

KNC Model 3112 Portable Live Pressure Calibration and Test System



Product Description

The Model 3112 Portable Live Pressure Calibration and Test System is a compact, completely self-contained unit designed for calibrating and testing pressure gauges, transducers, pressure switches, and other pressure-sensitive instruments up to 2,000 psi with an accuracy of $\pm 0.5\%$ of full scale. Two large, legible gauges, reading from 0 to 100 psig and 0 to 2,000 psig respectively, and controlled by an automatic transfer valve, permit precise stepless measurements over the entire range of the system. Other pressure ranges and units of measure (e.g., kPa) are available upon request. For details, please see the Ordering Information section below.

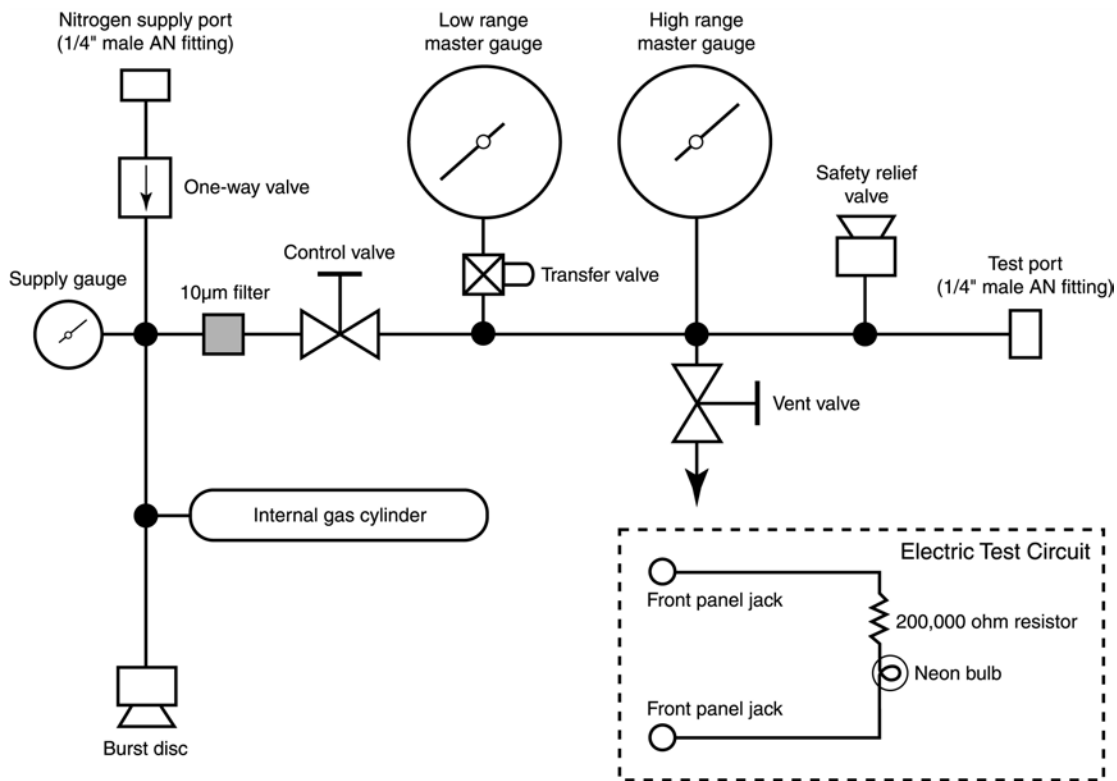
An internal nitrogen cylinder with a capacity of 90 cubic inches (7.1 std. cubic feet when charged at 2,250 psi at 70°F), permits the Model 3112 Portable Live Pressure Calibration and Test System to be easily transported to remote locations—no external gas or power sources are required. The cylinder can be charged using any available high pressure nitrogen source, and is wire-wound for protection against impact. Additional safety features include “blow-out back” master gauges to protect the operator from glass breakage in the event of a malfunction, burst discs to guard against inadvertent overpressurization, and a relief valve designed to protect the test item and master gauges from damage.

During setup, the Model 3112 Portable Live Pressure Calibration and Test System is first connected to the item to be calibrated using a 5-foot-long braided test hose. The hose is terminated at both ends with 1/4" female swivel AN fittings and doubles as a charging hose for the nitrogen cylinder.

To test an item, gas from the nitrogen cylinder is metered into the test circuit via a precision soft seat control valve (see diagram below), and applies pressure simultaneously to the item undergoing calibration and the master reference gauges. This enables the operator to easily perform comparative readings.

As the pressure is increased during testing, readings are transferred automatically from the low range (0 to 100 psig) gauge to the high range (0 to 2,000 psig) gauge. A second control valve is used for venting, allowing precise downscale measurements to be performed. As the test pressure drops, the transfer valve automatically switches from the high range gauge to the low range gauge.





A 65 to 250 VAC electrical tester is built into the Model 3112 Portable Live Pressure Calibration and Test System for convenient pneumatic switch testing. The electrical tester is connected from the front panel of the test system to the switch being tested using two 5-foot leads terminated with alligator clips. The presence of electrical current is shown using a neon lamp. The lamp will illuminate to indicate that voltage is present; when applied pressure trips the switch, the lamp will turn off.

All components of the Model 3112 Portable Live Pressure Calibration and Test System, including the test hose, technical manuals, and other supplies, are housed in a weatherproof, compact, and rugged aluminum carrying case with a locking hinged lid. A pressure relief valve built into the storage case protects the system from internal gas leakage during storage.

Ordering Information

Standard versions of the Model 3112 Portable Live Pressure Calibration and Test System are equipped with a 0 to 100 psig low range master gauge and a 0 to 2,000 psig high range master gauge. NSN (National Stock Number) 6685-821-0798 is applicable to this standard version.

The Model 3112 Portable Live Pressure Calibration and Test System may also be ordered with customer-specified measurement ranges for the master gauges. The minimum range available for the low range master gauge is 0 to 15 psig. The maximum range for the high range master gauge is 0 to 3,000 psig. Other modifications, such as metric scale units, are available upon special request. Please contact King Nutronics Corporation for more information.



Specifications

Characteristics	Specifications
Carrying case: Metal gauge Weatherproofing Material Instrument protection	0.050 inch Rubber seal gasket Anodized aluminum Lock and key
Panel: Material Metal gauge Item identification	Anodized aluminum (6061-T6) 0.125 inch Silk-screening on face
Master gauges: Accuracy Readability	0.5% of full scale 4.5 inch mirror dial with adjustable pointer
Supply gauge: Readability Range	2 inch 0 to 3,000 psig
Metering valves	Panel-mounted brass, fine-metering type, with replaceable Teflon seat
Fill and test ports: Material Threads Protection	300-series stainless steel AND10056-4 (1/4" flare) Captive dust caps
Internal supply cylinder: Capacity Rating Proof test	7.1 standard cubic feet ICC 3AA to 2,250 psig. Retest due date noted on panel face. 4,500 psig
Plumbing: Material Couplings	300-series seamless stainless steel tubing AND flare
Filtration	10µm nominal
Check valve	Soft seat
Burst disc pressure (brass)	3,000 psig nominal
Gauge protector	Adjustable, non-bleed
Relief valve	Adjustable, atmospheric bleed
Case relief valve	Automatic two-way vent ±0.5 psig, manual override
Test hose: Length Construction Fittings	5 feet Synthetic rubber with scuff-resistant fiber braid Cadmium-plated steel with female AN flare swivel fittings
Electrical tester: Voltage range Test lead length (qty. 2) Terminations Lamp type	65 to 250 VAC 5 feet Male plugs and alligator clips DIALCO Data Light (replaceable), neon
Dimensions, excluding handle (W x H x D)	16 x 8 x 9
Weight	22 lbs.

