

LPC-100 Low Pressure Calibrator Operation Manual

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Description

The LPC-100 was designed to provide a stable and versatile pressure source with an accurate low pressure reading in one light weight and durable package. The instrument is available in two pressure ranges 0 to 2 inches water gage and 0 to 5 inches water gage. The operation of the instruments is identical, see the specifications section of this manual for specifications for each model.

Operation

The LPC-100 is an extremely simple instrument to operate. In order to get the most reliable and accurate performance, follow the steps below:

Instrument Power Up:

The LPC-100 is powered on by rotating the rear panel mounted power switch (See Figure 2). The power switch is a 3 position rotary switch with the following positions:

- Left Most Position:** **Off.** The instrument and pump is off in this position.
- Center Position:** **Zero.** The front panel pressure meter is on and the pressure pump is off. This position is used to zero both the LPC-100 and any instrument connected to it.
- Right Position:** **Operate.** The front panel pressure meter is on and the pressure pump is on. This position is used to perform calibration and verification of instruments under test.



Figure 1. LPC-100 Front Panel



Figure 2. LPC-100 Rear Panel

Power On

Plug the DC adaptor into a suitable AC source. Rotate the power switch clockwise to the center (Zero) position and allow the instrument to warm up for 5 minutes. During the first 20 seconds of warm-up time, the front panel pressure indicator will perform a self-test to ensure proper operation. The test will cycle all LED segments cycling each character through all digits. The user should verify that all characters are functioning properly.

Zero Instrument

The LPC-100 meter will require periodic zeroing to ensure the highest accuracy. The zero should be checked and adjusted (if necessary) after connection to an instrument under test. Follow the steps below to zero the LPC-100:

- Connect all hoses to the instrument(s) to be calibrated.
- Turn the power switch (Figure 2) to the middle position and allow the instrument to warm up for at least 3 minutes.
- Verify the reading on the front panel meter (Figure 1) is stable and no external drafts are causing a reading.
- Press and hold the Zero Button (Figure 1) for 2 seconds. The display will flash and change to zero..

The LPC-100 instrument is now zeroed and can be used to perform the necessary pressure generation and measurement.

Adjust Pressure

The LPC-100 instrument has a built in electric pump which provides the pressure source for both the LPC-100 front panel meter and the instrument to be calibrated. The pressure output is connected to the instrument to be calibrated by connecting a hose from the pressure output on the back of the LPC-100 to the pressure input on the instrument to be calibrated. Once the proper connection is made, the desired pressure may be provided by adjusting the pressure control knob. Rotating the knob clockwise will increase the pressure and rotating the knob counter-clockwise will decrease the pressure output. While adjusting the pressure, turn the pressure control knob slowly, allowing the pressure to stabilize as you near the desired set point. Once the desired pressure is displayed on the LPC-100 display, allow 10 seconds for stabilization. An additional slight adjustment may be necessary to reach the final pressure. Any pressure, within the range of the instrument may be output by adjustment of the pressure control knob.

Note that it is possible to adjust the pressure beyond the rated maximum pressure of the LPC pressure meter. If you exceed the rated maximum pressure for the meter, the meter will flash the full scale value. Adjust the pressure output to within the operating range of the LPC-100 meter.

Calibration

The LPC-100 is calibrated prior to shipment to the customer. Cert-Pro company recommends that the instrument be returned to the factory every 12 months for inspection and calibration.

Specifications

Physical

Housing Material:	ABS plastic, clamshell case.
Size:	7.0 in x 5.0 in x 2 in (178mm x 127mm x 51mm)
Weight	1.5 lbs
Operating Temperature Range	0 to 55 °C
Storage Temperature Range	0 to 70 °C

Performance

Measurement Range:	±0-2.0” wg (LPC100-2)
	±0-5.0” wg (LPC100-5)
	±0-10.0” wg (LPC100-10)
	±0-2kPa (LPC100-2k)
	±0-5kPa (LPC100-5k)
Pressure Source Output	0 to full scale of instrument
Pressure Stability	0.002” wg
Accuracy	± 0.50% FS
Proof Pressure	3 x Range
Span Temp Comp	0.02% FS/°C
Zero Temp Comp	0.02% FS/°C
Warm-up Time	3 Minutes

Power

6 VDC through 110 VDC power pack. 2.5mm power jack, positive center.

Warranty:

Cert-Pro company warrants the model LPC-100 low pressure calibrator from defects in material and workmanship for a period of 12 months from the purchase date. If during the warranty period, the LPC-100 fails to operate properly and within specification, Cert-Pro company shall repair or replace (at Cert-Pro discretion) the instrument at no charge to the customer.

Misuse or abuse shall void this warranty.