

## CUBE BOX-PR

### High Accuracy Pressure Calibrator

**Accuracy: up to 0.02% FS**

The calibrator CUBE BOX-PR is designed for the calibration and testing of pressure instruments such as pneumatic and electronic transmitters, analogic gauges, digital pressure gauges, pressure transducers, pressure switches, valves etc.

The integrated pneumatic sections allow you to generate the desired pressures in all situations encountered in the field and to supply the pneumatic instrumentation.



#### General

Developed with the latest technology, the calibrator CUBE BOX-PR is at the forefront in terms of reliability and measurement accuracy. Fully characterized in all the operating range temperatures to ensure the best performance in all weather conditions. The pneumatic section includes three different ways to generate the pressure depending on the needs identified in the field. Case 1) Pneumatic pressure available from a compressor. In this case, by placing the selector valve on the red section a compressed air inlet (9 bar max) is available and a pressure reducer as well. Case 2) An external regulated pressure (e.g. external pump or cylinder with external reducer) is available. In this case, by placing the

selector valve on the green section the CUBE BOX-PR can be used as a digital pressure gauge. Case 3) Neither a pressure compressor (not regulated) or an external regulated pressure are available. In this case, by placing the selector valve on the blue section a manual pump (vacuum-pressure) a pressure regulator and a vacuum-pressure selection valve can be used.

The CUBE BOX-PR is one of the few calibrators in the market that supplies the pneumatic instrumentation, sets the measuring point and reads the retransmitted pneumatic signal at the same time. Model for this application: CUBE BOX-PR-402B-151g-ZZ

#### Features

- Pressure ranges up to 700 bar



- Accuracy up to 0.02 % FS
- Fully temperature compensated (14...122 °F / -10 °C to 50 °C)
- Large LCD display
- Up to 2 pressure channels simultaneously shown
- Active channel selection
- Backlight
- Contrast regulation
- Barometric option available (to switch from gauge to absolute)
- min/Max pressure value continuously displayed
- leak-rate/stability continuously displayed
- Hold function for a specific pressure value
- Selectable filter weight
- Data-logger
- Auto-power off /Auto-backlight off selectable
- Battery charge indication (%)
- Two colours LED for charge status (in charge- end charge)
- Offset selectable
- RS232 connection
- NiMh rechargeable battery

### Serial Port

D RS-232 connection (9 pin)

### Power supply

- 4 rechargeable AAA Ni-Mh batteries (inside the instrument)
- Power supply adapter: 230 Vac - 9 V dc
- Power supply connector 9 V dc - 600 mA

### Temperature

- Compensated Temperature: 14°F to 122°F (-10°C...50°C)
- Storage Temperature: -4°F to 158°F (-20°C to 70°C)
- Humidity: <95%

### Case

- In concordance with directive 2002/95/EC: DEF STAN 81-41 (level J), IP67 Dustproof-Waterproof, STANAG 4280 (edition 2)
  - Dimensions (mm): 305 x 270 x 194
  - Weight: 3 kg (6.5 lbs)
  - Lock
  - Pressurizing valve

## Technical Data

### Measuring fluid

- Clean gas for the pneumatic section
- Any fluid compatible with Stainless Steel for the external transducer

### Type of material

- Wetted part: Stainless Steel
- Case: Polypropylene copolymer

### Pressure connections

Stäubli® quick connectors.

## Pressure Ranges

Transducer Channel 1

Code	Range [bar]	Resolution	Over press
701B	-1...7 bar g	0.00001 bar	120 % FS
402B	-1...40 bar g	0.0001 bar	120 % FS

Code	Range [psi]	Resolution	Over press
701B	-14...100 psi g	0.001 psi g	120 % FS
402B	-14...600 psi g	0.01 psi g	120 % FS

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P-CUBEPR-E-0516-1



#### Transducer Channel 2 (optional)

Code	Range [bar]	Resolution	Over press
101A	0...1 bar abs	0.00001 bar	120 % FS
151G	0...1.5 bar g	0.00001 bar	110 % FS
203G	0...200 bar g	0.001 bar	120 % FS
703G	0...700 bar g	0.001 bar	110 % FS

Code	Range [bar]	Resolution	Over press
101A	-14...15 psi g	0.001 psi g	120 % FS
151G	0...20 psi g	0.001 psi g	110 % FS
203G	0...2900 psi g	0.01 psi g	120 % FS
703G	0...10000 psi g	0.01 psi g	110 % FS

Other ranges on request.

#### Measuring unit:

20 measuring unit:

mbar - bar - Pa - hPa - kPa - MPa -  
 kg/cm<sup>2</sup> - kg/m<sup>2</sup> - mmHg - cmHg - mHg  
 - mmH<sub>2</sub>O - cmH<sub>2</sub>O - mH<sub>2</sub>O - torr - atm  
 - psi - inHg - inH<sub>2</sub>O - ftH<sub>2</sub>O  
 ( Hg@0 °C; H<sub>2</sub>O @ 4°C; p<sub>atm</sub>=101325 Pa)

### Pneumatic Section (Channel 1)

#### Red Section

- Compressed gas tube connection:  
Tightening ring nut junction for 6x4 mm tube. P<sub>max</sub> = 9 bar
- Pressure regulator: 9...0 bar

#### Blue Section

- Vacuum/Pressure Selector
- Fine volume variator
- Manual Pump:
  - Vacuum: -900...0 mbar
  - Pressure: 0...30 bar

#### Green Section

Select to use the instrument as a digital manometer

#### In common to all the pneumatic sections:

- Stäubli® quick connectors.

### Scope of delivery

- Pressure Calibrator CUBE BOX-PR
- Power Supply 100...240 Vac – 9 Vdc
- Calibration Report
- Operating Manual
- High pressure hose (only if ordered the transducer channel 2)
- One or two Stäubli® quick connectors for 6x4 mm tube (depending on the model).

### Options

- Set of adaptors
- High pressure hose
- Hand hydraulic pump model M-10
- Hand pneumatic pump model MVP-600
- Hand pneumatic pump model MP-P
- Hand pneumatic pump model MP-V
- Volume variator model M-80
- Please contact us for other measuring units
- Calibration certificate by EA authorized laboratory (Accredia, DAkkS, Cofrac, etc.)

### How to Order

CUBE BOX-PR-XXXX-YYYY-ZZ

Where:

XXXX – Code for the transducer channel  
 1. See table “Pressure Ranges”.

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YYYY – Code for the transducer channel 2 not connected to the pneumatic section. See table “Pressure Ranges”. Write “YYYY” if not desired the transducer channel 2.

ZZ – Code for the certification

- TC – Traceable Calibration Report (6 + 6 points + 2 points for repeatability).
- AC – EA Accredited Calibration Certificate (Accredia, DAkkS, Cofrac, etc.)
- FR – Factory Calibration Report (5 + 5 points).

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We reserve the rights to change at any time this technical specifications without notice.