

Pressure &

Vacuum Measurement Solutions

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PBTS1A

PORTABLE BARATRON® TRANSFER STANDARD

Designed with the cleanroom in mind, the PBTS1A is a portable single-channel high accuracy 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 25,000 Torr.

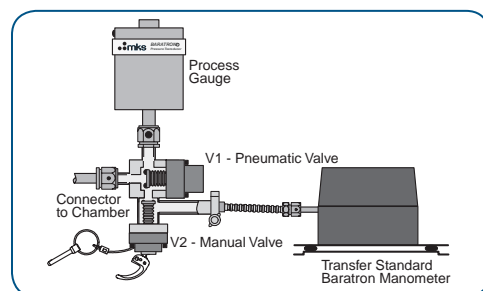
The system includes a Type 690 Baratron pressure sensor, a Type 670 signal conditioner/display and an uninterruptable power supply all housed in a rugged wheeled caddy with an extendable handle for easy towing. The caddy also includes an integral tilt stand which, when extended, places the unit at an 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 10 ranges: 0.1 to 25,000 Torr Full Scale
- Premium Type 690 transfer standard Baratron® Capacitance Manometer provides a wide measurement band at 0.05% or 0.08% of Reading accuracy
- Incone® and stainless steel wetted surfaces permit use with many corrosive gases
- Components are packaged in a wheeled caddy which is conveniently 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 shows a typical process set point verification. The PBTS1A's Type 690 transfer standard is removed from its storage drawer and placed in close proximity to the process tool's manometer port. This 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, it can be used to verify accuracy of the gauge and check system set point pressures.



Specifications and Ordering Information

Transfer Standard

Baratron® Pressure Sensor Accuracy

(non-linearity, hysteresis, and non-repeatability)

Resolution (of F.S.)

Fittings

Operating Temperature Range

Readout Electronics

Power Required

Warm-up Time/Start Time

Configuration

Enclosure

Weight

MKS Type 690 Absolute Sensor (NIST traceable); see 690 data sheet for other specifications

Standard: 0.08% of Reading (\pm temp. coefficients)

Optional for 1-1000 Range: 0.05% of Reading (\pm temp. coefficients)

1 x 10⁻⁶

4 VCR®, female

15° to 40°C

MKS Type 670, 5½-digit LCD

110VAC, 60 Hz; 220 VAC, 50 Hz; 100 VAC, 50/60 Hz; 3A

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.

Removable Transfer Standard (10 ft./3m cable with 4 VCR® female transducer fitting)

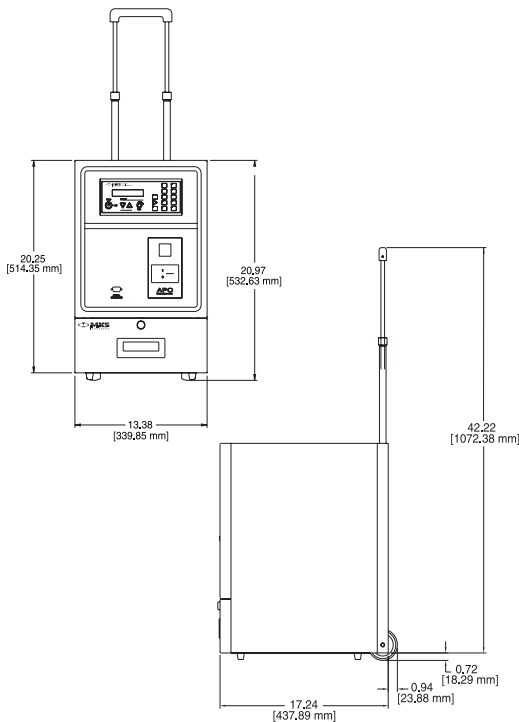
Metal wheeled caddy with extendable handle and tilt stand

75 lb. (34 Kg)

Ordering Code Example: PBTS1A01UB2

PBTS1A Portable Baratron Transfer Standard	Code	Configuration
Type Number	PBTS1A	PBTS1A
Ranges		
0.1 mmHg	.1	01
1	01	
10	11	
100	12	
1000	13	
5000	53	
10000	14	
15000	RB	
20000	24	
25000	RC	
Input Power		
Standard USA & Canada input power 110 VAC, 60 Hz	U	U
220 VAC, 50 Hz	F	
100 VAC, 50/60 Hz	J	
Accuracy		
\pm 0.08% of Reading	B	B
\pm 0.05% of Reading (1,10,100,1000 mmHg models only)	A	
Interface		
RS-232 (standard)	2	2
IEEE-488	8	
Accessories		
Isolation valve, 4VCR-F to 4VCR-M - use recommended for 1000 Torr and lower		99A0298
Bellows adapters, 4VCR each end (male to female)		6" 6BL4VCR
In Situ Diagnostic Access (IDA) Valve - simplifies access to process chamber; various configurations available		12" 12BL4VCR

Contact Applications Engineering at 800-227-8766 for the correct configuration for your application.



Dimensional Drawing —

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



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