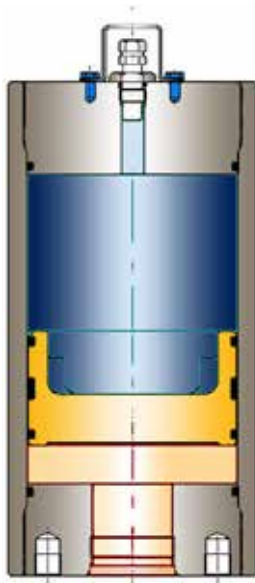
## Efficiency

- **High Speed, High Flow, High Cycle Rate**
  - 6 - 8 Metres Per Second Piston Velocity
  - Low Friction Piston Seal System
  - Precise Engineering Design to close tolerances
  - Low Friction Tube Surface Finish
  - Fluid Compatibility Water Glycol or Mineral Oil
  - Flange & Port options for High Flow rates



## Flexibility

- **Interchange Capability**
  - Complete Range of Flange or Port Sizes
  - Mounting Interface to customer requirement
  - One Piece or Two Piece Hydraulic & Nitrogen End Cap
  - Port Orientation 45° or full 360° increments
  - Suitable for Retrofit



## Reliability

- **Proven Application Performance and Reliability**
  - The range has been utilised in high speed Die Casting Applications for over 10 Years and the new wider range of DC piston accumulators offer additional product features and technical benefits to meet customer requirements.

# DC Series: How to order

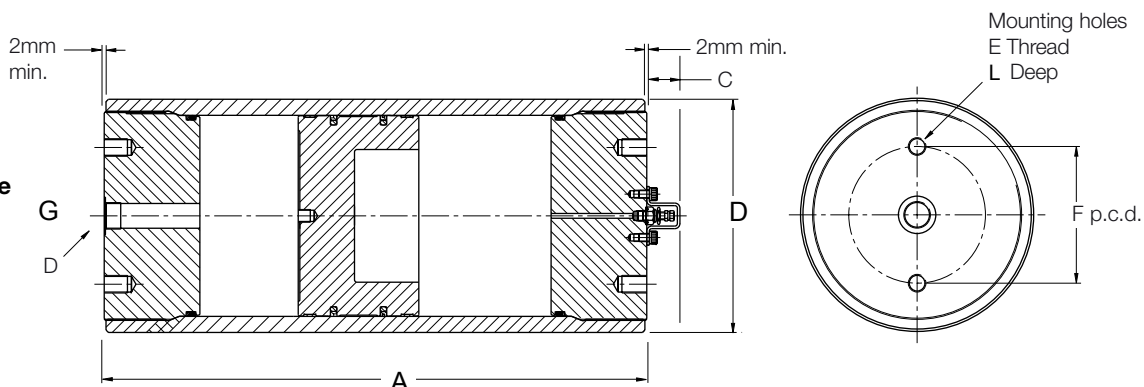
	Series	Model	Type of Construction	Options	Capacity	Working Pressure	Design Number	Seal Type	Port Size	Gas Port	Pre-Charge
	<b>CD</b>	<b>250</b>	<b>E</b>	<b>M</b>	<b>080</b>	<b>L</b>	<b>2</b>	<b>K</b>	<b>RF</b>	<b>S</b>	<b>/ 010</b>
<b>DC</b>	Series Accumulator										
<b>B</b>	Bottle										
<b>Code</b>	<b>Bore Size (nominal)</b>										
<b>180</b>	180 mm bore										
<b>250</b>	250 mm bore										
<b>Code</b>	<b>Approval Type</b>										
<b>E</b>	According to PED 2014/68/EU (From 07/2016 PED 97/23/EC becomes PED 2014/68/EU)										
<b>Code</b>	<b>Valve Options</b>										
<b>O</b>	No gas valve										
<b>M</b>	Poppet-type gas valve										
<b>L</b>	Poppet-type gas valve + water service										
<b>P</b>	Poppet-type gas valve + safety fuse										
<b>R</b>	Poppet-type gas valve + water service + safety fuse										
<b>Code</b>	<b>Capacity</b>	<b>Model</b>	<b>Code</b>	<b>Capacity</b>	<b>Model</b>						
<b>006</b>	6.0	DC180 only	<b>030</b>	30	DC180 & DC250						
<b>008</b>	8.0	DC180 only	<b>040</b>	40	DC180 & DC250						
<b>010</b>	10	DC180 only	<b>050</b>	50	DC180 & DC250						
<b>015</b>	15	DC180 only	<b>060</b>	60	DC180 & DC250						
<b>020</b>	20	DC180 only	<b>080</b>	80	DC180 & DC250						
<b>025</b>	25	DC180 only									
<b>Code</b>	<b>Maximum Working Pressure <sup>3</sup></b>										
<b>L</b>	250 bar										
<b>H</b>	350 bar										
<b>Code</b>	<b>Port</b>										
<b>2</b>	Metric mounting + BSPP port (standard)										
<b>###</b>	Specials (Parker assigned number)										
<b>Please see Seals table on page 101</b>											
<b>Please see Fluid Port tables on page 107</b>											
<b>Gas Port</b>						<b>Hydraulic and Gas Port Modifications</b>					
Specification (where no valve supplied)						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					
<sup>1</sup> Other approvals are available to order - please consult the factory.											
<sup>2</sup> Where a gas port is specified, no gas valve will be supplied.											
<sup>3</sup> For other pressure ratings, please consult the factory.											
<b>Code</b>	<b>Pre-Charge (for example)</b>										
<b>100</b>	100 bar										
<b>200</b>	200 bar										

# DC Series 250&350 bar, 10 to 80 Litres

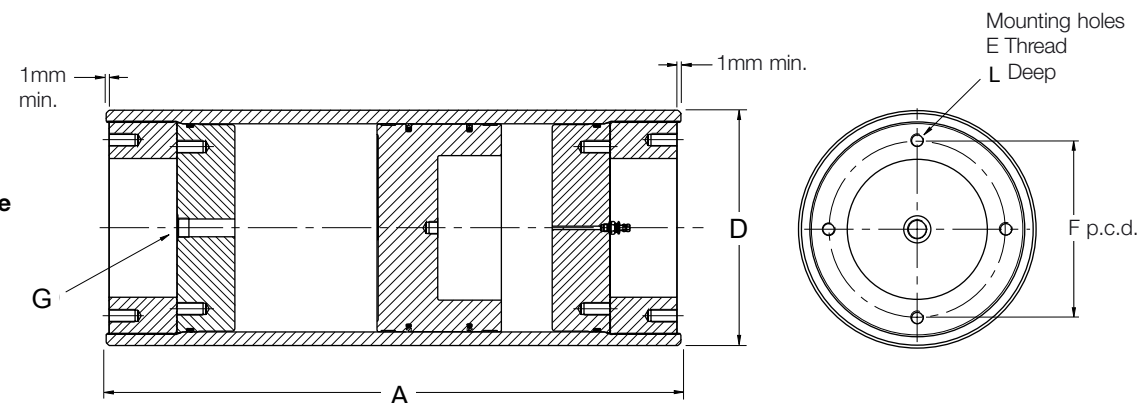
Standard version, Nitrile Seals, According to PED 2014/68/EU

Model	Part number	Volume (Litres)	Max Flow Rate l/min	Weight (KG) for 250 bar	Weight (KG) for 350 bar	Dimensions in mm								
						Bore	øD 250 bar	øD 350 BAR	A	C	E	F	L	G Port BSPP
DC 180	DC180E0010L2K**	10	12,000	93	117	180	207	220	748	42	M16x2	140	20	G1.1/2
	DC180E0015L2K**	15	12,000	106	136	180	207	220	944	42	M16x2	140	20	G1.1/2
	DC180E0020L2K**	20	12,000	118	155	180	207	220	1141	42	M16x2	140	20	G1.1/2
	DC180E0025L2K**	25	12,000	131	175	180	207	220	1337	42	M16x2	140	20	G1.1/2
	DC180E0030L2K**	30	12,000	143	194	180	207	220	1534	42	M16x2	140	20	G1.1/2
	DC180E0040L2K**	40	12,000	168	232	180	207	220	1927	42	M16x2	140	20	G1.1/2
DC 250	DC250E0030L2K**	30	23,000	245	317	250	290	310	1041	42	M22x2.5	170	30	G1.1/2
	DC250E0040L2K**	40	23,000	271	359	250	290	310	1245	42	M22x2.5	170	30	G1.1/2
	DC250E0050L2K**	50	23,000	298	401	250	290	310	1449	42	M22x2.5	170	30	G1.1/2
	DC250E0060L2K**	60	23,000	325	442	250	290	310	1652	42	M22x2.5	170	30	G1.1/2
	DC250E0080L2K**	80	23,000	379	526	250	290	310	2060	42	M22x2.5	170	30	G1.1/2

**250 Bar and 350 Bar DC Series  
 180mm and 250mm Bore with CE Approval**



**250 Bar and 350 Bar DC Series  
 250mm and 360mm Bore with CE Approval**



**Hydraulic and Gas Ports**

The BSPP ports shown are supplied as standard at the fluid ends of DC Series 250 bar accumulators, and at the gas ends of these accumulators when ordered for use with gas bottles. A range of optional threaded and flanged ports is also available, as shown below. All ports are specified by adding the relevant code to the accumulator model number.

**BSPP Threaded Ports**

Thread Size	From Model	Code
G1	All models	<b>RD</b>
G1 1/4		<b>RE</b>
G1 1/2 (standard)		<b>RF</b>
G2		<b>RG</b>

**Optional Flanged Ports**

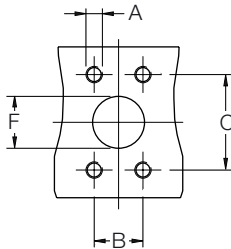
Bore Ø	ISO Port	DN10	DN13	DN19	DN25	DN32	DN38	DN51	DN56	DN63	DN70	DN80
180	ISO 6162		•	•	•	•	•	•				
	ISO 6164	•	•	•	•	•	•	•	•	•		
250	ISO 6162		•	•	•	•	•	•				
	ISO 6164	•	•	•	•	•	•	•	•	•	•	•

**Optional Flanged Ports**

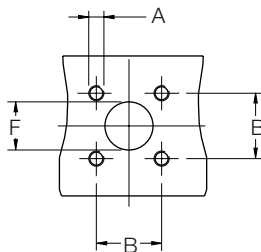
DC Series Piston Accumulators are available with metric flange ports to ISO 6162/3000 psi and ISO 6164/6000 psi as shown in the tables. Inch pattern flange ports and flange ports for higher pressure operation are also available, please consult the factory for details.

Flange Ports to ISO 6162/3000 psi						
Flange Size	From Model	A *	B ± 0.25	C ± 0.25	F	Code
DN13	180	M8	17.5	38.1	13	<b>MT</b>
DN19	180	M10	22.3	47.6	19	<b>MU</b>
DN25	180	M10	26.2	52.4	25	<b>MV</b>
DN32	180	M10	30.2	58.7	32	<b>MW</b>
DN38	180	M12	35.7	69.9	38	<b>MJ</b>
DN51	180	M12	42.9	77.8	51	<b>ML</b>
DN64	180	M12	50.8	88.9	64	<b>MM</b>
DN76	180	M16	61.9	106.4	76	<b>MN</b>

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	180	M6 x 1	24.7	10.0	<b>SD</b>
DN13	180	M8 x 1.25	29.7	13.0	<b>SE</b>
DN19	180	M8 x 1.25	35.4	19.0	<b>SF</b>
DN25	180	M10 x 1.5	43.8	25.0	<b>SG</b>
DN32	180	M12 x 1.75	51.6	32.0	<b>SH</b>
DN38	180	M16 x 2	60.1	38.0	<b>SP</b>
DN51	180	M16 x 2	69.3	51.0	<b>SQ</b>
DN56	180	M20 x 2.5	83.4	56.0	<b>SX</b>
DN63	180	M24 x 3	102.5	63.0	<b>SR</b>
DN70	250	M24 x 3	113.1	70.0	<b>SY</b>
DN80	250	M30 x 3.5	123.7	80.0	<b>SZ</b>

Additional threaded and flanged port options are available



# Accessories

## Burst Disc (Safety Fuse)

The burst discs (safety fuses) are a safety device which release the gas pressure independent of the pressure being caused by a fire or a failure of other safety equipment in the system. They are available in carbon steel or stainless steel.



## Clamps & Brackets

Parker clamps are designed to allow quick and easy installation of accumulators. Manufactured from carbon and stainless steel.



## Proportional Relief Valves

An automatic protection mechanism for process instrumentation systems. When upstream pressure exceeds the closing force exerted by the valve's spring, the lower stem opens and permits flow through the valve's outlet port - which can be ducted to a safe place or released to atmosphere. Flow rate increases proportionately to the increase in upstream pressure.



## Automated Charging System

This automated nitrogen top up system for gas charging (CLS) ensures accumulators are precharged to an accurate level and reduces human intervention on site, providing a virtually maintenance free solution. New Patent Applied.



## Accumulator & Gas Bottle Racks

Parker can provide an additional service for customers who would like their accumulators and gas backup bottles positioned in racks with connecting pipework, manifolds and valves. The accumulator racks can be load tested and painted according to customer requirements. The Parker technical teams are highly experienced with dedicated team members for this service, which can save you valuable time and resources.



# EHP Series Piston Accumulators

## up to 350 bar

### IN THIS SECTION

#### Piston Accumulators

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The EHP Piston Accumulators are manufactured in Carbon & Stainless Steel and are available with a wide selection of bore sizes and approvals including BV Marine. Ideally suited for Industrial applications (250 & 350 bar/ up to 540mm bore as standard).



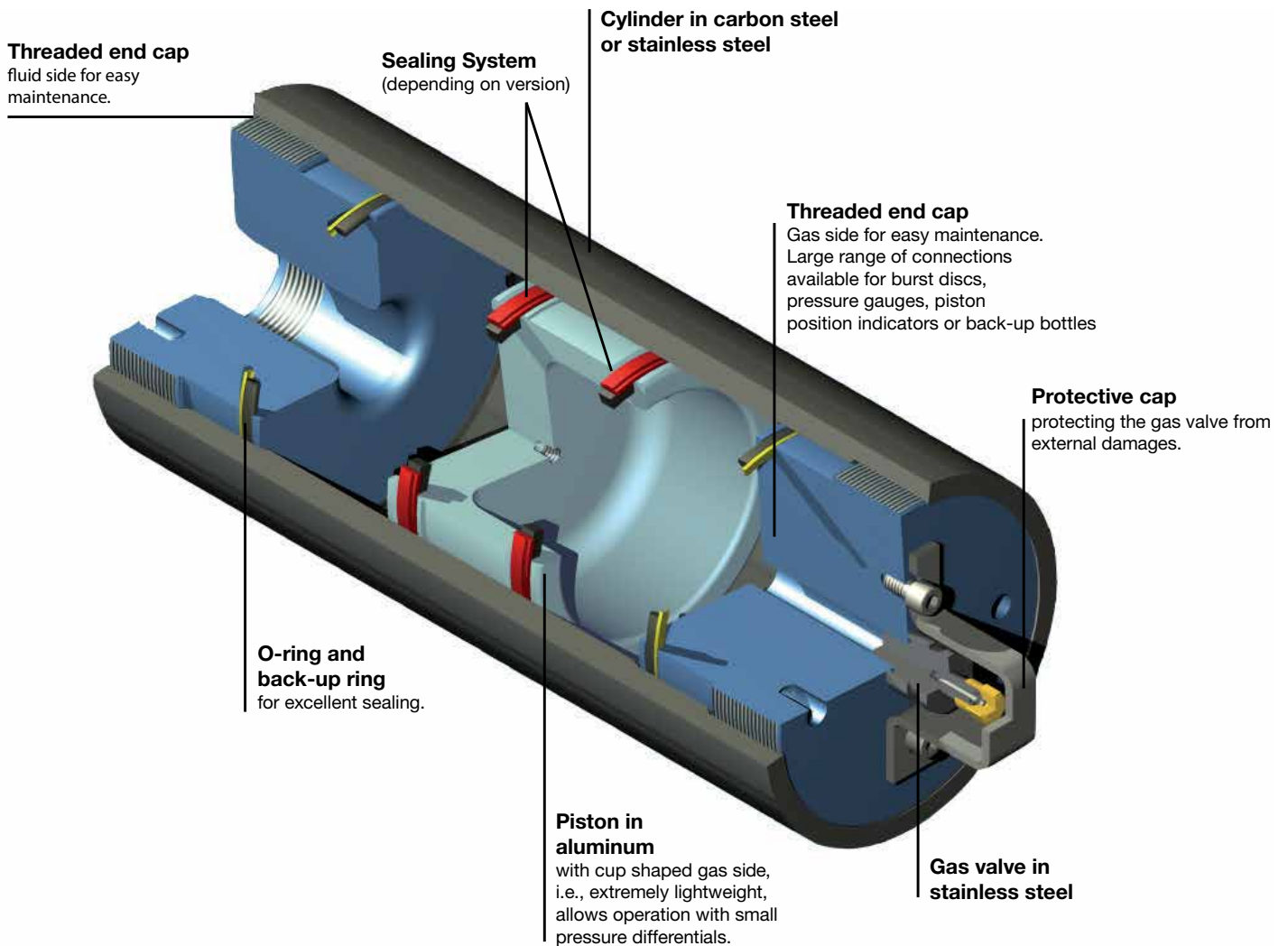
Sizing Questionnaires	Accumulator Stations	Gas Bottles	Accessories	Diaphragms	Attenuators	Pulsation Dampers	Piston Accumulators			Bladder Accumulators		
							EHP	DC	AP	A	ACP	O&G

# General Information EHP Piston Accumulators

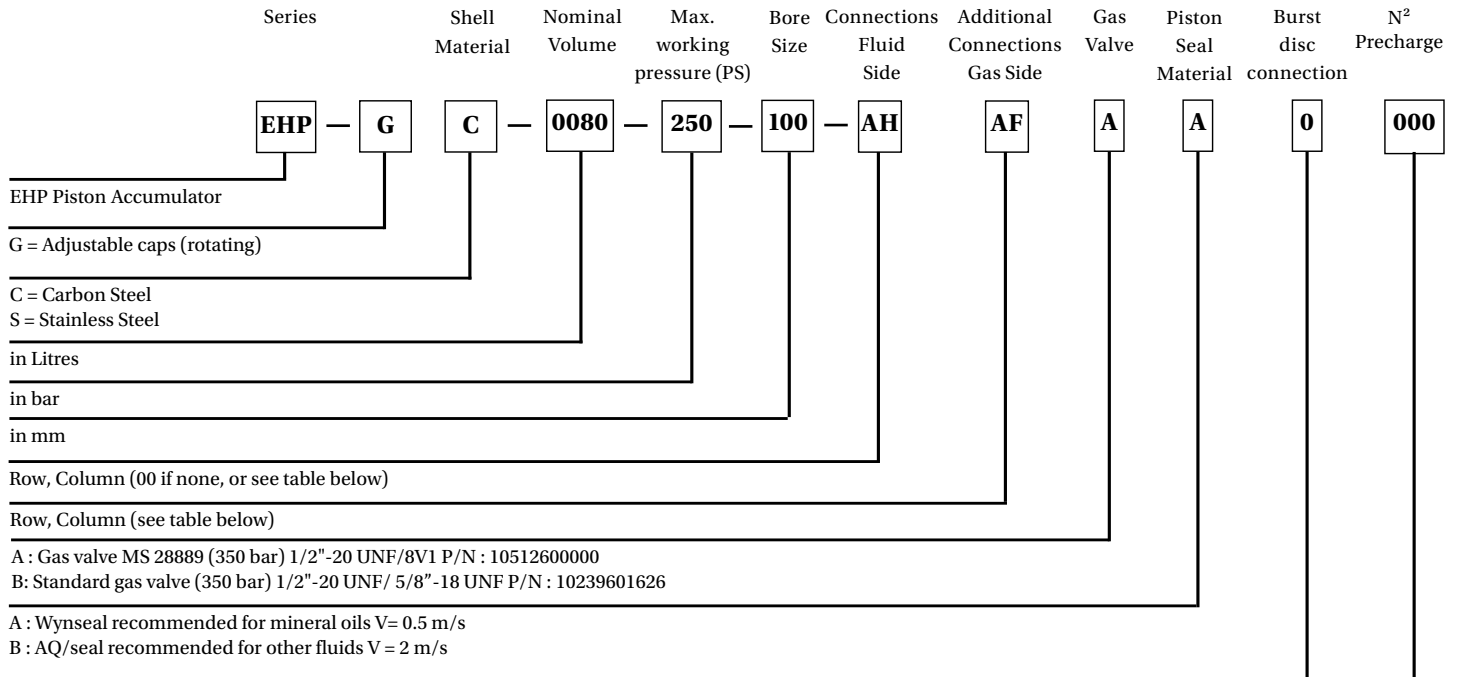
## Technical Characteristics

The accumulator comprises of a pressure vessel, a piston and its seals.

- Shell material options include standard carbon steel and stainless steel.
- End caps - steel, pistons lightweight aluminium alloy. Piston and end cap seals in NBR (standard version), other compounds to suit application.
- 
- For unique applications and hostile environments, different designs, materials and coatings can be supplied. Please contact our division
- A wide variety of options is available following of the series, for example
  - Threaded and manifold port styles and sizes
  - Seal compounds
  - High flow gas ports
  - Gas valves, safety fuses....



# EHP Series: How to order a Piston Accumulator



Code	Burst Disc	Size
0	Without burst disc, no connection	
A	275 Bar/80°C	G 1/4"
B	385 Bar/80°C	G 1/4"
C	230 Bar/80°C	G 1/4"
D	250 Bar/80°C	G 1/4"
E	300 Bar/80°C	G 1/4"
F	420 Bar/80°C	G 1/4"
K	230 Bar/80°C	
L	275 Bar/80°C	
M	385 Bar/80°C	
N	without burst disc. Plugged connection	NPT 1/4"
P	without burst disc. Plugged connection	G 1/4"
R	300 Bar/80°C	
X	Special	

N<sup>2</sup> preload in bar (example 010 = 10 bar, 000 N<sup>2</sup> if no preload)

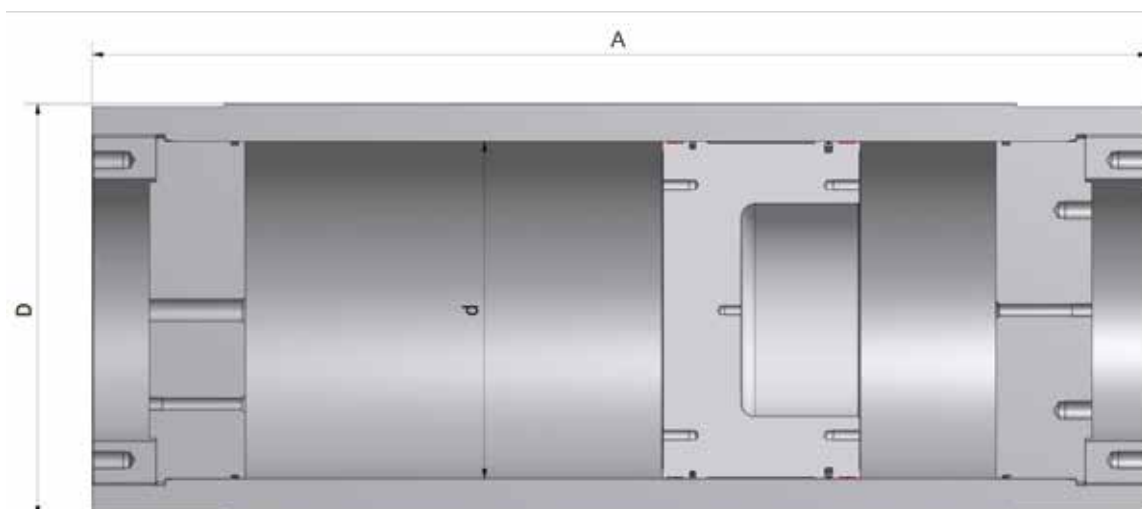
### Fluid side connection/Gas side additional connection

Specification	A	B	C	D	E	F	G	H	I	K	L	M	N
Thread to ISO228-1 (G)	A G1/8"-28	G1/4"-19	G3/8"-19	G1/2"-14	G5/8"-14	G3/4"-14	G7/8"-14	G1"-11	G 1 1/4"-11	G1 1/2"-11	G2"-11	G2 1/2"-11	G3"-11
SAE Flange (ISO 6162)	B 1/2" 210 Bar	3/4" 210 Bar	1" 210 Bar	1 1/4" 210 Bar	1 1/2" 210 Bar	2" 210 Bar	2 1/2" ca 175 Bar	3" ca 140 Bar					
SAE Flange	C 1/2" 3000 psi	3/4" 3000 psi	1" 3000 psi	1 1/4" 3000 psi	1 1/2" 3000 psi	2" 3000 psi	2 1/2" 3000 psi	3" 3000 psi					
SAE Port (UN)	D #5 1/2"-20	#6 9/16"-18	#8 3/4"-16	#10 7/8"-14	#12 1 1/16"-12	#16 1 5/16"-12	#20 1 5/8"-12	#24 1 7/8"-12	#32 2 1/2"-12				
Metric (ISO 6149-1)	E M10 x 1	M12 x 1,5	M14 x 1,5	M18 x 1,5	M22 x 1,5	M27 x 2	M33 x 2	M42 x 2	M48 x 2				

# EHP Series 207 bar, 60 to 400 Litres, Ø 360

Standard version (Stainless Steel shell/seals for mineral oils). Maximum Piston Speed 2 m/s.  
Suitable for Mineral based hydraulic fluids, Vegetable oils, Water Glycols.  
For other fluids please contact Parker. According to PED 2014/68/EU, Fluid Group 1 or 2.

Type	Part Number	Seal Kit	Effective Gas vol. Litres	Max. Working pressure (PS) bar	Admissible Accumulator Temperature min/max (°C)	Weight kg	A mm	ø D mm	ø d mm	Std Fluid opening
EHP(G) S 0600-207-360	815EHPGS0602036	8220000000016	60	207	-15/100	446	1106	408	360	G2"
EHP(G) S 0700-207-360	815EHPGS0702036	8220000000016	70	207	-15/100	467	1204	408	360	G2"
EHP(G) S 0800-207-360	815EHPGS0802036	8220000000016	80	207	-15/100	488	1303	408	360	G2"
EHP(G) S 0900-207-360	815EHPGS0902036	8220000000016	90	207	-15/100	509	1401	408	360	G2"
EHP(G) S 1000-207-360	815EHPGS1002036	8220000000016	100	207	-15/100	530	1500	408	360	G2"
EHP(G) S 1500-207-360	815EHPGS1502036	8220000000016	150	207	-15/100	635	1990	408	360	G2"
EHP(G) S 2000-207-360	815EHPGS2002036	8220000000016	200	207	-15/100	740	2481	408	360	G2"
EHP(G) S 2500-207-360	815EHPGS2502036	8220000000016	250	207	-15/100	845	2973	408	360	G2"
EHP(G) S 3000-207-360	815EHPGS3002036	8220000000016	300	207	-15/100	950	3464	408	360	G2"
EHP(G) S 3500-207-360		8220000000016	350	207	-15/100	1055	3955	408	360	G2"
EHP(G) S 4000-207-360		8220000000016	400	207	-15/100	1160	4426	408	360	G2"



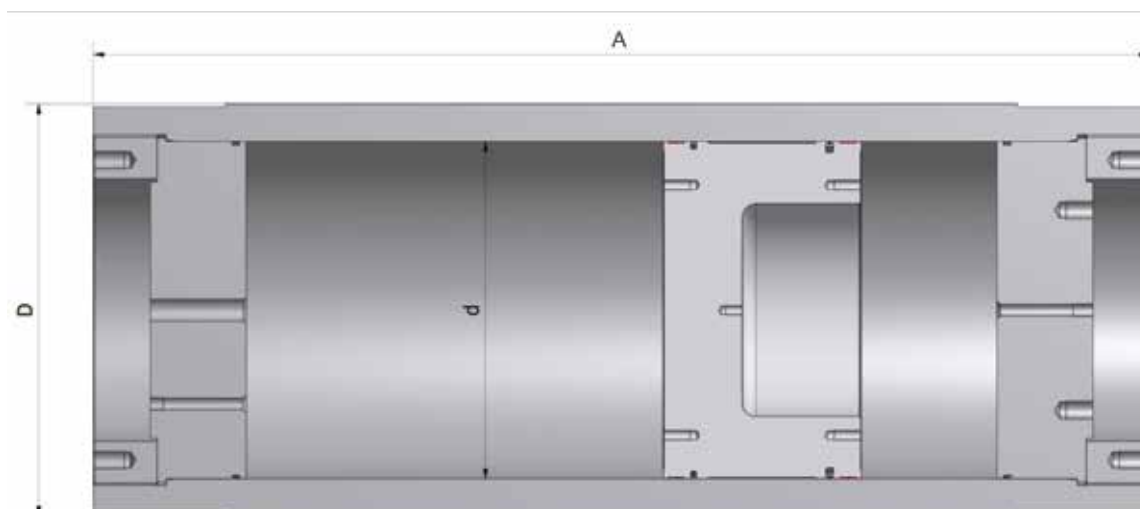
## EHP Series 220 bar, 150 to 650 Litres, Ø 540

Standard version (Carbon Steel shell/seals for mineral oils) temperature from - 15° up to 100°C.  
Maximum Piston Speed 2 m/s. Suitable for Mineral based hydraulic fluids, Vegetable oils, Water Glycols.  
For other fluids please contact Parker Olaer. According to PED 2014/68/EU, Fluid Group 1 or 2.

Type	Part Number	Seal Kit	Effective Gas vol. Litres	Max. Working pressure (PS) bar	Admissible Accumulator Temperature min/max (°C)	Weight kg	A mm	ø D mm	ø d mm	Std Fluid opening
EHP(G) C 1500-220-540 ALAFBB0000	815EHPGC15002254	8220000000018	150	220	-15/100	2147	1415	630	540	G3"
EHP(G) C 2000-220-540 ALAFBB0000	815EHPGC20002254	8220000000018	200	220	-15/100	2280	1633	630	540	G3"
EHP(G) C 2500-220-540 ALAFBB0000	815EHPGC25002254	8220000000018	250	220	-15/100	2413	1851	630	540	G3"
EHP(G) C 3000-220-540 ALAFBB0000	815EHPGC30002254	8220000000018	300	220	-15/100	2546	2068	630	540	G3"
EHP(G) C 3200-220-540 ALAFBB0000	815EHPGC32002254	8220000000018	320	220	-15/100	2625	2156	630	540	G3"
EHP(G) C 3400-220-540 ALAFBB0000	815EHPGC34002254	8220000000018	340	220	-15/100	2702	2243	630	540	G3"
EHP(G) C 3500-220-540 ALAFBB0000	815EHPGC35002254	8220000000018	350	220	-15/100	2741	2375	630	540	G3"
EHP(G) C 3600-220-540 ALAFBB0000	815EHPGC36002254	8220000000018	360	220	-15/100	2780	2331	630	540	G3"
EHP(G) C 3800-220-540 ALAFBB0000	815EHPGC38002254	8220000000018	380	220	-15/100	2857	2418	630	540	G3"
EHP(G) C 4000-220-540 ALAFBB0000	815EHPGC40002254	8220000000018	400	220	-15/100	3004	2505	630	540	G3"
EHP(G) C 4500-220-540 ALAFBB0000	815EHPGC45002254	8220000000018	450	220	-15/100	3128	2723	630	540	G3"
EHP(G) C 5000-220-540 ALAFBB0000	815EHPGC50002254	8220000000018	500	220	-15/100	3322	2942	630	540	G3"
EHP(G) C 5500-220-540 ALAFBB0000	815EHPGC55002254	8220000000018	550	220	-15/100	3516	3160	630	540	G3"
EHP(G) C 6000-220-540 ALAFBB0000	815EHPGC60002254	8220000000018	600	220	-15/100	3711	3379	630	540	G3"
EHP(G) C 6500-220-540 ALAFBB0000	815EHPGC65002254	8220000000018	650	220	-15/100	3904	3597	630	540	G3"

Available in ASME VIII Division I U STAMPED, in that case EHP (G)C ---> IHP (G)C

\*\* From 07/2016 PED 97/23/EC becomes PED 2014/68/EU



# EHP Series 250 bar, 1 to 4 Litres, Ø 80

Standard version (Carbon steel/Wynseal) for mineral oils. According to PED 2014/68/EU, Fluid Group 2, EN14359-2006

Type Part number	Pre-charge			Wynseal Piston Kit	Without burst disc. Plugged connection
	1 - 109 bar	110 - 209 bar	210 - 300 bar	Part number	Model Part number
EHP-C-0010-250-080-AF00AA0000 * 9000-0701-AF00AA0000	Consult Division	Consult Division	Consult Division	Consult Division 9782-080-000	-
EHP-C-0010-250-080-AF00AAP000 * 9000-0701-AF00AAP000	Consult Division	Consult Division	Consult Division	Consult Division 9782-080-000	Consult Division
EHP-C-0020-250-080-AB00AA0000 9098-1001-AB00AA0000	Consult Division	Consult Division	Consult Division	Consult Division 9782-080-000	-
EHP-C-0020-250-080-AF00AA0000 9098-1001-AF00AA0000	Consult Division	Consult Division	Consult Division	Consult Division 9782-080-000	-
EHP-C-0020-250-080-AF00AAP000 9098-1001-AF00AAP000	Consult Division	Consult Division	Consult Division	Consult Division 9782-080-000	Consult Division
EHP-C-0030-250-080-AF00AA0000 9098-1301-AF00AA0000	Consult Division	Consult Division	Consult Division	Consult Division 9782-080-000	-
EHP-C-0040-250-080-AF00AA0000 9098-1601-AF00AA0000	Consult Division	Consult Division	Consult Division	Consult Division 9782-080-000	-

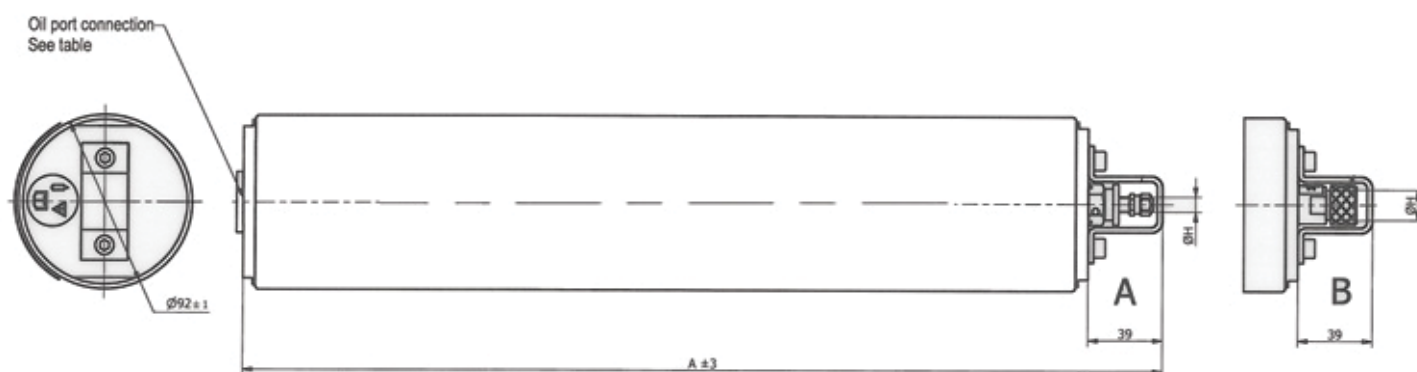
Available in ASME VIII Division I U STAMPED, in that case EHP (C) ---> IHP (C)

\* From 07/2016 PED 97/23/EC Article 3.3 becomes PED 2014/68/EU Article 4.3

\*\* From 07/2016 PED 97/23/EC becomes PED 2014/68/EU

Type Part number	Effective Gas vol. Litres	Max. Working pressure (PS) bar	∅ Bore	Max Flow Rate lt/ min	Admissible Accumulator Temperature min/max (°C)	Weight kg	A max Height mm	External ∅D mm	Oil port connec- tion	V m/s
EHP-C-0010-250-080-AF00AA0000 * 9000-0701-AF00AA0000	1	250	80	151	-20/+80	9.7	387	92	G 3/4"	0.5
EHP-C-0010-250-080-AF00AAP000 * 9000-0701-AF00AAP000	1	250	80	151	-20/+80	9.7	387	92	G 3/4"	0.5
EHP-C-0020-250-080-AB00AA0000 9098-1001-AB00AA0000	2	250	80	151	-20/+80	12.2	586	92	G 1/4"	0.5
EHP-C-0020-250-080-AF00AA0000 9098-1001-AF00AA0000	2	250	80	151	-20/+80	12.2	586	92	G 3/4"	0.5
EHP-C-0020-250-080-AF00AAP000 9098-1001-AF00AAP000	2	250	80	151	-20/+80	12.2	586	92	G 3/4"	0.5
EHP-C-0030-250-080-AF00AA0000 9098-1301-AF00AA0000	3	250	80	151	-20/+80	14.7	785	92	G 3/4"	0.5
EHP-C-0040-250-080-AF00AA0000 9098-1601-AF00AA0000	4	250	80	151	-20/+80	17.2	984	92	G 3/4"	0.5

Above dimensions are in mm and are subject to manufacturing tolerances.



**GAS CONNECTIONS**

**Model Valve A**      **Model Valve B**  
 8V1                      5/8"18 UNF

Above dimensions are in mm and are subject to manufacturing tolerances.



# EHP Series 250 bar, 2 to 10 Litres, Ø 100

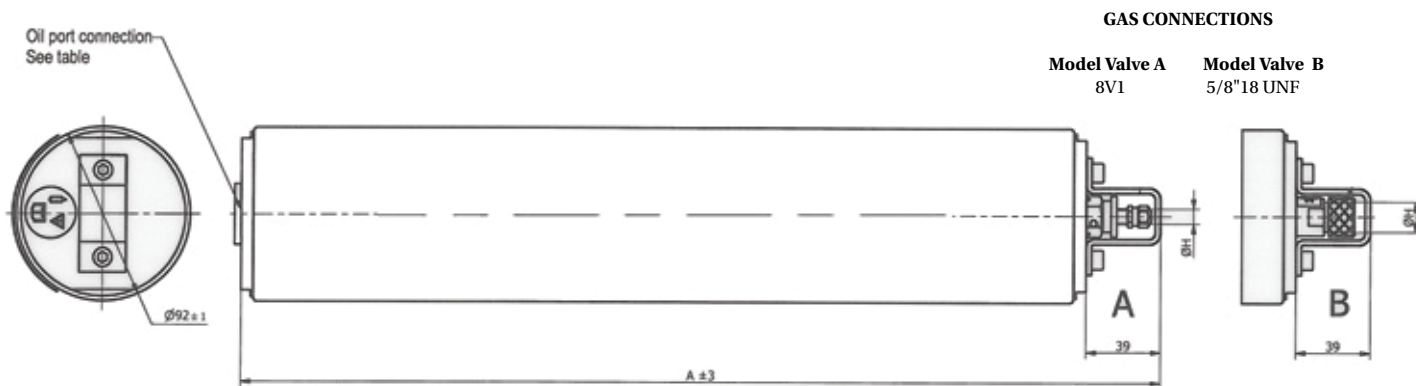
Standard version (Carbon steel/Wynseal) for mineral oils, According to PED 2014/68/EU (\*\*), EN 14359, Fluid Group 2 EN 14359

Type Part number	Pre-charge			Wynseal Piston Kit	Without burst disc. Plugged connection
	1 - 109 bar	110 - 209 bar	210 - 300 bar	Part number	Model Price Part number
EHP-C-0020-250-100-AD00AA0000 9098-1002-AD00AA0000	Consult Division	Consult Division	Consult Division	9782-100-000	
EHP-C-0020-250-100-AF00AA0000 9098-1002-AF00AA0000	Consult Division	Consult Division	Consult Division	9782-100-000	-
EHP-C-0040-250-100-AD00AA0000 9098-1602-AD00AA0000	Consult Division	Consult Division	Consult Division	9782-100-000	
EHP-C-0040-250-100-AF00AA0000 9098-1602-AF00-AA0000	Consult Division	Consult Division	Consult Division	9782-100-000	
EHP-C-0040-250-100-DF00AA0000 9098-1602-AD00AA0000	Consult Division	Consult Division	Consult Division	9782-100-000	
EHP-C-0060-250-100-AF00AA0000 9098-1902-AF00AA0000	Consult Division	Consult Division	Consult Division	9782-100-000	-
EHP-C-0060-250-100-AH00AA0000 9098-1902-AH00AA0000	Consult Division	Consult Division	Consult Division	9782-100-000	-
EHP-C-0080-250-100-AF00AA0000 9098-2002-AF00AA0000	Consult Division	Consult Division	Consult Division	9782-100-000	-
EHP-C-0080-250-100-AH00AAP000 9098-2002-AH00-AAP000	Consult Division	Consult Division	Consult Division	9782-100-000	Consult Division
EHP-C-0100-250-100-AH00AA0000 9098-2102-AH00AA0000	Consult Division	Consult Division	Consult Division	9782-100-000	-
EHP-C-0100-250-100-AH00AAP000 9098-2102-AH00AAP000	Consult Division	Consult Division	Consult Division	9782-100-000	Consult Division

Available in ASME VIII Division I U STAMPED, in that case EHP (C) ---> IHP (C)

\*\* From 07/2016 PED 97/23/EC becomes PED 2014/68/EU

Type Part number	Effective Gas vol. Litres	Max. Working pressure (PS) bar	∅ Bore	Max Flow Rate lt/ min	Admissible Accumulator Temperature min/max (°C)	Weight kg	A max Height mm	External ∅D mm	Oil port con- nection	V m/s
EHP-C-0020-250-100-AD00AA0000 9098-1002-AD00AA0000	2	250	100	236	-20/+80	16.4	441	115	G 1/2"	0.5
EHP-C-0020-250-100-AF00AA0000 9098-1002-AF00AA0000	2	250	100	236	-20/+80	16.4	441	115	G 3/4"	0.5
EHP-C-0040-250-100-AD00AA0000 9098-1602-AD00AA0000	4	250	100	236	-20/+80	21.5	696	115	G 1/2"	0.5
EHP-C-0040-250-100-AF00AA0000 9098-1602-AF00-AA0000	4	250	100	236	-20/+80	21.5	696	115	G 3/4"	0.5
EHP-C-0040-250-100-DF00AA0000 9098-1602-AD00AA0000	4	250	100	236	-20/+80	21.5	696	115	#16 1 5/16"	0.5
EHP-C-0060-250-100-AF00AA0000 9098-1902-AF00AA0000	6	250	100	236	-20/+80	26.5	951	115	G 3/4"	0.5
EHP-C-0060-250-100-AH00AA0000 9098-1902-AH00AA0000	6	250	100	236	-20/+80	26.5	951	115	G 1"	0.5
EHP-C-0080-250-100-AF00AA0000 9098-2002-AF00AA0000	8	250	100	236	-20/+80	31.5	1205	115	G 3/4"	0.5
EHP-C-0080-250-100-AH00AAP000 9098-2002-AH00-AAP000	8	250	100	236	-20/+80	31.5	1205	115	G 1"	0.5
EHP-C-0100-250-100-AH00AA0000 9098-2102-AH00AA0000	10	250	100	236	-20/+80	36.6	1460	115	G 1"	0.5
EHP-C-0100-250-100-AH00AAP000 9098-2102-AH00AAP000	10	250	100	236	-20/+80	36.6	1460	115	G 1"	0.5



# EHP Series 250 bar, 4 to 20 Litres, Ø 140

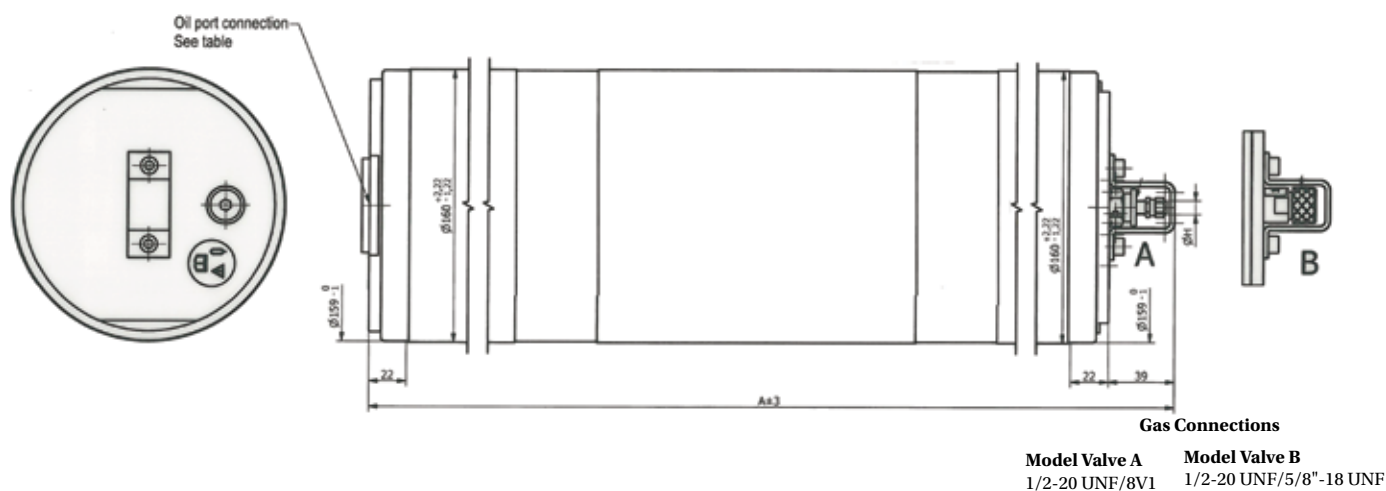
Standard version (Carbon steel/Wynseal for mineral oil, AQseal for other fluids) for mineral oils, According to PED 2014/68/EU, EN14359-2006

Type Part number	Pre-charge			Wynseal or AQ Seal Piston Kit	Without burst disc. Plugged connection
	1 - 109 bar	110 - 209 bar	210 - 300 bar	Part number	Model Price Part number
EHP-C-0040-250-140-AKAFABP000 9098-1604-AKAFABP000	Consult Division	Consult Division	Consult Division	AQ seal 001185-00000.	Consult Division
EHP-C-0060-250-140-AKAFABP000 9098-1904-AKAFABP000	Consult Division	Consult Division	Consult Division	AQ seal 001185-00000.	Consult Division
EHP-C-0060-250-140-AKAFAAP000 9098-1904-AKAFAAP000	Consult Division	Consult Division	Consult Division	AQ seal 001185-00000.	Consult Division
EHP-C-0080-250-140-AKAFABP000 9098-2004-AKAFABP000	Consult Division	Consult Division	Consult Division	AQ seal 001185-00000.	Consult Division
EHP-C-0080-250-140-AKAFAAP000 9098-2004-AKAF-AAP000	Consult Division	Consult Division	Consult Division	AQ seal 001185-00000.	Consult Division
EHP-C-0100-250-140-AKAFAAP000 9098-2104-AKAFAAP000	Consult Division	Consult Division	Consult Division	AQ seal 001185-00000.	Consult Division
EHP-C-0150-250-140-AKAFAAP000 9098-2304-AKAFAAP000	Consult Division	Consult Division	Consult Division	AQ seal 001185-00000.	Consult Division
EHP-C-0150-250-140-AF00AA0000 9098-2304-AF00AA0000	Consult Division	Consult Division	Consult Division	AQ seal 001185-00000.	Consult Division
EHP-C-0200-250-140-AKAFAAP000 9098-2604-AKAFAAP000	Consult Division	Consult Division	Consult Division	AQ seal 001185-00000.	Consult Division

\*\*From 07/2016 PED9 7/23/EC becomes PED 2014/68/EU

Available in ASME VIII Division I U STAMPED, in that case EHP (C) ---> IHP (C)

Type Part number	Effective Gas vol. Litres	Max. Working pressure (PS) bar	∅ Bore	Max Flow Rate lt/ min	Admissible Accumulator Temperature min/max (°C)	Weight kg	A max Height mm	External ∅D	Oil port con- nection	V m/s
EHP-C-0040-250-140-AKAFABP000 9098-1604-AKAFABP000	4	250	140	1846	-20/+150	34.1	470	160	G 1 1/2"	2
EHP-C-0060-250-140-AKAFABP000 9098-1904-AKAFABP000	6	250	140	1846	-20/+150	38.9	600	160	G 1 1/2"	2
EHP-C-0060-250-140-AKAF AAP000 9098-1904-AKAF AAP000	6	250	140	462	-20/+80	43.7	600	160	G 1 1/2"	0.5
EHP-C-0080-250-140-AKAFABP000 9098-2004-AKAFABP000	8	250	140	1846	-20/+150	38.9	730	160	G 1 1/2"	2
EHP-C-0080-250-140-AKAF AAP000 9098-2004-AKAF AAP000	8	250	140	462	-20/+80	43.7	730	160	G 1 1/2"	0.5
EHP-C-0100-250-140-AKAF AAP000 9098-2104-AKAF AAP000	10	250	140	462	-20/+80	48.5	860	160	G 1 1/2"	0.5
EHP-C-0150-250-140-AKAF AAP000 9098-2304-AKAF AAP000	15	250	140	462	-20/+80	60.0	1185	160	G 1 1/2"	0.5
EHP-C-0150-250-140-AF00AA0000 9098-2304-AF00AA0000	15	250	140	462	-20/+80	71.5	1185	160	G 3/4"	0.5
EHP-C-0200-250-140-AKAF AAP000 9098-2604-AKAF AAP000	20	250	140	462	-20/+80	60.0	1509	160	G 1 1/2"	0.5



# EHP Series 250 bar, 8 to 50 Litres, Ø 180

Standard version (Carbon steel/seals for mineral oil). Maximum piston speed 2 m/s.

Suitable for mineral based hydraulic fluids, Vegetable oils, water glycols. For other fluids consult Parker.

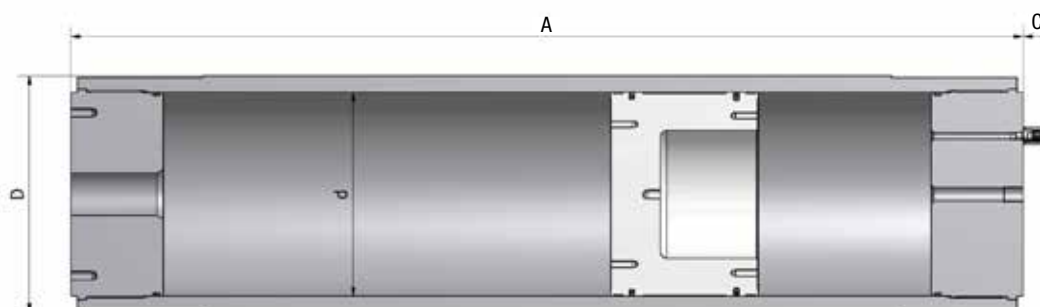
According to PED 2014/68/EU (\*\*), Fluid Group 1 or 2 AD2000

Type	Part number	Effective Gas vol. Litres	Max. Working pressure (PS) bar	Admissible Accumulator Temperature min/max (°C)	Weight kg	A max Height mm	External øD mm	ød mm	Max Fluid opening	Seal Kit
EHP C 0080/250/180 AHAFBB000	815EHP0C00802518	8	250	- 15/100	110	622	219.1	180	G1"	8220000000011
EHP C 0090/250/180 AHAFBB000	815EHP0C00902518	9	250	- 15/100	115	660	219.1	180	G1"	8220000000011
EHP C 0100/250/180 AHAFBB000	815EHP0C01002518	10	25	- 15/100	120	700	219.1	180	G1"	8220000000011
EHP C 0150/250/180 AHAFBB000	815EHP0C01502518	15	250	- 15/100	135	896	219.1	180	G1"	8220000000011
EHP C 0180/250/180 AHAFBB000	815EHP0C01802518	18	250	- 15/100	150	1092	219.1	180	G1"	8220000000011
EHP C 0200/250/180 AHAFBB000	815EHP0C02002518	20	250	- 15/100	160	1095	219.1	180	G1"	8220000000011
EHP C 0250/250/180 AHAFBB000	815EHP0C02502518	25	250	- 15/100	175	1288	219.1	180	G1"	8220000000011
EHP C 0320/250/180 AHAFBB000	815EHP0C03202518	32	250	- 15/100	205	1563	219.1	180	G1"	8220000000011
EHP C 0350/250/180 AHAFBB000	815EHP0C03502518	35	250	- 15/100	210	1681	219.1	180	G1"	8220000000011
EHP C 0400/250/180 AHAFBB000	815EHP0C04002518	40	250	- 15/100	230	1880	219.1	180	G1"	8220000000011
EHP C 0500/250/180 AHAFBB000	815EHP0C05002518	50	250	- 15/100	270	2275	219.1	180	G1"	8220000000011

Available in ASME VIII Division I U STAMPED, in that case

EHP (C) ----> IHP (C) \*\*From 07/2016 PED 97/23/EC Article

3.3 becomes PED 2014/68/EU Article 4.3



# EHP Series 250 bar, 10 to 150 Litres, Ø 195

Standard version (Carbon steel/seals for mineral oil). Maximum piston speed 2 m/s.

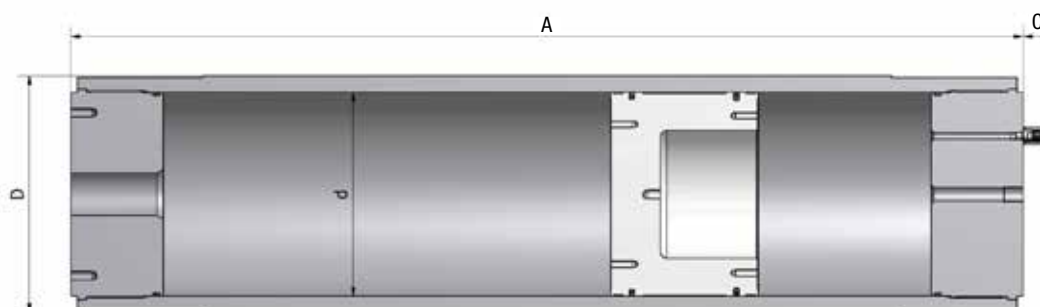
Suitable for mineral based hydraulic fluids, Vegetable oils, water glycols. For other fluids consult Parker.

According to PED 2014/68/EU (\*\*), Fluid Group 1 or 2 AD2000

Type	Part number	Effective Gas vol. Litres	Max. Working pressure (PS) bar	Admissible Accumulator Temperature min/max (°C)	Weight kg	A max Height mm	External øD mm	ød mm	Std Fluid port	C mm	Seal Kit
EHP S 0100-250-195	815EHP0S0102519	10	250	-15/+100	150	645	243	195	G2"	45	8220000000020
EHP S 0200-250-195	815EHP0S0202519	20	250	-15/+100	199	980	243	195	G2"	45	8220000000020
EHP S 0300-250-195	815EHP0S0302519	30	250	-15/+100	249	1315	243	195	G2"	45	8220000000020
EHP S 0400-250-195	815EHP0S0402519	40	250	-15/+100	299	1650	243	195	G2"	45	8220000000020
EHP S 0500-250-195	815EHP0S0502519	50	250		348	1985	243	195	G2"	45	8220000000020
EHP S 0600-250-195	815EHP0S0602519	60	250		398	2320	243	195	G2"	45	8220000000020
EHP S 0700-250-195	815EHP0S0702519	70	250		447	2654	243	195	G2"	45	8220000000020
EHP S 0800-250-195	815EHP0S0802519	80	250		497	2989	243	195	G2"	45	8220000000020
EHP S 0900-250-195	815EHP0S0902519	90	250		546	3324	243	195	G2"	45	8220000000020
EHP S 1000-250-195	815EHP0S1002519	100	250		596	3659	243	195	G2"	45	8220000000020
EHP S 1500-250-195	815EHP0S1502519	150	250		844	5333	243	195	G2"	45	8220000000020

Available in ASME VIII Division I U STAMPED, in that case EHP (S) ---> IHP (S)

\*\*From 07/2016 PED 97/23/EC becomes PED 2014/68/EU



# EHP Series 250 bar, 10 to 150 Litres, Ø 200

Standard version (Carbon steel/seals for mineral oil). Maximum piston speed 2 m/s.

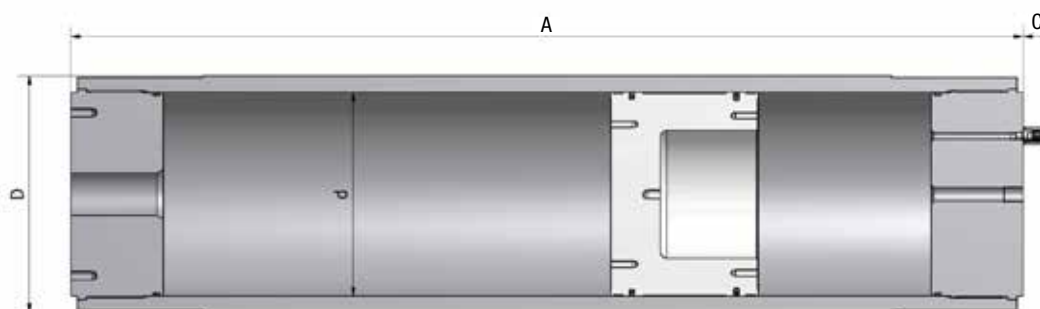
Suitable for mineral based hydraulic fluids, Vegetable oils, water glycols.

For other fluids consult Parker. According to PED 2014/68/EU (\*\*), Fluid Group 1 or 2 AD2000

Type	Part number	Effective Gas vol. Litres	Max. Working pressure (PS) bar	Admissible Accumulator Temperature min/max (°C)	Weight kg	A max Height mm	External øD	ød mm	Std Fluid opening	C mm	Seal Kit
EHP C 0100-250-200	815EHP0C0102520	10	250	-15/+100	87	585	230	200	G2"	45	8220000000023
EHP C 0200-250-200	815EHP0C0202520	20	250	-15/+100	110	903	230	200	G2"	45	8220000000023
EHP C 0300-250-200	815EHP0C0302520	30	250	-15/+100	133	1221	230	200	G2"	45	8220000000023
EHP C 0350-250-200	815EHP0C0352520	35	250	-15/+100	144	1321	230	200	G2"	45	8220000000023
EHP C 0400-250-200	815EHP0C0402520	40	250	-15/+100	156	1540	230	200	G2"	45	8220000000023
EHP C 0500-250-200	815EHP0C0502520	50	250	-15/+100	178	1858	230	200	G2"	45	8220000000023
EHP C 0750-250-200	815EHP0C0752520	75	250	-15/+100	236	2654	230	200	G2"	45	8220000000023
EHP C 0800-250-200	815EHP0C0802520	80	250	-15/+100	247	2813	230	200	G2"	45	8220000000023
EHP C 0900-250-200	815EHP0C0902520	90	250	-15/+100	270	3131	230	200	G2"	45	8220000000023
EHP C 1000-250-200	815EHP0C1002520	100	250	-15/+100	293	3450	230	200	G2"	45	8220000000023
EHP C 1500-250-200	815EHP0C1502520	150	250	-15/+100	407	5041	230	200	G2"	45	8220000000023

Available in ASME VIII Division I U STAMPED, in that case EHP (C) ---> IHP (C)

\*\*From 07/2016 PED 97/23/EC becomes PED 2014/68/EU



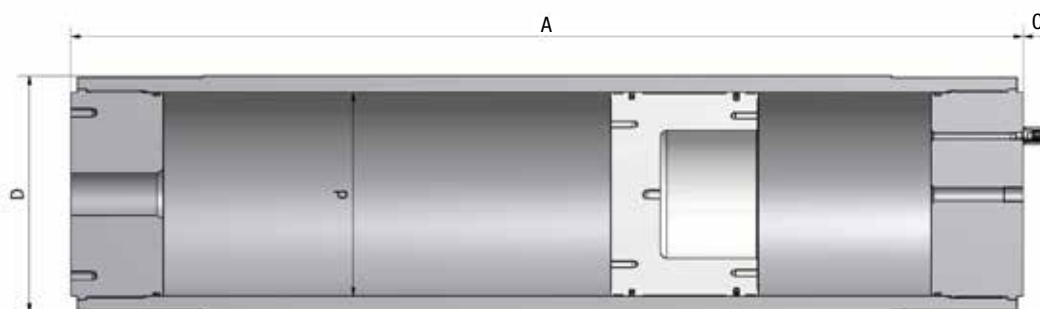
# EHP Series 250 bar, 25 to 200 Litres, Ø 250

Standard version (Carbon steel/seals for mineral oil). Maximum piston speed 2 m/s.  
 Suitable for mineral based hydraulic fluids, Vegetable oils, water glycols. For other fluids consult Parker.  
 According to PED 2014/68/EU (\*\*), Fluid Group 1 or 2 AD2000

Type	Part number	Effective Gas vol. Litres	Max. Working pressure (PS) bar	Admissible Accumulator Temperature min/max (°C)	Weight kg	A max Height mm	External øD	ød mm	Std Fluid port	C mm	Seal Kit
EHP C 0250/250/250 ALAFBB0000	815EHP0C02502525	25	250	-15/100	260	891	298.5	250	G2"	45	8220000000003
EHP C 0300/250/250 ALAFBB0000	815EHP0C03002525	30	250	-15/100	275	992	298.5	250	G2"	45	8220000000003
EHP C 0350/250/250 ALAFBB0000	815EHP0C03502525	35	250	-15/100	292	1093	298.5	250	G2"	45	8220000000003
EHP C 0400/250/250 ALAFBB0000	815EHP0C04002525	40	250	-15/100	310	1196	298.5	250	G2"	45	8220000000003
EHP C 0450/250/250 ALAFBB0000	815EHP0C04502525	45	250	-15/100	328	1296	298.5	250	G2"	45	8220000000003
EHP C 0500/250/250 ALAFBB0000	815EHP0C05002525	50	250	-15/100	345	1401	298.5	250	G2"	45	8220000000003
EHP C 0550/250/250 ALAFBB0000	815EHP0C05502525	55	250	-15/100	362	1500	298.5	250	G2"	45	8220000000003
EHP C 0600/250/250 ALAFBB0000	815EHP0C06002525	60	250	-15/100	375	1606	298.5	250	G2"	45	8220000000003
EHP C 0650/250/250 ALAFBB0000	815EHP0C06502525	65	250	-15/100	392	1704	298.5	250	G2"	45	8220000000003
EHP C 0700/250/250 ALAFBB0000	815EHP0C07002525	70	250	-15/100	410	1811	298.5	250	G2"	45	8220000000003
EHP C 0750/250/250 ALAFBB0000	815EHP0C07502525	75	250	-15/100	428	1907	298.5	250	G2"	45	8220000000003
EHP C 0800-250-250	815EHP0C0802525	80	250	-15/100	445	2011	298.5	250	G2"	45	8220000000003
EHP C 0900/250/250 ALAFBB0000	815EHP0C09002525	80	250	-15/100	475	2216	298.5	250	G2"	45	8220000000003
EHP C 1000-250-250	815EHP0C1002525	100	250	-15/100	510	2421	298.5	250	G2"	45	8220000000003

Available in ASME VIII Division I U STAMPED, in that case EHP (C) ---> IHP (C)

\*\*From 07/2016 PED 97/23/EC becomes PED 2014/68/EU





# EHP Series 250 bar, 30 to 500 Litres, Ø 350

Standard version (Carbon steel/seals for mineral oil). Maximum piston speed 2 m/s.

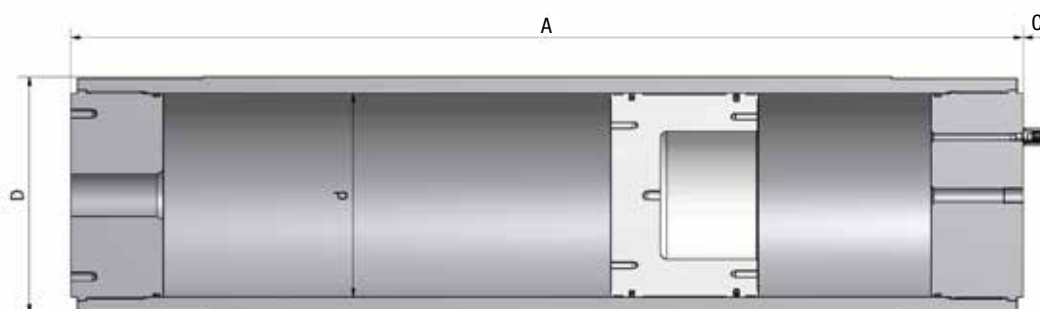
Suitable for mineral based hydraulic fluids, Vegetable oils, water glycols.

For other fluids consult Parker. According to PED 2014/68/EU (\*\*), Fluid Group 1 or 2 AD2000

Type	Part number	Effective Gas vol. Litres	Max. Working pressure (PS) bar	Admissible Accumulator Temperature min/max (°C)	Weight kg	A max Height mm	External øD	ød mm	Std Fluid port	C mm	Seal Kit
EHP C 0300-250-350	815EHP0C0302535	30	250	-15/100	445	818	406.4	350	G2"	45	8220000000003
EHP C 0400-250-350	815EHP0C0402535	40	250	-15/100	472	922	406.4	350	G2"	45	8220000000003
EHP C 0500-250-350	815EHP0C0502535	50	250	-15/100	500	1026	406.4	350	G2"	45	8220000000003
EHP C 1000-250-350	815EHP0C1002535	100	250	-15/100	637	1546	406.4	350	G2"	45	8220000000003
EHP C 1500-250-350	815EHP0C1502535	150	250	-15/100	772	2066	406.4	350	G2"	45	8220000000003
EHP C 2000-250-350	815EHP0C2002535	200	250	-15/100	912	2586	406.4	350	G2"	45	8220000000003
EHP C 2500-250-350	815EHP0C2502535	250	250	-15/100	1048	3106	406.4	350	G2"	45	8220000000003
EHP C 3000-250-350	815EHP0C3002535	300	250	-15/100	1185	3626	406.4	350	G2"	45	8220000000003
EHP C 3500-250-350	815EHP0C3502535	350	250	-15/100	1322	4146	406.4	350	G2"	45	8220000000003
EHP C 4000-250-350	815EHP0C4002535	400	250	-15/100	1429	4664	406.4	350	G2"	45	8220000000003
EHP C 4500-250-350	815EHP0C4502535	450	250	-15/100	1565	5183	406.4	350	G2"	45	
EHP C 5000-250-350	815EHP0C5002535	500	250	-15/100	1702	5703	406.4	350	G2"	45	

Available in ASME VIII Division I U STAMPED, in that case EHP (C) ---> IHP (C)

\*\*From 07/2016 PED 97/23/EC becomes PED 2014/68/EU



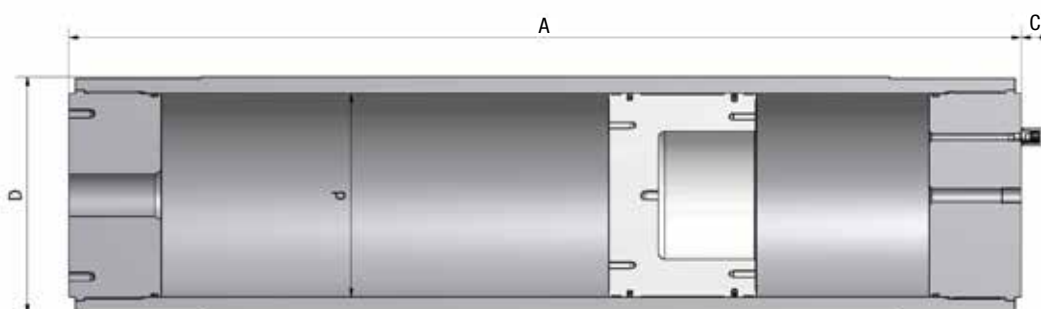
# EHP Series 250 bar, 125 to 1000 Litres, Ø 540

Standard version (Carbon steel/seals for mineral oil). According to PED 2014/68/EU (\*\*)

Type	Part number	Effective Gas vol. Litres	Max. Working pressure (PS) bar	Admissible Accumulator Temperature min/max (°C)	Weight kg	A max Height mm	External øD	ød mm	Std Flu-id port	C mm	Seal Kit
EHP C 1250-250-540	815EHPOC1252554	125	250	-15/100	1546	1530	650	540	G3"	45	822000000018
EHP C 2500-250-540	815EHPOC2502554	250	250	-15/100	2070	2001	650	540	G3"	45	822000000018
EHP C 3000-250-540	815EHPOC3002554	300	250	-15/100	2546	2696	650	540	G3"	45	822000000018
EHP C 4000-250-540	815EHPOC4002554	400	250	-15/100	3000	3154	650	540	G3"	45	822000000018
EHP C 5000-250-540	815EHPOC5002554	500	250	-15/100	3322	3472	650	540	G3"	45	822000000018
EHP C 6000-250-540	815EHPOC6002554	600	250	-15/100	3711	3861	650	540	G3"	45	822000000018
EHP C 7000-250-540	815EHPOC7002554	700	250	-15/100	4099	4249	650	540	G3"	45	822000000018
EHP C 8000-250-540	815EHPOC8002554	800	250	-15/100	4487	4637	650	540	G3"	45	822000000018
EHP C 9000-250-540	815EHPOC9002554	900	250	-15/100	4875	5025	650	540	G3"	45	822000000018
EHP C 10000-250-540	815EHPOC10002554	1000	250	-15/100	5263	5413	650	540	G3"	45	822000000018

Available in ASME VIII Division I U STAMPED, in that case EHP (C) ----> IHP (C)

\*\*From 07/2016 PED 97/23/EC becomes PED 2014/68/EU



# EHP Series 350 bar, 2 to 10 Litres, Ø 100

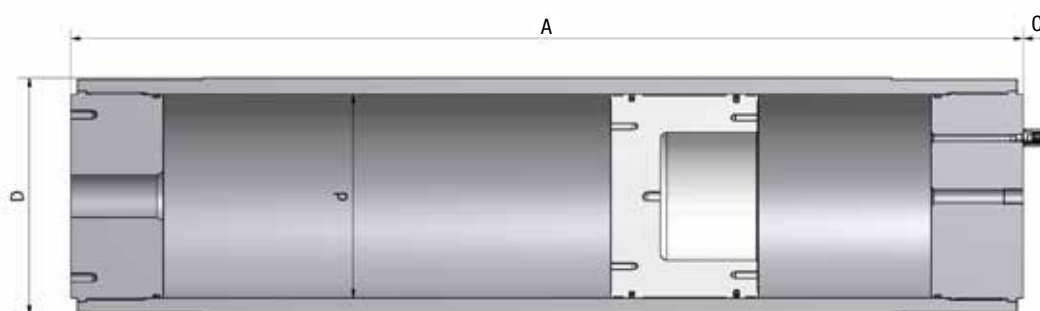
Standard version (Carbon Steel shell/seals for mineral oils) temperature from / 15° up to 100°C.  
 Maximum Piston Speed 2 m/s. Suitable for Mineral based hydraulic fluids, Vegetable oils, Water Glycols. For other fluids please contact Parker Olaer.

According to PED 2014/68/EU (\*\*), ASME VIII Div.1 Design, Fluid Group 1/2

Type	Part number	Effective Gas vol. Litres	Max. Working pressure (PS) bar	Admissible Accumulator Temperature min/max (°C)	Weight kg	A max Height mm	External øD	ød mm	Std Fluid port	C mm	Seal Kit
EHP C 0020-350-100	815EHP0C00023510	2	350	-15/100	37	475	140	100	G1"	45	8220000000024
EHP C 0030-350-100	815EHP0C00033510	3	350	-15/100	45	602	140	100	G1"	45	8220000000024
EHP C 0040-350-100	815EHP0C00043510	4	350	-15/100	52	729	140	100	G1"	45	8220000000024
EHP C 0050-350-100	815EHP0C00053510	5	350	-15/100	60	857	140	100	G1"	45	8220000000024
EHP C 0060-350-100	815EHP0C00063510	6	350	-15/100	67	984	140	100	G1"	45	8220000000024
EHP C 0070-350-100	815EHP0C00073510	7	350	-15/100	75	1111	140	100	G1"	45	8220000000024
EHP C 0080-350-100	815EHP0C00083510	8	350	-15/100	83	1239	140	100	G1"	45	8220000000024
EHP C 0090-350-100	815EHP0C00093510	9	350	-15/100	90	1366	140	100	G1"	45	8220000000024
EHP C 0100-350-100	815EHP0C00103510	10	350	-15/100	98	1493	140	100	G1"	45	8220000000024

Available in ASME VIII Division I U STAMPED, in that case EHP (C) ---> IHP (C)

\*\*From 07/2016 PED 97/23/EC becomes PED 2014/68/EU



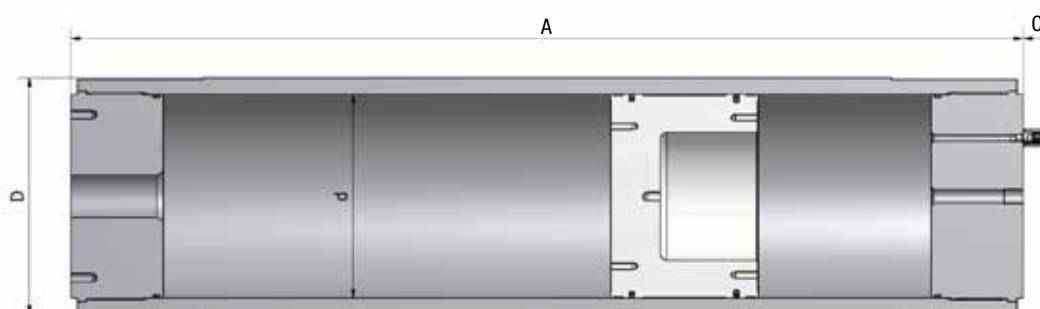
# EHP Series 350 bar, 8 to 50 Litres, Ø 180

Standard version (Carbon Steel shell/seals for mineral oils). Maximum Piston Speed 2 m/s. Suitable for Mineral based hydraulic fluids, Vegetable oils, Water Glycols. For other fluids please contact Parker According to PED 2014/68/EU (\*\*).Fluid Group 1/2 AD2000

Type	Part number	Effective Gas vol. Litres	Max. Working pressure (PS) bar	Admissible Accumulator Temperature min/max (°C)	Weight kg	A max Height mm	External øD	ød mm	Std Fluid port	C mm	Seal Kit
EHP C 0080-350-180	815EHP0C0083518	8	350	-15/100	130	646	229	180	G2"	45	8220000000011
EHP C 0100-350-180	815EHP0C0103518	10	350	-15/100	140	724	229	180	G2"	45	8220000000011
EHP C 0150-350-180	815EHP0C0153518	15	350	-15/100	165	920	229	180	G2"	45	8220000000011
EHP C 0200-350-180	815EHP0C0203518	20	350	-15/100	185	1116	229	180	G2"	45	8220000000011
EHP C 0300-350-180	815EHP0C0303518	30	350	-15/100	235	1510	229	180	G2"	45	8220000000011
EHP C 0400-350-180	815EHP0C0403518	40	350	-15/100	285	1902	229	180	G2"	45	8220000000011
EHP C 0500-350-180	815EHP0C0503518	50	350	-15/100	335	2295	229	180	G2"	45	8220000000011

Available in ASME VIII Division I U STAMPED, in that case EHP (C) ---> IHP (C)

\*\*From 07/2016 PED 97/23/EC becomes PED 2014/68/EU



# EHP Series 350 bar, 25 to 200 Litres, Ø 250

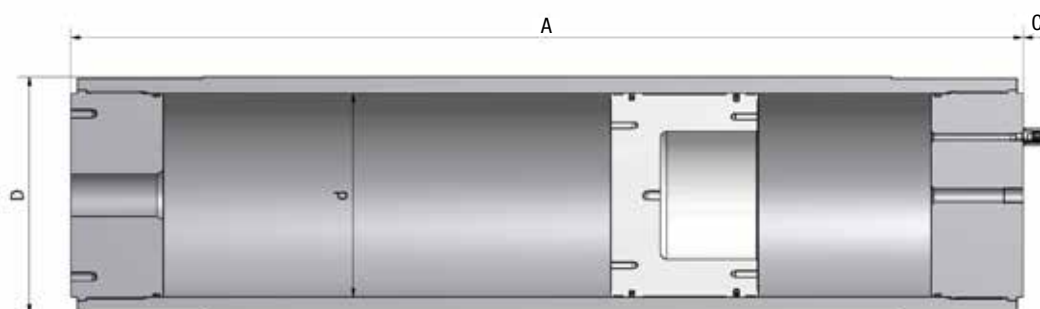
Standard version (Carbon Steel shell/seals for mineral oils). Maximum Piston Speed 2 m/s.  
Suitable for Mineral based hydraulic fluids, Vegetable oils, Water Glycols. For other fluids please contact Parker.

According to PED 2014/68/EU (\*\*), Fluid Group 1/2, AD2000.

Type	Part number	Effective Gas vol. Litres	Max. Working pressure (PS) bar	Admissible Accumulator Temperature min/max (°C)	Weight kg	A max Height mm	External øD	ød mm	Std Fluid port	C mm	Seal Kit
EHP C 0250-350-250	815EHP0C0253525	25	350	-15/100	355	914	323.8	250	G2"	45	8220000000003
EHP C 0300-350-250	815EHP0C0303525	30	350	-15/100	380	1016	323.8	250	G2"	45	8220000000003
EHP C 0400-350-250	815EHP0C0403525	40	350	-15/100	435	1220	323.8	250	G2"	45	8220000000003
EHP C 0500-350-250	815EHP0C0503525	50	350	-15/100	485	1423	323.8	250	G2"	45	8220000000003
EHP C 0600-350-250	815EHP0C0603525	60	350	-15/100	510	1627	323.8	250	G2"	45	8220000000003
EHP C 0700-350-250	815EHP0C0703525	70	350	-15/100	595	1830	323.8	250	G2"	45	8220000000003
EHP C 0800-350-250	815EHP0C0803525	80	350	-15/100	645	2035	323.8	250	G2"	45	8220000000003
EHP C 0900-350-250	815EHP0C0903525	90	350	-15/100	700	2238	323.8	250	G2"	45	8220000000003
EHP C 0950-350-250	815EHP0C0953525	95	350	-15/100	725	2340	323.8	250	G2"	45	8220000000003
EHP C 1000-350-250	815EHP0C1003525	100	350	-15/100	750	2442	323.8	250	G2"	45	8220000000003

Available in ASME VIII Division I U STAMPED, in that case EHP (C) ---> IHP (C)

\*\*From 07/2016 PED 97/23/EC becomes PED 2014/68/EU



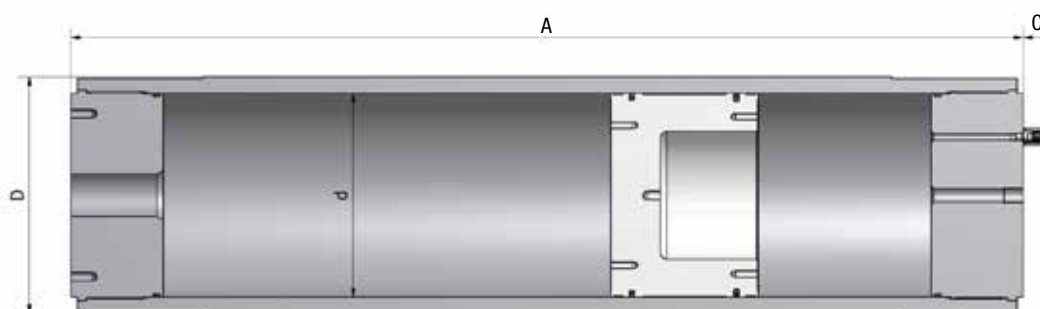
# EHP Series 350 bar, 30 to 350 Litres, Ø 350

Standard version (**Carbon Steel** shell/seals for mineral oils) temperature from - 15° up to 100°C. Maximum Piston Speed 2 m/s. Suitable for Mineral based hydraulic fluids, Vegetable oils, Water Glycols. For other fluids please contact Parker Olaer. According to PED 2014/68/EU (\*\*)Fluid Group 1/2

Type	Part number	Effective Gas vol. Litres	Max. Working pressure (PS) bar	Admissible Accumulator Temperature min/max (°C)	Weight kg	A max Height mm	External øD	ød mm	Std Fluid port	C mm	Seal Kit
EHP C 0300/350/350	815EHPOC03003535	30	350	-15/100	775	842	457.2	350	G5"	45	8220000000002
EHP C 0400/350/350	815EHPOC04003535	40	350	-15/100	830	946	457.2	350	G5"	45	8220000000002
EHP C 0500/350/350	815EHPOC05003535	50	350	-15/100	885	1050	457.2	350	G5"	45	8220000000002
EHP C 0600/350/350	815EHPOC06003535	60	350	-15/100	940	1154	457.2	350	G5"	45	8220000000002
EHP C 0700/350/350	815EHPOC07003535	70	350	-15/100	995	1259	457.2	350	G5"	45	8220000000002
EHP C 0800/350/350	815EHPOC08003535	80	350	-15/100	1050	1362	457.2	350	G5"	45	8220000000002
EHP C 0900/350/350	815EHPOC09003535	90	350	-15/100	1110	1466	457.2	350	G5"	45	8220000000002
EHP C 1000/350/350	815EHPOC10003535	100	350	-15/100	1165	1570	457.2	350	G5"	45	8220000000002
EHP C 1500/350/350	815EHPOC15003535	150	350	-15/100	1440	2090	457.2	350	G5"	45	8220000000002
EHP C 2000/350/350	815EHPOC20003535	200	350	-15/100	1720	2610	457.2	350	G5"	45	8220000000002
EHP C 2500/350/350	815EHPOC25003535	250	350	-15/100	1995	3130	457.2	350	G5"	45	8220000000002
EHP C 3000/350/350	815EHPOC30003535	300	350	-15/100	2275	3650	457.2	350	G5"	45	8220000000002
EHP C 3500/350/350	815EHPOC35003535	350	350	-15/100	2550	4170	457.2	350	G5"	45	8220000000002

Available in ASME VIII Division I U STAMPED, in that case EHP (C) ---> IHP (C)

\*\*From 07/2016 PED 97/23/EC becomes PED 2014/68/EU



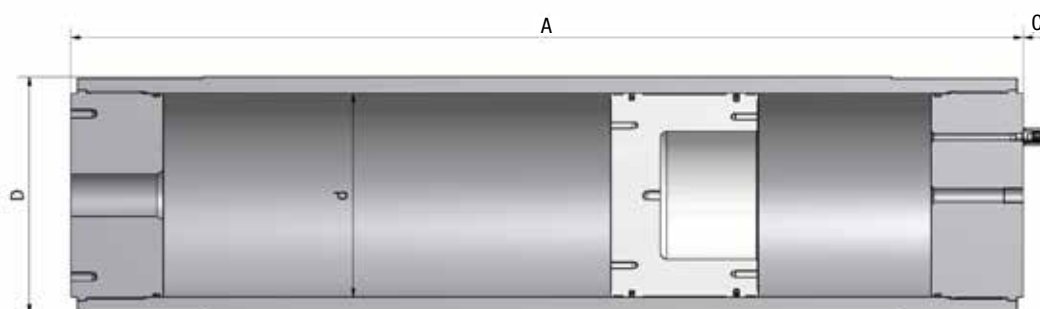
# EHP Series 350 bar, 125 to 1000 Litres, Ø 540

Standard Version (Carbon Steel shell) temperature from - 15° up to 100°C According to PED 97/23/EC

Type	Part number	Effective Gas vol. Litres	Max. Working pressure (PS) bar	Admissible Accumulator Temperature min/max (°C)	Weight kg	A max Height mm	External øD	ød mm	Std Fluid port	C mm	Seal Kit
EHP C 1250-350-540	815EHPOC1253554	125	350	-15/+100	1763	1730	730	540	G 3"	45	822000000018
EHP C 2500-350-540	815EHPOC2503554	250	350	-15/+100	2366	2201	730	540	G 3"	45	822000000018
EHP C 3000-350-540	815EHPOC3003554	300	350	-15/+100	2913	2896	730	540	G 3"	45	822000000018
EHP C 4000-350-540	815EHPOC4003554	400	350	-15/+100	3435	3354	730	540	G 3"	45	822000000018
EHP C 5000-350-540	815EHPOC5003554	500	350	-15/+100	3805	3672	730	540	G 3"	45	822000000018
EHP C 6000-350-540	815EHPOC6003554	600	350	-15/+100	4253	4061	730	540	G 3"	45	822000000018
EHP C 7000-350-540	815EHPOC7003554	700	350	-15/+100	4699	4449	730	540	G 3"	45	822000000018
EHP C 8000-350-540	815EHPOC8003554	800	350	-15/+100	5145	4837	730	540	G 3"	45	822000000018
EHP C 9000-350-540	815EHPOC9003554	900	350	-15/+100	5591	5225	730	540	G 3"	45	822000000018
EHP C 10000-350-540	815EHPOC10003554	1000	350	-15/+100	6037	5613	730	540	G 3"	45	822000000018

Available in ASME VIII Division I U STAMPED, in that case EHP (C) ---> IHP (C)

\*\*From 07/2016 PED 97/23/EC becomes PED 2014/68/EU



# Regulations for EHP/IHP Piston Accumulators

- Available
- Available on request

This table is giving an indication of approval availability for the range of products. Availability is to be confirmed for each approval, in particular the pressure rating and the allowable working temperatures.

PISTON ACCUMULATOR EHP/IHP					EUROPE	USA	CHINA	CANADA	AUSTRALIA	BRASIL	RUSSIA, KAZAKHSTAN, BELARUS	MARINE OFF-SHORE				
Product line	Internal diameter Ø (mm)	Material Grade CS : Carbon Steel SS : Stainless Steel	Design pressure PS (Bar)	Volume V	PED Fluid Group 2 (EN 14359)	PED Fluid Group 1 (AD-2000)	ASME VIII Div.1	SELO	CRN	AS1210	NR13	CUTR 032/2013	DNV GL	ABS	BV Marine	RINA
EHP/EHP2	50	CS	250	1,5 - 4L	●	○	○	○	○	○	○	○	●	●	○	○
EHP/EHP2	50	CS	360	0,15 - 4L	●	○	○	○	○	○	○	○	-	●	○	○
EHP/EHP2	80	CS	250	1,5 - 4L	●	○	○	○	○	○	○	○	●	●	○	○
EHP/EHP2	100	CS	250	0,8 - 15L	●	○	○	○	○	○	○	○	●	●	○	○
EHP/EHP2	140	CS	250	4 - 25L	●	○	○	○	○	○	○	○	●	●	○	○
EHP/EHP2	140	CS	310	4 - 25L	●	○	○	○	○	○	○	○	-	●	○	○
EHP/EHP2	180	CS	250	10 - 60L	●	○	○	○	○	○	○	○	●	●	○	○
EHP/EHP2	200	CS	250	10 - 60L	●	○	○	○	○	○	○	○	●	●	○	○
EHP/EHP2	100	CS	350	0.5 - 15L	●	○	○	○	○	○	○	○	●	●	○	○
EHP/EHP2	180	CS	350	10 - 100L	●	○	○	○	○	○	○	○	●	●	○	○
EHP/EHP2	200	CS	350	10 - 150L	●	○	○	○	○	○	○	○	●	●	○	○
EHP/EHP2	250	CS	250	50 - 220L	●	○	○	○	○	○	○	○	●	●	○	○
EHP/EHP2	250	CS	350	50 - 220L	●	○	○	○	○	○	○	○	●	●	○	○
EHP/EHP2	360	CS	250	100 - 640L	●	○	○	○	○	○	○	○	●	●	○	○
EHP	100	CS	350	2-10 L	●	○	●	○	○	○	○	○	○	○	○	○
EHP	180	CS	250	8-50 L	○	●	○	○	○	○	○	○	○	○	○	○
EHP	180	CS	250	8-50 L	○	●	○	○	○	○	○	○	○	○	○	○
EHP	180	CS	350	8-50 L	○	●	○	○	○	○	○	○	○	○	○	○
EHP	195	SS	250	10-150 L	●	○	○	○	○	○	○	○	○	○	○	○
EHP	200	CS	250	10-150 L	●	○	○	○	○	○	○	○	○	○	○	○
EHP	250	CS	250	25-100 L	○	●	○	○	○	○	○	○	○	○	○	○
EHP	250	CS	250	25-200 L	○	●	○	○	○	○	○	○	○	○	○	○
EHP	250	CS	350	25-200 L	○	●	○	○	○	○	○	○	○	○	○	○
EHP	350	CS	220	30-500 L	○	●	○	○	○	○	○	○	○	○	○	○
EHP	350	CS	350	30-350 L	○	●	○	○	○	○	○	○	○	○	○	○
IHP	350	CS	190	30-350 L	○	○	○	○	○	●	○	○	○	○	○	○
EHP	360	SS	207	60-400 L	●	○	●	○	○	○	○	○	○	○	○	○
EHP	540	CS	220	150-650 L	●	○	○	○	○	○	○	○	○	○	○	○

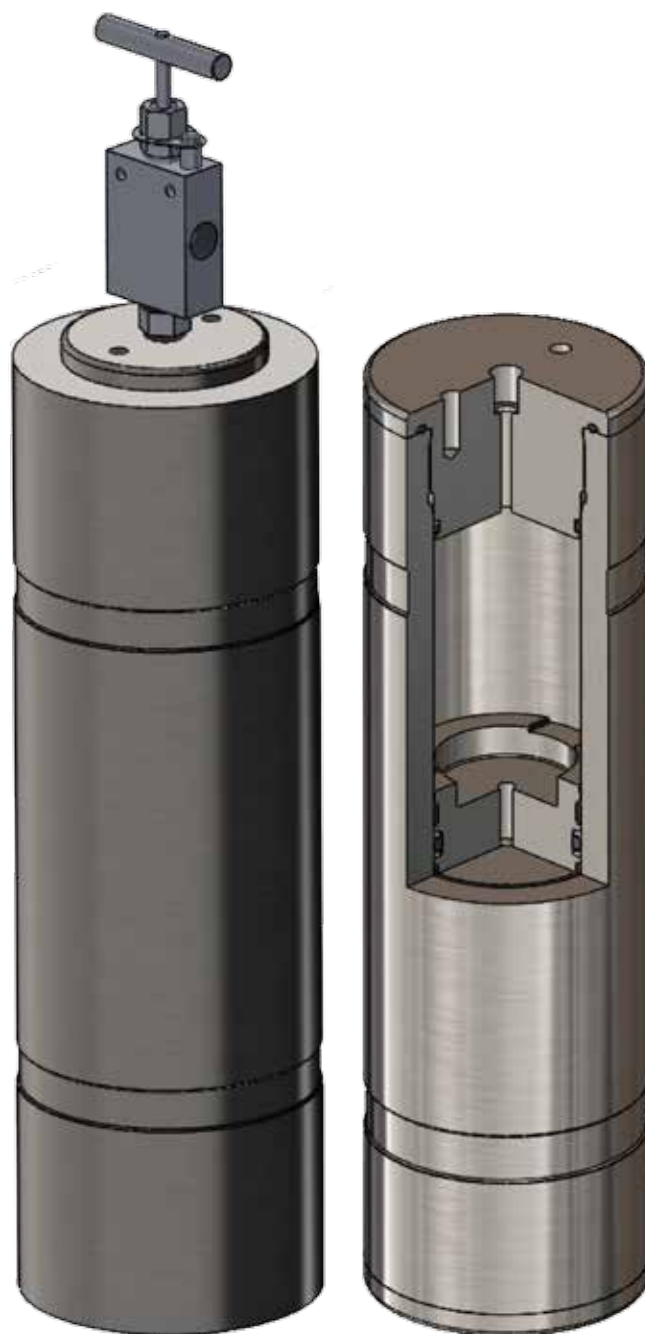


# up to 3000 bar: EHP Pistons

Carbon and Stainless Steel

## Benefits

- **Experienced Technical Support Team** to help develop the most effective and efficient product for your system/application.
- **Materials to suit the most demanding environments.** Parker Olaer offer a choice of materials from metallic and elastomeric components to suit the operating environment e.g. chemical compatibility, environment conditions (topside or subsea) and temperature extremes.
- **International design codes and regulations.**
- **Meeting the highest pressure requirements.** This high pressure piston range can provide pressures of up to 2500 bar (more than 36,000 psi).
- **Bespoke Designs to suit your needs.** Parker Olaer pistons can be designed and built to your specified criteria and can therefore meet any space limitations you may have.



# High Pressure, up to 3000 bar: General Information

## Technical Characteristics:

### Capabilities

Paker ACDE Piston Accumulators are available in any capacity up to 1350 litres. Capacity is only limited by pressure and available materials. Our standard range is 1 litre up-to and including 150 litres. All units are made to order, and can be custom engineered to suit specific space restrictions.

### Pressure

Piston Accumulators are available in any pressure between 5 bar and 3000 bar. The pressure rating is dependant on capacity and/or available materials.

### Materials

Our units are available in a variety of materials such as Carbon steel, Stainless steel, Duplex or Super Duplex steels and Aluminium. All come with a choice of material certification options.

### Design

Vessels will be in accordance with the PED 97/23/EC for use in Europe and designed to PD5500. Optional 3rd party witness (eg. Lloyds) available. Other design codes can be considered for example ASME VIII Div 1.

### Fluid End Connections

To suit customer requirements – e.g. NPT, BSP, Autoclave type or SAE/ASME flanged.

### Gas End Connections

To suit customer requirements – e.g. NPT, BSP, Autoclave type or SAE/ASME flanged. Transfer barrier ports, Gas Charging valves (brass and stainless) Gas pressure relief devices e.g. Burst discs and Fuse plugs.

### Seals

For low or high temperature applications. Materials typically Nitrile, PTFE, Viton, EPDM and others.

### Piston Position Indicators

#### Carbon Steel Options:

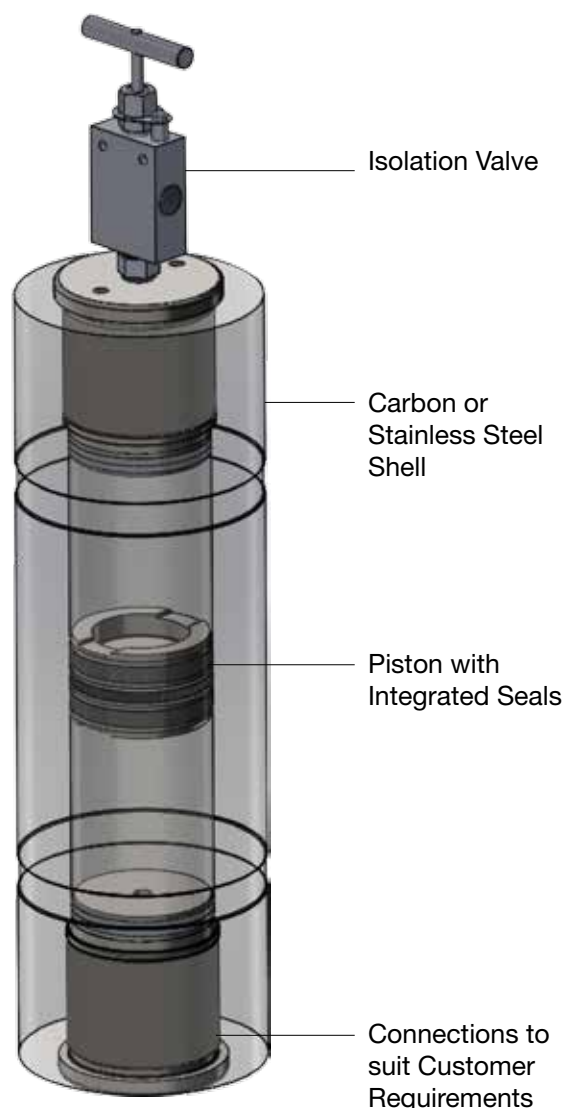
- Tailrod – magnetic operation with visual flapper or magnetic indicator switch.
- Bent tube Indicator - magnetic operation with visual flapper or magnetic indicator switch.
- Tailrod – operating a cam/switch.
- Proximity switch

#### Stainless Steel Options:

- Piston Magnet - magnetic operation with visual flapper or magnetic indicator switch
- Proximity switches

#### Carbon Steel Units

Wide range of product sizes we are available. For further information please contact a member of our sales team.



# Raising the bar on piston design

Fully flexible design capacity allowing us to design products to suit your applications.

This is a small selection of the pistons we commonly supply however please contact us for other options and prices.

Available on request   
 Standard product

## Carbon Steel Pistons

Bar	Internal Diameter (Ø d)												
	50	80	90	100	115	125	160	180	200	250	360	500	
200													
350													
500													
750													
1000													
1250													
1500													
1750													
2000													
2250													
2500													

Contact  
Parker Olaer

## Stainless Steel (17/4) Pistons

Bar	Internal Diameter (Ø d)												
	50	80	90	100	115	125	160	180	200	250	360	500	
200													
350													
500													
750													
1000													
1250													
1500													
1750													
2000													
2250													
2500													

Contact  
Parker Olaer

## Stainless Steel (AISI 316) Pistons

Bar	Internal Diameter (Ø d)												
	50	80	90	100	115	125	160	180	200	250	360	500	
200													
350													
500													
750													
1000													
1250													
1400													

Contact  
Parker Olaer

## Duplex Pistons

Bar	Internal Diameter (Ø d)												
	50	80	90	100	115	125	160	180	200	250	360	500	
200													
350													
500													
750													
1000													

Contact  
Parker Olaer

## Super Duplex Pistons

Bar	Internal Diameter (Ø d)												
	50	80	90	100	115	125	160	180	200	250	360	500	
200													
350													
500													
750													
1000													
1250													

Contact  
Parker Olaer

# In-house Facilities

## Design, Development and Production Services

### Design Facilities

A dedicated technical team uses the latest 3D SolidWorks and Autodesk Inventor software driven by calculation programs (linked to EN14359, PD5500 and ASME VIII) to reduce design times and provide technical customer support.

### Assembly

Our purpose built production area incorporates;

- Ultrasonic cleaning of components; tube washing bath with capability of up to 4 metres long x 750mm diameter.
- 40 metre x 5 tonne crane facility throughout the stocking, assembly and testing areas and 15 tonne crane in the Fabrication area.

### Hydraulic Testing

The piston testing facility provides:

- Data logging of test results for permanent record
- Remote inspection for leaks by CCTV
- Steel self contained high safety cell
- Lift-off roof for large cylinders
- 2 off air-driven test rigs (water/ glycol & mineral oil) high volume, low pressure pre-test filling capable of testing up to 3000 bar



# SBV3 Pulsation Dampers

Silicone Filled Bladder SBV3 Series, up to 40 bar

## IN THIS SECTION

### SBV3 Series Pulsation Dampers

SBV3 Series: How to order	139
Part Numbers and Dimensions	140

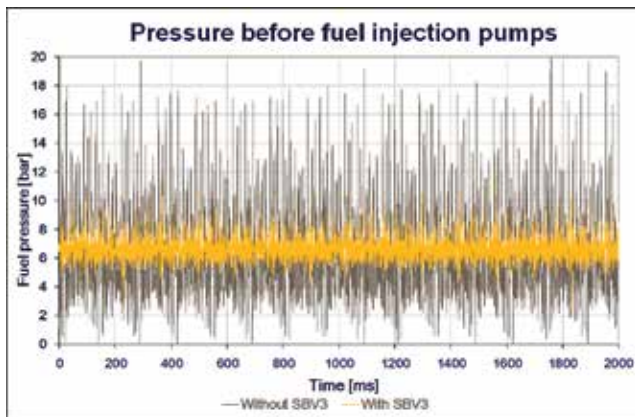


Sizing Questionnaires	Accumulator Stations	Gas Bottles	Accessories	Diaphragms	Attenuators	Pulsation Dampers	Piston Accumulators					Bladder Accumulators		
							EHP	DC	AP	A	ACP	O&G	Regulations	EHV

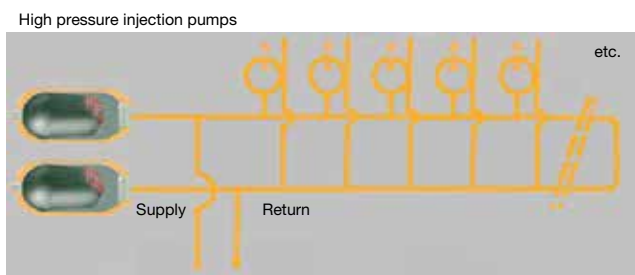
# Description

The SBV3 pulsation damper by Parker Olaer is specially designed for installation on low pressure fuel systems, typically in Marine and Power Generation applications, to attenuate pressure pulses.

The patented technology removes all risks and maintenance associated with pressurised gas and no precharge is required as Silicone particles are used instead. This third generation of damper integrates the brand new S2 rubber mix which offers improved longevity and efficiency and the new stem adapter which provides greater reliability.



## Typical Installation Example



<b>1. Silicone Port</b>	Can be connected to drain pan through spill detection system or valve
<b>2. Shell</b>	Material: Carbon Steel Maximum working pressure: 40 bar Nominal Capacities: 0.5, 1 or 2.5 Litres
<b>3. Bladder</b>	Mix compound S2 type HBRR; specially developed to be compatible with fuel types HFO & MDO and high temperature environments.
<b>4. Fluid port</b>	With reinforced strainer, G2" compatible with a large range of adaptors and manifolds

# Benefits

**The new generation of SBV offers enhanced longevity, delivering stable performance levels 35% longer than the SBV2. The new stem adapter reduces the risk of leakage; 2 to 3 times lower than the SBV2 and an improved strainer prevents silicone parts from entering the fuel system.**

### Easy to install and use

The SBV3 is installed on the diesel engine inlet outlet or outlet fuel lines. The bottom side is connected to the fuel system and the external connection on the top side, to a spill detection system. No additional fluids or gas precharge are required and its lightweight construction makes it easier to handle and transport.

### Improved safety

The new stem adapter with 2 sealing zones significantly reduces the risk of hot fluid contact during inspection and maintenance. Its high pressure safety factor and enhanced leak prevention also provide improved safety features.

### Efficiency and Reliability

Offering a product lifetime of 35% longer than its former model the SBV3 offers better value for money and peace of mind. A robust shell design and improved stem adapter optimize this product for high stress and fatigue.

### Extending System Life – Cost Saving!

The reduction of pressure peaks in the fuel system will prevent damage to pumps/instrumentation and reduce the costs associated with system maintenance and repair.

### Approvals

CE or PED 2014/68/EU Article 4.3

BV Marine

Other approvals available on request (ABS, DNV, GL, NKK).

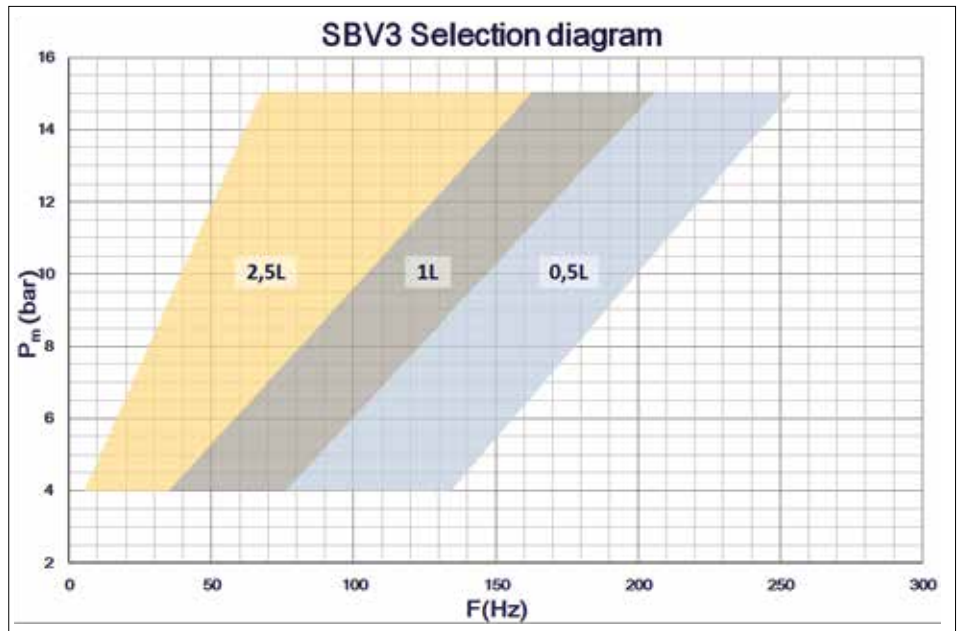
# SBV3 Series: How to select the right SBV3

Two pieces of information are required to select the most suitable SBV3 model for your system:

- F(Hz): Fundamental frequency of pulsations
- P<sub>m</sub> (bar): Mean pressure in the circuit

**To select:**

1. Using the adjacent diagram, find the fundamental frequency and the mean pressure.
2. Select the right model in the shaded area.



# SBV3 Series: How to order

**SBV3 0.5 40 / 00 A S2 K M 1 00**

<b>Product Type</b>									
SBV3 : Silicon low pressure bladder									
<b>Volume in L (up to 4 Characters)</b>									
0.5 - for 0,5 Liter 1.0 - for 1,0 Liters 2.5 - for 2.5 Liters									
<b>Maximum Working Pressure According to CE*</b>									
40 - for 40 bar max working pressure									
<b>Approvals*</b>									
00 - According to the PED2014/68/EU, article 4.3 11 - According CE & BV Marine 13 - According PED article 4.3 & BV Marine *Please consult Parker for other approvals									
<b>Material (Shell and Fluid Port)</b>									
A - All parts in carbon steel with Epoxy paint for shell only									
<b>Bladder Mix</b>									
S2 - Compound S2 type HNBR									
<b>Fluid Port Configuration</b>									
K - G2" according to ISO228									
<b>Silicone Port Configuration</b>									
L - No gas valve - pipe connection Ø10mm M - No gas valve - pipe connection Ø8mm									
<b>Fluid Type</b>									
1 - Fluid Type 1 CE Fluid Group 1									
<b>Special</b>									
00 - No Special features or configuration ZZ - Special configuration or several options									

# Technical Specifications

## Pressure

Maximum working pressure: (PS) = 40 bar

Operating pressure (OP): 3 to 15 bar.

## Pre-charge pressure

No precharge pressure requested.

Bladder filled with silicone particles.

## Material of construction

Shell in forged carbon steel with epoxy paint Bladder mix S2 HNBR.

## Temperature range

Standard construction: -10 to +150°C.

## System fluids

Suitable for diesel oil and heavy oil (MDO&HFO)

Product approved for fluid group 1 according to PED

## Approvals

Compliance PED : article 4.3\* or CE

BV Marine

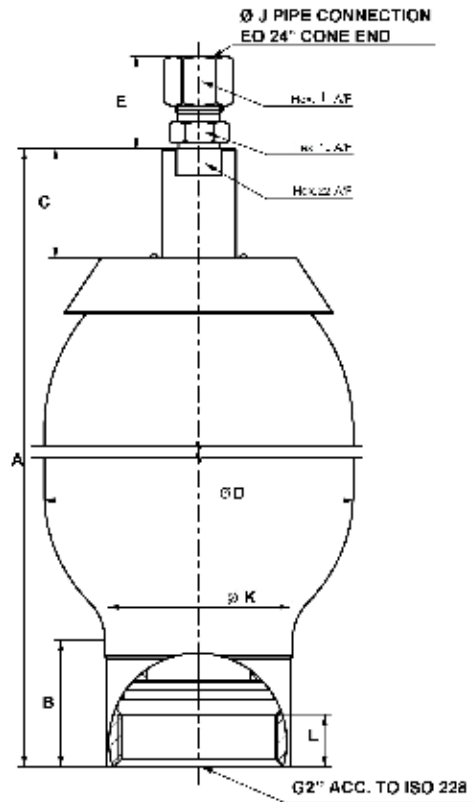
Other approvals available on request

(ABS, DNV, GL, NKK)

## Installation

Vertical (fluid port on bottom side), preferable to horizontal.

User manual is delivered with the damper.



Type	Part Number	Volume Litres	Weight Kg	Dimensions (mm)								
				A	B	C	ØD	E	I	ØJ	ØK	L
SBV3 0.5-40/00-AS2KM-100	092686011S2	0.5	3	261	46	40	90	28	17	8	68	24
SBV3 1.0-40/13-AS2KM-100	092390011S2	1	6	289	47	40	116	34	22	10	68	19
SBV3 2.5-40/11-AS2KL-100	092391011S2	2.5	10	463	47	40	116	34	22	10	68	19

The dimensions given in the table above are in mm and the manufacturing tolerances are not taken into account

Patents applied in most major industrial countries.

\*From 07/2016 PED97/23/EC Article 3.3 becomes PED2014/68/EU Article 4.3



## Accessories

### Manifold :

- DIN
- JIS
- ANSI

and substitute existing solution in SAE 3000 psi



### Clamps :

Temperature 150°C

Construction in Zinc plated – Silicon rubber

SBV3-E95

SBV3-A114



### Other Accessories :

- Pipe Kit's for monitoring the Bladder up to 150°C
- Ball valve – Connector – clamps
  - in Carbone Steel coating CF
- Pipe :
  - Carbone steel coating CF
  - Stainless steel 1.4571
  - Copper (pipe)

For more information please contact your local Parker sales office.



# APD, BPD, CPD & DPD Pulsation Dampers

Stainless Steel and Polypropylene

## IN THIS SECTION

### APD,DPD,CPD,DPD Series Piston Accumulators

ACP Series: How to order	147
APD Part Numbers	150
BPD Part Numbers	151



Sizing Questionnaires	Accumulator Stations	Gas Bottles	Accessories	Diaphragms	Attenuators	Pulsation Dampers	Piston Accumulators				Bladder Accumulators		
							EHP	DC	AP	A	ACP	O&G	Regulations

# Benefits

Parker Pulsation Dampers can provide cost savings to end users of pumping systems by reducing pipework and instrumentation damage, whilst also providing a more accurate dispersal of pumped products and improved reliability and accuracy of system instrumentation.

Pulsation Dampers are available in Stainless Steel and Polypropylene models. Volume sizes of 0.1 litre to 2 litres with working pressures of up to 10 bar are available for the Polypropylene models.

Stainless steel models are available in volume sizes of 0.1 to 5 litres and working pressures of up to 690 bar.

Our range of low cost Pulsation Dampers offer the following benefits:

- **Removal of pressure spikes**
  - **Protection of pipework and instrumentation**
  - **Provision of continuous steady flow**
  - **Reduction of system noise and cavitation**
- 
- **Accurate dispersal of pumped products**
  - **Improved reliability and accuracy of system instrumentation**
  - **International Certification**
  - **Bespoke designs tailored to customer requirements**



Polypropylene

Stainless Steel



# Markets & Applications

Ideal for Oil & Gas and Industrial installation

**Oil & Gas**

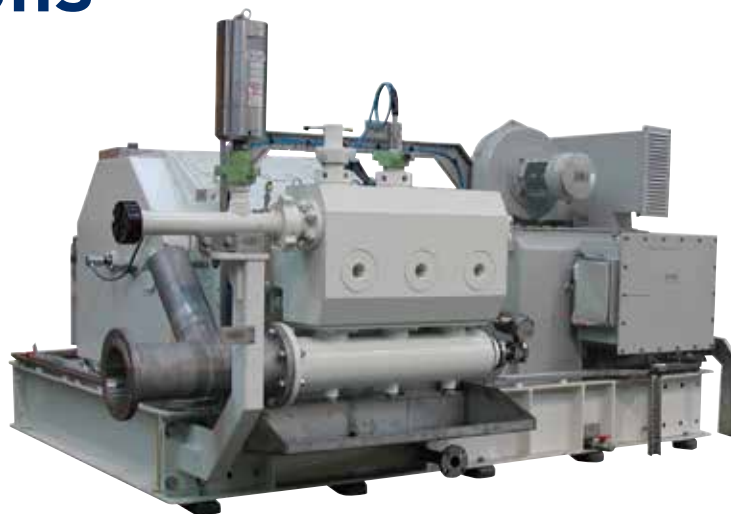
- Chemical Injection Skids/Systems

**Industrial**

- Test Equipment

**Petrochemical**

- Dosing Pump Systems



# Main Features

	<b>Stainless Steel (316)* Pulsation Dampers</b>	<b>Polypropylene Pulsation Dampers</b>
Maximum Pressure	690 bar **	10 bar
Maximum Volume	5 Litres	2 Litres ***
Design	PD55000 ASME VIII Div 1 ASME VIII Div 1 U Stamp	Sound Engineering Practice (SEP)
Flanged Options	Flanged options available	No flanged options available
Maintenance	Repairable	Non-repairable

\* Other materials available on request e.g. duplex, super duplex, inconel.

\*\* Higher pressures available on request

\*\*\* Units up to 1 litre stocked as standard

# Stainless Steel Pulsation Dampers

## Main Features

### 1 Shell

CE certified in accordance with the PED (97/23/EC) where applicable. Manufactured from high grade 316 Stainless Steel, other materials available.

- Nominal capacities 0.1 litre to 5 litres.
- Working pressures of up to 690 bar, higher pressures available on request.
- Wide range of separator materials available
- Designed to PD5500 or ASME VIII Div 1.
- U Stamp is available as an option.

### 2 Label

Vessel information is stamped directly on shell. Stainless Steel nameplates are available at an extra cost.

### 3 Material Certification

Material certifications are available to EN10204 3.1 NACE MR0175 compliance is available on request.

### 4 Finish

Natural finish, unpainted as standard. Special paints available.

### 5 Fluid Port

A large variation of threaded or flanged options are available. For connection options please see page 149.

### 6 Safety

All gas-loaded pulsation dampers 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 pulsation damper. See Installation and Servicing data sheet for information regarding installation of pulsation damper.

### 7 Pressure Testing

A hydrostatic pressure test is carried out on all our pulsation dampers 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.

### 8 Accessories

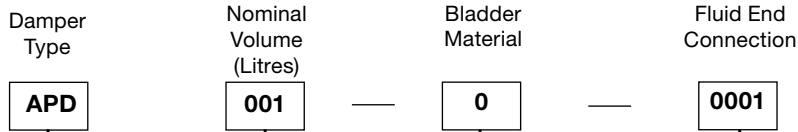
A complete range of damper charging equipment is available from Parker Olaer.

### 9 Spare Parts

Available on request.



# Stainless Steel: How to order



**Code: Type**

- APD : Standard pressure
- BPD : High pressure
- CPD : ASME standard pressure
- DPD : ASME high pressure
- EPD : 'Special' alternative materials or high pressures
- CPDU: ASME U Stamped Standard Pressure
- DPDU: ASME U Stamped High Pressure

**Code: Litres**

- 001 : 0.1
- 025 : 0.25
- 050 : 0.5
- 100 : 1
- 200 : 2
- 300 : 3
- 500 : 5

**Code: Material**

- 0 : Nitrile (NBR)
- A : EPDM
- 6 : Viton (FKM)

Other bladder materials are available on request

**Code: Fluid end connection**

- 0001 : 1/2" BSP (F)
- 0002 : 3/4" BSP (F)
- 0003 : 1" BSP (F)
- 0004 : 1 1/2" BSP (F)
- 0005 : 1/2" NPT (F)
- 0006 : 2" BSP (F)
- 0007 : 3/4" NPT (F)
- 0024 : 1" NPT (F)
- 0026 : 1/4" NPT(F)
- 0042 : 2" NPT(F)
- 0012 : 3/8" NPT(F)

- 0010 : 1/2" 150 lb R/F Flange
- 0011 : 1" 150 lb R/F Flange
- 0012 : 1/2" 300 lb R/F Flange
- 0013 : 1" 300 lb R/F Flange
- 0016 : 2" 150 lb R/F Flange
- 0032 : 2" 300 lb R/F Flange
- 0070 : 1/2" 1500LB RTJ Flange
- 0072 : 1" 1500LB RTJ Flange
- 0088 : 1/2" 2500lb RTJ Flange

Other thread and flange options available on request



**Capacities and Dimensions**

**APD Range (PD5500)**

	Volume (litres)						
	0.1	0.25	0.5	1	2	3	5
Height (mm)	200	220	242	270	405	425	437
Outside Diameter (mm)	60	76	94	127	127	153	170
Weight (kg)	2.7	4.5	7.4	15	20	31	33
<b>Design Pressure (bar)</b>	<b>350</b>	<b>300</b>	<b>250</b>	<b>180</b>	<b>180</b>	<b>250</b>	<b>120</b>

**BPD Range (PD5500)**

	Volume (litres)						
	0.1	0.25	0.5	1	2	3	5
Height (mm)	215	236	272	290	426	448	472
Outside Diameter (mm)	76	102	127	146	146	170	190
Weight (kg)	5.4	12	21	27	37	52	55
<b>Design Pressure (bar)</b>	<b>690</b>	<b>690</b>	<b>690</b>	<b>450</b>	<b>450</b>	<b>430</b>	<b>300</b>

**CPD Range (ASME VIII Div 1)\***

	Volume (litres)						
	0.1	0.25	0.5	1	2	3	5
Height (mm)	200	220	242	270	405	425	437
Outside Diameter (mm)	60	76	94	127	127	153	170
Weight (kg)	2.7	4.5	7.4	15	20	31	33
<b>Design Pressure (bar)</b>	<b>300</b>	<b>250</b>	<b>170</b>	<b>140</b>	<b>140</b>	<b>120</b>	<b>95</b>

**DPD Range (ASME VIII Div 1)\***

	Volume (litres)						
	0.1	0.25	0.5	1	2	3	5
Height (mm)	215	236	272	290	426	448	472
Outside Diameter (mm)	76	102	127	146	146	170	190
Weight (kg)	5.4	12	21	27	37	52	55
<b>Design Pressure (bar)</b>	<b>460</b>	<b>420</b>	<b>400</b>	<b>350</b>	<b>350</b>	<b>300</b>	<b>207</b>



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

- \*'U' Stamp options are also available at extra cost. Request price if required.
- APD/CPD models have brass gas valves
- BPD/DPD models have stainless steel gas valves



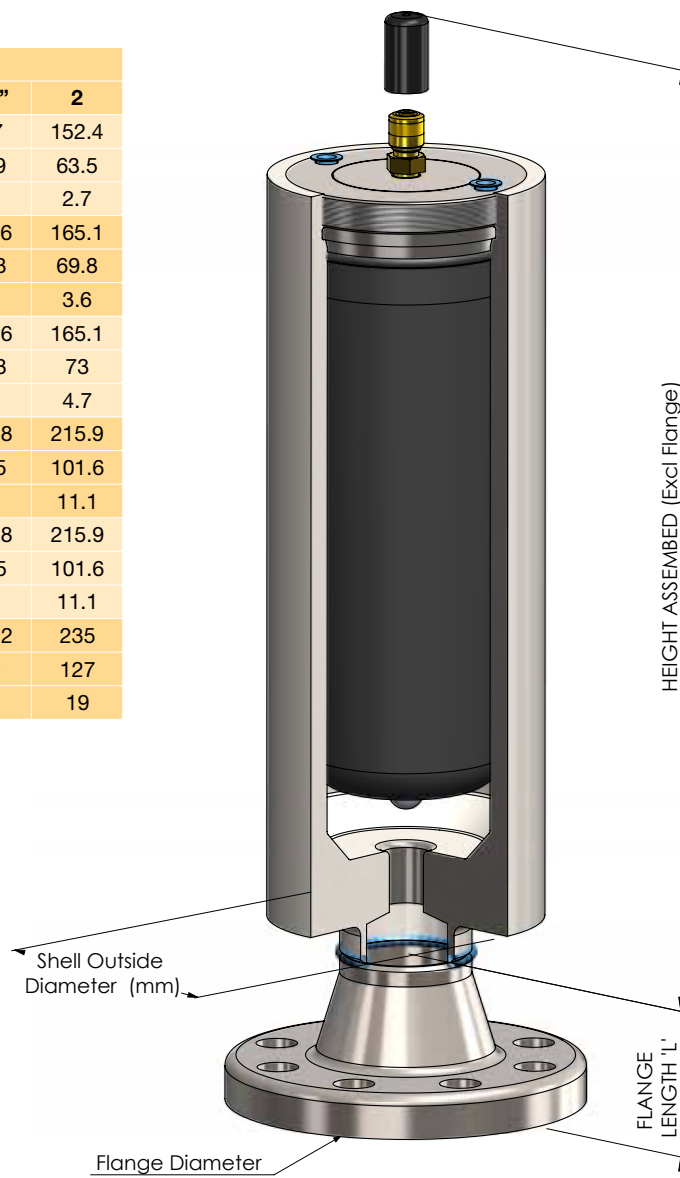
**Flanged Fluid End Options**

Dimensions (mm)		Nominal Flange Sizes					
		½"	¾"	1"	1 ¼"	1 ½"	2"
150lb	Diameter	88.9	98.4	107.9	117.5	127	152.4
	Length "L"	47.6	52.4	55.6	57.1	61.9	63.5
	Weight (kg)	0.5	0.7	1.1	1.5	1.8	2.7
300lb	Diameter	95.2	117.5	123.8	133.4	155.6	165.1
	Length "L"	52.4	57.1	61.9	65.1	68.3	69.8
	Weight (kg)	0.8	1.3	1.7	2.2	3.2	3.6
600lb	Diameter	95.2	117.5	123.8	133.4	155.6	165.1
	Length "L"	52.4	57.1	61.9	66.7	69.8	73
	Weight (kg)	0.9	1.5	1.9	2.6	3.3	4.7
900lb	Diameter	120.6	130.2	149.2	158.7	177.8	215.9
	Length "L"	60.3	69.8	73	73	82.5	101.6
	Weight (kg)	1.9	2.6	3.8	4.4	6.1	11.1
1500lb	Diameter	120.6	130.2	149.2	158.7	177.8	215.9
	Length "L"	60.3	69.8	73	73	82.5	101.6
	Weight (kg)	1.9	2.6	3.8	4.4	6.1	11.1
2500lb	Diameter	133.3	139.7	158.8	184.2	203.2	235
	Length "L"	73	79	89	95	111	127
	Weight (kg)	3.6	4.1	5.9	9	13	19

Note: In most cases the fitting of a flange will de-rate the design pressure of the damper if in any doubt please refer to flange specification ANSI B16.5 for the maximum working pressures.

These dimensions and weights are to be added to the damper dimensions if a flange is required.

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



# Pulsation damper APD Series

Standard pressure with brass gas valve

Volume (L)	Type	Connection	Nitrile Version	EPDM Version	Viton Version
			Part Number	Part Number	Part Number
0.1	PULSATION DAMPER 0.1L 1/2BS	1/2" BSP (F)	APD001-0-0001	APD001-A-0001	APD001-6-0001
	PULSATION DAMPER 0.1L 1/2N	1/2" NPT (F)	APD001-0-0005	APD001-A-0005	APD001-6-0005
	PULSATION DAMPER 0.1L 3/4B	3/4" BSP (F)	APD001-0-0002	APD001-A-0002	APD001-6-0002
	PULSATION DAMPER 0.1L 3/8" NPT	3/8" NPT (F)	APD001-0-0112	APD001-A-0112	APD001-6-0112
	PULSATION DAMPER 0.1L 1/2"	1/2" 150LB RF	APD001-0-0010	APD001-A-0010	APD001-6-0010
	PULSATION DAMPER 0.1L 1/2"	1/2" 2500LB RF	APD001-0-0239	APD001-A-0239	APD001-6-0239
	SPARES PARTS 0.1L		APD001-0-EX	APD001-A-EX	APD001-6-EX
	BLADDER KIT 0.1L		APD001-0	APD001-A	APD001-6
0.25	PULSATION DAMPER 0.25L 1/2	1/2" BSP (F)	APD025-0-0001	APD025-A-0001	APD025-6-0001
	PULSATION DAMPER 0.25L 1/2	1/2" NPT (F)	APD025-0-0005	APD025-A-0005	APD025-6-0005
	PULSATION DAMPER 0.25L 1" 2500	1" 2500LB RTJ	APD025-0-0064	APD025-A-0064	APD025-6-0064
	PULSATION DAMPER 0.25L 1/2" 2500	1/2" 2500LB RTJ	APD025-0-0088	APD025-A-0088	APD025-6-0088
	PULSATION DAMPER 0.25L 3/4	3/4" NPT (F)	APD025-0-0007	APD025-A-0007	APD025-6-0007
	PULSATION DAMPER 0.25L 3/8" NPT	3/8" NPT (F)	APD025-0-0112	APD025-A-0112	APD025-6-0112
	SPARES KIT 0.25L ATEX		APD025-0EX	APD025-A-EX	APD025-6-EX
	BLADDER KIT 0.25L		APD025-0	APD025-A	APD025-6
0.5	PULSATION DAMPER 0.5L 3/4"	3/4" NPT (F)	APD050-0-0007	APD050-A-0007	APD050-6-0007
	PULSATION DAMPER 0.5L 1"BS	1" BSP (F)	APD050-0-0003	APD050-A-0003	APD050-6-0003
	PULSATION DAMPER 0.5L 1/2B	1/2" BSP (F)	APD050-0-0001	APD050-A-0001	APD050-6-0001
	PULSATION DAMPER 0.5L 3/4BS	3/4" BSP (F)	APD050-0-0002	APD050-A-0002	APD050-6-0002
	PULSATION DAMPER 0.5L 1/2N	1/2" NPT (F)	APD050-0-0005	APD050-A-0005	APD050-6-0005
	PULSATION DAMPER 0.5L 1"NPT FE	1" NPT (F)	APD050-0-0024	APD050-A-0024	APD050-6-0024
	PULSATION DAMPER 0.5L 1/4" NPT	1/4" NPT (F)	APD050-0-0026	APD050-A-0026	APD050-6-0026
	0.5L APD SPARES - VITON - ATEX		APD50-0EX	APD050-A-EX	APD050-6-EX
	BLADDER KIT 0.5L		APD050-0	APD050-A	APD050-6
1	PULSATION DAMPER 1.0L 1/2B	1/2" BSP (F)	APD100-0-0001	APD100-A-0003	APD100-6-0001
	PULSATION DAMPER 1.0L 1"BSP	1" BSP (F)	APD100-0-0004	APD100-A-0004	APD100-6-0004
	PULSATION DAMPER 1.0L 1/2N	1/2" NPT (F)	APD100-0-0005	APD100-A-0005	APD100-6-0005
	PULSATION DAMPER 1.0L 3/4N	3/4" NPT (F)	APD100-0-0007	APD100-A-0007	APD100-6-0007
	PULSATION DAMPER 1.0L 1"	1" NPT (F)	APD100-0-0024	APD100-A-0024	APD100-6-0024
	PULSATION DAMPER 1.0L 1/2"	1/2" 300 LB RF	APD100-0-0012	APD100-A-0012	APD100-6-0012
	BLADDER KIT 1.0L		APD100-0	APD100-A	APD100-6
2	PULSATION DAMPER 2.0L 1"BS	1" BSP (F)	APD200-0-0003	APD200-A-0003	APD200-6-0003
	PULSATION DAMPER 2.0L 2"BS	2" BSP (F)	APD200-0-0006	APD200-A-0006	APD200-6-0006
	PULSATION DAMPER 2.0L 3/4N	3/4" NPT (F)	APD200-0-0007	APD200-A-0007	APD200-6-0007
	PULSATION DAMPER 2.0L VITON 1"	1" NPT (F)	APD200-0-0024	APD200-A-0024	APD200-6-0024
	PULSATION DAMPER 2L, 1 1/2"	1 1/2" 1500LB RF	APD200-0-0113	APD200-A-0113	APD200-6-0113
	BLADDER KIT 2.0L		APD200-0	APD200-A	APD200-6
3	PULSATION DAMPER 3.0L 2"BS	2" BSP (F)	APD300-0-0006	APD300-A-0006	APD300-6-0006
	PULSATION DAMPER 3.0L 1"	1" NPT (F)	APD300-0-0024	APD300-A-0024	APD300-6-0024
	PULSATION DAMPER 3L 1 1/4"	1 1/4" BSP (F)	APD300-0-0020	APD300-A-0020	APD300-6-0020
	BLADDER KIT 3.0L		APD300-0	APD300-A	APD300-6
5	PULSATION DAMPER 5.0L 2"BS	2" BSP (F)	APD500-0-0006	APD500-A-0032	APD500-6-0032
	PULSATION DAMPER 5.0L 2"300	1 1/2" BSP (F)	APD500-0-0004	APD500-A-0004	APD500-6-0004
	BLADDER KIT 5.0L		APD500-0	APD500-A	APD500-6

# Pulsation damper BPD Series

High pressure with stainless steel gas valve

## NITRILE CONSTRUCTION

Volume (L)	Type	Connection	Nitrile Version	EPDM Version	Viton Version
			Part Number	Part Number	Part Number
0.1	PULSATION DAMPER 0.1L	1/2" BSP (F)	BPD001-0-0001	BPD001-A-0001	BPD001-6-0001
	PULSATION DAMPER 0.1L	1/2" NPT (F)	BPD001-0-0005	BPD001-A-0005	BPD001-6-0005
	PULSATION DAMPER 0.1L	1/4" BSP (F)	BPD001-0-0107	BPD001-A-0107	BPD001-6-0107
	BLADDER KIT 0.1L		BPD001-0	BPD001-A	BPD001-6
0.25	PULSATION DAMPER 0.25L	1/2" BSP (F)	BPD025-0-0001	BPD025-A-0001	BPD025-6-0001
	PULSATION DAMPER 0.25L	1/2" NPT (F)	BPD025-0-0005	BPD025-A-0005	BPD025-6-0005
	BLADDER KIT 0.25L		BPD025-0	BPD025-A	BPD025-6
0.5	PULSATION DAMPER 0.5L 1/2"	1/2" BSP (F)	BPD050-0-0001	BPD050-A-0001	BPD050-6-0001
	PULSATION DAMPER 0.5L 3/4"	3/4" BSP (F)	BPD050-0-0002	BPD050-A-0002	BPD050-6-0002
	PULSATION DAMPER 0.5L 3/8"	1/2" NPT (F)	BPD050-0-0005	BPD050-A-0005	BPD050-6-0005
	PULSATION DAMPER 0.5L 3/4"	3/4" NPT (F)	BPD050-0-0007	BPD050-A-0007	BPD050-6-0007
	PULSATION DAMPER 0.5L 3/4"	1/4" NPT (F)	BPD050-0-0026	BPD050-A-0026	BPD050-6-0026
	BLADDER KIT 0.5L		BPD050-0	BPD050-A	BPD050-6
1	PULSATION DAMPER 1,0L 3/4"	1" BSP (F)	BPD100-0-0003	BPD100-A-0003	BPD100-6-0003
	PULSATION DAMPER 1,0L	1/2" NPT (F)	BPD100-0-0005	BPD100-A-0005	BPD100-6-0005
	PULSATION DAMPER 1,0L	3/4" NPT (F)	BPD100-0-0007	BPD100-A-0007	BPD100-6-0007
	PULSATION DAMPER 1,0L	1" NPT (F)	BPD100-0-0024	BPD100-A-0024	BPD100-6-0024
	BLADDER KIT 1,0L		BPD100-0	BPD100-A	BPD100-6
2	PULSATION DAMPER 2,0L	1/2" BSP (F)	BPD200-0-0001	BPD200-A-0001	BPD200-6-0001
	PULSATION DAMPER 2,0L	1" BSP (F)	BPD200-0-0003	BPD200-A-0003	BPD200-6-0003
	PULSATION DAMPER 2,0L	1/2" NPT (F)	BPD200-0-0005	BPD200-A-0005	BPD200-6-0005
	PULSATION DAMPER 2,0L 3/4"	3/4" NPT (F)	BPD200-0-0007	BPD200-A-0007	BPD200-6-0007
	PULSATION DAMPER 2,0L	1" NPT (F)	BPD200-0-0024	BPD200-A-0024	BPD200-6-0024
	BLADDER KIT 2,0L		BPD200-0	BPD200-A	BPD200-6
3	PULSATION DAMPER 3,0L	1" BSP (F)	BPD300-0-0003	BPD300-A-0003	BPD300-6-0003
	PULSATION DAMPER 3,0L	1/2" NPT (F)	BPD300-0-0005	BPD300-A-0005	BPD300-6-0005
	PULSATION DAMPER 3,0L 3/4"NP	3/4" NPT (F)	BPD300-0-0007	BPD300-A-0007	BPD300-6-0007
	BLADDER KIT 3,0L		BPD300-0	BPD300-A	BPD300-6
5	BLADDER KIT 5,0L		BPD500-0	BPD500-A	BPD500-6

# Accessories for Stainless Steel Range

## 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.

### 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)	Charging Set Contents		
		Pressure Gauge(s)		
		Pressure (bar)	Part No	Charging Hose
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

Part No	Pressure Range (bar)	Set/ Kit Contents			
		Pressure Gauge(s)			
		Pressure (bar)	Part No	Charging Hose	Case
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

### 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" both ends
	50097-099	Extension Adaptor for Charging Hose 345 bar
	55354-099	Charging Hose 1/4" BSP (F) 690B x 2.5m long
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

# Polypropylene Pulsation Dampers

## Main Features

### 1 Shell

Polypropylene Shell Material.

- Standard capacities 0.25 and 1 litre.
- Working pressures of up to 10 bar, 0.1
- 0.1, 0.5 and 2 litre units can be manufactured although these are non-standard and are not stocked.

### 2 Finish

Natural finish, unpainted as standard.

### 3 Fluid Port

A large variation of threaded options are available.

### 4 Safety

All gas-loaded pulsation dampers 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. See Installation and Servicing data sheet for information regarding installation of pulsation damper.

### 5 Pressure Testing

A hydrostatic pressure test is carried out on all our pulsation dampers shells during the manufacturing process.

### 6 Accessories

A complete range of damper charging equipment is available from Parker Olaer.

### 7 Spare Parts

Our polypropylene pulsation dampers are non-repairable.



## Specification

### Design Features include:

- Manufactured from high grade Polypropylene.
- Lightweight construction, non-repairable units.
- Low cost alternative to stainless steel at low pressure.
- Nominal capacities 0.1 litre to 2 litres.
- Working pressures of up to 10 bar.
- Wide range of separator materials available.

## Warning

These units are recognised by the prefix 'PPD' and have a shell and head made from polypropylene. This makes them lightweight, low cost and good chemical compatibility.

The maximum working pressure of this range is 10 Bar.

The polypropylene dampers are designed for a maximum life of 10 years. The replacement of the internal bladder is not recommended for this range. It should be noted that this model of damper is non-repairable in design.

***WARNING – Do NOT attempt to disassemble these units. Replace with new if necessary.***

The fitting of any permanent pressure gauge is strongly prohibited, however if fitted without manufacturers knowledge then the gauge should be appropriate for the maximum design pressure of 10 bar. The recommended nitrogen pressure setting for pulsation damping is 80% of the mean line pump pressure. ***WARNING – Use dry Nitrogen only Do NOT fill with more than 8 Bar Nitrogen Maximum***

If in doubt please contact Parker.

# Polypropylene: How to order



**Code: Type**  
 PPD : Polypropylene

**Code: Litres**  
 001 : 0.1 - By request  
 025 : 0.25  
 050 : 0.5- By request  
 100 : 1  
 200 : 2- By request

**Code: Material**  
 0 : Nitrile (NBR)  
 A : EPDM  
 6 : Viton (FKM)

Other bladder materials are available on request

**Code: Fluid end connection**

0001 : 1/2" BSP (F)  
 0002 : 3/4" BSP (F)  
 0003 : 1" BSP (F)

0005 : 1/2" NPT (F)  
 0007 : 3/4" NPT (F)  
 0024 : 1" NPT (F)  
 0026 : 1/4" NPT(F)  
 0012 : 3/8" NPT(F)

Other thread options available on request

## Capacities and Dimensions

Designation	Volume Litres	Max. Working Pressure (PS) bar	Dimensions in mm	
			A max. height	ØD
PPD001	0.10	10	190	70
PPD025	0.25	10	212	90
PPD050	0.50	10	242	110
PPD100	1.00	10	262	140
PPD200	2	10	398	140

Standard model volumes



# Attenuators

350 bar

## IN THIS SECTION

### ATTENUATORS

SH Series: 350 bar	156
General Information SH Series Attenuators	157
SH Series: How to order	157

## Reducing noise in hydraulic systems

To attenuate the pressure pulses by at least 20 dB over a wide frequency range, Parker Olaer produces high-frequency hydraulic attenuators with models ranging from 100 to 1000 Hz, in addition to its range of accumulators (up to 300 Hz).



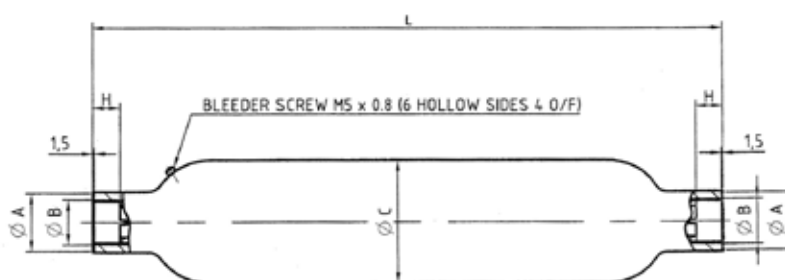
Bladder Accumulators	Piston Accumulators	Pulsation Dampers	Attenuators	Diaphragms	Accessories	Gas Bottles	Accumulator Stations	Sizing Questionnaires	EBV
									EHV
									Regulations
									O&G
									ACP
									A
									AP
									DC
									EHP

# Attenuators SH Series 350 bar

Standard version (Carbon Steel shell) for allowable temperature from - 40° up to 175°C. According to PED 2014/68/EU \* Group 2

Type	Part number	Clamps		Volume Litres	Max. Working pressure (PS) bar	Max Flow Rate l/min	Admissible Attenuator Temperature min/max (°C)	Weight kg	Dimensions in mm				
		Model (quantity)	Part number						A max Height	ØD	ØF for Bonded Seal	ØG Gas Cyl.	H mini
SH 170-25*	60045400100	E95	20250803648	1.5	350	25	-40/+175	5.8	462	90	353	3/4"	18
SH 170-50*	60045500100	E95	20250803648	2.2	350	50	-40/+175	7.3	590	90	353	3/4"	18
SH 170-75*	60045100100	E114	20251003648	3.4	350	75	-40/+175	12.0	597	114	54	1 1/4"	22
SH 170-100*	60044900100	E114	20251003648	3.4	350	100	-40/+175	12.0	597	114	54	1 1/4"	22
SH 170-125*	60045000100	E114	20251003648	4.6	350	125	-40/+175	15.0	749	114	54	1 1/4"	22
SH 170-175*	60044600100	E114	20251003648	4.6	350	170	-40/+175	15.0	749	114	54	1 1/4"	22
SH 170-275*	60045200100	E114	20251003648	4.6	350	275	-40/+175	15.0	749	114	54	1 1/4"	22
SH 220-25*	60045300100	E95	20250803648	1.2	350	25	-40/+175	5.2	386	90	35.3	3/4"	18
SH 220-50*	60043800100	E95	20250803648	1.5	350	50	-40/+175	5.8	462	90	35.3	3/4"	18
SH 220-75*	60045600100	E95	20250803648	1.5	350	75	-40/+175	5.8	462	90	35.3	3/4"	18
SH 220-100*	60045700100	E95	20250803648	2.2	350	100	-40/+175	7.4	590	90	35.3	3/4"	18
SH 220-125*	60045800100	E95	20250803648	2.2	350	125	-40/+175	7.4	590	90	35.3	3/4"	18
SH 220-175*	60044700100	E114	20251003648	3.4	350	175	-40/+175	12.0	597	114	54	1 1/4"	22
SH 220-275*	60044500100	E114	20251003648	3.4	350	275	-40/+175	12.0	597	114	54	1 1/4"	22

\* FROM 07/2016 PED 97/23/EC Article 3.3 becomes PED 2014/68/EU Article 4.3





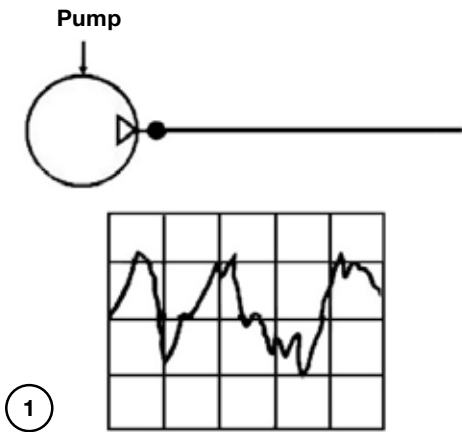
# General information Attenuators

The performance obtained with the attenuators substantially reduces the fluctuations of high-frequency hydraulic pressure (see diagrams 1 and 2).

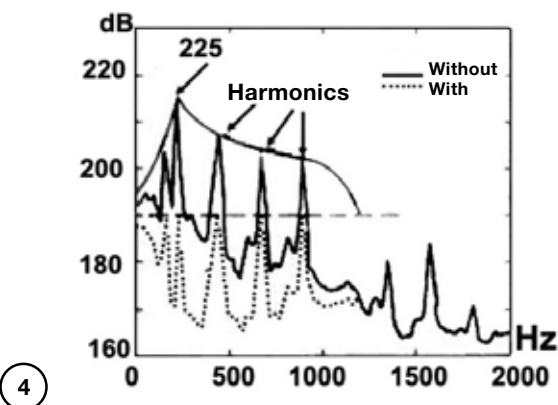
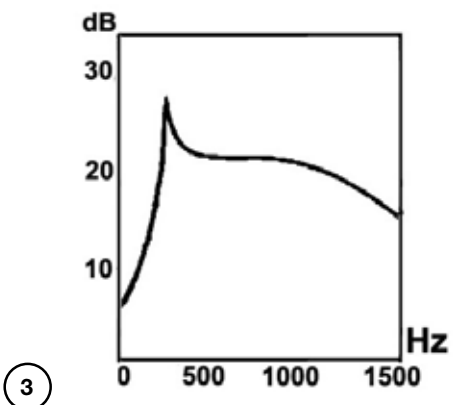
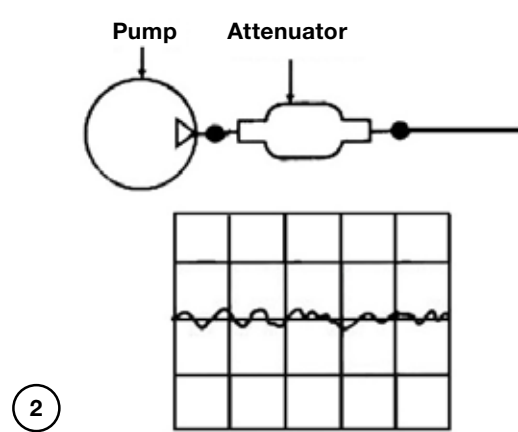
attenuation levels of the pressure pulses as a function of the frequencies to be filtered, and secondly an example of the amplitude spectra of a pump with and without a muffler, which reduces the pulses from 217 dB to 190 dB.

Curves 3 and 4 show firstly a typical attenuation curve (in dB) specific to each model of muffler, indicating the

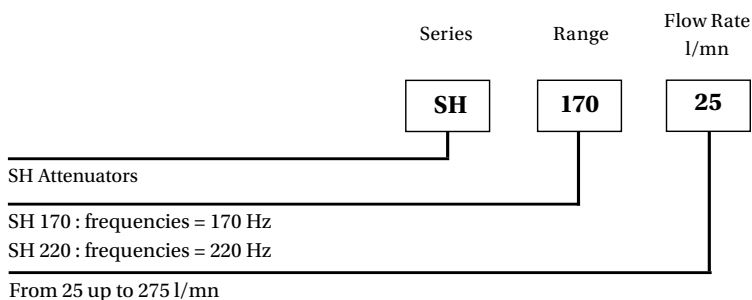
## Without Hydraulic Attenuators



## With Hydraulic Attenuators



## SH Series: How to order an Attenuator





# Diaphragm Accumulators

(ELM Series, up to 350 bar)

## IN THIS SECTION

### Diaphragm Accumulators

ELM Series: Technical Characteristics	160
ELM Series: How to Order	161
ELM Series 0.075 to 1.4 Litres, NBR 140 to 350 bar	162
ELM Series 0.75 to 3.5 Litres, NBR 160 to 350 bar	164
ELM Series 0.075 to 1.4 Litres, ECO 140 to 350 bar	166
ELM Series 1.4 to 3.5 Litres, ECO 160 to 350 bar	168
Lock-nut	170

The Parker Olaer ELM Diaphragm Accumulators are low cost, compact and lightweight and are ideally suited to the Mobile - Agricultural and Construction markets (140 to 350 bar/ 0.075 to 3.5L).



Sizing Questionnaires	Accumulator Stations	Gas Bottles	Accessories	Diaphragms	Attenuators	Pulsation Dampers	Piston Accumulators				Bladder Accumulators		
							EHP	DC	AP	A	ACP	O&G	Regulations

# ELM Series Technical Characteristics

The technical characteristics are as follows:

**Minimum/maximum temperature allowable (° Celsius) :**

- 20/+80 for standard nitrile elastomers for models between 0.5 < V < 1.4 Litre
- 10/+80 for standard nitrile elastomers for models ≥ 2 Litres and < 0.32 Litre
- 35/+80 for hydrin elastomers

**Materials :** carbon steel or stainless steel, nitrile or hydrin diaphragm, for other constructions: please consult Parker.

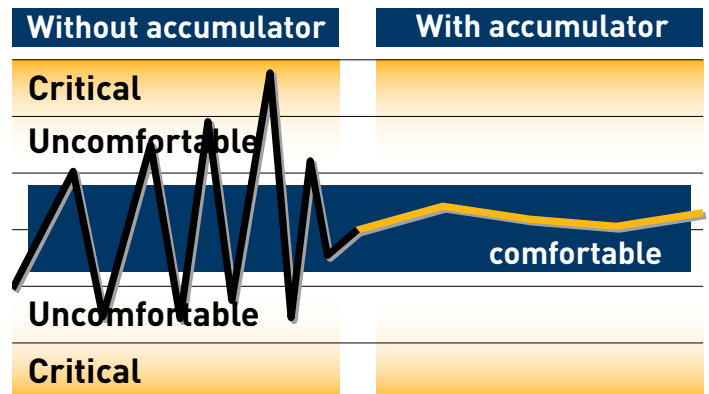
This non-repairable accumulator comprises a shell electron beam welded in carbon steel or stainless steel, nitrile or hydrin diaphragm, for other constructions please consult Parker Olaer.

**Your Benefits**

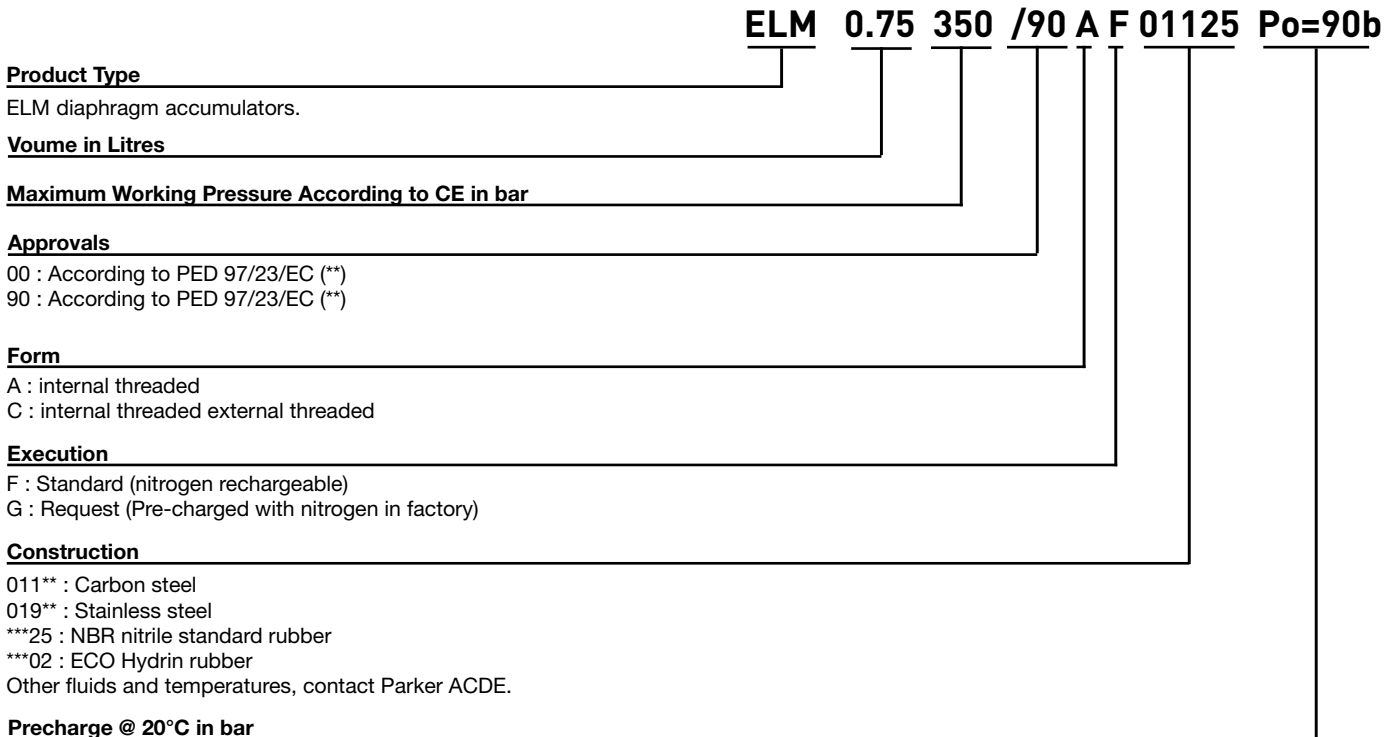
- The adaptation of a hydraulic shock absorber made up of a diaphragm accumulator improves driver comfort and offers immediate response times when driving over obstacles and the same flexibility for variable operating conditions.
- The same EC pressure directive (PED) compliant accumulator can be used in over 35 destination countries, thus facilitating their free movement. In addition all our ELM diaphragm accumulators have SELO approval for China.



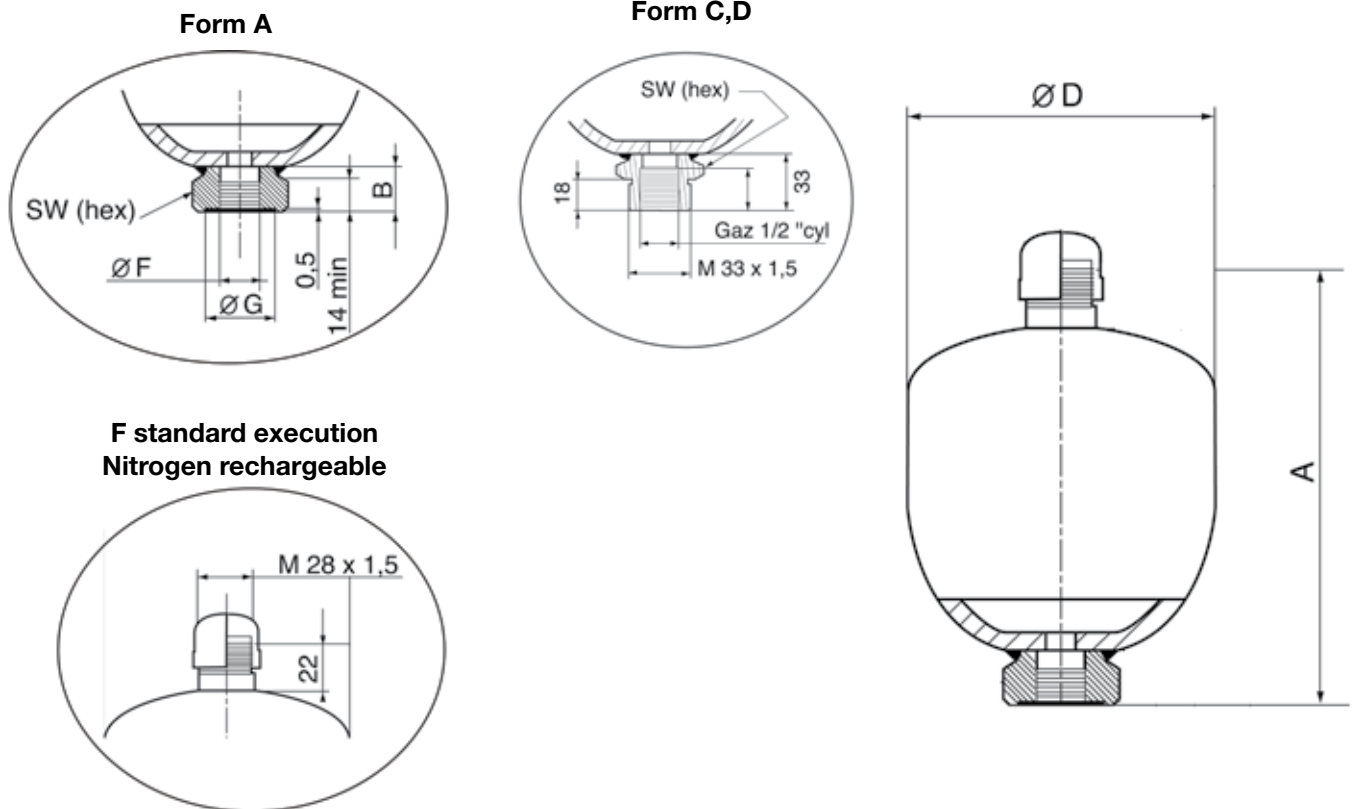
**Comparative cycle** for a tractor and its accessories in working conditions !



# EBV Series: How to order a low pressure accumulator



\*From 07/2016 PED 97/23/EC Article 3.3 becomes PED 2014/68/EU Article 4.3  
 \*\* From 07/2016 PED 97/23/EC becomes PED 2014/68/EU



# ELM Series 140 - 350 BAR, 0.075 to 1.4 Litres

NBR Version (Steel casing/mix NBR) for mineral oils temperature  
According to PED 2014/68/EU(\*\*), Fluid Group 2

Type Part number	Factory precharge from by 5 bar step  5 TO 130 Bar	Clamps	Lock nut	
		Model (quantity) Part number	Model (quantity) Part number	
ELM 0.075-250/00/AF* 10849201125	751013	-	-	
ELM 0.16-250/00/AF* 10849301125	751013	-	-	
ELM 0.32-210/00/AF* 10986601125	751000	E95 (1) 20250803648	-	
ELM 0.5-210/00/AF* 10849501125	751000	E106 (1) 20250903648	-	
ELM 0.5-210/00/CF* 10849601125	751000	E106 (1) 20250903648	M33x1.5 10945700100	
ELM 0.75-210/00/AF* 10849701125	751010	E114 (1) 20251003648	-	
ELM 0.75-210/00/CF* 10849801125	751010	E114 (1) 20251003648	M33x1.5 10945700100	
ELM 0.75-350/00/AF* 10931801125	751010	E136 (1) 20251103648	-	
ELM 0.75-350/00/CF* 10931901125	751010	E136 (1) 20251103648	M33x1.5 10945700100	
ELM 1-210/00/AF* 10984701125	751001	E136 (1) 20251103648	-	
ELM 1-210/00/CF* 10984801125	751001	E136 (1) 20251103648	M33x1.5 10945700100	
ELM 1-350/00/AF* 11110901125	751001	E136 (1) 20251103648	-	
ELM 1-350/00/CF* 11111001125	751001	E136 (1) 20251103648	M33x1.5 10945700100	
ELM 1.4-140/90/AF** 10850201125	751014	E155 (1) 20251203648	-	
ELM 1.4-140/90/CF** 10850301125	751014	E155 (1) 20251203648	M33x1.5 10945700100	
ELM 1.4-210/90/AF** 10996501125	751014	E155 (1) 20251203648	-	
ELM 1.4-210/90/CF** 10996601125	751014	E155 (1) 20251203648	M33x1.5 10945700100	

\*From 07/2016 PED 97/23/EC Article 3.3 becomes PED 2014/68/EU Article 4.3

\*\* From 07/2016 PED 97/23/EC becomes PED 2014/68/EU

Type Part number	Effective Gas vol. Litres	Max. Working pressure (PS) bar	Temp. Min/ Max (°C)	Execution form	Max. Pre- charge bar	Max compression in bar ratio P2/ P0	Max Pressure amplitude P2-P1	Weight kg	Dimensions in mm					Oilport	
									A max Height	B	SW	D	G	F	H
ELM 0.075-250/00/AF* 10849201125	0.075	250	-10/+80	AF	130	8	210	0.7	112	20	32	64	29	G½	-
ELM 0.16-250/00/AF* 10849301125	0.16	250	-10/+80	AF	130	6	210	1.0	120	20	32	75	29	G½	-
ELM 0.32-210/00/AF* 10986601125	0.32	210	-10/+80	AF	130	8	140	1.4	135	20	32	92	29	G½	-
ELM 0.5-210/00/AF* 10849501125	0.50	210	-20/+80	AF	130	8	175	2.0	153	22	41	107	34	G½	-
ELM 0.5-210/00/CF* 10849601125	0.50	210	-20/+80	CF	130	8	175	2.0	164	33	41	107	-	G½	M33x1.5
ELM 0.75-210/00/AF* 10849701125	0.75	210	-20/+80	AF	130	8	175	2.6	167	22	41	122	34	G½	-
ELM 0.75-210/00/CF* 10849801125	0.75	210	-20/+80	CF	130	8	175	2.6	178	33	41	122	-	G½	M33x1.5
ELM 0.75-350/00/AF* 10931801125	0.75	350	-20/+80	AF	130	8	150	4.0	174	22	41	128	34	G½	-
ELM 0.75-350/00/CF* 10931901125	0.75	350	-20/+80	CF	130	8	150	4.0	185	33	41	128	-	G½	M33x1.5
ELM 1-210/00/AF* 10984701125	1.0	210	-20/+80	AF	130	8	170	3.5	182	22	41	136	34	G½	-
ELM 1-210/00/CF* 10984801125	1.0	210	-20/+80	CF	130	8	170	3.5	192	33	41	136	-	G½	M33x1.5
ELM 1-350/00/AF* 11110901125	1.0	350	-10/+80	AF	130	8	150	5.0	200	22	41	129	34	G½	-
ELM 1-350/00/CF* 11111001125	1.0	350	-10/+80	CF	130	8	150	5.0	211	33	41	129	-	G½	M33x2
ELM 1.4-140/90/AF** 10850201125	1.4	140	-20/+80	AF	130	8	120	4.2	192	22	41	147	34	G½	-
ELM 1.4-140/90/CF** 10850301125	1.4	140	-20/+80	CF	130	8	120	4.2	203	33	41	147	-	G½	M33x1.5
ELM 1.4-210/90/AF** 10996501125	1.4	210	-20/+80	AF	130	8	120	4.2	192	22	41	148	34	G½	-
ELM 1.4-210/90/CF** 10996601125	1.4	210	-20/+80	CF	130	8	120	4.2	202	33	41	148	-	G½	M33x1.5

See drawing on page 161

# ELM Series 160 - 350 BAR, 0.75 to 3.5 Litres

NBR Version (Steel casing/mix NBR) for mineral oils temperature According to PED 97/23/EC, Fluid Group 2

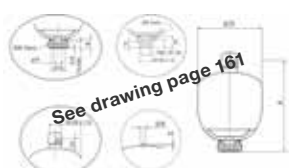
Type Part number	Factory precharge from by 5 bar step  5 TO 130 Bar	Clamps  Model (quantity) Part number	Lock nut  Model (quantity) Part number
ELM 1.4-250/90/AF 11013201125	751014	E155 (1) 20251203648	-
ELM 1.4-250/90/CF 11013301125	751014	E155 (1) 20251203648	M33x1.5 10945700100
ELM 1.4-350/90/AF** 10932101125	751014	E160 (1) 20259003648	-
ELM 1.4-350/90/CF** 10932201125	751014	E160 (1) 20259003648	M33x1.5 10945700100
ELM 2-100/90/AF** 10850401125	751014	E155 (1) 20251203648	-
ELM 2-250/90/AF** 11013401125	751014	E155 (1) 20251203648	-
ELM 2-350/90/AF** 11006001125	751014	E160 (1) 20259003648	-
ELM 2-350/90/CF** 11006101125	751014	E160 (1) 20259003648	M45X1.5
ELM 2.8-250/90/AF** 10887901125	751002	E168 (1) 20251303648	-
ELM 2.8-350/90/AF** 10975801125	751002	E180 (1) 20243203625	-
ELM 2.8-350/90/CF** 10975901125	751002	E180 (1) 20243203625	M45X1.5
ELM 3.5-250/90/AF** 10850501125	751012	E168 (1) 20251303648	-
ELM 3.5-350/90/AF** 10984901125	751012	E180 (1) 20243203625	-
ELM 3.5-350/90/CF** 10985001125	751012	E180 (1) 20243203625	M45X1.5

\*From 07/2016 PED 97/23/EC Article 3.3 becomes PED 2014/68/EU Article 4.3

\*\* From 07/2016 PED 97/23/EC becomes PED 2014/68/EU



Type Part number	Effective Gas vol. Litres	Max. Working pressure (PS) bar	Temp. Min/ Max (°C)	Execution form	Max. Pre- charge bar	Max compression in bar ratio P2/P0	Max Pressure amplitude P2-P1	Weight kg	Dimensions in mm					Oilport	
									A max Height	B	SW	D	G	F	H
ELM 1.4-250/90/AF 11013201125	1.40	250	-20/+80	AF	130	8	140	5.4	196	22	41	152	34	G½	-
ELM 1.4-250/90/CF 11013301125	1.40	250	-20/+80	CF	130	8	140	6.0	207	33	41	152	-	G½	M33x1.5
ELM 1.4-350/90/AF** 10932101125	1.40	350	-20/+80	AF	130	8	150	7.0	199	22	41	156	34	G½	-
ELM 1.4-350/90/CF** 10932201125	1.40	350	-20/+80	CF	130	8	150	7.0	221	44	44	156	-	G½	M33x1.5
ELM 2-100/90/AF** 10850401125	2.00	100	-10/+80	AF	100	8	80	3.5	241	22	41	145	34	G½	-
ELM 2-250/90/AF** 11013401125	2.00	250	-10/+80	AF	130	8	150	8.5	252	22	41	156	33	G¾	-
ELM 2-350/90/AF** 11006001125	2.00	350	-10/+80	AF	130	8	150	9.5	252	22	41	156	33	G¾	-
ELM 2-350/90/CF** 11006101125	2.00	350	-10/+80	CF	130	8	150	9.5	270	40	50	156	-	G¾	M45x1.5
ELM 2.8-250/90/AF** 10887901125	2.80	250	-10/+80	AF	130	6	140	8.5	269	20	41	168	33	G¾	-
ELM 2.8-350/90/AF** 10975801125	2.80	350	-10/+80	AF	130	6	200	14.3	265	23	55	180	34	G¾	-
ELM 2.8-350/90/CF** 10975901125	2.80	350	-10/+80	CF	130	6	200	14.5	286	21	55	180	-	G¾	M45x1.5
ELM 3.5-250/90/AF** 10850501125	3.50	250	-10/+80	AF	130	4	100	10.2	314	20	41	168	33	G¾	-
ELM 3.5-350/90/AF** 10984901125	3.50	350	-10/+80	AF	130	4	200	16.0	305	23	55	180	34	G¾	-
ELM 3.5-350/90/CF** 10985001125	3.50	350	-10/+80	CF	130	4	200	16.5	326	26	55	180	-	G¾	M45x1.5



## ELM Series 140 - 350 BAR, 0.075 to 1.4 Litres

ECO Version (Steel casing/mix ECO) for mineral oils temperature from - 35°C up to 80°C. According to PED 2014/68/EU, Fluid Group 2

Type Part number	Factory precharge from by 5 bar step	Clamps	Lock nut	
	5 TO 130 Bar	Model (quantity) Part number	Model (quantity) Part number	
ELM 0.075-250/00/AF* 10849201102	751013	-	-	
ELM 0.16-250/00/AF* 10849301102	751013	-	-	
ELM 0.32-210/00/AF* 10986601102	751000	E95 (1) 20250803648	-	
ELM 0.5-210/00/AF* 10849501102	751000	E106 (1) 20250903648	-	
ELM 0.5-210/00/CF* 10849601102	751000	E106 (1) 20250903648	M33x1.5 10945700100	
ELM 0.75-210/00/AF* 10849701102	751010	E114 (1) 20251003648	-	
ELM 0.75-210/00/CF* 10849801102	751010	E114 (1) 20251003648	M33x1.5 10945700100	
ELM 0.75-350/00/AF* 10931801102	751010	E136 (1) 20251103648	-	
ELM 0.75-350/00/CF* 10931901102	751010	E136 (1) 20251103648	M33x1.5 10945700100	
ELM 1-210/00/AF* 10984701102	751001	E136 (1) 20251103648	-	
ELM 1-210/00/CF* 10984801102	751001	E136 (1) 20251103648	M33x1.5 10945700100	
ELM 1-350/00/AF* 11110901102	751001	E136 (1) 20251103648	-	
ELM 1-350/00/CF* 1111101102	751001	E136 (1) 20251103648	M33x1.5 10945700100	
ELM 1.4-140/90/AF** 10850201102	751014	E155 (1) 20251203648	-	
ELM 1.4-140/90/CF** 10850301102	751014	E155 (1) 20251203648	M33x1.5 10945700100	
ELM 1.4-210/90/AF** 10996501102	751014	E155 (1) 20251203648	-	
ELM 1.4-210/90/CF** 10996601102	751014	E155 (1) 20251203648	M33x1.5 10945700100	

\*From 07/2016 PED 97/23/EC Article 3.3 becomes PED 2014/68/EU Article 4.3

\*\* From 07/2016 PED 97/23/EC becomes PED 2014/68/EU

Type Part number	Effective Gas vol. Litres	Max. Working pressure (PS) bar	Execution form	Max. Pre- charge bar	Max compres- sion in bar ratio P2/P0	Max Pres- sure ampli- tude P2-P1	Weight kg	Dimensions in mm						Oilport	
								A max Height	B	SW	D	G	F	H	
ELM 0.075-250/00/AF* 10849201102	0.075	250	AF	130	8	210	0.7	112	20	32	64	29	G½	-	
ELM 0.16-250/00/AF* 10849301102	0.16	250	AF	130	6	210	1.0	120	20	32	75	29	G½	-	
ELM 0.32-210/00/AF* 10986601102	0.32	210	AF	130	8	140	1.4	135	20	32	92	29	G½	-	
ELM 0.5-210/00/AF* 10849501102	0.50	210	AF	130	8	175	2.0	153	22	41	107	34	G½	-	
ELM 0.5-210/00/CF* 10849601102	0.50	210	CF	130	8	175	2.0	164	33	41	107	-	G½	M33x1.5	
ELM 0.75-210/00/AF* 10849701102	0.75	210	AF	130	8	175	2.6	167	22	41	122	34	G½	-	
ELM 0.75-210/00/CF* 10849801102	0.75	210	CF	130	8	175	2.6	178	33	41	122	-	G½	M33x1.5	
ELM 0.75-350/00/AF* 10931801102	0.75	350	AF	130	8	150	4.0	174	22	41	128	34	G½	-	
ELM 0.75-350/00/CF* 10931901102	0.75	350	CF	130	8	150	4.0	185	33	41	128	-	G½	M33x1.5	
ELM 1-210/00/AF* 10984701102	1.0	210	AF	130	8	170	3.5	182	22	41	136	34	G½	-	
ELM 1-210/00/CF* 10984801102	1.0	210	CF	130	8	170	3.5	192	33	41	136	-	G½	M33x1.5	
ELM 1-350/00/AF* 11110901102	1.0	350	AF	130	8	150	5.0	200	22	41	129	34	G½	-	
ELM 1-350/00/CF* 1111101102	1.0	350	CF	130	8	150	5.0	211	33	41	129	-	G½	M33x2	
ELM 1.4-140/90/AF** 10850201102	1.4	140	AF	130	8	120	4.2	192	22	41	147	34	G½	-	
ELM 1.4-140/90/CF** 10850301102	1.4	140	CF	130	8	120	4.2	203	33	41	147	-	G½	M33x1.5	
ELM 1.4-210/90/AF** 10996501102	1.4	210	AF	130	8	120	4.2	192	22	41	147	34	G½	-	
ELM 1.4-210/90/CF** 10996601102	1.4	210	CF	130	8	120	4.2	202	33	41	147	-	G½	M33x1.5	

Above dimensions are in mm and are subject to manufacturing tolerances.

See drawing on page 161

## ELM Series 160 - 350 BAR, 1.4 to 3.5 Litres

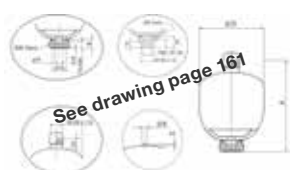
ECO Version (Steel casing/mix ECO) for mineral oils temperature from - 35°C up to 80°C. According to PED 2014/68/EU, Fluid Group 2

Type Part number	Factory precharge from by 5 bar step 5 TO 130 Bar	Clamps Model (quantity) Part number	Lock nut Model (quantity) Part number
ELM 1.4-250/90/AF** 11013201102	751014	E155 (1) 20251203648	-
ELM 1.4-250/90/CF** 11013301102	751014	E155 (1) 20251203648	M33x1.5 10945700100
ELM 1.4-350/90/AF** 10932101102	751014	E160 (1) 20259003648	-
ELM 1.4-350/90/CF** 10932201102	751014	E160 (1) 20259003648	M33x1.5 10945700100
ELM 2-100/90/AF** 10850401102	751014	E155 (1) 20251203648	-
ELM 2-250/90/AF** 11013401102	751014	E155 (1) 20251203648	-
ELM 2-350/90/AF** 11006001102	751014	E160 (1) 20259003648	-
ELM 2-350/90/CF** 11006101102	751014	E160 (1) 20259003648	M45X1.5
ELM 2.8-250/90/AF** 10887901102	751002	E168 (1) 20251303648	-
ELM 2.8-350/90/AF** 10975801102	751002	E180 (1) 20243203625	-
ELM 2.8-350/90/CF** 10975901102	751002	E180 (1) 20243203625	M45X1.5
ELM 3.5-250/90/AF** 10850501102	751012	E168 (1) 20251303648	-
ELM 3.5-350/90/AF** 10984901102	751012	E180 (1) 20243203625	-
ELM 3.5-350/90/CF** 10985001102	751012	E180 (1) 20243203625	M45X1.5

\*From 07/2016 PED 97/23/EC Article 3.3 becomes PED 2014/68/EU Article 4.3

\*\* From 07/2016 PED 97/23/EC becomes PED 2014/68/EU

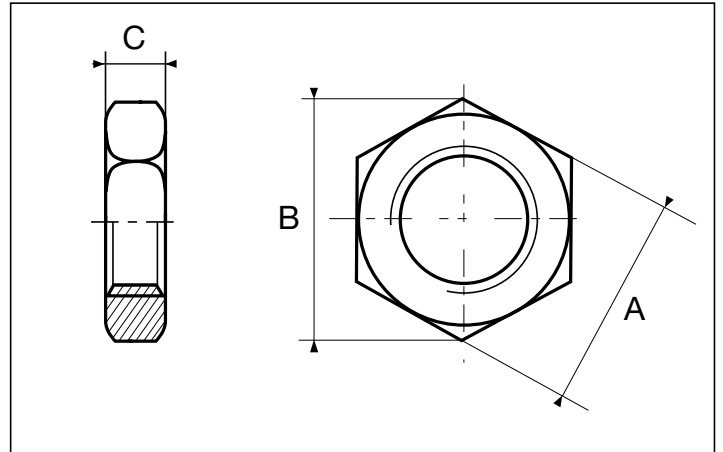
Type Part number	Effective Gas vol. Litres	Max. Work- ing pressure (PS) bar	Execution form	Max. Pre- charge bar	Max compression in bar ratio P2/P0	Max Pressure amplitude P2-P1	Weight kg	Dimensions in mm						Oilport	
								A max Height	B	SW	D	G	F	H	
ELM 1.4-250/90/AF** 11013201102	1.40	250	AF	130	8	140	5.4	196	22	41	152	34	G½	-	
ELM 1.4-250/90/CF** 11013301102	1.40	250	CF	130	8	140	6.0	207	33	41	152	-	G½	M33x1.5	
ELM 1.4-350/90/AF** 10932101102	1.40	350	AF	130	8	150	7.0	199	22	41	156	34	G½	-	
ELM 1.4-350/90/CF** 10932201102	1.40	350	CF	130	8	150	7.0	221	44	44	156	-	G½	M33x1.5	
ELM 2-100/90/AF** 10850401102	2.00	100	AF	100	8	80	3.5	241	22	41	145	34	G½	-	
ELM 2-250/90/AF** 11013401102	2.00	250	AF	130	8	150	8.5	252	22	41	156	33	G¾	-	
ELM 2-350/90/AF** 11006001102	2.00	350	AF	130	8	150	9.5	252	22	41	156	33	G¾	-	
ELM 2-350/90/CF** 11006101102	2.00	350	CF	130	8	150	9.5	270	40	50	156	-	G¾	M45x1.5	
ELM 2.8-250/90/AF** 10887901102	2.80	250	AF	130	6	140	8.5	269	20	41	168	33	G¾	-	
ELM 2.8-350/90/AF** 10975801102	2.80	350	AF	130	6	200	14.3	265	23	55	180	34	G¾	-	
ELM 2.8-350/90/CF** 10975901102	2.80	350	CF	130	6	200	14.5	286	21	55	180	-	G¾	M45x1.5	
ELM 3.5-250/90/AF** 10850501102	3.50	250	AF	130	4	100	10.2	314	20	41	168	33	G¾	-	
ELM 3.5-350/90/AF** 10984901102	3.50	350 350	AF AF	130 130	4 4	200 200	16.0 16.0	305 305	23 23	55 55	180 180	34	G¾	-	
ELM 3.5-350/90/CF** 10985001102	3.50	350 350	CF CF	130 130	4 4	200 200	16.5 165.0	326 326	26 21	55 55	180 180	-	G¾	M45x1.5	



# Lock-nut

Type	Part number	Pitch	A	B	C
M33x1.5	10945700100	1.5	50	57.5	10
M45x1.5		1.5	70	80.8	10

Above dimensions are in mm and are subject to manufacturing tolerances.



# Accumulator Accessories

Clamps, Brackets, Charging Sets, Safety Blocks, Burst Discs

## IN THIS SECTION

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### Burst Discs

202



Bladder Accumulators	Regulations	EBV
	O&G	EHV
	ACP	
Piston Accumulators	A	
	AP	
	DC	
	EHP	
Pulsation Dampers		
Attenuators		
Diaphragms		
Accessories		
Gas Bottles		
Accumulator Stations		
Sizing Questionnaires		

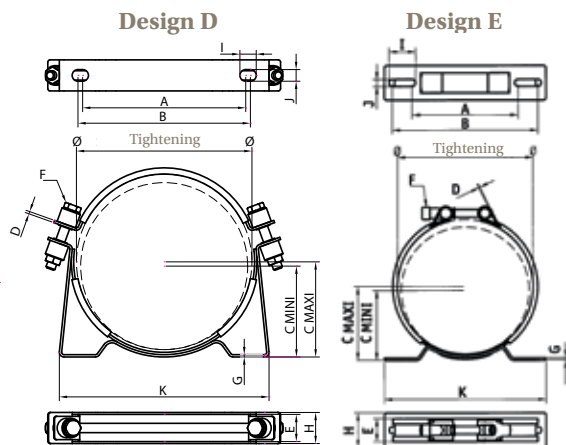
## Clamps - steel with zinc protection

Clamps : Steel with zinc plated protection, Rubber EPDM (Version 48), Rubber NBR Nitrile (Version 25)

Type Part number	Design	Recommended Min to Max TIGHTENING Ø mm	Accumulator Capacity (Litres)
A56 20149203625	E	54 to 56	EHV 0,2L
E95 20250803648	E	87 to 97	ELM 0,32L EHV 0,5L EBV0,5L
E106 20250903648	E	99 to 109	ELM 0,5L
E114 20251003648	E	112 to 124	EBV&EHV 1/2,5/5L ELM 0,75L210
E136 20251103648	E	128 to 138	ELM 0,75L 350 ELM 1L
E155 20251203648	E	146 to 157	ELM 1,4 ELG 4L20
E160 20259003648	E	155 to 165	ELM 1,4L350 ELM 2L
E168 20251303648	E	166 to 176	EHV 4/6/10L ELM2,8L/3,5L
E180 20243203625	E	178 to 184	ELM 3,5L350
D215 20251403648	D	215 to 219	EBV 10/20/32/50L
D226 20251503648	D	215 to 226	EHV 10 to 57 L
D368 20127403625	D	363.5 to 368	EBV 100/200



Type Part number	Dimensions in mm												Weight kg	Recommended tightening torque N.m	Recommended max allowable weight if vertical equipment kg	Recommended max allowable weight if horizontal equipment kg
	A	B	C Min/ Max		D	E	F	G	H	I	J	K				
A56 20149203625	92	102	36	36	3	37	M10x80	3	31	14	9	134	0.45	7	10	30
E95 20250803648	88	140	615	665	1.5	28	M8x75	3	40	35	9	155	0.30	7	30	90
E106 20250903648	88	140	68	73	1.5	28	M8x75	3	40	35	9	155	0.31	7	30	90
E114 20251003648	88	140	73	78	1.5	28	M8x75	3	40	35	9	155	0.34	7	30	90
E136 20251103648	88	140	80	85	1.5	28	M8x75	3	40	35	9	155	0.35	7	30	90
E155 20251203648	137	189	81	865	1.7	30	M10x80	3	45	35	9	210	0.52	10.5	60	60
E160 20259003648	137	189	87	91.9	1.7	32	M10x80	3	45	35	9	210	0.54	10.5	60	60
E168 20251303648	137	189	92	96	1.7	30	M10x80	3	45	35	9	210	0.55	10.5	60	60
E180 20243203625	137	189	97	100	2	35	M10x80	4	65	35	9	210	0.76	10.5	60	60
D215 20251403648	210	222	123	125	3	36	M12x70	3	40	21	15	266	1.40	9	65	110
D226 20251503648	210	222	119	123	3	35	M12x80	3	40	21	15	270	1.40	11	75	150
D368 20127403625	334	346	1,985	201	3	36	M12x75	3	50	21	15	420	2.13	11	50	80



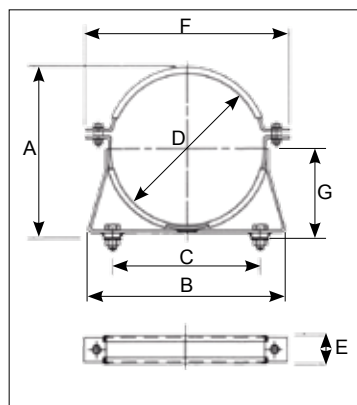
## Clamps - Stainless Steel

Clamps : Stainless Steel with Nitrile rubber mouldings.

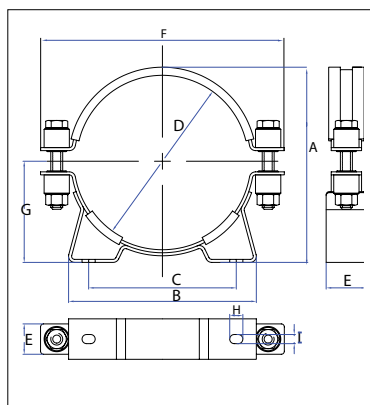
Part Number	Design	Accumulator Capacity (Litres)	
10957	A	0.6	
10981	C	1 - 3	
10982-DEE	B	4 - 9	
10983	B	10 - 54	
11060-DEE	A	12 - 54 HP200	

Part Number	Dimensions in mm										Mounting Bolts	Mass kg
	A	B	C	D	E	F	G (ref)	H	I			
10957	125	140	90	92-95	25	140	n/a	n/a	n/a		M8 x 30	0.59
10981	137	144	100	111 - 116	30	-	73	13	9		M8 x 80	0.75
10982-DEE	185	185	145	165-170	40	240	100	13	9		M8 x 80	1.25
10983	250	267	211	218 - 228	40	306	129	21	15		M12 x 80	1.50
11060-DEE	270	280	220	256 - 261	40	345	140	11	11		M10 x 50	2

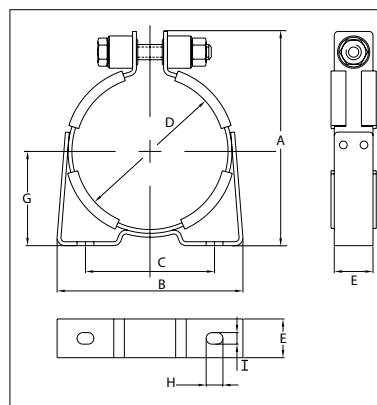
Design A



Design B

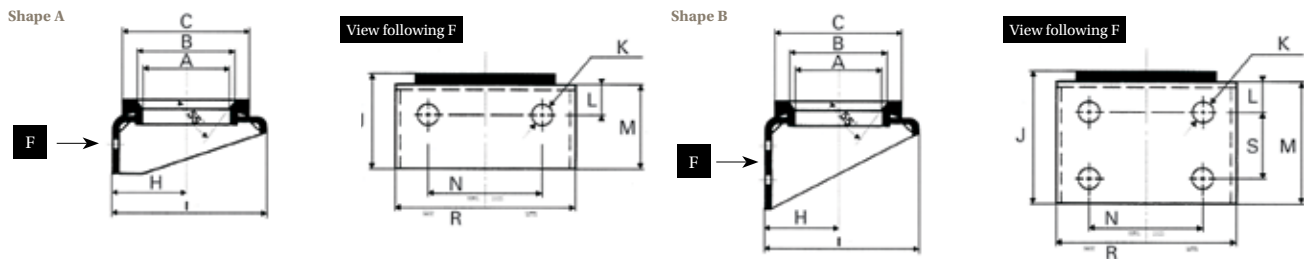


Design C



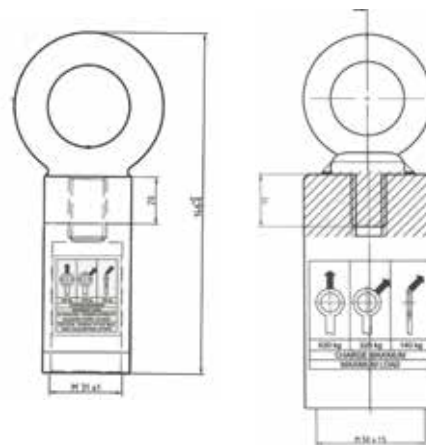
# Support Brackets

Type Part number	Models	Dimensions en mm														Weight kg
		Design	A	B	C	H	I	J	K	L	M	N	R	S		
CE89 20151903620	Accumulators 1 to 5 Litres	A	89	101	125	73	140	75	13	25	60	75	130	-	0.8	
CE108 20118703620	EHV 4 & 6 & 10 Litres	A	108	120	150	92	175	95	17	25	80	160	210	-	1.5	
CE159A 20109003620	Accumulators 10 to 50 Litres < 550 Bar	B	159	170	200	123	235	115	17	25	100	200	260	40	2.9	
CE300 20150800100	Accumulators 100-200 Litres	B	300	-	-	200	380	-	20	50	300	375	475	200	30	



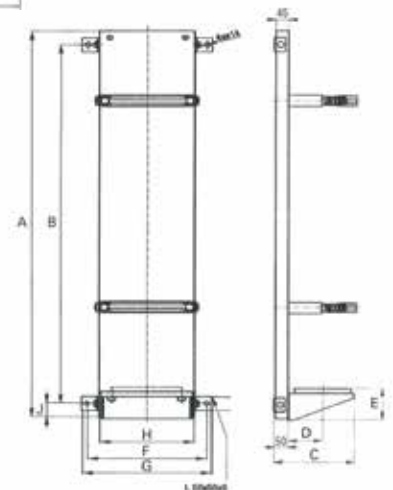
# Lifting Eye

Type Part number	Models
LIFTING EYE DIA.22 10912700200	Accumulators equipped of valve stem DIA. 22
LIFTING EYE DIA. 50 09098800200	Accumulators equipped of valve stem DIA 50
LIFTING EYE M79x2 08905900200	Accumulators ≥ 100 Litres



# Mounting Frames

Type Part number	For models EHV	Dimensions in mm								
		A	B	C	D	E	F	G	H	J
EF1 20217500125	EHV 4 & 6 & 10 Litres	670	570	225	92	96	340	370	270	50
EF2 20217600125	EHV 10 & 12 & 20 & 24.5 Litres	670	570	285	123	115	340	370	270	50
EF3 20217700125	EHV 32 & 50 Litres	1405	1300	285	123	115	340	370	270	55



# Charging Set VGU

The charging set VGU is an indispensable instrument for the verification, pressurization and nitrogen bleeding of most of the hydraulic accumulators available on the market. The standard set is delivered in a storage case containing the following:

- VGU universal tester and pressurizer (end M28 x 1.50).
- Pressure gauge kit from 0 to 25 bar.
- Pressure gauge kit from 0 to 250 bar.
- Connection adapters for inflation valves (7/8" - 5/8" - 8V1 - M28 x 1.50 G 1/4").
- High pressure hose, 2.5 m long, for connecting to a nitrogen source.
- Hexagon socket screw key 6mm.
- Spare parts kit including rings
- Operating instruction in French, English, German.

**Note:** On request, the following options are available:

- Pressure gauge kits with different scale divisions: 63mm with glycerol bath back end G1/4" cyl. equipped with direct gear for Minimess ® connection. Scale divisions 0-10, 0-60, 0-100, 0-400, with accuracy class 1.6%.
- High pressure hose of different length with adapters for nitrogen bottles from various countries (specify country), at each end with a female swivel coupling G1/4" for connecting to the inflation port.

**Maximum working pressure:** limited by the maximum operating pressure of the installed hydraulic system, pressure limited to **400 bar** in any case.

Type Part number	Spare Parts	
	High Pressure Hose	Spare Part Kits
	Type Price Part number	Type Price Part number
VGU/F.25/250.8.TS2.3 20214122823	TS2 (France) 20214800000	10774100023
VGU/F.25/250.8.TS3.3 20214122833	TS3 (Germany) 20228000000	10774100023
VGU/F.25/250.8.TS8.3 20214122883	TS8 (Italy) 20217200000	10774100023
VGU/F.25/250.8.TS9.3 20214122893	TS9 (Netherlands) 20227300000	10774100023
VGU/F.25/400.8.TS2.3 20214139823	TS2 (France) 20214800000	10774100023
VGU/F.25/400.8.TS3.3 20214139833	TS3 (Germany) 20228000000	10774100023
VGU/F.25/400.8.TS8.3 20214139883	TS8 (Italy) 20217200000	10774100023
VGU/F.25/400.8.TS9.3 20214139893	TS9 (Netherlands) 20227300000	10774100023

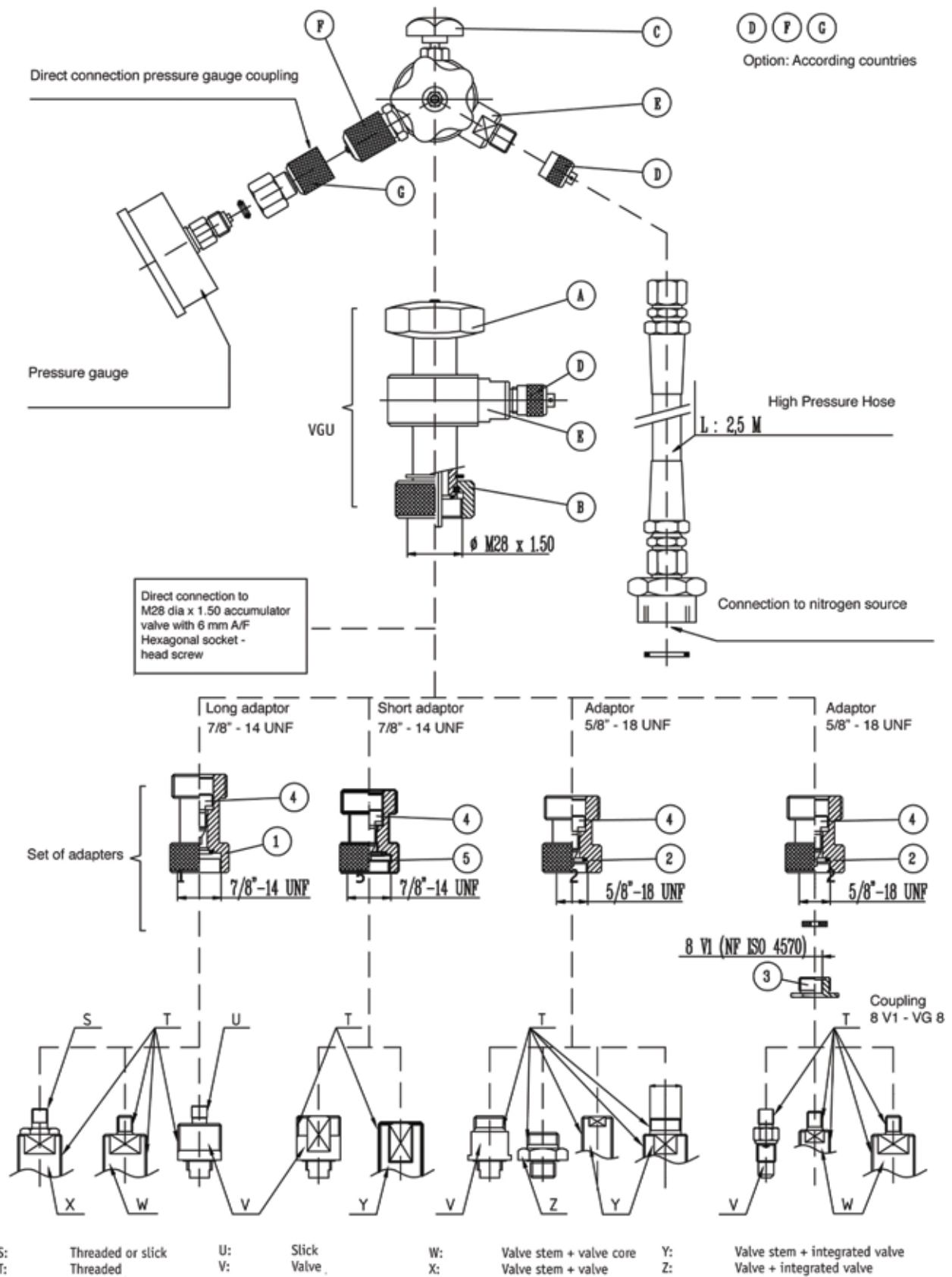
### Spare parts Gauge KIT VGU

Type Price Part number
0 to 25 bar 00090300000
0 to 250 bar 00090500000
0 to 400 bar 00090600000

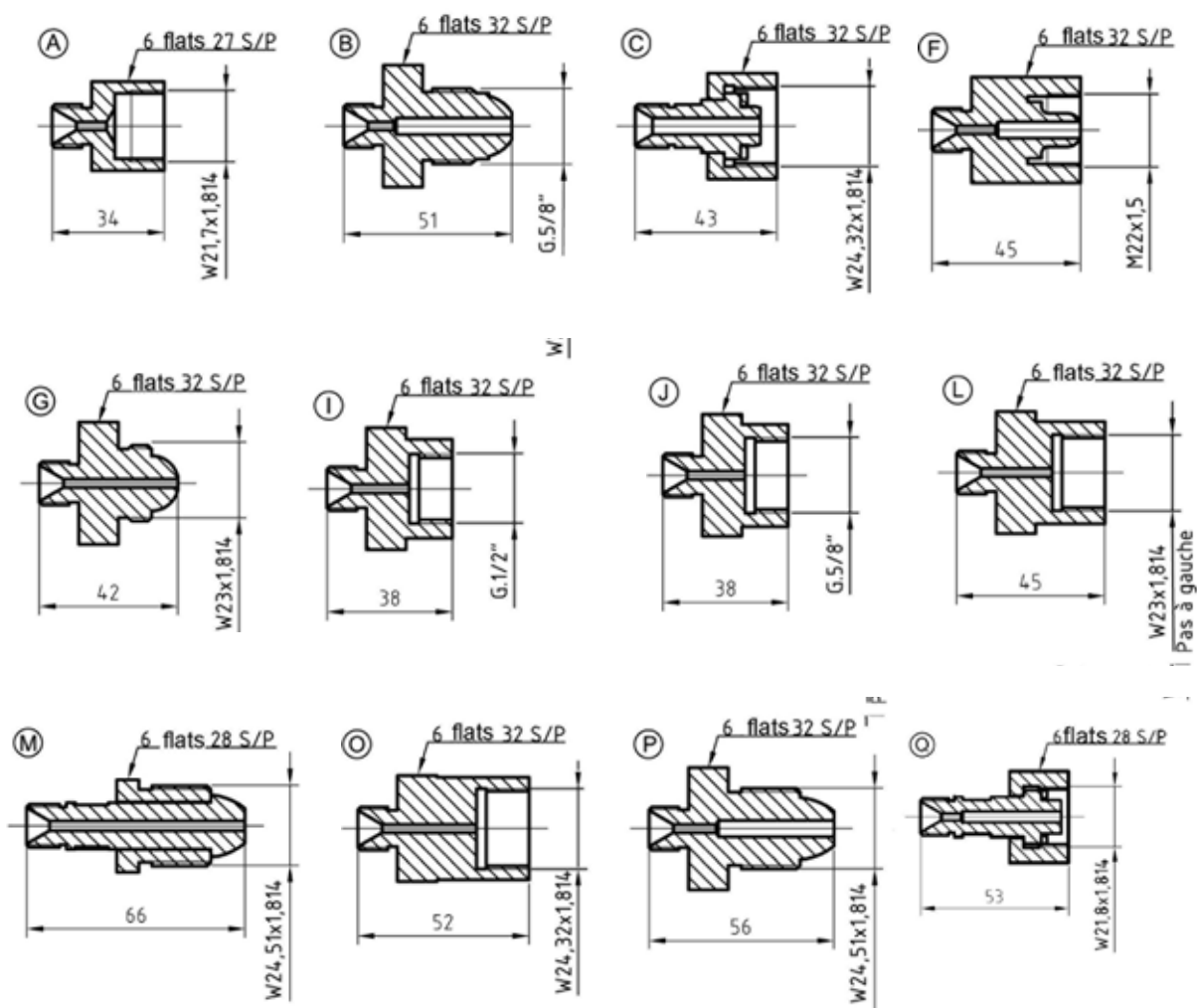
### SPARE PARTS Adaptors VGU

Type Price Part number
Long Adaptor 7/8" - 14 UNF 20212700223
Short Adaptor 7/8" - 14 UNF 20213500223
Adaptor 5/8" - 18 UNF 20213000223
Adaptor 1/4" cyl 20221100220
Coupling 8 V1 20214000200



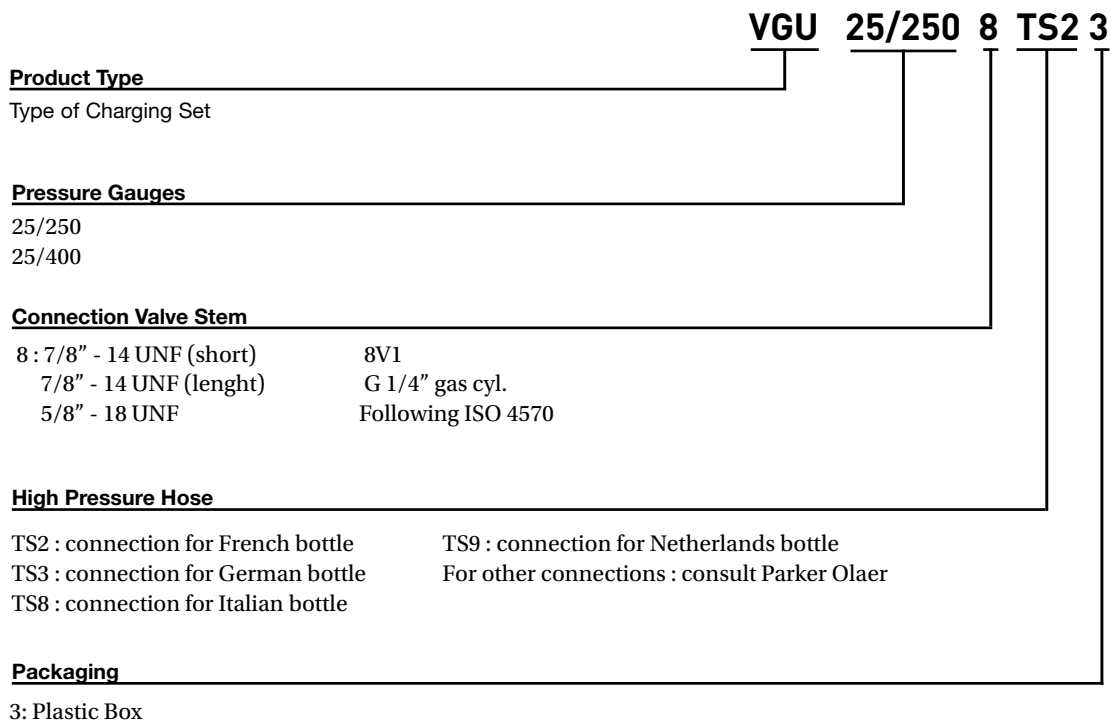


# VGU Connections



Country	Type of Connection	Country	Type of Connection	Country	Type of Connection	Country	Type of Connection
ARGENTINA	B	GERMANY	C/O	NORTH AFRICA	A	THAILAND	B
AUSTRALIA	B	GREECE	A/B	NORWAY	C/O	THE NETHERLANDS	C/O
AUSTRIA	C	HONG KONG	B	POLAND	C/O	TURKEY	B/C/O
AZERBAIJAN	E/C/O	HUNGARY	Q/A	PORTUGAL	B	UKRAINE	C/O
BELARUS	E/C/O	INDIA	B	ROMANIA	A	UNITED ARAB EMIRATES	A
BELGIUM	A/C/O	INDONESIA	B	RUSSIA	E/C/O	UNITED KINGDOM	B
BRAZIL	I	IRELAND	B	SINGAPORE	B	USA	MP
BULGARIA	E/A	ITALY	N	SLOVAKIA	C/O	VIETNAM	B
CANADA	MP	JAPAN	D/G	SLOVENIA	C/O		
CHINA	F/J	KAZAKHSTAN	E/C/O	SOUTH AFRICA	B		
CZECH REPUBLIC	C/O	LUXEMBOURG	C/O	SOUTH KOREA	G		
DENMARK	C/O	MALAYSIA	H/B	SPAIN	A		
FINLAND	C/O	MEXICO	M/P/A	SWEDEN	C/O		
FRANCE	A	NEW ZEALAND	B	SWITZERLAND	C/O		

# How to order a VGU Charging Set





# Safety Blocks

Parker Olaer has developed a complete range of decompressing and isolating blocks (sizes 10 to 50) to answer all standard and special applications.

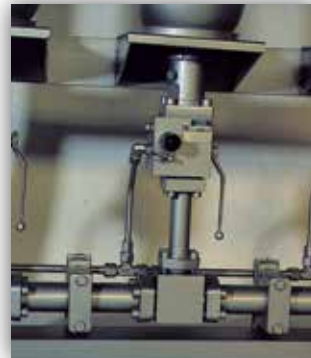
These blocks are in conformity with the European Directive on the equipment under pressure (97/23), these appliances have been designed to group together in a single compact unit all the components necessary for the correct operation of a hydraulic system equipped with hydropneumatic accumulators.

The basic block consists of :

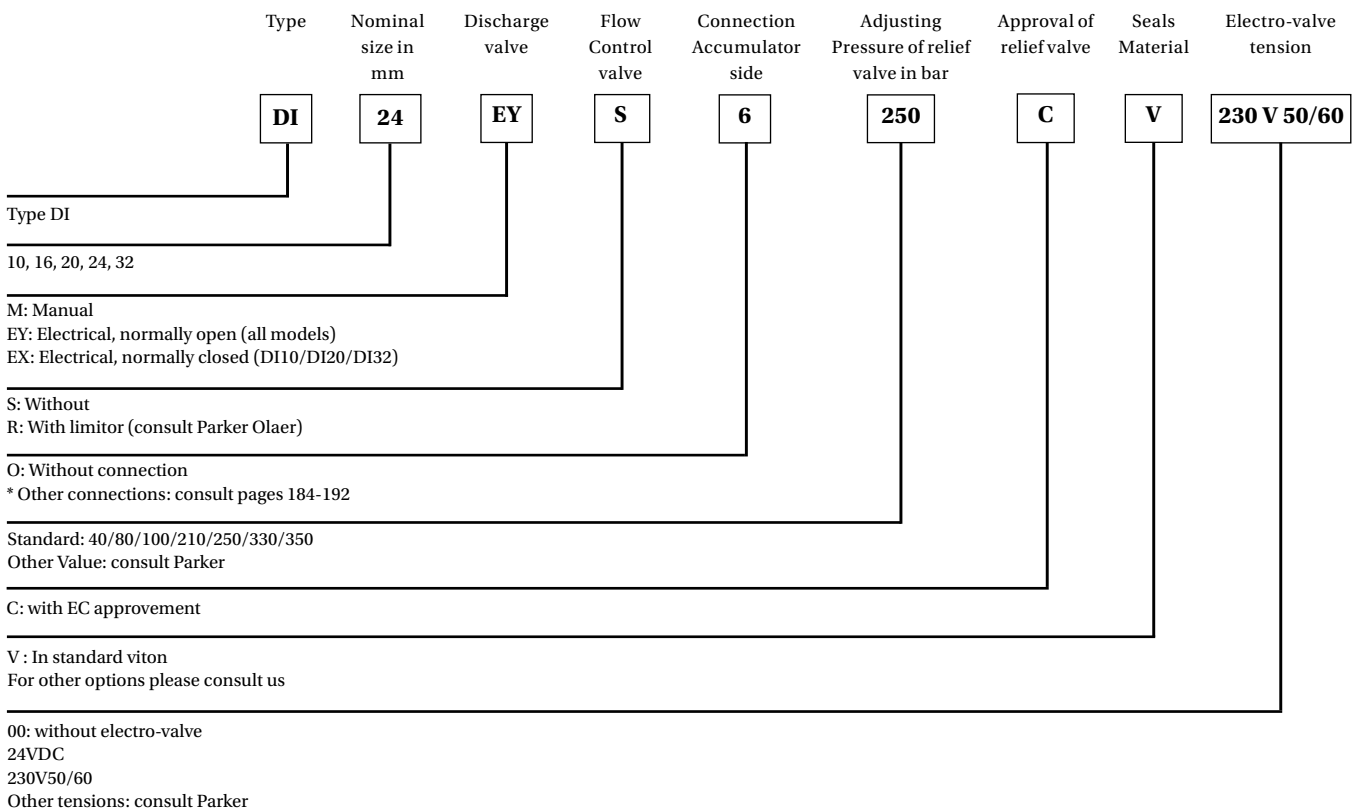
- Isolating valve to isolate the accumulator from the circuit for all the blocks except from model DI 10 where it also ensures the decompression function.
- A drain valve for decompressing the accumulator for all models (except DI 10)
- A pressure relief valve EC with poppet calibrated generally to the maximum service pressure of the accumulator (under no circumstances must this appliance be used to protect the hydraulic pump)
- Pressure tapping port (M)

In the E version, the basic block, to decompress the accumulator, can be equipped with an electro-valve :

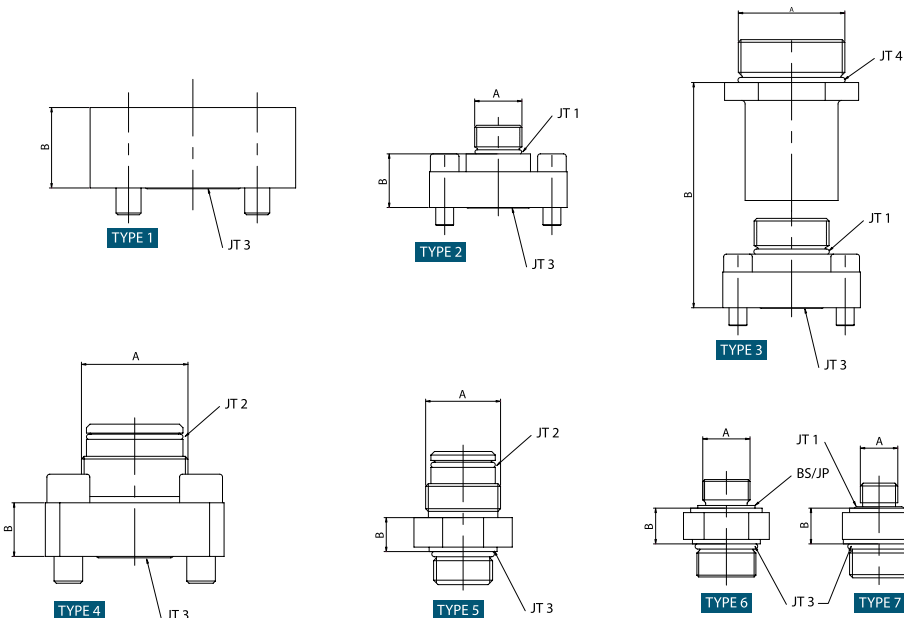
- 2 ways 2 positions (DI 10/DI 20/DI 32) cartridge type.
- 3 ways 2 positions (DI 16/DI 24) with impact of connection according to DIN 24340 Form A, ISO 4401 and CETOP RP 121 H.



## DI Series: How to order a Safety Block



# Connection accumulator side for block D10 - DI16 - DI20 - DI24 - DI32



Models	Application	A	B	Sealing						Type	Codif
				JT1 (angle)	JT2 (piston)	JT3	JT4	BS	JP		
DI10 MS/ES	ELM 0.075-250/ 0.16-250/ 0.32-210	G 1/2"	20	-	-	29 x 3	-	28.7 x 21.5 x 2.5	-	6	5
	ELM	G 1/2"	20	22 x 3	-	29 x 3	-	-	-	7	4
	ELM	G 3/4"	20	-	-	29 x 3	-	-	32 x 27 x 1.5	6	6
DI20 MS/ES	EHV 0.5 to 1.6 L	G 3/4"	18	-	17 x 3	29 x 3	-	-	-	5	2
	EHV 2.5 to 10 L (350 bar)	G1 1/4"	19	-	30 x 3	29 x 3	-	-	-	5	1
	EHV 10 to 50 L	G2"	36.5	-	48 x 3	29 x 3	-	-	-	5	3
DI16 MS/ES	EHV 0.5 to 1.6 L	G 3/4"	30	21.3 x 2.5	-	32 x 2	-	-	-	2	2
	EHV 0.5 to 1.6 L	G 3/4"	30	-	16.9 x 2.7	32 x 2	-	-	-	4	F
	EHV 2.5 to 10 L (350 bar)	G1 1/4"	30	36.2 x 3	-	32 x 2	-	-	-	2	1
	EHV 2.5 to 10 L (350 bar)	G1 1/4"	30	-	30 x 3	32 x 2	-	-	-	4	D
	EHV 10 to 50 L	G2"	96	36.2 x 3	-	32 x 2	54 x 3	-	-	3	3
	EHV 10 to 50 L	G2"	116	-	48 x 3	32 x 2	-	-	-	4	7
	EHVF 10 to 50 L	1 1/2"-6000	33	-	-	32 x 2	-	-	-	1	J
	EHVF 2.5 to 10 L (350 bar)	1 1/4"-3000	33	-	-	32 x 2	-	-	-	1	K
DI24 MS/ES	EHV 0.5 to 1.6 L	G 3/4"	35	21.3 x 2.4	-	48 x 3	-	-	-	2	2
	EHV 2.5 to 10 L (350 bar)	G1 1/4"	35	36.2 x 3	-	48 x 3	-	-	-	2	1
	EHV 2.5 to 10 L (350 bar)	G1 1/4"	35	-	30 x 3	48 x 3	-	-	-	4	F
	EHV 10 to 50 L	G2"	35	54 x 3	-	48 x 3	-	-	-	2	3
	EHV 10 to 50 L	G2"	35	-	48 x 3	48 x 3	-	-	-	4	D
	EBV 100 to 200 L + Piston Accumulator	G2"	80	54 x 3	-	48 x 3	54 x 3	-	-	3	7
	EHVF 10 to 50 L	2"-3000	45	-	-	48 x 3	-	-	-	1	J
	EHVF 10 to 50 L	1 1/2"-6000	45	-	-	48 x 3	-	-	-	1	J
	EHVF 2.5 to 10 L (350 bar)	1 1/4"-3000	45	-	-	48 x 3	-	-	-	1	K
	EHVF 2.5 to 10 L (350 bar)	1"-6000	45	-	-	48 x 3	-	-	-	1	K
DI32 MS/ES	EHV 0.5 to 1.6 L	G 3/4"	30	-	17 x 3	37.2 x 3	-	-	-	4	2
	EHV 2.5 to 10 L	G1 1/4"	30	-	30 x 3	37.2 x 3	-	-	-	4	1
	EHV 10 to 50 L	G2"	30	-	48 x 3	37.2 x 3	-	-	-	4	3

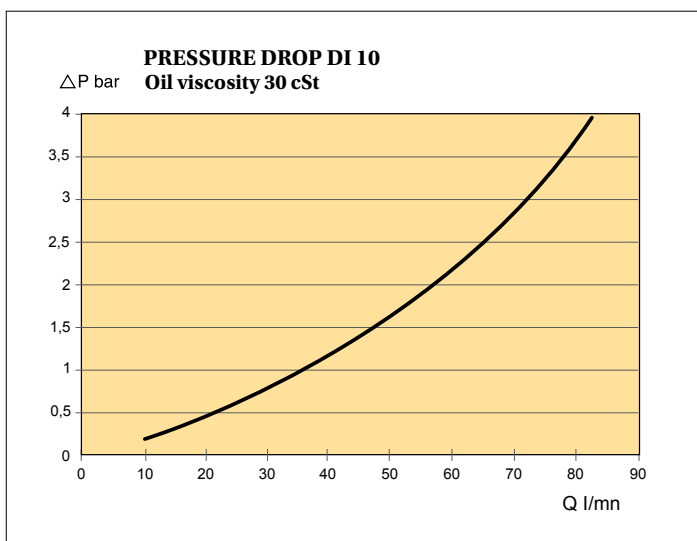
Above dimensions are in mm and are subject to manufacturing tolerances.

# Safety Block DI 10

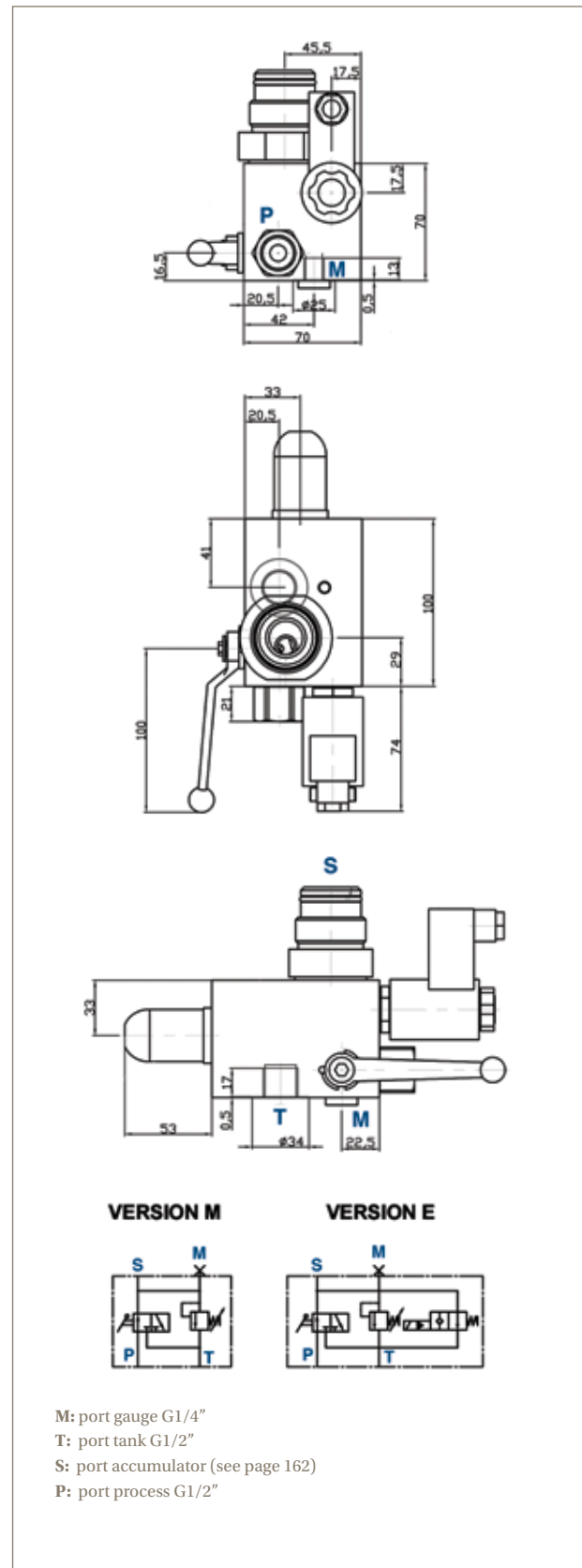
## TECHNICAL DATA DI 10

- **Size:** Nominal diameter : 10 mm
- **Maxi working pressure:** Manual version : 400 bar  
Electrical version : 350 bar
- **Weight without connector:** Manual version : 3,5 kg  
Electrical version : 4 kg
- **Materials:** Carbon steel  
According to PED suitable for fluid group 2
- **Temperature:** Manual version : - 10°C à + 70°C  
Electrical version : - 10°C à + 60°C (ambient temperature)
- **Electrical data:** DC : 24 V AC : 230 V-50/60 Hz Standard  
protection: din 43650
- **Standard connector :** DIN 43650
- **Connection accumulator side:** See page 188
- **Pressure / return connector of circuit:** See hydraulic drawing
- **Pressure relief valve EC (nominal dia):** 10 mm (nominal dia)
- **Flow:** Consult the diagram

Pressure relief valve sealed delivered with declaration of conformity



Above dimensions are in mm and are subject to manufacturing tolerances.



# Safety Block DI 10 Manual Version

Standard version (Carbon steel, rings VITON) temperature -10°C up to 70°C  
 Maximum working pressure : 350 Bar.  
 According to PED 2014/68/EU, EN 14359 Fluid Group 2

Connecting to accumulator	Type	Part number
EHV 0,5 up to 1,6 L G3/4" 210 B	DI10MS/2/210CV	35172112G02
EHV 0,5 up to 1,6 L G3/4" 330 B	DI10MS/2/330CV	35172112J02
EHV 0,5 up to 1,6 L G3/4" 350B	DI10MS/2/350CV	35172112Y02
EHV 2,5 up to 10 L G1"1/4 100 B	DI10MS/1/100CV	35172111D02
EHV 2,5 up to 10 L G1"1/4 210 B	DI10MS/1/210CV	35172111G02
EHV 2,5 up to 10 L G1"1/4 250 B	DI10MS/1/250CV	35172111H02
EHV 2,5 up to 10 L G1"1/4 330 B	DI10MS/1/330CV	35172111J02
EHV 2,5 up to 10 L G1"1/4 350 B	DI10MS/1/350CV	35172111Y02
EHV 10 up to 50 L G2" 210 B	DI10MS/3/210CV	35172113G02
EHV 10 up to 50 L G2" 250 B	DI10MS/3/250CV	35172113H02
EHV 10 up to 50 L G2" 330 B	DI10MS/3/330CV	35172113J02
ELM G1/2"	DI10MS/4/100CV	35172114D02
ELM G1/2"	DI10MS/4/140CV	35172114Q02

Connecting to accumulator	Type	Part number
ELM G1/2"	DI10MS/4/210CV	35172114G02
ELM G1/2"	DI10MS/4/250CV	35172114H02
ELM G1/2"	DI10MS/4/330CV	35172114J02
ELM G1/2"	DI10MS/4/350CV	35172114Y02
ELM 0,32-210 G1/2"	DI10MS/5/210CV	35172115G02
ELM 0,075-250/0,16-250 G1/2"	DI10MS/5/250CV	35172115H02
ELM G3/4"	DI10MS/6/100CV	35172116D02
ELM G3/4"	DI10MS/6/140CV	35172116Q02
ELM G3/4"	DI10MS/6/210CV	35172116G02
ELM G3/4"	DI10MS/6/250CV	35172116H02
ELM G3/4"	DI10MS/6/330CV	35172116J02
ELM G3/4"	DI10MS/6/350CV	35172116Y02

Other pressure setup on request

# Safety Block DI 10 Electrical Version

Standard version (Carbon steel, seals VITON) temperature -10°C up to 60°C  
 Maximum working pressure : 350 Bar. According to PED 2014/68/EU, EN 14359 Fluid Group 2

Connecting to accumulator	With Electro-valve tension 24VDC	
	Type	Part number
EHV 0,5 up to 1,6 L G 3/4" 350 B	DI10EYS/2/350CV24VCC	35172132Y22
EHV 2,5 up to 10 L G1"1/4 350 B	DI10EYS/1/350CV24VCC	35172131Y22
ELM G1/2"	DI10EYS/4/210CV24VCC	35172134G22
ELM G3/4"	DI10EYS/6/210CV24VCC	35172136G22
ELM G3/4"	DI10EYS/6/250CV24VCC	35172136H22

With Electro-valve tension 230V50/60	
Type	Part number
DI10EYS/2/350CV230V50/60	35172132Y62
DI10EYS/1/350CV230V50/60	35172131Y62
DI10EYS/4/210CV230V50/60	35172134G62

## Electro-Valve Options or Accessories

Type	Characteristics	Part number
RELIEF VALVE EC	100 BAR	35045931002
RELIEF VALVE EC	140 BAR	35045931402
RELIEF VALVE EC	210 BAR	35045932102
RELIEF VALVE EC	250 BAR	35045932502
RELIEF VALVE EC	330 BAR	35045933302
RELIEF VALVE EC	350 BAR	35045933502

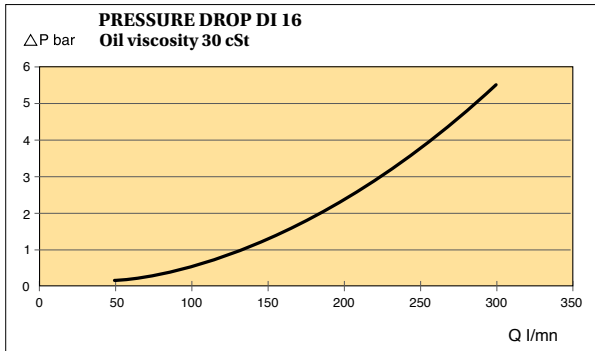


\*\* From 07/2016 PED 97/23/EC becomes PED 2014/68/EU

# Safety Block DI 16

## TECHNICAL DATA DI 16

- **Size:** Nominal diameter : 16 mm
  - **Maxi working pressure:** Manual version : 350 bar  
Electrical version : 350 bar
  - **Weight without connector:** Manual version : 4,3 kg  
Electrical version : 5.8 kg
  - **Materials:** Carbon steel  
According to PED suitable for fluid group 2
  - **Temperature:** Manual version : - 15°C à + 80°C  
Electrical version : - 15°C à + 60°C (ambient temperature)
  - **Electrical data:** DC : 24 V AC : 230 V-50/60 Hz Standard  
protection: IP 65
  - **Standard connector :** DIN 43650
  - **Connection accumulator side:** See page 188
  - **Pressure / return connector of circuit:** See drawing
  - **Pressure relief valve EC:** 6 mm (nominal dia)
  - **Flow:** Consult the diagram
- Optional flow control valve on the block :Consult us. Pressure relief valve sealed delivered with declaration of manufacturing conformity



Minimes screw coupling  
TYPE 1620

Positioning Cetop size 3  
for clack electro-valve

**VERSION E**  
View according to F

4 holes M5 - Depth of tapped 12 useful  
Front hole depth : 16 on point

**VERSION M**

**VERSION E**

**M:** screw coupling G 1/4" delivered with Minimes 1620  
**T:** port tank G1/4" flattened dept 1 for bonded seal  
**A:** port accumulator (see page 162)  
**P:** port process G3/4" flattened depth 1.5 for bonded seal

## Safety Block DI 16 Manual Version

Standard version (Carbon steel, seals VITON) temperature -15°C up to 80°C

Maximum working pressure : 350 Bar. According to PED 2014/68/EU(\*\*), EN 14359, Fluid Group 2

Connecting to accumulator	Type	Part number
EHV 0,5 up to 1,6 L G3/4" 210 B	DI16MS/2/210 CV	35128812G02
EHV 0,5 up to 1,6 L G3/4" 250 B	DI16MS/2/210 CV	35128812H02
EHV 0,5 up to 1,6 L G3/4" 330 B	DI16MS/2/330 CV	35128812J02
EHV 0,5 up to 1,6 L G3/4" 350 B	DI16MS/2/350 CV	35128812Y02
EHV 2,5 up to 10 L G1"1/4 210 B	DI16MS/1/210 CV	35128811G02
EHV 2,5 up to 10 L G1"1/4 250 B	DI16MS/1/250 CV	35128811H02
EHV 2,5 up to 10 L G1"1/4 330 B	DI16MS/1/330 CV	35128811J02
EHV 2,5 up to 10 L G1"1/4 350 B	DI16MS/1/350 CV	35128811Y02
EHV 10 up to 50 L G2" 210 B	DI16MS/3/210 CV	35128813G02
EHV 10 up to 50 L G2" 250 B	DI16MS/3/250 CV	35128813H02
EHV 10 up to 50 L G2" 330 B	DI16MS/3/330 CV	35128813J02
EHV 10 up to 50 L G2" 350 B	DI16MS/3/350 CV	35128813Y02

## Safety Block DI 16 Electrical Version

Standard version (Carbon steel, seals VITON) temperature -15°C up to 60°C Maximum working pressure : 350 Bar. According to PED 2014/68/EU (\*\*), EN 14359, Fluid Group 2. Pre-machine for Electro-valve installation. For complete electrical safety block please add electro-valve price to DI16EYS example : DI16EYS/1/330CV24VCC = PN 35128831J02 + PN 35157700281

Connecting to accumulator	without Electro-valve Tension	
	Type	Part number
EHV 0,5 up to 1,6 L G3/4" 210 B	DI16EYS/2/210 CV	35128832G02
EHV 0,5 up to 1,6 L G3/4" 250 B	DI16EYS/2/250 CV	35128832H02
EHV 0,5 up to 1,6 L G3/4" 330 B	DI16EYS/2/330 CV	35128832J02
EHV 0,5 up to 1,6 L G3/4" 350 B	DI16EYS/2/350 CV	35128832Y02
EHV 2,5 up to 10 L G1"1/4 210 B	DI16EYS/1/210 CV	35128831G02
EHV 2,5 up to 10 L G1"1/4 250 B	DI16EYS/1/250 CV	35128831H02
EHV 2,5 up to 10 L G1"1/4 330 B	DI16EYS/1/330 CV	35128831J02
EHV 2,5 up to 10 L G1"1/4 350 B	DI16EYS/1/350 CV	35128831Y02
EHV 10 up to 50 L G2" 210 B	DI16EYS/3/210 CV	35128833G02
EHV 10 up to 50 L G2" 250 B	DI16EYS/3/250 CV	35128833H02
EHV 10 up to 50 L G2" 330 B	DI16EYS/3/330 CV	35128833J02
	DI16EYS/3/350 CV	35128833Y02

### Options and Accessories

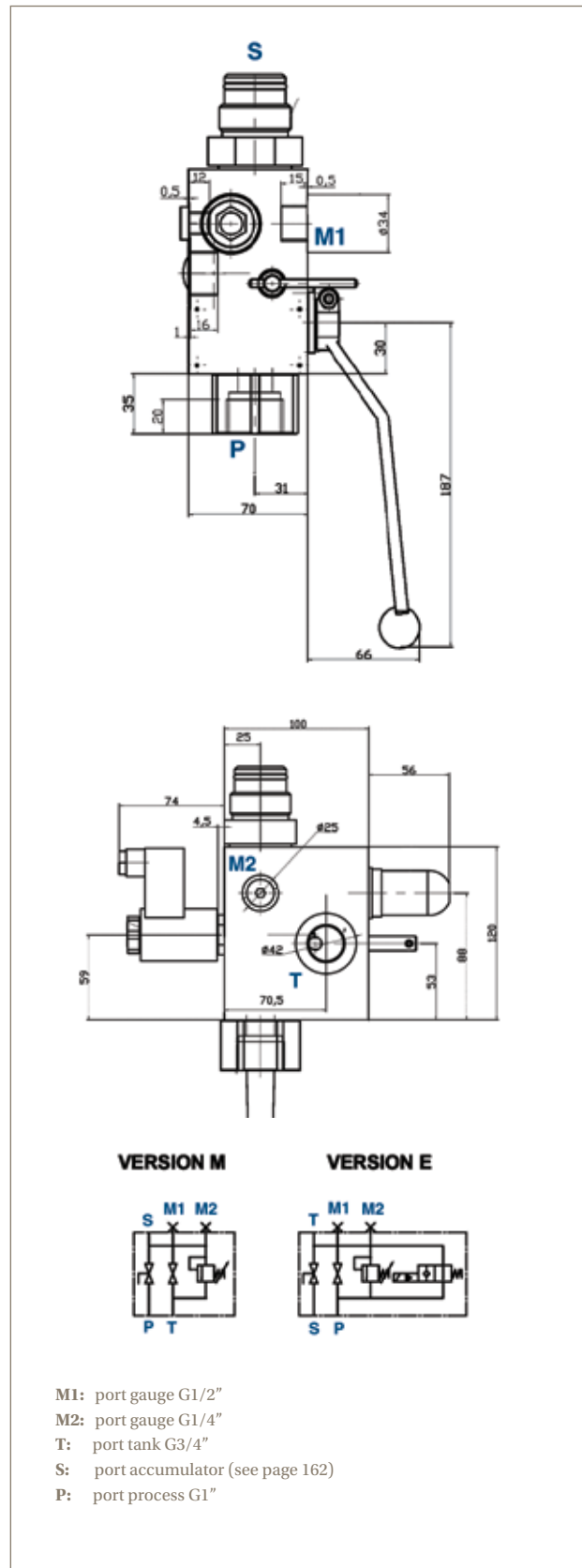
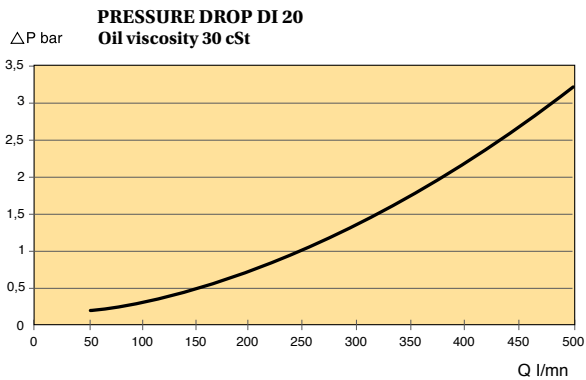
Type	Electro valve tension	Part number
ELECTRO-VALVE T3	24 VCC	35157700281
ELECTRO-VALVE T3	110/120VA 50/60 Hz	35157800281
ELECTRO-VALVE T3	220/230VA 50/60 Hz	35157900281
FLOW CONTROL	R16	35141800281
FLANGE M 3/4" GAS CYL connection accumulator side		35054100281
FLANGE M 1"1/4 GAS CYL connection accumulator side		35054200281
FLANGE M 2" GAS CYL connection accumulator side		35103500281
RELIEF VALVE CE	210	35045732102
RELIEF VALVE CE	250	35045732502
RELIEF VALVE CE	330	35045733302
RELIEF VALVE CE	350	35045733502

\*\* From 07/2016 PED 97/23/EC becomes PED 2014/68/EU

# Safety Block DI 20

## TECHNICAL DATA DI 20

- **Size:** Nominal diameter : 20 mm
  - **Maxi working pressure:** Manual version : 400 bar  
Electrical version : 350 bar
  - **Weight without connector:** Manual version : 6,4 kg  
Electrical version : 6,9 kg
  - **Materials:** Carbon steel  
According to PED suitable for fluid group 2
  - **Temperature:** Manual version : - 15°C à + 70°C  
Electrical version : - 15°C à + 60°C (ambient temperature)
  - **Electrical data:** DC : 24 V AC : 230 V-50/60 Hz Standard  
protection: IP 65
  - **Standard connector :** DIN 43650
  - **Connection accumulator side:** See page 188
  - **Pressure / return connector of circuit:** See drawing
  - **Pressure relief valve EC:** 10 mm (nominal dia)
  - **Flow:** Consult the diagram
- Pressure relief valve sealed delivered with declaration of manufacturing conformity



Above dimensions are in mm and are subject to manufacturing tolerances.

## Safety Block DI 20 Manual Version

Standard version (Carbon steel, seals VITON) temperature -15°C up to 70°C Maximum working pressure: 400 Bar According to PED 2014/68/EU (\*\*)

Connecting to accumulator	Type	Part number
EHV 0,5 up to 1,6 L G3/4" 330 B	DI20MS/2/330CV	35172212J02
EHV 2,5 up to 10 L G1"1/4 350 B	DI20MS/1/350CV	35172211Y02
EHV 10 up to 50 L G2" 210 B	DI20MS/3/210CV	35172213G02
EHV 10 up to 50 L G2" 250 B	DI20MS/3/250CV	35172213H02
EHV 10 up to 50 L G2" 330 B	DI20MS/3/330CV	35172213J02

## Safety Block DI 20 Electrical Version

Standard version (Carbon steel, seals VITON) temperature -15°C up to 60°C Maximum working pressure: 350 Bar According to PED 2014/68/EU (\*\*)

Connecting to accumulator	With Electro-valve tension 230V50/60		With Electro-valve tension 24VDC	
	Type	Part number	Type	Part number
EHV 2,5 up to 10 L G1"1/4 330 B	DI20EYS/1/330CV230V50/60	35172231J62	DI20EYS/1/330CV24VCC	35172231J22
EHV 2,5 up to 10 L G1"1/4 350 B	DI20EYS/1/350CV230V50/60	35172231Y62	DI20EYS/1/350CV24VCC	35172231Y22
EHV 10 up to 50 L G2" 210 B	DI20EYS/3/210CV230V50/60	35172233G62	DI20EYS/3/210CV24VCC	35172233G22
EHV 10 up to 50 L G2" 250 B	DI20EYS/3/250CV230V50/60	35172233H62	DI20EYS/3/250CV24VCC	35172233H22
EHV 10 up to 50 L G2" 330 B	DI20EYS/3/330CV230V50/60	35172233J62	DI20EYS/3/330CV24VCC	35172233J22

### Spares Parts Relief Valve

Type	Characteristics	Part number
RELIEF VALVE CE	210 BAR	35045932102
RELIEF VALVE CE	250 BAR	35045932502
RELIEF VALVE CE	330 BAR	35045933302
RELIEF VALVE CE	350 BAR	35045933502

\*\* From 07/2016 PED 97/23/EC becomes PED 2014/68/EU

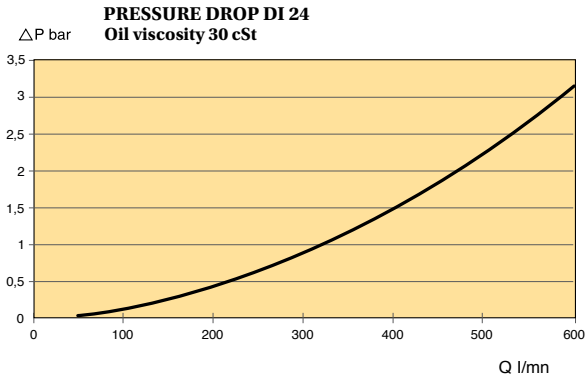




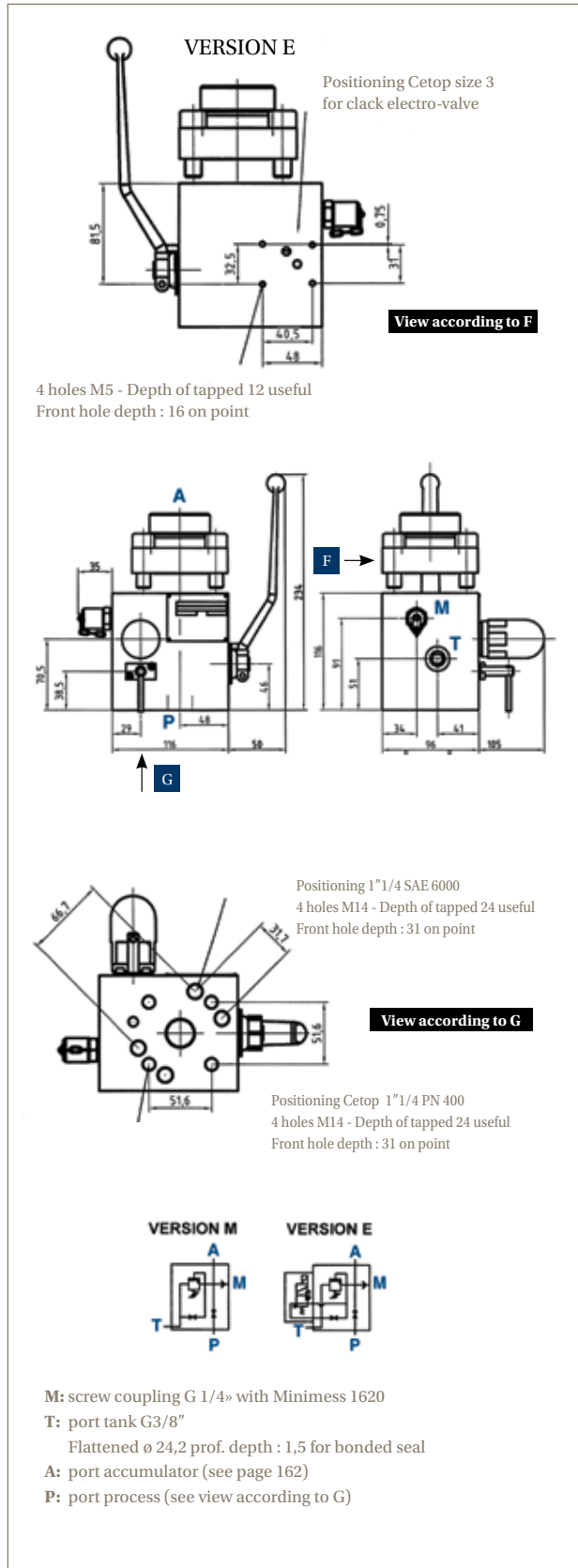
# Safety Block DI 24

## TECHNICAL DATA DI 24

- **Size:** Nominal diameter : 24 mm
- **Maxi working pressure:** Manual version : 350 bar  
Electrical version : 350 bar
- **Weight without connector:** Manual version : 9,5 kg  
Electrical version : 11 kg
- **Materials:** Carbon steel  
According to PED suitable for fluid group 2
- **Temperature:** Manual version : - 15°C à + 70°C  
Electrical version : - 15°C à + 50°C (ambient temperature)
- **Electrical data:** DC : 24 V AC : 230 V-50/60 Hz Standard protection: IP 65
- **Standard connector :** DIN 43650
- **Connection accumulator side:** See page 188
- **Pressure / return connector of circuit:** See drawing
- **Pressure relief valve EC:** 10 mm (nominal dia)
- **Flow:** Consult the diagram



Above dimensions are in mm and are subject to manufacturing tolerances.



## Safety Block DI 24 Manual Version

Standard version (Carbon steel, seals VITON) temperature -15°C up to 70°C Maximum working pressure : 350 Bar. According to PED 2014/68/EU (\*\*), EN 14359, Fluid group 2

Connecting to accumulator	Type	Part number
EHV 2,5 up to 10 L G1"1/4 210 B	DI24MS/1/210CV	35129011G02
EHV 2,5 up to 10 L G1"1/4 250 B	DI24MS/1/250CV	35129011H02
EHV 2,5 up to 10 L G1"1/4 330 B	DI24MS/1/330CV	35129011J02
EHV 2,5 up to 10 L G1"1/4 350 B	DI24MS/1/350CV	35129011Y02
EHV 10 up to 50 L G2" 210 B	DI24MS/3/210CV	35129013G02
EHV 10 up to 50 L G2" 250 B	DI24MS/3/250CV	35129013H02
EHV 10 up to 50 L G2" 330 B	DI24MS/3/330CV	35129013J02
G2" 350 B	DI24MS/3/350CV	35129013Y02
ACCU PISTON 10 up to 50 L G2" & EBV 100 and 200 L		

## Safety Block DI 24 Electrical Version

Standard version (Carbon steel, seals VITON) temperature -15°C up to 50°C. Maximum working pressure : 350 Bar. According to PED 2014/68/EU (\*\*), EN 14359, Fluid group 2. Pre-machine for Electro-valve installation. For complete electrical safety block please add electro-valve price to DI24EYS example : DI24EYS/1/330CV24VCC = PN 35129031J02 + PN 35157700281

Other pressure setup : on request

Connecting to accumulator	without the electro-valve tension	
	Type	Part number
EHV 2,5 up to 10 L G1"1/4 210 B	DI24EYS/1/210CV	35129031G02
EHV 2,5 up to 10 L G1"1/4 250 B	DI24EYS/1/250CV	35129031H02
EHV 2,5 up to 10 L G1"1/4 330 B	DI24EYS/1/330CV	35129031J02
EHV 2,5 up to 10 L G1"1/4 350 B	DI24EYS/1/350CV	35129031Y02
EHV 10 up to 50 L G2" 210 B	DI24EYS/3/210CV	35129033G02
EHV 10 up to 50 L G2" 250 B	DI24EYS/3/250CV	35129033H02
EHV 10 up to 50 L G2" 330 B	DI24EYS/3/330CV	35129033J02
G2" 350 B	DI24EYS/3/350CV	35129033Y02
PISTON ACCUMULATOR 10 up to 50 L G2"& EBV 100 and 200 L		

### Options and Accessories

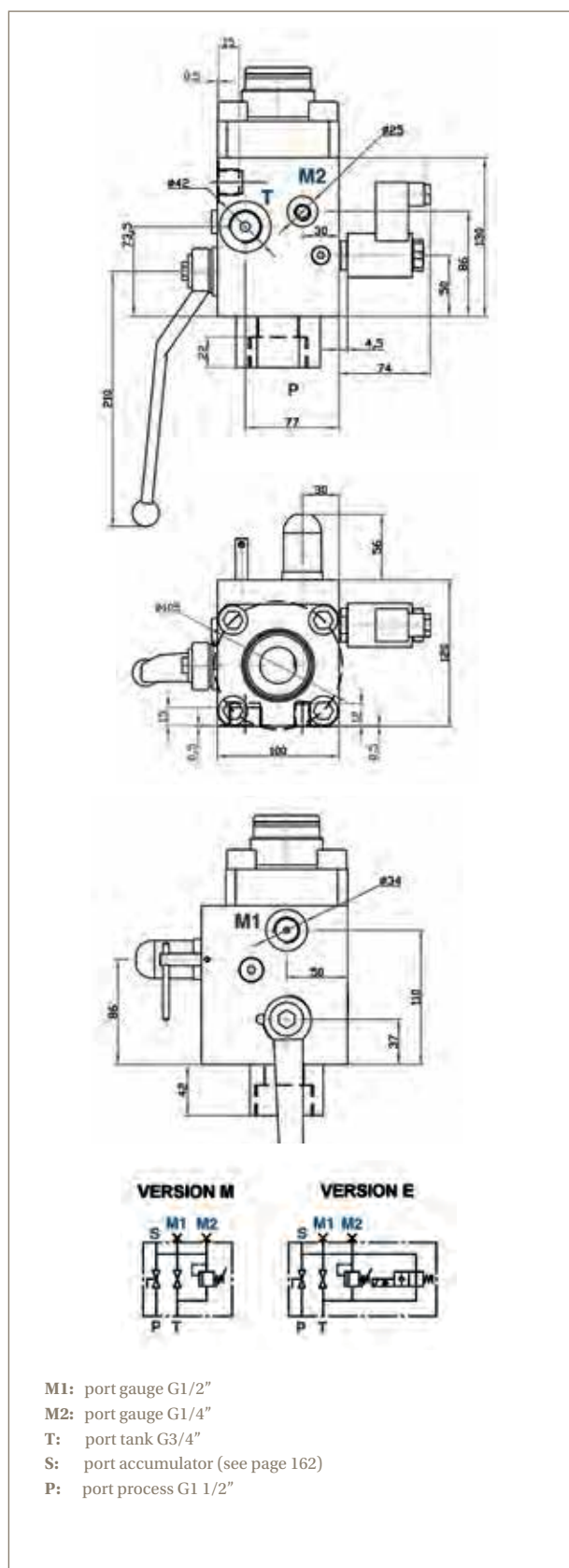
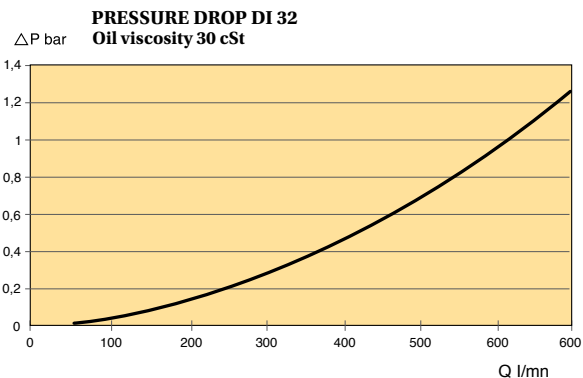
Type	Electro valve tension	Part number
ELECTRO-VALVE T3	24 VCC	35157700281
ELECTRO-VALVE T3	110/120 V 50/60 Hz	35157800281
ELECTRO-VALVE T3	220/230 V 50/60 Hz	35157900281
FLOW CONTROL	R24	35067500281
FLANGE M 1"1/4 GAZ CYL CONNECTION ACCUMULATOR SIDE		10436600281
FLANGE M 2" GAZ CYL CONNECTION ACCUMULATOR SIDE		35037500281
RELIEF VALVE CE	210 BAR	35045932102
RELIEF VALVE CE	250 BAR	35045932502
RELIEF VALVE CE	330 BAR	35045933302
RELIEF VALVE CE	350 BAR	35045933502

\*\* From 07/2016 PED 97/23/EC becomes PED 2014/68/EU

# Safety Block DI 32

## TECHNICAL DATA DI 32

- **Size:** Nominal diameter : 32 mm
- **Maxi working pressure:** Manual version : 400 bar  
Electrical version : 350 bar
- **Weight without connector:** Manual version : 11,7 kg  
Electrical version : 12,2 kg
- **Materials:** Carbon steel  
According to PED suitable for fluid group 2
- **Temperature:** Manual version : - 10°C à + 70°C  
Electrical version : - 10°C à + 60°C (ambient temperature)
- **Electrical data:** DC : 24 V AC : 230 V-50/60 Hz Standard  
protection: IP 65
- **Standard connector :** DIN 43650
- **Connection accumulator side:** See page 188
- **Pressure / return connector of circuit:** See drawing
- **Pressure relief valve EC:** 10 mm (nominal dia)
- **Flow:** Consult the diagram



Above dimensions are in mm and are subject to manufacturing tolerances.

## Safety Block DI 32 Manual Version

Standard version (Carbon steel, seals VITON) temperature -10°C up to 70°C Maximum working pressure: 400 Bar According to PED 2014/68/EU (\*\*), EN 14359, Fluid Group 2

Connecting to accumulator	Type	Part number
EHV 2,5 up to 10 L G1"1/4	DI32MS/1/210CV	35172311G02
EHV 2,5 up to 10 L G1"1/4	DI32MS/1/250CV	35172311H02
EHV 2,5 up to 10 L G1"1/4	DI32MS/1/330CV	35172311J02
EHV 2,5 up to 10 L G1"1/4	DI32MS/1/350CV	35172311Y02
EHV 10 up to 50 L G2"	DI32MS/3/210CV	35172313G02
EHV 10 up to 50 L G2"	DI32MS/3/250CV	35172313H02
EHV 10 up to 50 L G2"	DI32MS/3/330CV	35172313J02

## Safety Block DI 32 Electrical Version

Standard version (Carbon steel, seals VITON) temperature -10°C up to 60°C  
Maximum working pressure: 350 Bar  
According to PED 2014/68/EU (\*\*), EN 14359, Fluid Group 2

Connecting to accumulator	With Electro-valve tension 24VDC		With Electro-valve tensions 230V50/60	
	Type	Part number	Type	Part number
EHV 2,5 up to 10 L G1"1/4	DI32EYS/1/210CV24VCC	35172331G22	DI32EYS/1/210CV230V50/60	35172331G62
EHV 2,5 up to 10 L G1"1/4	DI32EYS/1/250CV24VCC	35172331H22	DI32EYS/1/250CV230V50/60	35172331H62
EHV 2,5 up to 10 L G1"1/4	DI32EYS/1/330CV24VCC	35172331J22	DI32EYS/1/330CV230V50/60	35172331J62
EHV 2,5 up to 10 L G1"1/4	DI32EYS/1/350CV24VCC	35172331Y22	DI32EYS/1/350CV230V50/60	35172331Y62
EHV 10 up to 50 L G2"	DI32EYS/3/210CV24VCC	35172333G22	DI32EYS/3/210CV230V50/60	35172333G62
EHV 10 up to 50 L G2"	DI32EYS/3/250CV24VCC	35172333H22	DI32EYS/3/250CV230V50/60	35172333H62
EHV 10 up to 50 L G2"	DI32EYS/3/330CV24VCC	35172333J22	DI32EYS/3/330CV230V50/60	35172333J62

Type	Characteristics	Part number
RELIEF VALVE CE	210 BAR	35045932102
RELIEF VALVE CE	250 BAR	35045932502
RELIEF VALVE CE	330 BAR	35045933302
RELIEF VALVE CE	350 BAR	35045933502

\*\* From 07/2016 PED 97/23/EC becomes PED 2014/68/EU

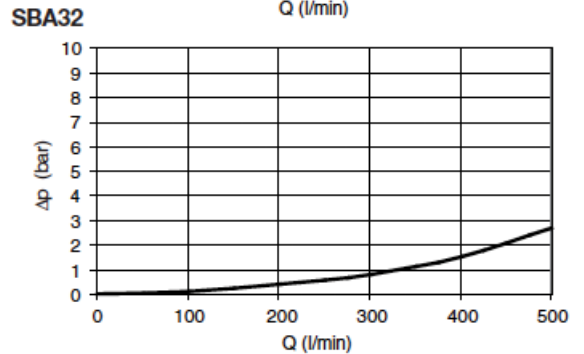
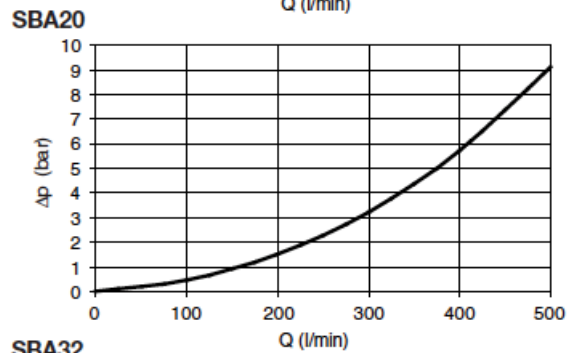
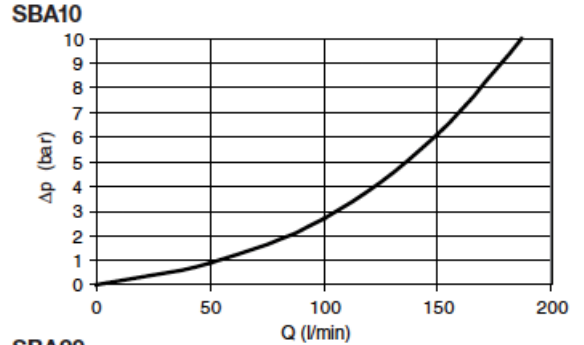


# SBA Series Safety Block

## TECHNICAL DATA SBA SAFETY BLOCK

- **Construction**
  - shut-off valve: ball valve
  - pressure relief: poppet-type valve with damping
  - manually-operated discharge valve: poppet-type valve
  - electrically-operated discharge valve: poppet-type valve (where fitted)
- **Port type** - see table below
- **Mounting position** - Accumulator port A facing upwards
- **Mounting screws (not supplied)**  
 M8 to grade 10.9, max. torque 26 + 4Nm
- **Ambient temperature** : -30°C to +80°C
- **Max. operating pressure:** 350 bar
- **Relief flow rate G at pnom:** see table below
- **Fluid:** Mineral oil according to DIN/ISO. For other fluid types, please contact the Parker.
- **Operating temperature** : -15°C to +80°C
- **Viscosity:** 10 to 800 mm<sup>2</sup>/s
- **Δp-Q-graphs:** see right side of this page
- **Electrical discharge:** U=24VDC, 105VDC (for 115V/60 Hz AC supply), P=26W, 100% ED, IP 65 to DIN 40050, connector to DIN 43650 type A
- **Finish:** Black zinc phosphated
- **Seal material:** Nitrile

## Flow - Accumulator (A) to Pressure Port (P)



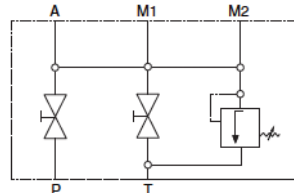
## Dimensions and Weights

Type	A1	P	T	M1	M2	Weight (Kg)	Model Number <sup>2</sup>
10M	M33x2	G1/2	G3/8	G1/2	G1/4	44	SBA10MT1
10E	M33x2	G1/2	G3/8	G1/2	G1/4	47	SBA10ET1
20M	M33x2	G1	G1/2	G1/2	G1/4	60	SBA20MT1
20E	M33x2	G1	G1/2	G1/2	G1/4	65	SBA20ET1
32M	Flange	G1 1/2	G1	G1/2	G1/4	12	SBA32MT1
32E	Flange	G1 1/2	G1	G1/2	G1/4	126	SBA32ET1

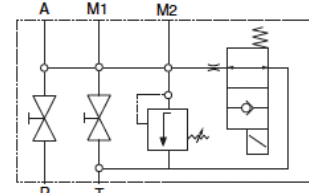
<sup>1</sup> A range of adapters is available for accumulator port A – Consult Division

<sup>2</sup> xxx = pressure setting of pressure relief valve – Consult Division

SBA Type M  
 Manually-Operated Discharge Valve



SBA Type E  
 Manually- and Electrically-Operated Discharge Valves



**Accessories**

**Pressure Relief Valve**

The function of the pressure relief valve is to protect the accumulator in service. If pressure exceeds the relief valve setting, the valve lifts off its seat and fluid is discharged to tank, allowing pressure in the system to fall to a safe level.

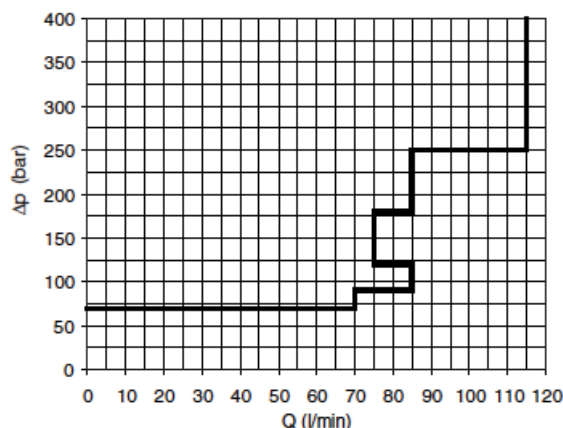
Because of its cartridge design, the pressure relief valve can be readily replaced by a valve with a different pressure setting, selected from the table. A new approval under PED 2014/63/EU (\*\*\*) is not required following this change. The pre-set relief pressure, in bar, is stamped onto the identification plate.

Pressure P (bar)	Item Number
50	SV050
70	SV070
100	SV100
120	SV120
140	SV140
160	SV160
200	SV200
210	SV210
250	SV250
280	SV280
300	SV300
330	SV330

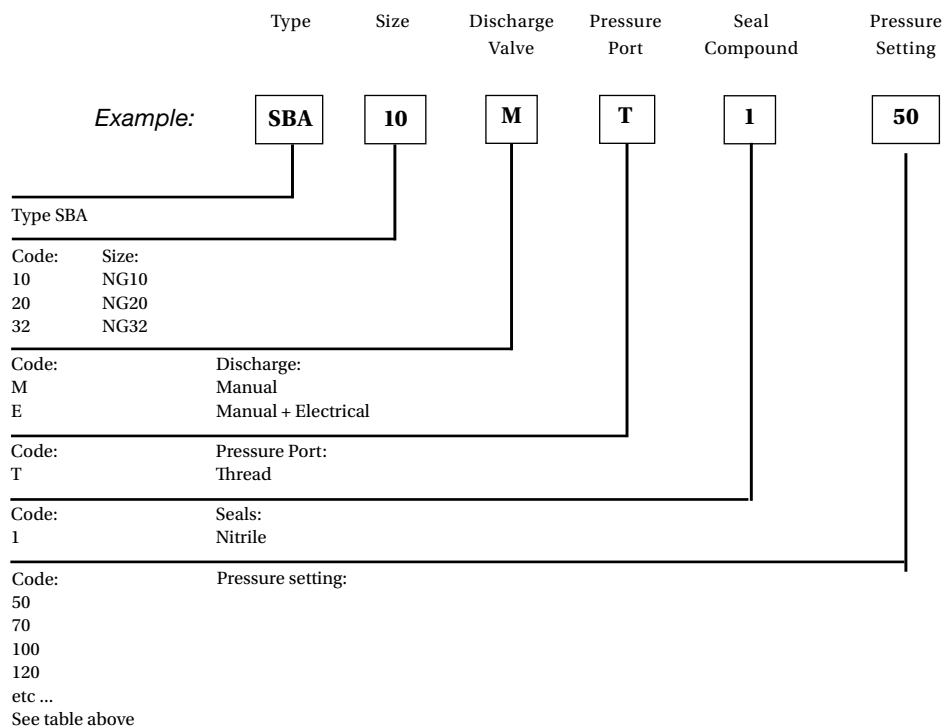
**Type Approval**

The pressure relief valve is checked and security sealed following approval, according to pressure vessel regulations. It carries a CE mark, type approval number and serial number. All valves are supplied with a certificate showing the pressure setting. The documents supplied with the pressure relief valve must be retained, as they will be required in the event of repeat tests.

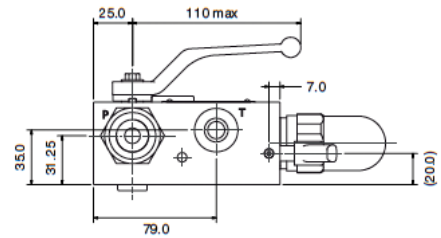
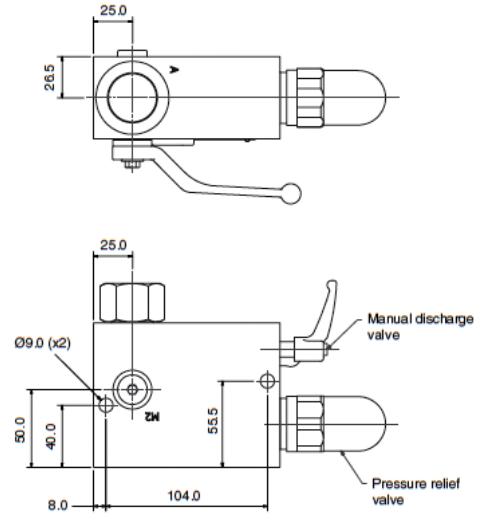
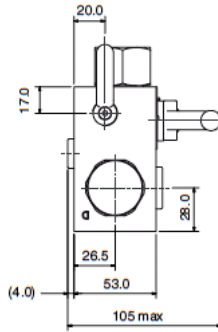
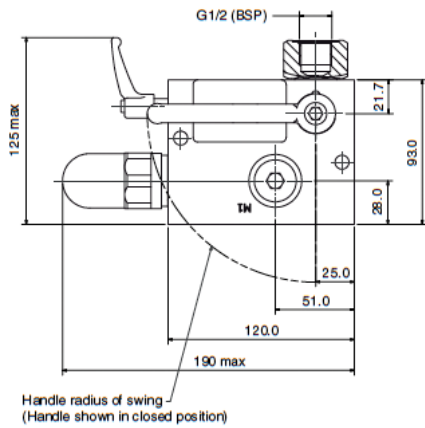
**Flow Limits for Safety Valve SV - All Models**



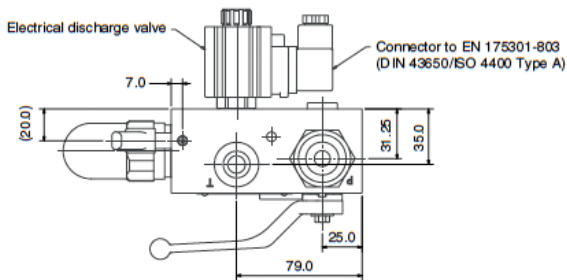
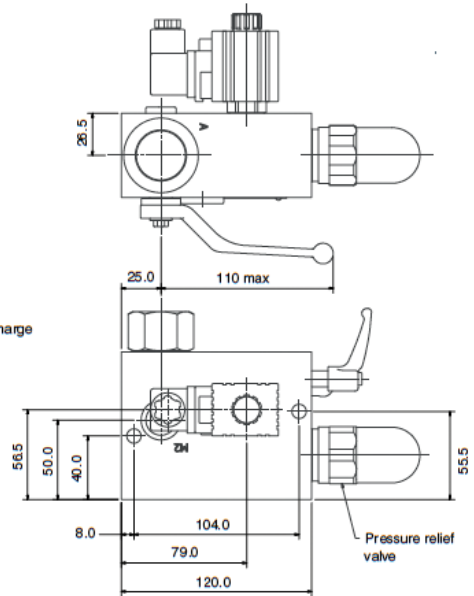
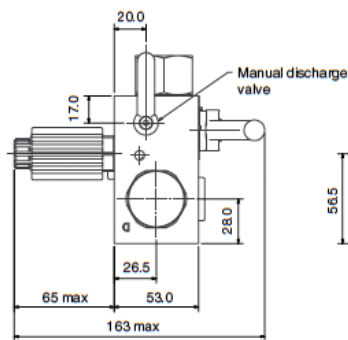
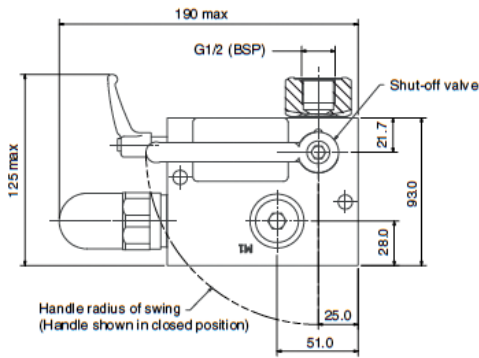
**SBA Series: How to order a SBA Safety Block**



# SBA10MT1

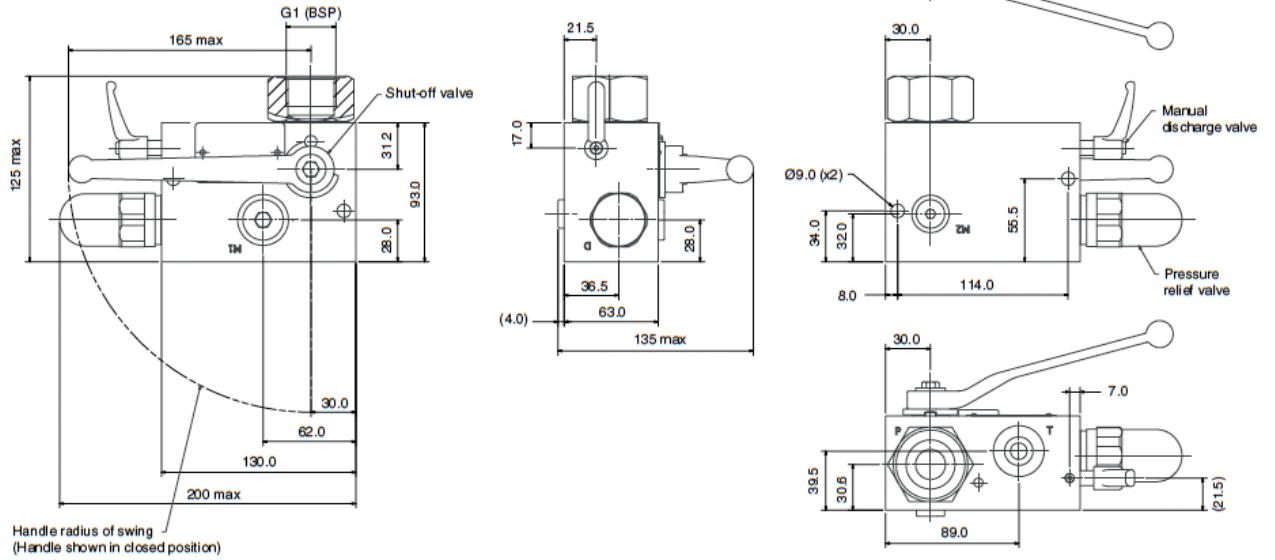


# SBA10ET1

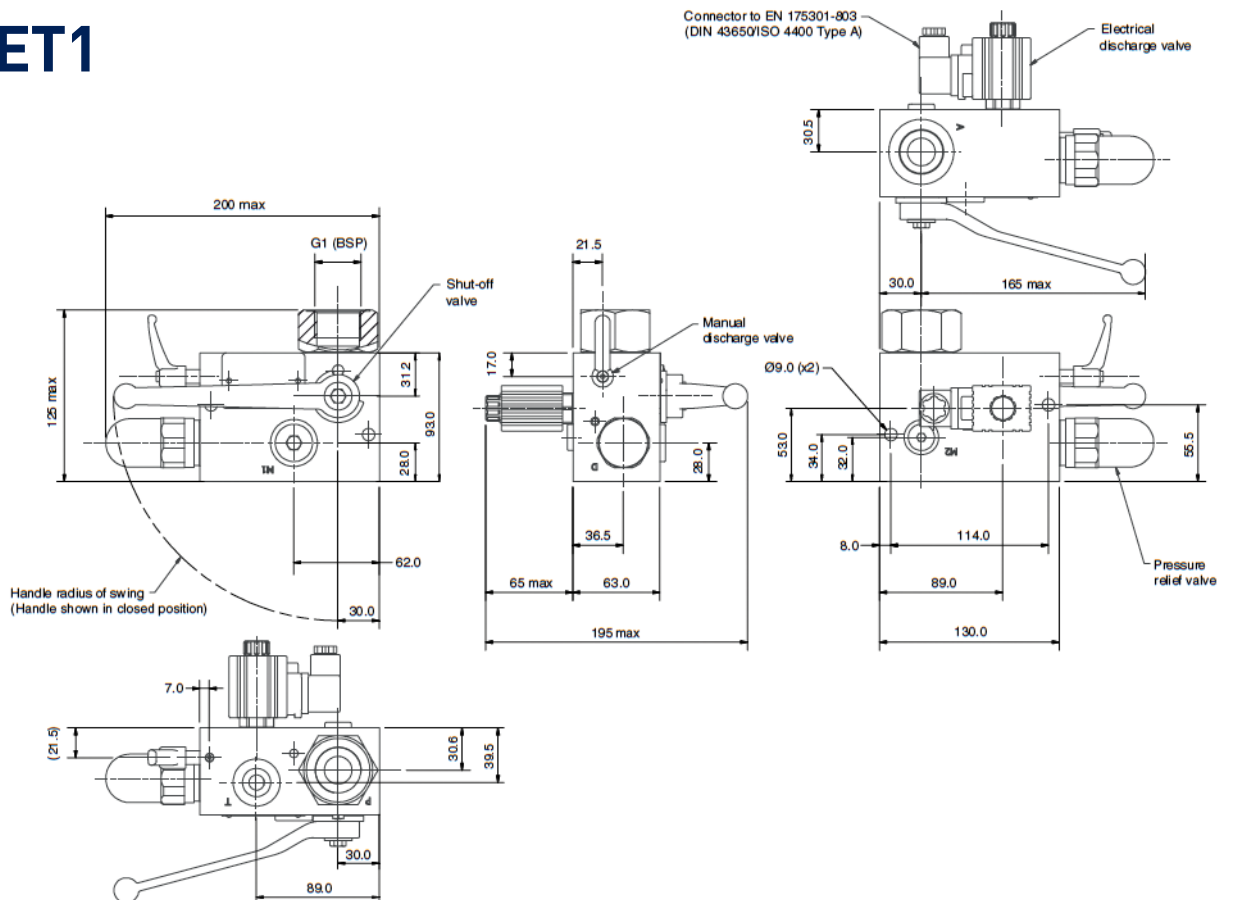


Above dimensions are in mm and are subject to manufacturing tolerances.

# SBA20MT1



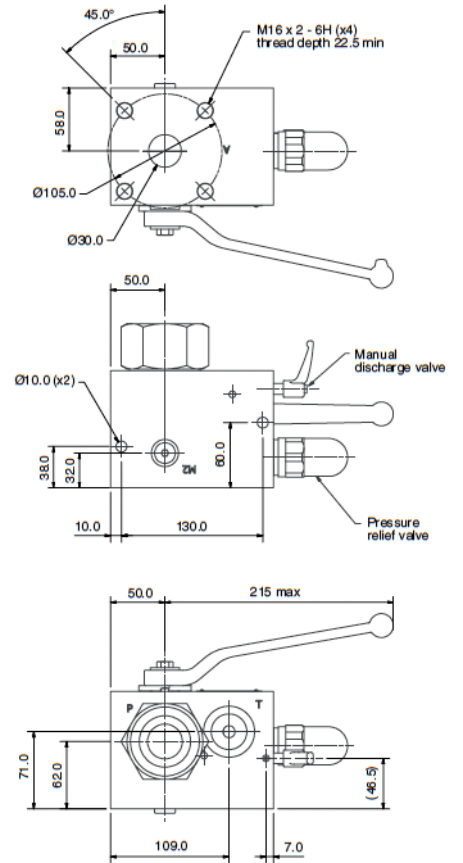
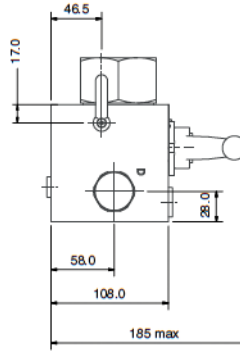
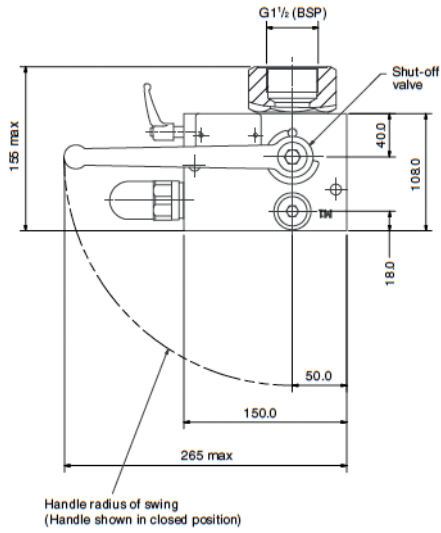
# SBA20ET1



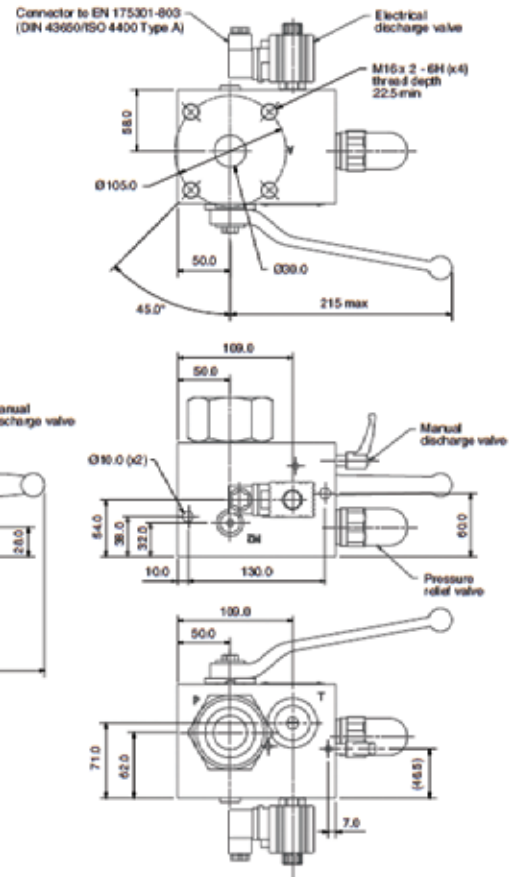
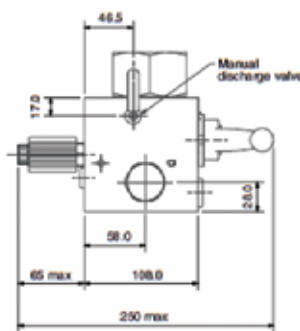
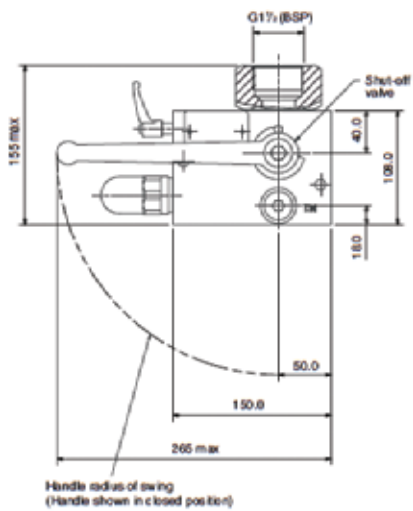
Above dimensions are in mm and are subject to manufacturing tolerances.



# SBA32MT1



# SBA32ET1

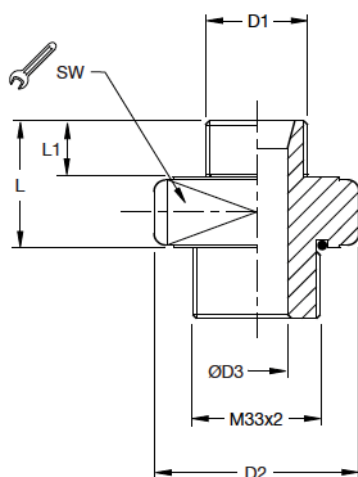


Above dimensions are in mm and are subject to manufacturing tolerances.

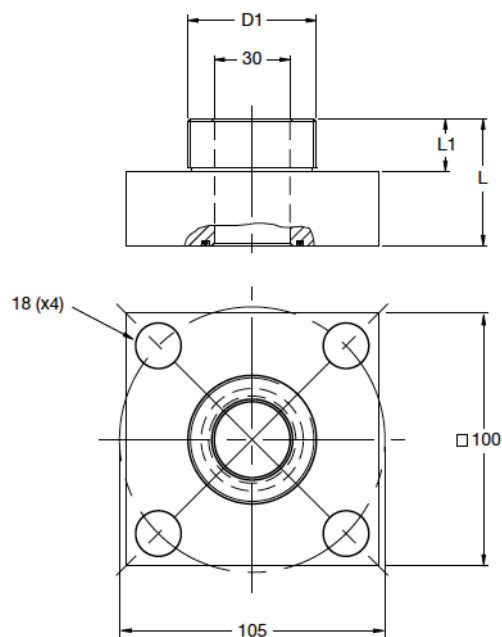
# Adapters - Accumulator to SBA Safety Block

Accumulator Fluid Port D1		Safety Block Port A	SW	L	L1	D2	D3	Weight (Kg)	Part Number	Use with SBA	For Accumulator Type		
											Bladder	Diaphragm	Piston
G3/4	ISO 228	M33 x2	46	33	16	53	16	04	UEST-T-3/4	10 & 20	x		
G1 1/4	ISO 228	M33 x2	55	41	20	63	20	04	UEST-T-1 1/4	10 & 20	x		
G2	ISO 228	M33 x2	80	46	22	90	20	15	UEST-T-2	10 & 20	x		
G2	ISO 228	Flange 100	-	50	22	-	30	22	UEST-F-2	32	x		
G1/2	ISO 228	M33 x2	46	34	14	53	12	04	UEST-T-1/2ED	10 & 20		x	x
G3/4	ISO 228	M33 x2	46	36	16	53	16	04	UEST-T-3/4ED	10 & 20		x	x
G1 1/2	ISO 228	Flange 100	-	70	22	-	30	23	UEST-F-1 1/2	32			x

Threaded Adapter  
 UEST-T-xx



Flanged Adapter  
 UEST-F-xx

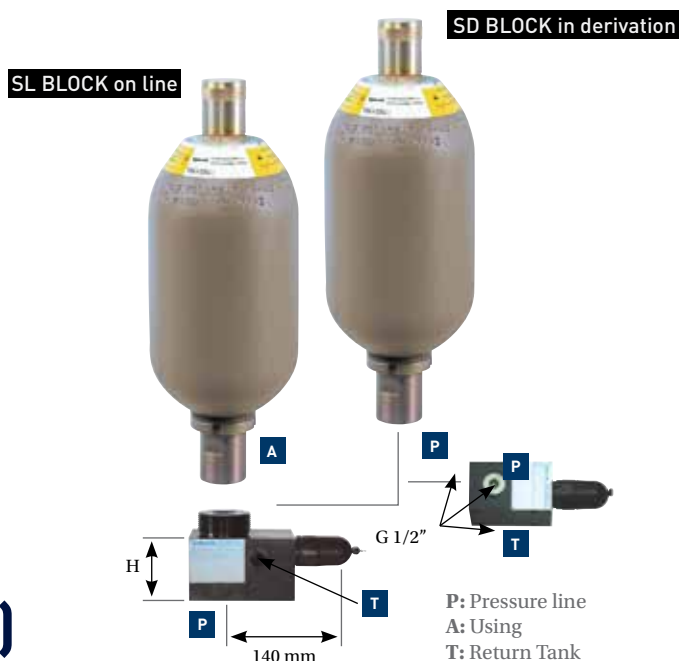


# Relief Valve Block SD/SL

Safety unit able to limit the pressure to the rating value of the accumulator using for the pressure test

Type	Connection accumulator side	H (mm)	A Using side	P Pressure line	T Return tank
SL 10	8	57	G 1/2"	G 1/2"	G 3/8"
SL 16	2	56	G 3/4"	G 3/4"	G 3/8"
SL 16	1	67	G1 1/4"	G1 1/4"	G 3/8"
SL 16	4	67	M40 x 1.5	M40 x 1.5	G 3/8"
SL 24	3	70	G2"	G2"	G 3/8"
SL 24	5	70	M50 x 150	M50 x 150	G 3/8"

Above dimensions are in mm and are subject to manufacturing tolerances.



## Type SL (assembly in line)

With rings in Viton All Fluids except Skydrol

Type	Connection accumulator side	Part Number
SL BLOCK on line	SL 10/8	3517608XXX2
	SL 16/1	3517091XXX2
	SL 24/3	3517073XXX2

## Type SD (assembly in derivation)

SD BLOCK	SD 24/0	3517060XXX2
----------	---------	-------------

xxx to be replaced with the relief valve set pressure in bar e.g.35176083502 for relief valve preset to 350 bar

# ECA & ECSA Series Safety Block

## TECHNICAL DATA CARBON STEEL SAFETY BLOCK (345 BAR)

**Maximum working pressure:** 345 bar

**Materials:** Carbon steel. All blocks are fully tested.

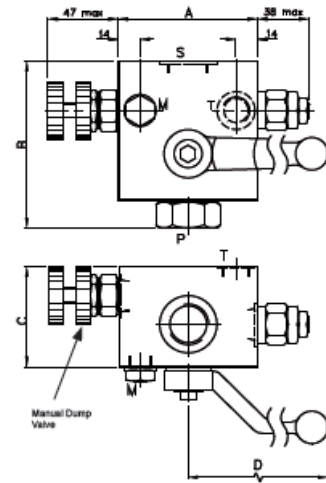
**Seals:** Nitrile fitted as standard. Viton and other options also available.

**Connections :**

- Pressure gauge connection (M port).
- Wide range of adaptors for accumulator connection.
- All G threads (BSP) to BS2779 1986. Performance data available.

**Other:**

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



## TECHNICAL DATA STAINLESS STEEL SAFETY BLOCK (345 BAR & 690 BAR)

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

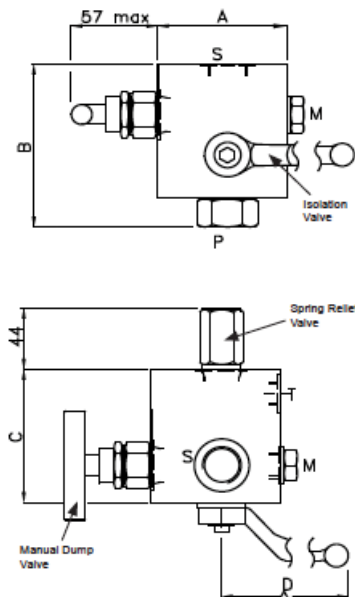
**Seals:** Nitrile fitted as standard. Viton and other options also available.

**Connections :**

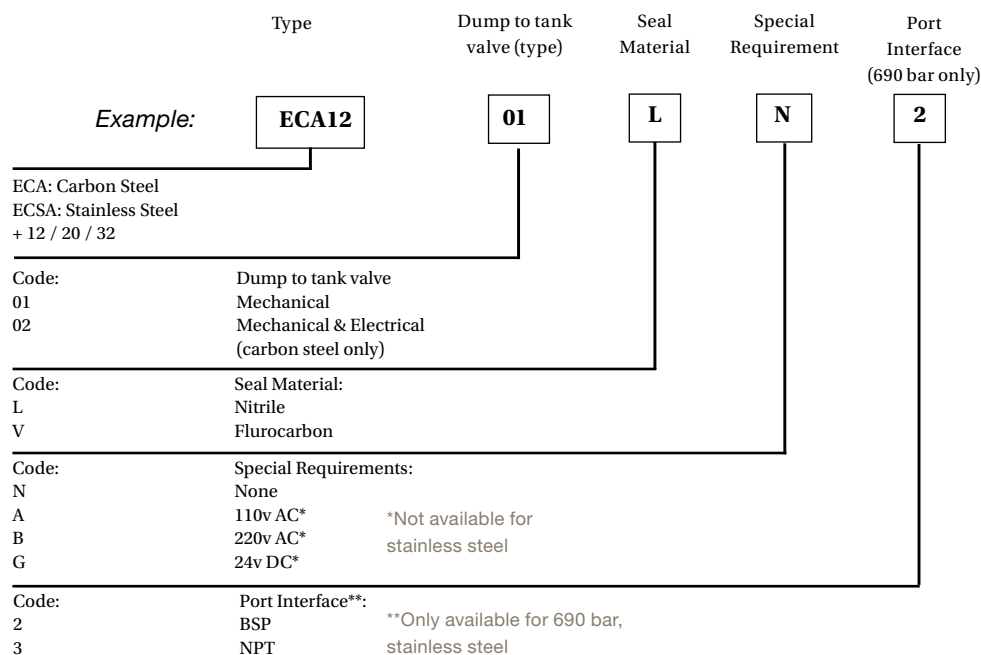
- Pressure gauge connection (M port).
- Wide range of adaptors for accumulator connection.
- All G threads (BSP) to BS2779 1986.
- For 760 bar only - All NPT to ANSI/ASME B.1.20.1 1983
- Performance data available.

**Other:**

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



# EC(S)A Series: How to order an ECA or ECSA Safety Block



## ECA, Carbon Steel, 345 Bar

Part Number	Port Sizes				Dimensions (mm - for standard (01) Safety Block)			
	S port Accumulator	P port process	T port tank	M port Gauge	A	B	C	D Handle Length
ECA12-01-L-N	G 1/2"	G 1/2"	G 1/4"	G 1/4"	76	93	60	115
ECA20-01-L-N	G 3/4"	G 3/4"	G 3/8"	G 1/4"	90	108	70	160
ECA32-01-L-N	G1 1/4"	G1 1/4"	G 3/8"	G 1/4"	90	131	90	300

## ECSA, Stainless Steel, 345 Bar

Part Number	Port Sizes				Dimensions (mm - for standard (01) Safety Block)			
	S port Accumulator	P port process	T port tank	M port Gauge	A	B	C	D Handle Length
ECSA12-01-L-N	G 1/2"	G 1/2"	G 1/4"	G 1/4"	65	94	76	115
ECSA20-01-L-N	G 3/4"	G 3/4"	G 3/8"	G 1/4"	70	108	90	160
ECSA32-01-L-N	G1 1/4"	G1 1/4"	G 3/8"	G 1/4"	90	131	105	300

## ECSA, Stainless Steel, 690 Bar

Part Number	Port Sizes				Dimensions (mm - for standard (01) Safety Block)			
	S port Accumulator	P port process	T port tank	M port Gauge	A	B	C	D Handle Length
ECSA12-01-L-N-2	G 1/2"	G 1/2"	G 1/4"	G 1/4"	70	94	85	115
ECSA12-01-L-N-3	1/2" NPT	1/2" NPT	1/4" NPT	1/4" NPT	70	94	85	115

• All NPT to ANSI/ASME B.1.20.1. 1983

• All G threads (BSP) to BS2779 1986

# Burst Disc Kit

**Up to 650 bar - CE Marked**

Parker burst discs are available for the EHV range of accumulators, designed adaptor, available in carbon steel or stainless steel.

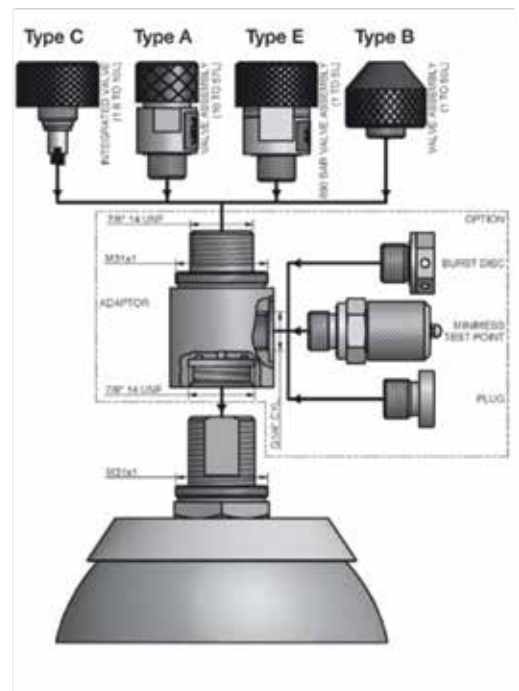
Burst discs are a safety device which release the gas pressure independent of the pressure being caused by a fire or a failure of other safety equipment in the system.

This is a secondary safety device and it should be set higher than the normal hydraulic safety devices in the system.

This material is delivered with the kit including burst disc, o-ring, and label.

Complete kit of burst disc (1) includes adaptor and label (2), o-ring (3), burst disc (4)

For installation, please consult user manual delivered with declaration of manufacturing of conformity (3.1 certificate)



# Burst Disc Kit

Type	Carbon Steel Kit	Stainless Steel Kit	Burst Pressure in bar at temperature					P/N Stainless Steel Burst Disc (only)
	Part Number	Part Number	80°C	40°C*	20°C*	0°C*	- 20°C*	
Burst Disc Kit G¼ 230 B	11172700223	11172701723	230	240	247	254	264	11171700000
Burst Disc Kit G¼ 250 B	11172800223	11172801723	250	261	269	277	288	11171800000
Burst Disc Kit G¼ 275 B	11172900223	11172901723	275	287	296	305	317	11171900000
Burst Disc Kit G¼ 290 B	11173000223	11173001723	290	303	312	321	334	11172000000
Burst Disc Kit G¼ 300 B	11173100223	11173101723	300	313	323	333	346	11172100000
Burst Disc Kit G¼ 360 B	11173200223	11173201723	360	375	387	399	414	11172200000
Burst Disc Kit G¼ 385 B	11173300223	11173301723	385	402	414	426	443	11172300000
Burst Disc Kit G¼ 420 B	11173400223	11173401723	420	438	452	466	484	11172400000
Burst Disc Kit G¼ 480 B	11173500223	11173501723	480	501	516	531	552	11172500000
Burst Disc Kit G¼ 650 B	11173600223	11173601723	650	678	699	720	748	11172600000

\* Temp ranges are shown as indicative tolerances only. Actual performance would require testing to confirm

# Gas Bottles

up to 350 bar

## IN THIS SECTION

### Gas Bottles

BA EHP Series, 250 bar, 25 to 200 Litres, ø250	204
BA EHP Series, 250 bar, 25 to 500 Litres, ø350	205
BA EHP Series, 250 bar, 125 to 1000 Litres, ø540	206
BA EHP Series, 350 bar, 125 to 1000 Litres, ø540	207
BA EHB Series, 330 bar, 10 to 57 Litres	208
BA EHP Series, 350 bar, 1.6 to 10 Litres	210
BA EHP Series, 267 bar, 150 to 500 Litres	212
EHB Series, 350 bar & 3050 psi (APP22)	213



Sizing Questionnaires	Accumulator Stations	Gas Bottles	Accessories	Diaphragms	Attenuators	Pulsation Dampers	Piston Accumulators				Bladder Accumulators		
							EHP	DC	AP	A	ACP	O&G	Regulations

# BA EHP Series Tube & Cap type

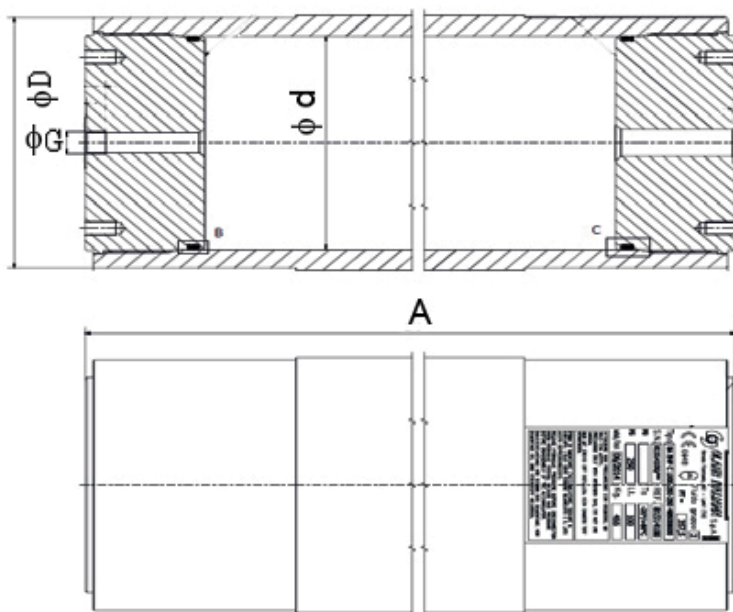
## Series 250 bar, 25 to 200 Litres, Ø 250

Standard Version (**Carbon Steel** shell/seals for mineral oils) temperature from - 20° up to 80°C.  
 According to PED 2014/68/EU

Type	Part number	Effective Gas vol. Litres	Max. Working pressure bar	Max Weight kg	Dimensions in mm					Seal Kit
					A Max. Length	C	øD max	d	øG connection	
BA EHP C 0250-250-250	815EHPOC0252525	25	250	260	891	45	298.50	250	G 2"	8220000000003
BA EHP C 0300-250-250	815EHPOC0302525	30	250	275	992	45	298.50	250	G 2"	8220000000003
BA EHP C 0400-250-250	815EHPOC0402525	40	250	310	1196	45	298.50	250	G 2"	8220000000003
BA EHP C 0500-250-250	815EHPOC0502525	50	250	345	1401	45	298.50	250	G 2"	8220000000003
BA EHP C 0600-250-250	815EHPOC0602525	60	250	375	1606	45	298.50	250	G 2"	8220000000003
BA EHP C 0700-250-250	815EHPOC0702525	70	250	410	1811	45	298.50	250	G 2"	8220000000003
BA EHP C 0800-250-250	815EHPOC0802525	80	250	445	2011	45	298.50	250	G 2"	8220000000003
BA EHP C 0900-250-250	815EHPOC0902525	90	250	475	2216	45	298.50	250	G 2"	8220000000003
BA EHP C 1000-250-250	815EHPOC1002525	100	250	510	2421	45	298.50	250	G 2"	8220000000003
BA EHP C 2000-250-250	815EHPOC2002525	200	250	660	4458	45	298.50	250	G 2"	8220000000003

Available in ASME VIII Division I, U STAMPED, in that case BA EHP C ---> BA IHP C

\*\* From 07/2016 PED 97/23/EC becomes PED 2014/68/EU





# BA EHP Series Tube & Cap type

## Series 250 bar, 25 to 500 Litres, Ø 350

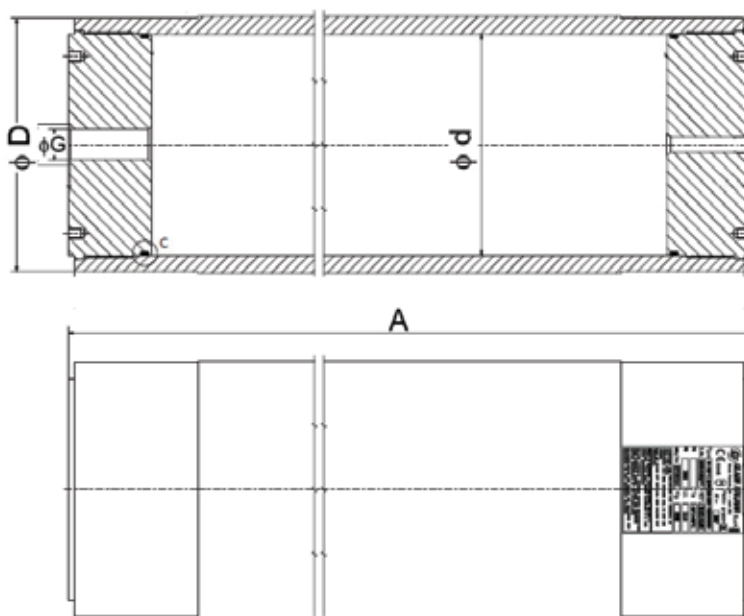
Standard Version (Carbon Steel shell/seals for mineral oils) temperature from - 15° up to 100°C.

According to PED 2014/68/EU (\*\*)

Type	Part number	Effective Gas vol. Litres	Max. Working pressure bar	Max Weight kg	Dimensions in mm					
					A Max. Length	C	øD max	d	øG connection	Seal Kit
BA EHP C 0300-250-350	815EHPOC0302535	30	250	445	818	45	406.4	350	G 2"	822000000003
BA EHP C 0300-250-350	815EHPOC0402535	40	250	472	922	45	406.4	350	G 2"	822000000003
BA EHP C 0500-250-350	815EHPOC0502535	50	250	500	1026	45	406.4	350	G 2"	822000000003
BA EHP C 0500-250-350	815EHPOC1002535	100	250	637	1546	45	406.4	350	G 2"	822000000003
BA EHP C 1000-250-350	815EHPOC1502535	150	250	772	2066	45	406.4	350	G 2"	822000000003
BA EHP C 2000-250-350	815EHPOC2002535	200	250	912	2586	45	406.4	350	G 2"	822000000003
BA EHP C 2500-250-350	815EHPOC2502535	250	250	1048	3106	45	406.4	350	G 2"	822000000003
BA EHP C 3000-250-350	815EHPOC3002535	300	250	1185	3626	45	406.4	350	G 2"	822000000003
BA EHP C 3500-250-350	815EHPOC3502535	350	250	1322	4146	45	406.4	350	G 2"	822000000003
BA EHP C 4000-250-350	815EHPOC4002535	400	250	1429	4664	45	406.4	350	G 2"	822000000003
BA EHP C 4500-250-350	815EHPOC4502535	450	250	1565	5183	45	406.4	350	G 2"	822000000003
BA EHP C 5000-250-350	815EHPOC5002535	500	250	1702	5703	45	406.4	350	G 2"	822000000003

Available in ASME VIII Division I, U STAMPED, in that case BA EHP C ----> BA IHP C

\*\* From 07/2016 PED 97/23/EC becomes PED 2014/68/EU



# BA EHP Series 250 bar, 125 to 1000 Litres, Ø 540

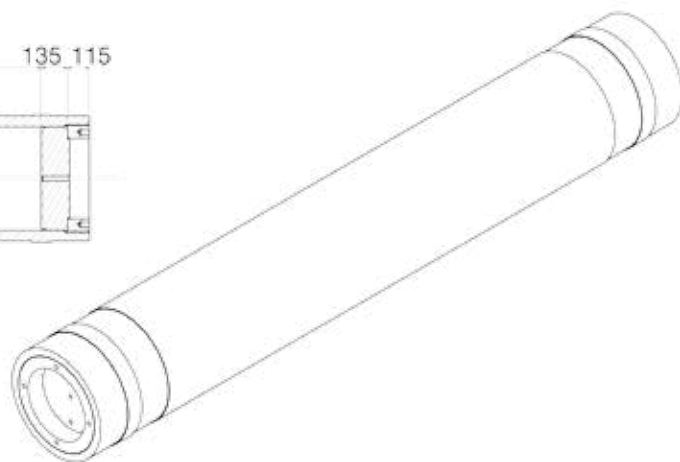
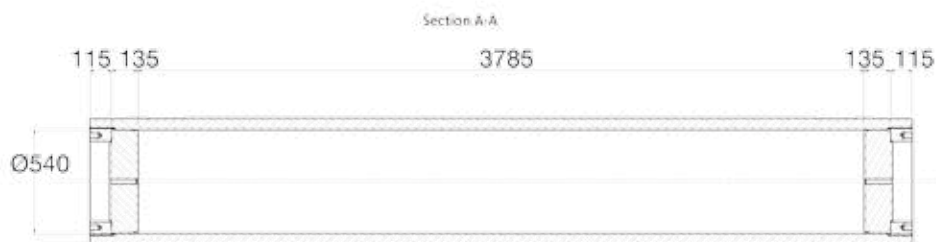
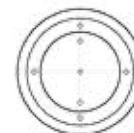
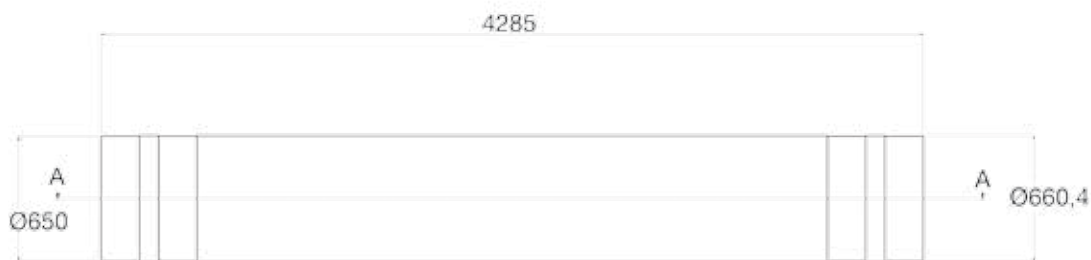
Standard Version (Carbon Steel shell) temperature from - 15° up to 100°C According to PED 2014/68/EU (\*\*)

Product Prices & Dimensions

Type	Part number	Effective Gas vol. Litres	Design P bar	Weight kg	L mm	D mm	d mm	Std Fluid opening	Seal Kit
BA EHP C 1250-250-540	815BAEHPOC1252554	125	250	1546	1530	650	540	G 3"	8220000000018
BA EHP C 2500-250-540	815BAEHPOC2502554	250	250	2070	2001	650	540	G 3"	8220000000018
BA EHP C 3000-250-540	815BAEHPOC3002554	300	250	2546	2696	650	540	G 3"	8220000000018
BA EHP C 4000-250-540	815BAEHPOC4002554	400	250	3000	3154	650	540	G 3"	8220000000018
BA EHP C 5000-250-540	815BAEHPOC5002554	500	250	3322	3472	650	540	G 3"	8220000000018
BA EHP C 6000-250-540	815BAEHPOC6002554	600	250	3711	3861	650	540	G 3"	8220000000018
BA EHP C 7000-250-540	815BAEHPOC7002554	700	250	4099	4249	650	540	G 3"	8220000000018
BA EHP C 8000-250-540	815BAEHPOC8002554	800	250	4487	4637	650	540	G 3"	8220000000018
BA EHP C 9000-250-540	815BAEHPOC9002554	900	250	4875	5025	650	540	G 3"	8220000000018
BA EHP C 10000-250-540	815BAEHPOC10002554	1000	250	5263	5413	650	540	G 3"	8220000000018

Available in ASME VIII Division I, U STAMPED, in that case BA EHP C ---> BA IHP C

\*\* From 07/2016 PED 97/23/EC becomes PED 2014/68/EU



# BA EHP Series 350 bar, 125 to 1000 Litres, Ø 540

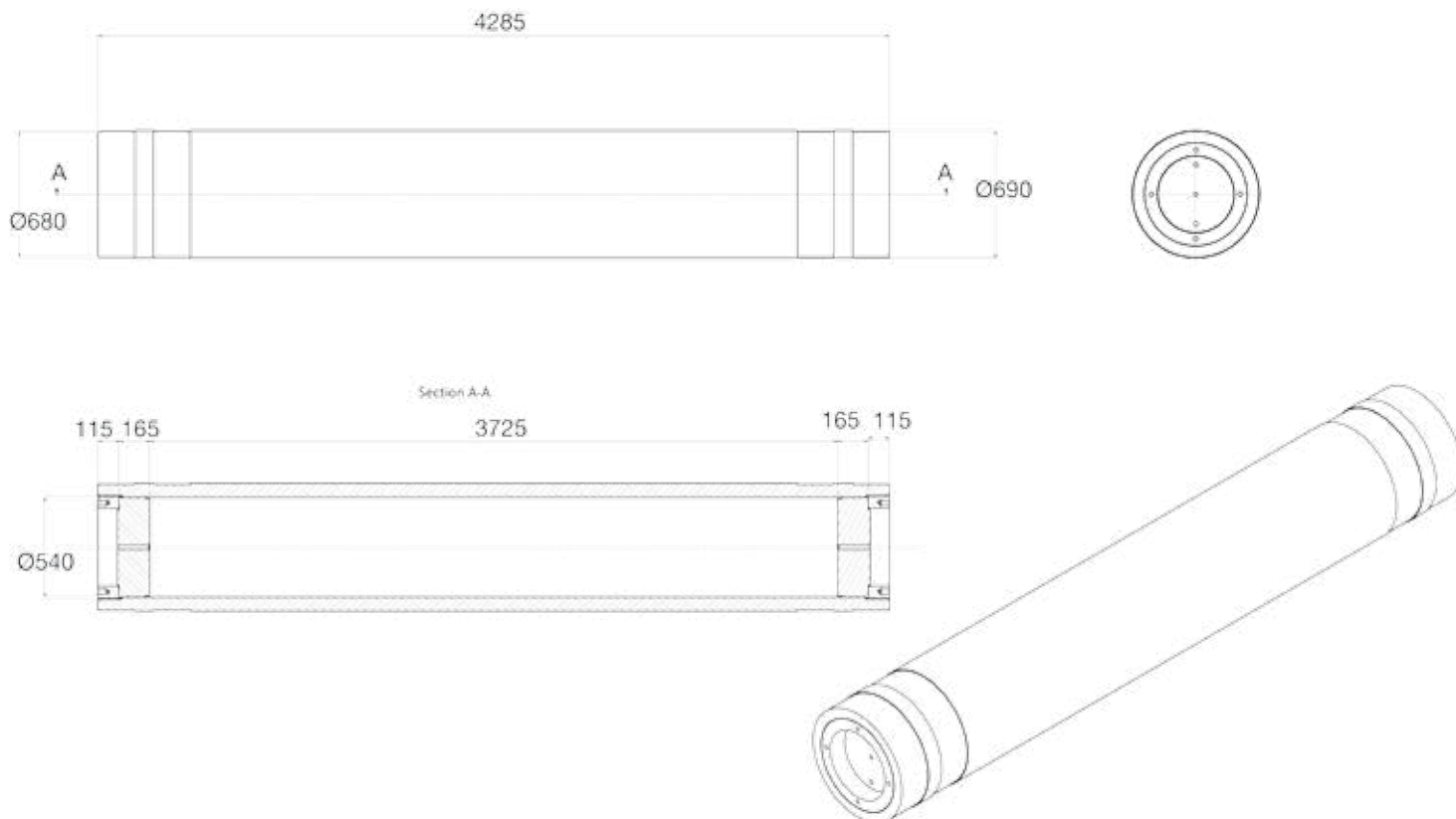
Standard Version (Carbon Steel shell) temperature from - 15° up to 100°C According to PED 2014/68/EU (\*\*)

## Product Prices & Dimensions

Type	Part number	Effective Gas vol. Litres	Design P bar	Weight kg	L mm	D mm	d mm	Std Fluid opening	Seal Kit
BA EHP C 1250-350-540	815BAEHPOC1253554	125	350	1663	1730	730	540	G 3"	8220000000018
BA EHP C 2500-350-540	815BAEHPOC2503554	250	350	2265	2201	730	540	G 3"	8220000000018
BA EHP C 3000-350-540	815BAEHPOC3003554	300	350	2813	2896	730	540	G 3"	8220000000018
BA EHP C 4000-350-540	815BAEHPOC4003554	400	350	3335	3354	730	540	G 3"	8220000000018
BA EHP C 5000-350-540	815BAEHPOC5003554	500	350	3705	3672	730	540	G 3"	8220000000018
BA EHP C 6000-350-540	815BAEHPOC6003554	600	350	4153	4061	730	540	G 3"	8220000000018
BA EHP C 7000-350-540	815BAEHPOC7003554	700	350	4599	4449	730	540	G 3"	8220000000018
BA EHP C 8000-350-540	815BAEHPOC8003554	800	350	5045	4837	730	540	G 3"	8220000000018
BA EHP C 9000-350-540	815BAEHPOC9003554	900	350	5491	5225	730	540	G 3"	8220000000018
BA EHP C 10000-350-540	815BAEHPOC10003554	1000	350	5937	5613	730	540	G 3"	8220000000018

Available in ASME VIII Division I, U STAMPED, in that case BA EHP C ---> BA IHP C

\*\* From 07/2016 PED 97/23/EC becomes PED 2014/68/EU



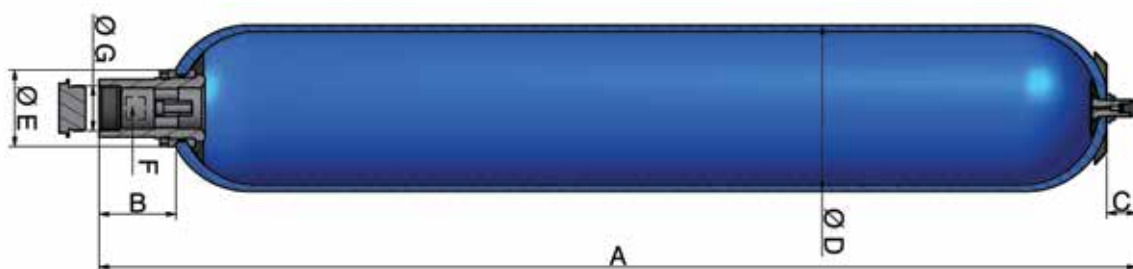
## BA EHB Series, 10 to 57 Litres, 330 bar

Standard Version (Carbon Steel shell) for mineral oils. According to PED 2014/68/EU (\*\*), EN14359 Fluid Group IV Product Prices, Part numbers, Accessories, Dimensions

Type	Part number	Complete Repair Kit	
		Model Part number	
EHB 10-330/90	10949501125	KIT EHB 10-330/90 19060401125	
EHB 12-330/90	10993401125	KIT EHB 12-330/90 19060401125	
EHB 20-330/90	10933901125	KIT EHB 20-330/90 19060401125	
EHB 24.5-330/90	10943501125	KIT EHB 24.5-330/90 19060401125	
EHB 32-330/90	10935901125	KIT EHB 32-330/90 19060401125	
EHB 42-330/90	11181801125	KIT EHB 42-330/90 <a href="#">Consult Division</a>	
EHB 50-330/90	11137501125	KIT EHB 50-330/90 19060401125	
EHB 57-330/90	11181901125	KIT EHB 57-330/90 19060401125	

\*\* From 07/2016 PED 97/23/EC becomes PED 2014/68/EU

Type	Effective Gas vol. Litres	Max. Working pressure (PS) bar	Max Flow Rate lt/min	Temp. Range <sup>1</sup> min/max (°C)	Max Weight kg	Top connection	Dimensions in mm						
							A max Length	B	C	ØD max	ØE	F on flats	ØG connection
EHB 10-330/90	9.2	330	900	-40/+80	29	1/2" 20 UNF	554	103	40	226	101	70	G 2"
EHB 12-330/90	11	330	900	-40/+80	34	1/2" 20 UNF	654	103	40	226	101	70	G 2"
EHB 20-330/90	17.8	330	900	-40/+80	46	1/2" 20 UNF	864	103	40	226	101	70	G 2"
EHB 24.5-330/90	22.5	330	900	-40/+80	53	1/2" 20 UNF	999	103	40	226	101	70	G 2"
EHB 32-330/90	32	330	900	-40/+80	76	1/2" 20 UNF	1387	103	40	226	101	70	G 2"
EHB 42-330/90	42	330	900	-40/+80	82	1/2" 20 UNF	1529	103	40	226	101	70	G 2"
EHB 50-330/90	48.5	330	900	-40/+80	105	1/2" 20 UNF	1903	103	40	226	101	70	G 2"
EHB 57-330/90	51	330	900	-40/+80	110	1/2" 20 UNF	1999	103	40	226	101	70	G 2"



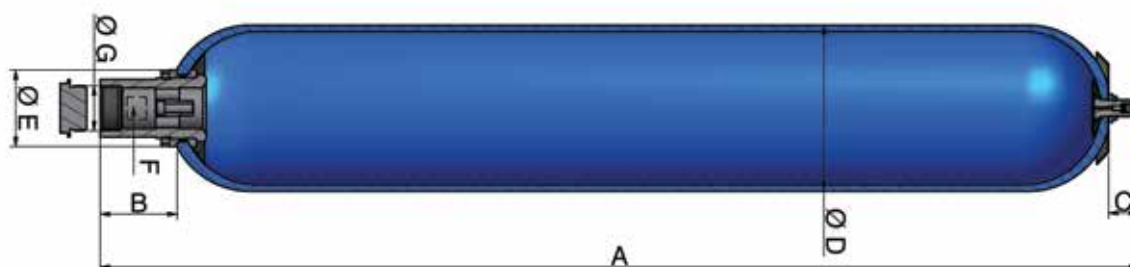
## BA EHB Series, 1.6 to 10 Litres, 350 bar

Standard Version (Carbon Steel shell) for mineral oils According to PED 2014/68/EU (\*\*)

Type	Part number	Complete Repair Kit Part number
EHB 1.6-350/90*	11106501125	KIT EHB 1.6-350/90* 19067801125
EHB 2.5-350/90*	10940901125	KIT EHB 2.5-350/90* 19067901125
EHB 5-350/90**	10941001147	KIT EHB 5-350/90 19067901125
EHB 4-350/90**	10987101125	KIT EHB 4-350/90** 19068001125
EHB 6-350/90**	10954101125	KIT EHB 6-350/90** 19068001125
EHB 10-350/90***	10936001125	KIT EHB 10-350/90*** 19068001125

\*\* From 07/2016 PED 97/23/EC becomes PED 2014/68/EU

Type	Effective Gas vol. Litres	Max. Working pressure (PS) bar	Max Flow Rate lt/min	Temp. Range <sup>1</sup> min/max (°C)	Max Weight kg	Top connection	Dimensions in mm						
							A max Length	B	C	øD max	øE	F on flats	øG connection
EHB 1.6-350/90*	16	350	240	-40/+80	7	1/2" 20 UNF	414	54	40	116	50	32	G 3/4"
EHB 2.5-350/90*	2.4	350	450	-40/+80	10	1/2" 20 UNF	521	66	40	116	68	50	G 1 1/4"
EHB 5-350/90**	5	350	450	-40/+80	16	1/2" 20 UNF	870	66	40	116	68	50	G 1 1/4"
EHB 4-350/90**	3.7	350	450	-40/+80	14	1/2" 20 UNF	406	65	40	170	68	50	G 1 1/4"
EHB 6-350/90**	6	350	450	-40/+80	19	1/2" 20 UNF	532	65	40	170	68	50	G 1 1/4"
EHB 10-350/90***	10	350	450	-40/+80	29	1/2" 20 UNF	797	65	40	170	68	50	G 1 1/4"



# BA series, Forged Shell Type

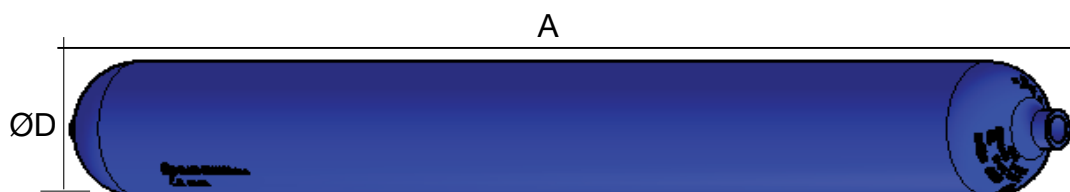
## 150 to 500 Litres, 267 bar

Forged carbon steel shell temperature from - 40° up to 80°C

According to PED 2014/68/EU (\*\*), ASME CODE SEC VIII DIV.1,SELO,CUTR

Type Part number	Regulation	Effective Gas vol. Litres	Max. Working pressure (PS) bar	Max. Working essure (PS) psi APP22	A Maxi Lenght mm	øD max mm	Bottom con- nection	Top connection
BA150-267 0957035CAS3710665OA	CE ASME SELO CUTR	150	267	3872	2050	356	G 3/4"	G1"1/2
BA320-267 0957035CAS3610665OB	CE ASME SELO CUTR	320	267	3872	3200	406	G 3/4"	G1"1/2
BA500-267 0957035CAS3610665OC	CE ASME SELO CUTR	500	267	3872	4850	406	G 3/4"	G1"1/2

\*\* From 07/2016 PED 97/23/EC becomes PED 2014/68/EU





# BA series, Forged Shell Type

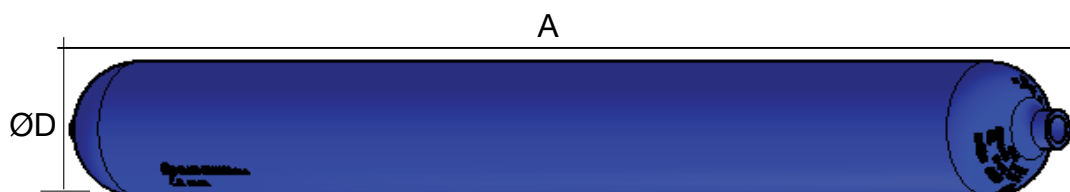
## 50 to 100 Litres, 350 bar & 3050 PSI (APP22)

Forged Carbon Steel shell temperature from -40° up to 80°C.

According to PED 2014/68/EU (\*\*), ASME CODE SEC VIII DIV.1,SELO

Type Part number	Regulation	Effective Gas vol. Litres	Max. Working pressure (PS) bar	Max. Working essure (PS) psi APP22	Max Weight kg	A Maxi Length mm	øD max mm	Bottom connection	Top connection
BA50-360/94 0957036ASMECE1100OIT	CE ASME	496	360	4000	94	1800	222	G 3/4"	G1" 1/2
BA 50-350/86 0957035CAS35302653	CE ASME SELO	507	350	3000	100	1800	221	G 3/4"	G1" 1/2
BA 75-350/86 0957035CAS35302654	CE ASME SELO	732	350	3000	134	1720	275	G 3/4"	G1" 1/2
BA 100-350/86 0957035CAS35302652	CE ASME SELO	979	350	3000	180	1420	360	G 3/4"	G1" 1/2

\*\* From 07/2016 PED 97/23/EC becomes PED 2014/68/EU





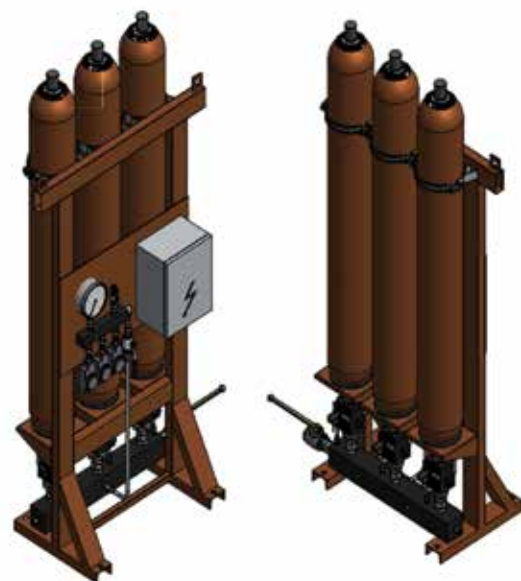
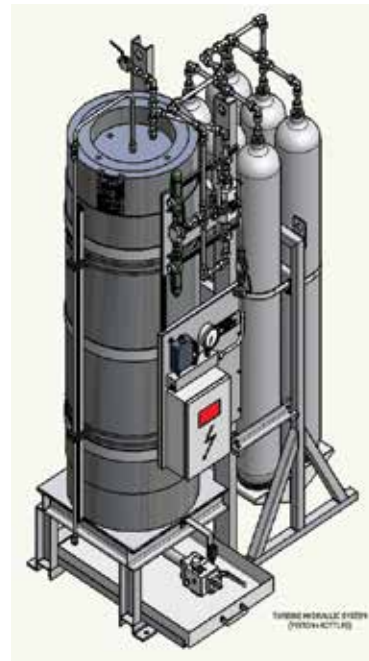
# Accumulator Systems

## Gas Bottles and Pistons

### IN THIS SECTION

#### Accumulator Systems

Gas Bottles	216
Pistons	218

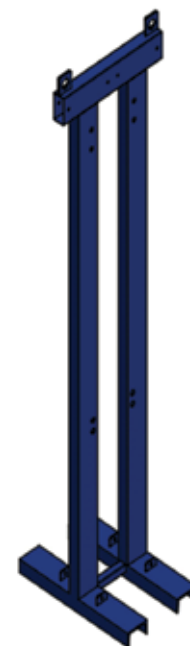


Sizing Questionnaires	Accumulator Stations	Gas Bottles	Accessories	Diaphragms	Attenuators	Pulsation Dampers	Piston Accumulators					Bladder Accumulators		
							EHP	DC	AP	A	ACP	O&G	Regulations	EHV

# Accumulator Systems - Gas Bottles

Standard version (**Carbon Steel** shell) also available in Stainless Steel  
*Part numbers, Dimensions*

Type Part number	Number of accumulators	Volume Litres	Weight kg	L mm	I mm	H mm	Base accumulator bracket + neck
Skid MNF 2x BA 50 litres	2	100	30	350	550	2000	•
Skid MNF 3x BA 50 litres	3	150	42	550	550	2000	•
Skid MNF 4x BA 50 litres	4	200	30	350	550	2000	•
Skid MNF 6x BA 50 litres	6	300	42	550	550	2000	•



Type	Accumulator Brackets	Painted external RAL 5005	Special painting or external treatments	Hooks for lifting	Forklift bar for lifting	Gas bottle tube connections in CS	Gas bottle tube connections in CS
Skid MNF 2x BA 50 litres	•	•	○	•	○	○	○
Skid MNF 3x BA 50 litres	•	•	○	•	○	○	○
Skid MNF 4x BA 50 litres	•	•	○	•	○	○	○
Skid MNF 6x BA 50 litres	•	•	○	•	○	○	○

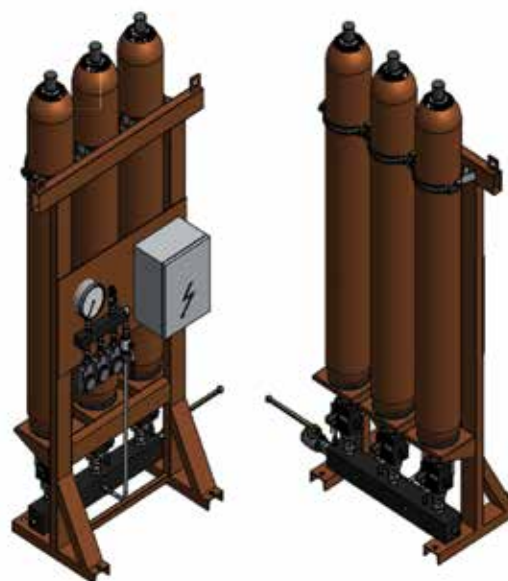
• Included

○ Available on request

Drain for gas bottle not available

Dimensions L, I and D are nominal.

Other customized version available on request



# Accumulator Systems - Gas Bottles

Standard version (**Carbon Steel** shell) also available in Stainless Steel  
*Part numbers, Dimensions*

Type Part number	Number of accumulators	Volume Litres	Weight kg	L mm	I mm	H mm	Base accumulator bracket + neck
Skid STD 4x BA 50 litres	4	200	36	570	680	1630	20109200050
Skid STD 6x BA 50 litres	6	300	39	802	680	1630	20109200050
Skid STD 8x BA 50 litres	8	400	42	1,034	680	1630	20109200050
Skid STD 10x BA 50 litres	10	500	45	1,266	680	1630	20109200050
Skid STD 12x BA 50 litres	12	600	48	1,498	680	1630	20109200050



Type	Accumulator Brackets	Painted external RAL 5005	Special painting or external treatments	Hooks for lifting	Forklift bar for lifting	Gas bottle tube connections in CS	Gas bottle tube connections in CS
Skid STD 4x BA 50 litres	●	●	○	●	○	○	○
Skid STD 6x BA 50 litres	●	●	○	●	○	○	○
Skid STD 8x BA 50 litres	●	●	○	●	○	○	○
Skid STD 10x BA 50 litres	●	●	○	●	○	○	○
Skid STD 12x BA 50 litres	●	●	○	●	○	○	○

Drain for gas bottle not available

- Included
- Available on request

Dimensions L, I and D are nominal.  
 Other customized version available on request



# Accumulator Systems - Pistons

Standard version (**Carbon Steel** shell) also available in Stainless Steel  
 According to CE EN 1090-1  
*Part numbers, Dimensions*

Type Part number	Number of accumulators	Volume Litres	Weight kg	L mm	I mm	H mm	Base accumulator bracket + neck
Skid EHP xxx/xx/250	1	250	98	500	450	2000	●
Skid EHP xxx/xx/350	1	350	117	668	500	2100	●
Skid EHP xxx/xx/540	1	540	160	670	550	2300	●

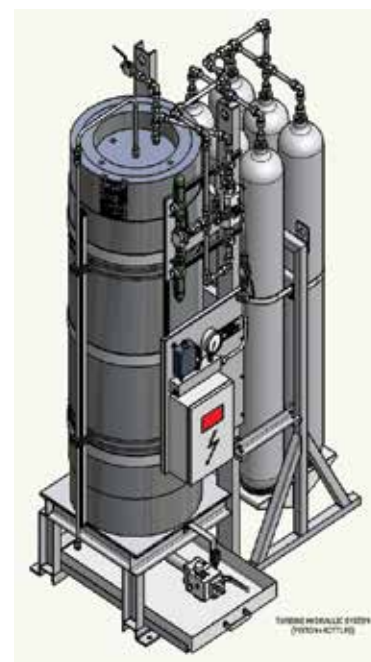


Type	Accumulator Brackets	Painted external RAL 5005	Special painting or external treatments	Hooks for lifting	Forklift bar for lifting	Gas bottle tube connec- tions in CS	Gas bottle tube connections in CS	Control panel plate
Skid EHP xxx/xx/250	●	●	○	●	○	○	○	○
Skid EHP xxx/xx/350	●	●	○	●	○	○	○	○
Skid EHP xxx/xx/540	●	●	○	●	○	○	○	○

Drain for gas bottle not available

- Included
- Available on request

Dimensions L, I and D are nominal.  
 Other customized version available on request



**DATA SHEET Application : ENERGY STORAGE**

Date:

<b>Company Name:</b>	<b>Contact Name:</b>
<b>Market Segment:</b> <i>expl. O&amp;G, Distribution, Marine, Industrial, Offshore, Service</i>	<b>E-mail:</b>
<b>Address:</b>	<b>Telephone:</b>
<b>Website:</b>	

**SIZING DATA**

<b>Describe application:</b> Please attached system scheme			
<b>Fluid Type:</b>			
<b>Volume of Fluid to be restored:</b>			Ltr.
<b>Dual Time (Charge-Stabilisation-Discharge):</b>			Sec
<b>Maximum Working Pressure (P2):</b>			Bar
<b>Minimum Working Pressure (P1):</b>			Bar
<b>Fluid Temperature during Operation:</b>	Min. °C		Max. °C
<b>Certification:</b>			

**TECHNICAL SPECIFICATION OR SPECIAL REQUIREMENTS HAVE TO BE FILLED IN**

- Material options :
- Special Port Connections and adaptors :
- Special Coatings :
- End user country :

If there is no special requirement, we will offer standard connection and material according to the fluid and PED 2014/68/EU

**DATA SHEET**  
**TO DETERMINE THERMAL EXPANSION IN A CLOSED CIRCUIT**

<b>Company Name:</b>	<b>Contact Name:</b>
<b>Market Segment:</b> <i>expl. O&amp;G, Distribution, Marine, Industrial, Offshore, Service</i>	<b>E-mail:</b>
<b>Address:</b>	<b>Telephone:</b>
<b>Website:</b>	

**SIZING DATA**

<b>Fluid Type:</b>			
<b>Circuit Fluid Volume:</b>			Ltr.
<b>Ambiant temperature:</b>			°C
<b>Circuit Fluid Temperature during Operation:</b>	Min. °C		Max. °C
<b>Maximum Working Pressure (P2):</b>			Bar
<b>Minimum Working Pressure (P1):</b>			Bar
<b>Fluid Thermal Expansion Coefficient:</b>			$\beta$
<b>Certification:</b>			
Note : The accumulator is supposed to be subject to the same temperature variation of the circuit . Otherwise, either away from an an accumulator or by installation of a lyre dissipating calories.			

**TECHNICAL SPECIFICATION OR SPECIAL REQUIREMENTS HAVE TO BE FILLED IN**

- Material options :
- Special Port Connections and adaptors :
- Special Coatings :
- End user country :

If there is no special requirement, we will offer standard connection and material according to the fluid and PED 2014/68/EU



**DATA SHEET Application : SURGE ARRESTOR / WATERHAMMER** (2 pages)

<b>Company Name:</b>	<b>Contact Name:</b>
<b>Market Segment:</b> <i>expl. O&amp;G, Distribution, Marine, Industrial, Offshore, Service</i>	<b>E-mail:</b>
<b>Address:</b>	<b>Telephone:</b>
<b>Website:</b>	

**SIZING DATA / DONNEES D'ENTREE**

<b>Describe application:</b>			
Mandatory system scheme attached			
<b>Pump Technology:</b>			<b>Moment of inertia</b> Kg. m <sup>2</sup>
<b>Pump Flow Rate:</b>			l/min
<b>Pump Start-Up *: →</b>	<b>Time to maximal flow:</b>		Sec
<b>Pump Shut-Off *: →</b>	<b>Time to 0 flow rate:</b>		Sec
<b>Valve Opening *: →</b>	<b>Opening valve time:</b>		Sec
<b>Valve Closing *: →</b>	<b>Closing valve time:</b>		Sec
<b>Valve technology :</b>	<b>Ball valve</b>  <b>Butterfly valve</b>  <b>Knife gate valve</b>		
<b>Fluid Type:</b>			
<b>Fluid Temperature:</b>			°C

\* Choose your application case

<b>Pipe Material:</b>	
<b>Pipe Length:</b>	m
<b>Pipe Internal Diameter:</b>	mm
<b>Pipe Thickness :</b>	mm
<b>Maximum Allowable Pressure for Pipe:</b>	Bar
<b>Level difference between pump and valve:</b>	m
<b><math>\Delta P</math> between pump and valve:</b>	Bar
<b>Pressure at the Pump/Valve:</b>	Bar
<b>Pressure at Maximum Flow Rate:</b>	Bar
<b>Pressure at 0 Flow Rate:</b>	Bar
<b>Flow Rate:</b>	L/min
<b>Minimum Allowable Working Pressure:</b>	Bar
<b>Certification:</b>	
Note: If possible enclose also the schematic of valve closure sequence or pump start-up/shutt-off sequence.	

**TECHNICAL SPECIFICATION OR SPECIAL REQUIREMENTS HAVE TO BE FILLED IN**

- Material options
- Special Port Connections and adaptors
- Special Coatings
- End user country

If there is no special requirement, we will offer standard connection and material according to the fluid and PED 97/23/EC.

(\*\*) From 07/2016 PED 97/23/EC becomes PED 2014/68/EU

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**DATA SHEET Application : PULSATION DAMPER FOR PUMP PULSATION**

Date:

<b>Company Name:</b>	<b>Contact Name:</b>
<b>Market Segment:</b> <i>expl. O&amp;G, Distribution, Marine, Industrial, Offshore, Service</i>	<b>E-mail:</b>
<b>Address:</b>	<b>Telephone:</b>
<b>Website:</b>	

**SIZING DATA**

<b>Fluid Type:</b>	
<b>Type of Pump:</b>	<input type="checkbox"/> Single Acting <input type="checkbox"/> Dual Acting
<b>Number of Elements:</b>	<input type="checkbox"/> Pistons <input type="checkbox"/> Vanes
<b>Pump Rotation Speed:</b>	Rpm <b>Piston Stroke : <i>Piston Area</i> :</b> mm mm <sup>2</sup>
<b>Flow Rate:</b>	L/min.
<b>Requested Residual Pulse:</b>	<input type="checkbox"/> +/-2,5% <input type="checkbox"/> +/- 5%
<b>Working Temperature:</b>	°C
<b>Working Pressure:</b>	Bar
<b>Viscosity at Working Temperature:</b>	Cst
<b>Allowable Pressure Drop <math>\Delta P</math> :</b>	Bar

**Pipes dimensions**

<b>Ø ca Internal Pipe Diameter:</b>	m m
<b>Ø c Internal Pipe Diameter:</b>	m m
<b>Lc Pipe Length:</b>	m m
<b>Certification:</b>	



**TECHNICAL SPECIFICATION OR SPECIAL REQUIREMENTS HAVE TO BE FILLED IN**

- Material options :
- Special Port Connections and adaptors :
- Special Coatings :
- End user country :

If there is no special requirement, we will offer standard connection and material according to the fluid

Архангельск (8182)63-90-72  
Астана (7172)727-132  
Астрахань (8512)99-46-04  
Барнаул (3852)73-04-60  
Белгород (4722)40-23-64  
Брянск (4832)59-03-52  
Владивосток (423)249-28-31  
Волгоград (844)278-03-48  
Вологда (8172)26-41-59  
Воронеж (473)204-51-73  
Екатеринбург (343)384-55-89  
Иваново (4932)77-34-06  
Ижевск (3412)26-03-58  
Иркутск (395)279-98-46  
Казань (843)206-01-48  
Калининград (4012)72-03-81  
Калуга (4842)92-23-67  
Кемерово (3842)65-04-62  
Киров (8332)68-02-04  
Краснодар (861)203-40-90  
Красноярск (391)204-63-61  
Курск (4712)77-13-04  
Липецк (4742)52-20-81  
Киргизия (996)312-96-26-47  
Магнитогорск (3519)55-03-13  
Москва (495)268-04-70  
Мурманск (8152)59-64-93  
Набережные Челны (8552)20-53-41  
Нижний Новгород (831)429-08-12  
Новокузнецк (3843)20-46-81  
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Орел (4862)44-53-42  
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Сочи (862)225-72-31  
Ставрополь (8652)20-65-13  
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Тверь (4822)63-31-35  
Томск (3822)98-41-53  
Тула (4872)74-02-29  
Тюмень (3452)66-21-18  
Ульяновск (8422)24-23-59  
Уфа (347)229-48-12  
Хабаровск (4212)92-98-04  
Челябинск (351)202-03-61  
Череповец (8202)49-02-64  
Ярославль (4852)69-52-93

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