

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

TECHNICAL DATA

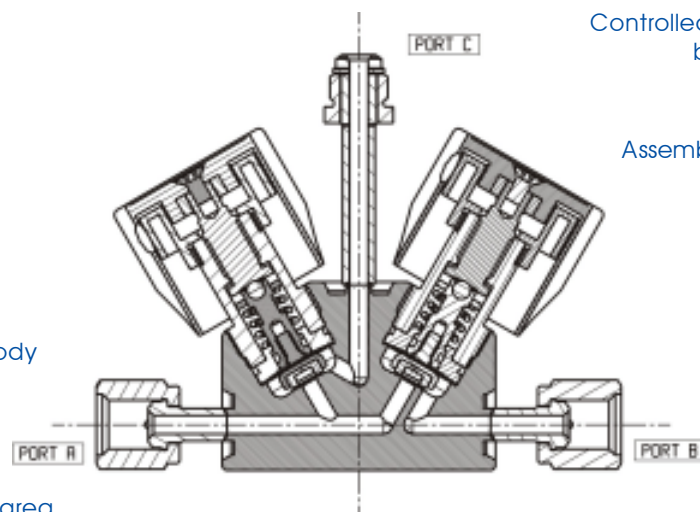
M 4.1/ M8.1VB

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

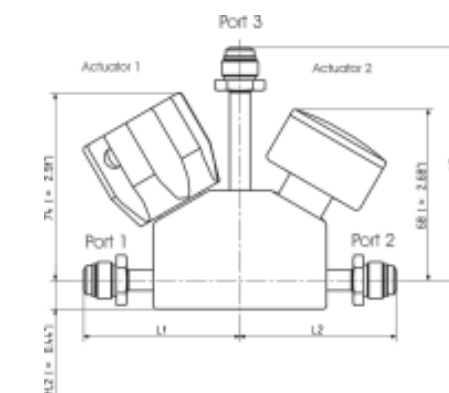
Manufactured to the **THREE STAR PROCESS** °

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	

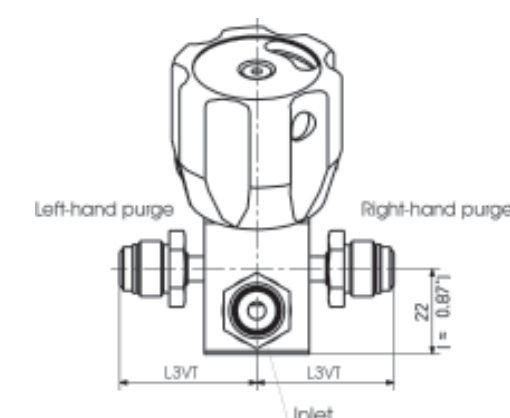
CONSTRUCTION MATERIALS

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® (Vespel®, 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

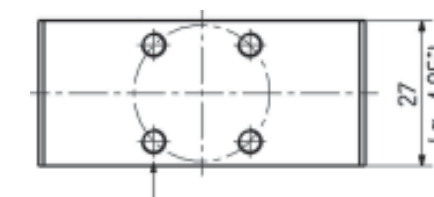
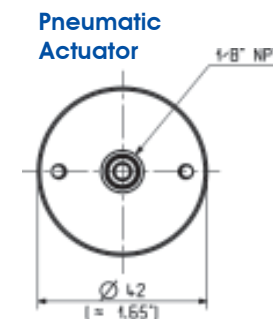
Parts for all valve grades	
Upper spindle	Stainless Steel
Handle	Aluminum or Extruded Plastic
All others	Stainless Steel or Alloys

Pneumatic Actuation

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	

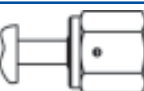
A= Inlet Connection
B= Outlet Connection
C= Vertical Purge (right-hand purge for VT versions)
D= Left-hand Purge (when applicable)

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 (2.40")	61 (2.40")	91 (3.58")	35,3 (1.39")
	M8.1VB 54,5 (2.14")	54,5 (2.14")		
 GAZEL® -Female (face seal)*	M4.1VB 52 (2.05")	52 (2.05")	75 (2.95")	35,3 (1.39")
	M8.1VB 54,5 (2.14")	54,5 (2.14")		
 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

