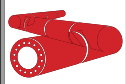


ROTO-BOSS™ MULTI-PORT ORIFICE METER RUN

The safest,
most user-friendly
meter run on
the market.



Sur-Tech

Global Measurement Solutions



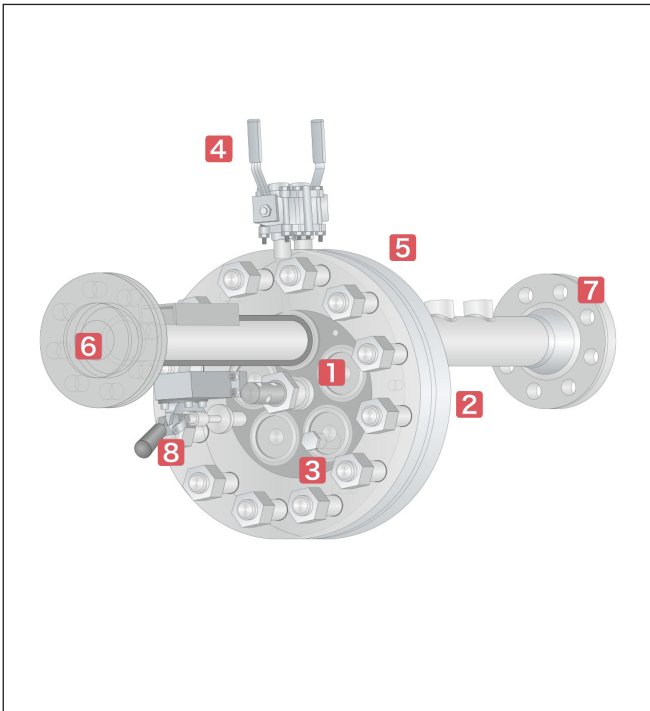


SUR-TECH ROTO-BOSS™ METER RUN

Can a meter run be accurate, safe and easy to use?

Engineered with the end-user in mind, the Roto-Boss™ eliminates the pain points experienced with conventional meter runs. Sur-Tech have engineered a multi-orifice advancement of the conventional meter run that offers precision measurement, safe, easy operation and a 10-second plate change out procedure.

Here's why:



ROTO-BOSS™ ADVANTAGES:

- 1** Rotating orifice mechanism allows users to shift plates in seconds without interrupting the flow and causing down-time.
- 2** Plate exchanges and inspections can be accomplished by accessing one simple inspection plug.
- 3** Rotating orifice plate design eliminates exposure to harmful gases and pressures. Masking up is unnecessary, even in sour gas operations.
- 4** With the Auto-Boss™, which adds remote management capabilities to Roto-Boss™ features, users can connect to utilize actuators and positioners to connect to SCADA systems and perform automated plate changes.
- 5** Simple design (only 6 main components) ensures that the Roto-Boss™ is easy to maintain and incredibly durable.
- 6** Engineered for accuracy. Meets AGA 3 and ISO 5167 measurement standards.
- 7** Bolts into existing meter run dimensions (made to measure)
- 8** Locking mechanism ensures orifice plate concentricity and prevents tampering.



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INDUSTRY APPLICATIONS

Putting the Roto Boss to work.



The Roto-Boss™ is engineered for the rigors of industry. The patented design makes it the most reliable, cost effective and safest orifice plate meter on the market.

OIL AND GAS

- Corrosive/abrasive conditions
- Intensive recovery methods (shale)
- High pressure conditions
- Strict environmental regulations
- Extreme temperatures
- Remote locations

MINING

- Remote locations
- Extreme temperatures
- Strict environmental regulations
- Corrosive/abrasive slurries
- Heavy vibration
- High fluid velocity

CHEMICAL

- Hazardous liquids/gases
- Corrosive/abrasive conditions
- Extreme temperatures
- Strict emission/effluent regulations
- High pressure conditions

PROCESS APPLICATIONS

- ALLOCATION GAS AND FISCAL METERING
- FISCAL GAS METERING
- FLUID SEPERATORS
- FRACTURING PROCESS
- WELL HEAD FLOW LINE MEASUREMENT

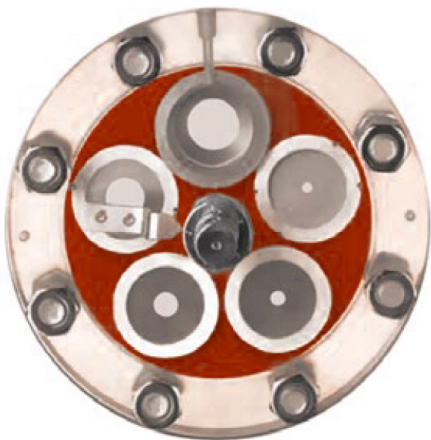
- WELL HEAD FLOW LINE MEASUREMENT
- CO2 METERING
- WET GAS METERING

ENGINEERED FOR IMPROVED COST OF OWNERSHIP The Roto-Boss™ solution.

The technology advancements of the Roto-Boss™ was inspired by the overwhelming complexity of existing products. The goal was to make the process of plate changing simple, repeatable and cost efficient. Reducing unnecessary parts and simplifying a complex plate change protocol.

Plate change steps: The Roto-Boss™ versus a conventional orifice meter.

ROTO-BOSS™ METER RUN		CONVENTIONAL ORIFICE METER RUN:	
1	Pull out locking mechanism	1	Open equalizer
2	Rotate plate to required beta/plate bore	2	Open gate
		3	Roll plate down
		4	Close gate
		5	Close equalizer
		6	Open bleeder to bleed pressure off head
		7	Loosen bolts on head
		8	Slide out the block off plate and gasket
		9	Roll plate and two piece carrier
		10	Replace plate
		11	Reinstall plate with beveled edge downstream of the meter. Ensure plate is flush
		12	Slide block-off plate and return gasket to position
		13	Tighten row of bolts on block-off plate.
		14	Reverse the process: close the bleed tightly
		15	Slowly open equalizer
		16	Open bleeder all the way
		17	Open gate
		18	Roll orifice plate into service
		19	Close gate
		20	Close the equalizer



REMOTE PLATE ACTUATION OPTIMIZATION

ROTO-BOSS™ with AUTO-BOSS™

Sur-Tech's Roto-Boss™ is the only automated multi-orifice plate meter run in existence. End users are able to change orifice plates by use of their existing SCADA, PLC or DCS or even wirelessly.

Auto-Boss™ enables plate changing protocols that can be triggered by CBM (Condition Based Monitoring) parameters such as worn sharp edge or changes in flow velocities without ever interrupting gas flow production or attending the equipment location.



The Auto-Boss is designed to give you 3-5 (three to five) different orifice plate selections within the RotoBoss^{STM} which can be changed from virtually any location throughout the world.

Our system allows the operator to initialize the software, input the password and simply choose which orifice is required, resulting in an orifice plate change in less than thirty (30) seconds without interrupting the gas flow or having to send someone to the location. meter run that offers precision measurement, safe, easy operation and a 10-second plate change out procedure.

Roto-Boss™ with Auto-Boss™ enables the end user to change plates without any exposure to potentially harmful gases (sour) or pressures to personnel. Significant savings occur when the 'down time' is reduced. Plate selection, changes and inspection can be accomplished without ever shutting down the line. The Auto-Boss delivers consistent and accurate metering, safety and savings, without the downtime associated with conventional orifice metering devices.



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Visit our case studies on Roto-Boss to learn more

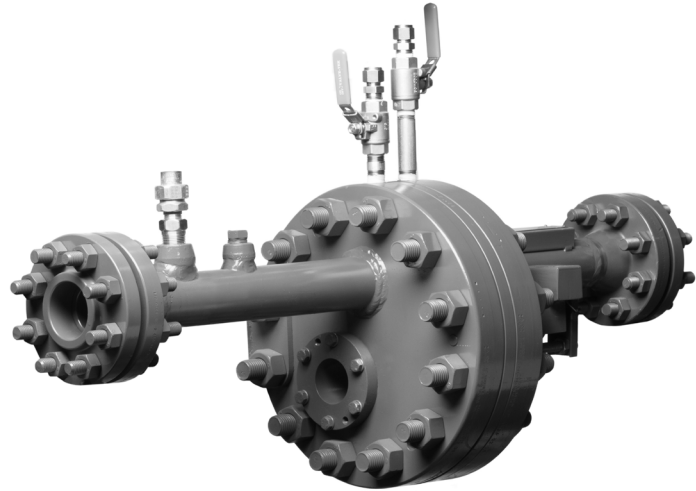
Sold by Sur-Tech. Made by Sur-Flo.

Sur-Tech is a subsidiary company of Sur-Flo. Sur-Tech offer lifecycle support to customers across Asia, Africa, Europe, Latin America and the Middle East.

At Sur-Flo, our skilled staff take pride in making innovative, durable meters and controls.

Engineered Solutions are one of our strengths. Sur-Flo can customize the Roto-Boss™ meter run to suit application specs, pressure ratings and site requirements. Full metering streams can be offered complete with associated valving and instrumentation.

At Sur-Flo, we are proud to offer customer-centered support and technical assistance.



SPECIFICATIONS

Standard Sizes	1"-24" Other sizes available upon request
Pressure Rating	150 - 2500 ANSI
Process/Ambient Temperature Range	-50 °C to 149 °C
Pipe Materials	A106 / A333 / 316 SS/ DUPLEX / SUPER DUPLEX (further options upon request)
Flange Materials	A106 / A333 / 316 SS/ DUPLEX / SUPER DUPLEX (further options upon request)
DP Take off options	1/2" NPTF / Welded RF or RTJ Flanged
Orifice Plate Material	316/316L SS / DUPLEX, SUPER DUPLEX, INCONEL
Seal Material	HSN (further options upon request)
Flow Conditioner Material	316/316L SS / DUPLEX, SUPER DUPLEX, INCONEL
Accuracy	Built in accordance with API 14.2/AGA 3, ISO 5167
NACE Specification (when requested)	MR0175

YOUR PRODUCTIVITY. ENGINEERED.

Since 1979, Sur-Flo has been designing and manufacturing products that make work easier for our customers. We take tried-and-true process control and measurement technologies and make them better, safer and easy to maintain. Our control valves and flow meters are engineered to perform and built to last.

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