



Ranges

1 to 100 PSIA
-14 to 100 PSIG
0 to 28 inHg



Accuracy

$\pm 0.1\%$ IV or 0.005 PSIA ¹
 $\pm 0.1\%$ IV or 0.005 PSIG ^{1,2}
 $\pm 0.1\%$ IV or 0.01 inHg ¹



Model 5120 Low Pressure Gage Calibrator

Calibration labs need equipment that keeps pace with the field and the King Nutronics Model 5120 Low Pressure Gage Calibrator (LPGC) delivers exactly that. Engineered as a fully portable pneumatic pressure calibration system, it combines an intuitive interface with flexible operating modes, giving technicians the choice of manual control or fully automated sequences. Whether verifying a single gage in static mode or running a dynamic pressure profile across a range of test instruments, the LPGC adapts to the task at hand, with built-in automated leak testing and pressure head correction ensuring every reading reflects true, traceable accuracy from the very first connection.

At the heart of the LPGC is smart transducer technology that eliminates guesswork from setup. Each transducer stores its own range, accuracy, and calibration/characterization data on board, and the system's plug-and-play architecture automatically recognizes new or replacement transducers with zero manual configuration. The transducers cover the range of vacuum to 100 PSIA, work seamlessly together across the full pressure range, complete with over-pressure protection that guards against backflow of

contaminated gas. Transducers remain easily accessible, removable, and cleanable with non-ozone-depleting solvents, keeping the system field-serviceable without specialized tools or downtime.

A dedicated, automated self-purging liquid trap Contamination Prevention System (CPS) keeps pneumatic calibration isolated. Pressure media flows one-way from source to test instrument, while a fully separate return circuit captures, processes, and safely disposes of potentially contaminated media - a design that extends to vacuum operation as well. Two dedicated, color-coded trap sets make cross-contamination virtually impossible: a blue circuit reserved exclusively for clean pneumatic media, and an orange circuit rated for water, seawater, and a full spectrum of MIL-spec hydraulic fluids, lubricants, and fuels.

The LPGC System delivers laboratory-grade accuracy, in a portable design with a level of confidence King Nutronics has provided for over 60 years.

¹) Accuracy is whichever is greater
²) from 15 to 100 PSIA, the accuracy is $\pm 0.01\%$ IV or 0.005 PSIA

	Specifications
Absolute Range	1 to 100 PSIA
Absolute Accuracy	1 to 100 PSIA: $\pm 0.1\%$ IV or 0.005 PSIA ¹ from 15 to 100 PSIA: $\pm 0.01\%$ IV or 0.005 PSIA ¹
Gauge Range	-14 to 100 PSIG
Gauge Accuracy	$\pm 0.1\%$ IV or 0.005 PSIG, whichever is greater
Vacuum Range	0 to 28.000 inHg
Vacuum Accuracy	$\pm 0.1\%$ IV or 0.1 inHg, whichever is greater
Units of Measurement	PSIA, PSIG, PSI, kPa, bar, mbar, inHg @ 0°C, mmHg @ 0°C, inH ₂ O @ 4°C, inH ₂ O @ 60°F, inH ₂ O @ 20°C, ft-H ₂ O @ 4°C, ft-H ₂ O @ 60°F, ft-H ₂ O @ 20°C
Resolution	0.001 PSIA, 0.001 PSIG, 0.001 inHg, 0.01 mmHg, 0.01 mbar, 0.001 Bar, 0.001 kPa, 0.001 inH ₂ O, 0.001 ftH ₂ O
Operating Medium	Clean Dry Air or Nitrogen (non-density sensitive)
Display	10.4-inch full-color display
Interfaces	RS-232, USB, LAN, VGA, IEEE-488.2
Vacuum Port	Male JIC 37° AN-6 bulkhead (rear panel)
Pressure Port	Male JIC 37° AN-4 bulkhead (rear panel)
Power	90-265 VAC, 45 - 440 Hz, 1 Phase
Dimensions	17.0 x 10.0 x 16.4 in (WxHxD)
Weight	40 lbs (18.14 kg)

Features



Front Panel



Rear Panel

- | | |
|----------------------------|---------------------------|
| 1. 10.4-inch touch display | 8. USB port |
| 2. Power switch | 9. Ethernet port |
| 3. Input Pressure | 10. RS-232 interface |
| 4. Input Vacuum | 11. IEEE-488.2 (optional) |
| 5. Vent/Vacuum to CPS | 12. AC Power Input |
| 6. Pressure to CPS | 13. Exhaust Fan |
| 7. CPS interconnect | 14. Removable Transducers |

Contamination Prevention System (CPS)

The Model 5120 CPS is designed to protect the LPGC from liquid and vapor contamination. Unlike other contamination prevention systems on the market, our design does not permit reverse flow under normal operating conditions. This is achieved by improving the flow architecture and maintaining true unidirectional flow throughout the entire system, regardless of the configuration or operating mode. The CPS is available with the LPGC or as a standalone product.



Model 5120 CPS
P/N: 5120-002-001

Vacuum Source

A vacuum source is required when using the Model 5120 Series as a controller. Our compact, high performance oil-free vacuum source features a hermetic design providing a robust pumping speed of 60 Lpm and a low base pressure. 115V and 220V AC models are available.

- Small footprint, low weight, and low power requirements
- Oil-free, for no contamination of the vacuum system
- Hermetic design with fully isolated motor and bearings
- Lower base pressure than diaphragm pumps
- Low noise and vibration



Vacuum Source 115VAC
NSN: 4310-01-653-2521

Vacuum Source 220VAC
NSN: 4310-01-670-3652

1) Accuracy is whichever is greater