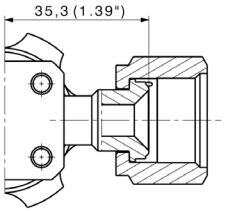
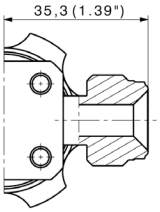
M8.1 | DIAPHRAGM VALVE

KEY FEATURES & BENEFITS

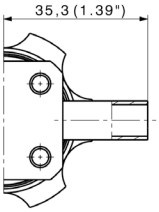
- 100% Helium Leak Test performed
- Metal seat option available
- Assembling, testing & Packaging in cleanroom: Class ISO 4
- Replaceable seat
- Individual serial number for full traceability
- Electropolished surface roughness per SEMI F19 UHP Grade
- 316L VAR® stainless steel double melt per SEMI F20 option available
- Fluid specific seat material as standard options
- 270° multiturn handwheel with open/close indicator



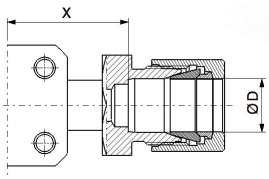
Female (face seal)
Swivel



Male (face seal)
non-Swivel



BWO for micro-welding head

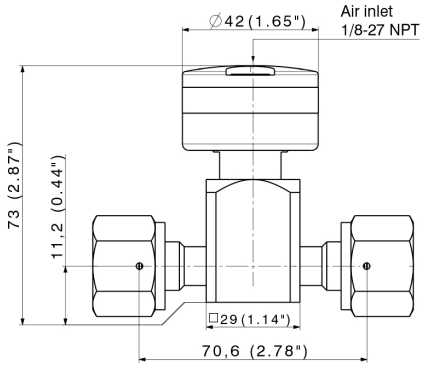


Compression tube fittings

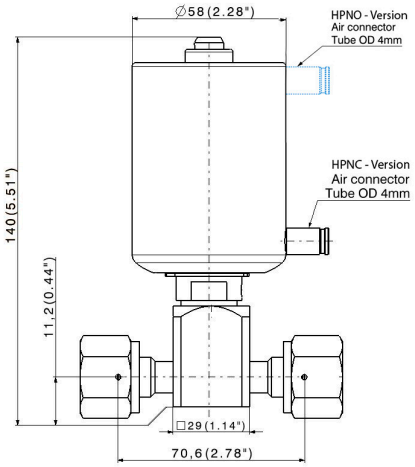
Ø D	X
10mm	32
12mm	29
3/8"	32
1/2"	29

DIMENSIONS

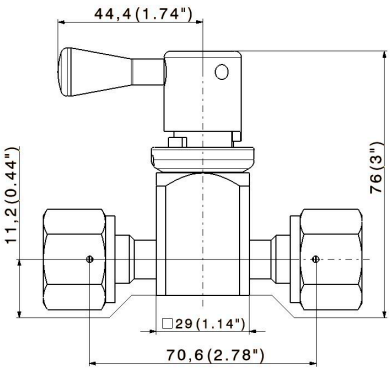
M8.1- PNEUMATIC VALVE LOW PRESSURE (LPNC, LPNO)



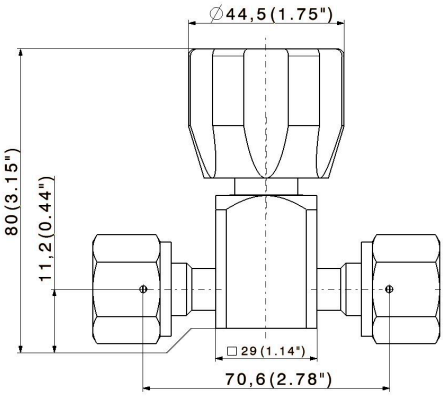
M8.1 - PNEUMATIC VALVE HIGH PRESSURE (HPNC, HPNO)



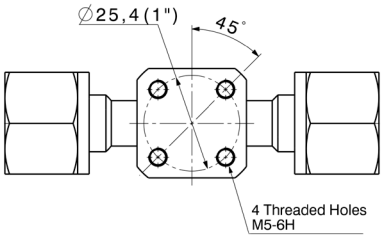
M8.1 QUARTER -TURN VALVE (QT)



M8.1 MULTI-TURN VALVE (MT) WITH OPEN/CLOSE WINDOW



M8.1 - BOTTOM VIEW



Dimensions are for reference only and are subject to change without notice

SPECIFICATIONS

Max. working pressure	See table below	**Flow capacity (Cv)**	0.35	**Certified max. Helium outboard leak rate**	≤ 1 x 10^{-9} mbar.l/s
Pneumatic actuator opening pressure	5 to 7 bar (73 to 102 psig)	**Nominal seat diameter**	8 mm (0,32")	**Certified max. Helium across the seat leak rate (at max. pressure)**	≤ 1 x 10^{-9} mbar.l/s
Temperature range	See table below	**Wetted volume**	< 1.2 cm^3	**Certified max. Helium inboard leak rate (at max. pressure)**	≤ 1 x 10^{-9} mbar.l/s
		Burst pressure	> 700 bar (10152 psig)		

CONSTRUCTION MATERIAL

	Parts	Material
Wetted parts	Body	SS 316L
	Seat	PCTFE, PVDF, VESPEL®
	Diaphragm	Hastelloy®
Non-wetted parts	Backup diaphragm	Phynox®
	Handwheel	Aluminium
	Actuator Body	SS 316L or Aluminium
	Others	Stainless Steel and Alloys

SURFACE FINISH

S	V	U
Ra 0.4 µm (15 µin)	Ra 0.25 µm EP (10 µin)	Ra 0.13 µm EP (5 µin)

TEMPERATURE RANGE

Seat (Actuation type)	Temperature Range
PCTFE / PVDF (manual & pneumatic*)	-40°C to +65°C (-40°F to +149°F)
Vespel® (manual & pneumatic*)	-40°C to +150°C (-40°F to +302°F)

*-20C° pneumatic versions

VALVE VERSION / MAX. WORKING PRESSURE

Valve	Max. working pressure
M8.1 (MT) Multiturn handwheel[1]	240 bar
M8.1 (QT) Quarter turn handwheel[1]	240 bar
M8.1 (LP*) Pneumatically actuated	17 bar
M8.1 (HP*) Pneumatically actuated	240 bar
M8.1 (HP*) Pneumatically actuated (seat material : metal)	50 bar

[1] FT (Panel Mounting) option available

MANUAL ACTUATION

Parts for all valve grades	
Upper spindle	Brass
Handle	Aluminum
All others	Stainless Steel or Alloys

PNEUMATIC ACTUATION

Parts	
Actuator Body	Stainless Steel / Aluminium
Piston	Brass / Aluminium / Stainless Steel
O-ring	NBR
All others	Stainless Steel or Alloys

All specifications subject to change without notice

PRODUCT CONFIGURATOR

	Surface Finish		Actuation		Porting Configuration	Body Material		Seat Material		End Connection		Options	
M8.1	**S**		**MT**		**2V1**	**I**		**K**		**A/B: B⅜**		**FT**	
	Ra 0.4µm (15 µin)	**S**	Quarter-Turn Handwheel (240 bar)	**QT**	See page 26	SS 316L	**I**	PCTFE (Kel-F®)	**K**	Metal face seal ⅜ - Female	**V ⅜ F**	Panel mounting[1]	**FT**
	Ra 0.25µm EP (10 µin)	**V**	Multi-Turn Handwheel (240 bar)	**MT**		Hastelloy®*	**H**	PI (Vespel®)	**V**	Metal face seal ⅜ - Male	**V ⅜ M**	Electric limit switch*	**CI**
	Ra 0.13 µm EP (5 µin)*	**U**	Pneumatically actuated (17 bar)	**LP***		*On demand		PVDF	**P**	BWO ⅜" - Standard	**B ⅜**	*On HP and LP actuators only	
	*On demand		Pneumatically actuated (240 bar)	**HP***				Metal*	**M**	BWO ½"	**B ½**		
			*Add NO for normally open or NC for normally closed					*On demand		BWO 12 mm	**B 12**		
										Compression tube fittings	**RDB⅜**		
										Compression tube fittings	**RDB½**		
										Compression tube fittings	**RDB 10**		
										Compression tube fittings	**RDB 12**		

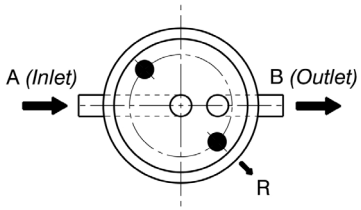
Special configuration on demand

VALVES

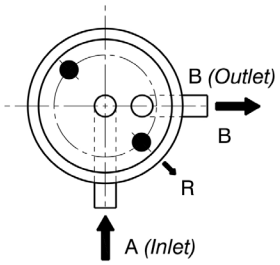
TOP VIEW

Standard configurations:

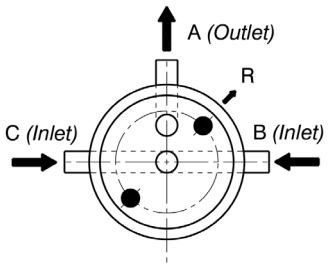
2V1



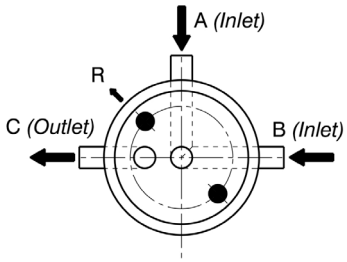
2V2



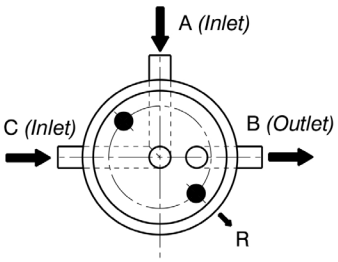
3V4



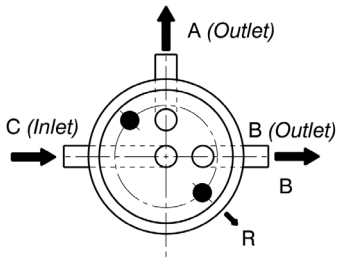
3V5



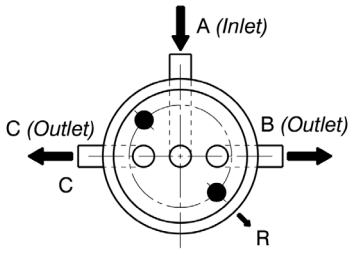
3V6



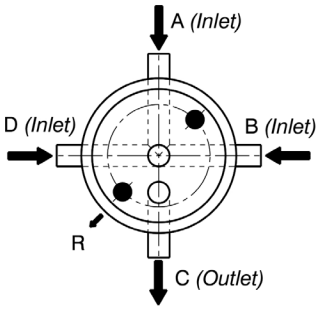
3V8



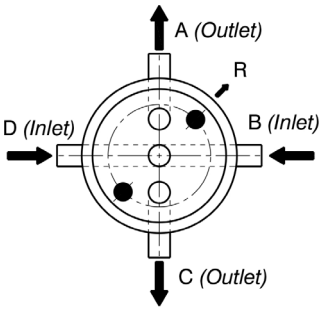
3V9



4V10



4V11



● ➡ Bottom Threaded holes, M4X0.7-6H
R ➡ Sniffing hole position

Other configurations: on demand