

Nitrogen Gas Charging & Testing Kit PCFPU280/70

- Safe & easy to use Minimes[®] charging & testing connections
- Safely test, charge or bleed
- Connects to most types of bladder, diaphragm & piston accumulator valves
- Minimes test points offer excellent system across 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.

Nitrogen accumulators
Fire suppression systems
Mobile hydraulics
Industrial hydraulics

MINIMESS®

Gas Charging Kits & Accessories

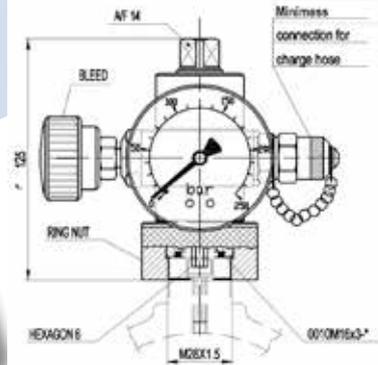
PCFPU280/70

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.

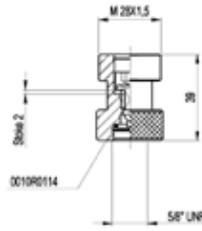


Charging Device (M28x1.5 Female)



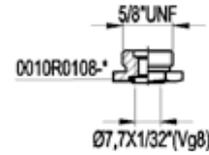
Important note: Accumulator connection to be specified (refer to identification code)

243 I Master adaptor (M28x1.5 male to 5/8"-18 UNF female)

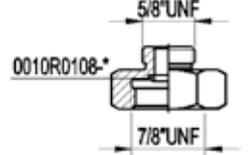


Charging valve adaptors

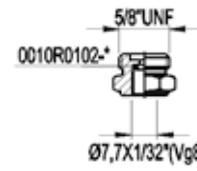
HT2510 (VG8 Schrader style short thread)



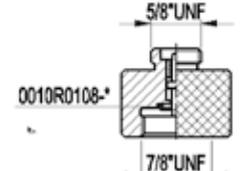
HT2511 (7/8"-14 UNF Female short thread)



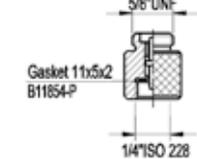
HT2513 (VG8 Schrader style long thread)



HT2514 (7/8"-14 UNF Female long thread with pin)



HT2512 (7/8"-14 UNF Female long thread with pin)



Features

- Test under pressure 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 and Minimess charging hose connection
- Accumulator charging valve adaptors 7/8"-14 UNF female, (short & long thread), 5/16"-32 UNEF (VG8) female (short & long thread) and 1/4" BSP female (with pin)
- 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

SPARE PARTS CODES	
PCFPU280/70	
Gasket Set	PC-Seals
Minimess Valve	2103-01-18.00
Charging Assembly	HT155
Charging Hose	S110-AC-AC-02.50
Pressure Gauge 60 bar	13S72142451000
Pressure Gauge 250 bar	13S721442451000
Adaptr. M28x1.5 to 5/8" UNF	2431
Adaptr. VG8 (short thread)	HT2510
Adaptr. VG8 (long thread)	HT2513
Adaptr. 7/8" UNF (short)	HT2511
Adaptr. 7/8" UNF (long thread with pin)	HT2514
Adaptor 1/4" BSP (with pin)	HT2512

ORDERING CODE

PCFPU	280/70	(X, A, B, C, D, E, F or U)		
(Pre-loading & checking set)	Pressure Gauges (full scale range in Bar)	Connection to Accumulator	Connection to Nitrogen bottle	Charging Hose (length in metres)
	250 & 60 bar (Standard) On request: 400, 350, 200, 160 100, 40, 25, 10	X = M28 x 1.5 female (Standard) A = 5/8" - 18 UNF female B = 5/16" - 32 UNEF / VG8 female (short) C = 5/16" - 32 UNEF / VG8 female (long) D = 7/8" - 14 UNF female (short) E = 7/8" - 14 UNF female (long with pin) F = 1/4" BSP female (with pin) U = Universal (all of the above)	(5/8" BSP Male) (Standard) On request W24,32x1/14" Female	2.5 metres On request Any length up to 10 metres

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 Minimesh hose to the dry nitrogen bottle adaptor.

General

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

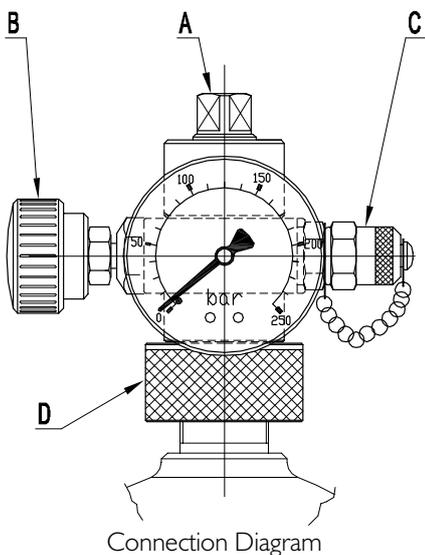
Pressure Checks

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 Minimesh 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 the 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 okay remove the PCFPU Kit as follows:

- Unscrew the Valve Knob **"A"**
- Open the Bleed Valve **"B"** and unscrew the Ring Nut **"D"**



Connection Diagram



Connection Example

Pressure Reduction

- Fit PCFPU Unit as described in the previous Pressure Checks section.
- Reduce the nitrogen pressure by opening the 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 Minimesh hose between the cylinder and the Minimesh 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 Minimesh 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 PC280/70 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.

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