



An Ovivo Company

## GAS CONTROL

### VAREC BIOGAS 219 Series U-TUBE MANOMETER

The 219 Series U-Tube Manometer is a versatile economical instrument for the measurement of pressures, vacuums or differential pressures.

#### Introduction

The Varec Biogas 219 U-Tube Manometer is a primary basic standard of pressure measurement. Measurements are accomplished by balancing a vertical head of indicating fluid with the pressure to be measured. As there are no cams, gears or levers to operate in the manometer, the readings obtained are always accurate.

#### Construction

The manometer has a rigid cast aluminum body frame protecting the glass U-Tube on three sides. Mounting holes are provided in the frame for mounting to a wall, column or other suitable structure.

The clean-out head at the top of the instrument seals the indicating tube legs and also provides for the external pressure connections to the manometer.

The manometer head fastens to the body by a single nut and is quickly and easily removed when necessary. This exclusive clean-out head feature permits cleaning and filling of the U-tube without disconnecting the piping to the manometer head.

#### Materials

##### Indicating Tube & Packing

Glass, Neoprene

##### Body

Aluminum

##### Heads/ Wetted Materials

Cast Iron, 316 SS, PVC

##### Finish

Aluminum Body, Black Crackle Enamel Head

#### Design Features

- Adjustable scale
- Indoor or outdoor installation
- Easy field tube replacement

#### Range

15, 20, 30 inches WC

#### Pressure Rating

250 psig

A standard 1/4" female pipe connection is provided out of the left and right sides of the clean-out head. Pressure connections around the rear or top of the head can be furnished when specified. Manometer clean-out heads of cast iron, stainless steel or PVC are available for special corrosive applications.

The manometer scale is located between the tube legs and overlaps the tube legs to a degree that facilitates reading at the meniscus position. The indicating scale is slotted and can be adjusted for accurate zero location. This simple engineered method of supporting and sealing the U-tube in the manometer permits easy tube replacement in the field.

#### Indicating Fluid

- Red Unity Oil - Specific gravity 1.0, Temp Range: 30° to 100°F (-1° to +38°C)
- Green Concentrate - Specific gravity 1.0, Temp Range: 30° to 100°F (-1° to +38°C)
- For optional temperature range or characteristics, consult factory. Each manometer requires 4oz. indicating fluid to fill.



#### Accessories

##### Moisture & Sediment Trap

Line traps keep the manometers and indicating fluid clean and are recommended for all installations. When installed in the line ahead of the manometer, they permit entrained solids to settle out before reaching the manometer. When used with gases or vapors, they trap moisture.

**Accessories**

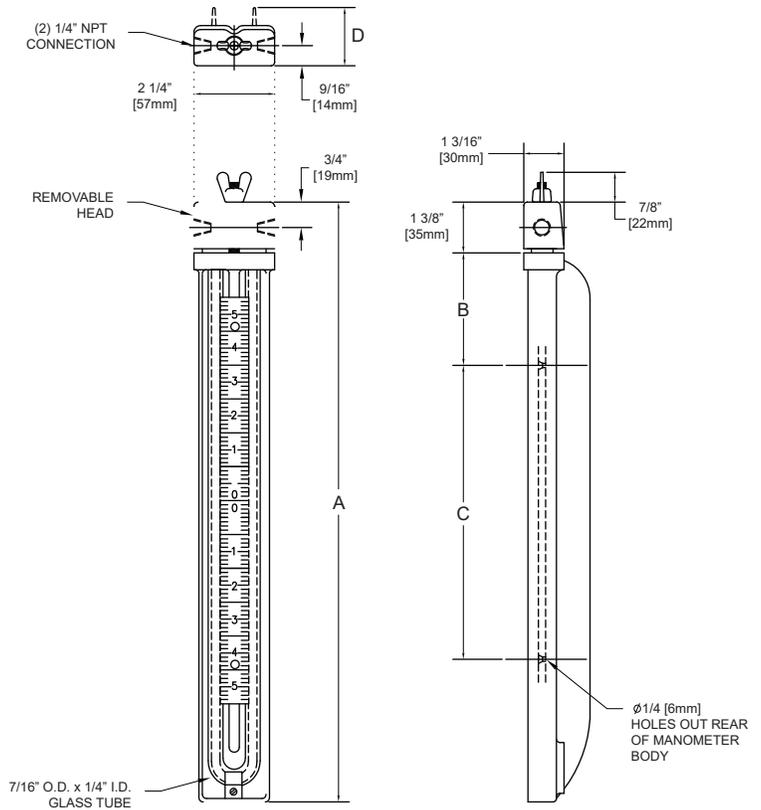
**Valve & Piping Manifold**

Equivalent to Meriam Model Numbers:  
 Model: 943AC300 - Carbon Steel  
 Model: 943AS300 - 316 SS

**Specifications**

**Dimensions, inches [mm] / lbs. (kg)**

Range Code	1	2	3
WC Range	20	30	15
A	24 <sup>3</sup> / <sub>8</sub> [619]	35 [889]	19 <sup>1</sup> / <sub>8</sub> [486]
B	2 <sup>5</sup> / <sub>8</sub> [67]	3 <sup>3</sup> / <sub>4</sub> [95]	4 <sup>15</sup> / <sub>16</sub> [125]
C	17 [432]	21 <sup>3</sup> / <sub>8</sub> [543]	7 <sup>1</sup> / <sub>4</sub> [184]
D	1 <sup>11</sup> / <sub>16</sub> [43]	1 <sup>11</sup> / <sub>16</sub> [43]	N/A
Shipping Weights	4 (2)	5 (3)	3 (2)



**Ordering Information**

Model	Description	
219	U-Tube Manometer	
	<b>Code</b>	<b>Size (Select One)</b>
	1	20" WC Range
	2	30" WC Range
	3	15" WC Range
	<b>Code</b>	<b>Scale Type (Select One)</b>
	1	English Unit (inches and tenths WC)
	2	Metric Unit (millimeter and centimeters WC)
	<b>Code</b>	<b>Material of Construction (Wetted Parts)</b>
	1	Cast Iron
	2	316 SS
	3	PVC
	<b>Code</b>	<b>Indicating Fluid (Must Specify One)</b>
	1	100 Red Unity Oil
	2	1000 Green Concentrate
	<b>Code</b>	<b>Accessories (Optional - May Specify More Than One)</b>
	C	Moisture & Sediment Trap Model 933A10
	D	3-Way Valve Manifold
	<b>Code</b>	<b>Material of Construction (3-Way Valve)</b>
	1	Carbon Steel
	2	316 SS

219 1 1 2 2 D 2 (Example)  
 Example: 219 Series U-Tube Manometer, 20" Range, English Unit Scale Reading, 316 SS Head, Green Concentrate Indicating Fluid, 3-Way Valve Manifold in 316 SS