

# MARTEL

ELECTRONICS

**BETA**  
CALIBRATORS

**-NEW-  
300 PSI Electric**

*Calibration Technology Starts Here*

*Handheld Pressure Calibration with  
Integral Electric Pressure Pump*

**The  
REVOLUTION  
CONTINUES  
BetaGauge 330  
300e**

## BetaGauge 330

The BetaGauge 330 is a revolution in pressure calibration technology for the process industries. With the 330, technicians have a small, lightweight calibrator that generates from high vacuum to 300 PSI using a high performance integral electric pump.

Gone is the drudgery of manual pumping or using large, heavy and unwieldy boxes with limited portability and poor battery life.

The BetaGauge 330 has a form factor only slightly larger than Martel's popular BetaGauge 321 and weighs in at a mere 2.5 pounds. The housing is contoured to easily fit a technician's hand with good balance top to bottom.

Performance doesn't stop with the pump. The BetaGauge 330 provides  $\pm 0.035\%$  of full scale accuracy on its internal, isolated pressure sensor. Temperature compensation on its internal sensor ensures accuracy in field applications. An external pressure module connection supports all 29 ranges of BetaPort-P pressure modules for even greater measurement capability.

A Pt100 RTD input is provided for temperature measurements accurate to  $\pm 0.1^\circ\text{C}$  ( $0.2^\circ\text{F}$ ). In addition, the BetaGauge 330 measures and simulates 4-20 mA loop current signals. It can measure up to 30 VDC. An internal 24 VDC Instrument Power Supply supplies power to a transmitter under test.

Like its calibrator siblings, the 330 displays up to 3 calibration values at one time from the choice of internal pressure sensor, external pressure sensor, temperature from the optional RTD probe or electrical (mA or VDC).

The display is a large back lit graphics style LCD that's easy to read in any lighting condition.

*Continued on back.*



Patent  
Pending

### General Features

- Integrated internal electrically operated pneumatic pump: generates pressure to 300 PSI and vacuum to -12 PSI (-0.8 to 20 Bar, -80 to 2000 kPa)
- Accuracy of 0.035% FS
- Small rugged compact design operates on eight (8) standard Alkaline AA batteries
  - Only 8" high x 4" wide x 2-3/8" deep (20 cm x 10 cm x 6 cm)
  - Lightweight at just 2.5 pounds (1.2 kg)
- External pressure module interface supports all BetaPort-P pressure modules (requires optional BPPA-100 module adapter)
- Pt100 RTD input for temperature measurement, accurate to 0.2°F (0.1°C) (measurement only)
- 24 V loop power to power device under test
- Store and recall 5 user defined setups
- Clearbrite LCD with backlight can be configured to display up to 3 variables displayed simultaneously (user controlled)
- Ideal for gas custody transfer flow meter applications
- Pressure displayed in the user's choice of 15 engineering units
- Switch test is automatic using internal sensor or external pressure module
- IP51 Rated
- Percent error function

For more information:

- Call us toll free at 800-821-0023 or 603-434-1433
- Fax us at 603-434-1653
- Email us at [sales@martelcorp.com](mailto:sales@martelcorp.com) and ask for a BetaGauge 330 Pressure brochure
- Or go to our website, [www.martelcalibrators.com](http://www.martelcalibrators.com) and click on BetaGauge 330

## BetaGauge 330

### Specifications

#### Ranges

Available Pressure

PSIG:	-12 to 30 PSI / -0.8 to 2 bar -12 to 150 PSI / -0.8 to 10 bar -12 to 300 PSI / -0.8 to 20 bar
PSIA:	0 to 30 PSIA / 0 to 2 bar A 0 to 150 PSIA / 0 to 10 bar A

mA	0 to 24 mA, max, load 1000 Ohms
RTD	Pt100-385, -40 to 150°C

#### Engineering Units

psi, bar, mbar, kPa, MPa, kg/cm<sup>2</sup>, cmH<sub>2</sub>O@4°C, cmH<sub>2</sub>O@20°C, mmH<sub>2</sub>O@4°C, mmH<sub>2</sub>O@20°C, mmHg@0°C, inH<sub>2</sub>O@4°C, inH<sub>2</sub>O@20°C, inH<sub>2</sub>O@60°F, inHg@0°C

Instrument Power Supply 24 VDC at 24 mA

#### Accuracy

Pressure

±0.035% of full scale on internal sensor module dependent for external sensors  
Add 0.002% FS/°C outside of 15 to 35°C

mA ±0.015% of reading ± 2 counts (simulation and measurement)

Volts ±0.015% of reading ± 2 counts (measurement only)

Temperature ±0.1°C (0.2°F) (measurement only) (Pt100 RTD)

#### General

Integrated internal electrically operated pneumatic pump:  
generates -12 PSI to 300 PSI pressure (-0.8 to 20 Bar, -80 to 2000 kPa)

#### Environmental

Operating Temperature -10 °C to +50 °C  
Storage Temperature -20 °C to +60 °C

#### Power Requirements

Battery Eight (8) standard Alkaline AA batteries  
Battery Life 100 pump cycles to 300 PSI minimum  
1000 pump cycles to 30 PSI

#### Physical

Dimensions 8" high x 4" wide x 2-3/8" deep (20 cm x 10 cm x 6 cm)  
Weight 2.5 pounds (1.2 kg)

#### Connections

Pressure: 1/8" female NPT - Stainless Steel  
Electrical: standard banana jacks  
RTD: 4 pin LEMO style  
External module: 6 pin LEMO style

Included Accessories - NIST traceable calibration certificate, batteries installed, test leads, test hose, fittings, user guide, carrying case.

### BETAGAUGE 330 Hand Held Pressure Calibrator with Integral Electric Pressure Pump

The new BetaGauge 330 Pressure Calibrator provides a number of convenience features. Switch test can be performed on internal or external pressure input. Percent (%) Error and damping functions are provided. Up to five frequently used setups can be stored and retrieved with one button recall.

The compact, rugged design operates on eight (8) standard AA Alkaline batteries. Due to the power saving designs incorporated in the BetaGauge 330, it can perform approximately 300 calibration cycles to 150 PSI on one set of batteries or 100 cycles to 300 PSI.

The 330 comes in 5 ranges of 30 PSI, 150 PSI and 300 PSI gauge and 30 PSI and 150 PSI absolute.

Like all Martel calibrators, the BetaGauge 330 comes from the factory ready to go to work with batteries installed, NIST traceable calibration certificate, test leads, connection hose, fittings, deluxe carrying case and user manual.



### BetaGauge 330 Ordering Information

Part Number	Description
1919793	BetaGauge 330-30, 30 psi/2 bar internal range, battery operated internal pump
1919782	BetaGauge 330-150, 150 psi/10 bar internal range, battery operated internal pump
1919919	BetaGauge 330-300, 300 psi/20 bar internal range, battery operated internal pump
1919882	BetaGauge 330-30A, 30 psi/2 bar ABSOLUTE internal range, battery operated internal pump
1919883	BetaGauge 330-150A, 150 psi/10 bar ABSOLUTE internal range, battery operated internal pump
	All units above include <ul style="list-style-type: none"> <li>• LDT-500 liquid/dirt trap</li> <li>• Batteries</li> <li>• Test leads</li> <li>• Test hose &amp; fittings</li> <li>• NIST traceable calibration certificate</li> <li>• User guide</li> <li>• Deluxe soft sided carrying case</li> </ul>
	<b>Custody Transfer Calibration Kits</b>
1919795	BetaGauge 330-30 as above with 1500 psi BetaPort-P external pressure module
1919796	BetaGauge 330-30 as above with 3000 psi BetaPort-P external pressure module
1919797	BetaGauge 330-30 as above, BetaPort-P external pressure module NOT INCLUDED
	All custody transfer calibration kits include <ul style="list-style-type: none"> <li>• BPPA-100 pressure module adapter</li> <li>• LTP-100A 100Ω RTD probe</li> </ul>

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