



DIAPHRAGM VALVE

- 100% Helium Leak Test performed
- Available in sizes 1/2" to 3/4" to support a wide range of connections
- Assembling, testing & Packaging in cleanroom: Class ISO 4
- Individual serial number for full traceability
- Electropolished surface roughness per SEMI F19 UHP Grade
- UHP Material - Semi F20 option available
- Excellent purgeability due to optional purge ports
- Fluid specific seat material as standard options
- Replaceable seat

M12 | HIGH PERFORMANCE UHP LINE VALVES

SPECIFICATIONS

Max. inlet pressure See table next page	Pneumatic actuator opening pressure 5 to 7 bar (70 to 100 psig)	Certified max. Helium outboard leak rate $\leq 1 \times 10^{-9}$ mbar.l/s
Temperature range See table next page	Nominal seat diameter 12 mm (0.47")	Certified max. Helium across the seat leak rate (at max. pressure) $\leq 1 \times 10^{-9}$ mbar.l/s
Wetted volume < 7 cm ³	Flow capacity (Cv) 1.75	Certified max. Helium inboard leak rate (at max. pressure) $\leq 1 \times 10^{-9}$ mbar.l/s
Burst pressure > 700 bar (10,150 psig)		

CONSTRUCTION MATERIAL

	Parts	Material
Wetted parts	Body	SS 316L, UHP Material - Semi F20
	Seat	PCTFE, Polyimid
	Diaphragm	Phynox®
Non-wetted parts	Backup diaphragm	Phynox®
	Handwheel	Aluminium
	Actuator Body	Aluminium
	Others	Stainless Steel, Alloys, Brass

SURFACE FINISH

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

VALVE VERSION / MAX. WORKING PRESSURE

Valve	Max. working pressure
M12 (MT) Multiturn handwheel	15 bar
M12 (PP2) Pneumatically actuated	15 bar

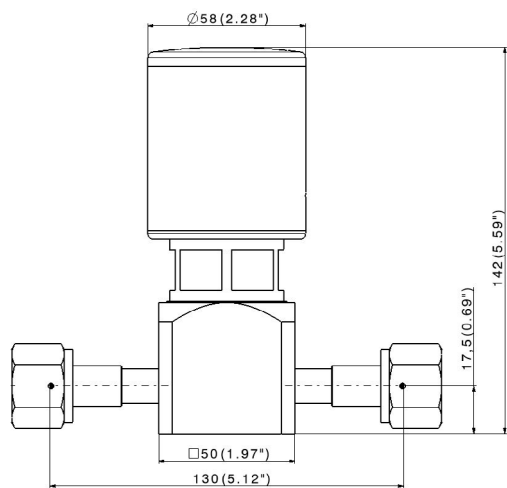
TEMPERATURE RANGE

Seat (Actuation type)	Temperature Range
PCTFE (manual & pneumatic*)	-40°C to +65°C (-40°F to +149°F)
Polyimid (manual & pneumatic*)	-40°C to +150°C (-40°F to +302°F)
*-20C° pneumatic versions	

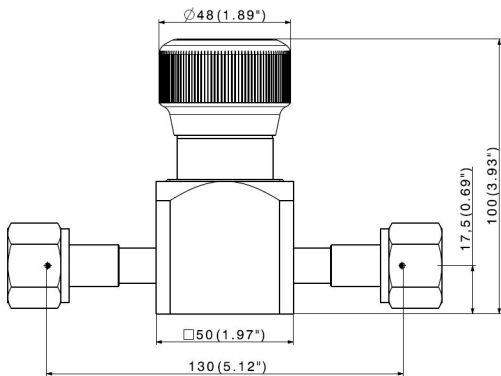
SCAN ME FOR FLOW
CURVES & PRODUCT
CONFIGURATOR



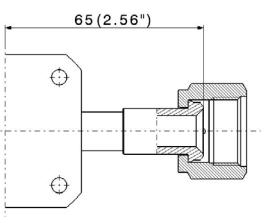
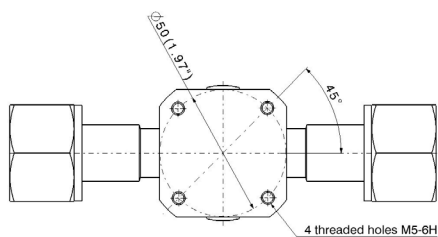
**M12 - PNEUMATIC VALVE
(PP2NC, PP2NO)**



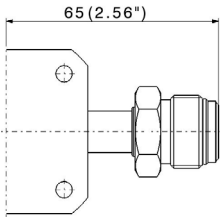
M12 - MULTI-TURN VALVE (MT)



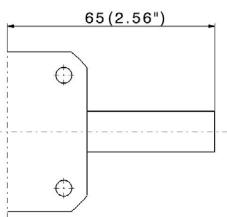
M12-BOTTOM VIEW



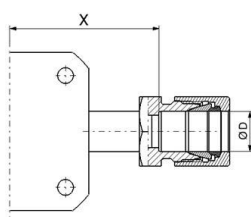
Female (face seal)
Swivel



Male (face seal)
Swivel



BWO
for micro-welding head



Compression tube fittings

ØD	X
12mm	47,5
18mm	50
1/2"	47,5
3/4"	50

PRODUCT CONFIGURATOR

	Surface Finish		Actuation		Porting Configuration		Body Material		Seat Material		End Connection		Options	
M12	S		MT		2W1		I		K		A/B: B½		-	
	Ra 0.4 µm (15 µin)	S	Multi-Turn Handwheel (15 bar)	MT	2 ports in line	2W1	SS 316L	I	PCTFE (Kel-F®)	K	Metal face seal ½" - Female	V ½ F	Electric limit switch***	CI
	Ra 0.25 µm EP (10 µin)	V	Pneumatically actuated (15 bar)	PP2*	2 Ports in line, upstream purge port - left side	2 WPEG	Hastelloy®**	H	Polyimide	V	Metal face seal ½" - Male	V ½ M		
	Ra 0.13 µm EP (5 µin)**	U			2 Ports in line, downstream purge port - left side	2 WPSG	UHP Material - Semi F20	A			Metal face seal ¾" - Female	V¾F		
					2 Ports in line, 2 purge ports upstream/ Downstream - left side	2 W1p2					Metal face seal ¾" - Male	V¾ M		
					2 ports in line, full passage, downstream branch	3WT					BWO ½"	B ½		
					2 ports in line, full passage, downstream branch, downstream purge port	3 WTPS					BWO ¼"	B ¼		
											Compression tube fittings	RDB 12		
											Compression tube fittings	RDB ¾		
											Compression tube fittings	RDB 18		
* Add NO for normally open or NC for normally closed														
** On demand														

* Add NO for normally open or NC for normally closed

** On demand

*** For pneumatic actuators only

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