

*Calibration Technology Starts Here*

*Portable Pressure  
Calibration  
Powerhouse*

## DPC-300A Dual System Pneumatic Calibrator

The Martel BETA DPC-300A isn't just a replacement for the old "box" calibrator. With full digital precision and accuracy, a dual pressure system and a built-in loop calibrator function, it's a pressure calibration powerhouse in a portable format.

A dual pressure system means you can use regulated plant air or internally generated pressure sources for calibration. The internal pump goes up to 300 psi with pushbutton ease. Exact values are set using the fine vernier control knob. Plant air, up to 100 psi is controlled with a precision regulator for low inches of water on up.

Speaking of inches of water column, the user can elect to display the pressure signal in any of 13 engineering units.

As they say on TV, "but wait, there's more": a built-in loop calibrator with 24 VDC instrument loop power supply; high capacity rechargeable NiMH batteries for 50 hours of use or 125 cycles of pumping to 300 psi, Martel's trademark 3 key function menus, ClearBrite™ LCD display and multimode operation to name a few.

This high performance calibrator comes in a high performance housing. It's a rugged IP67 rated blown resin case that can take a pounding when used in the field. IP67 means waterproof including immersion when the case is closed.

### General Features

- Dual pressure systems
  - Regulated plant air to 100 psi / 7 bar
  - Integral electric pump to 300 psi / 20 bar
- Pressure accuracy up to  $\pm 0.025\%$  of full scale
- Built-in loop calibrator with 24 V loop power
- External pressure module interface
- 24 VDC instrument power supply
- User's selection of 13 engineering units
- Heavy duty IP67 case (cover closed)
- Long life rechargeable NiMH battery power



### Specifications

|                                     |  |
|-------------------------------------|--|
| <b>Instrument Setup Recall</b>      | 5 setups; last used setup displays on power-up   |
| <b>Environmental</b>                |  |
| <b>Operating Temperature</b>        | -10 °C to +50 °C   |
| <b>Storage Temperature</b>          | -20 °C to +60 °C   |
| <b>Battery Type</b>                 | 9 cell NiMH rechargeable; 3700 mAh @ 10.8V   |
| <b>Battery Life (fully-charged)</b> | Approx. 50 hours (only measurement or with external pressure supply)<br>125 pump cycles to 20 bar<br>300 pump cycles to 10 bar<br>1,000 pump cycles to 2 bar |

|                             |  |
|-----------------------------|--|
| <b>Physical</b>             |  |
| <b>Dimensions</b>           | 15.25" x 12" x 7" (387.4 x 304.8 x 177.8 mm)                                       |
| <b>Weight</b>               | 15.5 lbs. (approx. 7 kg)   |
| <b>EMI/RFI Conformance</b>  | EN50082-1: 1992 and EN55022: 1994 Class B  |
| <b>Safety</b>               | EN/IEC 61010-1:2010 3rd Edition (Low Voltage Directive)                            |
| <b>Connectors/Ports</b>     | 1/8" NPT; BetaPort-P pressure module jack; power jack                              |
| <b>Included Accessories</b> | Reference manual, NIST-traceable calibration certificate, test leads and hose kit. |

|                          |  |
|--------------------------|--|
| <b>Ranges</b>            |  |
| <b>Pressure</b>          | -12 to 300.00 psi / -0.8 to 20 bar / -80 to 2000 kPa   |
| <b>mA</b>                | 0 to 24,000 mA   |
| <b>Volts</b>             | 0 to 30,000 VDC  |
| <b>Engineering Units</b> | psi, bar, mbar, kPa, MPa, kgcm <sup>2</sup> , mmH <sub>2</sub> O @ 4°C, mmH <sub>2</sub> O @ 20°C, cmH <sub>2</sub> O @ 4°C, cmH <sub>2</sub> O @ 20°C, inH <sub>2</sub> O @ 4°C, inH <sub>2</sub> O @ 20°C, inH <sub>2</sub> O @ 60°F, mmHg @ 0°C, inHg @ 0°C |

|                 |  |
|-----------------|--|
| <b>Accuracy</b> |  |
| <b>Pressure</b> | 6 months: ±0.025% of reading ±0.01% of full scale<br>1 year: ±0.035% of reading ±0.01% of full scale |
| <b>mA</b>       | ±0.015% of reading ±0.002mA  |
| <b>Volts</b>    | ±0.015% of reading ±0.002V   |

#### Temperature Effect (all functions)

No effect on accuracy on all functions from 15°C to 35°C  
Add ±0.002% F.S./°C for temps outside of 15°C to 35°C

### DPC?300A Dual System Pneumatic Calibrator Ordering Information

| Part Number | Description  |
|-------------|--|
| 1920022     | DPC-300A Calibrator, including Reference Manual, NIST traceable calibration certificate, test leads, battery pack, universal charger/AC adapter and hose kit |
| 1919872     | LDT-500 Liquid Dirt Trap (optional), protects internal pump from contamination with process fluids   |
| TBD         | Kit, valve seal replacement  |
| 1010064     | Kit, vernier repair  |
| 80438       | AC Adapter/Charger, replacement  |
| 5454067     | Filter, replacement  |



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