# WE ALSO OFFER...



DATA LOGGERS



FLOW METERS



PRESSURE SENSORS



TEMPERATURE SENSORS



OTHER TEST SENSORS



BESPOKE TEST RIGS



CALIBRATION & REPAIR

# HYDROTECHNIK

Hydrotechnik, 1 Central Park, Lenton Lane, Nottingham, NG7 2NR UK

UK free Phone: 0800 068 4134

Tel: +44 (0)1159 003550

Fax: +44 (0)115 9705 597

Email: sales@hydrotechnik.co.uk

Web: www.hydrotechnik.co.uk



# HHYDROTECHNIK

# PRODUCT RANGE OVERVIEW

# MINIMESS® TEST POINTS & ADAPTORS



• 1620, 1620p/T, 1215, 1615 & 1604 male threaded test points

THE UK'S LEADING SUPPLIER OF HYDRAULIC TEST EQUIPMENT

- In line test point tee adaptors for BSP, JIC, ORFS & Metric pipe systems
- Gauge, bulkhead & compact 90° adaptors
- Special application test points
- Zinc Nickel plated steel, 316Ti stainless steel, brass & monel materials

# MICROBORE HOSE, FITTINGS & ASSEMBLIES



- 2mm (Dn2) & 4mm (Dn4) microbore hose material options
- Polyamide synthetic braided & stainless steel braided PTFE bore materials
- Microbore hose end fittings for all major thread variants
- Zinc Nickel plated steel & 316Ti stainless steel materials
- Hose assembly accessories & services

# MINIMESS® PRESSURE TEST KITS & PRESSURE GAUGES



- 63 & 100mm analogue & 75mm digital pressure gauges
- Pressure gauge accessories
- BSP, JIC, Metric & Universal Minimess pressure test kits
- JCB style, Caterpillar style & Customer specific pressure test kits
- 700 bar hydraulic calibration hand pump kits

### MINIMESS GAS CHARGING VALVES & TEST KITS



- Minimess 1620 & 1615 series gas charging valves
- Nitrogen accumulator Minimess test kits
- . Charging & testing devices for accumulator or bottle connection
- · Adaptors for connection to leading accumulator brands

# MINIMESS® - THE ORIGINAL & STILL THE MARKET LEADER

Developed by Hydrotechnik more than 50 years ago, Minimess test points & associated products are found worldwide in hydraulic, process and gas systems. Minimess pressure test points offer the most advanced sealing system available with working pressures up to 630 bar. A lifetime leak free guarantee and suitability with almost any fluid or gas makes Minimess the most versatile test point available.

# MINIMESS® - A UNIQUE CONSTRUCTION Backing ring Teflon ring Secondary 0-ring Sealing bush Primary 0-ring Poppet valve Anti vibration protection Chain fixing ring Valve spring Sealing according to DIN · Single piece housing

### MINIMESS® - ONE PRODUCT - MANY APPLICATIONS

- Hydraulic testing
  - Bleeding
  - Filling
- Gas testing

- Oil Sampling
- · Gas charging
- Mobile hydraulics
- Industrial hydraulics

- · Offshore & subsea
  - Process plant
  - Pneumatics
  - Automotive



Industrial hydraulics & pneumatics



Mobile hydraulics & pneumatics



Offshore hydraulics & pneumatics

# HHYDROTECHNIK

# MINIMESS® TEST POINTS & ADAPTORS

Minimess test points offer a uniquely simple method of accessing low or high pressure systems for the purpose of pressure testing, oil sampling or gas charging. Manufactured in Steel, Stainless Steel, Brass or Monel with Buna Nitrile, Viton or EPDM sealing options, ensures compatibility with most systems and media.

# Minimess test point range

### Minimess 1620



MINIMESS® 1620 or 'Test 20' is the most commonly used test point across all industries.

Available in steel, stainless steel & monel with a wide choice of connection threads make this the most versatile range available.

Connection threads: BSP, BSPT Metric, NPT & UNF Standard sealing materials: Buna Nitrile, Viton & EPDM Working pressures up to 630 bar

# Minimess 1604



MINIMESS® 1604 is a larger bore (nominal 4mm) test point, used for higher flow requirements or for highly viscous fluids. 1604 test points are available in steel or stainless steel

Connection threads: BSP & Metric Standard sealing materials: Buna Nitrile & Viton Working pressures up to 400 bar

### Minimess 1215



MINIMESS® 1215 or 'Test 15' is commonly used in the construction and gas industries. Small and compact in design with a 12mm threaded cap, the 1215 is available in steel, stainless Steel and

THE UK'S LEADING SUPPLIER OF HYDRAULIC TEST EQUIPMENT

Connection threads: BSP, BSPT Metric, NPT & UNF Standard sealing materials: Buna Nitrile & Viton Working pressures up to 630 bar

### Minimess 1615



MINIMESS® 1615 or 'Test 15' coupling is used most commonly in the defence, gas and marine ndustries. The 1615 has a green finish and has an M16 connection thread. Materials available are steel. stainless Steel or monel.

Connection threads: BSP, Metric, & NPT Standard sealing materials: Buna Nitrile & Viton Working pressures up to 630 bar

# Minimess p/T 1620



MINIMESS® p/T 1620 was developed the to accept a temperature probe which gets in contact with the medium for accurate dynamic temperature and/ or pressure measurement.

Connection threads: BSP & Metric Standard sealing materials: Buna Nitrile, Viton & EPDM Working pressures up to 630 bar

Standpipe, bulkhead, gauge & 90° adaptors

point adaptor

3/4"-16 UNF

**Metric DKO swivel female** 

JIC fixed female standpipe

(37° cone sealing) test point

Sizes from 7/16"-20 UNF up to

**Test Point female to pressure** 

**Test Point bulkhead adaptors** 

All test point variants to Test Point. Metric, BSP gauge & NPT threads

All test point variants to BSP & NPT

gauge female adaptors

standpipe (24° cone sealing) test

Sizes from M12x1.5 up to M52x2 in Light or Heavy series

At Hydrotechnik, specials are our speciality. We manufacture to specific



Minimess 1620 subsea test point Special cap & thread design for underwater accumulators to 2000m

Minimess 1620 & 1604 gearbox oil

1620 & 1604 series test points with copper extension tube for gearbox oil





valve with internal 400 bar burst disc to protect critical equipment.

# In line test point tee adaptors



BSP male x swivel female (60° cone sealing) test point tee Sizes from 1/4" BSP up to 1.1/2"



JIC male x swivel female (37° cone sealing) test point tee Sizes from 7/16"-20 UNF up to 1.7/8"-12 UNF



(O-Ring face seal) test point tee Sizes from 9/16"-18 UNF up to 1.7/16"-12 UNF

Metric DKO male x swivel female

ORFS male x swivel female



(24° cone sealing) test point tee Sizes from M12x1.5 up to M52x2 in Light or Heavy series



Metric DKO compression test point Sizes from M12x1.5 up to M52x2 in Light or Heavy series



90° compact Test Points & gauge All test point variants to BSP threads

# **SPECIALS**

customer requirements such as special fitting requirements, body or seal materials such as below:-





sampling probes



**Minimess Gas Charging Valve** Customer specific test point thread with Minimess internals for nitrogen



Test point with internal burst disc Special accumulator gas charging

# MICROBORE HOSE, FITTINGS & ASSEMBLIES

The microbore hose assembly, most commonly used to connect to a Minimess® test point for pressure testing, has many other diverse applications.

The hose is available in 2mm and 4mm internal diameter up to 630 bar working pressure. The hose material is extremely flexible, light weight and can be specified for a large range



# Microbore hose options

### Dn2 - 400 bar Hose



Dn2 - 630 bar Low Temp

Size: 2mm ID x 5mm 0D Working Pressure: 400 bar Burst Pressure: 1040 bar Temp: -20°C to +100°C Min Bend Radius: 20mm

Size: 2mm ID x 5mm 0D

Working Pressure: 630 bar

Burst Pressure: 1950 bar

Temp: -54°C to +100°C

Min Bend Radius: 20mm



Dn2 - 630 bar Hose

Size: 2mm ID x 5mm 0D Working Pressure: 630 bar Burst Pressure: 1950 bar Temp: -20°C to +100°C Min Bend Radius: 20mm



Size: 2mm ID x 5mm OD Working Pressure: 450 bar Burst Pressure: 1350 bar Temp: -70°C to +260°C Min Bend Radius: 13mm

20mm bend

radius!

# Dn4 - 315 bar Hose



Size: 4mm ID x 8mm OD Working Pressure: 315 bar Burst Pressure: 810 bar Temp: -20°C to +100°C Min Bend Radius: 40mm



Size: 4mm ID x 8mm 0D Working Pressure: 450 bar Burst Pressure: 1500 bar Temp: -20°C to +100°C Min Bend Radius: 40mm

# Microbore hose end fittings

Anti buckle springs

Hydrotechnik UK stock a huge range of microbore hose fittings with many thread and fitting variants ready for assembly to hose lengths of your choice. These include:-

- 1620, 1215, 1615, 1604, Steck, BSP 60° cone, BSP gauge form, Metric DKO, NPT, JIC, ORFS, Banjo, Standpipe
- Male, fixed female, swivel female & 90° elbows
- Zinc Nickel plated steel, 316 Grade Stainless Steel



Hose tagging & Sleeving



**Pressure testing & Cleaning** 



Any hose length with any end fitting option available from stock.

# IH HYDROTECHNIK

# PRESSURE GAUGES & ACCESSORIES

Hydrotechnik supply and stock a large range of analogue & digital pressure gauges from -1 bar up to 700 bar. Analogue gauges are 63mm or 100mm bottom or back entry with a 75mm digital option for greater accuracy and min/max data capture.

THE UK'S LEADING SUPPLIER OF HYDRAULIC TEST EQUIPMENT

# **Analogue Pressure Gauges**



Sizes: 63mm & 100mm (others on request) Ranges: -1 to 700 bar steel case with brass vetted parts Glycerine

cale: psi outer (black), ar inner (red). Stainless

Accuracy: ±1.6%

# **Digital Pressure Gauges**



600 bar Scale: bar, psi, MPa Min & Max reading memory 0...100% bar graph indicator 2 x AA standard batteries Accuracy: ±0.5%

Ranges: 0...60, 250 &

Size: 75mm

# **Pressure Gauge Accessories**



Gauge thread adaptors in Steel, brass & stainless Rubber protective covers. Gauge isolation valves. Pressure restrictor valves. UKAS traceable pressure gauge calibration service.

# MINIMESS® PRESSURE TEST KITS

Hydrotechnik offer a huge range of hydraulic pressure test kits that are catered to a wide variety of users & thread variants. Each kit contains all the necessary equipment, including analogue pressure gauges that are suitable for all test point sizes and a large selection of pipe adaptors tailored to suit nearly all hydraulic machines or systems.

### Low Cost Test Kit



2 x 1620 test points

- 1 x Microbore test hose
- 2 x Pressure Gauges
- 1 x 1620 gauge adaptor
- 2 x BSP thread adaptors
- 1 x Sealing washer set

### **BSP Test Kit**



2 x 1620 test points

- 3 x 1620 BSP tees
- 1 x Microbore test hose
- 2 x Pressure Gauges
- 1 x Gauge adaptor
- 2 x BSP thread adaptors
- 1 x Sealing washer set

### **Metric Test Kit**



2 x 1620 test points

- 3 x 1620 Metric tees
  - 1 x Microbore test hose
  - 2 x Pressure Gauges
  - 1 x 1620 gauge adaptor
  - 2 x BSP thread adaptors
  - 1 x Sealing washer set

# JIC Test Kit



2 x 1620 test points 3 x 1620 JIC tees

1 x Microbore test hose

- 2 x Pressure Gauges
- 1 x 1620 gauge adaptor
- 2 x BSP thread adaptors 1 x Sealing washer set

# **Universal Test Kit**



5 x 1620 adaptors to 1215, 1615, Steck, HSP &

flat faced QRC test points

- 2 x 1620 test points 3 x 1620 BSP tees
- 2 x Microbore test hose
- 2 x Pressure Gauges
- 1 x 1620 gauge adaptor
- 2 x BSP thread adaptors 1 x Sealing washer set

# JCB & Caterpillar Style Test Kits



JCB style kit as our BSP kit but with HSP test points for JCB machines. CAT style kits with a large selection of JIC/ORES tees and flat faced quick release test points for CAT

# 4 & 6 Gauge Metal Box Test Kits



4 or 6 x pressure gauges fitted to removable gauge panel with minimess connections & test hoses

4 or 6 x selection of BSP, NPT & metric testnoints

### 700 bar Hand Pump Test Kits



High quality 700 bar hydraulic hand pump kits with Minimess test point connections & test hose.

# **Customer specific Test Kits**



Special design kits with test fitting contents of your choice for specific machine or engineer requirement.

# MINIMESS® GAS CHARGING TEST POINTS

Hydrotechnik offer a range of high quality gas charging valves and test points for use with most gases in the Minimess 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

- Excellent leak proof integrity, leakage <2 x 10-5 mbar l s-1 operating within -20°C to +135°C
- Uses the proven Minimess construction for safe & leak free gas charging or testing
- Working pressure up to 630 bar



# **Options include:**

- M14x1.5, ISO228-G1/4" BSP, 1/2"-20 UNF or 9/16"-18 UNF threads
- Operating temperatures: -20° to + 135°C, -30° to +80°C or -40° to +135°C
- Individual testing with Nitrogen at -33°C or -46°C at 60 bar or Helium at 500m bar
- 100% Pressure Testing
- 100% Helium Odour Test
- 100% Cryogenic testing at -40°C
- 3.1B Certification

# MINIMESS® GAS CHARGING & TESTING KITS

Hydrotechnik UK recently launched a new extended range of universal nitrogen gas charging kits for accumulators, dampers, fire suppression and other pneumatic or gaseous systems.

Kits are based around Hydrotechnik's Minimess leak free gas charging valves which are widely adopted and allow an operator to easily connect and disconnect under full system pressure without loss of gas. Suitable up to 630 bar, minimess charging and testing valves are dual purpose with a reliable positive screwed connection that allow for safe charging and discharging of gas.

Universal kits contains a range of valve adaptors to allow charging of Bosch, Hydac, Olaer, Parker accumulators.

# PC280/70



Accumulator charging & testing device for connection to accumulator Minimess 1620 connection to 5/8" BSP gas bottle connector.

- 1 x 2.5m microbore hose 2 x Pressure gauges
- 1 x Adaptor set for 5/8" & 7/8 UNF. 5/16" UNEF (VG8) & 1/4" BSP

# 5401-21-03.00KIT1



Accumulator charging

& testing device for connection to gas bottle W28x1/14" & 5/8" BSP. Minimess connection to accumulator.

- 1 x 5m microbore hose
- 1 x 250 bar pressure gauge for accumulator pressure
- 1 x Minimess adaptor set for 5/8", 7/8 UNF. M28x1.5, 5/16" UNEF (VG8)

# 5401-02-00.00KIT1



Accumulator charging, regulating & testing device for connection to gas bottle W28x1/14" & 5/8" BSP. With automatic pressure set valve & Minimess connections

1 x 5m microbore hose 2 x 250 bar pressure gauges for bottle & accumulator pressure

1 x Minimess adaptor set for 5/8", 7/8" UNF. M28x1.5. 5/16" UNEF (VG8)

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