FEATURE a unique proven design — M12

Tied diaphragm design for positive seat opening and retractation

Individual serial number for full traceability

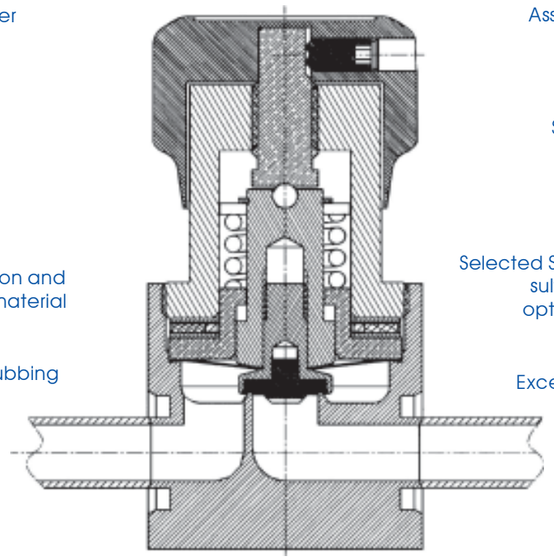
Low particle emission

Fully swept flow path

Reduced gas absorption and desorption from seat material

Clean operation, no rubbing

Fully contained Seat



Assembling, testing and packaging in cleanroom class 10

Small internal volume

Easy purgeability

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

Excellent flow coefficient

Metal to Metal sealing to atmosphere

Manufactured to the THREE STAR PROCESS®

CONSTRUCTION MATERIALS

		Valve Grade & Materials		
	Parts	**S**	**V**	**U**
Wetted parts	Body	Stainless Steel 316L		
	Body Surface Finish	< 0,4 µm (15µin Ra) non EP	< 0,25 µm (10µin Ra) EP	< 0,15 µm (6µin Ra) EP
	Diaphragms	Elgiloy®		
	Seat material	PCTFE (Kel-F®) / PVDF or Vespel® (on request)		
Non-wetted parts	Backup diaphragm	Elgiloy®		
	All others	Stainless Steel or alloys		

Manual Actuation

Upper Spindle	Stainless Steel
Handle	Aluminum
All others	Stainless Steel or Alloys

Pneumatic Actuation

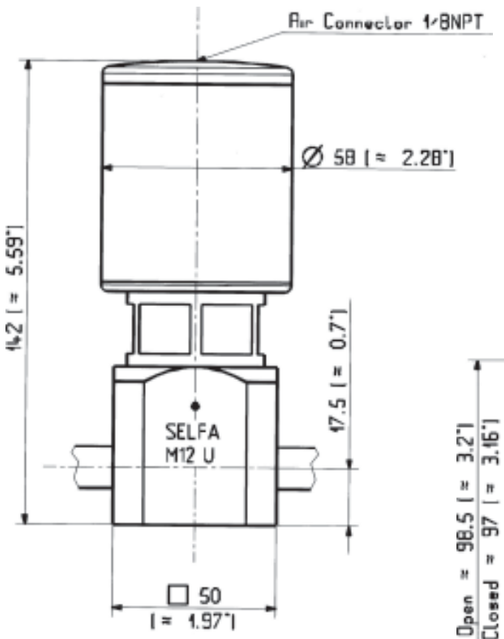
Parts	PP2
O-ring	NBR
Actuator Body	Aluminum Anodized

SELFA
Valves & Fittings

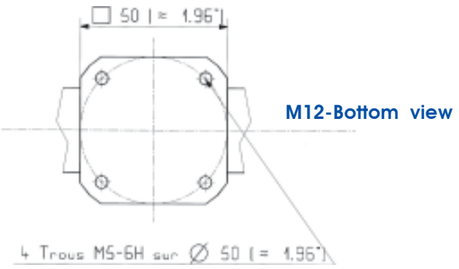
TECHNICAL DATA — M12

TECHNICAL DATA		
Fluid Media		High Purity and UHP, corrosive and non-corrosive gases
Max operating pressure	M12 MT manual	15 bar (215 PSI)
	M12 PP2 pneumatic	15 bar (215 PSI)
Min. operating pressure		Vacuum (for manual only)
Actuator opening pressure		5 to 7 bar (75 to 105 PSI)
Temperature range		-20°C to +80°C (-4°F to 176°F)
Flow coefficient		Cv = 1,75
Certified max. Helium inboard leak rate (at max. pressure)		<10^{-9} mbar.l/sec
Certified max. Helium outboard leak rate (at max. pressure)		<10^{-9} mbar.l/sec
Certified max. Helium leak rate across the seat (at max. pressure)		<1.10^{-9} mbar.l/sec
Nominal Seat Diameter		12 mm (0.47")
Weight	M12 MT	1,4 kg
	M12 PP2	3,1 kg

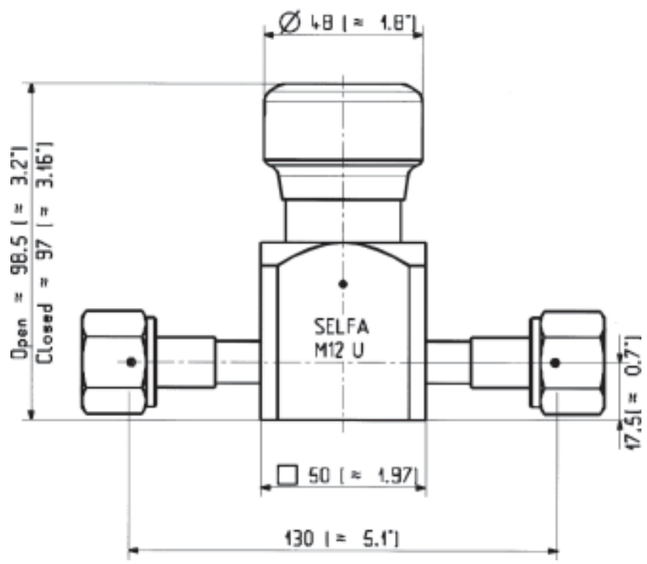
DIMENSIONS



M12-PP2



M12-Bottom view



M12-MT

M12-leaf 09-2
ROTAREX Group

HOW TO ORDER — M12

PART NUMBER							
Example :	M12 U	MT	2V1	I	/	K	A/B : B1/2	FT
	1	2	3	4		5	6	7

1- Valve Series

M12-U	UHP - Ra 0.15 µm Ep. (6 µin Ra)
M12-V	HP/UHP - Ra 0.25 µm Ep. (10 µin Ra)
M12-S	HP Version - Ra 0.4 µm non EP (15 µin Ra)

2 - Valve Actuation

MT	Multi-Turn Handwheel
PP2	Pneumatically actuated (Normally close version)

Standard colour:
for handles: white (other colours on request)
for pneumatic actuators: blue

3 - Valve Configuration

2V1	2 ports in line
2VPEG	2 Ports in line, upstream purge port - left side
2VPSG	2 Ports in line, downstream purge port - left side
2V1P2	2 Ports in line, 2 purge ports upstream/ downstream/left side
3VT	2 ports in line, full passage, downstream branch ("Te" Valve)
3VTPS	2 ports in line, full passage, downstream branch, downstream purge port

4 - Body Material (others on request)

I	AISI 316 L
H	Hastelloy® (on request)

5 - Seat Material

K	PCTFE (Kel-F®)
V	PI (Vespel®)
P	PVDF

6a - End Connections for 2VPEG/2VPSG/2V1P2/2VI

V 1/2-F	GAZEL® 1/2" - Female (Face Seal*)
V 1/2-M	GAZEL® 1/2" - Male (Face Seal*)
B 1/2	BWO 1/2" - (Butt Orbital Weld)
B 3/4	BWO 3/4" (Butt Orbital Weld)

SAGALOK (Double Ring Fittings on request)
Metric BWO available on request
Purge port available as BWO 1/4" or **GAZEL®** 1/4" male

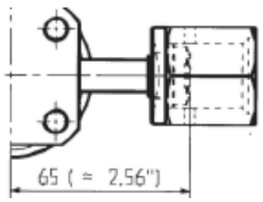
6b - End Connections for 3VT/3VTPS

B 1/2	BWO 1/2" - (Butt Orbital Weld)
B 3/4	BWO 3/4" (Butt Orbital Weld)
B1	BWO 1" (Butt Orbital Weld)
V1/2-F	GAZEL® 1/2" - Female (Face Seal*)
V1/2-M	GAZEL® 1/2" - Male (Face Seal*)
V3/4-M	GAZEL® 3/4" - Male (Face Seal*)
V3/4-F	GAZEL® 3/4" - Female (Face Seal*)

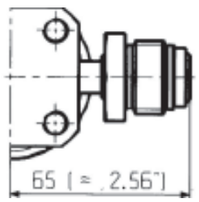
SAGALOK (Double Ring Fittings on request)
Branch available as **GAZEL®** 1/4" or BWO 1/4" or 1/2"
Metric BWO available on request
Purge port available as **GAZEL®** 1/4" male

7 - Options

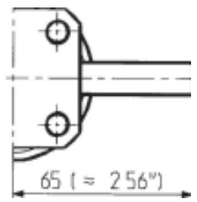
FT	Panel Mounting
—	Back Mounting
CI	Electric Limit Switch (PP2 actuators)



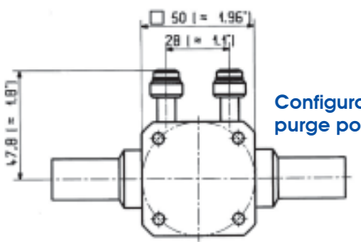
GAZEL® -Female (face seal)*



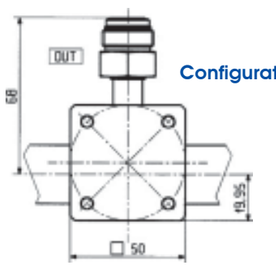
GAZEL® -Male (face seal)*



BWO for standard welding heads



Configuration with purge ports



Configuration 3VT

*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, Vespel® is a registered trade mark of DUPONT, ELGILOY® is a registered trade mark of ELGILOY Company.

SELFA-Valves & Fittings S.A. - L-7505 Lintgen, G.-D. of Luxembourg
Tel. *352 - 32 78 32 - 1, fax *352 - 32 78 32 322, www.rotarex.com, info@selfa.rotarex.com

SELFA
Valves & Fittings

A total component solution, from source to process

M12
SPRINGLESS DIAPHRAGM VALVES FOR HP AND UHP APPLICATIONS (STANDARD AND GAS SPECIFIC)

12

M12-leaf 09-2
ROTAREX Group