

## 6.1.1 TECHNICAL DATA

**MAX OPERATING PRESSURE (PS):** 360 bar

**PRESSURE TEST (PT):** 1.43 x PS

**NOMINAL CAPACITIES:** 52 - 75 litres

**WORKING TEMPERATURE:** -40 ÷ +150 °C

**BODY MATERIAL:** - carbon steel shell painted with rust inhibitor RAL 8012  
- nickel coating 25 - 40 µ

**FLUID PORT CONNECTION:** 3/4" BSP ISO 228 and  
1" BSP ISO 228

**WEIGHT:** see Table 6.1c

## 6.1.2 DESCRIPTION

Additional bottles type B consist of a seamless cylindrical pressure vessel made of high-tensile steel. They have one connection of 3/4" BSP ISO 228 and one of 1" BSP ISO 228.

The additional bottles are used to take in and store nitrogen to increase the gas volume in the accumulator station (with bladder or piston accumulator). This means that smaller accumulators can be used for the same gas volume and costs can be reduced. EPE offers a wide selection of bottles type, such as forged "B" version, shell of bladder accumulator "ASS" and "ASSA" versions or body piston type "AB" version.

## 6.1.3 "B" ADDITIONAL CYLINDERS ADVANTAGES

- compact
- simple construction
- quick, easy installation
- low cost

## 6.1.4 EUROPE MARKET

All hydraulic cylinders are pressure vessels and are subject to the national regulations and directives valid at the place of installation. For additional bottles type B, every shipping batch is complete of a conformity declaration and instructions of use and maintenance and/or all documents requested.

All vessel categories (see Table 6.1c) must be protected by means of a pressure relief valve in accordance with Directive 2014/68/EU.

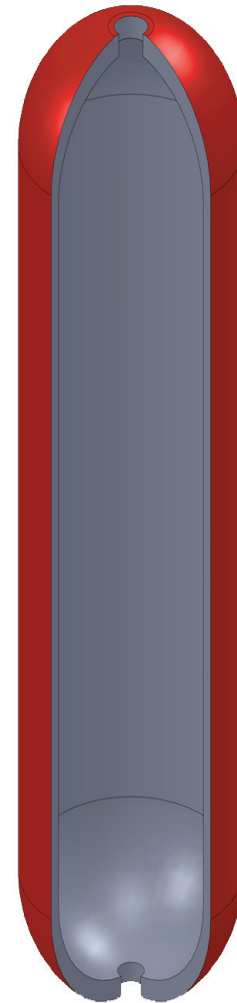
## 6.1.5 ACCESSORIES

For support equipment, see section 7

For gas side's safety equipment, see section 8

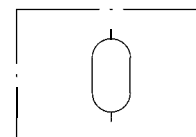
For pre-loading and charging set, see section 11

For other components, see section 12



6.1a

## 6.1.6 HYDRAULIC SYMBOL



6.1b

## 6.1.7 ORDER CODE

1	2	3	4	5	6	7	8	9	10
B	52	P	360	C	G	6	G	5	- 8

1	Series
	Seamless additional bottle = <b>B</b>

2	Nominal capacity (litres)
	52 = <b>52</b> 75 = <b>75</b>

3	Seals
	Without

4	Max working pressure (bar)
	360 = <b>360</b>

5	Body material
	Carbon steel = <b>C</b> Nickel coated carbon steel 25 µ = <b>N</b> Nickel coated carbon steel 40 µ = <b>M</b>

6	Bottom connection
	BSP ISO 228 = <b>G</b>

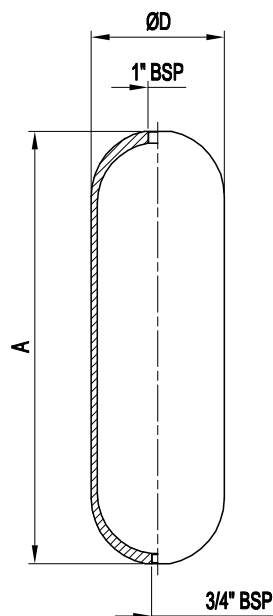
10	Test and certification
	Factory testing = <b>0</b> ML (China) = <b>3</b> RINA = <b>4</b> PED 2014/68/EU (for capacity greater than 1 l) = <b>8</b> EAC Passport (Russia) = <b>11</b> Algeria passport = <b>12</b> Standard regulation (NR13) (Brazil) = <b>13</b> Tunisian passport = <b>14</b>

9	Top connection dimension
	1" = <b>6</b>

8	Top connection
	BSP ISO 228 = <b>G</b>

7	Bottom connection dimension
	3/4" = <b>5</b>

## 6.1.8 DIMENSIONS



Additional bottle type B in carbon steel	Nominal gas volume litres	Effective gas volume litres	Working pressure bar	Ped category for the liquids of group 2	Maximum differential pressure bar	A mm	ØD mm	Dry weight kg
B52	52	50	360	IV	100	1722± 10	220	93,5
B75	75	75	360	IV	100	2520± 10	220	135

**6.1c**

\* The maximum differential pressure is the maximum allowable difference between the maximum pressure and the minimum working pressure (P2-P1) to have an infinite life cycle of the accumulator (greater than 2,000,000 cycles).

## 6.1.9 COMMISSIONING AND MAINTENANCE

### Delivery condition

The additional bottles type B are shipped on pallets or wooden boxes upon request. Unless otherwise required, certificates and documentation are provided together with the bottles.

### Handling

The original packaging is suitable for handling and storage. Where necessary, you should use suitable lifting equipment to support the weight of the bottles. However protect from impact the packaging and handle it with care.

### Storage

During storage in the warehouse, leave the product in its original packaging, keeping it away from heat sources and naked flames. The storage temperature should be between +10 and +40°C.

### Marking of the cylinder body

With reference to the PED 2014/68/EU classification, Article 3, Paragraph 3 and / or risk categories I or IV depending on to the volume and maximum working pressure, the cylinder indicates the following data:

- logo and country of the manufacturer
- month / year of production
- product code
- serial number
- maximum PS pressure and PT test pressure in bar
- min. and max. TS working temperature in Celsius
- volume V in litres
- group of fluids allowed
- CE marking with the identification number of the notified body

### It is strictly forbidden to:

- weld, rivet or screw any item of the cylinder
- engrave or permanently stamp the surfaces of the cylinder shell and / or carry out other operations that could affect or change the mechanical properties of the cylinder
- use the cylinder as a structural element: it should not be subjected to stresses or loads
- change the data of the nameplate without the permission of the manufacturer
- use a (dangerous) fluid of Group 1 with equipment designed and manufactured for fluids of Group 2.

### Installation

Before installation, you must perform a visual check to verify that the bottles has not suffered any damage during shipping / handling.

Verify that the requested type matches with what stamped on the nameplate.

We recommend using the additional bottles connected to the accumulator with a suitable safety valve (see Chapter 8).

This device provides the user and equipment protection against damage caused by pressure peaks.

The additional bottles type B may be installed in any position from horizontal to vertical (preferably with the connections vertically) and the data must be visible.

Proceed to the assembly so that no abnormal force affects the pipes connected directly or indirectly to the additional bottles, so we recommend

the use of supporting components and also fastening (please see Chapter 7) to avoid the transmission of vibrations.

Make sure that the cylinder is connected to the circuit through suitable connection devices.

Check that the max. allowed bottles pressure is equal to or greater than that of the circuit and that the temperature during operation is maintained within the range expected.

Make sure the fluid does not contain contaminants.

### Maintenance

- Periodically check the pre-charge pressure of the system: after the commissioning, check after 2-3 weeks of operation and if there were no leaks, repeat the operation after 3 months; if the pressure at the same temperature was stable, repeat the test yearly. For heavyduty applications, check the pre-charge every 6 months.
- Periodically (yearly) carry out a visual inspection of the bottle in order to detect any early signs of deterioration such as corrosion, deformation, etc.
- Comply with the requirements of the regulations concerning the verification of the functionality of the equipment according to the country of installation of the bottle.

### Disassembly

If for failure, scheduled check or retest it is necessary to remove the additional bottle from the system, prior to removal, completely discharge the pressure within the circuit.

### Demolition and recycling of the additional cylinder

Before demolition or recycling of the additional cylinder, you should always discharge the internal pressure.

If needed, proceed decontaminating in relation to the gas/fluid used prior to demolition.

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