

## ROOTS® Special Service Meters Type SSM



Series B3 3M175 SSM ROOTS® meter, Counter with Solid State Pulser

### Special Service Meters (Type SSM)

ROOTS® special service meters are continuous duty meters for measurement of gases where entrained liquids may be present and where the gas being measured may have a corrosive effect on some of the materials employed in meters of standard construction. Typical applications would be in a production pipeline with sour, wet gases or, in a sewage treatment plant to measure gases produced by a sludge digester.

### SSM Construction

All carbon steel parts have been eliminated from the gas stream in a Special Service Meter. The bearings are made of stainless steel as are the timing gears, spring clips, and internal cap screws. The bearing retainers, clamps and magnet wheel housings are made of anodized aluminum to provide greater resistance to corrosion.

The impellers are made from aluminum extrusions and hard-coated to impart wear and corrosion resistance. The cylinder and head plates on the Series B meters (sizes 8C175 through the 56M175) are manufactured from aluminum and hard-coat anodized. The anodizing also makes the meter highly resistant to abrasion from particles which may be in the gas stream.

### Lubrication

Meters installed and maintained in accordance with factory recommendations can be expected to operate dependably for many years. Proper oil level and cleanliness have the greatest effect on meter life expectancy. With wet gases, line condensate (which affects meter life and accuracy) can quickly accumulate in the end covers of the meter. If this happens, the oil level will increase in the oil gauges on the meter end covers. Each user will need to develop their own maintenance/oil change cycle to combat this situation. Depending on the amount of saturation, the oil may need to be changed as little as every few years or, in extreme conditions, on a daily basis.

Under normal conditions, oil change frequency will depend upon the cleanliness of the gas being measured. When the color darkens, the oil will need to be changed. Under favorable conditions, these periods may be from 3 to 5 years, or longer.

### Installation

Special consideration should be given to meters in corrosive environments to eliminate potential long-term problems.

Some key points are:

- Use a 100-mesh screen or filter upstream of the meter to eliminate debris and foreign material from entering the meter.
- Insert a trap or strainer upstream of the meter to separate water slugs, condensate, and entrained liquids from the gas. The device used for moisture removal should be drained as required, i.e. monthly, daily, or possibly as often as hourly.
- Locate line mount meters as high as possible in a vertical (downward) pipe run.
- The temperature of the gas at the meter should be higher than the temperature of the upstream gas. This helps prevent condensation in the meter.
- Run the meter continuously, if possible.

## Warranty

The standard equipment warranty as stated under General Terms of Sale applies to the Special Service Meters. No part or assembly shall be deemed defective by reason of failure to resist erosive or corrosive action of any gas or fluid.

## Ordering

To order a Special Service Meter, specify the meter model (size) and version along with "SSM" designation; i.e., "Series B3 ROOTS® meter, I6M175 CD SSM."

SSM sizes available: 8C through 56M.



### **Process Valve & Equipment Co. | Manufacturer's Rep. & Stocking Distributor**

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