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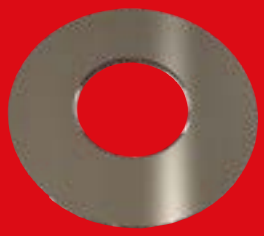
Sur-Tech
Global Measurement Solutions



‘Universal’ Orifice Plate

Universal orifice plates are used within orifice meters (see Roto-Boss™ brochure), some types of Orifice Flange Unions and also in Annular Chambers. They are termed as “universal” as they are manufactured to industry standard outer diameters and plate thicknesses to comply with measurement standards such as MFC-3M, ISO 5167 and AGA 3.

Available as Square Edge, Quarter Circle, Eccentric, Segmental, and Multi-hole.

ST500OP

Paddle Type Orifice Plate

Raised Face Paddle Plates are used for flow metering or restriction applications, where the orifice plate is installed between ASME B16.36 flanges for flow metering applications, or ASME B16.5 flanges for restriction applications. The assembled units are referred to as Orifice Flange Unions.

Paddle Type Orifice Plates are manufactured to industry standard outer diameters and plate thicknesses to comply with measurement standards such as MFC-3M, ISO 5167 and AGA 3, as well as customer specifications such as Shell and DIN standards.

Available as Square Edge, Quarter Circle, Eccentric, Segmental, Multi-hole with facings such as Flat Face, Raised Face, Male or Female RTJ.

STFFPP, STRFPP

Conditioning Paddle Plate

Conditioning orifice plates are specially designed 4-hole orifice plates that condition and correct the flow profile at the point of measurement. They require only a 2D upstream and 2D downstream straight length, and the use is intended for non-fiscal measurement applications.

The design can be used within orifice meters (see Roto-Boss™ brochure), some types of Orifice Flange Unions and also in Annular Chambers. The use of conditioning plates is well suited to most gas, liquid and steam applications.

STRTJCPP

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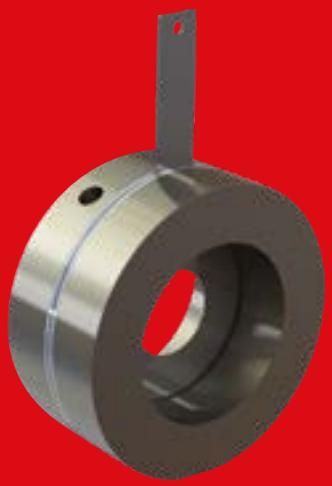
Compac Plate

Compac Plate is the ideal product for applications requiring the primary element, isolation and transmitter to be located in very close proximity. The design minimises the number of potential leak paths for services harmful to personnel. The design allows for the instrument manifold to be either welded or bolted to the plate body and is designed in accordance ISO-5167-2.

STCMP



Annular Chamber

Annular Chambers are available in a range of standard line sizes and configurations with optional materials available upon request.

Annular Chambers are used to achieve stable flow measurements under harsh process conditions. A pair of annular chambers are used in conjunction with an Orifice Paddle Plates and the assembly is mounted between process flanges.

Designed and manufactured in accordance with ISO 5167-2.

STAC

Orifice Flange Union

Orifice Flange Unions (OFU's) are available in a range of standard line sizes and configurations with optional materials available upon request.

OFU's used for flow measurement applications will have differential tappings added to the flanges. OFU's used for Restriction or Spectacle Blind applications will not require tapping points. Each OFU will normally be purchased with a plate depending upon application.

Economical and easy-to-use, this low maintenance flow measurement device simplifies the plate inspection and removal process with one tool required for flange separation.

STOFU

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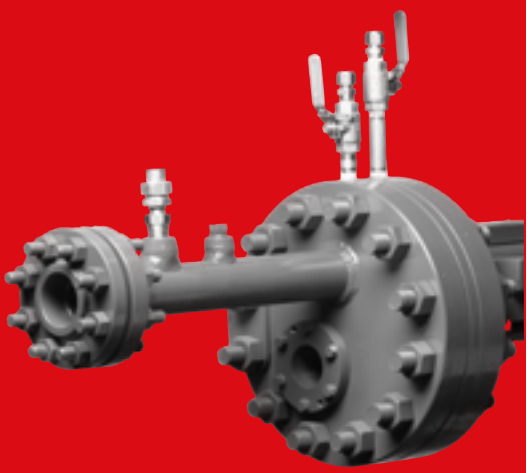
Integral Orifice Run

Integral Orifice Runs are for metering stream that are smaller than a 2″ Sch.40 line ID. Sizes range from 1/4″ to 2″ Sch.40 lines and in pressures 150-2500 ANSI class.

The integral runs can be designed and manufactured with a variety of connection types for differential pressure take-offs or even with a direct mount transmitter with valve option.

Finished meter runs can be fully painted in customer specific paint systems and more readily are supplied with flow conditioners, process connections and accessories such as thermowells and instrumentation.

STIOR

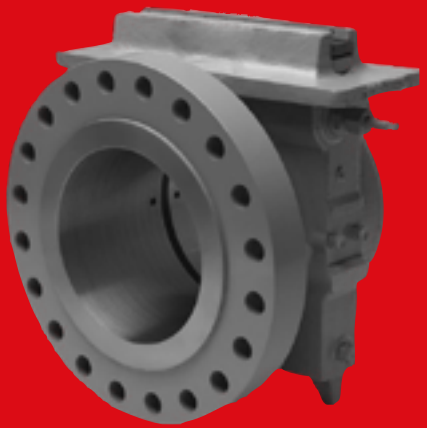


Roto-Boss™ Multi-Port Orifice Meter Run

A multi-orifice advancement of the conventional meter run that offers precision measurement, safe, easy operation and a 10-second plate change-out procedure.

Sur-Tech's Roto-Boss™ meter run is designed with five different orifice plate selections, which are changeable for measuring gas. It takes just seconds for an operator to safely rotate the plate to a new orifice.

STMR



Single Chamber Orifice Meter

Single Chamber Orifice Meters are available in a range of standard line sizes and configurations with optional materials available upon request.

Single Chamber Orifice Meters are used for flow measurement applications and are used to aid orifice plate inspections without the need to break the flange pipeline integrity, albeit a line shutdown and depressurisation is required. The plate is housed in a carrier ring with seals to mitigate any process bypass of the plate causing mismeasurement.

Economical and easy-to-use, this low maintenance flow measurement device simplifies the plate inspection and removal process without the need for flange separation.

STSC

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Dual Chamber Orifice Meters

Dual Chamber Orifice Meters are available in a range of standard line sizes and configurations with optional materials available upon request.

Dual Chamber Orifice Meters are used for flow measurement applications. This device is utilised to aid orifice plate inspections without the need to break the flange pipeline integrity. No line shutdown and depressurization is required as the chamber houses a block and bleed isolation. The plate is housed in a carrier ring with seals to mitigate any process bypass of the plate causing mis-measurement.

Economical and easy-to-use, this low maintenance flow measurement device simplifies the plate inspection and removal process without the need for costly line intervention.

STDC

Differential Wedge Meter

The Sur-Tech wedge flow meter accommodates most flows, even the most abrasive. This type of differential technology is a proven, consistent measuring technology for media in upstream, midstream and downstream applications. Accuracy and reliability are achieved with rugged construction, practical design, and a simple principle of operation. The wedge flow meter stands alone in its ability to maintain the necessary square root relationship between flow rate and differential pressure for almost any type of flow.

STDWM

Differential Pressure Cone Meter

The Differential Pressure Cone Flow Meter has a cone-shaped element which shapes the flow profile ahead of the differential pressure (DP) measurement port without impacting the flow against a sharp surface, creating an extremely stable signal for measurement with minimal wear on the cone edge.

The differential pressure cone meter utilises the center element to straighten the flow and create an ideal dynamic which allows differential pressure technology to be used in a unique way providing extensive flexibility in a wide variety of applications.

STDPCM

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Differential Pressure Wafer Cone

The Differential Pressure Wafer Cone Flow Meter is a compact alternative which is clamped between line flanges. The cone-shaped element shapes the flow profile ahead of the differential pressure (DP) measurement ports without impacting the flow, creating an extremely stable signal for measurement with minimal wear on the cone edge.

The design of the Sur-Tech wafer cone meter allows for easy installation and replacement of different beta cones for changes in flow rates if necessary. The wafer cone is a robust meter and can be used across a wide variety of industries and applications.

STWCM

Vortex Cone Meter

The Vortex Cone Meter flowmeter utilises two different flow meter technologies in combination; vortex and differential pressure. The design has blended the two separate flow metering principles into one hybrid system where the two meters complement each other's performance. This combination allows for the prediction of the fluid density, volumetric flow rate and mass flow rate without any fluid density information being required from an external source.

With the addition of two differential pressure transmitters, advanced diagnostic software continually monitors and verifies the meter's performance. The ST-VCM product line is available with a wide range of options and meter configurations to meet your specific application requirements.

STVCM

Venturi Tubes

Venturi tubes are reliable, easy to use and maintenance-free flow meters. Venturi tubes are particularly well suited to the measurement of clean liquids and gases. Venturi tubes are preferred over other differential pressure flow meters as their design encourages a higher pressure recovery and reduced upstream and downstream pipe requirements. Also Venturi tubes do not require the use of flow conditioning devices upstream of the high pressure tapping.

STVEN

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Flow Nozzle

Flow Nozzles are reliable, easy to use and maintenance-free flow meters. Flow Nozzles are particularly well suited to the measurement of high velocity and abrasive process in gas, steam and liquid flows.

They are used in multiple industries with a wide variety of design options in accordance to ISO 5167-3 and ASME MFC3.

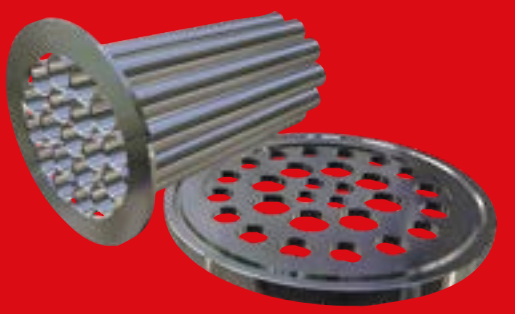
STNOZ

SURBAR Flow Sensor Pitot Tubes – Multiport Self-Averaging

Pitot Tubes are one of the simplest forms of flow measurement devices yet they can be used in many different applications covering air flow in ducts and stacks, steam flow, as well as liquid flow in pipes and open channels.

Sur-Tech pitot tubes can be manufactured in a variety of configurations to suit process medium, connection type (including extractable), material and pipe line size. Static and Fully Retractable versions are available.

STR100 & STF200



Flow Conditioners & 19 Tube Bundles

Flow Conditioners and 19 Tube bundles are inserted upstream of the primary metering element to condition the flow characteristics and by doing so enable a shortening of the minimum upstream length requirements.

Flow Conditioners eliminate swirl and create a symmetrical flow profile which increases the accuracy of measurement at the primary element. Flow conditioners are used with ultrasonic meters, turbine meters, coriolis and orifice plates where the highest possible accuracy of measurement is required.

19 Tube bundles by nature of their design only eliminate swirl within the pipe though these are still a popular method of flow conditioning.

STFC

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Meter Run

Meter runs and spools are essential components of a high accuracy metering stream. Sur-Tech manufactures meter runs for many types of primary meter to the exact requirements of the relevant measurement standards and design codes, ensuring total compliance.

Finished meter runs can be fully painted in customer-specific paint systems and more readily are supplied with flow conditioners, process connections and accessories such as thermowells and instrumentation.

MRST

Paddle Meter

The toughest, most effective meter on the market. Our unique paddle meter design is engineered so that wearing parts are out of the direct path of the fluid. This makes the ST1015 incredibly durable, even in gas breakout situations.

ST1015

Turbine Flow Meter

The Sur-Tech turbine flow meter is designed to withstand the demands of the most rigorous flow measurement applications. Originally developed for the secondary oil recovery market, the turbine flow meter is an ideal meter for liquid flow measurement on or off the oil field.

The meter features a rugged 316 stainless steel housing and rotor support assemblies, CD4MCU stainless steel rotor, and abrasive-resistant tungsten carbide rotor shaft and journal bearings. The turbine flow meter maintains measurement accuracy and mechanical integrity in the corrosive and abrasive fluids commonly found in oil field water flood projects and many industrial applications.

When paired with a Sur-Tech flow monitor, the Sur-Tech turbine flow meter meets a wide range of measurement requirements. This makes it ideal for applications such as pipelines, production/injection fields, in-situ mining operations, offshore facilities, and other industrial applications.

STTFM100

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Coriolis Mass Flow Meter

The RCT1000 Coriolis mass flow meter identifies flow rate by directly measuring mass flow and density of fluids over a wide range of process temperatures with a high degree of accuracy. For homogenous fluids consisting of two components like sugar and water, the RCT1000 Coriolis system can derive the concentration and mass of each component based on fluid properties and density measurement. Furthermore, the unobstructed, open flow design makes it suitable for a variety of fluids such as slurries and other viscous, nonconductive fluids that are difficult to measure with other technologies.

STC15L, STC30L, STC40L, STC60L

Electromagnetic Flow Meter

The Sur-Tech Meter is the result of years of research and field use of electromagnetic flow meter technology. Based on Faraday's law of induction, these meters can measure almost any liquid, slurry or paste that has minimum electrical conductivity.

Designed, developed and manufactured under strict quality standards, the meter features sophisticated, processor-based signal conversion with accuracies of ±0.25 percent. The wide selection of liner and electrode materials helps ensure maximum compatibility and minimum maintenance over a long operating period.

STMTG18A

Industrial Oval Gear Meter

The Industrial Oval Gear Meter is a modular flow meter design, economical yet highly accurate and rugged. Due to the rugged nature of this particular flow measurement technology, the Industrial Oval Gear Meter can be used in a number of applications where conventional meters are not acceptable. Whether the liquid being measured is very viscous or highly corrosive, the oval gear meter can handle it. The Industrial Oval Gear Meter is designed for a variety of applications including petroleum-based fluids, water solutions, and any other liquid compatible with the materials of construction.

STIOG

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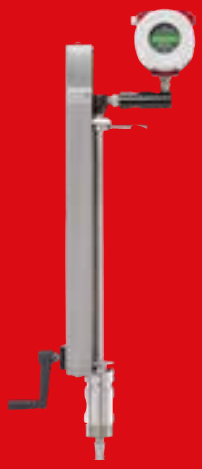
Insertion Turbine Mass Flow Meter

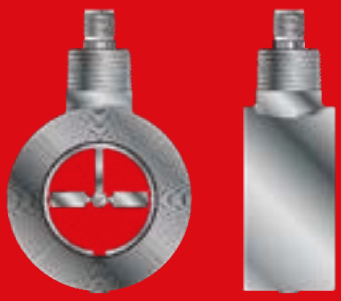


These multivariable flowmeters utilise three primary sensing elements – a turbine sensor, an RTD temperature sensor, and a solid-state pressure transducer – to measure the mass flow rate of gases, liquids and steam. Because the ST-PT is able to measure all process variables within a single device it provides exceptional accuracy, simplifies system design and reduces installation costs.

They are easily installed with Flanged or Male NPT process connections in any pipe size of two-inches and greater. Optional retractor or "hot-tap" hardware simplifies maintenance operations. provides excellent rangeability and can measure very low flow rates with negligible permanent pressure drop. Additionally rotors are interchangeable, making this meter a good choice for installations with step changes in seasonal flow rates.

STPT

Gas Turbine Flow Meter



The gas turbine flow meter provides long service life by offering a durable construction design composed of stainless steel and tungsten carbide shaft and bearings. The unique wafer style design allows for quick installation and easily fits between two flanges.

STGTFM

Wafer Turbine Flow Meter

The in-line turbine flow meter was developed for liquid applications where accuracy and dependability are needed. Our stainless-steel body incorporates a helical turbine with tungsten carbide shaft and bearing. It provides an efficient, long service life and a cost-effective solution for your measurement requirements.

Simple in design and construction, using modified upstream and downstream flow straighteners for a high degree of flow accuracy. It's between-the-flange design eliminates the need for mating flanges, requiring less space in the flow line, lowering costs for easy, one-man installation.

The meter produces a sine-wave signal proportional to its volumetric flow rate. With optional electronics, this flow meter provides local flow rate and volume totalization and interfaces with most instruments, PLCs and computers.

STWTFM

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Ultrasonic Transit Time Meter

The Ultrasonic Transit Time Meter measures clean liquids as well as those with small amounts of suspended solids or aeration such as surface water or sewage.

FEATURES
- Bi-directional flow measurement system
- Totalizer options include forward, reverse and net total
- Modbus RTU or BACnet MSTP over RS485; Ethernet connections including BACnet/IP, EtherNet/IP, and Modbus TCP/IP protocols
- Large, easy-to-read digital display
- Rugged, aluminum enclosure ensures a long service life in harsh environments
- Certified for hazardous area installation in North America and Europe

STFX5000

Thermal Mass Flow Meter For Gases Featuring In-Situ Calibration Check

Thermal Mass Flow Meters that measure the flow rate and consumption of gases for multiple industrial, municipal and commercial applications. The new ST400 Industrial Thermal Mass Flow Meter provides state-of-the-art components, a dual-sided, explosion-proof, NEMA 4X enclosure, a fast response to rapid temperature fluctuations, and a well-thought-out terminal arrangement with a 3-way switch for externally or internally isolating the 4–20 mA or for non-isolated, self-powered operation Rated for both CSA Class 1 Division 2, and Class 1 Division 1 Applications.

ST400

Thermal Mass Flow Meter For Gases Featuring In-Situ Calibration Check – Insertion-Type

Thermal Mass Flow Meters that measure the flow rate and consumption of gases for multiple industrial, municipal and commercial applications. The STIP features a bright, high contrast, photo-emissive OLED (Organic LED) display of Flow Rate, Total and Temperature in a robust, yet lightweight, dual-sided NEMA 4 enclosure. The Flow Rate is also displayed graphically in a horizontal bar graph format. The rear compartment is completely separated from the electronics, and has large, easy-to-access, well marked terminals, for ease of customer wiring. Rated for CSA Class 1 Division 2 Applications.

STIP

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STBT3100 Flow Monitor

The STBT3100 Series flow monitor is a flexible, durable, easy-to-use platform for your flow metering applications. Our trusted flow metering technology now offers a new flow monitor with more options and features than ever before with the STBT3100 Series.

STBT3100

STBT2900 Flow Monitor

The STBT2900 flow monitor incorporates state-of-the-art, digital signal processing technology, designed to provide exceptional flexibility at a very affordable price. Though it is designed for use with Blancett flow sensors, this monitor can be used with almost any flow sensor producing a low amplitude AC output or contact closure signal.

STBT2900

STBT3000 Flow Monitor

The STBT3000 Series flow monitor is a flexible, durable, easy-to-use platform for your flow metering applications. Our trusted flow metering technology now offers a new flow monitor with more options and features than ever before with the STBT3000 Series.

STBT3000

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Digital Mass Flow Controller

High-performance mass flow controller with multitude of functions for general industrial use.

STDMFC

Compact Digital Mass Flow Controller

Compact digital mass flow controller for equipment.

STCDMFC

Gas Mass Flow Controller

This flow meter can measure flow rate without being affected by changes in gas temperature and pressure.

STGMFC

Gas Flow Monitor

Useful for air-fuel ratio control and energy management of burners.

STGFM

Air Flow Meter

This compact mass flow meter is effective for managing compressed air to save energy.

STAFM

Mass Flow Sensor

This product can measure instantaneous air flow rate under 10L/min with fast response. In addition, it is small and lightweight enough to be installed easily.

STMFS

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Micro Flow Rate Liquid Flow Meter

The micro flow rate liquid flow meter is designed to be embedded into equipment or to be installed in a production line or utility facility in the FA Market.

STMFR

Electromagnetic Flow Meter Converter

A general-purpose and user-friendly electromagnetic flow meter converter that is highly flexible and loaded with a diverse array of functions.

STEFMC

Two-wire Electromagnetic Flow Meter

The two-wire flow meter operates on the basis of Faraday's law of electromagnetic induction.

STTEFM

Electromagnetic Flow Meter for Water Applications

This electromagnetic flow meter applies Faraday's law of electromagnetic induction to measure flow. It can only be used with water.

STEFMW

Electromagnetic Flow Meter Open Channel Flow Meter Detector

This is a volumetric immersible flow meter that applies Faraday's law of electromagnetic induction to measure flow. It is ideal for use with liquids and slurries having a conductivity above a certain value.

STEFMO

Electromagnetic Flow Meter Hyper-Fill

This electromagnetic flow meter for container filling machines is a volumetric flow meter that works by applying Faraday's law of electromatic induction. It is ideal for flow rate measurement of liquids having a conductivity of 50 µS/cm or more.

STEFMH

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Multivariable Air Flow Meter

This flow meter provides the functions and performance required to monitor and manage factory air consumption.

STMAFM

Steam Flow Meter

This special-purpose flow meter was developed for the measurement of saturated steam. The required upstream straight pipe length is extremely short, so this flow meter can be installed in places where it was previously impossible to put a flow meter.

STSFM

Elliptical Throat Flow Meter

This flow meter has a tapered elliptical constriction in the flow path which is used to measure the flow rate by finding the differential pressure between the constriction and the preceding part of the flow path.

STETFM

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Ultrasound Flow Meter

The ultrasound flow meter has been specially designed for use in high-risk zones. All its components are protected in its robust stainless steel unit. This ATEX certified flow meter allows you to undertake reliable measurements in complete safety. This converter can be coupled with different probes.

STUF841

Portable Ultrasound Flow Meter

On the principle of “transit time”, this field device allows the measurement of the flow of water of variable qualities, of various petroleum products or of fluids coming from the processes of the food & beverage or chemical industry. Thanks to a specific and efficient signal processing, this portable flow meter offers high performance measurement capabilities, adapting to the conditions of each site.

STPUFM