

Vacuum Insulated Evaporator (VIE)

Pneumatech MGS VIE Control Panels are intended to supply oxygen pipeline installations complying with UK DoH Health Technical Memorandum No. 2022 or 02-01, BS EN ISO 7396-1.

VIE Control Panels are available in a duplex configuration, with one standby and one duty regulator set. The VIE Control panel is designed to accept a supply of gaseous oxygen from the VIE at 1050 kPa (10.5 bar) or from the standby manifold at 850 kPa (8.5 bar) and to reduce the pressure to a nominal 420 kPa (4.2 bar) pipeline distribution system pressure.

VIE Control panels are designed to regulate line pressure based on two pipe sizes: Ø 22mm and Ø 28mm, sized for different flow rate capacities.

Features

All components degreased for oxygen use

Quarter turn ball valves die cast brass alloy body with nitrile seals

Non relieving Regulators 28 bar rated

High lift brass safety relief valve, BSP threads

Gauge monitoring 0 to 11 bar bottom entry connection

In line filtration

Classification

VIE Control Panel designed to HTM 2022 and HTM 02 01

CE marked 2460 (DNV GL Presafe AS)

Services for use

Oxygen	400 kPa (4 bar)
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Mounting

- Mounted on a light weight mild steel zinc plated and passivated back plate assembly
- Weight – 70kg

Construction

- All components degreased for oxygen use
- Mild steel powder coated enclosure with inlet and outlet pressure gauges

Pressure Sensors

- Pressure switches monitor inlet pressure
- Dual line pressure switch monitor (high and low pressure)

Pressure Reduction Capacity

- Maximum inlet pressure: 2,800 kPa (28 bar)
- Outlet pressure reduced to: 420 kPa (4.2 bar)

Flow Rate

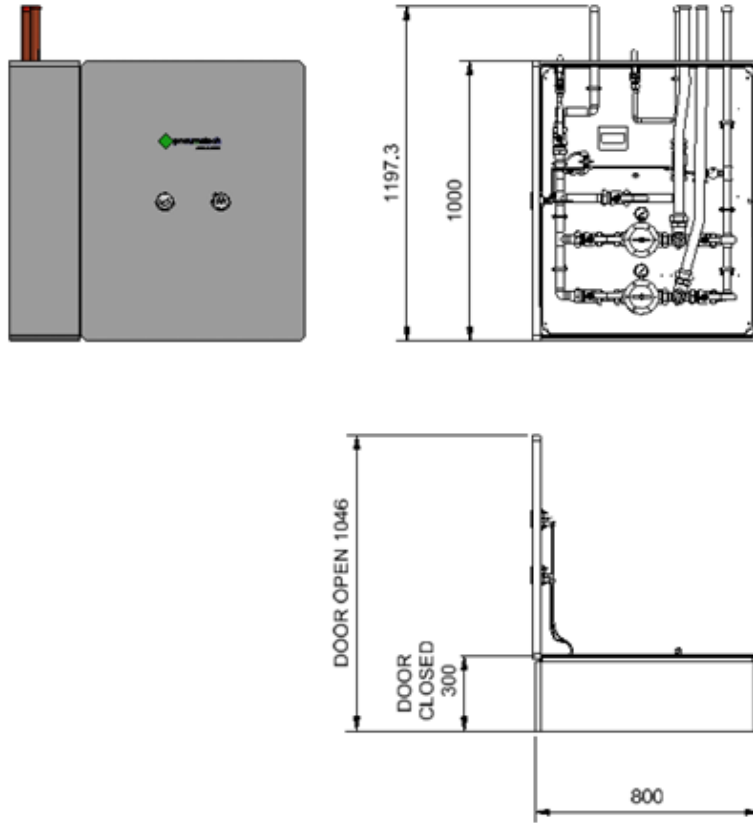
- 22mm system 3,000 L/min
- 28mm system 3,000 L/min

Relief Valve Settings

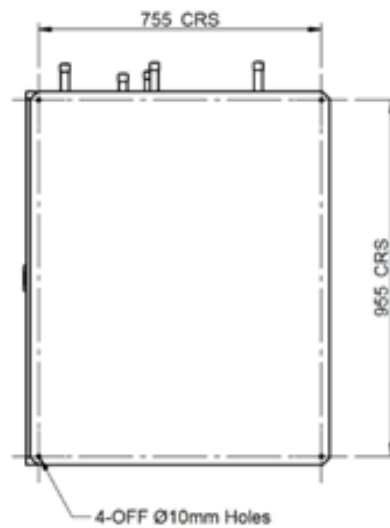
- Nominal 4 bar manifold 550kPa (5.5 bar) relieving

VIE's Installation

All dimensions are common for both 22mm and 28mm control panels



Mounting Dimensions



Regulators

Used to provide a convenient and low cost method to reduce a supplied air pressure to a desired outlet pressure and transform a fluctuating air supply to a relatively constant reduced air pressure within the operating range of the regulator. This type of regulator is generally used in a wide variety of applications where reduced pressure is highly desirable for energy conservation, safety requirements, air circuit control and air instrumentation.

Operation

Turning the adjusting knob clockwise forces the main spring downward onto the flexible diaphragm which presses down onto the valve stem. The diaphragm and valve stem move downward forcing the balanced valve off its seat, which allows air to flow past the valve to the outlet side of the regulator and downstream to the air system. A precisely positioned aspirator tube communicates secondary pressure to the diaphragm resulting in instant compensation in order to maintain the desired secondary set pressure. The diaphragm, valve stem and valve move upward, compressing the regulating main spring. Upward movement stops when the spring force acting on the diaphragm balances the pressure force acting below the diaphragm. For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

