

ROTO-BOSS™ MULTI-PORT ORIFICE METER RUN

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



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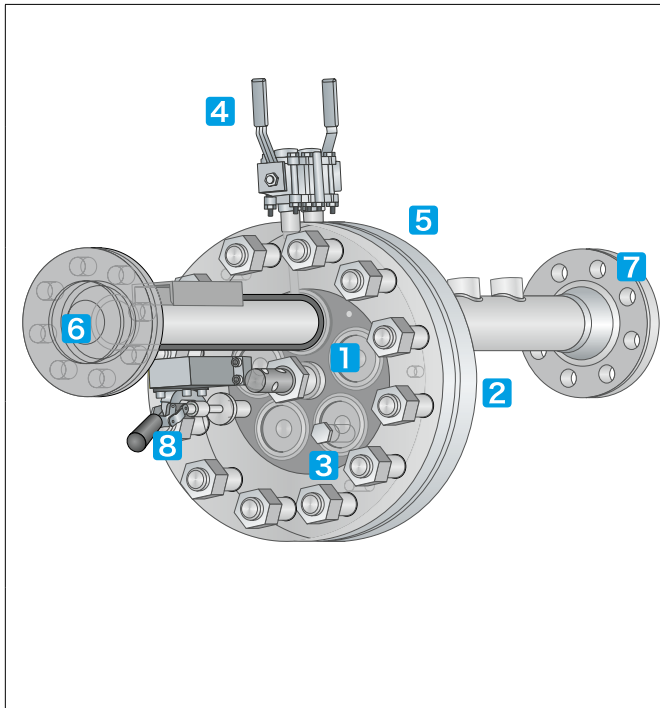
Q
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SUR-FLO ROTO-BOSS™ METER RUN

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

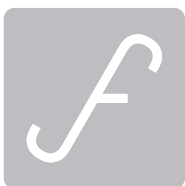
Yes, when it's engineered with the end-user in mind. When we created the Roto-Boss™, we looked at pain points with conventional meter runs. Then we engineered a multi-orifice advancement of the conventional meter run that offers precision measurement, safe, easy operation and a 10-second plate change 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 the AGA 2000 Report standard of accuracy.
- 7** Bolts into existing meter run applications.
- 8** Locking mechanism ensures orifice eccentricity.



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ENGINEERED FOR THE ENERGY INDUSTRY

The Roto-Boss™ solution.

Sur-Flo has been at the forefront of oil and gas meter and control product innovations since 1979. Our advancement of meter run technology was inspired by the overwhelming complexity of existing products. With unnecessary parts and a complex, critical plate change protocol, the industry was due for a meter run engineered for productivity.

Plate change steps: A conventional meter run vs the Roto-Boss™

CONVENTIONAL METER RUN		SUR-FLO ROTO-BOSS™ METER RUN	
1	Open equalizer	1	Pull out locking mechanism
2	Open gate	2	Rotate plate
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. Be sure to tighten bolts from the inside out		
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		

How it works:

When the line parameters change or a plate gets damaged, operators used to have to go through a series of steps before doing a meter run plate change. We removed most of these steps so that even inexperienced service technicians can quickly and easily maintain the meter run.



ROTO-BOSS™

APPLICATION: shallow gas wells and pipelines, test separators
SERVICE CHALLENGES: wells located in underground caissons

NORTH OF MEDICINE HAT, **ALBERTA**

CASE STUDY

ACCURATE MEASUREMENT

SAFE AND SIMPLE OPERATION

EASY INSPECTION AND MAINTENANCE

MINIMAL DOWNTIME

BENEFITS



10X fewer steps to change out a Roto-Boss™ as compared to conventional meter runs. Over the years, staff at Sur-Flo Meters & Controls have heard harrowing stories about near-miss accidents with standard meter runs. This one tops them all.

Challenge: Multi-step meter run service hazards

Conventional meter runs are notorious for being difficult to service. The average meter run takes 15-20 steps to change a plate. One misstep in that sequence can expose the operator to harmful gases or pressures.

A few years ago, Sur-Flo got a call from a production supervisor at a major energy producer with operations north of Medicine Hat. Many of the wells in

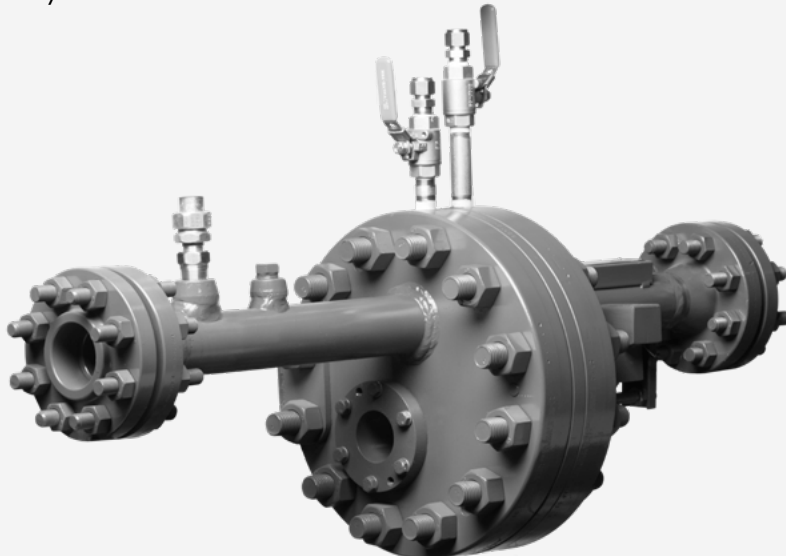
the operation were housed in underground caissons.

The production supervisor explained that a summer student had gone down into one of the caissons to change the plate on a conventional orifice meter. He thought he knew the steps, but he didn't. He took the plate out under full pressure. The door shot off and the plate went right through the roof. He could have been killed.

The production supervisor, rattled by the student's near-miss, called Sur-Flo looking for a safer meter run.

Sur-Flo Solution:

A safer meter run is exactly what Sur-Flo offers. The Roto-Boss™ enables users to change plates without ever opening the orifice changer – in just two steps. This design greatly reduces the potential for user error and contributes to workplace safety.



Sur-Flo's 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.

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

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

Custom orders are one of our strengths. Sur-Flo can customize the Roto-Boss™ meter run to suit application specs, pressure ratings and site requirements.

At Sur-Flo, we're proud to offer customer-centred support, technical assistance and one of the best turn-around times in the industry.



SPECIFICATIONS

Standard Sizes	Up to 8" (contact Sur-Flo for larger sizes)
Pressure Rating	150 –1500 ANSI
Process/Ambient Temperature Range	-50° C – 149° C
Pipe Materials	A106 / 316SS
Flange Materials	A105N / 316SS
Orifice Plate Material	316SS
Seal Material	HSN
Flow Conditioner Material	316SS
Accuracy	Built to AGA 2000 specifications
NACE Specification (when requested)	MR0175