

## 11.1 General

The EPE piston accumulators come equipped with, after being tested and thoroughly checked at the factory, perfectly correspondent to the **order specifications** stamped on the name plate fitted at the gas valve section of each accumulator.

The following is stamped on the name plate:

- Maximum working pressure PS in bar
- Value of pre-charge Po in bar (sticky label)
- Accumulator manufacturers number.
- The trade mark CE with certifying authority N° (only when the standards are applied)
- Date of manufacture month/year
- Fluid groups
- Name, logo, nationality, manufacturers and telephone number

**ATTENTION:** The maximum working pressure stamped on the accumulator should be equal or higher than the calibration pressure of the income limit valve of the hydraulic circuit.

Before carrying out interventions (repairs, replacements etc.) on and installation, filled with an accumulation, it is necessary to completely discharge the liquid pressure and gas pressure.

The conformity and test certificates are supplied with eh accumulator, unless otherwise stated.

## 11.2 Preliminary Checks

To the reception you assure that:

- The accumulator did not sustain damages during transportation.
- The specifications on the name plate correspond to the order.

## 11.3 Installation

The best efficiency is generally obtained by installing the accumulator as **near as possible** to the utility. The optimal installation position is vertically, with the nitrogen valve in the upper position, however a horizontal installation is also acceptable.

It is recommended that:

- Leave necessary space for use of pre-charge equipment.
- The pre-charge fastening method using supplied "U" bolts like in Fig. 18 (See chapter 9). The hydraulic connections must not carry the weight of the accumulator.

It is absolutely prohibited to weld mounts or alter the body of the accumulator.

- Provide a filter on pressure side of hydraulic system
- Provide a check valve between pump and accumulator.
- Ensure that the pressure limitation valve of the circuit is directly connected to the accumulator and calibrated to an inferior value of the operational pressure stamped on the accumulator specification plate.

It is advisable to provide an interception and **discharge valve**. in order to isolate the accumulator (to check or for repairs) during the operation of the plant. All these functions are obtainable with the application of the connector block **EPE series BS**, eliminating bulky connectors (See chapter 13 catalog 1007 related to bladder accumulators)

## 11.4 Commissioning

The AP series accumulators are supplied, unless otherwise specified, with a pre-charge pressure of 30 bar.

Before commissioning, it is necessary to verify that:

- The pre-charge pressure corresponds to the value requested and or provided.

We generally remember:

Po = 0,95 – 0,97 P1 (Energy reserve etc.)

Po = 0,8 P1 (Anti-pulsation)

Po = 0,6 – 0,9 P1 (Anti water hammer)

An incorrectly chosen pre-charge pressure is frequently the cause of bad operation of the plant and can negatively influence the longevity of the accumulator. The **pre-charge** value indicated on the name plate (For all accumulators provided with pre-charge) is **relative to a temperature of 20 °C**

For accumulators provided without pre-charge, or subsequent to repairs, it is necessary to inflate with nitrogen and verify with appropriate apparatus type PC/... following procedure indicated in chapter 12.

**FOR PRE-CHARGE USE ONLY AND EXCLUSIVELY DRY NITROGEN IN BOTTLES.**

## 11.5 Maintenance

- Regularly verify pre-charge pressure during the first week of commissioning the plant. If no leaks are found, execute successive checks after 3 months and successively after 6 or 12 months, according to experiences and conditions of utilization.
- Carry out periodical visual examination of accumulator in order to check for corrosion and or deformation.
- Conform to government requirements regarding periodic checks of pressure vessels.

## 11.6 Repairs

Before disassembly the plant, ensure that there is no residual hydraulic pressure.

Completely discharge nitrogen before any maintenance operation.

To disassembly and replace components, refer to chapter 13.

Use only original EPE spare parts

## 11.7 Out of Commission

In case the accumulator has to be put out of work, it is necessary to ensure that it is completely discharged and the pre-charge valve is completely blown down.