PBTS1C

Portable Baratron® Transfer Standard

The PBTS1C is a portable single-channel high accuracy pressure standard with a pressure measurement range of 10^{-5} to 25000 Torr for real-time in situ pressure verification applications.

The PBTS1C is suitable for use in the calibration lab, production floor, or cleanroom environment. The system includes an AA06A Baratron® Capacitance Manometer pressure sensor which acts as the pressure standard and a 670C power supply and display with a signal conditioner all housed in a rugged wheeled cart with an extendable handle for easy maneuvering. The cart itself includes a secure drawer to store the pressure standard and associated 13 foot interconnecting cable.

The manometer is 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 standard is 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 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 (10^{-5} to 25,000 Torr)
- Wetted materials (Inconel®, Incoloy® alloy, stainless steel)
- NIST traceable calibration
- User-friendly interface (12 user options, angled LCD)
- RS-232 connectivity
- Portable design with integrated UPS

Key Benefits

- Accurately measures diverse pressures from low to high vacuum
- 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	AA06A Baratron capacitance manometer absolute pressure sensor (NIST traceable)
Pressure Range (Full Scale)	0.1, 1, 10, 100, 1000, 5000, 10000, 15000, 20000, 25000 Torr
Baratron® Pressure Sensor Accuracy (including non-linearity, hysteresis, and non-repeatability)	
Standard	0.08% of Reading (±temp. coefficients)
Optional	0.05% of Reading (±temp. coefficients) - (for 1-1000 range)
Resolution (of Full Scale)	1 x 10^{-6}
Fitting	4 VCR® female
Operating Temperature Range	15° to 40°C, temperature-controlled to 45°C
Wetted Materials	Inconel/Incoloy and stainless steel
Readout Electronics	670C, 5½-digit LCD
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 (13 ft cable with 4 VCR female transducer fitting)
Enclosure	Metal wheeled cart with extendable handle
Weight	75 lb. (34 Kg)

Drawings

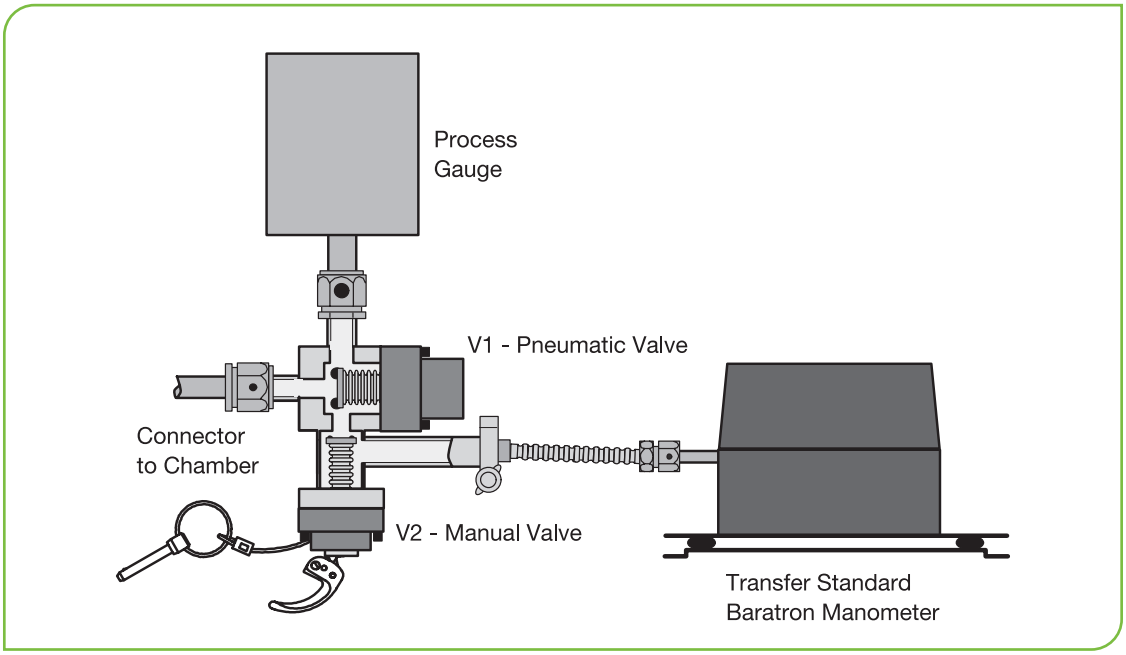
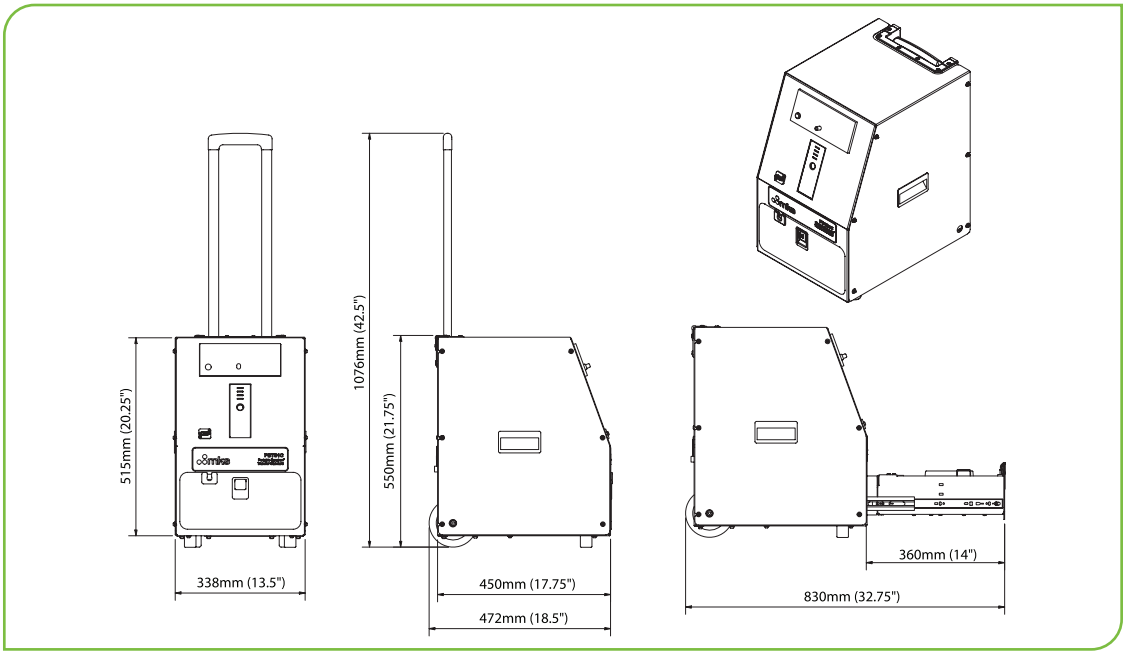


Figure 1 - Typical process set point verification



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

Ordering Information

Ordering Code Example: PBTS1C01UB2	Code	Configuration
Model		
Portable Baratron Transfer Standard	PBTS1C	PBTS1C
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		
±0.08% of Reading	B	B
±0.05% of Reading (1, 10, 100, 1000 mmHg models only)	A	
Interface		
RS-232 (standard)	2	2
Accessories		
Isolation valve, 4 VCR-F to 4 VCR-M - use recommended for 1000 Torr and lower		99A0298

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PBTS1C - 04/25