



SELFA

Valves & Fittings

A total component solution, from source to process

**M4-SI (Reverse seat)
DIAPHRAGM LINE VALVES
FOR HP AND UHP APPLICATIONS
(STANDARD AND GAS SPECIFIC)**



4-SI



FEATURE a unique proven design

M4-SI

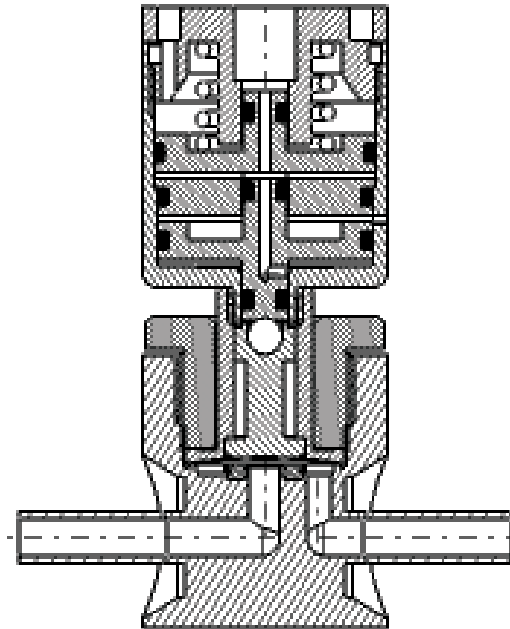
Selected Stainless Steels for low sulfur content as well as optimized impurity levels

Individual Serial number, for full traceability

Compact size

Precision electropolishing of all internal surfaces

Long life technology
Low particule generation



Assembling, testing & Packaging in cleanroom Cl. 10

Visual Open/Close Indicator (ON/OFF window on Multiturn version)

Fully functional from vacuum to rated pressure

Aerodynamic fully swept flow passage

Excellent purgeability

Manufactured to the **THREE STAR PROCESS[®]**

		Valve Grade & Materials	
		M4-SI S	M4-SI V
Wetted Parts	Body	SS 316 L	SS 316 L VAR
	Surface Finish	< 0,4 µm non EP (15µin Ra)	< 0,25 µm EP (10µin Ra)
	Diaphragm	Polished Nickel Alloy	
Non-wetted parts	Seat material	Kel-F [®] (PVDF or Vespel [®] on request)	
	Backup diaphragms	Nickel Alloy	
	All others	Stainless Steel or alloys	

Manual Actuation

Pneumatic Actuation

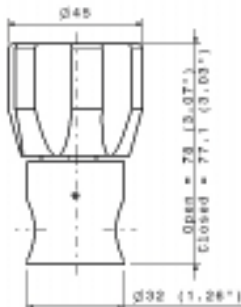
Parts for all valve grades	
Upper Spindel	Brass
Handle	QT-plastic / MT-Aluminium
All others	Stainless Steel

Parts	
Actuator Body	Aluminium
Piston	Brass
O-rings	NBR-PC 851
All others	Stainless Steel

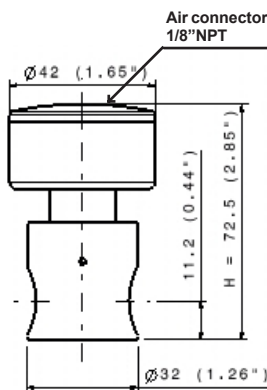
TECHNICAL DATA

M4-SI

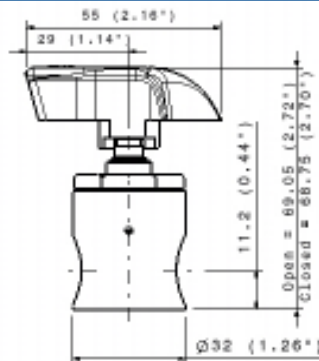
Fluid Media		Standard, HP, UHP, corrosive and non-corrosive gases
Max working pressure	M4-SI manual multiturn	3500 PSI (240 bar) or 290 PSI (20 bar) or 125 PSI (8.5 bar)
	M4-SI pneumatic BPNF	125 PSI (8.5 bar) working pressure
	M4-SI pneumatic LPNF - LPNO	290 PSI (20 bar) working pressure
	M4-SI 1/4 turn	125 PSI (8.5 bar) or 290 PSI (20 bar)
	M4-SI pneumatic HPNF - HPNO	3500 PSI (240 bar)
Pneumatic actuator opening pressure		5 - 7 bar (75 to 105 PSI)
Temperature range		-20°C to +65°C (-4°F to 149°F)(VespeI® seat to:155°C/311°F)
Burst pressure		12500 PSI (850 bar)
Flow Capacity		Cv = 0.2
Certified max. Helium inboard leak rate		< 1.10 ⁻⁹ mbar.l/sec
Certified max. Helium outboard leak rate (at max. pressure)		< 1.10 ⁻⁹ mbar.l/sec
Certified max. Helium across the seat leak rate (at max. pressure)		< 1.10 ⁻⁹ mbar.l/sec
Wetted volume		< 1.2 cc
Mounting		Back mounting or optional Panel mounting
Nominal seat diameter		4 mm (0.16")



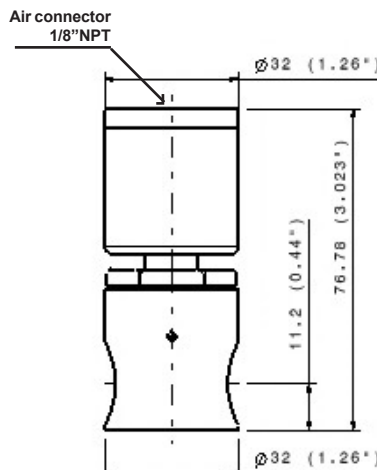
M4-SI
Multiturn valve
(MT) with open/
close window



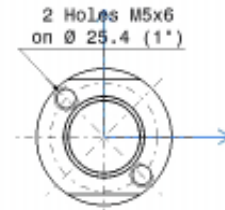
M4-SI - Pneumatic Valve
Medium Pressure (LPNF,
LPNO)



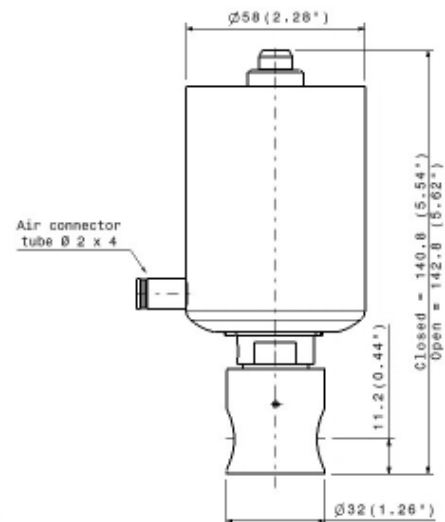
M4-SI - Quarter turn (QT) valve



M4-SI BPNF
Low pressure



M4-SI
bottom view



M4-SI pneumatic valve
High Pressure (HPNF,
HPNO)

HOW TO ORDER

M4-SI

PART NUMBER						
Example :	M4SI V	BP	2V1	K	A/B:B1/4	
	1	2	3	4	5	6

1 - Valve Series, Surface finish & Body material
M4-SI V - Ra 0.25 μm EP (10 μin Ra)-316 L VAR
M4-SI S - Ra 0.4 μm non EP (15 μin Ra)-316 L low sulf.

3 - Valve Configurations
2V1 2 ports in line
See below for other configurations

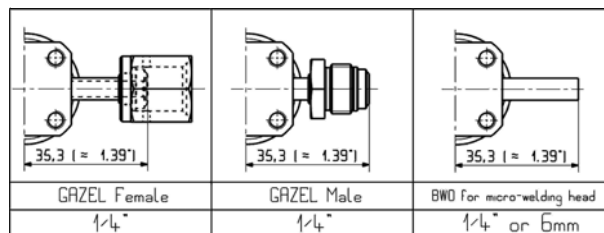
4 - Seat Material
K PCTFE (Kel-F®)
V Pi (Vespel®) (optional)
P PVDF (optional)

6 - Options
Panel Mounting
Electric limit switch

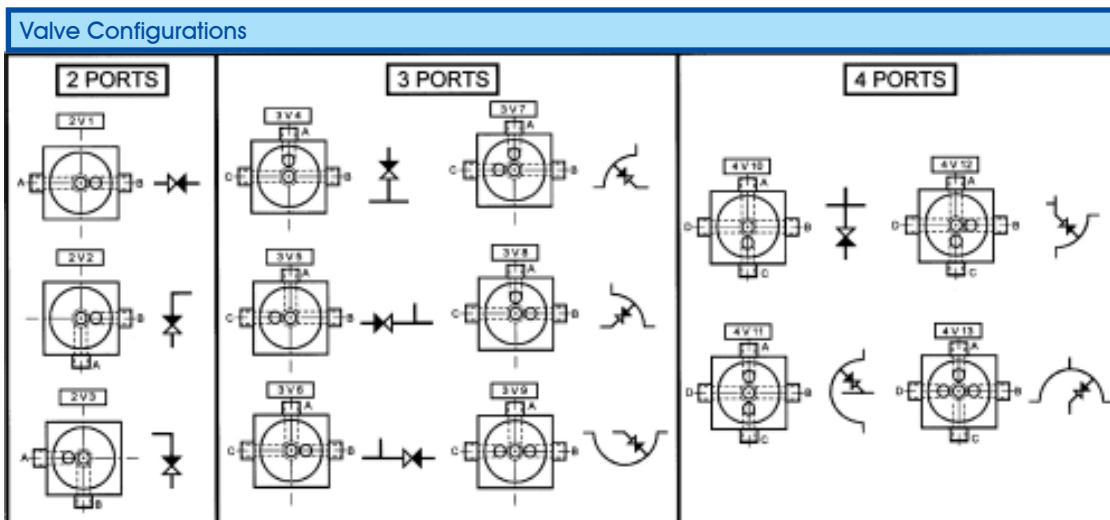
2 - Valve Actuation
BM Multi-Turn Handwheel (8.5bar)
LM Multi-Turn Handwheel (20bar)
HM Multi-Turn Handwheel (240bar)
BPNF Pneumatically actuated (8.5bar)
LPNF/LPNO Pneumatically actuated (20bar)
HPNF/HPNO Pneumatically actuated (240bar)
BQ Quarter-Turn Handwheel (8.5bar)
LQ Quarter-Turn Handwheel (20bar)

5 - End Connections
V 1/4 F GAZEL® 1/4" - Female (Face Seal*)
V 1/4 M GAZEL® 1/4" - Male (Face Seal*)
B 1/4 BWO 1/4" (Butt Orbital Weld)
B 6 BWO 6 mm (Butt Orbital Weld)

Standard Colors	
BM,LM,HM :	Blue
BPNF	Blue
LPNF	Blue
LPNO	Green
HPNF/HPNO	White
BQ,LQ	Black



GAZEL® -Female (face seal)* GAZEL® -Male (face seal)* BWO for standard welding heads



*All GAZEL® Face Seals are VCR® compatible. VCR® is a registered trade mark of CAJON CO., is a registered . Kel-F® is a registered trade mark of 3M company. Vespel® is a registered trade mark of DuPont.