Nitrogen Gas Charging & Testing Kit PCFPU280/70

- Safe & easy to use Minimess® charging & testing connections
- Safely test, charge or bleed
- Connects to most types of bladder, diaphragm & piston accumulator valves
- Minimess test points offer excellent system access versatility
- Simple hand tightening hose connection on to charging valves
- Low cost solution for testing & charging of a wide range of accumulators

Gas charging kit for bladder, diaphragm or piston accumulators with Nitrogen or to check or reduce existing precharge pressure in accumulators.
MINIMESS®
Gas Charging Kits & Accessories
PCFPU280/70

Accumulator Gas Charging & Testing Kit PCFPU280/70

Accumulator charging and testing kit used for charging bladder accumulators with Nitrogen as well as pressure checking and pressure adjustment.

Features
- Test or charge using Hydrotechnik Minimess® connections up to 630 bar
- Simple hand tightening hose connection on to accumulator charging device
- Connection options for most popular accumulator charging valves
- Economically priced

Kit Contents
- Valve body complete with M28x1.5 female ring nut connection to accumulator gas valve, with bleed valve, gauge port and Minimess 1620 charging hose connection.
- Accumulator charging valve adaptors to 7/8”-14 UNF female, (short & long thread), 5/16”-32 UNEF (VG8) female (short & long thread) and 1/4” BSP female (with pin), Minimess 16x1.5 and 16x2 female
- 2.5m long high pressure Minimess microbore flexible charging hose
- Two pressure gauges (60 bar and 250 bar)
- 5/8” BSP male bullnose adaptor to connect to nitrogen bottle with Minimess charging hose connection
- Set of spare gaskets
- Carrying case

ORDERING CODE

<table>
<thead>
<tr>
<th>PCFPU</th>
<th>280/70</th>
<th>(X, A, B, C, D, E, F, G, H or U)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pressure Gauges (Full scale range in Bar)</td>
<td>Connection to Accumulator</td>
<td>Connection to Nitrogen Bottle</td>
</tr>
<tr>
<td>250 &amp; 60 bar (Standard)</td>
<td>X = M28x1.5 female (Standard)</td>
<td>5/8” BSP Male (Standard)</td>
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<tr>
<td>Pre-loading &amp; checking set</td>
<td>A = 5/8”-18 UNF female</td>
<td>Various Worldwide Nitrogen bottle adaptors available on request</td>
</tr>
<tr>
<td>On request: 400,160,100, 40, 25,10</td>
<td>B = 5/16”-32 UNEF / VG8 female (short)</td>
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</table>
**Operational and Maintenance Instructions**

Use of charging device PCFPU280/70 only to fill a Nitrogen gas accumulator from a Nitrogen gas bottle or to drain or measure the pressure of a Nitrogen filled accumulator. 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 (PCFPU)**. 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 adaptor.

**General**

When charging, the nitrogen bottles must be capable of delivering pressure higher than the desired accumulator gas pressure.

**Pressure checks**

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

- **Isolate** the Accumulator from the system and reduce the liquid under pressure to zero.
- Remove the protective and sealing caps from the gas valve.
- Prior to mounting the PCFPU unit ensure that Valve knob “A” is unscrewed, Bleed Valve “B” is closed and Minimess Valve “C” is screwed tight. Make sure that mounted pressure gauge has a full scale appropriate to the pressure being measured (normally max pressure should not exceed 3/4 of full scale).
- Attach PCFPU unit to the accumulator gas 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 PCFPU Kit as follows:

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

**Pressure reduction**

- Fit PCFPU Unit as described in the previous Pressure Checks section.
- Reduce the nitrogen pressure by opening Bleed Valve “B” slowly while Valve Knob “A” is screwed in until the correct pressure is registered on the gauge.

**Increase or reset precharge pressure**

- Fit the PCFPU unit as described above.
- Fit the gas bottle adaptor to the nitrogen cylinder.
- Connect the Minimess hose between the cylinder and the Minimess valve “C”.
- Slowly open the valve on the cylinder until the gauge registers a pressure slightly higher than the one desired, then close off cylinder valve.
- Unscrew Knob “A” and reduce the pressure on PCFPU Kit to Zero by means of the Bleed Valve “B”.
- Disconnect the hose from the Minimess valve “C” and replace cap.
- Close the Bleed Valve “B” and wait approximately 15 minutes 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”.

If pressure is OK remove the PCFPU Kit as follows:

- Unscrew the Valve Knob “A”.
- Open the Bleed Valve “B” and unscrew the Ring Nut “D”.
- 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 PCFPU280/70 is supplied with two pressure gauges: the high pressure gauge (250 bar) is used for charging and for checking precharge pressures higher than 50 bar. The low pressure gauge (60 bar) is used for precharge pressures lower than 50 bar.

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