



## Description

The 8020B is an advanced pressure indicator suitable for wide workload calibration of pressure devices such as transmitters, sensors and gauges. It can be configured for ranges from vacuum to 5000 bar (70,000 psi), with up to four high accuracy reference sensors integrated in the unit. Additionally a barometric reference option available allowing absolute pressure emulation.

Due to its fully configurable design, the 8020B offers the maximum flexibility to end user requirements. Standard accuracy is 0.01 % FS for each internal sensor fitted. External sensors can also be connected to provide additional range coverage. A single 8020B with multiple sensors can be the dedicated pressure calibration system in a CalBench, working as both a pneumatic and a hydraulic standard.

The 8020B can be used with a Time Electronics calibration pump to generate pressure to both the indicator and unit under test. Pumps are available for micro-pressure pneumatic work, high range pneumatic and also hydraulic generation. Each pump provides an ergonomic and smooth method of pressure input with fine adjustment for applications requiring accuracy, control and stability.

## Applications

With up to four sensors integrated into the unit the user is always offered an optimal calibration solution over a very wide pressure range. The 8020B is suitable as a high performance pressure standard in process plants, factories and calibration labs. Routine testing of pneumatic and hydraulic pressure instrumentation is made simple, whether using the 8020B touch screen display or via EasyCal calibration software.

## Functionality

The 8020B features a colour touch-screen interface with user-friendly menus designed for simple operation, enabling users to quickly learn and master the operation of the instrument. Each pressure sensor reading is clearly displayed, and switching between sensors is made fast and intuitive during applications. Individual pressure ports for each sensor situate at the rear of the unit to allow the user to set up the 8020B for applications based on the pressure range or type requirement.

## Features

- Ranges from -1 to 5000 bar
- Configured based on end user requirements
- Gauge, compound, absolute, differential
- Up to 4 internal sensors, multiple external
- Pneumatic or hydraulic operation
- Use with pumps for pressure generation
- Accuracy 0.01 % FS (per integral sensor)
- Barometric reference option
- Touch screen user interface
- EasyCal software compatible

## EasyCal Calibration Software

The 8020B can be controlled with readback via EasyCal software to automate the calibration process. This provides increased speed of calibration and consistency of results. Produce traceable calibration certificates and test reports for quality standards with additional uncertainty information for ISO 17025 conformance.





## Technical Specification

Pressure ranges .....	-1 to 5000 bar (70,000 psi). Configured based on customer range requirement.
Sensors .....	4 internal total plus 1 barometric reference, external sensors also available.
Pressure types .....	Gauge, compound, absolute and differential.
Accuracy (per sensor) .....	0.01 % FS 0.03 % FS for low range and differential sensors (30 mbar to 300 mbar) 0.05 % FS for ranges above 1000 bar to 2500 bar 0.1 % FS for ranges from 2500 bar to 5000 bar.
Barometric reference option .....	Enables user to switch from gauge to absolute pressure. Measuring range: 800 to 1200 mbar absolute. Accuracy: 0.01 % RDG.
Pressure units .....	20 selectable and 1 programmable.
Pressure ports .....	Minimess, piping available to benchtop manifold (customer specific configuration) for over 700 bar. Quick release available upon request for low ranges models.
Pressure media .....	Gas or liquid.
Overpressure protection .....	150 % of the selected sensor.
Screen .....	7 " TFT colour touch-screen (4 wire resistive).
Resolution .....	Up to 6 digits (user selectable).
Warm-up time .....	Approximately 10 minutes.
Communication interface .....	RS-232 and ethernet (connected inside the CalBench to control centre module if ordered)
Power supply .....	100 to 230 V AC, 50/60 Hz. As per CalBench ordered.
Supply/Test port pressure .....	Maximum 105 % FS of selected sensor.
Operating temperature .....	10 to 40 °C (50 to 104 °F).
Storage temperature .....	0 to 70 °C (32 to 158 °F).
Air humidity .....	0 to 95 % (relative humidity without moisture condensation).
Compensated temp range .....	15 to +35 °C (+59 to +95 °F).
Dimensions .....	W 315 x H 201 mm (primary or secondary console fitting).

## Ordering Information

### 8020B ..... Precision Pressure Indicator

The configuration of the 8020B is specified upon consultation with Time Electronics, based on the pressure range coverage required.

8020BARO .....	Barometric Reference option for 8020 / 8020B
7115 .....	Contamination Trap
7161P .....	Pneumatic 4 port manifold (-1 to 200 bar use)
7161H .....	Hydraulic 4 port manifold (-1 to 700 bar use)
Pneumatic Benchtop Pumps .....	7194A: 200 bar / 7194: 100 bar / 7193A: 70 bar / 7193: 40 bar / 7192: 25 bar / 7191: 4 bar
Hydraulic Benchtop Pumps .....	7195A: 1000 bar / 7195: 700 bar / 7195LP: 400 bar (higher range pumps available upon request)
ECFLA .....	EasyCal Calibration Software (full user licence, accompanying calibrator discounted price)
Calibration Certificates .....	Traceable calibration certificate (Factory) and Accredited calibration certificate (ISO 17025)

Due to continuous development Time Electronics reserves the right to change specifications without prior notice.