HIDRACAR S.A.

INSTRUCTIONS FOR THE USE, MAINTENANCE & DISMANTLING OF OUR STAINLESS STEEL BELLOWS TYPE PULSATION DAMPENERS (NON REPAIRABLE MODELS)

USE:

For a correct operation of a pulsation dampener, the apparatus should be pre-charged with gas (DRY NITROGEN) at a pressure of 80% of the minimum pressure of the circuit.

The maximum pressure in the circuit must NEVER be higher than the maximum working pressure of the apparatus, which is indicated on its attached adhesive label. Although, to avoid a possible bellows breakage, the following relation must be complied:

$$\frac{\text{max. pulsation pressure admitted}}{\text{gas filling pressure}} \leq 2$$

The temperature of the liquid in the circuit must never exceed the temperature limits indicated on the label.

All the materials of the body and bellows separator element must be chemically compatible with the liquid of the circuit.

The thread of the port connection of the pulsation damper must be identical to the thread of the connection adapter to the pipe circuit.

ATTENTION: If a play exists between threads, it is important to detect which is out of norm and tolerance. **NEVER** try to compensate the excess clearance between threads filling it with Teflon tape or similar.

The nominal size of a pulsation dampener indicates its internal volume in litres, but not the amount of liquid that it can store. This depends on the range of pressures at which the circuit must work and on the pumps head capacity.

MAINTENANCE:

We only recommend verifying the pre-charge pressure every six months. To perform this task, you must use our charging kit (see apart the ***HIDRACAR*** charging kit instructions sheet).

In case the pulsation dampener is submitted to extreme working conditions, such as limit temperatures, highly corrosive liquid or environment, uninterrupted functioning 24 hours a day, etc. we recommend carrying out the pre-charge pressure control monthly. If the working temperature is higher than the ambient temperature, the following formula must be used to pre-charge the dampeners:

$$P_{0(20^{o}C)} = P_{0(w.t.)} * \frac{293}{273 + (w.t.)}$$

(w.t.) = working temperature in Celsius degrees

NOTE:

We strongly recommend to read the ***HIDRACAR*** pulsation dampeners technical article that you will find in our website.

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