

### ► Technical description

The ABVE bottle type accumulators consist of:

- a forged steel body
- a bladder
- a charging valve
- an oil side orifice fitted with a poppet valve which prevents extrusion of the bladder, and an air bleed screw used during system start-up.

### ► Advantages

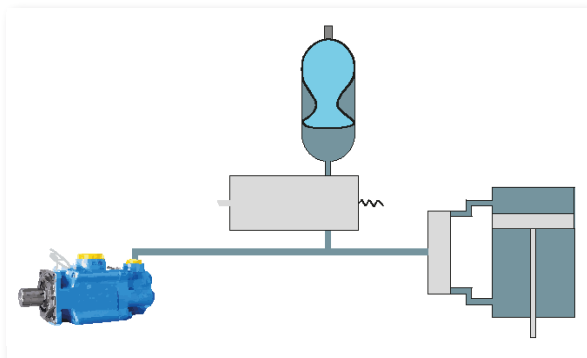
Bladder accumulator component parts are interchangeable with those of major accumulators available. Dimensions allow for easy installation and also use in batteries.

### ► Operating fluids

- Mineral-based hydraulic fluids: standard bladder
- Non-standard and/or corrosive fluids: please consult our Customer Service Department.

### ► Examples of applications

Energy storage



## ABVE 330 bar

Maximum pressure : 330 bar

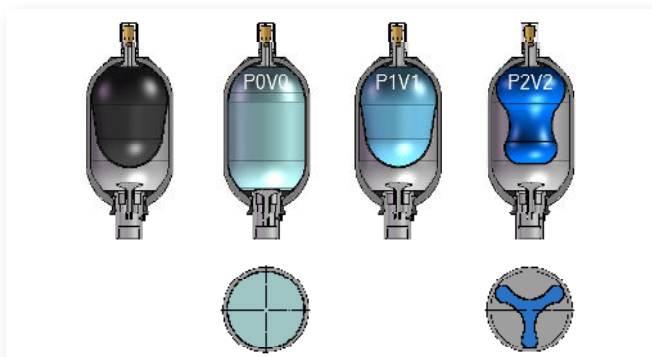
ABVE 4 maximum pressure : 350 bar

Extreme operating temperatures :

- Standard version : -20°C to +100°C



### ► Deformation of the bladder



### ► Filling gas

Nitrogen only.

### ► Volumetric ratio (V0–V2)/V0

The volumetric ratio of this type of accumulator is 0.75.

For example, an ABVE 4 accumulator can take in a maximum volume of :  $0.75 V_0 = 0.75 \times 3.7 = 2.8$  Litres.

### ► Tests et certificates

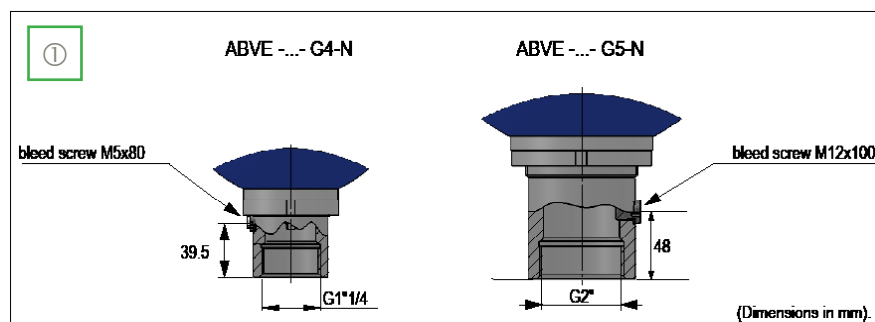
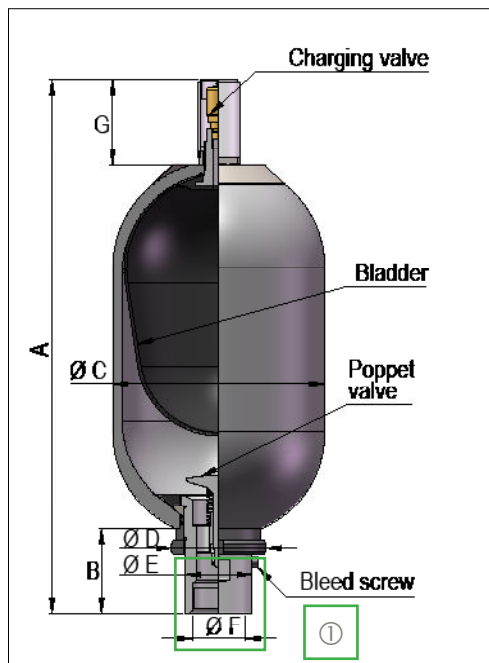
Designed and certified according to the European Directive 2014/68/UE. Other certificates on request.

HYDRO LEDUC ABVE accumulators have been qualified for 2.000.000 cycles with  $\Delta P = 300$  bar.

### ► After-sales service

HYDRO LEDUC provides after sales service and supplies spare parts.

## CHARACTERISTICS AND DIMENSIONS



| ABVE    | Nitrogen capacity<br>Vo (litres) | Max. pressure<br>(bar) | Weight<br>(kg) | Dimensions<br>(mm) |     |     |     |     |         |      |
|---------|----------------------------------|------------------------|----------------|--------------------|-----|-----|-----|-----|---------|------|
|         |                                  |                        |                | A                  | B   | Ø C | Ø D | Ø E | Ø F     | G    |
| ABVE 4  | 3.7                              | 350                    | 13             | 417.4              | 64  | 168 | 68  | 53  | G1 1/4" | 65.4 |
| ABVE 10 | 9.6                              | 330                    | 32.5           | 575.4              | 102 | 223 | 101 | 76  | G2"     | 65.4 |
| ABVE 20 | 17.6                             | 330                    | 45             | 878.4              | 102 | 223 | 101 | 76  | G2"     | 65.4 |
| ABVE 32 | 32.7                             | 330                    | 80             | 1403.4             | 102 | 223 | 101 | 76  | G2"     | 65.4 |
| ABVE 50 | 48.9                             | 330                    | 110            | 1926               | 102 | 223 | 101 | 76  | G2"     | 73   |

| ABVE |    |    |    |    |    |    |
|------|----|----|----|----|----|----|
| 01   | 02 | 03 | 04 | 05 | 06 | 07 |

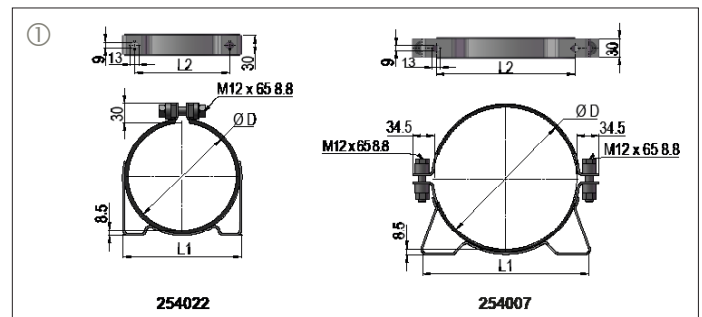
To obtain the code of your ABVE accumulator, complete the different parameters from 01 to 07 in the table on the left according to the options you require (see table below).

| Accumulator type     |                                        |    |    |    |    |    |      |
|----------------------|----------------------------------------|----|----|----|----|----|------|
| 01                   | ABVE                                   | •  | •  | •  | •  | •  | ABVE |
| Volume (L)           |                                        |    |    |    |    |    |      |
| 02                   |                                        | 04 | 10 | 20 | 32 | 50 |      |
| Gas side diameter    |                                        |    |    |    |    |    |      |
| 03                   | Ø 22 mm                                | •  | •  | •  | •  | •  | S2   |
| Oil side connections |                                        |    |    |    |    |    |      |
| 04                   | G1 1/4"                                | •  |    |    |    |    | G4   |
|                      | G2"                                    |    | •  | •  | •  | •  | G5   |
| Gas side connections |                                        |    |    |    |    |    |      |
| 05                   | P1620 valve (M16x200)                  | •  | •  | •  | •  | •  | W    |
|                      | V15 valve (5/8"UNF)                    | •  | •  | •  | •  | •  | T    |
| Oil side options     |                                        |    |    |    |    |    |      |
| 06                   | Without option                         | •  | •  | •  | •  | •  | N    |
|                      | G3/4"                                  | •  | •  | •  | •  | •  | A    |
|                      | G2"→G1"                                |    | •  | •  | •  | •  | B    |
|                      | G2»→full                               |    | •  | •  | •  | •  | C    |
| Charging pressure    |                                        |    |    |    |    |    |      |
| 07                   | Specify the charging pressure (in bar) |    |    |    |    |    |      |

## ACCESSORIES

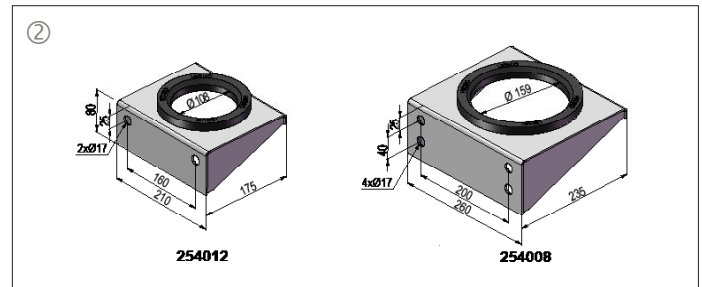
### ► Fixation clamps ①

| Volume (L)         | Dimensions (mm) |     |     | Characteristics   | Code   |
|--------------------|-----------------|-----|-----|-------------------|--------|
|                    | Ø D             | L1  | L2  |                   |        |
| 4                  | 168             | 184 | 148 | Zinc-plated steel | 254022 |
| 10 - 20<br>32 - 50 | 221             | 258 | 216 |                   | 254007 |



### ► Fixation seats ②

| Volume (L)        | Code LEDUC |
|-------------------|------------|
| 4                 | 254012     |
| 10 - 20 - 32 - 50 | 254008     |



### ► Adaptors ③

| Volume (L)        | Dimensions |       |        | Characteristics | Code LEDUC |
|-------------------|------------|-------|--------|-----------------|------------|
|                   | A          | B     | C (mm) |                 |            |
| 4                 | G1 1/4"    | G3/4" | 16     | Steel           | 066305     |
| 10 - 20 - 32 - 50 | G2"        | G3/4" | 13     |                 | 066074     |
|                   |            | G1"   | 19     |                 | 066068     |
|                   |            | Full  | 19     |                 | 066069     |

