

V400 SERIES CYLINDER VALVES

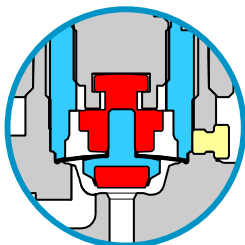
GENTEC® V400 series cylinder valve is developed for the semiconductor industry. It is designed for use with ultra-high purity gas cylinders to prevent gas leakage and achieve the low leakage rates demanded by high purity gas users.



V402
Pneumatic Cylinder Valve



V401
Manual Cylinder Valve



Tied-Diaphragm Design
with replacable valve seat

Features

- Suitable for most special gases including variants for oxygen and highly corrosive gases such as chlorine and hydrogen chloride
- Manual and Pneumatic versions are available based on a common body design
- Final assembly and testing are carried out under class 100 clean room conditions
- 100% High-pressure helium leak test
- Tied-Diaphragm Design with replacable valve seat
- Various inlet and outlet gas connection standards are available (CGA, JIS, ISO, GB, etc.)
- For transportation the actuator can be locked to prevent shock-induced leakage
- The outlet port is sealed and protected by a cap retained by a chain
- Internally springless design
- The valve mechanism incorporates secondary sealing for enhanced safety

Specification

- Working pressure: 3000 psi (207 Bar)
- Nominal Bore: 4 mm
- Operating temperature: -40°C ~ 60°C (-40°F ~ 140°F)
- Outboard (gland) Leak rate: $\leq 1 \times 10^{-9}$ mbar l/s (249 bar He)
- Inlet/Outlet (seat) Leak rate: $\leq 1 \times 10^{-8}$ mbar l/s (249 bar He)
- Cv : 0.3

Materials of Construction

- Body: 316L, 316L VAR
- Seat: Vespel®, PCTFE
- Diaphragm: Elgiloy®

Pneumatic Control Specification

- A normally-closed actuator is available for all valves
The valve is opened by applying pressure and is closed by spring return
- Pilot pressure: 73 ~ 116 psi (5 ~ 8 Bar)
- Actuating medium: Air or Nitrogen
- Pilot Port: G1/8
- Materials of Construction: Stainless Steel, Nickel Aluminium
Bronze and Hard Anodized Aluminium Alloy

Ordering Information

Ex: SL	- V400	- N4	- D632	- K	- R04 (Optional)	- T (Optional)
Body	Series Number	Inlet Connection*	Outlet Connection*	Seat Material	Pressure Relief Device	Flow Restrictor
SL: 316L SLV: 316L VAR	V401: Manual V402: Pneumatic	P2: GB PZ27.8 N4: 3/4 NGT T2: 1/2 NPT B1: BSP, 1"-14 E2: EN 629-1 25E D2: DIN 477 W28.8 X 1/14 J2: JIS B8246 V2	D632: CGA632 (DISS) D634: CGA634 (DISS) D714: CGA714 (DISS) D718: CGA718 (DISS) J22R: J22R GB01: W21.8-14RH C350: CGA350 C660: CGA660 BS03: BS 341#03 DN01: DIN 477#01	K: PCTFE V: VespeI®	Blank: None RXX: Pressure Relief Device (Refer to table1)*	Blank: None T: With flow restrictor mounting hole **

* Various inlet and outlet gas connection standards are available, please contact Gentec for details.

** If an additional flow restrictor is required, please refer to Table 2 for ordering information.

Optional Accessories
Table 1: Safety Plug Allocation Table

Code	9 Digit Number	Material	Description	Solution Temperature °C (°F)	Working Pressure psi (Bar)	Burst pressure psi (Bar)
R1	201099001	Ni	Rupture disc type	/	2015 (139)	3360 (232)
R2	201099002	Ni	Rupture disc type	/	2265 (156)	3775 (260)
R3	201099003	Multicomponent alloy+Ni	Solution+rapture disc type	74 (165)	2015 (139)	3360 (232)
R4	201099004	Multicomponent alloy+Ni	Solution+rapture disc type	74 (165)	2265 (156)	3775 (260)
R5	201099005	Multicomponent alloy+Ni	Solution+rapture disc type	100 (212)	2015 (139)	3360 (232)
R6	201099006	Multicomponent alloy+Ni	Solution+rapture disc type	100 (212)	2265 (156)	3775 (260)
R7	330113060	Ni	Rupture disc type	/	1380 (95)	2300 (159)
R10	330113050	SS	Rupture disc type	/	2015 (139)	3360 (232)
R11	330113010	Multicomponent alloy+SS	Solution+rapture disc type	74 (165)	2015 (139)	3360 (232)
R12	330113020	Multicomponent alloy+SS	Solution+rapture disc type	74 (165)	2400 (165)	4000 (276)
R13	330113100	Multicomponent alloy+SS	Solution+rapture disc type	100 (212)	2265 (156)	3775 (260)
R22	201099007	Multicomponent alloy	Soluble washer	100 (212)	500 (35)	
R23	201099008	Multicomponent alloy	Fusible plug	74 (165)	500 (35)	

Table 2: Flow Restrictor Ordering Information

Code	9 Digit Number	Orifice	Model No
T1	330111600	0.3	ND53184/4
T2	330111610	0.5	ND53184/6
T3	330111650	1	ND53184/7
T4	330111620	1.75	ND53184/1
T5	330111630	2.5	ND53184/2
T6	330111640	3	ND53184/3


Flow Restrictor