

The PV 621, 622 and 623 Pressure Stations

Features

- A uniquely capable, re-rangeable and self contained pressure test system
- Advanced pressure generation
 - 95% vacuum to 20 bar (300 psi) pneumatic
 - 95% vacuum to 100 bar (1500 psi) pneumatic
 - 0 to 1000 bar (15000 psi) hydraulic
- Stand alone replacements for hand pumps
- Bench top use as comparators

There are three pressure generation stations: the PV 621, a pneumatic pressure generator for pressures 95% vacuum to 20 bar (300 psi); the PV 622, a pneumatic pressure generator for pressures 95% vacuum to 100 bar (1500 psi); and the PV 623, a hydraulic pressure generator for pressures up to 1000 bar (15000 psi). Each pressure station is designed for stand-alone operation as a pressure generator and can replace conventional hand pumps to provide greater efficiency and ease of use. They can also be used on the workbench as a comparators.

The PV 621 has a conventional hand pump, volume adjuster and pressure/vacuum selector, but will generate pressure with half the effort of conventional systems.

The PV 622 100 bar (1500 psi) pneumatic station represents a five-fold increase in capability and solves the transportation and health and safety issues of using gas bottles and regulators as a pressure source in field locations. It features an innovative dual stage system incorporating a hand pump to generate pressure and a screw press to intensify the pressure. For a typical 4" gauge mounted on the station, 100 bar (1500 psi) can be achieved in just

one cycle, but the process can be repeated as many times as required for higher volume systems. The screw press converts to a precision volume adjuster allowing the test pressure to be increased or decreased as required.

The PV 623 solves many of the problems associated with hydraulic pressure generation by generating pressure to 1000 bar (15000 psi) and providing a stable pressure within 1 minute. In conventional systems priming to remove air is wasteful and messy and pressure stability is only achieved after several minutes. This instability is the result of thermal change, seen as a large pressure leak, which can render the device unusable for calibration for 10 minutes per pressure test.

Operation of the PV 623 is simple. The screw press is rotated anti-clockwise to fill the screw press with hydraulic fluid from an internal reservoir. The screw press is then rotated clockwise to fill the test device and compress the hydraulic fluid. For larger volume systems the process can be repeated, a non-return valve prevents pressure loss on the refill cycle. When the test pressure has been reached the screw press converts to a precision volume adjuster for making fine adjustments.

Combining any of the pressure stations with a PM 620 pressure module and the DPI 620 calibrator creates a uniquely capable, self-contained pressure calibrator.

PV 621, 622 and 623 Specification

Maximum pressure	PV 621 20 bar (300 psi) pneumatic PV 622 100 bar (1500 psi) pneumatic PV 623 1000 bar (15000 psi) hydraulic
Pressure media	PV 621 and PV 622 non-corrosive gases, PV 623 de-mineralized water or mineral oil (ISO viscosity grade < 22)
Operating temperature	-10° to 50°C (14° to 122°F) For water +4 to +50°C (39 to 122°F)
Storage temperature	-20 to 70°C (-4 to 158°F) (must be empty of water)
Shock and vibration	BS EN 61010:2001; Def stan 66-31, 8.4 cat III, 1 m drop tested
Pressure safety	Pressure equipment directive class SEP
Size and weight	450 mm x 280 mm x 235 mm, PV 621 2.65 kg, PV 622 3.30 kg, PV 623 3.75 kg

PV 62X IS Pressure Station Specification

Operating temperature	-10° to 40°C (14° to 104°F) Baseefa10ATEX0011X IECEx BAS 10.0003X Page 11 of 46 TR0753 Issue 1 Ex II 2 G
EN60079-0:2009	Electrical apparatus for Potentially Explosive Atmospheres – General Requirements. (Harmonized) (IEC 60079-0:2007 Edition 5)
EN60079-11:2007	Electrical apparatus for Potentially Explosive Atmospheres – Intrinsic Safety 'i'. (Harmonized) (IEC 60079-11:2006 Ed 5)

