# ACS(L) Welded cylindrical accumulators



## ► Technical description

The ACS(L) type welded accumulators are made up of a shell in high resistance steel containing a fluid-gas separator called a bladder-diaphragm. This bladder-diaphragm is made of nitrile for the standard range, and of hydrogenated nitrile for low temperature applications. The bladder-diaphragm is fitted with an anti-extrusion stud, thus allowing rapid and

total discharge of the accumulator.

## ► Advantages

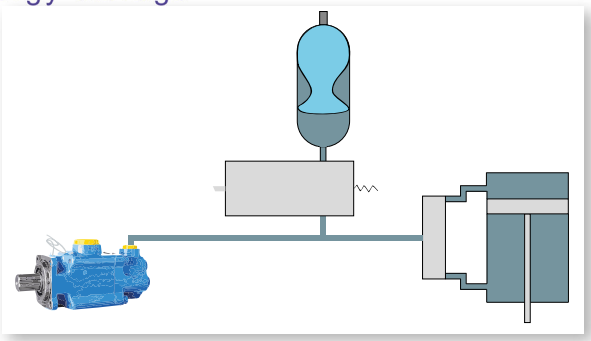
- Low temperature versions suitable for operation at temperatures down to -40°C (only for ACS series)
- Completely modular from 0.7 to 4 litres. This design concept means easy addition of intermediate models if required
- The bladder-diaphragm offers exceptionally good resistance to fatigue
- Rapid and total discharge possible due to the anti-extrusion stud actually fitted onto the bladder-diaphragm.

## ► Operating fluids

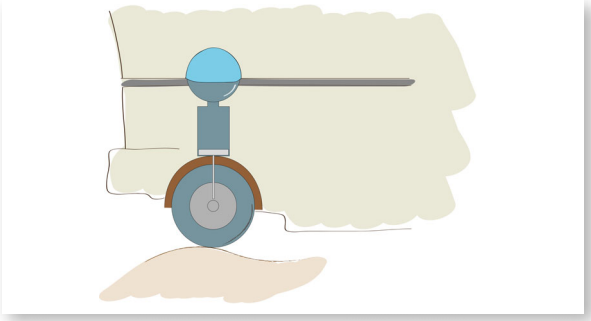
- Mineral-based hydraulic fluids.
- Other fluids: please ask.

## ► Examples of applications

### Energy storage



### Suspension



## ACS 330 bar

Maximum pressure: 330 bar
Extreme operating temperatures :

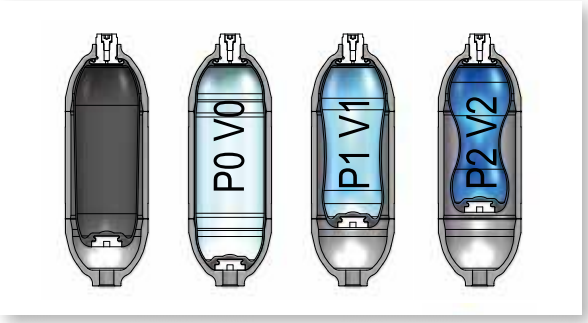
- Standard version : -20°C to +100°C
- Low temperature version : -40°C to +100°C

## ACSL 250 bar

Maximum pressure 250 bar.
Extreme operating temperatures :

- Standard version : -20°C to +100°C

## ► Deformation of the bladder-diaphragm




## ► Filling gas

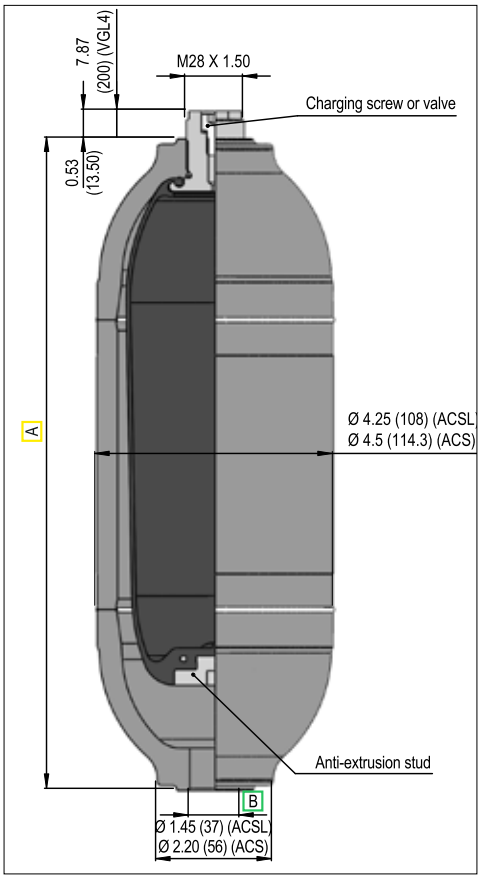
Nitrogen only.

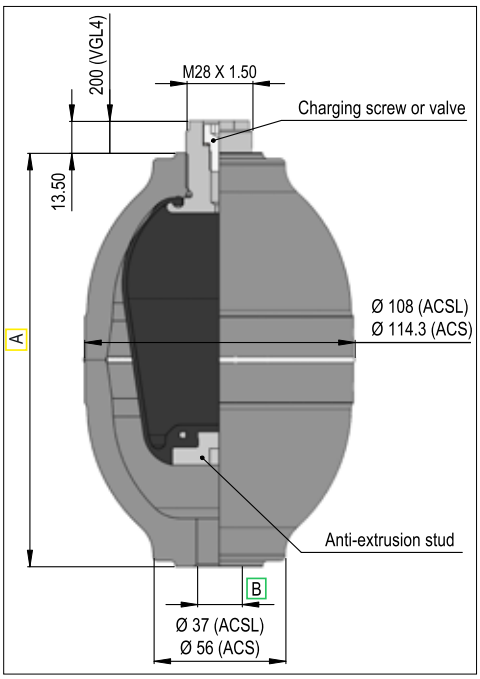
## ► Volumetric ratio (V0–V2)/V0

The recommended volumetric ratio of this type of accumulator is 0.75. For example: an ACS 4 accumulator can take in a maximum volume 0,75 V0 = 0,75 x 4 =3 litres.

## ► Tests et certificates

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




ACS(L) 0.7 L.

For A and B see the following table.

## CHARACTERISTICS AND DIMENSIONS

| | Volume (L) | Max. pressure (bar) | Weight (kg) | Length A (mm) | Diameter B (inches) |
|---|---|---|---|---|---|
| ACS | 0.7 | 330 | 4 | 175 | G1/2" or G3/4" |
| | 1 | | 5.9 | 236 | |
| | 1.5 | | 7.8 | 315 | |
| | 2 | | 9.9 | 392 | |
| | 2.5 | | 11.5 | 463 | G3/4" |
| | 4 | | 17.5 | 695 | |

| | Volume (L) | Max. pressure (bar) | Weight (kg) | Length A mm | Diameter B (inches) |
|---|---|---|---|---|---|
| ACSL | 0.7 | 250 | 3 | 175 | G1/2" or G3/4" |
| | 1 | | 4.5 | 241 | |
| | 1.5 | | 5.9 | 315 | |
| | 2 | | 7.6 | 392 | |
| | 2.5 | | 8.9 | 463 | G3/4" |
| | 4 | | 13.9 | 696 | |

# ACS(L) Order code system

| ACS(L) | ... | ... | .. | .. | . | . |
|---|---|---|---|---|---|---|
| 01 | 02 | 03 | 04 | 05 | 06 | 07 |

To obtain the code of your welded cylindrical accumulator ACS(L), 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

| | | ACS | ACSL | ACS | ACSL | ACS | ACSL | ACS | ACSL | ACS | ACSL | ACS | ACSL | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | **ACS 330 bar** | • | | • | | • | | • | | • | | • | | **ACS** |
| | **ACSL 250 bar** | | • | | • | | • | | • | | • | | • | **ACSL** |

## Volume (L)

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 02 | **0.7** | **1** | **1.5** | **2** | **2.5** | **4** | |

## Operating temperature

| | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 03 | -20 +100°C | • | | • | • | | • | | • | • | | • | • | | • | • | | • | • | **S** |
| | -40 +100°C | | • | | | | | • | | | • | | | • | | | • | | | **F** |

## Fluid side connections

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 04 | Male M33x1.5 - Female G1/2" | • | • | • | • | | | **01** |
| | Male M33x1.5 - Female G1/2" + M33x1.5 nut | • | • | • | • | | | **02** |
| | Female G1/2" | • | • | • | • | | | **10** |
| | Female G3/4" | • | • | • | • | • | • | **11** |
| | Female G3/8" | • | • | • | • | | | **12** |
| | Female M16x1.5 | • | • | • | • | | | **13** |
| | Female M18x1.5 | • | • | • | • | | | **14** |
| | Female 3/4"-16UNF-2B | • | • | • | • | • | • | **15** |
| | Female 1"1/16-12UNF-2B | • | • | • | • | • | • | **16** |
| | Male G3/4" | • | • | • | • | • | • | **50** |

## Gas side connections

| | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 05 | Charging screw M28 x 1.5 | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | **V** |
| | P1620 valve (M16x200) | • | | • | • | • | | • | • | | • | • | | • | • | | • | • | | **W** |
| | SCHRADER valve (8V1) | • | | • | • | • | | • | • | | • | • | | • | • | | • | • | | **Y** |

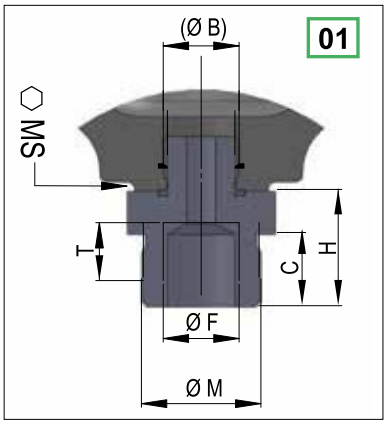
## Gas side connections protection

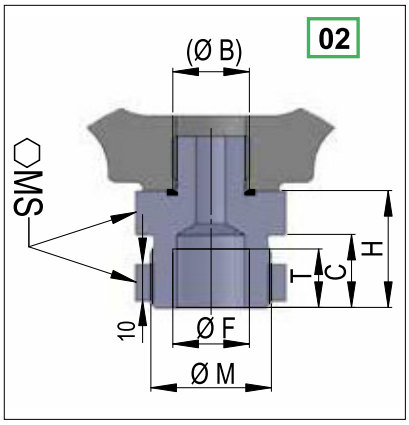
| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 06 | Without protection (P1620, SCHRADER) Plastic plug (M28 x 1.5 screw) | • | • | • | • | • | • | **N** |
| | With metallic plug | • | • | • | • | • | • | **P** |

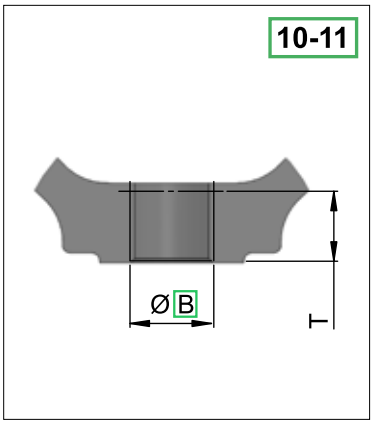
## Charging pressure

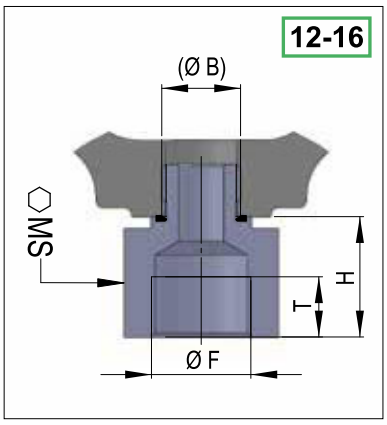
| | | |
|---|---|---|
| 07 | Specify the charging pressure (in bar). | |

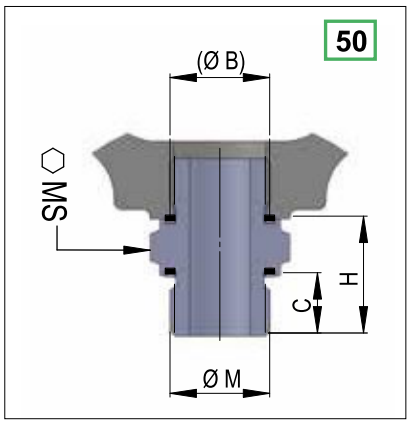
## ► Hydraulic connections - Code 04

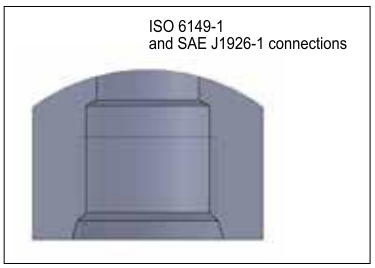


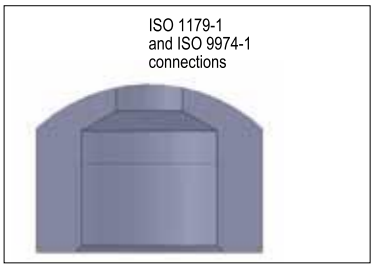




Connection for fittings : 13,15 and 16.

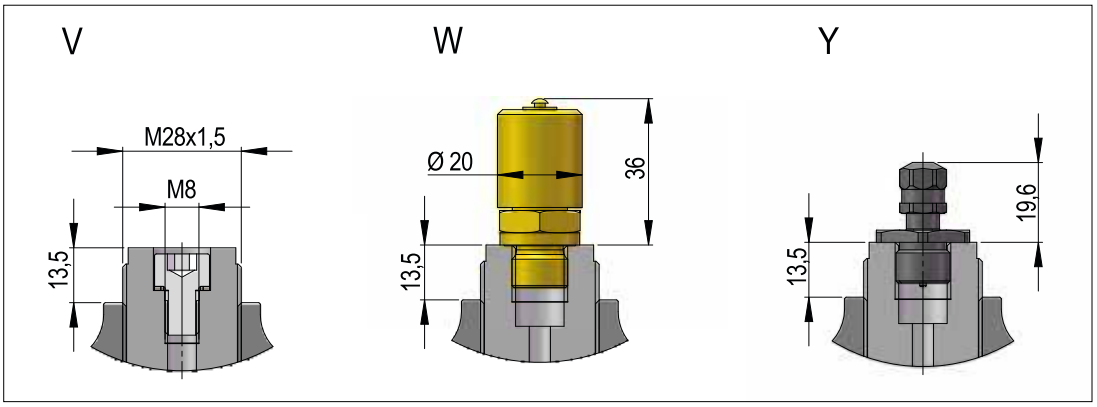



Connection for fittings : 02,01,12 and 14.

| Code | Ø B | Ø F | H | SW | T useful | C | ØM |
|---|---|---|---|---|---|---|---|
| 01 | G1/2" | G1/2 - ISO 1179-1 | 32 | 41 | 16 | 20 | M33x1.5 |
| 02 | | | | | | | |
| 10 | | without fitting | - | - | 18 | - | - |
| 11 | G3/4" | without fitting | - | - | 18 | | |
| 12 | | G3/8 - ISO 1179-1 | 10 | 32 | 12 | | |
| 13 | | M16x1.5 - ISO 6149-1 | 10 | 32 | 13 | | |
| 14 | | M18x1.5 - ISO 09974-1 | 10 | 32 | 12 | | |
| 15 | | 3/4-16UNF-2B - SAE J1926-1 | 25 | 32 | 14.3 | | |
| 16 | | 1 1/16-12UNF-2B - SAE J1926-1 | 27 | 46 | 19 | | |
| 50 | | - | 31 | 32 | - | 16 | G3/4 - DIN 3852-11 |

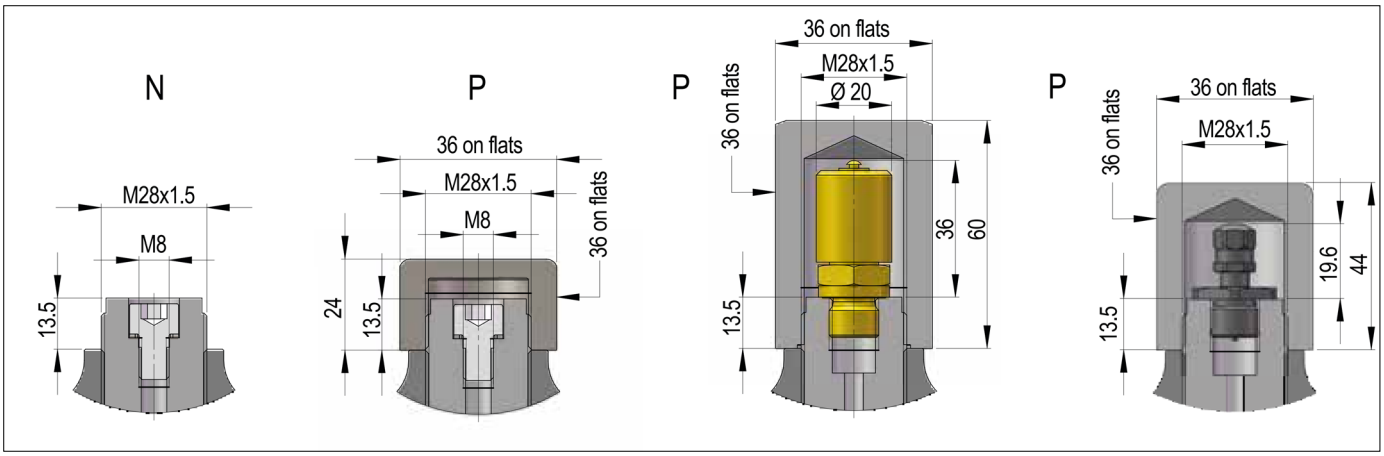
Dimensions in mm.

## ► Gas side connections - Code 05




Dimensions in mm.

## ► Gas side options - Code 06

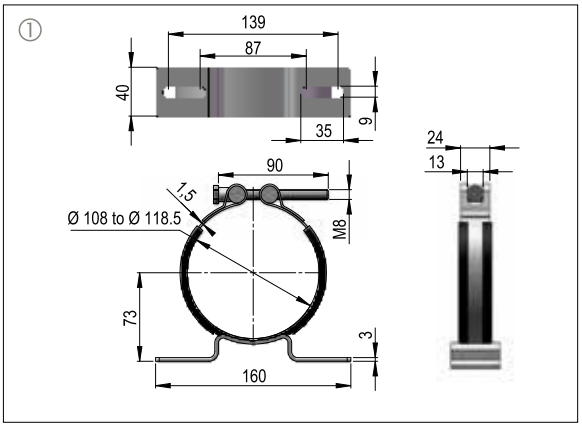



Dimensions in mm.

# ACCESSORIES

## ► ACS(L) adjustable clamps ①

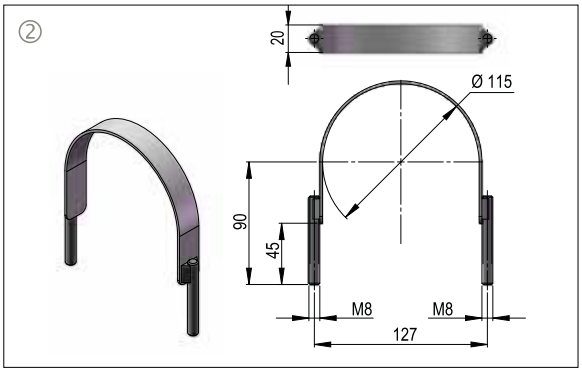
| Volume (L) | Caracteristics | Code LEDUC |
|---|---|---|
| 0.7 - 1 - 1.5 2 - 2.5 - 4 | Zinc-plated steel | 254021 |
| | Zinc-plated steel quick-tightening | 254031 |
| | Stainless steel | 254032 |




## ► ACS(L) fixed clamp ②

| Volume (L) | Caracteristics | Code LEDUC |
|---|---|---|
| 0.7 - 1 - 1.5 | Zinc-plated steel | C001028 |

Tightening torque of the fixation screws: 20 Nm.




## ►ACS(L) clamps ③

| Volume (L) | Caracteristics | Code LEDUC |
|---|---|---|
| 0.7 - 1 - 1.5 2 - 2.5 - 4 | Zinc-plated steel | C001031 |
| | Stainless steel | C001032 |

Tightening torque of the fixation screws: 20 Nm.

