

FEATURE a unique proven design M4.1 / M8.1 VB

TECHNICAL DATA

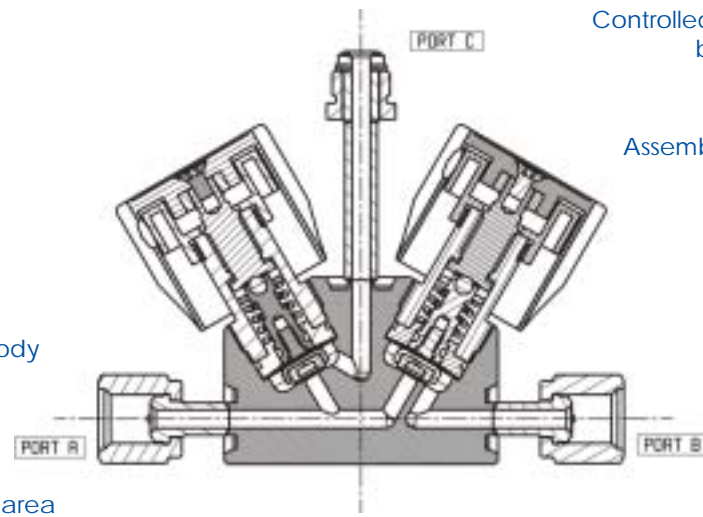
M 4.1 / M8.1 VB

Individual Serial number, for full traceability

Developed from proven M4.1/m8.1 valve technology

Gas specific solutions (body and seat materials)

No spring in the wetted area for zero particle emission



Controlled (PC) electropolishing for better corrosion resistance

Assembling, testing & Packaging in cleanroom Class 10

Pneumatic and manual actuation available

Unique high pressure leak test port

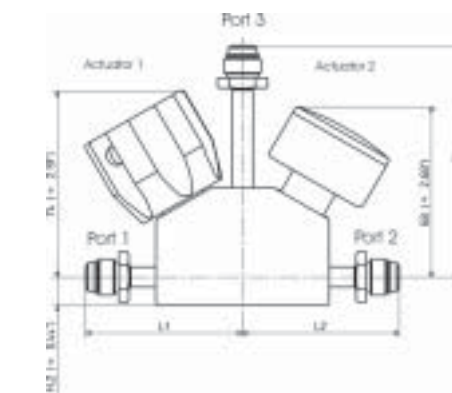
Manufactured to the THREE STAR PROCESS AE

TECHNICAL DATA		
Fluid Media		Standard, High and Ultra High Purity, corrosive and non-corrosive gases
Max working pressure	M4.1/ M8.1VB Manual-Multi-turn -1/4 Turn	240 bar (3500 PSI)
	M4.1/ M8.1VB Pneumatic - Low Pressure	17 bar (250 PSI)
Pneumatic actuator operating pressure		5 - 7 bar (75 - 105 PSI)
Temperature range		-20°C to + 80°C (-2°F to 176°F)
Burst Pressure		850 bar (12500 PSI)
Flow Capacity (C _v)	M4.1/ M8.1VB Manual	M4.1VB:C _v = 0.26 / M8.1VB:C _v = 0.53
	M4.1/ M8.1VB Pneumatic	M4.1VB:C _v = 0.26 / M8.1VB:C _v = 0.53
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

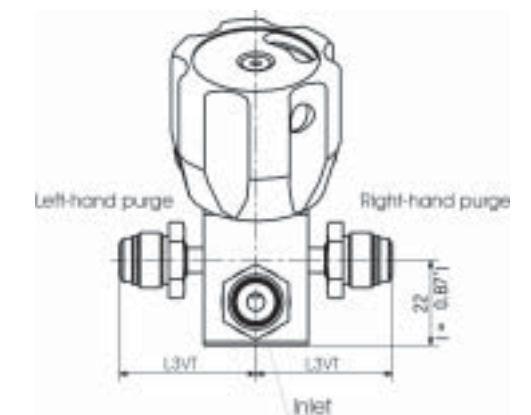
CONSTRUCTION MATERIALS

DIMENSIONS

		Valve Grade & Materials		
Parts		M4.1/ M8.1 VB S	M4.1/ M8.1 VB V	M4.1/ M8.1 VB U
Wetted parts	Body	SS 316L	SS 316L	SS 316L VAR
	Surface Finish	< 0,4 µm non EP (15µin Ra)	< 0,25 µm EP (10µin Ra)	< 0,15 µm EP (6µin Ra)
	Diaphragm	Hastelloy®		
	Seat Material	Kel-F® (VespeI®, PVDF, metal on request)		
Non-wetted parts	Backup diaphragms	Elgiloy®		
	all others	Stainless Steel or alloys		



Refer to last page for L1, L2, L3 and L3VT



For right-hand purge only: please order under ref. M4.1-M8.1 VTD

For left-hand purge only: please order under ref. M4.1-M8.1 VTG

Manual Actuation

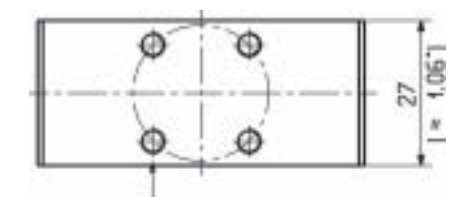
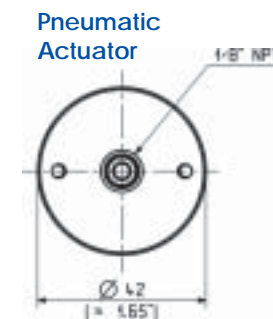
Pneumatic Actuation

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

Parts	Low Pressure	High Pressure
Actuator Body	SS 316 L	Aluminum
Piston	Aluminum	
O-rings	NBR - PC 851	
All others	Stainless Steel or Alloys	



Handwheel with on/off window



4 mounting holes M5 thread located 45° from center line on a 1.00 (25.4) circle

PART NUMBER					
Example : M4.1VB U	MT/MT	A	K	A/B:B'1/4	C:V1/4MMS
1	2/2	3	4	5	6

1 - Valve Series and Surface Finish

M4.1/M8.1VB U	Ra 0,15µm EP (6 µin Ra)
M4.1/M8.1VB V	Ra 0,25µm EP (10 µin Ra)
M4.1/M8.1VB S	Ra 0,4µm nonEP (15 µin Ra)

VB= Standard vertical purge block
VT= Vee-Block with transverse purge port
VTD= Vee-Block with right-hand purge port
VTG= Vee-Block with left-hand purge port

5 - M4.1 VB - End Connections - Port A-B-C-D

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" - Standard (Butt Weld Orbital)
B 6	BWO 6 mm - Butt Weld Orbital

5 - M8.1 VB - End Connections - Port A-B-C-D

V 3/8-F	GAZEL 3/8" - Female (face seal)*
V 3/8-M	GAZEL 3/8" - Male (face seal)*
B 1/2	BWO 1/2" - Standard (Butt Weld Orbital)
B 3/8	BWO 3/8" - Butt Weld Orbital
SAGALOK Double ring fitting on request	

A= Inlet Connection
B= Outlet Connection
C= Vertical Purge (right-hand purge for VT versions)
D= Left-hand Purge (when applicable)

2 - Valve Actuation (Standard: Normally closed)

MT	Manually actuated - Multi Turn
QT	Manually actuated - Quarter Turn
LP	Pneumatically actuated - Low Pressure
HP	Pneumatically actuated - High Pressure (Add - NO - for Normally Open version) (Add - NF - for normally close version)

3 - Body Material (others on request)


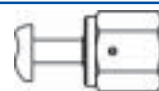

I	AISI 316L
A	AISI 316L, VAR
H	Hastelloy® (on request)

4 - Seat Material

K	PCTFE (Kel-F®)
V	PI (VespeI®)
P	PVDF
M	Metal (on request)

6 - Options

MS	Valve fitted with locking device (manual)
FT	Panel mounting
—	Back mounting
CI	Electric limit switch (LP actuators only)

End Connection	Dimensions mm (inches)				
	L1	L2	L3	L3VT	
 GAZEL® -Male (face seal)*	M4.1VB	61	61	91	35,3
	M8.1VB	54,5 (2.14")	54,5 (2.14")	91 (3.58")	35,3 (1.39")
 GAZEL® -Female (face seal)*	M4.1VB	52	52	75	35,3
	M8.1VB	54,5 (2.14")	54,5 (2.14")	75 (2.95")	35,3 (1.39")
 BWO 1/4" (orbital weld)		46 (1.81")	46 (1.81")	83,2 (3.27")	35,3 (1.39")
		top port		side port	

Note: All purge ports in 1/4"

*All GAZEL® Face Seals are VCR® compatible. VCR® is a registered trade mark of CAJON CO., HASTELLOY® is a registered trade mark of CABOT Corp., Kel-F® is a registered trade mark of 3M company, VespeI® is a registered trade mark of DUPONT, ELGILOY® is a registered trade mark of ELGILOY Company.



SELFA

Valves & Fittings

A total component solution, from source to process

M4.1 / M8.1 VB IN LINE VALVE VEE BLOCK

4.1 VB
8.1 VB

