



UHP600

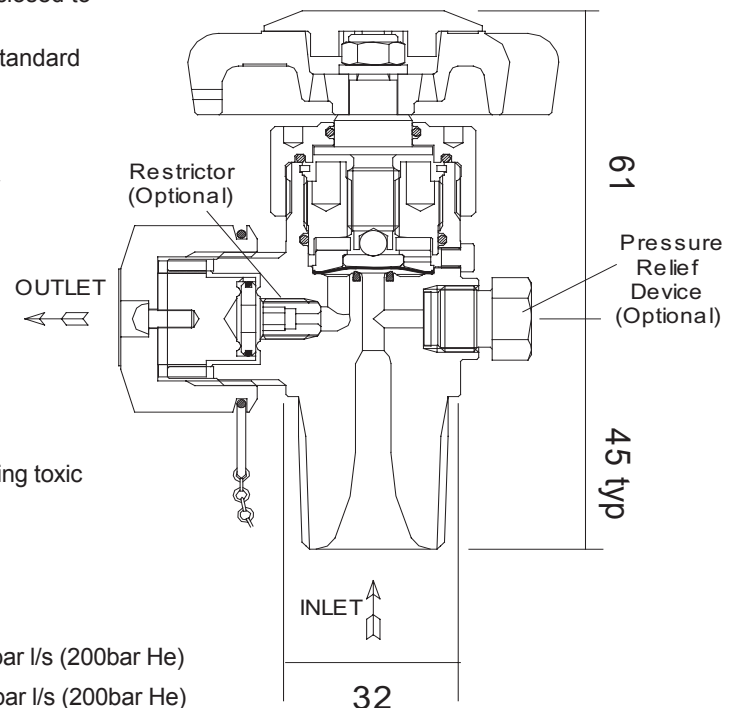
ULTRA HIGH PURITY DIAPHRAGM CYLINDER VALVE

KEY FEATURES AND BENEFITS:

- BOC Edwards and Hale Hamilton Valves Ltd have jointly developed an ultra high purity diaphragm cylinder valve for the semiconductor industry. The valve will be marketed to all the gas companies that serve the industry.
- Manual and actuated versions are available based on a common body design.
- Suitable for most special gases including variants for oxygen and highly corrosive gases such as chlorine and hydrogen chloride.
- Built to ultra high purity standards in a dedicated clean room facility. Final assembly and testing is carried out under class 10 conditions.
- Designed for the low leakage rates demanded by high purity gas users. Each valve is tested for leakage using a mass spectrometer.
- Non tied-diaphragm construction; the diaphragms act directly on the seat to close the valve, which minimises dead space and wetted area.
- Mechanically supported and retained valve seat to minimise deformation under load and seat lift under reverse flow conditions.
- The diaphragm isolates the operating mechanism from the process fluids, it is of one-piece non-welded construction for greater integrity and improved fatigue life.
- To prevent the shedding of particulate contamination, there are no sliding, rotating or rubbing components in the flow path.
- For optimal cleaning and purging, the inlet is shaped for enhanced gas flow and body is electrochemically polished.
- Inlet and outlet port configurations are available to suit all known industry standards. The same valve family can be used for all fluids in all market areas.
- Hand-wheels can be wire locked.
- For transportation the actuator can be locked closed to prevent shock induced leakage.
- Both manual and actuated versions fit under standard valve protection caps.
- The outlet port is sealed and protected by a cap retained by a chain.
- The valve mechanism incorporates secondary sealing for enhanced safety.
- Π (Pi) marking for TPED by Notified Body.



UHP600 Manual



SPECIFICATION:

- Working pressure 230bar (3300psi)
- Fluid Media: Industrial and special gases including toxic and corrosive gases and oxygen
- Nominal Bore: 4mm
- Cv: 0.3
- Operating temperature: -20 to +65°C
- Outboard (gland) Leak rate: less than 1×10^{-9} mbar l/s (200bar He)
- Inlet/Outlet (seat) Leak rate: less than 1×10^{-8} mbar l/s (200bar He)

HALE HAMILTON



MATERIALS OF CONSTRUCTION:

- BODY - 316L VAR stainless steel, Hastelloy C22, Monel or Nickel
- SEAT - PTFE, Kynar 740, Vespel SP21 or Zytel 103 (Nylon)
- DIAPHRAGM - Elgiloy

No lubrication is used in the flow path and the seat materials are chosen for minimal gas absorption. Please contact us for advice on material selection.

PORT OPTIONS:

- European Standards: Inlet DIN 477, EN 629; Outlet DIN 477, BS 341, ISO 10692-1
- US Standards: Inlet NGT; Outlet CGA, ISO 10692-1
- Japanese Standards: Inlet and Outlet JIS

Any combination of port configurations can be supplied on request.

OPTIONAL FEATURES:

- Pressure relief device
- Purge ports
- Outlet flow restrictor

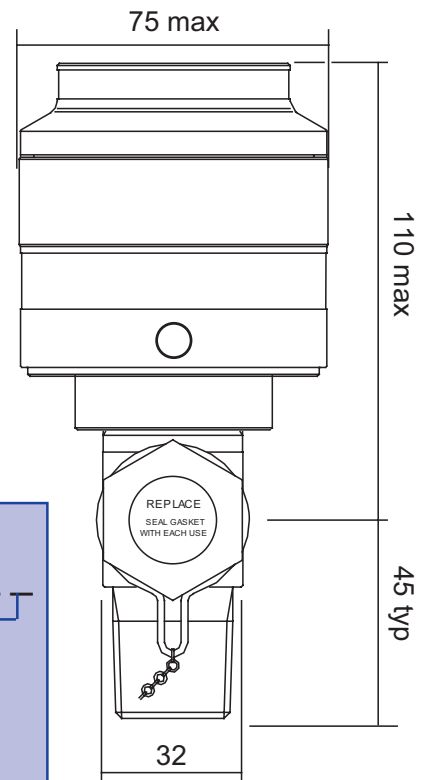
ACTUATOR SPECIFICATION:

A normally-closed actuated version is available for all valve variants. The valve is opened by applying pressure to the pilot port and is closed by a spring. The valve can be locked closed for transportation by rotating the locking collar.

- Pilot pressure: 5 to 8bar (70 to 120psi)
- Actuating medium: Air or Nitrogen
- Pilot Port: 1/8" NPT
- Materials of Construction: Stainless Steel, Nickel Aluminium Bronze and Hard Anodised Aluminium Alloy.



UHP601 Actuated



ORDER CODES:

UHP60

Operation: 0-Manual, 1-Actuated

Body Material: S-316L VAR,
H-Hastelloy, M-Monel, N-Nickel

Inlet port: 2 digit code

Outlet port: 4 digit code

Seat material: P-PCTFE, K-Kynar,
V-Vespel, N-Nylon

Options: 4 digit code