

BL503 ABSOLUTE PRESSURE PISTON GAUGE



The gas operated BL503 absolute pressure piston gauges as primary standards for absolute pressure and gauge pressure, with emphasis on obtaining the effective area from the piston-cylinder dimensions and the mass in vacuum of the pressure balance floating element. It is designed to enable metrology and research institutes to realize and disseminate exceptional fundamental pressure measurements.

FEATURES

- 0.005% of reading accuracy
- Pressure ranges is up to 20MPa
- Three different piston cylinder units can be exchanged for different pressure
- 20kg mass set or optional 40kg mass set
- Build-in motor to rotate the mass set
- With dial piston position indicator
- PT100 shows the piston temperature
- Pirani vacuum gauge can accurately measure residual vacuum in bell jar.
- The aluminum alloy base that has been processed as a whole ensures the assembly accuracy and operational flexibility of the system
- All internal pressure fittings are made of stainless steel material to avoid rusting of key sealing components and frequent equipment maintenance

APPLICATION

- Primary pressure standard in lab
- Reference pressure measure in workshop

SPECIFICATION

- Accuracy: 0.005% of reading
- Piston and cylinder material: Tungsten Carbide
- Mass material: 304 stainless steel
- Pipe line material: 316L stainless steel
- Pneumatic base material: Aluminium alloy
- Seal material: Buna-N, PTFE, Cu Alloy
- Medium: Dry and clean air, or pure nitrogen
- Gravity: 9.80665 m/s² or customize local value.
- Pressure units available: MPa, bar, psi (optional)
- Pressure connector: Metric
- Base dimension (L*D*H): 185 x 455 x 380 mm
- Base weight: Apprx.20kg

PRESSURE RANGE WITH 20KG MASS SET

Part #	Kn	Area	Mass	Range
BL503-400KPA	20kPa/kg	5cm ²	20kg	(2 ~ 400) kPa (10~400) kPa abs.
BL503-2MPA	100kPa/kg	1cm ²	20kg	(0.01~ 2)MPa (0.05~ 2) MPa abs.
BL503-10MPA	500kPa/kg	0.2cm ²	20kg	(0.25~10)MPa (0.25~10)MPa abs.
BL503-20MPA	500kPa/kg	0.2cm ²	40kg	(0.1~20)MPa (0.5~20)MPa abs.

SCOPE OF DELIVERY

- BL503 Absolute pressure piston gauge base (60MPa)
- Piston cylinder unit
- 304 stainless steel mass set
- Mass carrier and Bell jar
- Vacuum meter
- Piston position terminal
- Pneumatic pressure regulator (10MPa or 20MPa depends)
- Adapter kits (1/4NPT, 1/2NPT, 1/4G, 1/2G)

OPTIONAL ACCESSORIES AND SERVICES

- ISO17025 calibration certificate (P/N:CAL-503)
- Gas bottle (15MPa/ 40L)
- Electric vacuum pump

ORDERING MODEL NUMBER

- BL503-400KPa
- BL503-2MPA
- BL503-10MPA
- BL503-20MPA