

# UPC5100/UPC5110

## Low Pressure/Vacuum Calibration Standard



UPC5100

**Please refer to price schedule for part numbers and part numbering guide.**

Designed for quick, convenient and accurate performance, the UPC5100 pressure calibration standard takes portability to a new level.

By incorporating self-contained pressure and vacuum sources, the UPC5100 eliminates the hassle and mess of hauling around extra hoses and pumps. Everything required for immediate operation is right at your fingertips. Weighing less than 35 pounds, the UPC5100 is easily transported for on-the-go operation.

Each UPC5100 is equipped with five switch-selectable measurement ranges for vacuum and low-pressure applications from 27 inches Hg vacuum to 100 psi. The patented precision Orion 2D vernier control allows the operator to rapidly secure the most accurate pressure value possible. Increased protection is provided by a self-relieving regulator that eliminates costly repairs due to inadvertent pressure overshooting. The UPC5100 is easy to operate and training can be accomplished in as little as 10 minutes. Different technicians can calibrate the same transmitter and get identical results...every time.

From aerospace, to health care, to general industry, the portable UPC5100 or 19 inch rack-mount UPC5110 provides everything you need for fast, accurate calibration regardless of where the job takes you.

### Applications

- Aircraft manufacturing, government laboratories, oil industry, electric power plants (nuclear and fossil), and general industry
- Pharmaceutical validation and calibration
- Bio-medical quality assurance
- Condenser vacuum

### Standard Features

- Available in self-contained enclosure with carrying handles (UPC5100) or 19 inch rack-mounted version (UPC5110)
- Five independent selectable ranges in each instrument  $\pm 0-28$  inHg,  $\pm 0-387$  inH<sub>2</sub>O,  $0-2771$  inH<sub>2</sub>O,  $\pm 0-96$  kPa,  $0-100$  PSI
- Available with Light Emitting Diode (LED) or Liquid Crystal Display (LCD)
- Pressure/Vacuum display resolution 0.02% F.S. typical for each range
- $\pm 0.05\%$  F.S. accuracy for each range
- State-of-the-art push button calibration - No analog potentiometers or adjustments required
- Different technicians can calibrate the same transmitter and get identical results...every time
- Easy to operate, training can be accomplished in 10 minutes
- Lightweight - less than 35 pounds
- Adjustable overpressure protection
- Precision vernier control
- Self-contained nitrogen cylinder and vacuum converter provides 27 inches Hg (w/out external pump) to 100 psi
- Voltage/current display mode for transducer testing
- Quick-disconnect fitting and hose included

### Options/Accessories

- 58487**.....Pressure trap (UPC5100/UPC5110)  
Literature sheet PN 58621\*
- 55291**.....Test port quick-disconnect with 1/4 NPT female  
(finger tighten to DUT, no tools required)
- 63257**.....Additional operating and maintenance manual
- 55281**.....Additional test port (output) 5 ft. long hose with  
quick-disconnect plug (brass) on one end and 1/4 in.  
37° female AN swivel tube coupling on the other end
- 55282**.....Additional fill port (input) 5 ft. long hose fitted with  
quick-disconnect plug (brass) on one end and 1/4 in.  
37° female AN swivel coupling on the other end

\* For units prior to S/N A1300 use literature sheet PN 58627

**AVAILABLE PRESSURE CALIBRATIONS:**

Gauge and vacuum

**OVERALL ACCURACY:**

±0.05% F.S. maximum. Accuracy statement includes all effects of linearity, hysteresis, repeatability and ambient temperature

**TEMPERATURE RANGE:**

Operating: 40°F to 140°F (4°C to 60°C)  
 Storage: 0°F to 185°F (-17°C to 85°C)  
 Relative humidity: 95% non-condensing

**PRESSURE MEDIA:**

Clean dry gaseous nitrogen or clean dry air

**PRESSURE MEDIA FILTER:**

Rating: 7 microns nominal  
 Type: Field replaceable filter cartridge

**CONTROL VALVES:**

Type: Micro-metering with positive shut off, adjustable stop and replaceable seat, non-destructible  
 Material: Aluminum/stainless steel

**INTERNAL PIPING:**

Tubing: 5/32 in. nylon tubing, 1/8 in. copper  
 Fittings: Brass

**TEST PORT:**

Style: Quick-disconnect type  
 Pressure rating: 600 psi maximum, connected or disconnected

**PRESSURE HOSE:**

Quantity supplied: One output  
 Length: 5 feet, nominal

**VERNIER CONTROL:**

Volume: 0.25 cubic inches  
 Material: Aluminum/stainless steel

**PRESSURE LIMIT MONITOR GAUGE:**

Size: Two-inch diameter  
 Range: 160 psi  
 Pressure supply gauge: 3000 psi  
 Regulator: 100 psi max  
 Construction: Self-relieving, single stage regulator

**INTERNAL PRESSURE SENSOR:**

Type: Bonded, metal foil strain gauge or equal  
 Sensitivity: 3 mV/V, nominal  
 Construction: Completely weld sealed stainless steel outer body and pressure cavity

**UPC5100 EXTERNAL CARRYING CASE:**

Type: Aluminum case with cover and carrying handle  
 Material thickness: 0.090 in. nominal  
 Finish: Grey polyurethane baked-enamel paint, textured finish

**CURRENT DISPLAY:**

0-20,000 mA counting by 0.005 mA

**VACUUM CONVERTER:**

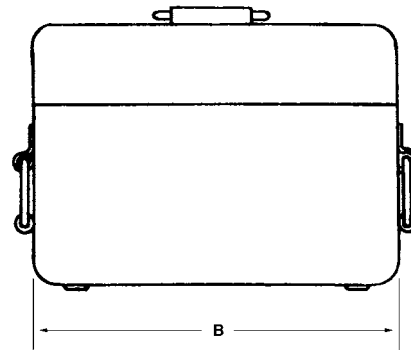
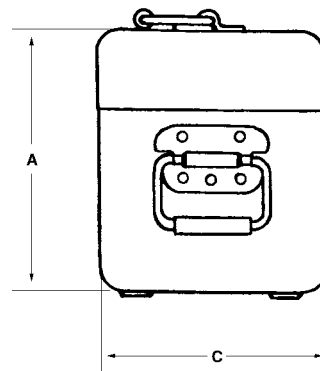
Capable of generating 27 inches Hg vacuum stand alone or 30 inches Hg with external vacuum pump

**WEIGHT:**

UPC5100: Less than 35 lb (15.9 kg) including two hoses and one cable

**UPC5100 OVERALL DIMENSIONS**

A = 11.5 in. (292.10 mm)      C = 10.0 in. (254.00 mm)  
 B = 16.0 in. (406.40 mm)



**UPC5110 (not shown) dimensions**—excluding front handles:  
 19 in. (482.6 mm) W x 8.1 in. (205.74 mm) D x 10.5 in. (266.7 mm) H

Rack-mount dimensions are for reference only. Consult factory for cutout dimensions.