Diaphragm Valve
VDV52UB Series

VIGOUR

Product Feature

- Suitable for ultra-pure, flammable or toxic fluid lines in semiconductor manufacturing equipment and facilities
- Direct diaphragm construction with superior sealing performance, remarkable durability, compactness and particle and dead-space-free performance
- Valve open and closed position is easily visible at a glance
- Excellent gas displacement characteristics
- EP treatment is standard for all wetted surfaces
- Standard seat material is PCTFE, Polyimide/PFA is option

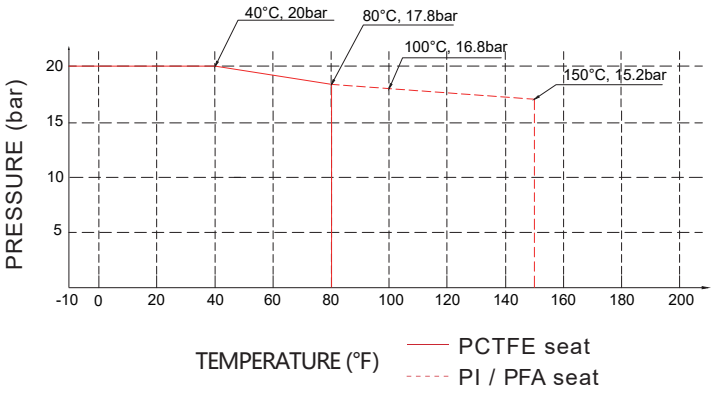
1/4 Type

1/4 Type

1/2 Type

1/2 Type

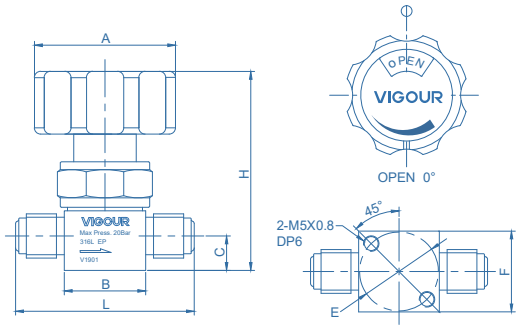
Temperature / Pressure Rating



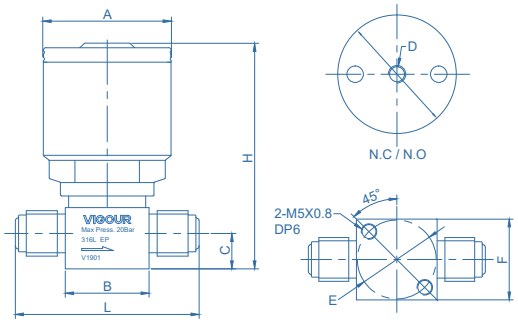
Technical Data

Max. Working Pressure:	300 psig (20bar)
Actuation Pressure:	58~87psig (4~6bar)
Max. Working Temp.:	14°F ~ 176°F (-10°C ~ 80°C)
Surface finish:	10µin. Ra
Materials	
Body:	see ordering info
Diaphragm:	Elgiloy®
Seat packing:	PCTFE
Handle:	AL
Internal Leakage Allowance:	$1x10^{-9}$ mbar l/s He
External Leakage Allowance:	$1x10^{-9}$ mbar l/s He
Flow capacity:	1/4”Cv=0.3 3/8”1/2”Cv=0.65
Weight:	approx. 0.27kg (depending on connections or options)

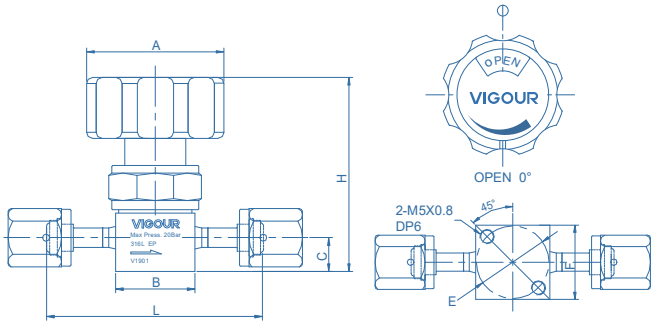
Dimensions (mm)



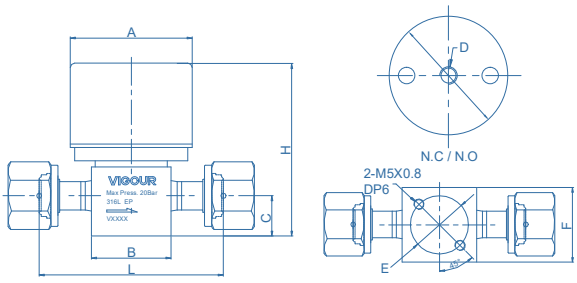
1/4, 3/8, 1/2 manual actuator (VFS male)



1/4 pneumatic actuator (VFS male)



1/4, 1/2 manual actuator (VFS female)



1/2 pneumatic actuator (VFS female)

manual actuator

End Comections	Orifice (mm)	Dimensions (mm)						
		A	B	C	E	F	L	H
1/4" VFS male	4.4	Φ45	26	11	Φ25.4	26	57	64
1/4" VFS female	4.4	Φ45	26	11	Φ25.4	26	71	64
3/8" VFS male	7	Φ45	36	18.2	Φ28	36	77	78
1/2" VFS male	7	Φ45	36	18.2	Φ28	36	77	78
1/2" VFS female	7	Φ45	36	18.2	Φ28	36	83	78

pneumatic actuator, normally opened / normally closed

End Comections	Actuator	Orifice (mm)	Dimensions (mm)							
			A	B	C	D	E	F	L	H
1/4" VFS male	N.C / N.O	4.4	Φ39.6	26	11	M5x0.8	Φ25.4	26	57	70
1/4" VFS female	N.C / N.O	4.4	Φ39.6	26	11	M5x0.8	Φ25.4	26	71	70
3/8" VFS male	N.C / N.O	7	Φ55	36	18.2	RC 1/8	Φ28	36	77	78
1/2" VFS male	N.C / N.O	7	Φ55	36	18.2	RC 1/8	Φ28	36	77	78
1/2" VFS female	N.C / N.O	7	Φ55	36	18.2	RC 1/8	Φ28	36	83	78

Ordering information

VDV52UBS - M - A - MV4 - MV4 - PA - P

Materials
S: 316L

Actuator
M: manual actuator
PO: pneumatic actuator,normally opened
PC: pneumatic actuator,normally closed

Flow Circuit Diagram
For details, refer to the flow circuit diagram on page 65.

End Connection
MV4: 1/4" VFS male
FV4: 1/4" VFS female
TW4: 1/4" tube weld
MV6: 1/2" VFS male 3/8" O.D.
FV6: 1/2" VFS female 3/8" O.D.
TW6: 3/8" tube weld
MV8: 1/2" VFS male
FV8: 1/2" VFS female
TW8: 1/2" tube weld

* Other connection standard,consult factory

Valve Seat Option
None: PCTFE(standard)
VS: Vespel®
PA: PFA

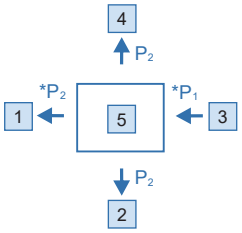
Process Specification
none: VS001B
P: VS001A

* For details, please refer to the appendix.

VIGOUR

Diaphragm Valve
Flow Circuit Diagram

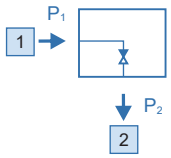
Ports Diagrammatic Drawing:



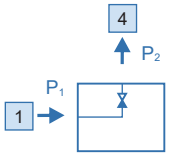
*P1: Inlet pressure
*P2: Outlet pressure

Two ports flow circuit diagram:

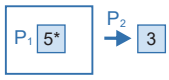
Standard model



"A" Type

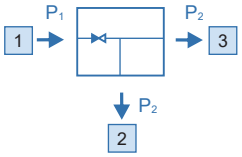


"B" Type

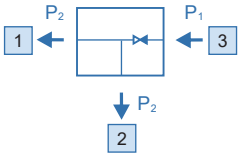


"K" Type
*Bottom interface

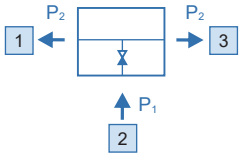
Three ports flow circuit diagram:



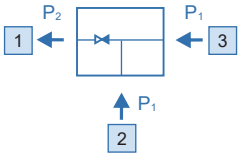
"C" Type



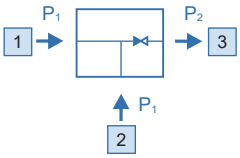
"D" Type



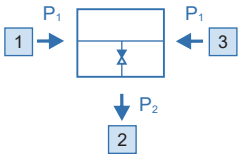
"E" Type



"F" Type

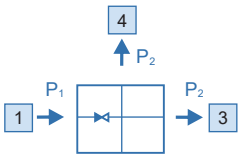


"G" Type

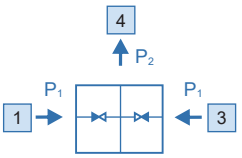


"H" Type

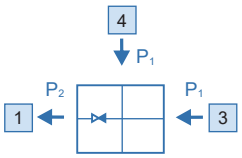
Four ports flow circuit diagram:



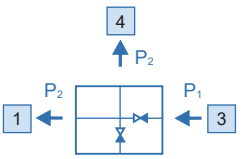
"I" Type



"J" Type



"L" Type



"M" Type

Diaphragm Valve
VDV52UC Series

VIGOUR

Product Feature

- Suitable for ultra-pure, flammable or toxic fluid lines in semiconductor manufacturing equipment and facilities
- Direct diaphragm construction with superior sealing performance, remarkable durability, compactness and particle and dead-space-free performance
- Valve open and closed position is easily visible at a glance
- Excellent gas displacement characteristics
- EP treatment is standard for all wetted surfaces
- Standard seat material is PCTFE, Polyimide/PFA is option

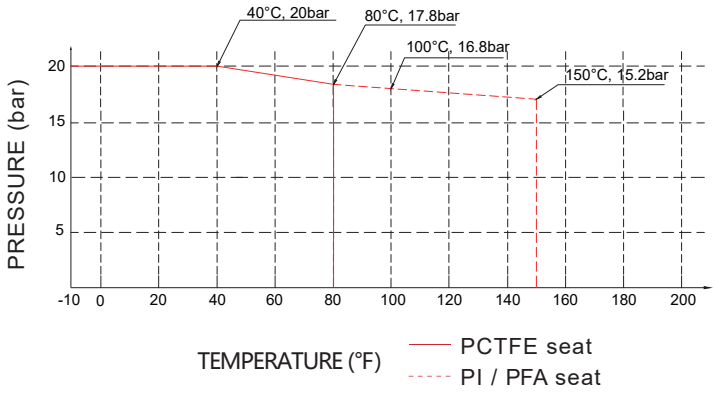
1/4 Type

1/4 Type

1/2 Type

1/2 Type

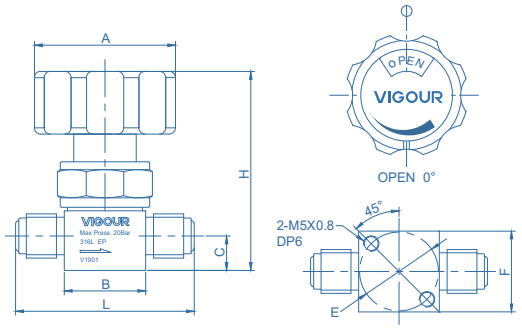
Temperature / Pressure Rating



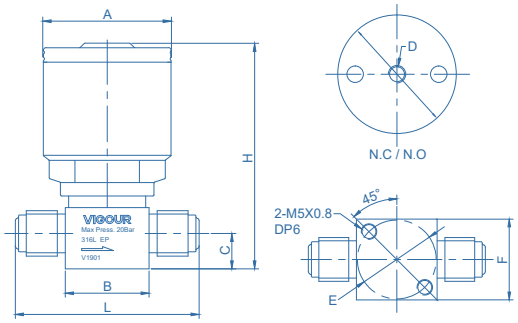
Technical Data

Max. Working Pressure:	300 psig (20bar)
Actuation Pressure:	58~87psig (4~6bar)
Max. Working Temp.:	14°F ~ 176°F (-10°C ~ 80°C)
Surface finish:	7μin. Ra
Materials	
Body:	see ordering info
Diaphragm:	Elgiloy®
Seat packing:	PCTFE
Handle:	AL
Internal Leakage Allowance:	$1x10^{-9}$ mbar l/s He
External Leakage Allowance:	$1x10^{-9}$ mbar l/s He
Flow capacity:	1/4”Cv=0.3 3/8”1/2”Cv=0.65
Weight:	approx. 0.27kg (depending on connections or options)

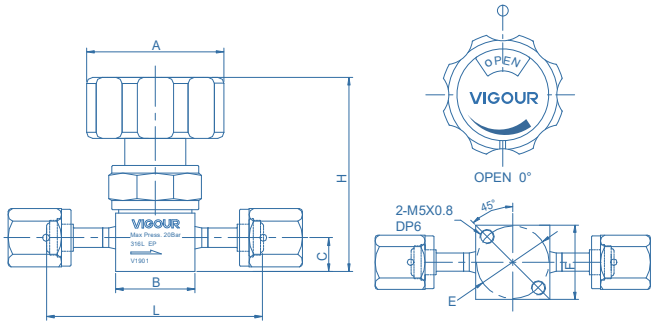
Dimensions (mm)



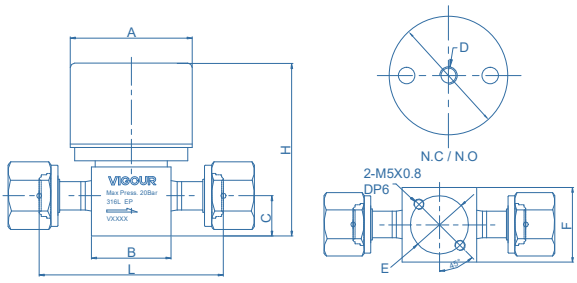
1/4, 3/8, 1/2 manual actuator (VFS male)



1/4 pneumatic actuator (VFS male)



1/4, 1/2 manual actuator (VFS female)



1/2 pneumatic actuator (VFS female)

manual actuator

End Comections	Orifice (mm)	Dimensions (mm)						
		A	B	C	E	F	L	H
1/4" VFS male	4.4	Φ45	26	11	Φ25.4	26	57	64
1/4" VFS female	4.4	Φ45	26	11	Φ25.4	26	71	64
3/8" VFS male	7	Φ45	36	18.2	Φ28	36	77	78
1/2" VFS male	7	Φ45	36	18.2	Φ28	36	77	78
1/2" VFS female	7	Φ45	36	18.2	Φ28	36	83	78

pneumatic actuator, normally opened / normally closed

End Comections	Actuator	Orifice (mm)	Dimensions (mm)							
			A	B	C	D	E	F	L	H
1/4" VFS male	N.C / N.O	4.4	Φ39.6	26	11	M5x0.8	Φ25.4	26	57	70
1/4" VFS female	N.C / N.O	4.4	Φ39.6	26	11	M5x0.8	Φ25.4	26	71	70
3/8" VFS male	N.C / N.O	7	Φ55	36	18.2	RC 1/8	Φ28	36	77	78
1/2" VFS male	N.C / N.O	7	Φ55	36	18.2	RC 1/8	Φ28	36	77	78
1/2" VFS female	N.C / N.O	7	Φ55	36	18.2	RC 1/8	Φ28	36	83	78

Ordering information

VDV52UCSLV - M - A - MV4 - MV4 - PA - P

Materials

SLV: 316L secondary remelt

Actuator

M: manual actuator
PO: pneumatic actuator,normally opened
PC: pneumatic actuator,normally closed

Flow Circuit Diagram

For details, refer to the flow circuit diagram on page 65.

End Connection

MV4: 1/4" VFS male
FV4: 1/4" VFS female
TW4: 1/4" tube weld
MV6: 1/2" VFS male 3/8" O.D.
FV6: 1/2" VFS female 3/8" O.D.
TW6: 3/8" tube weld
MV8: 1/2" VFS male
FV8: 1/2" VFS female
TW8: 1/2" tube weld

* Other connection standard,consult factory

Valve Seat Option

None: PCTFE(standard)
VS: Vespel®
PA: PFA

Process Specification

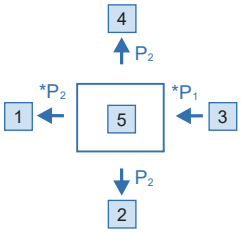
P: VS001A

* For details, please refer to the appendix.

VIGOUR

Diaphragm Valve
Flow Circuit Diagram

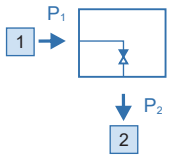
Ports Diagrammatic Drawing:



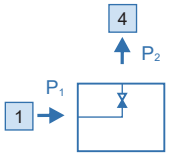
*P1: Inlet pressure
*P2: Outlet pressure

Two ports flow circuit diagram:

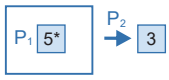
Standard model



"A" Type

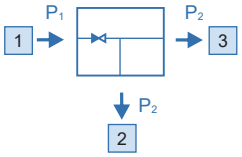


"B" Type

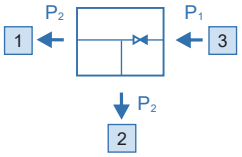


"K" Type
*Bottom interface

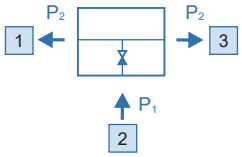
Three ports flow circuit diagram:



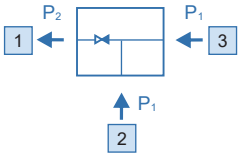
"C" Type



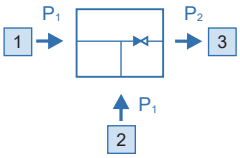
"D" Type



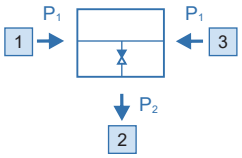
"E" Type



"F" Type

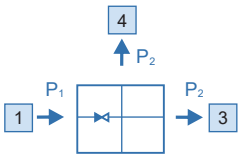


"G" Type

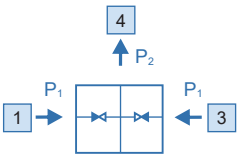


"H" Type

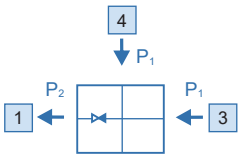
Four ports flow circuit diagram:



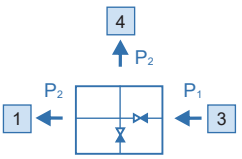
"I" Type



"J" Type



"L" Type



"M" Type