

# PBMS2H

## Portable Two-Channel Baratron® Measurement System



The PBMS2H is a portable two-channel pressure standard with a pressure measurement range of  $10^{-5}$  to 1000 Torr for real-time in situ pressure verification applications.

The PBMS2H is suitable for use in the calibration lab, production floor, or cleanroom environment. The system includes one or two 627H Baratron® capacitance manometers, a PR4000B display and an uninterruptible power supply all housed in a rugged wheeled cart with an extendable handle for easy maneuvering.

The manometers are temperature-controlled at 45°C to maintain stability and high accuracy. The front face of the cart is angled upward to allow for easy viewing of the digital LCD readout.

Figure 1 shows a typical process pressure set point verification set up. The cart's pressure standards are removed from its storage drawer and placed near the process tool's manometer port. This is facilitated by using a combination isolation valve such as the MKS' IDA™ In Situ Diagnostic Access Isolation Valve. When the pressure standard is connected to the isolation valve's access port, it can be used to verify the accuracy of the gauge and check the system's set point pressure.

### Product Features

- Wide pressure range (0.02 to 1000 Torr Full Scale)
- Wetted materials (Inconel®, Incoloy® alloy, stainless steel)
- NIST traceable calibration
- RS-232 connectivity
- Portable design with integrated UPS
- One or two temperature-controlled manometers



### Key Benefits

- Accurately measures diverse pressures
- Ensures long-lasting performance and corrosion resistance
- Ensures confident, accurate pressure readings traceable to national standards
- Facilitates simplified operation with clear display
- Enables seamless integration for efficient data collection and analysis
- Allows for convenient power backup, transport, and setup in various locations

## Specifications

<b>Pressure Standard</b>	627H Baratron® capacitance manometer absolute pressure sensor (NIST traceable)
<b>Pressure Range (Full Scale)</b>	0.02, 0.05, 0.1, 1, 10, 100, 1000 Torr
<b>Baratron® Pressure Sensor Accuracy (including non-linearity, hysteresis, and non-repeatability)</b>	± 0.12% of Reading (all ranges except 0.15% for 0.05 and 0.1 Torr, ±0.25% for 0.02 Torr)
<b>Resolution (of Full Scale)</b>	1 x 10 <sup>-4</sup>
<b>Fitting</b>	NW16KF, 8 VCR® female
<b>Operating Temperature Range</b>	15°C to 40°C, temperature-controlled to 45°C
<b>Wetted Materials</b>	Inconel/Incoloy and stainless steel
<b>Readout Electronics</b>	PR4000B Versatile 4½ place digital LCD display/power supply
<b>Power Required</b>	110 VAC, 60 Hz; 220 VAC, 50 Hz; 100 VAC, 50/60 Hz; 3A
<b>Warm-up Time/Start Time</b>	4 hours (Use of the internal 280 VA UPS will keep the transfer standard warmed up and ready for immediate use for at least 60 minutes.)
<b>Configuration</b>	Removable transfer standard (15 ft cable)
<b>Enclosure</b>	Metal wheeled cart with extendable handle and tilted front panel
<b>Weight</b>	75 lb. (34 Kg)

## Drawings

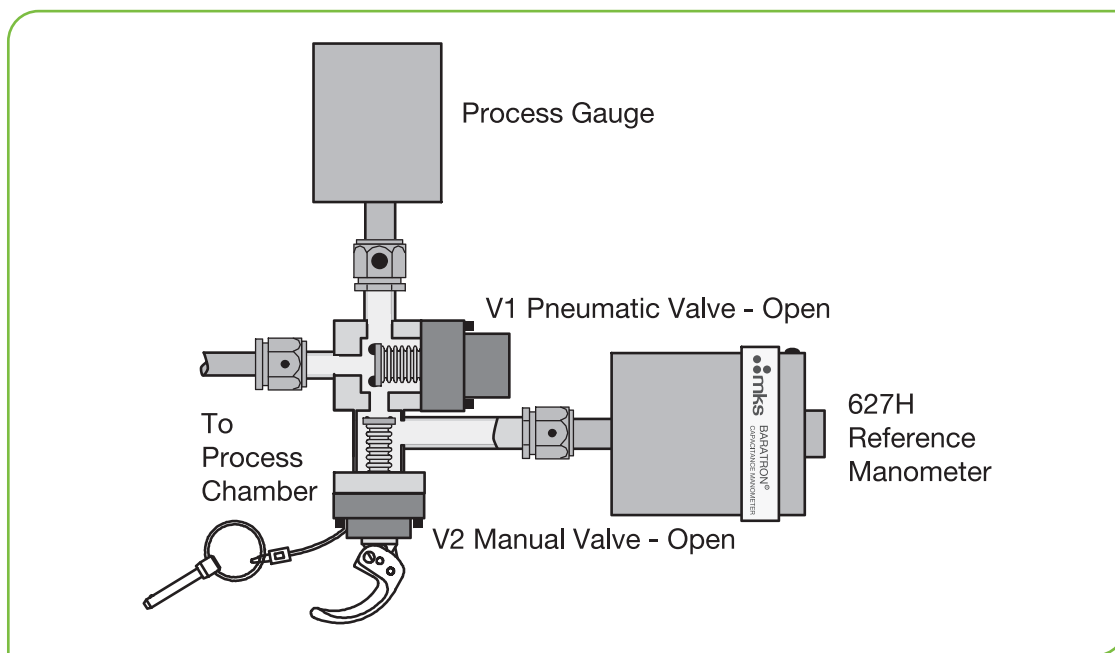
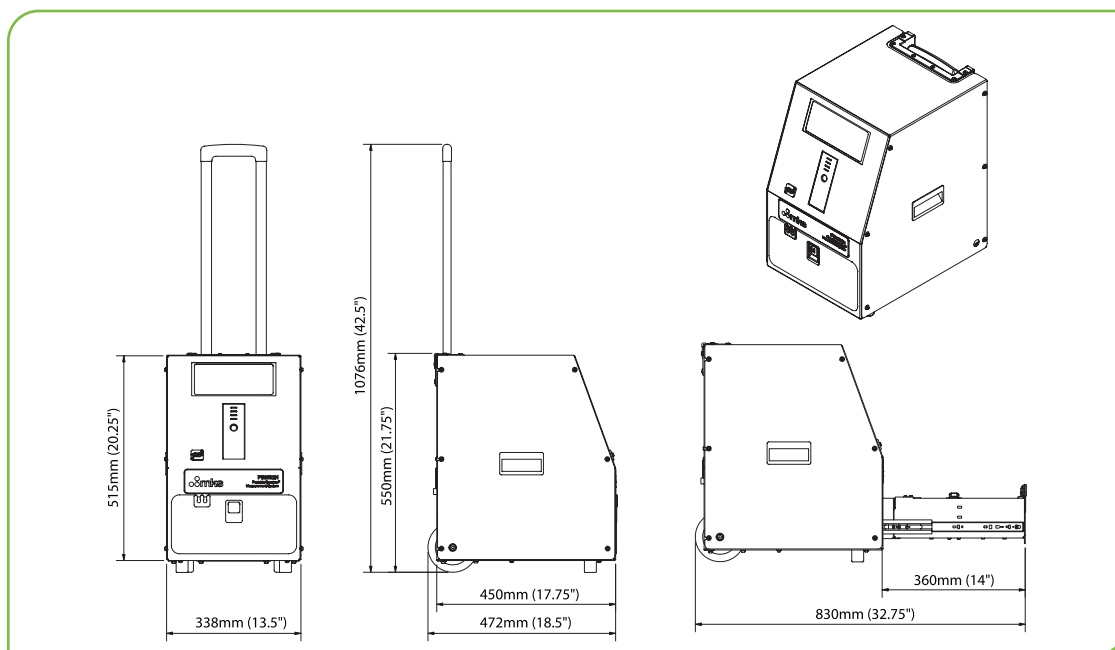


Figure 1 - Typical set up for process set point verification



Dimensional Drawing - Unless otherwise specified, dimensions are nominal values in millimeters (inches referenced).

## Ordering Information

Ordering Code Example: PBMS2H0112BU2	Code	Configuration
<b>Model</b>		
PBMS2H Portable Baratron Measurement System	PBMS2H	PBMS2H
<b>Range, Manometer 1</b>		
0.02 mmHg	U2	01
0.05	U5	
0.1	.1	
1	01	
10	11	
100	12	
1000	13	
<b>Range, Manometer 2</b>		
0.02 mmHg	U2	12
0.05	U5	
0.1	.1	
1	01	
10	11	
100	12	
1000	13	
None	00	
<b>Fittings</b>		
8 VCR female	B	B
NW16KF	D	
<b>Input Power</b>		
Standard USA & Canada input power 110 VAC, 60 Hz	U	U
220 VAC, 50 Hz	F	
100 VAC, 50/60 Hz	J	
<b>Interface</b>		
RS-232 (standard)	2	2