Pre-Loading & Checking Set, Type-PCM

General

Used for charging of welded Diaphragm Accumulators (type: AMW) with gas as well as pressure checking and adjustment. When charging, the nitrogen bottles must be capable of delivering pressure higher than the desired accumulator gas pressure.

Construction

Standard version comprises
Valve body complete with ring nut connection to accumulator gas valve, pressure gauge, bleed and non return snap-in connection.
High pressure hose complete with connections.
Two pressure gauges (HP & LP)
Set of spare gaskets.
Carrying case.
Adaptor to connect to nitrogen bottle.

Important Note:
Accumulator connection - M28x1.5

Technical Features

Max. Working pressure : 400 Bar.
Accumulator Connection : M28 x 1.5
Bottle Connection : Standard - 5/8” BSP (Internal)
Pressure gauges :
Ø63. Connection - 1/4” BSP(M)
LP - 70 kg/cm2.
HP - 280 kg/cm2
Weight : 1.8 kg (carrying case included)

Identification Code

<table>
<thead>
<tr>
<th>Type</th>
<th>Pressure Gauges (full scale bar)</th>
<th>Connection to Accumulator</th>
<th>Connection to Bottle</th>
<th>Hose (Mtrs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCM</td>
<td>280/70 (Standard)</td>
<td>= M28 x 1.5</td>
<td>= 5/8”BSP(M)</td>
<td>= 2 Mtrs. (Std)</td>
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<tr>
<td>(Pre-Loading &amp; Checking)</td>
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<td></td>
<td></td>
<td>On request 1.5-2.5-4 Mtrs</td>
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Note : Technical specifications are subject to change.
It is important to keep gas pressure in the accumulator constant and it should therefore be checked periodically by means of Pre-loading & Checking Unit (PCM).

The same equipment is used for re-inflating the bladder after serving or replacement.

Connection is made by a special minimess hose to the dry nitrogen bottle with an adaptor.

**Pressure Checks**

This is a simple operation, the correct procedure is as follows:

* **Isolate** the Accumulator from the system and reduce the liquid pressure to Zero.
* Remove the protective and sealing caps from the gas valve.
* Prior to mounting the PC unit ensure that Valve Knob “A” is unscrewed, Bleed Valve “B” is closed and Non-Return Valve “C” is screwed tight.
* Attach PC unit to the gas-fill valve by means of Ring Nut “D”.
* Screw Valve Knob “A” to a point where pressure is registered.

If the pressure is OK remove the PC Kit as follows:

* Unscrew the Valve Knob “A”.
* Open the Bleed Valve “B” and unscrew the Ring Nut “D”.

**Pressure reduction**

* Fit PC Unit as described above.
* Reduce the nitrogen pressure by opening Bleed Valve “B” slowly while the Valve Knob “A” is screwed in until the correct pressure is registered on the gauge.

**Increase or reset pre-charge pressure**

If it is necessary to fill, or to increase the gas pressure, proceed as follows:

* Fit the PC unit as described above.
* Fit the bottle adaptor to the nitrogen cylinder.
* Connect the minimess hose between the cylinder and the non-return valve “C”.
* Slowly open the valve on the cylinder until the gauge registers a pressure slightly higher than the one desired, then shut.
* Unscrew Knob “A” and reduce the pressure on PC Kit to Zero by means of the Bleed Valve “B”.
* Disconnect the hose from the non-return valve and replace cap.
* Close the Bleed Valve “B” and wait approximately 5 mins. for the temperature to stabilise.
* Screw Valve Knob “A” until the pressure can be read. This should be slightly higher than the desired pressure.
* Adjust by means of the Bleed Valve “B” & remove the filling unit.
* Use soapy water test for leaks.
* Replace the valve cover and protection caps.

The Accumulator is now precharged as per the requirement.

**WARNING**

It is recommended that the gas line is fitted with a safety relief valve when charging accumulators with shell ratings of less than Nitrogen Cylinder pressure.

**Note:**

Standard equipment PCM-280/70 is supplied with two pressure gauges: the high pressure gauge (280 bar) is used for charging and for checking pre-charge pressures higher than 50 bar.

The low pressure gauge (70 bar) is used for pre-charge pressures lower than 50 bar.

**ONLY NITROGEN MUST BE USED FOR CHARGING. AIR OR OXYGEN COULD CAUSE AN EXPLOSION.**
Disposal Guidelines - Accumulators

Disposal

Before the accumulator is sent for disposal or recycling, it should always be discharged completely of the pre-charge pressure and the gas valve unscrewed. Pre-loading and checking kits are suited for this task.

For permanently sealed design Diaphragm Accumulators (Version-P) the diaphragm is preferably damaged on a test rig or the accumulator is carefully drilled (Ø ≥ 6 mm) on the gas chamber using a suitable clamp. As the gas flowing out can draw metal splinters or particles with it, safety glasses must be worn.

Fluid residues are to be drained completely before disposal / recycle of the accumulator. Decontaminate if needed and in accordance with local regulations.

Environmental Protection

Careless disposal of the product and/or residual fluid contained therein can cause environmental pollution.

Dispose the product in accordance with provisions applicable in the country of use.

Fluid residues are to be disposed according to the respective safety data sheets (MSDS) valid for the specific hydraulic fluids.