

Portable dry block temperature calibrator LR-Cal PULSAR-80Cu

- Range: ambient temperature to +550°C.
- Metal block outer diameter 80 x 300 mm, Inner diameter 60 x 275 mm suitable for appropriate reduction inserts
- Insertion depth of the holes of the insert: 275 mm.
- For checking and calibration of temperature sensors and thermostats with long bulbs.
- Reduction inserts available to customers request.



The temperature calibrator **LR-Cal PULSAR-80Cu** consists of a metal block diameter 80 mm x length 300 mm, heated by a resistance which winds around the outer surface of the block. A hole with diameter 60 mm and depth 275 mm is made in the block for the appropriate reduction inserts.

The **LR-Cal PULSAR-80Cu** is equipped with a counter-current forced air cooling system, which keeps the temperature in the upper part of the well low. This system enables to check even very short probes, without heating the connection head or the handgrip. The calibrator is equipped with a PID microprocessor controller with a resolution up to 0.01°C, setting of the standard of measurement in °C, °F and K, programming of ascent/descent ramps and storage of a thermostats' operative temperature.

The version **LR-Cal PULSAR-80Cu** is equipped with an acquisition card, having two adjustable inputs, able to read Pt 100 3/4-wires and thermocouples J, E, K, N, R and S with automatic compensation of the cold junction. The values of up to two connected probes can be displayed on instruments' display simultaneously with the values of temperature set point and measured temperature of the internal reference temperature probe.

Furthermore, the **LR-Cal PULSAR-80Cu** is equipped with a RS232 serial interface. It can operate in automatic mode connected to a PC by means of the optional AQ2sp software which enables to carry out probe calibrations and cyclical life tests. Test results can be stored and printed, so they are easily traceable in compliance with ISO 9001 standards.

Scope of standard delivery:

- Dry block temperature calibrator model **LR-Cal PULSAR-80Cu** or model **LR-Cal PULSAR-80Cu-2I**
- Power supply cable, fuses kit
- Thermostats connection cable
- Block extractor (tool)
- Test-Report (factory certificate: accuracy and stability)
- Operating manual
- Version **LR-Cal PULSAR-80Cu-2I**: kit of clamps connection

PULSAR-80Cu Dry block Temperature Calibrator up to 550°C, insertion depth 275 mm

LR-Cal



- Operating range:** Ambient temperature to +550°C (1022°F)
- Stability:** ±0.05°C (at 450°C); ±0.09°F (at 842°F)
- Radial temperature uniformity:** ±0.1°C (at 100 mm depth); ±0.1°F (at 100 mm depth)
- Axial temperature uniformity:** ±0.3°C (at 120 mm from the bottom); ±0.5°F (at 120 mm from the bottom)
- Maximum heating time:** 9°C/min. (48°F/min.)
- Maximum cooling time:** 1.6°C/min. (35°F/min.)
- Display resolution:** 0.1°C (0.01°F)
- Display accuracy:** ±0.3°C (±0.5°F)
- Temperature units:** °C, °F, K
- Interface:** RS232 serial interface
- Well diameter:** 60 mm (2.3 in.)
- Insert hole depth:** 275 mm (10.8 in.)
- Supply:** 230 VAC - 50/60 Hz
- Power consumption:** 1700 W
- Dimensions:** 170 x 450 x 330 mm (6.6 x 17.7 x 12.9 in.)
- Weight:** 23 kg (50 lb)
- Shipping size:** 240 x 410 x 515 mm (9.4 x 16 x 20.2 in.)
- Shipping weight incl. optional carrying case:** 30 kg (60 lb)

Version PULSAR-80Cu-2I:

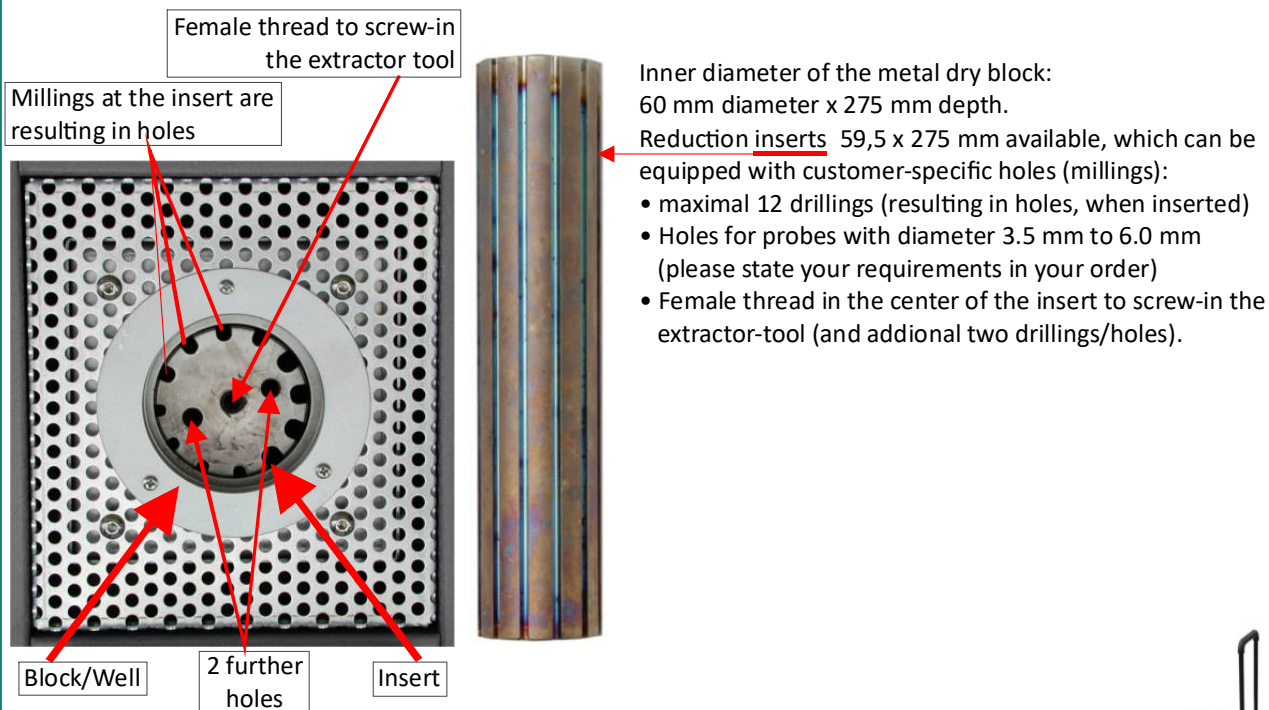
With data acquisition card and two input devices to measure resistance thermometer probes and thermocouples.

Details - see next page.

Order-Code: PULSAR-80CU-2I

Please order separately:

Reduction insert for the dry block, with customer specific holes, order-code **PULSAR-80CU-INS-12**



Further accessories and options:

- Trolley case, order-code **PULSAR-80CU-KOFFER**
- AQ2sp-Software (Windows-PC) incl. RS232 cable, order-code **599.0.000.0003.0**
- DAkkS certification (in place of factory test report)



Version PULSAR-80Cu-2I:

Instrument version with 2 measuring inputs, both suitable for resistance thermometers Pt 100 (2-, 3- or 4-wire) or Pt 100 as well as thermocouples (incl. cold junction compensation) types B, E, J, K, N, R, S and T. The signals of up to two external temperature sensors can be displayed additionally.



Order-Code: PULSAR-80CU-2I

Accuracy of the two measuring inputs at version LR-Cal PULSAR-80Cu-2I:

Accuracy (max. deviation) of the optional measuring inputs at version "-2I":

Resistance thermometer:			
Pt 100 + PT 1000	at -40°C:	±0.09°C	at 0°C: ±0.08°C
	at +300°C:	±0.14°C	at +450°C: ±0,30°C
	at +150°C:	±0.11°C	at +600°C: ±0,40°C
Thermocouples:			
Type B	at +950°C:	±0.97°C	at 1050°C: ±1.03°C
Type E	at -40°C:	±0.42°C	at 0°C: ±0.40°C
Type J	at +200°C:	±0.52°C	at +450°C: ±0.67°C
Types K + N + R + S	at +400°C:	±0.64°C	at +700°C: ±0.82°C
Type T	at -40°C:	±0.42°C	at 0°C: ±0.40°C
			at +350°C: ±0.61°C
			at +700°C: ±0.82°C
			at +1000°C: ±1.00°C