



Meter Calibration & Repair Services

*Offering our meter expertise to provide a true meter
Supply and support partnership*

Stream
measurement

Flowmeters | Systems | Calibration Services



Why Stream Measurement

As a meter manufacturer Stream Measurement really understand how flowmeters work and how the technology should be applied, used and serviced – ensuring the support you need for a successful outcome of your measuring application.

Established in 1999, following their management buyout of Schlumberger's Measurement Division and with a brand heritage established over 80 years, Stream Measurement has earned an enviable reputation as one of the UK's leading flow meter companies.

With their main factory in the North West of England and a sales and support centre in the South West customers are ensured of local expert support.

Stream offer a very different approach for their customers - making them stand out from their competitors and ensuring a complete meter supply and support partnership:

- ***All flowmeters and instruments supplied by Stream are preconfigured prior to shipment to enable a plug and play solution***
- ***Everything we supply into the market is fully supported, in-house, by our true flow meter experts***
- ***Complete range of flowmeters for Energy and Process applications***
- ***Full range of fully certified meter repair and calibration services to complement our products – ensuring lifetime supply and support***

Our Products

Using the experiences learnt through repair and calibration activities, our product range has been chosen to ensure only the highest level of reliability and accuracy, with all of our products fully certified and compliant with current UK legislation.

In addition to our own UK manufacture of the highly regarded Unipulse positive displacement flowmeter and Shoflo flow Indicator, Stream Measurement offer a comprehensive range of flow products through exclusive supplier partnerships with a number of world leading flow meter companies including Sensus, Itron, Red Seal (Neptune) and ABB.



Stream Measurement is very proud that all of their product manufacturing and calibration processes are fully supported by their ISO9001 Quality Programme which they have maintained since 2003

Our Services

With over 80 years of flowmeter knowledge, the highest levels of product expertise and customer support are not just words to Stream Measurement.

Over the last ten years the company have invested heavily to grow their product and calibration portfolio. Complete understanding of their products is paramount to ensuring that Stream continues to provide the best possible product and customer support - helped by their loyal customer base.

As a flowmeter manufacturer Stream Measurement have always maintained a repair and calibration capability - both in-house and through their field services. Initially supporting their own flowmeters however over the years as their relationships with other meter manufacturers have developed so too has the range of meters they are able to support.

In 2012 Stream acquired the UK water meter test facility from Itron Metering Systems, designed primarily for the production testing of water meters, the rigs are used by many of the UK water utilities to prove the performance and accuracy of fiscal meters. Whilst still maintaining the highest levels of traceability the facility has been extended for use in the accuracy verification of process flowmeters, increasing the technology coverage to include Turbine, Positive Displacement, Electromagnetic, Vortex and Coriolis flow meters.

Adding to their product support expansion in 2013 Stream acquired the UK gas repair and calibration facility of Itron Metering Solutions.

This facility provides Itron with a local repair and

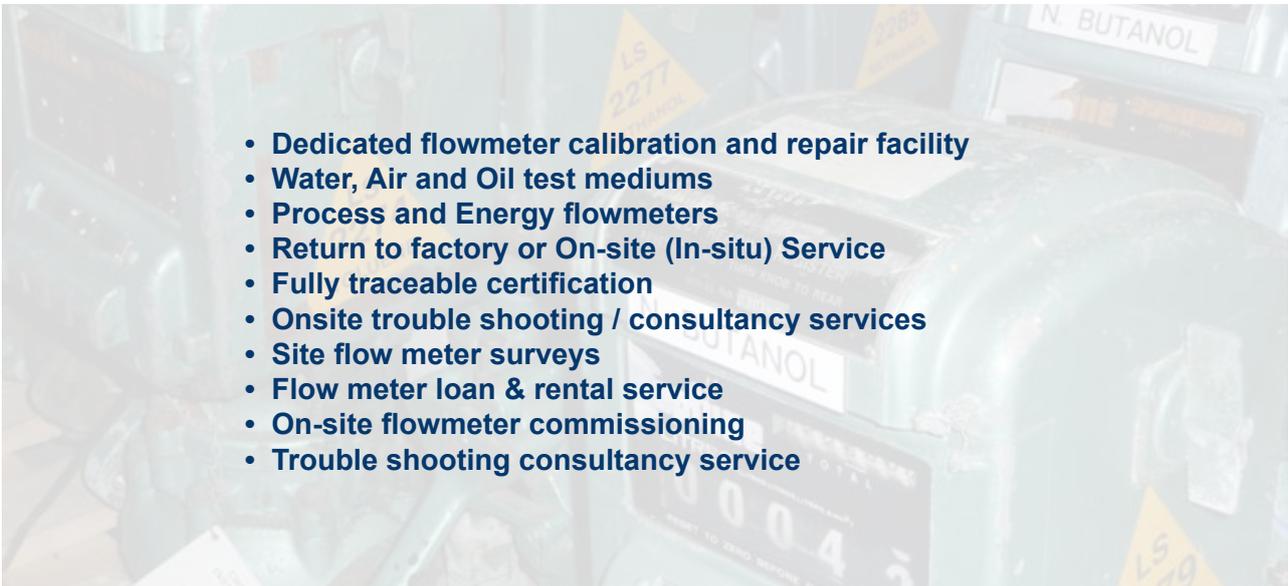
calibration service for their range of fiscal and secondary gas meters, whilst extending additional calibration services to Stream's own customers, ensuring their gas meters are tested to the same exacting fiscal standards.

The rigs ensure that a wide range of flowrates can be achieved, with the HC flow-rig providing one the highest of UK capacities – enabling meters up to 400mm to be verified. The rigs are ideal for testing and verifying any flowmeter, using air as the test medium, achieving flowrates from 0.3 to 3120m³/Hr (depending on the meter technology under test).

Whilst ensuring a totally independent test facility, unbiased towards any meter make, Stream do share a special relationship with the major meter manufacturers which means they are able to provide a full meter repair and refurbishment service for the entire range of RPD and Turbine gas meters (fiscal and secondary) - saving customers money and increasing their product support capability.

Whether your need is for commissioning or calibration of an existing flowmeter, repair or simply advice on your existing application – Stream Measurement are here to help.

Stream Measurement have both the knowledge and equipment to provide a complete range of repair and calibration services, for all markets, covering fiscal and secondary flowmeters with test fluids including water, oil and air – and with over 80 years of flow meter expertise they are the ideal service partner for your flow meter supply and support requirements.

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- **Dedicated flowmeter calibration and repair facility**
 - **Water, Air and Oil test mediums**
 - **Process and Energy flowmeters**
 - **Return to factory or On-site (In-situ) Service**
 - **Fully traceable certification**
 - **Onsite trouble shooting / consultancy services**
 - **Site flow meter surveys**
 - **Flow meter loan & rental service**
 - **On-site flowmeter commissioning**
 - **Trouble shooting consultancy service**

Fiscal Meter Calibration Introduction

Application knowledge, product understanding and calibration traceability are even more pertinent when verifying the accuracy of fiscal meters.

Stream Measurement operates two fiscal standard facilities, utilising Water and Air as the test medium. Used and trusted by the UK's Water and Gas Utilities, using production designed test equipment, Stream offer a range of meter repair and verification services – focused specifically on supporting our customers with increased product life, certification compliance and meter accuracy verification.

“ What you can measure - you can manage”

Lord Kelvin (1824 - 1907)

‘If you don’t measure flow correctly - you can’t possibly manage your process’

Measurement data is generated by the meter - the meter is therefore critical to the performance of any monitoring or control system.

Therefore why would anybody rely on a non-metering or generalist calibration company to look after the key measurement asset - yet historically this is exactly the situation that has existed within the market

Thankfully this is changing

Complete understanding of your flowmeter is paramount to ensuring the optimum performance of the device



Fiscal & Secondary Gas Meter Calibration

Adding to their product support expansion, in 2013 Stream acquired the UK gas meter repair and calibration facility from Itron Metering Solutions, providing Itron with a local repair and calibration service for their fiscal range of gas meters. The facility is now further extended to accommodate the repair and calibration of all manufacturer's gas meters – whilst also enabling our secondary metering customers to benefit by ensuring their gas meters are tested to the same exacting fiscal standards.

The rigs ensure that a wide range of flow rates can be achieved, with their high capacity flow-rig providing one the highest UK capacities – enabling flowmeters up to 400mm to be verified. Whilst predominantly used for the testing of Rotary Piston (RPD) and Turbine meters, the rigs can also be utilised to verify most flowmeter technologies, using air as the test medium, achieving flow rates from 0.3 to 3120m³/Hr.

The Facility & Equipment:

Designed for the fiscal calibration of gas meters this test facility is fully environmentally controlled, whilst the testing of standard gas meters is automated to achieve the highest test standards are maintained.

The test equipment includes:

Bell Prover: regarded as the standard for gas meter calibration, used primarily for the testing of Diaphragm, RPD and Ultrasonic meters. Fully traceable to National Standards the system is fully automated and electronically controlled to ensure the highest level of accuracy and test repeatability.

High Capacity Flow Rig: used to test large gas meters and regulators. The rig can accommodate meters upto 400mm (16") in size and can be used to verify many meter technologies including Turbine and RPD.



- **Flowmeter sizes 4mm to 400mm**
- **Official repair, refurbishment & calibration centre for Itron**
- **Suitable for Diaphragm, RPD, Turbine, Vortex and Thermal Mass Flow Meters**
- **Fully traceable service to fiscal standards**
- **Highest level of calibration accuracy and traceability - Used for Fiscal Verification**
- **Repair, maintenance and refurbishment service**
- **Special quick turnaround repair & calibration service for Itron meters**
- **Collection & Delivery arranged with 24hr turnaround for scheduled meters**

Gas Meter Repair & Refurbishment

Whilst operated as a totally independent test facility, Stream share a special relationship with Itron which means they can provide a full gas meter repair and refurbishment service for the entire range of Itron (including Schlumberger, PCC and Parkinson Cowan) gas meters whether fiscal or secondary, which not only means these meters can be repaired locally in the UK on a fast turnaround, but also saves our customers money by preventing the need for meter replacement and increasing product life.

Subject to spares availability Stream are also able to extend the repair service to other manufacturers meters including Elster and VemmTec.

Whether your need is for commissioning or calibration of an existing flow meter, repair or simply advice on your existing application – Stream Measurement are here to help

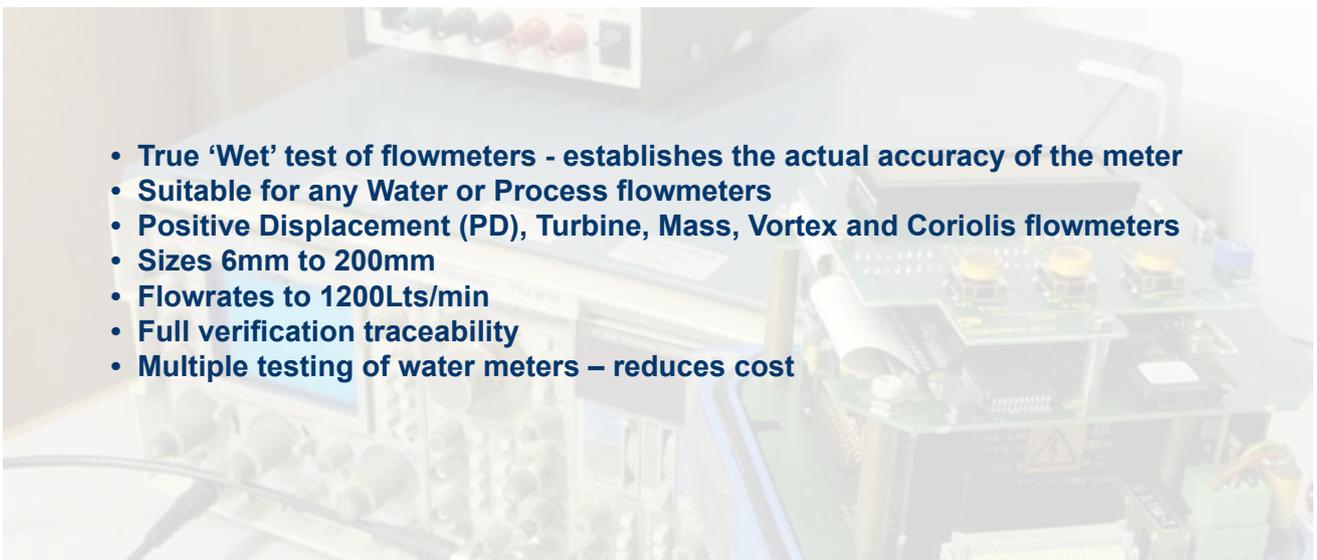


Fiscal & Secondary Water Meter Calibration

In 2012 Stream Measurement acquired the water meter test capability of Itron Metering Solutions – ensuring one of the most extensive meter testing facilities in the UK.

Originally designed for the production of water meters the additional rigs utilise water as the test medium and comprise of a high volume rig capable of testing 45 small water meters at one time, whilst the larger test rig can check meters up to 8” in size.

Ideal for verifying water utility meters to MID or BS5728 and operated under Stream’s ISO9001 quality assurance programme, the rigs provide full test rig traceability with our test equipment calibrated by UKAS accredited laboratories in accordance with the requirements of ISO/IEC 17025:2005.



Oil Meter Calibration

Stream's newly refurbished oil based calibration facility is designed primarily for Mechanical Fuel Flowmeters. The facility utilises high accuracy master meters to ensure the optimum level of verification accuracy.

Ideal for flowmeters with aluminium internal parts, which could be ruined using water, the new oil based test rig adds to Stream's already extensive range of facilities.

Each flowmeter is tested at either two, three or five flow points, with the test at each flow point being repeated three times to ensure repeatability of the flowmeter (the single most important performance factor of the instrument).

Our service covers most manufacturers' flowmeter, whether for process or energy measurement - supporting Positive Displacement and Turbine Technologies.

The service is ideal for Industrial Process, Fuel Oil, Petroleum and LPG meters.

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- **Highest level of calibration accuracy and traceability**
 - **Ideal for Process, Energy, LPG and Fuel Oil Meters**
 - **Used for Positive Displacement (PD), Turbine, and Coriolis Mass flowmeters**
 - **Flow meter sizes 25mm to 100mm (depending on meter technology)**
 - **Flow rates 20lts/min to 1300lts/min**
 - **Fully traceable service to National Standards**
 - **Ideal for flowmeters containing Aluminium parts**



Process Meter Calibration

As a flowmeter manufacturer Stream have always maintained a repair and calibration capability – both in-house and through their field services. Initially supporting their own process flowmeters - over the years, as their relationships with other meter manufacturers have developed, so too has the range of meters they are able to support.

Our new fiscal test rigs expand our calibration offering and ensure that Stream is able to offer 'benefit of scale' prices to their existing and prospective process and energy customers.

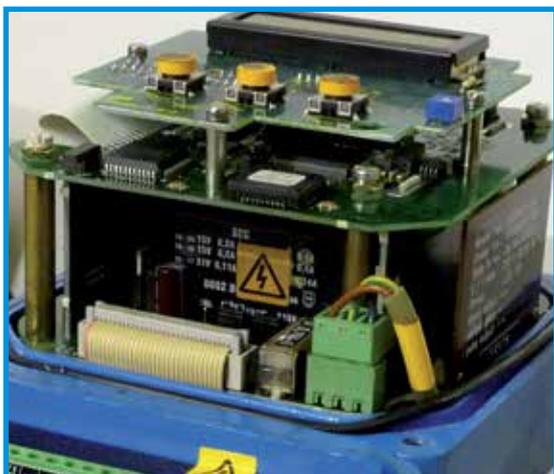
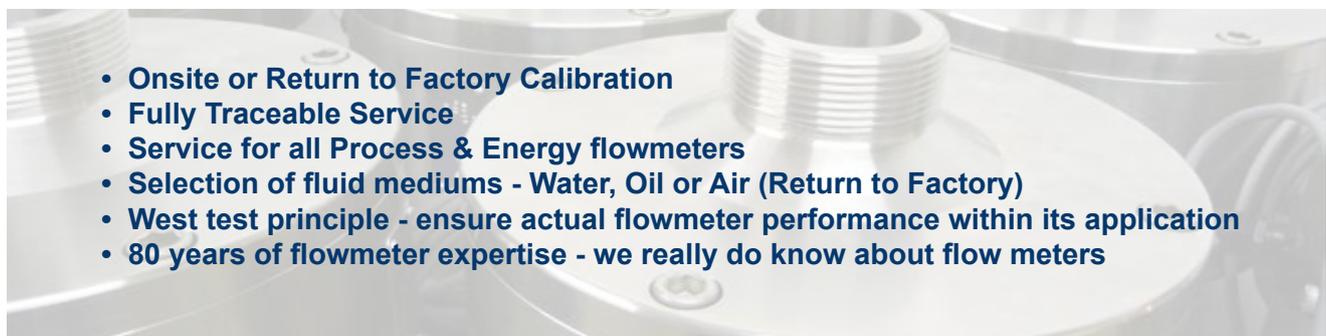
Stream are able to provide a complete range of calibration services with test fluids including water, oil and air – and with over 80 years of flowmeter expertise they are the ideal service partner for your flowmeter supply and support requirements.

Our calibration tests are all based on the 'wet test principle' which ensures that a flowmeter is operating to its best potential. When testing flowmeters in-situ this also means that we are checking the entire meter installation ensuring the flowmeter accuracy is not being affected by any entrained air, bends, valves or the pipework itself.

Our services are utilised by many of the world's leading manufacturing companies covering the Pharmaceutical, Food, Chemical, Paints, Automotive and Petroleum processes – all of whom insist on the greatest standards of workmanship and highest levels of accuracy.

Understanding exactly how a flowmeter works is critical to its correct calibration, which means that Stream Measurement are best placed to assist with calibration and application advice.

As with our entire product offering – the services Stream offer are all fully supported by our ISO9001 quality program.





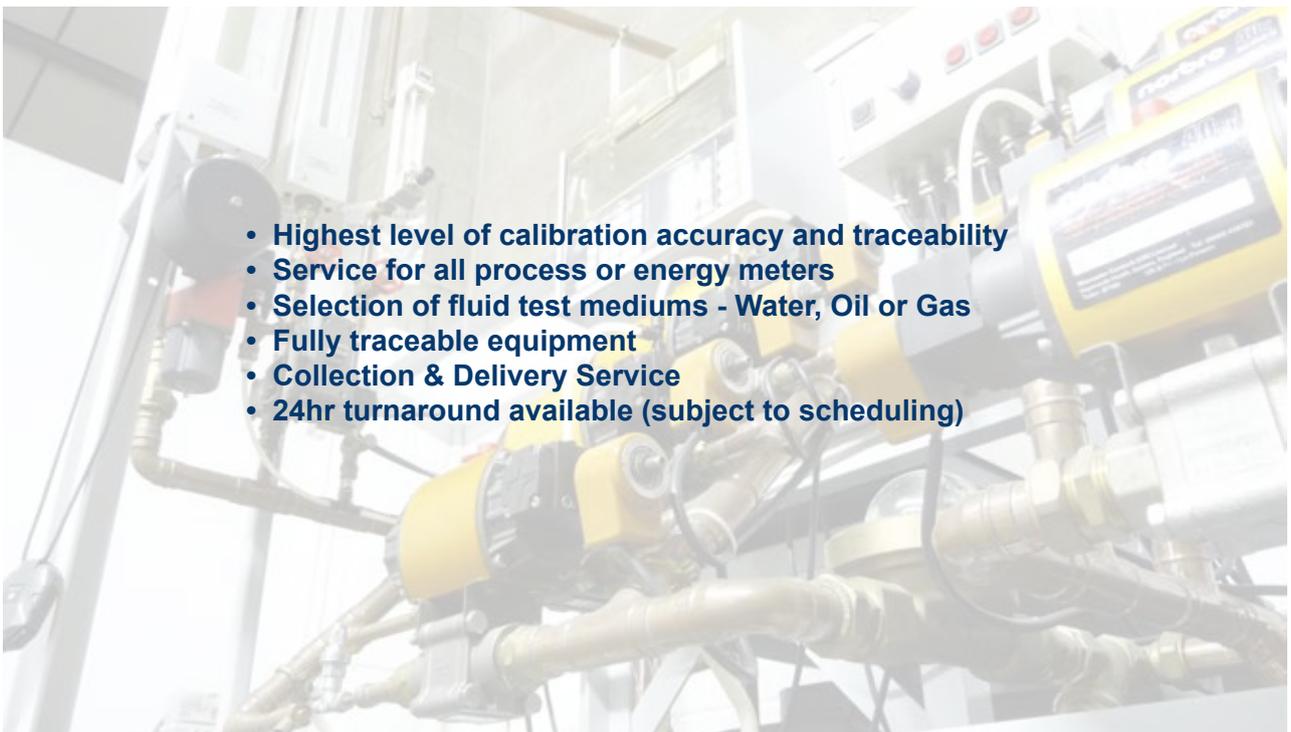
Return to Factory Process Meter Calibration

Stream Measurement's Return to Factory flowmeter calibration ensures that the highest level of calibration accuracy and test rig traceability are achieved – and their wide range of test fluid mediums (including Water, Air and Oil) makes for one of the largest in-house calibration offering in the UK.

Our standard service verifies the flowmeter accuracy at two flow points, the test at each flow point is repeated three times to ensure repeatability of the flow meter (the single most important performance factor of the flow meter). This service can also be enhanced to cover three, five or eight flow points.

Our service covers any manufacturer's flowmeter – whether for process or energy fluids and provides for most meter technologies, including Positive Displacement, Turbine, Electromagnetic, Coriolis Mass, Vortex or Swirl.

The validity of Stream's calibration services are such that they undertake confidential verification for world leading meter manufacturers, many UK calibration houses, in addition to a host of Blue Chip process companies.



- **Highest level of calibration accuracy and traceability**
- **Service for all process or energy meters**
- **Selection of fluid test mediums - Water, Oil or Gas**
- **Fully traceable equipment**
- **Collection & Delivery Service**
- **24hr turnaround available (subject to scheduling)**

On-site Factory Process Meter Calibration

Stream Measurement's on-site (in-situ) calibration service verifies the performance of the flowmeter within its normal operating conditions. The service not only verifies the flowmeter, but also takes into account any installation problems such as entrained air or poor installation – utilising the experience and knowledge of our test engineers to trouble shoot any measurement or metering issues, such as inaccurate batch control problems.

Many of our competitors offer an electronic verification, which merely checks the function of the flowmeter, without taking into account any of the installation effects or fluid conditions. Stream's service provides a true flowmeter 'wet test' which really is the only way to understand the actual performance of the flowmeter within its application.

The service requires our test equipment to be connected via hose to our customer's application pipework with the flowmeter tested using actual application fluids which are diverted through our equipment and either back into the process or to a storage vessel for future use within the process. Using our Master flowmeters or Master Weigh scales (depending on the flow rate and technology being tested) the result can be calculated on-site, enabling your operators to adjust any control equipment, such as batch controllers or PLC's, with the new calibration factor.

This test can be carried out on any manufacturer's flowmeter, covering any technology, including Positive Displacement, Turbine, Electromagnetic, Coriolis, Vortex or Swirl. The nature of our equipment means that we are able to check flowmeters within any area including hazardous or hygienic.

Users of our Stream Measurement's Unipulse flowmeters also benefit from special further discounted calibration rates - please call our process team for more details and special calibration programmes only available to Unipulse users.

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- **Ensures actual flowmeter performance & proves the meter installation**
 - **Fully portable test equipment**
 - **Suitable for calibration of equipment within hazardous areas**
 - **Uses application fluids to ensure highest flowmeter accuracy & performance**
 - **All makes and types of flowmeters**
 - **Fully traceable service**
 - **Flow meter trained engineers**



Stream's test rigs are compact and portable and are fully traceable to the highest standards, depending upon the equipment used and the fluids being monitored. The service covers any operationally safe application liquid including food products, solvents, fuel oil and LPG.

Additionally Stream engineers carry a range of spares for many standard common flowmeters to ensure that repairs can be undertaken during the works, reducing downtime and minimising process interruption.

To complement their support services Stream offer a free on-site flowmeter audit and inspection, with any proposal fully quoted to any works being undertaken.



Flowmeter Repair Services

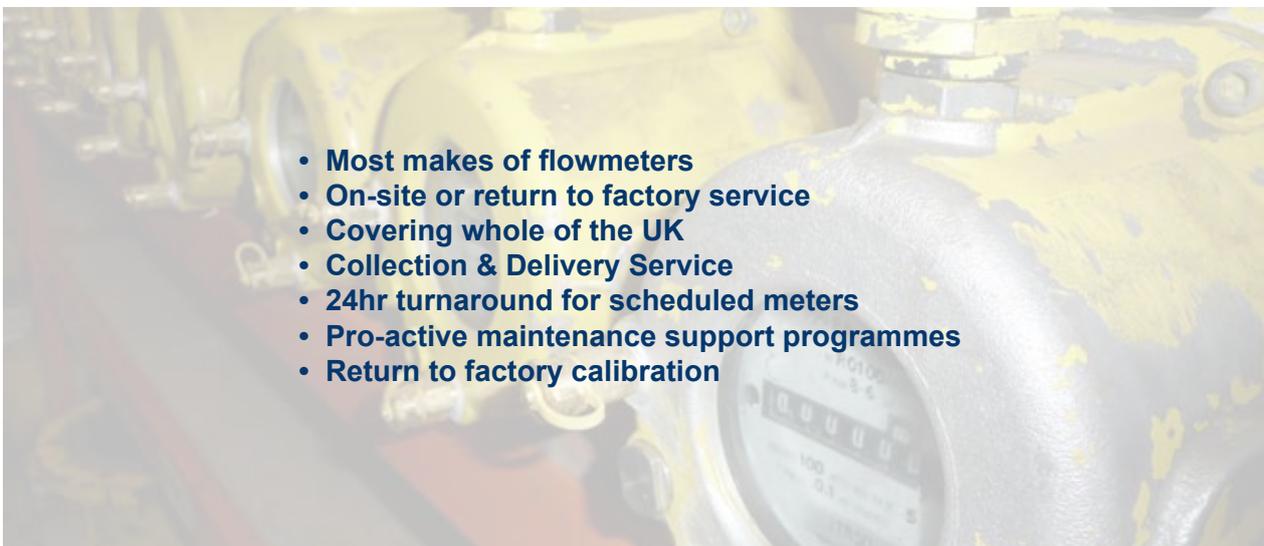
As the manufacturer of the renowned Unipulse flowmeter and Shoflo Indicator Stream Measurement offer special discounted rates for both the repair and calibration of their flowmeters. Users of our Unipulse flowmeter can also benefit from discounted calibration rates for any other manufacturer's flowmeters they may have.

Additionally Stream's association with the Schlumberger Neptune Group (Stream were previously part of this group) and their long established relationships with other flowmeter manufacturers allow them to repair & calibrate most flowmeters at competitive prices whilst ensuring a fast response time.

Our engineers are experienced with most manufacturers' flowmeters and carry a comprehensive selection of parts, particularly for Schlumberger Neptune flowmeters for which we stock an almost entire range.

Where required Stream is able to modify registers, add pulse outputs and carry out extensive flowmeter repairs ensuring minimum maintenance costs and maximum meter life.

Covering the whole of the UK, Stream offers a tailored pro-active on-site maintenance package which can be used to minimise production downtime.



- **Most makes of flowmeters**
- **On-site or return to factory service**
- **Covering whole of the UK**
- **Collection & Delivery Service**
- **24hr turnaround for scheduled meters**
- **Pro-active maintenance support programmes**
- **Return to factory calibration**

Stream's Heritage & Timeline:

- 2014: Stream appointed as distributor for EMU Smart Power Electricity Meters and Dataloggers and expand their sales territories for Neptune (now Red Seal) process flowmeters to include Africa and the Middle East
- 2013: Stream acquire Itron's UK gas meter calibration & operate as Itron's UK service centre and appointed as Fluidwell distribution partner for UK and Ireland
- 2012: Stream acquire Itron's UK water meter calibration facility
- 2011: Southern Sales Office opens
- 2008: Stream acquire the business of GJ Electrical (meter calibration)
- 2006: Awarded exclusive UK distribution of Sensus Water & Heat Meters
- 2003: Awarded ISO9001
- 2002: Stream acquire the business of Taylor Meter Services (meter calibration)
- 2001: Stream purchase assets of Advanced Energy Products Ltd (Nottingham) and are appointed as UK distributor for Schlumberger water & heat meters (now Itron)
- 2000: Appointed as UK master distributor for Schlumberger gas meters (now Itron) for the UK and form alliance with ABB to become specialist flow partner for the sale and support of ABB flow meters
- 1999: Andy Maber & Nigel Bradbury undertake a management buyout of Schlumberger's Measurement Division Europe (formerly Neptune - established in 1928) and form Stream Measurement Ltd and take ownership of the Unipulse flowmeter and Shoflo flow indicator, restarting production at their Oldham UK facility
Stream become exclusive distributor for Neptune process flowmeters covering the UK and Europe



Flowmeters | Systems | Calibration Services

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