



CALIBRATOR Pro

load banks up to 1000A



TECARC Calibrator models were first launched in 2008, competitive pricing combined with superb portability, fast, easy operation & reliable results mean these are trusted by Engineers all over the world & have become the leading global product for welding equipment calibration & test.

Recently updated IEC standards has pushed us to carry out a redesign & upgrade.

Calibrator Pro models are latest upgraded versions of our original Calibrator models, just as easy to use but loaded with extra features to suit for any application. **Almost everything has been improved, see below.**

- Accuracy, repeatability & temperature stability now exceed precision grade requirements, for compliance with the toughest international requirements such as aerospace, nuclear industries & scientific testing.
- Displays mean DC volts & Amps, true AC RMS Volts & Amps, complex waveform values such as pulse MIG & TIG, ambient temperature °C, & wire feed speed (with optional plug in tacho unit).
- Volts now displays to 2 decimal places; amps display now to 1 decimal place + hold function to lock values if needed.
- Instrument panel now slopes back for better visibility & displays are sunlight readable up to 5M away.
- We have added a welding DIX connector to allow monitoring of real welding parameters instead of using the internal resistive loads, ideal for automated welding & integrated or inaccessible systems.
- Instrument panel removes in less than a minute for fast & easy recalibration.
- Power supply is now a replaceable PP3 9V battery, efficient design with auto shut down & auto wake up results in around 150-200 tests before replacement. Low battery shut down is also included.
- Improved internal case design with doubled panels at critical points to withstand tough use in industry.
- Improved 'stack effect' cooling channels hot air through the case at a faster rate than many powerful fans.
- Improved load resistor mount design to minimise 'ringing' vibration noises in transport.
- Now with 8 fine control switch steps instead of 5 & greater load range from 2A@10V to 35A@21V.
- 4mm output terminals provided to allow plug in of an external meter, this allows readings of both voltage & current to be displayed on a Fluke or similar & can be used for recalibration of the instrument panel.
- Built in TIG 'HF' suppression stops all HF from reaching the instrument panel & the 4mm output terminals to protect DMM.

Models & technical specifications.

Model	Calibrator Pro 600	Calibrator Pro 800	Calibrator Pro 1000
Main power load switches	5 of, 30A, 60A, 100A, 150A, 230A	7 of, 25A, 35A, 75A, 105A, 145A, 170A, 200A	8 of, 25A, 35A, 75A, 105A, 145A, 170A, 200A, 230A
Fine control switch	8 step, from 2A – 35A	8 step, from 2A – 35A	8 step, from 2A – 35A
Instrument accuracy@20°C Valid for 1 year, 3% range-100% range. Temp coefficient 0-+40°C range +/-0.005%/°C TRMS AC/DC 20-300Hz sinewave or squarewave.	Amps DC +/-0.25% rdn+0.3A Volts DC +/-0.25% rdn+0.1V Amps AC +/-0.25% rdn+0.6A Volts AC +/-0.25% rdn+0.2V WFS M/min +/-0.25% rdn+0.04M Temp +/-0.25% rdn+0.3C	Amps DC +/-0.25% rdn+0.3A Volts DC +/-0.25% rdn+0.1V Amps AC +/-0.25% rdn+0.6A Volts AC +/-0.25% rdn+0.2V WFS M/min +/-0.25% rdn+0.04M Temp +/-0.25% rdn+0.3C	Amps DC +/-0.25% rdn+0.3A Volts DC +/-0.25% rdn+0.1V Amps AC +/-0.25% rdn+0.6A Volts AC +/-0.25% rdn+0.2V WFS M/min +/-0.25% rdn+0.04M Temp +/-0.25% rdn+0.3C
Volts display range	0.00V -100.00V	0.00V -100.00V	0.00V -100.00V
Amps display range	0.0A - 600.0A	0.0A - 900.0A	0.0A - 1250.0A
Wire speed display range	0.00M/min – 40.00M/min	0.00M/min – 40.00M/min	0.00M/min – 40.00M/min
Resolution	0.02V, 0.3A, 0.02M/min, 0.3°C	0.02V, 0.3A, 0.02M/min, 0.3°C	0.02V, 0.3A, 0.02M/min, 0.3°C
Main load duty cycles	100%@marked A value	100%@marked A value	100%@marked A value
Main load overload capability	125% A=30 secs, 150% A = 12 secs, 200% A = 3 secs	125% A=30 secs, 150% A = 12 secs, 200% A = 3 secs	125% A=30 secs, 150% A = 12 secs, 200% A = 3 secs
Total load duty cycle	9.0KW@100%, 18kw@50%	13KW@100%, 26KW@50%	16KW@100%, 32KW@50%
Overvoltage protection	230V AC/DC 3 secs	230V AC/DC 3 secs	230V AC/DC 3 secs
Recalibration period	1 year	1 year	1 year
Case size approx. mm	260Wx570Lx410H + ext hardware	310Wx660Lx560H + ext hardware	310Wx660Lx560H + ext hardware
Weight approx	15kg	26kg	28kg

The instrument panel on Calibrator Pro models use high stability precision electronics, including patented RMS precision converters, this gives us superb accuracy, linearity & temperature stability, typically 20 times more precise than a good clamp on ammeter. This also allows precise measurement of complex waveforms including pulsed MIG & TIG. In addition, it also allows us to extend the calibration period to 1 year. Note; A clamp on meter & load bank is unlikely to offer compliance with current calibration standards.

The range of resistive loads fitted to our Calibrators is designed to test all welding power sources to the internationally recognised Amps to volts formula. (MIG/MAG 14+0.05V, TIG/WIG 10+0.04V, MMA + SUB ARC/SAW 20+0.04V). The operator can select any combination of loads including the fine control switch to achieve the required current & voltage. With all loads switched on the approx. amps rating is equivalent to the model, so 600A for the Pro 600 model etc. There is no other product on the market offering the versatility, ease of use, speed & accuracy as our Calibrator Pro models. Calibration & documentation is carried out with ease in as little as 10 mins per machine.

The most popular Calibration standard in the world is now IEC 60974-14 (BS EN60974-14) we include information, guides & sample certificates in our instruction manual to assist you in working to this standard. In addition, we can provide training & certification to show competence to the standard.

This latest standard also requires calibration of wire speed where the function is available to calibrate, many modern MIG/MAG models now require this, our plug in Tacho unit provides the easiest & fastest way to compliance.

PTO for standard supply, options & accessories.