

Accumulator charging valves & kits

Minimess® gas charging valves

Nitrogen pressure regulators & charging devices

Nitrogen accumulator gas charging & testing kits

Accumulator valve adaptors & accessories



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1990 - 2015

Hydrotechnik UK Ltd is one of the UK's leading test and measurement equipment distributors and manufacturers, servicing a wide range of industries since 1990.

A hydraulic accumulator is a pressure storage reservoir in which a non-compressible hydraulic fluid is held under pressure by an external source. The external source can be a spring, a raised weight, or a compressed gas. An accumulator enables a hydraulic system to cope with extremes of demand using a less powerful pump, to respond more quickly to a temporary demand, and to smooth out pulsations.

A compressed gas accumulator consists of a cylinder with two chambers that are separated by an elastic diaphragm, a totally enclosed bladder, or a floating piston. One chamber contains hydraulic fluid and is connected to the hydraulic line. The other chamber contains an inert gas under pressure (typically nitrogen) that provides the compressive force on the hydraulic fluid. As the volume of the compressed gas changes, the pressure of the gas (and the pressure on the fluid) changes inversely.

Wind turbines commonly use piston type accumulators because of their smaller footprint and high pressure performance and are commonly fitted with Minimesse charging valves due to their high pressure capability, leak-free design and safe ease of use.

Hydrotechnik have developed a range of nitrogen gas charging and testing kits specifically for the wind generation market and for general hydraulic applications.

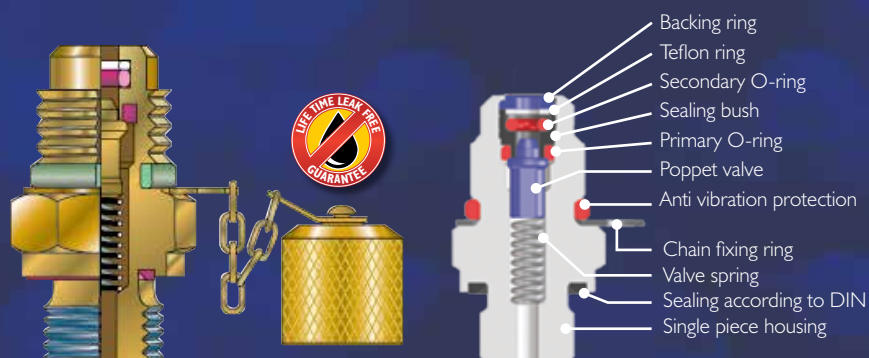
Minimesse™ primary charging connection

All Hydrotechnik's Accumulator charging connections are based around Hydrotechnik's Minimesse leak proof gas charging valves which are widely adopted and allow an operator to connect and disconnect under full system pressure without the loss of gas or pressure. Suitable up to 630 bar, Minimesse® charging and testing valves are a dual purpose device with a reliable safe screwed connection, they allow for safe charging and discharging of gas.

The kits all utilise their leak-free Minimesse gas charging valves. The kits have adaptors to suit almost all modern accumulator designs even when Minimesse is not fitted.

Microbore hoses are supplied for easy connection & purging before charging under high pressure. Their flexibility, anti-leak design and small bore provides a controlled charging process.

Hydrotechnik equipment is chosen for it's rugged high quality, ease of use and flexibility and is the choice of industry professionals worldwide.



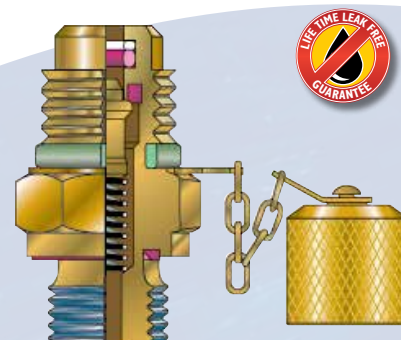
Minimess® gas charging valves

Safe, easy to use, diverse, leak-free and long lasting.

Hydrotechnik manufacture a range of high quality gas charging valves and testing points for use with most gases in the Minimess® 1215, 1615 & 1620 series design. Our Minimess gas charging valves are manufactured with very precise internal tolerances to give maximum sealing integrity, not possible with standard Minimess test points. Manufactured in Brass, 1.4571 (316Ti) or 1.4104 stainless steel grades with special compound Viton or Buna Nitrile sealing gives high performance in the harshest of environments.

Models

1. Minimess® 1615 (M16x1.5)
2. Minimess® 1620 (M16x2)
3. Minimess® 1615 / 1620 Subsea Design
4. Minimess® 1215 (M12x1.65)



Minimess® gas charging valves
are available in a range of sizes & materials



KEY FEATURES

- Maximum sealing integrity
- Stainless steel construction as standard
- Working pressures up to 630 bar
- Working temperatures from -40°C to +135°C
- A wide range of mounting threads



EXAMPLE APPLICATIONS

- Pneumatic or gaseous systems
- Fire suppression
- Industrial hydraulic accumulators & subsea



ADVANTAGES

- Easy & safe to use
- Excellent leak proof integrity, leakage <2 x 10⁻⁵ mbar l/s
- Adaptors available to suit a range of accumulator designs or existing connections
- Provides a faster & more controlled charging or testing process
- Military authorised

Accumulator charging & pressure regulating devices

A complete range of bottle pressure regulating and accumulator charging devices

Our range of accumulator charging devices & pressure regulators are used to fill, adjust and control gas pressure in hydraulic accumulators with nitrogen & other inert gases. All with safe and easy to use Minimesse connectivity.

Models

1. 5401-02-00.00 high quality pressure regulator (10...235 bar), accumulator charging & testing device
2. HT2494 pressure regulator (30...200, 10...100, 5...50, 3...30, 1.5...15, 1...8 bar regulating options)
3. 5114-21-03.00 accumulator charging & testing device for Minimesse I620 charging hose
4. PC accumulator charging device 5/8"-18 UNF female for Minimesse I620 charging hose
5. PCFPU accumulator charging device M28x1.5 female for Minimesse I620 charging hose



KEY FEATURES

- Bleed, charge or test gas pressures
- All devices use Minimesse® connectivity
- Inlet gas pressure up to 300 bar



EXAMPLE APPLICATIONS

- Pneumatic or gaseous systems
- Fire suppression
- Industrial hydraulic accumulators



ADVANTAGES

- Easy & safe to use
- Solutions to suit your budget
- Solutions to suit a wide range of functions
- Connections available to suit a wide range of accumulator designs or existing connections
- Military authorised models available

Minimesse® accumulator charging regulating devices are available to connect to the majority of nitrogen gas canisters.

Accumulator charging valves & Nitrogen bottle adaptors

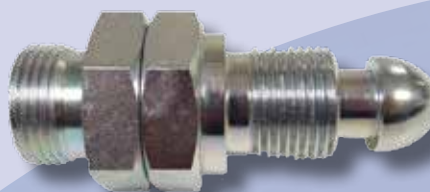
A complete range of bottle and charging valve adaptors

A wide selection of adaptors to suit our charging devices & kits, allowing connection to many different accumulator charging valves found in the field. Nitrogen gas bottle adaptors allowing connection of our Minimess® flexible hoses, charging & pressure regulating devices to most nitrogen gas bottles worldwide.

Nitrogen bottle connections

W24,32x1/14", W21,8x1/14", W30x2 female

1/2", 5/8" & 3/4" BSP ISO 228 male & female



Accumulator charging valve connections

5/8"-18 UNF, 7/8"-14 UNF (long & short thread)

VG8, 5/16"-32 UNEF (Schrader style)

1/4" BSP (Parker / Olaer style)

M28x1.5 (Hydac style)

Minimess® 1215, 1615 & 1620



Create a **temporary Minimess® 1615** charging connection from:-
VG8 or 5/16"-32 UNEF (Schrader style)
 Create a **permanent Minimess® 1615** charging connection from:-
7/8"-14 UNF (requires removal of existing valve)
M28x1.5 (requires removal of existing valve)



Adapt your PCFPU device from **M28x1.5 to 5/8"-18 UNF**
 Adapt your **5/8"-18 UNF** (PC charging device or adapted PCFPU device) to:-
VG8 or 5/16"-32 UNEF (Schrader style)
7/8"-14 UNF (with & without pin)
1/4" BSP (Parker / Olaer style)



KEY FEATURES

A range of threaded adaptors allowing connectivity to most accumulators

Minimess® adaptors allowing temporary connection to our permanent replacement of existing accumulator valves



EXAMPLE APPLICATIONS

Pneumatic or gaseous systems

Fire suppression

Industrial hydraulic accumulators



ADVANTAGES

Easy & safe to use

Solutions to suit your budget

Solutions to suit a wide range of functions

Connections available to suit a wide range of accumulator designs or existing connections

Military authorised models available

Microbore leak-free pressure testing & charging hoses

The ideal charging hose offering unrivalled pressure, flexibility & ease of use.

Microbore hoses are lightweight, very flexible & low cost. They are suitable for a wide range of applications including hydraulics, air, gases and greases. All of our nitrogen gas charging kits are supplied with anti-leak microbore hoses. Our hoses are specified for their durability and lifetime leak-free guarantee meaning no loss of gas on disconnection. Their easy connection and flexibility aid pressure testing for gas charging accumulators. On top of this their unique small bore size provides a safe and controlled charging process.

Microbore charging hoses can be supplied with anti-leak ends to aid in the purging of air before charging and stops any loss of gas on disconnection after charging is complete.



KEY FEATURES

Working pressures up to 630 bar
Minimess® leak-free pressure testing & charging



EXAMPLE APPLICATIONS

Pneumatic or gaseous systems
Fire suppression
Industrial hydraulic accumulators



ADVANTAGES

Easy & safe to use
Highly flexible
Minimess® small bore charging hose connections provide safe, quick and controlled charging or testing procedure



Microbore hoses aid safe and controlled charging.

PC Nitrogen gas charging & testing kit

The ideal kit for charging & testing bladder & diaphragm accumulators.

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



KEY FEATURES

- Safe, easy to use Minimesse® charging & testing connections
- 5/8"-18 UNF female accumulator connection with additional VG8 (schrader style), 7/8"-14 UNF and 1/4" BSP adaptors
- 2.5m flexible high pressure microbore charging hose
- 60 bar & 250 bar pressure gauges with safety blow out flap (other ranges on request)



EXAMPLE APPLICATIONS

- Pneumatic or gaseous systems
- Industrial hydraulic accumulators



ADVANTAGES

- Easy & safe to use for testing, charging or bleeding
- Wide range of accumulator charging valve adaptors
- Minimesse® small bore charging hose connections provide safe, quick and controlled charging or testing procedure



The PC charging device fits to the accumulator valve and is charged or tested using a high pressure Minimesse® microbore flexible hose.

PCFPU Nitrogen gas charging & testing kit

The ideal kit for charging & testing bladder, diaphragm & piston accumulators.

Nitrogen accumulator charging kit for charging or pressure checking with Hydac style M28x1.5 female threaded accumulator valves with hexagon valve key. 400 bar maximum pressure (limited by charging device) with Hydrotechnik Minimess® test or charging points and charging hose.



KEY FEATURES

Safe, easy to use Minimess® charging & testing connections

M28x1.5 female accumulator connection with additional 5/8"-18 UNF, VG8 (schrader style), 7/8"-14 UNF and 1/4" BSP adaptors

2.5m flexible high pressure microbore charging hose

60 bar & 250 bar pressure gauges with safety blow out flap (other ranges on request)



ADVANTAGES

Easy & safe to use for testing, charging or bleeding

Wide range of accumulator charging valve adaptors

Minimess® small bore charging hose connections provide safe, quick and controlled charging or testing procedure



EXAMPLE APPLICATIONS

Pneumatic or gaseous systems

Industrial hydraulic accumulators



The PCFPU charging device fits to the accumulator valve and is charged or tested using a high pressure Minimess® microbore flexible hose.



PCFPU series accumulator charging & testing device



Microbore charging & testing hose

5114-21-03.KIT Nitrogen gas charging & testing kit

The ideal kit for charging & testing accumulators already fitted with minimess charging valves.

Minimess® accumulator charging kit for charging, testing or reducing existing charge pressures. Minimess valves and high pressure flexible microbore charging hoses provide safe connection for a controlled charging or testing process. Adaptors are available for temporary adaption or permanent replacing of different accumulator valves to Minimess.



KEY FEATURES

Safe, easy to use Minimess® charging & testing connections

Minimess® 1615 or 1620 accumulator connections with VG8 (schrader style) adaptor option

Minimess® 1615 adaptors available for permanent replacement of existing 7/8" - 14 UNF and M28x1.5 accumulator valves

W24.31x1/14" and 5/8" BSP gas bottle connection

2.5m flexible high pressure microbore charging hose

250 bar pressure gauge with safety blow out flap (other ranges on request)



ADVANTAGES

Minimess® small bore charging hose connections provide safe, quick and controlled charging or testing procedure

Military authorised



EXAMPLE APPLICATIONS

Pneumatic or gaseous systems

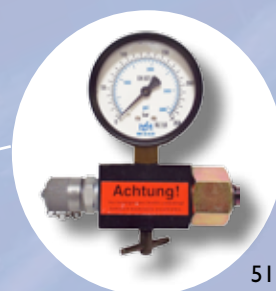
Industrial hydraulic accumulators



Minimess accumulator charging valve



The 5114-21-03.00 charging device fits to the nitrogen bottle (with suitable pressure regulation) and connects safely and easily to the nitrogen accumulator valve using a high pressure Minimess® microbore hose.



5114-21-03.00 series accumulator charging & testing device



Microbore charging & testing hose

540I-02-00.KIT Minimesse® Nitrogen gas regulating, charging & testing kit

The ultimate service tool for systems with Minimesse gas charging valves.

Minimesse® accumulator charging kit for charging, testing or reducing existing charge pressures. This kit comes with a high quality gas charging and testing device with pressure reducer valve enabling the user to fill, adjust and control gas pressure from 10 to 235 bar. Minimesse® valves and high pressure flexible microbore charging hoses provide safe connection for a controlled charging or testing process. Adaptors are available for temporary adaption or permanent replacement of existing accumulator valves to Minimesse®.



KEY FEATURES

Safe, easy to use Minimesse® charging & testing connections

Minimesse® 1615 or 1620 accumulator connections

VG8 (schrader style) adaptor option

Minimesse® 1615 adaptors available for permanent replacement of existing 7/8"-14 UNF and M28x1.5 accumulator valves

W24.31x1/14" and 5/8" BSP gas bottle connection

High quality pressure regulation from 10..235 bar

2.5m flexible high pressure microbore charging hose

250 bar (for charge pressure) & 400 bar pressure gauge (bottle pressure) with safety blow out flap



ADVANTAGES

Minimesse® small bore charging hose connections provide safe, quick and controlled charging or testing procedure

Military authorised



EXAMPLE APPLICATIONS

Pneumatic or gaseous systems

Industrial hydraulic accumulators

Microbore charging & testing hose



Minimesse accumulator charging valve



540I-02-00.00 series pressure regulator & accumulator charging & testing device



The 540I-02-00.00 charging device fits to the nitrogen bottle and connects safely and easily to the Minimesse accumulator valve using a high pressure Minimesse microbore flexible hose. The high quality pressure regulator unit allows easy setting of pre charge pressures from 10 to 235 bar.

540I-PCFPU Universal Nitrogen gas regulating, charging & testing kit

The ultimate service tool for the complete service engineer

Universal accumulator charging kit for charging, testing or reducing existing charge pressures. This ultimate service tool comes with a high quality gas charging and testing device with pressure reducer valve enabling the user to fill, adjust and control gas pressure from 10 to 235 bar. Minimesse® valves and high pressure flexible microbore charging hoses provide safe connection for a controlled charging or testing process. The PCFPU unit supplied allows for an additional full suite of adaptors, enabling connection to most accumulator valves.



KEY FEATURES

Safe, easy to use Minimesse® charging & testing connections

Minimesse® 1615 or 1620 accumulator connections

M28x1.5 female accumulator connection with additional 5/8"-18 UNF, VG8 (schrader style), 7/8"-14 UNF and 1/4" BSP adaptors

W24.31x1/14" and 5/8" BSP gas bottle connection

High quality pressure regulation from 10 to 235 bar

3 x 2.5m flexible high pressure microbore charging hoses enabling connection to Minimesse 1615 & 1620 valves

250 bar (for charge pressure) & 400 bar pressure gauge (bottle pressure) with safety blow out flap

Further 60 bar & 250 bar pressure gauges with safety blow out flap (other ranges on request) supplied with PCFPU charging device



ADVANTAGES

Minimesse® small bore charging hose connections provide safe, quick and controlled charging or testing procedure

All you need in one portable kit

Military authorised



EXAMPLE APPLICATIONS

Pneumatic or gaseous systems

Industrial hydraulic accumulators

Minimesse accumulator charging valve or PCFPU accumulator charging device enabling connectivity to most valves



Microbore charging & testing hose



540I-02-00.00 series pressure regulator & accumulator charging & testing device

The 540I-02-00.00 charging device fits to the nitrogen bottle and connects safely and easily to the Minimesse accumulator valve or the additional PCFPU accumulator charging device using a high pressure Minimesse microbore flexible hose. The high quality pressure regulator unit allows easy setting of pre charge pressures from 10 to 235 bar.



Specialists in high performance test & measurement solutions



Pressure



Flow turbines



Gear flow meters



Load



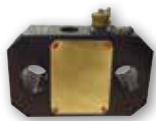
Infra red RPM



Inductive RPM



Temperature



Tension



Torque



Displacement



Particulate



Triaxial Vibration



Repair & Calibration

We offer a full repair service and calibration / certification using UKAS certified test equipment.

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