

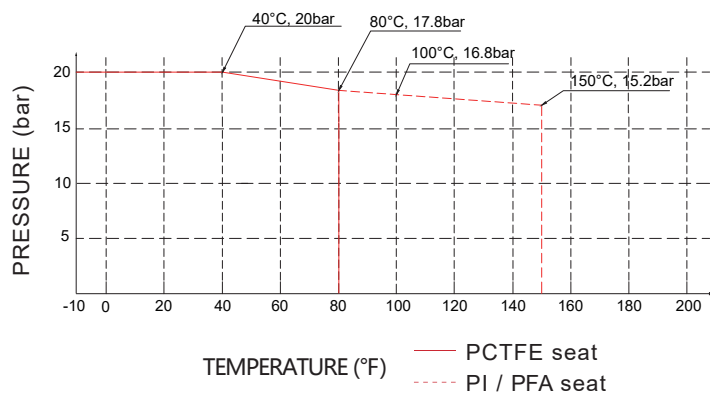
Diaphragm Valve VDV42UB Series

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
- Replaceable valve seat design
- Excellent gas displacement characteristics
- EP treatment is standard for all wetted surfaces
- Standard seat material is PCTFE, Polyimide / PFA is optional

Temperature / Pressure Rating



Replaceable Valve Seat Repair Kit – Ordering Information



Ordering Number	Seat material	Description	Explanation
DV42-WXB-316L-PCTFE	PCTFE	Including 1 pc of valve seat assembly and 2 pcs of diaphragms.	Suitable for replaceable seat diaphragm valves.
DV42-WXB-316L-Vespe [®]	Vespe [®]		
DV42-WXB-316L-PFA	PFA		

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:	316L
Diaphragm:	Co-Cr-Ni-Mo Alloy
Seat packing:	PCTFE
handwheel:	Al Alloy
Internal Leakage Allowance:	<1x10 ⁻⁹ mbar·L/s He
External Leakage Allowance:	<1x10 ⁻⁹ mbar·L/s He
Flow capacity:	Cv=0.3
Weight:	approx. 0.27kg (depending on connections or options)



1/4 Type



1/4 Type



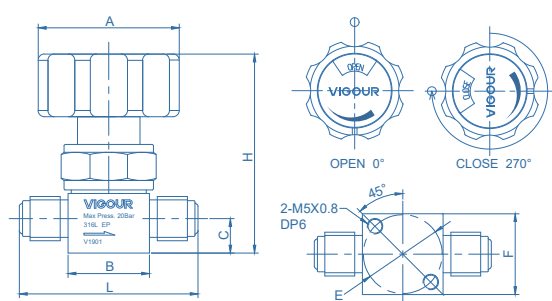
1/4 Type (Lock)



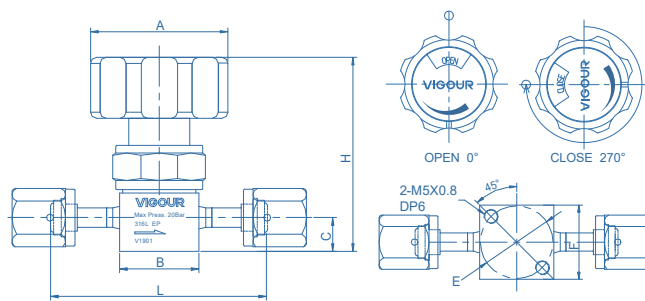
1/4 Type (IS option)



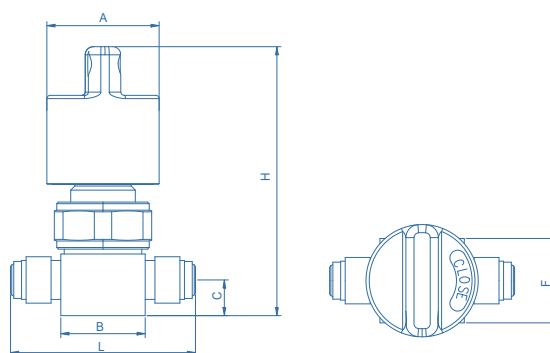
Dimensions (mm)



1/4 manual actuator (VFS male)



1/4 manual actuator (VFS female)



1/4 manual actuator (VFS male) Position Lock

manual actuator

End Connections			Orifice (mm)	Dimensions (mm)						
Mod.	VFS	O.D.		A	B	C	E	F	L	H
MV4	1/4"	1/4"	4.4	Φ45	26	11	Φ25.4	26	57	69
FV4	1/4"	1/4"	4.4	Φ45	26	11	Φ25.4	26	71	69
RMV4	1/4"	1/4"	4.4	Φ45	26	11	Φ25.4	26	71	69
TW4	----	1/4"	4.4	Φ45	26	11	Φ25.4	26	54	69
TW6	----	3/8"	4.4	Φ45	26	11	Φ25.4	26	69	69

manual actuator (Position Lock)

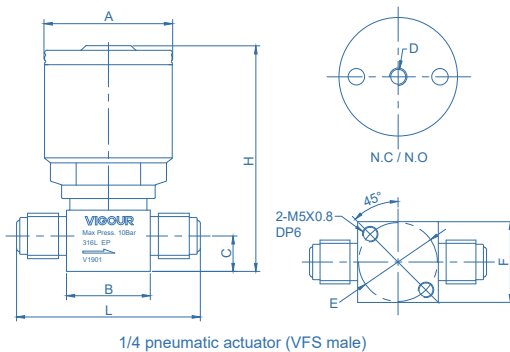
End Connections			Orifice (mm)	Dimensions (mm)						
Mod.	VFS	O.D.		A	B	C	E	F	L	H
MV4	1/4"	1/4"	4.4	Φ45	26	11	Φ25.4	26	57	74
FV4	1/4"	1/4"	4.4	Φ45	26	11	Φ25.4	26	71	74
RMV4	1/4"	1/4"	4.4	Φ45	26	11	Φ25.4	26	71	74
TW4	----	1/4"	4.4	Φ45	26	11	Φ25.4	26	54	74
TW6	----	3/8"	4.4	Φ45	26	11	Φ25.4	26	69	74



Diaphragm Valve VDV42UB Series

VIGOUR

Dimensions (mm)



pneumatic actuator (normally opened / normally closed)

End Connections			Actuator	Orifice (mm)	Dimensions (mm)							
Mod.	VFS	O.D.			A	B	C	D	E	F	L	H
MV4	1/4"	1/4"	N.C / N.O	4.4	Φ39.6	26	11	M5x0.8	Φ25.4	26	57	75
FV4	1/4"	1/4"	N.C / N.O	4.4	Φ39.6	26	11	M5x0.8	Φ25.4	26	71	75
RMV4	1/4"	1/4"	N.C / N.O	4.4	Φ39.6	26	11	M5x0.8	Φ25.4	26	71	75
TW4	----	1/4"	N.C / N.O	4.4	Φ39.6	26	11	M5x0.8	Φ25.4	26	54	75
TW6	----	3/8"	N.C / N.O	4.4	Φ39.6	26	11	M5x0.8	Φ25.4	26	69	75

Ordering information

VDV42UBS - M - A - MV4 - MV4 - PA - LOTOC - IS - 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 71.

End Connection

MV4: 1/4" VFS male

RMV4: 1/4" VFS Rotatable male

FV4: 1/4" VFS female

TW4: 1/4" tube weld

TW6: 3/8" 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.

Option

None: Standard

IS: Switch Position Indicator

Option

None: standard

LOTO: Closed Position Lock

LOTOT: Open Position Lock

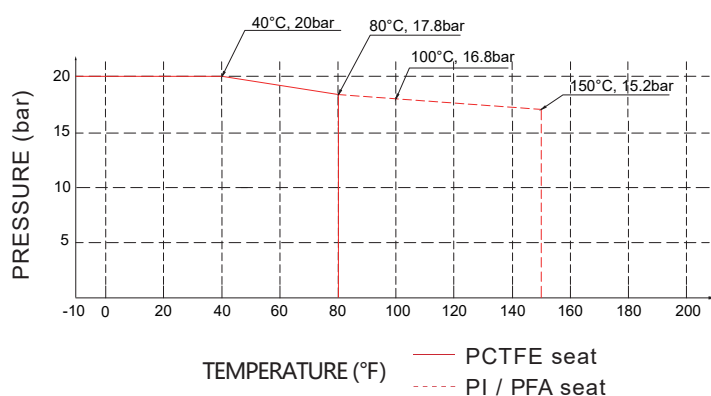
LOTOTC: Open / Closed Position Lock



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- Replaceable valve seat design
- Excellent gas displacement characteristics
- EP treatment is standard for all wetted surfaces
- Standard seat material is PCTFE, Polyimide / PFA is optional

Temperature / Pressure Rating



Replaceable Valve Seat Repair Kit – Ordering Information



Ordering Number	Seat material	Description	Explanation
DV42-WXB-316L S.R-PCTFE	PCTFE	Including 1 pc of valve seat assembly and 2 pcs of diaphragms.	Suitable for replaceable seat diaphragm valves.
DV42-WXB-316L S.R-Vespele®	Vespele®		
DV42-WXB-316L S.R-PFA	PFA		

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:	316L secondary remelt
Diaphragm:	Co-Cr-Ni-Mo Alloy
Seat packing:	PCTFE
Handwheel:	Al Alloy
Internal Leakage Allowance:	<1x10 ⁻⁹ mbar·L/s He
External Leakage Allowance:	<1x10 ⁻⁹ mbar·L/s He
Flow capacity:	Cv=0.3
Weight:	approx. 0.27kg (depending on connections or options)



1/4 Type



1/4 Type



1/4 Type (Lock)



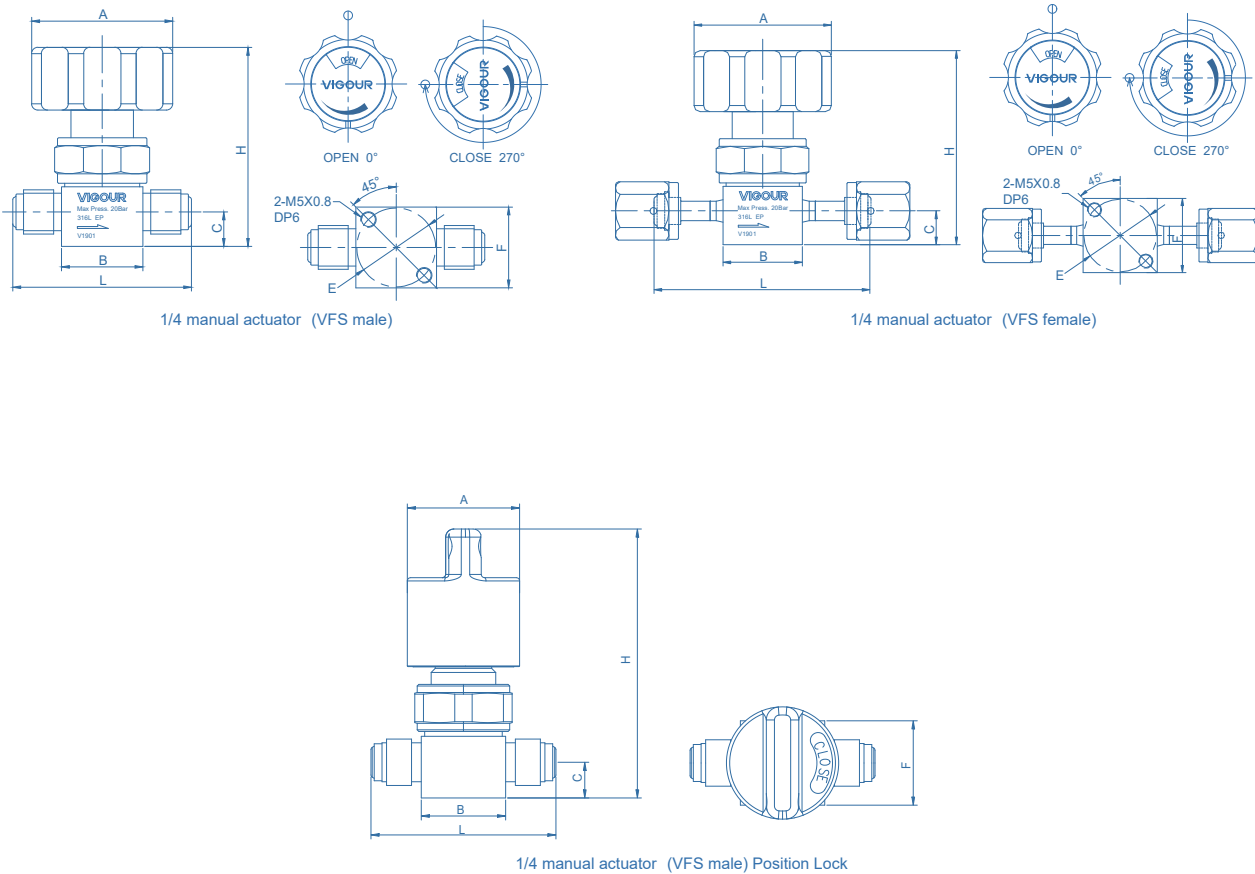
1/4 Type (IS option)



Diaphragm Valve VDV42UC Series

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Dimensions (mm)



manual actuator

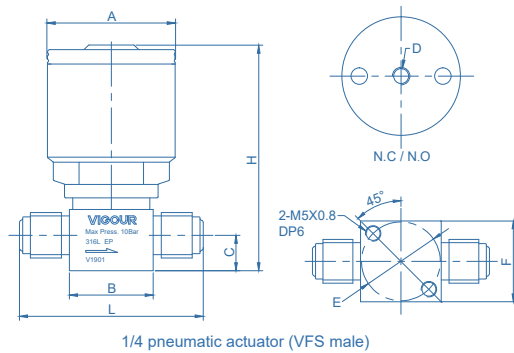
End Connections			Orifice (mm)	Dimensions (mm)						
Mod.	VFS	O.D.		A	B	C	E	F	L	H
MV4	1/4"	1/4"	4.4	Φ45	26	11	Φ25.4	26	57	69
FV4	1/4"	1/4"	4.4	Φ45	26	11	Φ25.4	26	71	69
RMV4	1/4"	1/4"	4.4	Φ45	26	11	Φ25.4	26	71	69
TW4	----	1/4"	4.4	Φ45	26	11	Φ25.4	26	54	69
TW6	----	3/8"	4.4	Φ45	26	11	Φ25.4	26	69	69

manual actuator (Position Lock)

End Connections			Orifice (mm)	Dimensions (mm)						
Mod.	VFS	O.D.		A	B	C	E	F	L	H
MV4	1/4"	1/4"	4.4	Φ45	26	11	Φ25.4	26	57	74
FV4	1/4"	1/4"	4.4	Φ45	26	11	Φ25.4	26	71	74
RMV4	1/4"	1/4"	4.4	Φ45	26	11	Φ25.4	26	71	74
TW4	----	1/4"	4.4	Φ45	26	11	Φ25.4	26	54	74
TW6	----	3/8"	4.4	Φ45	26	11	Φ25.4	26	69	74



Dimensions (mm)



pneumatic actuator (normally opened / normally closed)

End Connections			Actuator	Orifice (mm)	Dimensions (mm)							
Mod.	VFS	O.D.			A	B	C	D	E	F	L	H
MV4	1/4"	1/4"	N.C / N.O	4.4	Φ39.6	26	11	M5x0.8	Φ25.4	26	57	75
FV4	1/4"	1/4"	N.C / N.O	4.4	Φ39.6	26	11	M5x0.8	Φ25.4	26	71	75
RMV4	1/4"	1/4"	N.C / N.O	4.4	Φ39.6	26	11	M5x0.8	Φ25.4	26	71	75
TW4	----	1/4"	N.C / N.O	4.4	Φ39.6	26	11	M5x0.8	Φ25.4	26	54	75
TW6	----	3/8"	N.C / N.O	4.4	Φ39.6	26	11	M5x0.8	Φ25.4	26	69	75

Ordering information

VDV42UCSLV - M - A - MV4 - MV4 - PA - LOTOC - IS - 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 69.

End Connection

MV4: 1/4" VFS male

RMV4: 1/4" VFS Rotatable male

FV4: 1/4" VFS female

TW4: 1/4" tube weld

TW6: 3/8" tube weld

* Other connection standard, consult factory

Process Specification

P: VS001A

* For details, please refer to the appendix.

Option

None: Standard

IS: Switch Position Indicator

Option

None: standard

LOTO: Closed Position Lock

LOTG: Open Position Lock

LOTGC: Open / Closed Position Lock

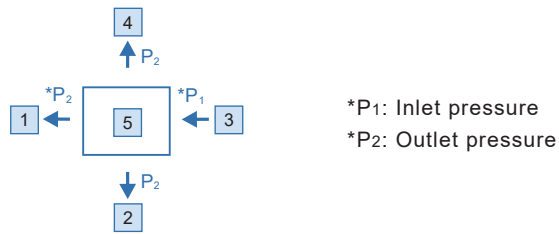
* Manual only



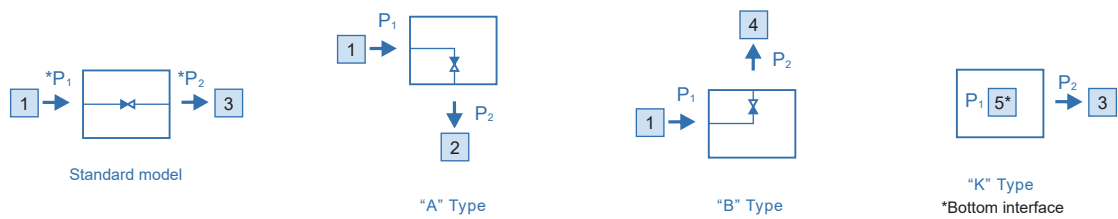
Diaphragm Valve Flow Circuit Diagram

VIGOUR

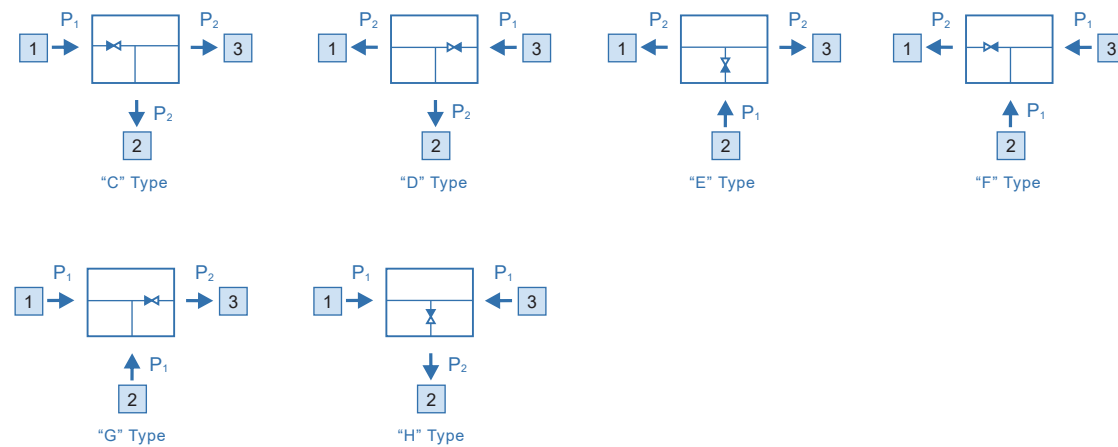
Ports Diagrammatic Drawing:



Two ports flow circuit diagram:



Three ports flow circuit diagram:



Four ports flow circuit diagram:

