Time Electronics
Calibration Bench Packages

Universal CalBench Package *(Order Code: CBUP)*

The CalBench Universal Package is for test facilities requiring a complete multi-product calibration and testing solution. Items have been carefully selected to provide a range of comprehensive features to enhance and optimise the calibration process.

The Universal CalBench package is ideal for calibration of these common devices/instruments as well as performing much more:

- Pressure: Gauges, Calibrators, Transducers, Transmitters, Indicators, Switches, Valves.
- Temperature and Loop: Sensors, Indicators, Thermocouple and RTD Transmitters, Calibrators, PRTs, Thermistors.
- Electrical/Electronic: Multimeters, AC/DC Signal Sources, Clamp Meters, Tachometers, Ohmmeters, Decade Boxes, Power Supplies.
- Frequency: Signal Generators, Oscilloscopes, Frequency Meters, Timer Counters.

ITEM #	CODE	BASIC DESCRIPTION	PURPOSE
1	7080	CalBench (W2000 x D850 x H1568): Height adjustable bench frame, work top, primary console with 7082 mains power control and distribution module (incl. 2 x output sockets), 4 x under console sockets, and under console lighting.	Provides an ergonomic workspace for various calibration and testing applications. A wide range of modules can be fitted to the primary console creating a highly flexible system that is both functional and easy to use.
2	7081	Secondary Console (W2000 x D225 x H390 mm)	Fitted directly below primary console to house additional modules.
3	7121	2 drawer Unit (W500 x D550 x H250mm)	For general use and keeping documents etc.
4	7087	Quad DC Power Supply Module - 6V(8A), 12V(8A), 24V(4A), 48V(3A)	Provides a DC power supply to various loop instrumentation under test.
5	7053	56V DC 4A Adjustable Power Supply Module - Digital	Provides a variable precision DC power supply for various applications.
6	7088	Adjustable AC Supply Module (0 to 265V/10A at 240V input or 0 to 121V/10A at 110V input)	Provides a variable AC supply to for electrical/electronic devices under test.
7	7051+	CalBench Control Centre & Multifunction Calibrator Module: • Integral Calibrator, 6.5 digit Multimeter, and Touch Screen PC • Source up to 1050V AC/DC voltage • Source up to 22A AC/DC current • Source up to 1GΩ resistance • Thermocouple simulate and measure • PT100 simulate and measure • Source capacitance and inductance • Oscilloscope calibration • Clamp meter adaptor and tacho meter adaptor included • EasyCal calibration software, printer kits, bar code reader and more	Allows automated calibration for a wide range of electronic test, pressure, temperature and electrical instrumentation. Provides precision electronic calibration source and measurement functions to calibrate a wide range of digital and analogue multimeters, frequency meters, ohm meters, AC/DC millivoltmeters, decade boxes, thermocouple indicators and sensors, clamp meters, oscilloscopes, timer counters, RTDs. Further to this it provides communication with pressure modules. EasyCal enables the user to automate the calibration process and increase speed of calibration and consistency of results. Easily produce calibration certificates and reports to ISO 9001, ISO 17025, and other international quality standards.
8	9769	7051 internal option: Scope 2.2GHz Levelled Sine Generator	Enhances the 7051's oscilloscope calibration capabilities.
9	7085A	Auto Switching Temperature Distribution Module	Allows 7 thermocouple types to be batch calibrated as well as providing an RTD reference.
10	7067	Precision Loop Calibrator Module	Provides secondary manual control loop calibration and test.
11	7068	RTD Temperature Calibrator Module	Provides a secondary manual control temperature calibrator.
12	5068B	Insulation Tester Calibration Module (100K Ohm - 10G Ohm)	Allows insulation testers to be calibrated (up to 2.5kV).
13	9758B	DC Electronic Load Module, 80A, 80V, 300W	Provides a precision controlled DC load for calibrating DC power supplies.
14	7059/7101	Combined Vacuum/Pressure Calibrator (VAC + 2bar)	Allows vacuum and low range pressure instruments, switches, gauges transmitters, transducers to be calibrated.
15	7062/7103	Pressure Calibration module with regulator (10bar)	Allows calibration of mid range pressure devices.
16	7062/7104	Pressure Calibration module with regulator (20bar)	Allows calibration of mid range pressure devices.
17	7064/7107	High Pressure Calibration module with regulator (100bar)	Allows calibration of high range pressure devices.
18	7064/7108	High Pressure Calibration module with regulator (200bar)	Allows calibration of high range pressure devices.
19	7066/7103	Differential Pressure Calibration module (10bar)	Allows calibration of differential pressure applications & instrumentation.
20	7038/7109	Multi Function Pressure Indicator (400bar)	Additional high pressure indication. Used for calibration with the 7195 hydraulic pump input.
21	7038/7110	Multi Function Pressure Indicator (600bar)	Additional high pressure indication. Used for calibration with the 7195 hydraulic pump input.
22	7198	Multi Adaptors/Fittings Kit with case	Provides all the required pressure connections and fittings for modules and pumps.
23	7149	Electrical Vacuum Pump	To supply the 7059 module a vacuum pressure source.
24	7195	Desktop Hydraulic Pump (0 to 600bar)	Provides pressure input to the 7038 modules up to 600bar.
25	7096	Digital Pressure Gauge (0 to 700bar, 0.25% Accuracy)	Secondary reference (back up gauge).
26	7072	Dry Block Calibrator (33 to 650 degC)	For calibrating temperature probes, RTDs, and more.
27	CERTS	Factory Calibration Certificates for test modules	Certifies all calibration modules have been tested in the TE factory (NPL traceable).

ADDING TO THE PACKAGE *(see separate data sheets and brochures at www.timeelectronics.com)*

The CalBench Universal Package can be customised per requirement. Options include:

- Replacing or removing non-required modules. Add others from the TE CalBench range.
- Additonal external items for other calibration applications: Dimensional, torque, weight, etc
- Line pressure requirements: This package requires up 200bar line pressure. If not present in the facility compressors and boosters can be supplied.
- Additional fittings and furniture: Under worktop drawers and cabinets, PC holders. Also side tables and laboratory furniture.
- Software add-ons and licenses: For customers requiring additional EasyCal features and workstation licenses.
- Laboratory design and supply: For the turnkey solution to design, install, commission, and train end users.
- CalBench Training: On-site or at the Time Electronics factory, UK.

Universal CalBench Package Images

Some of the external supplied items

7195

7096

7198

7149

Auto Process CalBench Package *(Order Code: CBAPP)*

The CalBench Auto Process Package is for test facilities requiring a process control orientated calibration and testing solution.

The system uses both software and modules for rapid calibration of various equipment common to process plants.

Calibrate these common devices/instruments and much more:

- Pressure: Gauges, Calibrators, Transducers, Transmitters, Indicators, Switches, Valves.
- Temperature and Loop: Sensors, Indicators, Thermocouple and RTD Transmitters, Calibrators, PRTs, Thermistors.
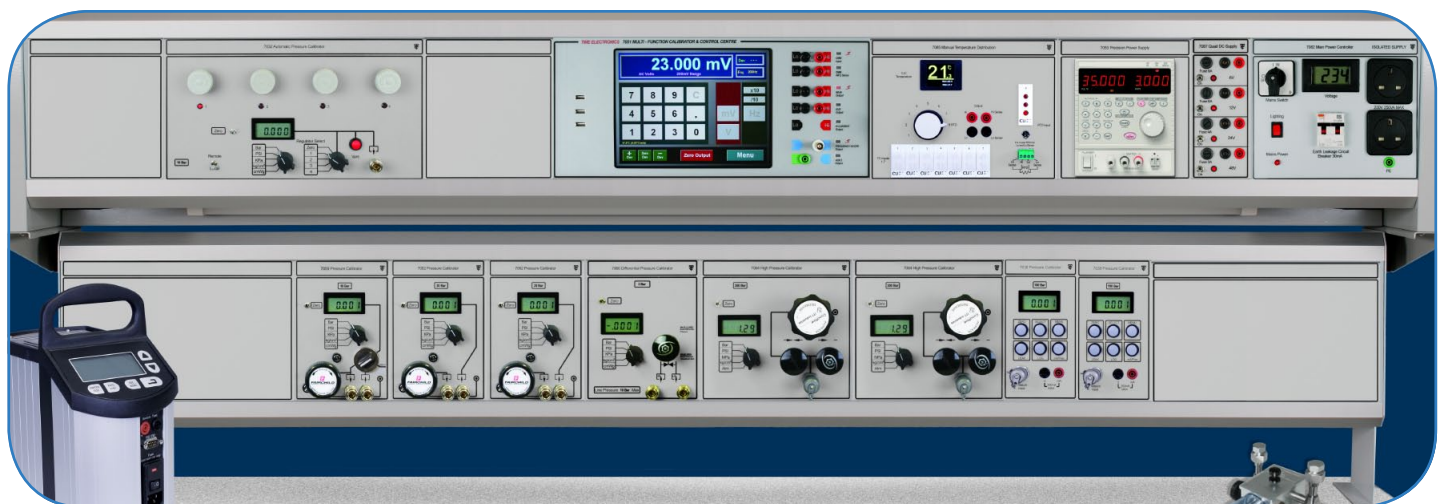- Electrical/Electronic: Ohm Meters, Millivoltmeters, Decade Boxes

ITEM #	CODE	BASIC DESCRIPTION	PURPOSE
1	7080	CalBench (W2000 x D850 x H1568): Height adjustable bench frame, work top, primary console with 7082 mains power control and distribution module (incl. 2 x output sockets), 4 x under console sockets, and under console lighting.	Provides an ergonomic workspace for various calibration and testing applications. A wide range of modules can be fitted to the primary console creating a highly flexible system that is both functional and easy to use.
2	7081	Secondary Console (W2000 x D225 x H390 mm)	Fitted directly below primary console to house additional modules.
3	7121	2 drawer Unit (W500 x D550 x H250mm)	For general use and keeping documents etc
4	7087	Quad DC Power Supply Module - 6V(8A), 12V(8A), 24V(4A), 48V(3A)	Provides a DC power supply to various loop instrumentation under test.
5	7053	56V DC 4A Adjustable Power Supply Module - Digital	Provides a variable precision DC power supply for a various applications.
6	7051	CalBench Control Centre & Multifunction Calibrator Module: • Integral Calibrator, 6.5 digit Multimeter, and Touch Screen PC • Source up to 22V AC/DC voltage • Source up to 220mA AC/DC current • Source up to 1GΩ resistance • Thermocouple simulate and measure • PT100 simulate and measure • EasyCal calibration software, printer kits	Allows automated calibration for a wide range of electronic test, pressure, temperature and electrical instrumentation. Provides precision electronic source and measurement functions suitable to calibrate a wide range of ohm meters, millivoltmeters, decade boxes, thermocouple and RTD indicators and sensors. Additionally this provides a setup for A to D signal injection, ramping for gauge sticktion testing automatically. The 7051 provides communication with pressure modules (via readback) to automate procedures for minimal error and fast turnaround time. EasyCal enables the user to automate the calibration process and increase speed of calibration and consistency of results. Easily produce calibration certificates and reports to ISO 9001, ISO 17025, and other international quality standards.
7	9787	7051 internal option: Full Range Resistance	Provides true resistance function for resistance substitution, select on test, RTD calibration, Ohmmeters.
8	7085A	Auto Switching Temperature Distribution Module	Allows 7 thermocouple types to be batch calibrated as well as providing an RTD reference.
9	7059/7101	Combined Vacuum/Pressure Calibrator (VAC + 2bar)	Allows vacuum and low range pressure instruments, switches, gauges transmitters, transducers to be calibrated.
10	7062/7102	Pressure Calibration module with regulator (5bar)	Allows calibration of mid range pressure devices.
11	7032/7103	Semi-Automatic Pressure Calibration module with regulators (10bar)	Allows set point calibration of mid range pressure devices.
12	7062/7104	Pressure Calibration module with regulator (20bar)	Allows calibration of mid range pressure devices.
13	7064/7107	High Pressure Calibration module with regulator (100bar)	Allows calibration of high range pressure devices.
14	7064/7108	High Pressure Calibration module with regulator (200bar)	Allows calibration of high range pressure devices.
15	7066/7103	Differential Pressure Calibration module (10bar)	Allows calibration of differential pressure applications & instrumentation.
16	7038/7109	Multi Function Pressure Indicator (400bar)	Additional high pressure indication. Used for calibration with the 7195 hydraulic pump input.
17	7038/7110	Multi Function Pressure Indicator (600bar)	Additional high pressure indication. Used for calibration with the 7195 hydraulic pump input.
18	7198	Multi Adaptors/Fittings Kit with case	Provides all the required pressure connections and fittings for modules and pumps.
19	7149	Electrical Vacuum Pump	To supply the 7059 module a vacuum pressure source.
20	7195	Benchtop Hydraulic Pump (0 to 600bar)	Provides pressure input to the 7038 modules up to 600bar.
21	7096	Digital Pressure Gauge (0 to 700bar, 0.25% Accuracy)	Secondary reference (back up gauge).
22	7072	Dry Block Calibrator (33 to 650 degC)	For calibrating temperature probes, RTDs, and more.
23	CERTS	Factory Calibration Certificates for test modules	Certifies all calibration modules have been tested in the TE factory (NPL traceable).

ADDING TO THE PACKAGE *(see separate data sheets and brochures at www.timeelectronics.com)*

The CalBench Universal Package can be customised per requirement. Options include:

- Replacing or removing non-required modules. Add others from the TE CalBench range.
- Additonal external items for other calibration applications: Electrical, electronic, dimensional, torque, weight, etc
- Line pressure requirements: This package requires up 200bar line pressure. If not present in the facility compressors and boosters can be supplied.
- Additional fittings and furniture: Under worktop drawers and cabinets, PC holders. Also side tables and laboratory furniture.
- Software add-ons and licenses: For customers requiring additional EasyCal features and workstation licenses.
- Laboratory design and supply: For the turnkey solution to design, install, commission, and train end users.
- CalBench Training: On-site or at the Time Electronics factory, UK.

Auto Process CalBench Package Images

Some of the external supplied items

7195

7096

7198

7149

Pneumatic Pressure CalBench Package *(Order Code: CBPPP)*

The CalBench Pneumatic Pressure Package is a system built for calibrating pressure instrumentation under 200bar.

The system includes pressure modules that require line pressure via the rear of the bench. In addition an external PC is used with EasyCal software for control of the 5065B digital multimeter and communication/readback from pressure modules.

Calibrate these common devices/instruments and much more:

• Pressure: Gauges, Calibrators, Transducers, Transmitters, Indicators, Switches, Valves.
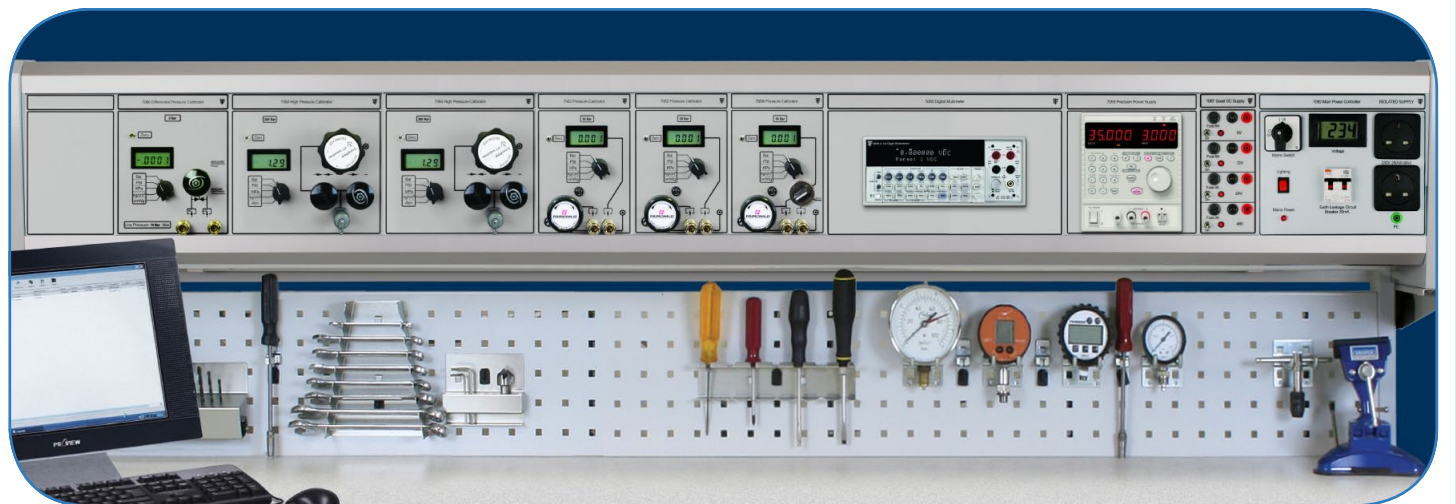
ITEM #	CODE	BASIC DESCRIPTION	PURPOSE
1	7080	CalBench (W2000 x D850 x H1568): Height adjustable bench frame, work top, primary console with 7082 mains power control and distribution module (incl. 2 x output sockets), 4 x under console sockets, and under console lighting.	Provides an ergonomic workspace for various calibration and testing applications. A wide range of modules can be fitted to the primary console creating a highly flexible system that is both functional and easy to use.
2	7123	Under worktop PC holder (vertical)	For housing PC.
3	7125	20 piece tool hook kit for rear perfo panel	For holding various instruments, devices and tools.
4	7087	Quad DC Power Supply Module - 6V(8A), 12V(8A), 24V(4A), 48V(3A)	Provides a DC power supply to various loop instrumentation under test.
5	7053	56V DC 4A Adjustable Power Supply Module - Digital	Provides a variable precision DC power supply for a various applications.
6	5065B	6.5 digit multimeter	Provides measurement capabilities for transducers and transmitters under test.
7	7059/7101	Combined Vacuum/Pressure Calibrator (VAC + 2bar)	Allows vacuum and low range pressure instruments, switches, gauges transmitters, transducers to be calibrated.
8	7062/7103	Pressure Calibration module with regulator (10bar)	Allows calibration of mid range pressure devices.
9	7062/7104	Pressure Calibration module with regulator (20bar)	Allows calibration of mid range pressure devices.
10	7064/7107	High Pressure Calibration module with regulator (100bar)	Allows calibration of high range pressure devices.
11	7064/7108	High Pressure Calibration module with regulator (200bar)	Allows calibration of high range pressure devices.
12	7066/7103	Differential Pressure Calibration module (10bar)	Allows calibration of differential pressure applications & instrumentation.
13	7198	Multi Adaptors/Fittings Kit with case	Provides all the required pressure connections and fittings for modules.
14	7149	Electrical Vacuum Pump	To supply the 7059 module a vacuum pressure source.
15	CBPC	PC with monitor, keyboard & mouse (not required if existing PC is used). Unit includes an 8 way port for RS-232 connectivity to modules. Note that the monitor can be mounted on a side arm from the bench if required.	Configured with EasyCal, the PC workstation provides storage management for QMS data and includes instrument user manuals, company protocols and policies. The workstation can also be connected to a local network for information sharing, backup and remote maintenance.
16	ECFLA	EasyCal Calibration Software Suite (pre-loaded on CBPC if ordered)	Software to provide automated calibration run for bench instruments and complete workflow for management of calibration standards, management of instruments, Job report and Job data capture, Calibration due reminder system, ID and bar code printing, PDF reports and certificates as well as simulation mode and over 1200 standard calibration procedures to get started.
17	9795	Printer and Connectivity Kit - Includes InkJet Printer, DVD-RW, 4 Port USB Hub, Numeric Key Pad & USB Memory Stick	Allows certificates and reports to be printed as required. Also data storage and connectivity.
18	9777	Bar Code Reader	For reading instruments/devices that have been bar coded. Enables instant identification within EasyCal.
19	9778	Cal and ID Label Printer	Print calibration labels, bar codes, and ID labels for tagging devices and instruments.
20	9796	Premium Test Lead Set	Provides necessary connections for the 5065B DMM module.
21	CERTS	Factory Calibration Certificates for test modules	Certifies all calibration modules have been tested in the TE factory (NPL traceable).

ADDING TO THE PACKAGE *(see separate data sheets and brochures at www.timeelectronics.com)*

The CalBench Pneumatic Pressure Package can be customised per requirement. Options include:

• Replacing or removing non-required modules. Add others from the TE CalBench range.

• Additonal external items for other calibration applications: Electronic, electrical, dimensional, torque, weight, etc

• Line pressure requirements: This package requires up 200bar line pressure. If not present in the facility compressors and boosters can be supplied.

• Additional fittings and furniture: Under worktop drawers and cabinets, PC holders. Also side tables and laboratory furniture.

• Software add-ons and licenses: For customers requiring additional EasyCal features and workstation licenses.

• Laboratory design and supply: For the turnkey solution to design, install, commission, and train end users.

• CalBench Training: On-site or at the Time Electronics factory, UK.

Pneumatic Pressure CalBench Package Images

Some of the external supplied items

9796

9777

7198

7149

Electrical/Electronic CalBench Package *(Order Code: CBEEP)*

The CalBench Electrical/Electronic Package is for test facilities requiring a multi-product calibration solution for testing mainly electronic devices and instruments. Items have been carefully selected to provide a range of comprehensive features to enhance and optimise the calibration process. Using the 7051 temperature and loop calibration is also possible.

Calibrate these common devices/instruments and much more:

- Temperature and Loop: Sensors, Indicators, Thermocouple and RTD Transmitters, Calibrators, PRTs, Thermistors.
- Electrical/Electronic: Multimeters, AC/DC Signal Sources, Clamp Meters, Tachometers, Ohmmeters, Decade Boxes, Power Supplies.
- Frequency: Signal Generators, Oscilloscopes, Frequency Meters, Timer Counters.
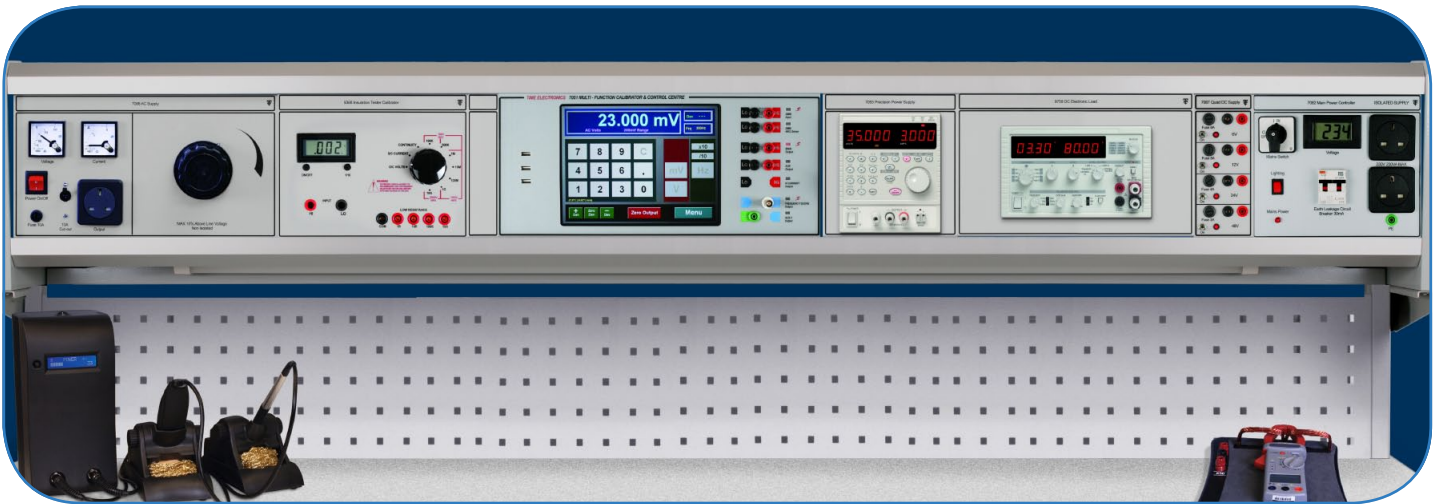
ITEM #	CODE	BASIC DESCRIPTION	PURPOSE
1	7080	CalBench (W2000 x D850 x H1568): Height adjustable bench frame, work top, primary console with 7082 mains power control and distribution module (incl. 2 x output sockets), 4 x under console sockets, and under console lighting.	Provides an ergonomic workspace for various calibration and testing applications. A wide range of modules can be fitted to the primary console creating a highly flexible system that is both functional and easy to use.
2	7121	2 drawer Unit (W500 x D550 x H250mm)	For general use and keeping documents etc
3	7087	Quad DC Power Supply Module - 6V(8A), 12V(8A), 24V(4A), 48V(3A)	Provides a DC power supply to various instrumentation under test.
4	7053	56V DC 4A Adjustable Power Supply Module - Digital	Provides a variable precision DC power supply for a various applications.
5	7088	Adjustable AC Supply Module (0 to 265V/10A at 240V input or 0 to 121V/10A at 110V input)	Provides a variable AC supply to for electrical/electronic devices under test.
6	7051+	CalBench Control Centre & Multifunction Calibrator Module: • Integral Calibrator, DMM, and Touch Screen PC • Source up to 1050V AC/DC voltage • Source up to 22A AC/DC current • Source up to 1GΩ resistance • Thermocouple simulate and measure • PT100 simulate and measure • Source capacitance and inductance • Oscilloscope calibration • Clamp meter adaptor and tacho meter adaptor included • EasyCal calibration software, printer kits, bar code reader & more	Automated multi product calibration. Calibrate digital and analogue multimeters, frequency meters, ohm meters, AC/DC millivoltmeters, decade boxes, thermocouple indicators and sensors, clamp meters, oscilloscopes, timer counters, RTDs and much more. EasyCal enables the user to automate the calibration process and increase speed of calibration and consistency of results. Easily produce calibration certificates and reports to ISO 9001, ISO 17025, and other international quality standards.
7	9769	7051 internal option: Scope 2.2GHz Levelled Sine Generator	Enhances the 7051's oscilloscope calibration capabilities.
8	5068B	Insulation Tester Calibration Module (100K Ohm - 10G Ohm)	Allows insulation testers to be calibrated (up to 2.5kV).
9	9758B	DC Electronic Load Module, 80A, 80V, 300W	Provides a precision controlled DC load for calibrating DC power supplies.
10	7139	Shelf (W450 x D250 x H130mm) for rear perfo panel	Suitable for holding portable equipment and tools.
11	7143	Document Holder (W450 x H360mm) for rear perfo panel	For holding user manuals of DUTs and other documentation.
12	7145	Benchtop Solder Station and Rework Kit	High quality soldering, for electronics, components etc. Extras also available such as fume extractor and circuit board holders.
13	7183	Electronics service case (82 tools)	General use, highly practical for various lab requirements.
14	CERTS	Factory Calibration Certificates for test modules	Certifies all calibration modules have been tested in the TE factory (NPL traceable).

ADDING TO THE PACKAGE *(see separate data sheets and brochures at www.timeelectronics.com)*

The CalBench Electrical/Electronic Package can be customised per requirement. Options include:

- Replacing or removing non-required modules. Add others from the TE CalBench range: Oscilloscopes, frequency counters, signal generators and much more.
- Additonal external items for other calibration applications: Pressure, dimensional, torque, weight, etc
- Additional fittings and furniture: Under worktop drawers and cabinets, PC holders. Also side tables and laboratory furniture.
- Software add-ons and licenses: For customers requiring additional EasyCal features and workstation licenses.
- Laboratory design and supply: For the turnkey solution to design, install, commission, and train end users.
- CalBench Training: On-site or at the Time Electronics factory, UK.

Electrical/Electronic CalBench Package Images

Some of the external supplied items

7145

7183

9773

7139 and 7143