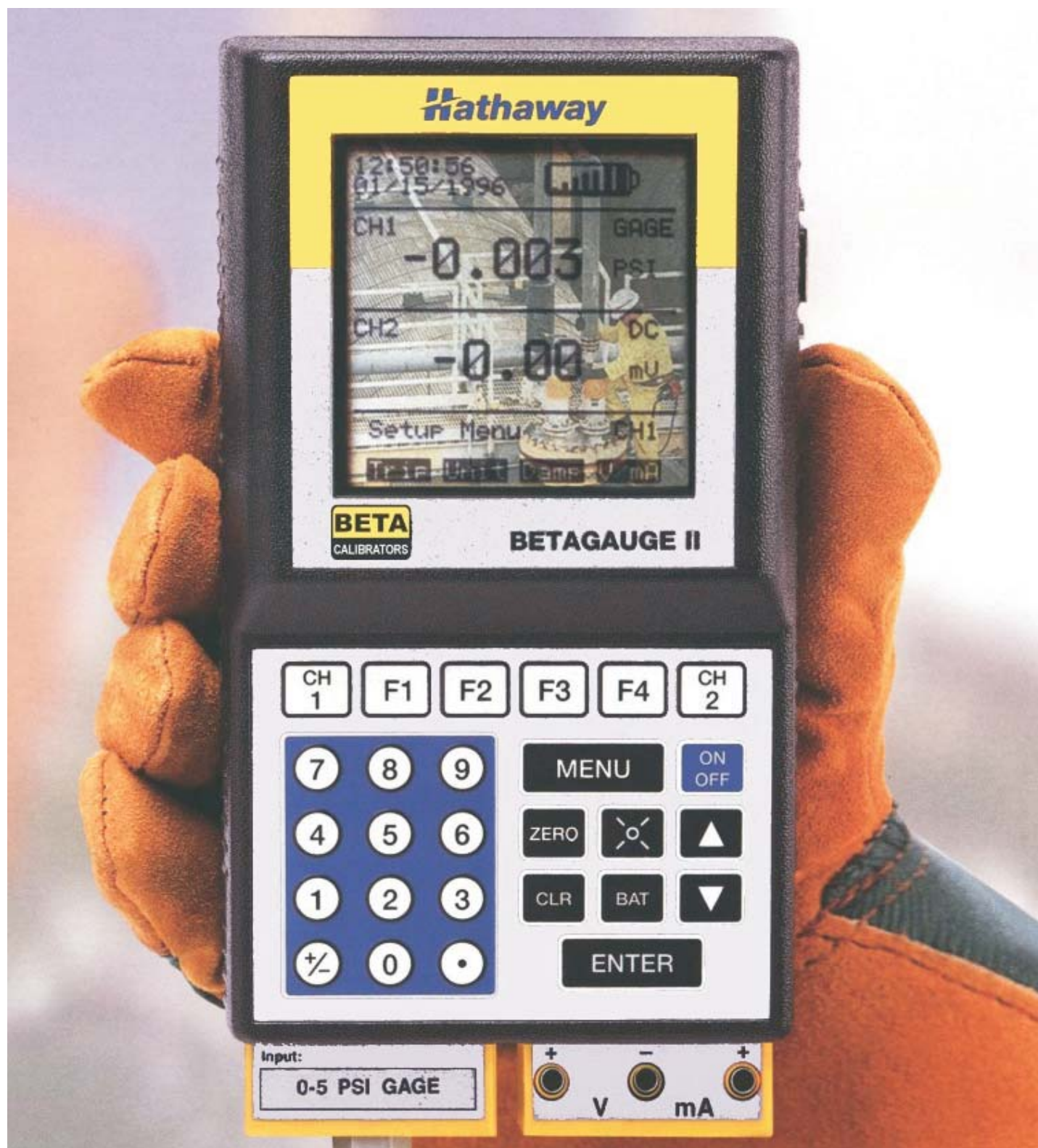




# BetaGauge II



## BetaGauge II.

The new industry standard in portable pressure calibrators is **0.025% accuracy.**

The process industries are quite literally under pressure. There's a lot of pressure instrumentation out there (one source estimates nearly 75% of all field calibrations involve some type of pressure variable). There's a lot riding on this instrumentation — process quality, plant safety, company profits. And a lot of the instrumentation rides on calibration accuracy.

That's why we weren't about to introduce just another pressure calibrator. We wanted to develop a successor that would significantly improve upon our own best-selling BetaGauge. We wanted to meet calibration requirements now and into the next decade.

By any measure, we satisfied that design criterion and then some. BetaGauge II is a quantum leap over every other Digital Pressure Gauge on the market. Over other pressure calibration devices like dead weight testers. Even over our own BetaGauge 320.

In terms of accuracy, the most critical feature of any calibrator, BetaGauge II is unmatched by any device in its price range. For the majority of its available ranges, it has a typical pressure accuracy of 0.025% full-scale and an electrical accuracy of  $\pm 0.01\%$ . That makes it four times more precise than the instruments it is used to calibrate, including 0.10% accuracy smart pressure transmitters. Even so, BetaGauge II is priced competitively with distant second 0.05% pressure calibrators. The closest devices more accurate are far more expensive — lab instruments not intended for field use, such as quartz gauges used to calibrate other calibrators.

Yet remarkably, best-of-class accuracy is but one of many reasons for specifying BetaGauge II.





**With MasterCAL<sup>®</sup> software,  
BetaGauge II becomes  
a documenting calibrator.**

Automating the process of pressure calibration is easy with BetaGauge II. It is fully compatible with our versatile, menu-driven, PC-based MasterCAL Calibration System Software. You can use them together to create a centralized database, with a history for every pressure instrument and pressure I/O loop in your plant. The software provides standardized calibration forms, procedures, and reports, so techs know exactly what needs calibrating when, and they can perform calibrations with minimal guesswork and data entry.

BetaGauge II's RS232 port also permits use with key software programs from manufacturers like ASTEC (Cornerstone), Honeywell Loveland, Emerson AMS, and others.



EC 92 Compliant

## **The calibration data you need. With urgency and clarity.**

The first thing you notice about BetaGauge II is its "big screen" display. More specifically, its 128 by 128 pixel, 63 by 63 mm LCD display with on-demand backlighting, top viewing angle, and per-channel display fields. A simple-to-use membrane keypad and a user-prompting program make BetaGauge II especially easy to navigate.

In addition to psig, psia, and psid, readouts are keypad selectable in any of the following engineering units for pressure: Kp/cm<sup>2</sup>; Atmos; mBar; Bar; KPa; mmHg; InHg; InWc 4°C, 20°C, 60°F; cmWc 4°C, 20°C, 60°F; plus one user-defined unit. Other valuable BetaGauge II features include minimum/maximum measurement memory, which automatically retains the lowest and highest values in any procedures, and % error display, which allows difficult pressure calibrations to be done without the need to maintain exact or steady test pressures.

## **Built for punishment. Ready for anything.**

BetaGauge II is a complete pressure calibrator. Engineered to perform in any industrial environment. Equipped with everything you need for maintaining your pressure instruments to their manufacturers' specs.

We developed BetaGauge II as intrinsically safe for use in Class I, Groups A, B, C, and D, and suitable for use in Class I Division 2, Groups A, B, C, and D hazardous areas. BetaGauge II is built and tested with intrinsically safe circuits and as intrinsically safe equipment.

Other safeguards include rugged ABS plastic cases, ESD protection on all pins, and EMI shielding. For optimum mechanical strength, external pressure connection is made by a 1/8" FNPT 316SS connector welded to a stainless steel metal plate.

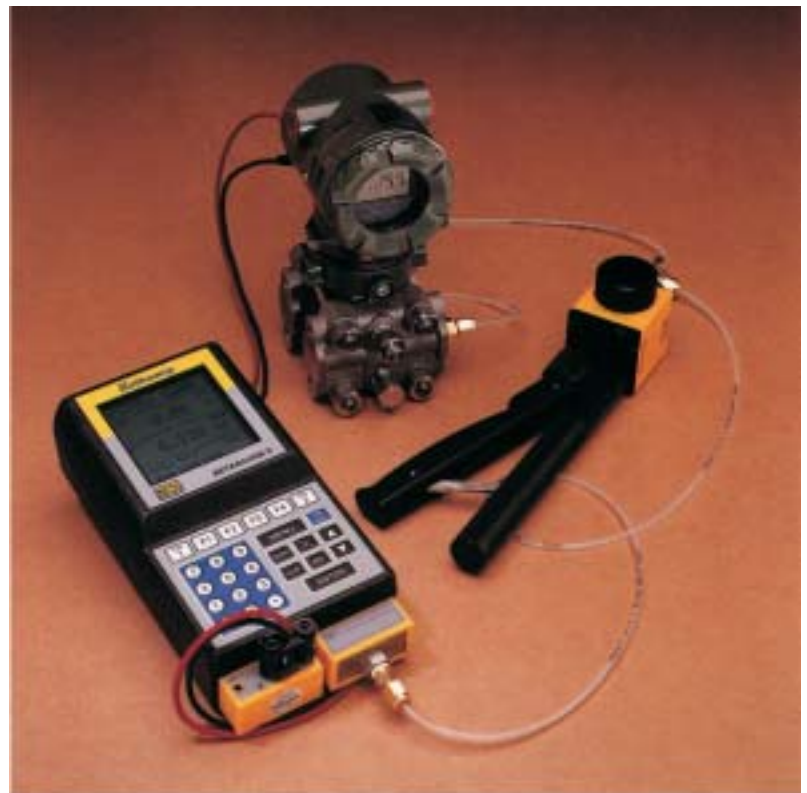
BetaGauge II is supplied with the following standard equipment:

- A multifunction, English-language, two-channel pressure calibrator.
- A standard voltage/current input module.
- An external battery pack (NiCd, rechargeable).

- One set of test leads.
- A standard trickle charger.
- An instruction manual.
- A vinyl carrying case.
- A 9 pin D shell to 9 pin D shell serial cable.

Options for BetaGauge II include:

- A 9 to 25 pin D shell adaptor.
- Additional standard input modules (23 pressure ranges to choose from).
- Vacuum and pressure pumps.
- Quick charge battery charger/conditioner.
- Wall mount fast charger.
- CSA Exia rated intrinsically safe battery pack.



## Dual-channel operation and 23 field changeable ranges redefine calibrator versatility.

With pressure devices of varying types and ranges scattered throughout a typical process plant, dedicated calibrators can get very costly, very quickly. BetaGauge II addresses this problem simply and sensibly. It is both a two-channel and multi-range device. Changing ranges is as easy as plugging in new input modules, which can be done even while the unit is powered up. BetaGauge II automatically recognizes the signals and assigns them to the proper channel. That versatility makes it the ideal answer for pressure calibration, even in critical applications like gas pipelines and other smart transmitter-equipped sites.

There are 23 standard BetaGauge II pressure ranges available in fully interchangeable input modules:

- 12 gauge ranges (from 0-5 psig up to 0-5000 psig).

- Two vacuum ranges (from 0 to -5 psig up to 0 to -15 psig).
- Four absolute ranges (from 0-15 psia up to 0-100 psia).
- Two compound ranges (from -15 to 15 psig up to -15 to 30 psig).
- Three differential ranges (from 0-5 psid up to 0-50 psid).

The standard dc module provides five electrical ranges:

- Three voltage ranges (from 0 to  $\pm 249.99$  mV dc up to 0 to  $\pm 24.999$  Vdc).
- Two current ranges (0 to  $\pm 24.999$  mA dc and 0 to  $\pm 149.99$  mA).

This plug-in design simplifies maintenance, too. The base unit needs no recalibration; only the input modules do. That means you never have to be out of service — you send only the out-of-calibration modules back to the shop, while still using BetaGauge II in the field.

## AVAILABLE RANGES

### PRESSURE (isolated sensors except as noted)

Gauge (PSIG)	Vacuum (PSIG)	Absolute (PSIA)	Compound (PSIG)	Differential (PSID) <sup>1</sup>
0-5 (0-350 mBar) <sup>3</sup>	0 to -5 (0 to -350 mBar) <sup>3,6</sup>	0-15 (0-1 Bar) <sup>2</sup>	-15 to 15 (-1 to 1 Bar) <sup>2,6</sup>	0-5 (0-350 mBar) <sup>3,6</sup>
0-7.2 (0-500 mBar) <sup>2,5</sup>	0 to -15 (0 to -1 Bar) <sup>2,6</sup>	0-30 (0-2 Bar)	-15 to 30 (-1 to 2 Bar) <sup>6</sup>	0-30 (0-2 Bar) <sup>6</sup>
0-10 (0-700 mBar) <sup>2</sup>		0-50 (0-3.5 Bar)		0-50 (0-3.5 Bar) <sup>6</sup>
0-30 (0-2 Bar)		0-100 (0-7 Bar)		
0-50 (0-3.5 Bar)	1. Maximum static pressure = 200 PSIG (14 Bar)		4. All other ranges have no additional hysteresis.	
0-100 (0-7 Bar)	2. Thermal & pressure hysteresis = .0025 PSI (.1724 mBar)		5. 7.2 PSI = 200" Water Column	
0-150 (0-10 Bar)	3. Thermal & pressure hysteresis = .0030 PSI (.2068 mBar)		6. Non-isolated sensor; use with non-corrosive media only!	
0-300 (0-20 Bar)				
0-1000 (0-70 Bar)				
0-1500 (0-100 Bar)				
0-3000 (0-200 Bar)				
0-5000 (0-340 Bar)				

**Note:** 0-7.2, 0-150 and 0-1500 PSI are extended ranges (See specifications for accuracies).

Other pressure units are user selectable: kP/cm2, Atmos, mBar, Bar, kPa, mmHg, "WC (4°C, 20°C, 60°F), cmWC(4°C, 20°C, 60°F) plus one user defined unit. The choice of pressure unit may be restricted by available resolution.

### ELECTRICAL

#### Voltage

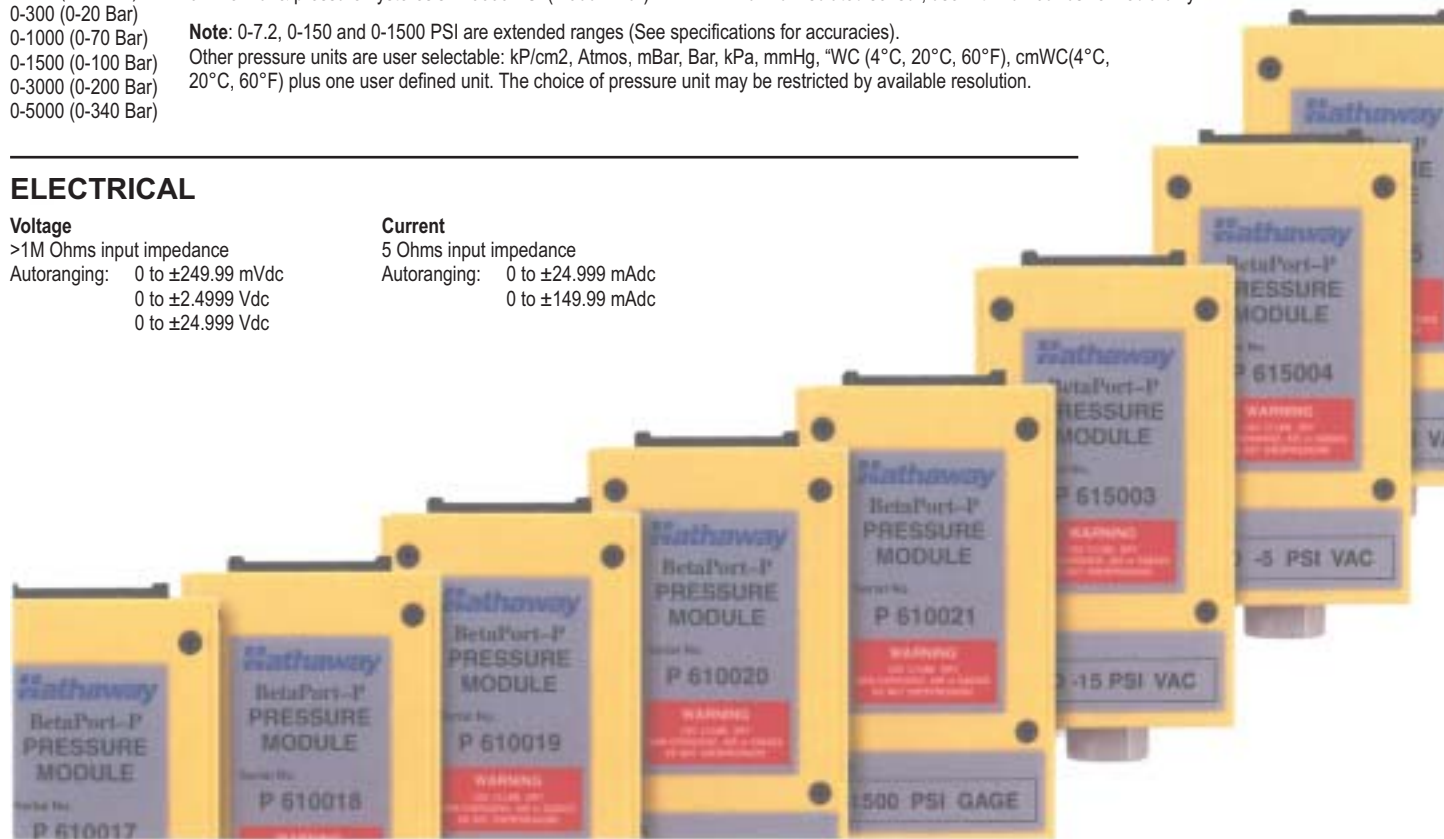
>1M Ohms input impedance

Autorangeing: 0 to  $\pm 249.99$  mVdc  
0 to  $\pm 24.999$  Vdc  
0 to  $\pm 24.999$  Vdc

#### Current

5 Ohms input impedance

Autorangeing: 0 to  $\pm 24.999$  mAdc  
0 to  $\pm 149.99$  mAdc





See our Web Site for full information on the complete line of BETA Calibrators and calibration management software or contact your local BETA Distributor for a 'hands on' demonstration.

Specifications are subject to change without notice.



**Represented by:**

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