

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

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

Drawings

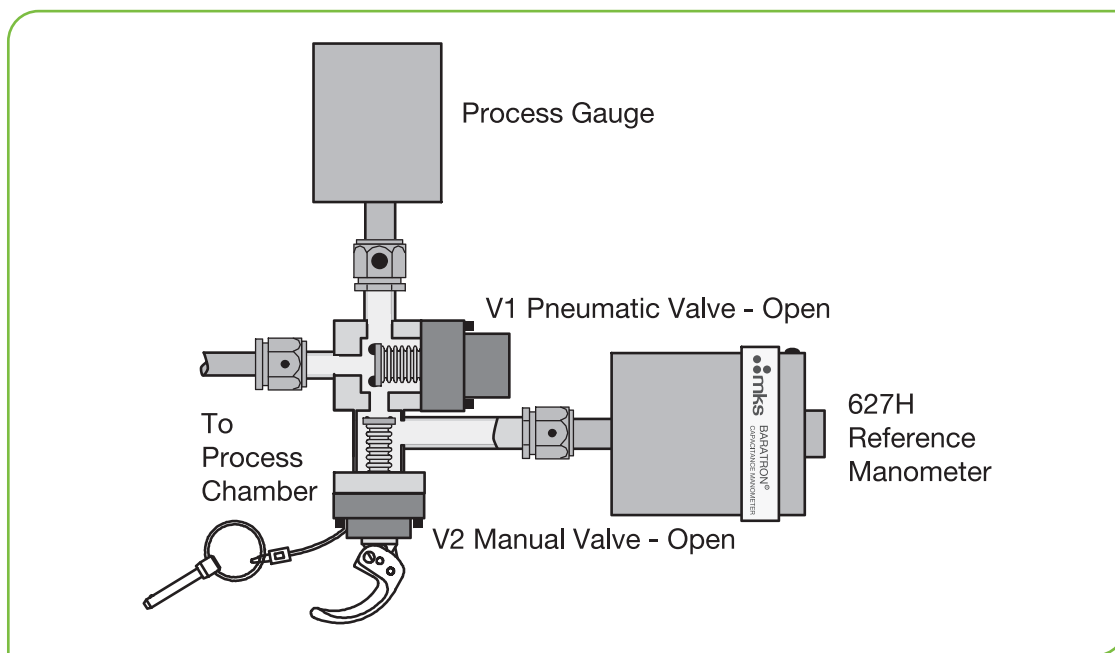
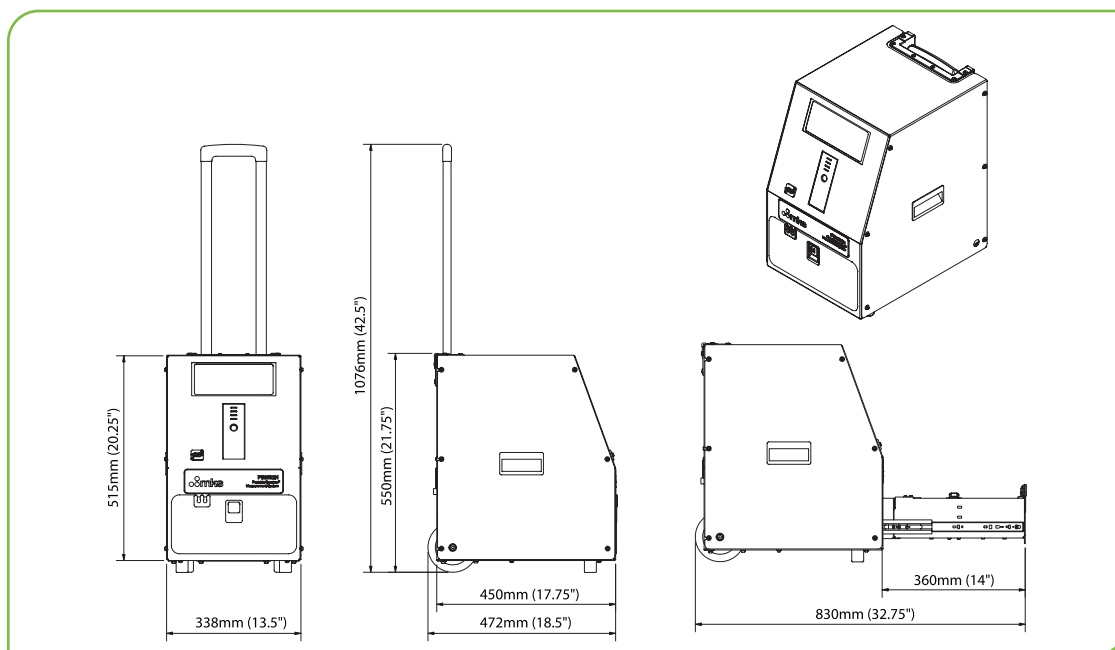


Figure 1 - Typical set up for process set point verification



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

Ordering Information

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