

# Piston Gauge Pressure Standard

FRS4



- Gauge and differential pressure generation and measurement
- Easy and fast calibration of pressure gauges and transfer standards
- Large area, thermally stable, non-rotating piston
- Transportable, making the FRS4 useful for intercomparison of installed calibrators
- USB communication
- Electronic control unit

The FRS4 is a piston gauge pressure calibrator for use in gauge and differential pressure modes. As well as performing the task of pressure measurement the FRS4 also generates the test pressure.

The instrument design is intended to make calibration of a wide range of pressure gauges and transfer standards easy and fast. The FRS4 can be supplied with an electronic control unit to set the instrument valving and test pressures. The control unit can be configured via a PC to define repeatable and consistent test settings.

The FRS4 is a calibrator which excels at low pressure levels where uncertainties start to increase in alternative instruments.

### Pressure Measurement

Nominal Piston Area	10 cm <sup>2</sup>	20 cm <sup>2</sup>	45 cm <sup>2</sup>	100 cm <sup>2</sup>
Pressure Range	44000 Pa	22000 Pa	9000 Pa	3400 Pa
Resolution	0.01 Pa	0.005 Pa	0.002 Pa	0.001 Pa
Uncertainty (typical)	+/- (0.005 % reading + 0.02 Pa)			

### Pneumatic

Media Compatibility	Clean, dry air or non-corrosive gas
Air Supply Pressure (control unit)	Maximum 10 bar gauge, Minimum 5 bar gauge
Pneumatic Connections	Air supply – 6 mm push-on tube connector Flow return – 6 mm push-on tube connector Equalise valve pilot – 6 mm push-in tube connector Pressure and reference ports – ¼ BSP female threaded

### Electrical

Supply Voltage	115 – 230 VAC, 50-60 Hz
Electrical connections	Power: detachable screw locking circular connector USB: Type B USB connector for printer or PC connection

### Environmental

Storage Temperature	Minimum	-10 °C
	Maximum	70 °C
Operating Temperature	Minimum	10 °C
	Typical	18 – 22 °C
	Maximum	40 °C

### Construction

Enclosure	Aluminium housing with anodised finish. Suitable for bench or floor mounting.
Dimensions	H 530 mm x W 345 mm x D 350 mm (When fitted on bench top stand)
Weight	35 kg ± 0.5 kg

*Furness Controls has a UKAS accredited laboratory which offers pressure calibration from 0 to 40 kPa and flow calibration from 0.1 ml/min to 2000 litres/min*