EQUIPMENT RENTAL AND CALIBRATION SERVICES



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The Complete Solution

maintenance.

What we offer:

- •
- •
- •
- business



At Proserv, we are committed to delivering an innovative range of solutions and services that enhance operational efficiency and productivity for clients worldwide.

With a track record spanning over 40 years, our experienced teams can offer hire or purchase agreements with options for ongoing modifications, service and

- Accuracy of equipment to industry standards
- Minimal disruption as tests can be carried out onsite
- Operational assurance and decreased downtime caused by control failure
- Services tailored to meet the demands of our clients'





Rental Equipment Fleet

Proserv carries an extensive rental fleet of general purpose and zone-rated equipment, enabling clients to control, monitor, measure and report during testing and maintenance activities. Our rental fleet is available for short and long-term rental periods and includes:

- Hydrostatic test equipment (gauges, recorders, PRVs, hydrostatic test pumps, gas boosters, manifolds)
- Flushing and fluid cleanliness equipment (general purpose and zone-rated flushing rigs, particle counters)

Electrical and umbilical test equipment (dataloggers, temperature / humidity meters, multimeters, wireless umbilical datalogging systems, subsea reels)

The benefits of renting from Proserv include:

- Avoids up-front costs / • CAPEX
- No maintenance costs
- Full breakdown cover
- Full technical support • remote and/or onsite

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Access to Proserv's network • of third party suppliers Equipment availability to cover multiple applications / specific project

To discuss your equipment rental requirements please contact:

+44 (0)1224 957236 rental@proserv.com

requirements

Euro pre-charge kit	Containing U to 400 barg (6 charging hose, accumulator case		
Mechanical pressure recorder	Portable 12" circular chart, s drive, ranging from zero to 2 with adaptations to suit, 1/3 chart drives		
Mechanical dual range recorder	Portable 12" circular chart, i 2,000 barg (30,000 psi), ten (adaptations to suit), config available		
Mechanical temperature recorder	Portable 12" circular chart, drive, ranging from -20 to +2		
Hydrostatic test pumps, DA/DHDA	Single or twin acting air driv with hydraulic output, fill/te and hydraulic controls, rang (6,000 to 23,000 psi), 0 to 1		
Hydrostatic hydratron AZ type test pumps	Suitable for oil or water app 400 to 2,000 barg (5,800 to		
Hydrostatic Haskel type test pumps	Suitable for oil or water app up to 1,000 barg (15,000 ps		
Over pressure protection skid	Can be set to clients' require barg (10,000 psi)		
Gas booster test pumps	Suitable for all gas testing u (20,000 psi)		
Hand pump	Hydraulic pump ranging up t		
Test manifolds	Working pressure 700 to 1,5 22,500 psi), 5 or 7 port opti thermowell with ½" npt (f) c		
Block and bleed valves	Providing 3 ports up to 700		
HP hose assemblies	1,800 barg (26,100 psi), 3 to		
Pressure relief valves	Ranges from 0 to 1,700 bar gas and fluid services, range		

transit case

Hydrostatic Testing

Standard test gauges

Digital pressure gauges

10" dial 1/2" BSP & NPT male lower connection (adaptions available), 0.25% FSD, ranging from minus 1 barg (vacuum) to 2,000 barg (30,000 psi)/dual. C/W

Keller Leo and Leo record digital gauges. Small, compact and durable digital gauges, ranges from 0-1,000 bar, accuracy of 0.1% FS

Containing 0 to 400 barg (6,000 psi) gauges, 2.5 metre connections, C/W transit

> single pen mechanical chart 2,000 barg (30,000 psi) /3, 2/8 & 24 hour to 7 day

, ranging from zero to mperature -20 to +100°C igurations of pressure/temp

single pen mechanical chart +100°C

iven high volume pumps test rig fitted with all air ges from 414 to 1,590 barg 10 barg (145 psi) air drive

oplications, mini pak, range to 30,000 psi)

oplications, mini pak, range si)

rements, ranging up to 700

up to 1,379 barg

to 700 barg (10,000 psi)

,500 barg (10,000 and tions are available, built in connection

) barg (10,000 psi)

to 30 metres, ¼" bsp (f) ends

rg (25,000 psi), suitable for gas and fluid services, range of connections to suit

Flushing and Fluid Cleanliness Equipment

Product	Description
Hydraulic filter pod	Ranges up to 1,000 barg (14,500 psi)
Flushing rigs general purpose safe area	Electrically driven, suitable for mineral oils and water- based glycol subsea control fluids, flow rates up to 35 litres per min. and pressures to 345 barg (5,000 psi)
Beckman Coulter HIAC PODS+ particle counter	Portable liquid particle counter measuring fluid cleanliness and optimising flushing time to compliment maintenance programmes, reporting standards include ISO 4406, NAS 1638 and SAE AS4059
Pamas SBSS particle counter	High resolution digital system for analysis of water and oil based fluids with NAS 1638 and SAE AS 4059 and ISO 4406 classifications
Pamas S40 particle counter	Portable high resolution digital system for analysis of water and oil based fluids with NAS 1638, SAE AS4059 and ISO 4406 classifications





Electrical and Umbilical Test Equipment

Product	Description		
Datalogger	Yokogawa LR6100E, LR810 paper chart capabilities, GX2 channels		
Thermocouple assembly	Type T and K, suited for meas for use with above datalogge		
Megger insulation tester high voltage	Performs insulation resistar		
Calibrator, Druck DPI 615	Battery powered portable p 20 bar (vacuum 290 PSI) an		
Multimeter (Fluke)	87-V and 787 process multi		
Low resistance ohmmeter megger	DLRO 10X, measures resist		
Temperature/humidity meter	Testoterm 610, measuring ra		
Pressure transducers/ pressure transmitters	Ranges from vacuum -1 to 4, suit		
Subsea reel	250 metres C/W digital temp		
Wireless umbilical datalogging system	Squirrel 1,000 series, multi- monitoring of umbilical hydr insulation resistance, ranges		
Time domain reflectometer	Bicotest model T625 with a metallic cable C/W kyoline printer		



00E, LR4100E, provides real time testing with K20 allows paperless datalogging with up to 10

asurements in the -200 to +1,350°C range, suitable ger

ance tests up to 10 kV with an accuracy of ±5%

pressure and mA calibrators, ranges from -1 bar to nd 4 – 20 mA

i meter

tance from 0.1 μ^c to 2000 ^c

range -10 to +50°C, accuracy +/-0.5°C

4,000 barg (60,000 psi), range of connections to

np indicator

i-channel wireless umbilical logger for real time Iraulic pressure and electrical continuity of es as per clients' specifications

a range of 0 to 20 kilometres, suitable for any



Chemical Injection

Proserv is proud to be a specialist in the manufacture, sale, service, repair and rental of chemical injection, metering and transfer pumps including ancillary equipment.

We offer bespoke designs and engineering solutions to satisfy new build equipment requirements or adapt existing equipment to meet new standards.

Our packages include:

- Training
- Feasibility studies
- Onsite or offshore surveys
- Scheduled maintenance trips

Our extensive rental fleet of portable chemical injection skid pumps includes:

- Haskel DGSTV-60
- Chemical transfer pumps
- CLD series pneumatic
- diaphragm pumpsWilliams W series
- pneumatic plunger pumpWilliams V series

pneumatic plunger pumps

What makes Proserv different?

We have 40 years' experience in the manufacture and supply of chemical delivery modules/units, both on and offshore. Benefits:

- Documentation support through MOC process
- In house chartered production chemist
- Corrosion monitoring
- Aftermarket support calibration/service portal

Our systems can be built to operate in hazardous zones and be ATEX compliant

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Chemical Transfer Pumps

Model No	Size	Max Volume GPH/ LPH	Max. Discharge Pressure PSIG/ BARG	Max. Suction Lift FT/M
B25	1"	2160/8175	1-45	20
B50	2"	7920/30000	1-45	20



Williams V Series Pneumatic Plunger Pumps, Pump Performance

Model Number @ Air/Gas Supply Pressure	Max Volume GPH/LPH	Volume Per Stroke	Stroke Length	Strokes Per Minute (Range)	Max Discharge Pressure (PsiG / BarG)	Max Air Consumption SCF Per Day
CP125V125 @100 PsiG	0.07/0.27	0.1 cc	0.5"	1-45	8650 / 596.4	180
CP250V225 @ 100 PsiG	0.57/2.16	0.8 cc	1"	1-45	7200/496.4	1150
CP250V300 @ 100 PsiG	0.57/2.16	0.8 cc	1"	1-45	13,100/ 903.2	2100
CP500V225 @ 100 PsiG	2.30/8.71	3.2 сс	1"	1-45	1750/120.7	1150
CP500V300 @ 100 PsiG	2.30/8.71	3.2 сс	1"	1-45	3250/224.1	2100
CRP500V400 @ 100 PsiG @ 150 PsiG	2.30/8.71 2.30/8.71	3.2 сс 3.2 сс	1" 1"	1-45 1-45	6300 / 434.4 9200 / 634.3	3584 5250
CRP750V400 @ 100 PsiG @ 150 PsiG	5.00 / 18.9 5.00 / 18.9	7.0 сс 7.0 сс	1" 1"	1-45 1-45	2600/178.3 4000/275.8	3584 5250
CRP1000V400 @ 100 PsiG @ 150 PsiG	9.18/34.75 9.18/34.75	12.9 сс 12.9 сс	1" 1"	1-45 1-45	1520/104.8 2300/158.6	3584 5250
CRP1000V600 @ 100 PsiG @ 150 PsiG	9.18/34.75 7.11/26.91	12.9 сс 10.0 сс	1" 1"	1-45 1-35	3400 / 234.4 4700 / 324.0	7190 10210
CRP1000V800 @ 100 PsiG @ 150 PsiG	9.18/34.75 7.11/26.91	12.9 сс 10.0 сс	1" 1"	1-45 1-35	6300 / 434.4 9100 / 627.4	12342 18150

This data should only be used to provide you with initial size selection. Contact Proserv for the performance graphs to allow verification of your pump selection.

CLD Series Pneumatic Diaphragm Pumps, Pump Performance

Model Number @ Air/Gas Supply Pressure	Max Volume GPH/LPH	Volume Per Stroke	Strokes Per Minute (Range)	Max Discharge Pressure (PsiG / BarG)	Max Air Consumption (SCF per Day)
CLD100-316-TFE @ 100 PsiG	0.75/2.8	1.0 сс	1-45	80/5.52	20
CLD100-TFE-TFE @100 PsiG	0.75 / 2.8	1.0 сс	1-45	75 / 5.17	20
CLD200-316-TFE @ 100 PsiG	10.0/37.8	14.0 cc	1-45	98/6.76	255
CLD200-TFE-TFE @ 100 PsiG	10.0/37.8	14.0 cc	1-45	93/6.41	255
CLD400-316-TFE @ 100 PsiG	45.0/ 170.3	63.0 cc	1-45	93/6.41	1200
CLD400-TFE-TFE @ 100 PsiG	45.0/ 170.3	63.0 cc	1-45	90/6.20	1200

Suitable for sodium hypochlorite applications



Haskel DGSTV-60

Maximum Air Supply 125 psi (8.5 bar), Single Air Head - 6 HP (4.5 kw)											
	Dette Asturi		Maxim	um Rated	Output Pr	essure	Displacement		Connection Ports		
Model	Ratio Dash	Actual Area	Continuous		Interm	mittent / Cycle					
	No	Ratio	PSI	Bar	PSI	Bar	ar CUIN	ML	Air Drive	Inlet	Oulet
GWD, GSFD, DGFD, DGSFD, DGSTVD	-12	14.8	8000	552	10000	690	15.9	260.0	3/4"	1-1/4"	3/4"
	-35	40.3	4375	302	4375	302	6.0	98.0	3/4"	1-1/4"	1/2"
*GW, DGF, GSF, DGSF, DGSTV	-60	69	7500	517	7500	517	3.5	57.0	3/4"	1-1/4"	1/2"
	-100	115	8000	552	10000	690	2.1	34.0	3/4"	1-1/4"	1/2"

*These pumps are not recommended for pressurised liquid inlet conditions.



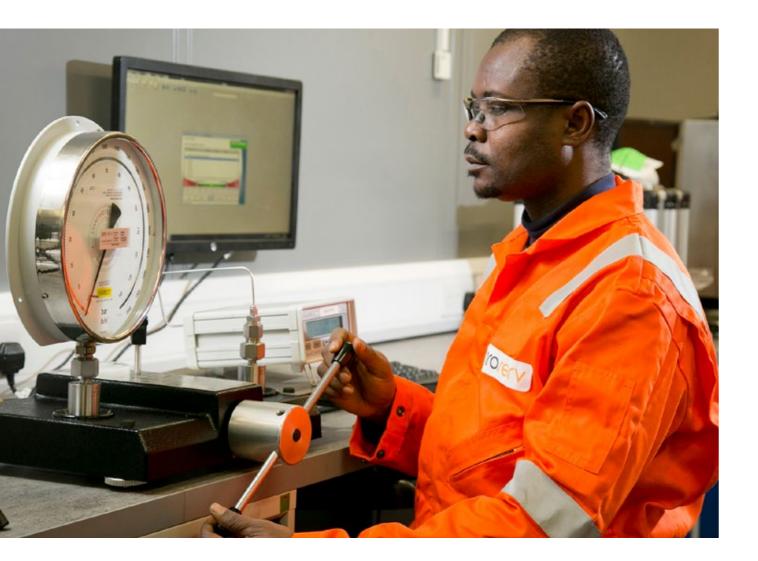
Performance table for W Series Pneumatic Plunger Pump

Model Number @ Air/Gas Supply Pressure	Max Volume GPH/LPH	Volume Per Stroke	Stroke Length	Strokes Per Minute (Range)	Max Discharge Pressure (PsiG / BarG)	Max Air Consumption SCF Per Day
CRP1500W400 @150 PsiG	22.90 / 86.40	36 cc	1 1/4"	1-40	600/41	11,543
CRP1500W600 @ 150 PsiG	22.90 / 86.40	36 cc	1 1/4"	1-40	1950/134	26,000
CRP1500W800 @ 150 PsiG	22.90 / 86.40	36 cc	1 1/4"	1-40	3450/238	46,000
CRP2250W600 @ 150 PsiG	90.00 / 336.00	160 cc	2 1/2"	1-35	900/62	46,000
CRP2250W800 @ 150 PsiG	90.00 / 336.00	160 cc	2 1/2"	1-35	1800/124	81,000

This data should only be used to provide you with initial size selection. Contact Proserv for the performance graphs to allow verification of your pump selection.







Calibration Services

Our purpose-built UKAS certified laboratory, based in Aberdeen, provides a variety of calibration services, covering an extensive range of electrical and pressure instruments.

National traceable certification is available both in our laboratory and onsite within customer facilities, both on and offshore.

Through the use of our mobile service van fleet and mobile calibration laboratory container, we can offer both pressure and temperature calibration at our clients' premises. In our climate controlled laboratories we provide pressure (up to 60,000 psi), temperature and electrical calibrations, with full equipment report details provided on our UKAS accreditation schedule. We also provide torque measurement (from 10Nm to 1000Nm), as per national standards.

We also specialise in the calibration and repair of dimensional metrological instruments such as micrometres, dial gauges and depth gauges using computerised calibration to tolerances of 10-4. Proserv takes ownership and enables the management of your equipment calibration requirements. We do this using our free customer portal, providing secure access to full equipment reports and certification as well as recalibration reminders to ensure your equipment remains in calibration for use during operations. To book a calibration or discuss your requirements please contact our dedicated customer service team on:

+44 (0)1224 957236 calibration@proserv.com

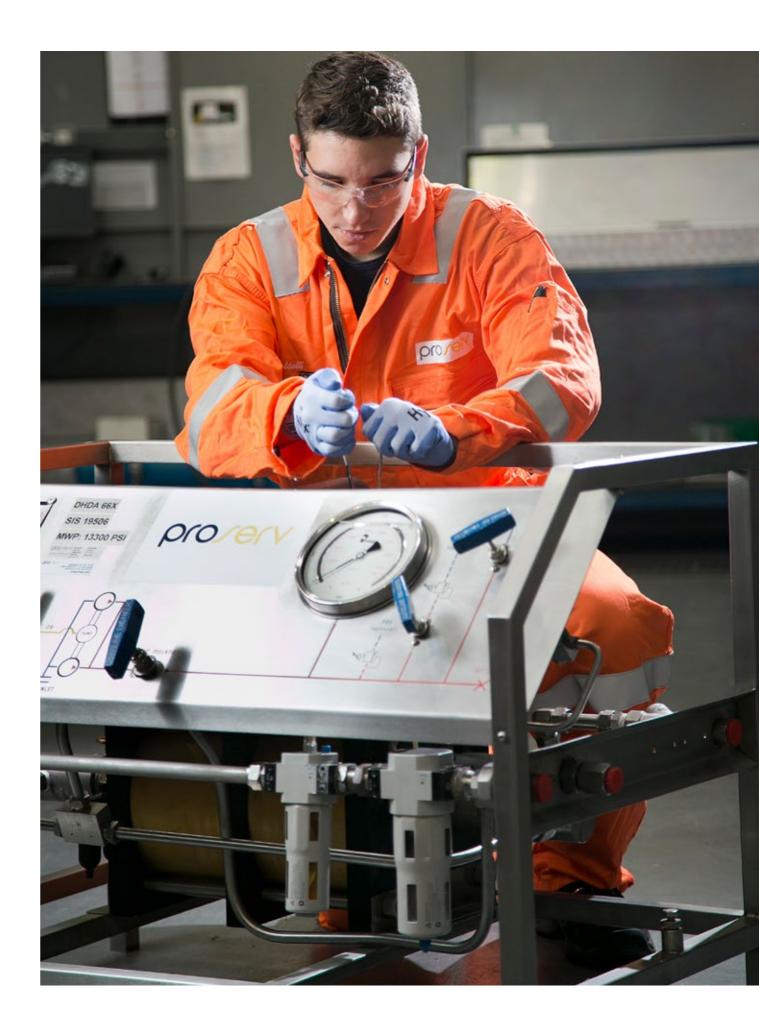
Instrumentation and Electrical Testing

Product	National Standard Calibration
Vacuum / pressure gauge	
Standard test gauge < 60,000 psi / 4,000 bar	✓
Industrial pressure gauge < 60,000 psi / 4,000 bar	✓
Differential gauge < 60,000 psi / 4,000 bar	✓
nVision gauge < 60,000 psi / 4,000 bar	✓
Chart recorder single pen < 60,000 psi / 4,000 bar	✓
Chart recorder dual pen pressure < 60,000 psi / 4,000 bar	~
Chart recorder single pen temperature -20°c + 100°c	\checkmark
Chart recorder dual pen pressure / temperature < 60,000 psi / 4,000 bar / -20°c + 100°c	✓
Deadweight tester base unit / comparator	
Deadweight tester piston unit c/w weight sets (calibration certificate c/w eight readings)	
Multi-meter 3.5 - 4.75 digits (hand-held)	\checkmark
Multi-meter 5.5 - 7.5 digits (bench top)	\checkmark
mV/mA source calibrator c/w temp simulation (e.g. Unomat)	\checkmark
mV/mA loop calibrator	\checkmark
Single channel oscilloscope	\checkmark
Dual channel oscilloscope	\checkmark
mA source / calibrator	\checkmark
mV source / calibrator	\checkmark

UKAS Calibration	Onsite (to National Standards)
✓	
✓	✓
✓	✓
✓	✓
✓	✓
✓	✓
✓	✓
✓	✓
✓	
✓	
✓	
✓	
✓	
✓	
✓	
✓	
✓	
\checkmark	

Instrumentation and Electrical Testing

Product	National Standard Calibration	UKAS Calibration	Onsite (to National Standards)
Resistance bridges	✓	\checkmark	
Resistance gauges	✓	\checkmark	
Resistance boxes	✓	\checkmark	\checkmark
Earth testers	 ✓ 	✓	
Insulation testers	 ✓ 	✓	
RCD testers	 ✓ 	\checkmark	
PAT tester	 ✓ 	\checkmark	
Single / dual power supply unit volts and amps up to 10 amps >10 amps traceable	✓	✓	✓
DMM process multi-meter	✓	\checkmark	
Digital tachometer	✓		
Data logger electrical signals only	✓	\checkmark	\checkmark
Druck pressure calibrator c/w volts and amps	✓	✓	\checkmark
Pressure calibrator c/w hand pump	✓	✓	✓
Digital pressure indicator c/w transducer < 60,000 psi / 4,000 bar	~	\checkmark	✓
High voltage insulation tester	✓	\checkmark	
Deadweight tester piston unit c/w weight sets (calibration certificate c/w eight readings)		\checkmark	
Multi-meter 3.5 - 4.75 digits (hand-held)	✓	✓	
Multi-meter 5.5 - 7.5 digits (bench top)	✓	\checkmark	
mV/mA source calibrator c/w temp simulation (e.g. Unomat)	✓	\checkmark	
mV/mA loop calibrator	\checkmark	\checkmark	
Single channel oscilloscope	\checkmark	\checkmark	
Dual channel oscilloscope	✓	\checkmark	





Product	National Standard Calibration	UKAS Calibration	Onsite (to National Standards)
mA source / calibrator	\checkmark	\checkmark	
mV source / calibrator	\checkmark	\checkmark	
Resistance bridges	\checkmark	\checkmark	
Resistance gauges	\checkmark	\checkmark	
Resistance boxes	✓	\checkmark	\checkmark
Earth testers	✓	\checkmark	
Insulation testers	✓	✓	
RCD testers	\checkmark	\checkmark	
PAT tester	✓	\checkmark	
Single / dual power supply unit volts and amps up to 10 amps >10 amps traceable	✓	✓	✓
DMM process multi-meter	✓	\checkmark	

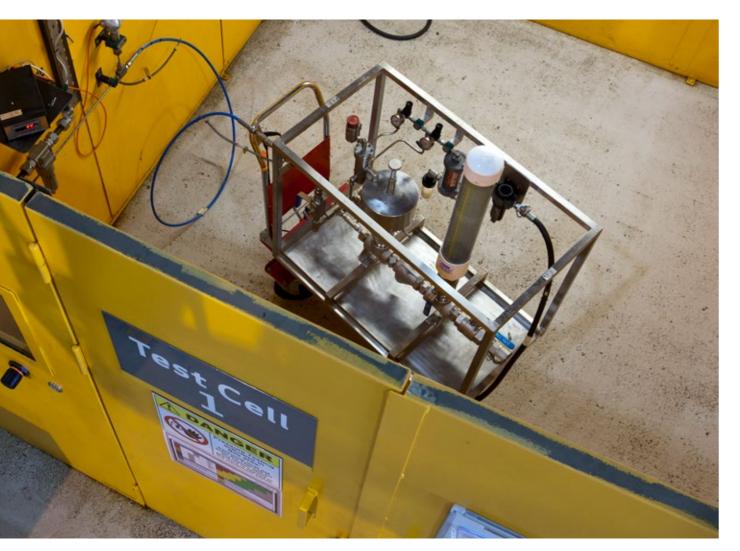
Product	National Standard Calibration
Digital tachometer	✓
Data logger electrical signals only	 ✓
Druck pressure calibrator c/w volts and amps	 ✓
Pressure calibrator c/w hand pump	 ✓
Digital pressure indicator c/w transducer < 60,000 psi / 4,000 bar	✓
High voltage insulation tester	 ✓
Low resistance ohm meter (ductor tester)	✓
Electrical loop tester	\checkmark
Clamp meter	\checkmark
Sound level meter	 ✓
High voltage test set	 ✓
Secondary injection test set	✓
Primary injection test set	\checkmark
Digital temperature indicator	\checkmark
Dry block temperature calibrator	 ✓
Multifunction tester	 ✓
Oil temperature bath	 ✓
Manometer	✓
Phase rotation meter	✓
Infrared thermometer	 ✓
Pressure transducer / transmitter < 60,000 psi / 4,000 bar	✓
Pamas SBSS/S40 particle counter	 ✓
Beckman Coulter PODS+ particle counter	 ✓
Data logger c/w pressure sensor	 ✓
Data logger c/w temperature sensor	 ✓
Temperature and humidity meter	✓
Temperature probe c/w mV output	 ✓

UKAS Calibration	Onsite (to National Standards)
✓	\checkmark
✓	\checkmark
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Metrology Items

External micrometres - fixed anvils 0 - 40 inches External micrometres - interchangeable anvils 0 - 42 inches Micrometre setting rods 0 - 40 inches Internal micrometres Stick micrometres - all ranges Depth micrometres Bore micrometres 0 - 6 inches Dial test indicators and gauges lever types - all sizes Vernier callipers 6 – 72 inches Vernier height gauges 6 – 40 inches Vernier depth gauges 0 – 24 inches Gear tooth vernier 0 - 60 inches Plain plug gauges - parallel 0 - 8 inches Feeler gauges Screw plug gauges - parallel threads 0 – 10 inches Screw plug gauges - taper threads 0 - 10 inches Screw ring gauges - parallel threads 0 - 8 inches Screw ring gauges - taper threads 0 - 1 inches Plain gap gauges 0 – 12 inches Plain ring gauges - parallel threads 0 - 10 inches Master setting ring 0 – 10 inches Pin gauges and thread wires 0 - 10 inches Bevel protractors With 6 inch or 150 mm blade With 12 inch or 300 mm blade With both sizes of blades Torque wrenches 1.2 - 1500 N.M Bore gauges – plunger type 0 – 6 inches Ball trammel (spheres) 0 – 6 inches





Pressure Testing and Technical Services

We have designated internal and external test pits for:

- Hydro testing (0 to 40,000 • psi)
- Gas testing (0 to 30,000 psi) •

Providing clients with:

- Safe operating systems • for the pressure testing of assemblies and components
- Remotely controlled test systems allowing hydraulic

flushing and testing to be controlled within a safe environment

Our team of fully trained and experienced technicians ensure equipment is maintained to the highest possible standard with the appropriate certification.

Technician services:

Servicing and repair of • pumps and HPUs

Flushing operations •

- Chemical injection services • Umbilical testing/monitoring .
 - insulation resistance, continuity resistance, TDR and pressure monitoring
- Hydrostatic testing

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Customer Web Portal

Proserv's free customer web portal is a customised, password protected portal that offers fast and easy access to bespoke documentation, including:

Certificates •

- Full equipment and work reports
- Recalibration reminders •
- Checklists •
- Mobilisation packs •

It also includes the option for customers to make their equipment available on the web.

Proserv E-Store

Proserv's enhanced platform is a dedicated site for the rental and purchase of production equipment and services.

The site includes an extensive fleet of general purpose and zone rated equipment, technical specifications and a chat function to ensure a timely response to all enquiries.



www.proserv-estore.com

Contact Us

Rental enquiries: **rental@proserv.com** Calibration enquiries: **calibration@proserv.com**

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