

■ V600 SERIES CYLINDER VALVES

Ultra High Purity Diaphragm Cylinder Valve is developed for the semiconductor industry. It is designed for use with ultra high purity gas cylinders to prevent gas leakage and achieve the low leakage rates demanded by high purity gas users.



V601
Pneumatic



V600
Manual

■ Features

- 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
- Final assembly and testing is carried out under class 10 clean room conditions
- Designed for the low leakage rates demanded by high purity gas users
- Non tied-diaphragm construction; the diaphragms act directly on the seat to close the valve, which minimizes dead space and wetted area
- Mechanically supported and retained valve seat to minimize deformation under load and seat lift under reverse flow conditions
- The diaphragm isolates the operating mechanism from the process fluids
- The one-piece, non-welded construction improves durability
- To prevent the shedding of particulate contamination, there are no sliding, rotating or rubbing components in the flow path
- 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
- For transportation the actuator can be locked closed to prevent shock induced leakage
- The outlet port is sealed and protected by a cap retained by a chain
- The valve mechanism incorporates secondary sealing for enhanced safety

■ Specification

- Working pressure: 3300 psi (230 bar)
- Suitable for spec gas applications, including toxic and corrosive gases
- Nominal Bore: 4 mm
- Operating temperature: -4°F ~ 150°F (-20°C ~ 65°C)
- Outboard (gland) Leak rate: $< 1 \times 10^{-9}$ mbar l/s (200bar He)
- Inlet/Outlet (seat) Leak rate: $< 1 \times 10^{-8}$ mbar l/s (200bar He)
- Cv: 0.3

■ V600 SERIES CYLINDER VALVES

■ Materials of Construction

- BODY - 316L stainless steel, 316L VAR stainless steel
- SEAT - PCTFE, Kynar 740, Vespel SP21 or Zytel 103 (Nylon)
- DIAPHRAGM - Elgiloy

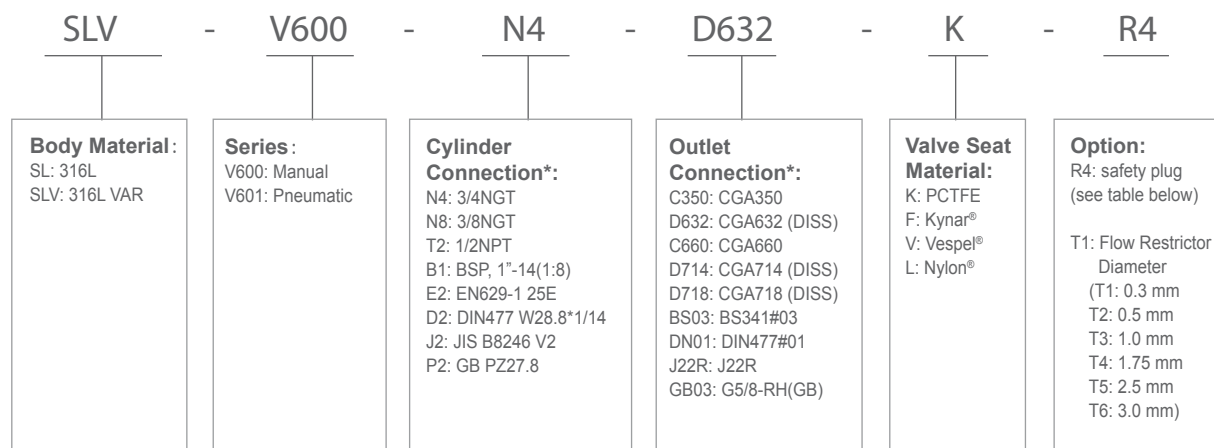
No lubrication is used in the flow passages. The seat materials are chosen for maximum compatibility, maintaining gas purity and integrity.

Please feel free to contact Genstar if you have any questions.

■ Actuator Specification

- A normally-closed actuator is available for all valves
The valve is opened by applying pressure and is closed by spring return
The valve can be locked in the closed position during for additional safety
- Pilot pressure: 70 ~ 120 psi (5 ~ 8 bar)
- Actuating medium: Air or Nitrogen
- Pilot Port: 1/8" NPT
- Materials of Construction: Stainless Steel, Nickel Aluminium Bronze and Hard Anodized Aluminium Alloy

■ Ordering Information



* For other connections, please contact Genstar customer service.

Safety Plug Allocation Table				
Code	Remark	Features Description	Solution Temperature °F (°C)	Working Pressure psi (bar)
R1	Ni	Rupture disk type	/	2016 (139)
R2	Ni	Rupture disk type	/	2265 (156)
R3	Ni	Solution+rupture disk type	165 (74)	2016 (139)
R4	Ni	Solution+rupture disk type	165 (74)	2265 (156)
R5	Ni	Solution+rupture disk type	212 (100)	2016 (139)
R6	Ni	Solution+rupture disk type	212 (100)	2265 (156)
R7	Ni	Rupture disk type	/	1380 (95)
R10	SS	Rupture disk type	/	2016 (139)
R11	SS	Solution+rupture disk type	165 (74)	2016 (139)
R12	SS	Solution+rupture disk type	165 (74)	2400 (165)
R13	SS	Solution+rupture disk type	212 (100)	2265 (156)
R22	multicomponent alloy	Soluble washer	212 (100)	500 (35)
R23	multicomponent alloy	Fusible plug	165 (74)	500 (35)