



Time Electronics Calibration Bench

Calibration, Test & Measurement

Maximum Versatility for all Calibration Applications:

- Pressure transducers, transmitters, switches
- Multi-meters, Ohm meters, resistance boxes
- Temperature indicators, sensors
- Oscilloscopes, Clamp meters
- Frequency meters, timer counters
- Loop signal indicators, transmitters
- AC/DC signal sources, Power supplies
- RTD transmitters, thermocouple transmitters
- AC/DC Milli-voltmeters



CalBench is the ultimate multifunction calibration station from Time Electronics. A wide range of standard modules can be mounted in the primary console; this gives a highly flexible system that is both functional and easy to use. Further expansion can be achieved by adding the optional secondary console 7081.

Core modules cover electronic signal, temperature, and pressure applications, non-standard modules for special applications can be incorporated into the bench consoles; each module is an independent item and there is a high degree of inter-changeability. This allows each bench to be custom designed to meet specific engineering requirements.

Functions are clearly defined on each module and a competent technician will quickly master the operation of the system without expensive training or constant reference to manuals.



Module Options

Pressure: Ranges from vacuum to 600bar. Also available is an Automatic Pressure Calibrator which allows 4 preset points to be selected at the push of a button, or by EasyCal remote control.

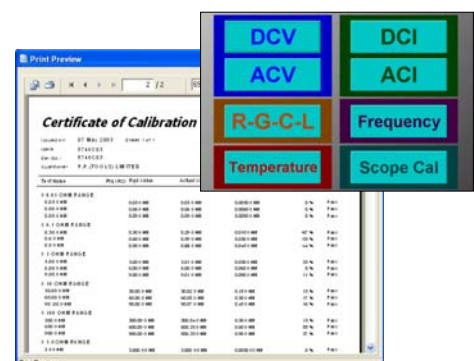
Power: Variable AC mains, variable DC and fixed quad or dual DC supplies can be fitted.

Loop and Temperature: High accuracy loop calibrator modules with source, measure and sink functions. Temperature calibrators capable of measuring and simulating RTDs/thermocouples.

External Options: Pneumatic (35bar) and hydraulic (250bar) handheld calibration pumps. Dry block calibrators with ranges from -25°C to 700°C.

Multifunction Calibrator and Control Centre:

Mounted centrally in the console with touch screen control. Source and measure voltage, current, resistance, frequency and much more. To make calibration faster and more productive, the control centre is preloaded with Time Electronics' well-established EasyCal software, which integrates with bench modules. Offering over 850 test procedures and networking capabilities, it fully automates the calibration process. Engineers can print and customise test certificates as required.



Calibration Bench Modules and Basic Specifications

Console Dimensions

Overall: Width 200 x height 156 x depth 85cm, 175Kg typical. With secondary console fitted height is 166cm.
 Primary Console: Width 200 x height 29 x depth 47cm, 90Kg typical.
 Secondary Console: Width 193 x height 40 x depth 19.5 cm, 30Kg typical.
 Individual module height 201mm standard, Individual module width shown in brackets.

Power Modules

7082 Mains Power Controller: (270mm) Single Phase Unit with 2 power sockets	Protection: 16A overload for entire bench, Meters: Mains voltage (0-300V). Options: Mains power up to 1Amp (7063), 110V DC up to 5 Amps (7075).
7083 Dual 24V DC Supply: (131mm) Suitable for powering loop signal instrumentation	Outputs: Two 24V, 2A. Floating with respect to each other and ground.
7088 Power Unit: (350mm) Output V&I monitored on 2 meters	Power: Variable 0 to 270V 50Hz, 10 Amps .
7086 Adjustable DC Power Supply: (168mm) 0 to 60V	Maximum Output Current: 1 Amp. Can also be supplied as 0 to 30V at 3 Amps.
7087 Quad DC Power Supplies: (80mm) 4 fixed independent floating supplies	V & I Ratings: 6V(8A), 12V(8A), 24V(4A), 48V(3A). Current Overload: 1.4 x max current rating.

7051 Multifunction Calibrator and Control Centre: (425mm)

- 0-22V AC/DC, 0 – 220mA AC/DC
- 0 – 1GΩ - decade steps
- 10 MHz frequency
- Digital Multi Meter 6½ digit – internal
- Simulated Resistance 10Ω to 40MΩ
- RTD Simulation/Measure
- Thermocouple Simulation/Measure 10 types
- EasyCal Calibration Management Software
- Touch Screen

Options: Hi Voltage/Current AC/DC1050V/22A (9782), Oscilloscope calibration (9775), Capacitance / Inductance (9798),
 Clamp meter adapter (9780), Tacho Meter adapter (9773), and Test lead set (9796).

Pressure Modules:

Available Units of Measure: Bar, PSI, kPa, MPa, inWg, cmWg, inHg, mmHg, Kg/cm2, atm.

Pressure Range Option Codes: 200mbar (7100), 2bar (7101), 5bar (7102), 10bar (7103), 20bar (7104), 35bar (7105), 70bar (7106),
 100bar (7107), 200bar (7108), 400bar (7109), 600bar (7110), Vacuum Regulator (7111).

Module and Description	Range (bar)	Accuracy (%)	Fittings
7062 Pressure Calibrator: (129mm) 4.5 digit display with 5 selectable pressure units Precision self venting regulator	VAC, 2, 5, 10, 20	0.04	Quick release
	0.2	0.1	
7064 High Pressure Calibrator: (200mm) 4.5 digit display with 5 selectable pressure units Precision self venting regulator	35, 70, 100	0.04	Minimess
	200	0.1	
7065 Pressure Indicator: (96mm) Precise pressure measurement	VAC, 2, 5, 10, 20, 70, 100	0.04	Under 20bar Quick release Over 20bar Minimess
	0.2, 200, 400, 600	0.1	
7038 Multifunction Pressure Indicator: (100mm) 4.5 digit display with 9 selectable pressure units	VAC, 2, 5, 10, 20, 70, 100	0.04	Under 20bar Quick release Over 20bar Minimess
	0.2, 200, 400, 600	0.1	
7066 Differential Pressure Calibrator: (150mm) Connection is made via two front panel quick release connector ports	VAC, 2, 5, 10	0.04	Quick release
	0.2	0.1	
7032 Automatic Pressure Calibrator: (340mm) Low cost programmable pressure calibrator module Automatic calibration possible via EasyCal software	VAC, 2, 10	0.04	Quick release
	0.2	0.1	
7084 Pneumatic Line Pressure Control: (150mm) Used for management of internal line pressures	Gauges: 60mm anti-shock. Regulated pressure options: 5bar, 35bar, 70bar.		

Temperature and Loop Calibration Modules

7085 Temperature Distribution Panel: (250mm) Simplifies thermocouple calibration	Range of colour coded connectors for thermocouples and RTD. Includes cold junction (CJC) temperature display.
7079 Loop Ancillaries Calibrator: (96mm) Test & calibrate electrical process loop signals	Measurement: 0 to 199.99mA, Continuity Test: Up to approximately 100 ohms. Output: Separate isolated 24VDC supply.
7068 RTD Temperature Calibrator: (107mm) Precisely simulate & measure RTD probes	Readout: Available in °C, °F, and °K Auto calculation of calibration points 0, 25, 50, 75, 100%.
7067 Loop Calibrator: (97mm) For the calibration of voltage & current loop signals	3 Operating Modes: Loop V/I source, Sink of loop current, Measurement of loop current/voltage.
7069 V-I Loop Calibrator: (97mm) Source & measure functions, plus a transmitter simulator/sink function	Accuracy: 0.02% of span, Display Resolution: 4.5 digits.

Additional Options

7070 / 7072 Dry block temperature calibrators	7089 Digital pressure gauge, 30 bar max (for 7090)
7090 Pneumatic Calibration Pump	7096 Digital pressure gauge, 300 bar max (for 7095)
7095 Hydraulic Calibration Pump	7097 Minimess test kit

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