



Pressure &

Vacuum Measurement Solutions

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PBMS2B

TWO-CHANNEL PORTABLE BARATRON® MEASUREMENT SYSTEM

Designed with the cleanroom in mind, the PBMS2B is a portable two-channel pressure standard that is designed for in situ applications. Equally at home on the bench as on the production floor, the unit may be used for any pressure measurement application in the range of 10^{-5} to 1000 Torr.

The system includes one or two Type 627B Baratron capacitance manometers, a Type PDR2000 display and an uninterruptable power supply all housed in a rugged wheeled caddy with an extendible handle for easy towing. The caddy also includes an integral tilt stand which, when extended, places the unit at an angle of 15 degrees from the vertical, thereby improving visibility of the display when the unit is on the floor.

Features & Benefits

- Provides for in situ verification of process gauge accuracy and tool-to-tool consistency
 - Reduces downtime caused by removing the process gauge for calibration
 - Eliminates the unnecessary replacement of properly functioning instruments
 - Provides a diagnostic tool for troubleshooting
- Select from 8 ranges: 0.02 to 1000 Torr full scale
- Temperature controlled Type 627B Baratron® Capacitance Manometer provides stable measurements at 0.12% to 0.25% of Reading accuracy
- Inconel® and stainless steel wetted surfaces permit use with many corrosive gases
- Second channel may be used for another standard manometer or may be used to monitor the device under test
- Components are packaged in a convenient wheeled caddy which is readily moved about the production facility
- No warm up delays: an uninterruptable power supply maintains power to the manometer for 1 hour during transit
- The transducer is traceable to NIST which assists in compliance with government and industry regulations such as ISO9000



Typical Application

The illustration to the right (Figure 1) shows a typical set up for process set point verification. The PBMS2B's Type 627 reference standard is removed from its storage drawer and placed in close proximity to the process tool's manometer port. This connection is facilitated by using a combination isolation valve such as the IDA™ valve. With the transfer standard connected to the IDA valve's access port via a short length of bellows tubing, the transfer standard can be used to verify the accuracy of the process gauge and check system set point pressures.

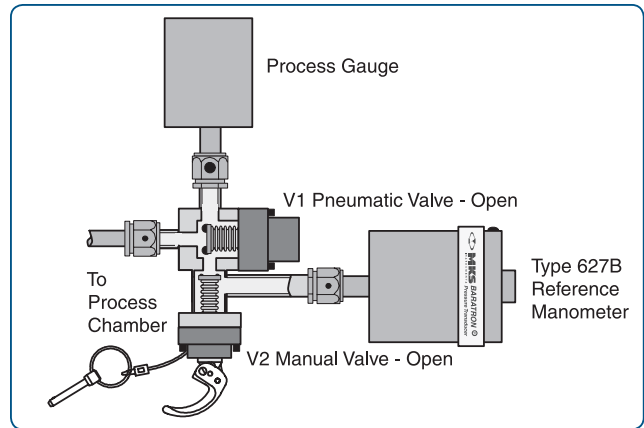
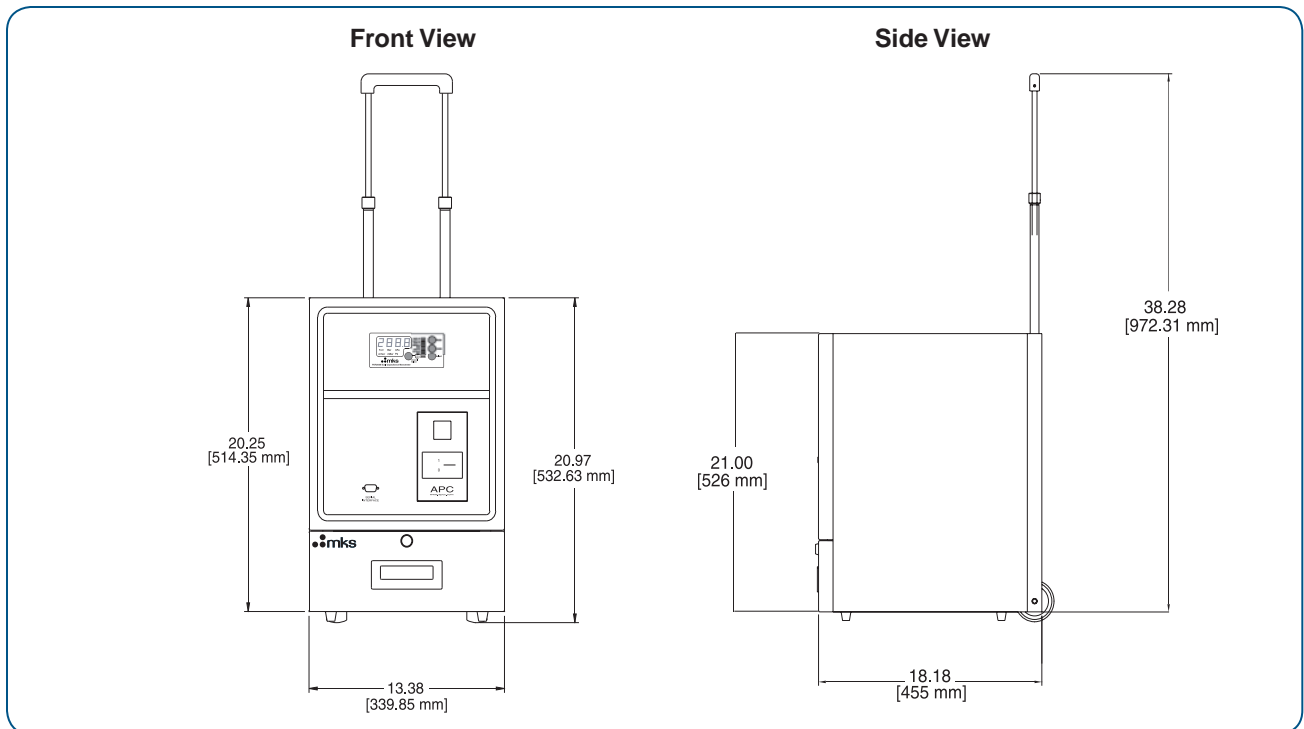


Figure 1 —
Typical set up for process set point verification



Dimensional Drawing —
Note: Unless otherwise specified, dimensions are nominal values in inches (mm referenced).



Specifications

Reference Manometer	MKS Type 627B Absolute Sensor (NIST traceable), see 600 Series Selection Guide for other specifications
Baratron® Transducer Accuracy (non-linearity, hysteresis, and non-repeatability)	Standard: $\pm 0.12\%$ of Reading (all ranges except 0.15% for 0.05 and 0.1 Torr, $\pm 0.25\%$ for 0.02 Torr)
Resolution (of F.S.)	1×10^{-4}
Fittings	$\frac{1}{2}$ " tubulation, NW16KF or 8 VCR®, female
Operating Temperature Range	15° to 40°C
Readout Electronics	MKS Type PDR2000, 4½-digit LCD
Power Required	110 VAC, 60Hz; 220 VAC, 50Hz; 100 VAC, 50/60 Hz; 3A
Warm-up Time/Start Time	4 hours. However, 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 (10 ft./3m cable)
Enclosure	Metal wheeled caddy with extendible handle and tilt stand
Weight	75 lb. (34 Kg)



Ordering Information

Ordering Code Example: PBMS2B0101AU2

Type PBMS2B	Code	Configuration
PBMS2B Portable Baratron Measurement System	PBMS2B	PBMS2B
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	01
0.05	U5	
0.1	.1	
1	01	
10	11	
100	12	
1000	13	
None	00	
Fittings		
½" Diameter tubulation	A	A
8 VCR female	B	
NW16KF	D	
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



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