Diaphragm Valve
VDV40UB Series

VIGOUR

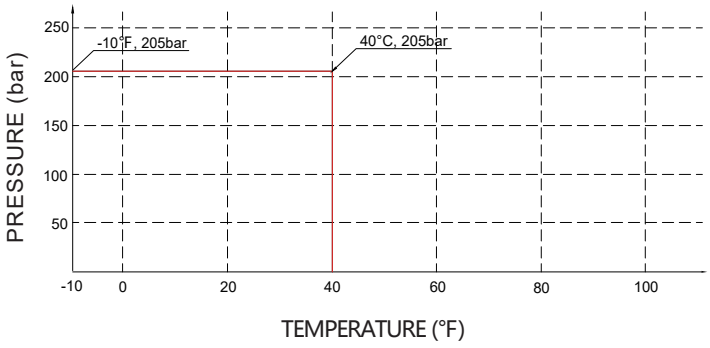
Product Feature

- 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 free performance
- The product is fabricated in compliance with the VS001A process specification
- 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 is option

1/4" pneumatic actuator

1/4" manual actuator

Temperature / Pressure Rating



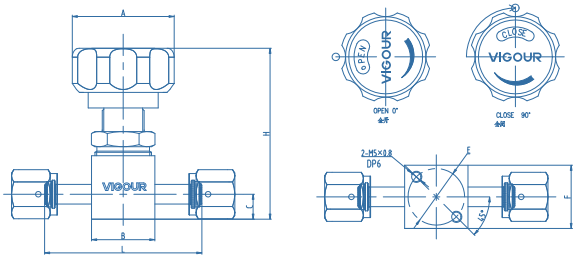
1/4" Right-angle handle

1/4" manual actuator (Lockable)

Technical Data

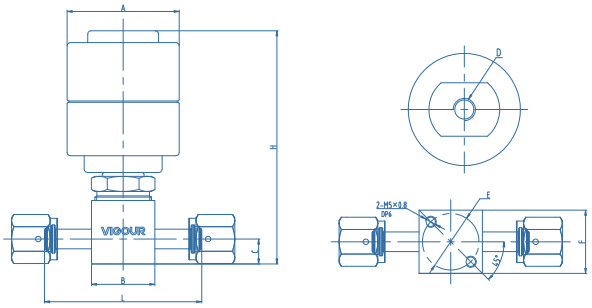
Max. Working Pressure:	3000 psig (200bar)
Actuation Pressure:	70~110 psig (5~8bar)
Max. Working Temp.:	-40°F ~ 160°F (-40°C ~ 71°C)
Surface finish:	10μin. Ra
Materials	
Body:	see ordering info
Diaphragm:	Elgiloy®
Seat packing:	PCTFE
Handle:	AL
Internal Leakage Allowance:	$1x10^{-9}$ mbar l/s He
External Leakage Allowance:	$1x10^{-9}$ mbar l/s He
Flow capacity:	pneumatic actuator Cv=0.23 manual actuator Cv=0.29
Weight:	approx 1.27kg (depending on connections or options)

Dimensions (mm)



manual actuator

End Comections	Orifice (mm)	Dimensions (mm)						
		A	B	C	E	F	L	H
1/4" VFS male	4.4	Φ47.5	28.4	11.2	Φ25.4	28.4	70.6	77
1/4" VFS female	4.4	Φ47.5	28.4	11.2	Φ25.4	28.4	70.6	77
3/8" VFS male	4.4	Φ47.5	28.4	11.2	Φ25.4	28.4	98	77
3/8" VFS female	4.4	Φ47.5	28.4	11.2	Φ25.4	28.4	98	77



pneumatic actuator (normally closed)

End Comections	Orifice (mm)	Dimensions (mm)							
		A	B	C	D	E	F	L	H
1/4" VFS male	4.4	Φ50.3	28.4	11.2	M5x0.8	Φ25.4	28.4	70.6	105
1/4" VFS female	4.4	Φ50.3	28.4	11.2	M5x0.8	Φ25.4	28.4	70.6	105
3/8" VFS male	4.4	Φ50.3	28.4	11.2	M5x0.8	Φ25.4	28.4	98	105
3/8" VFS female	4.4	Φ50.3	28.4	11.2	M5x0.8	Φ25.4	28.4	98	105

Ordering Information

VDV40UBS - M - A - MV4 - MV4 - VS - LO - P

Materials
S: 316L

Actuator
M: manual actuator
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

* Other connection standard,consult factory

Process Specification
None: VS001B
P: VS001A

* For details, please refer to the appendix..

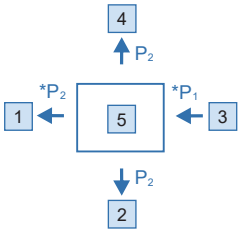
Optional
None: Round Knob
LO: Round Knob
Pull, then turn to open
lock out / tag out
L: Right-angle handle

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

VIGOUR

Diaphragm Valve
Flow Circuit Diagram

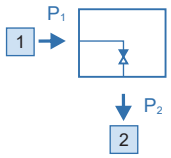
Ports Diagrammatic Drawing:



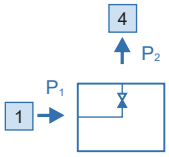
*P1: Inlet pressure
*P2: Outlet pressure

Two ports flow circuit diagram:

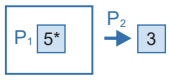
Standard model



"A" Type

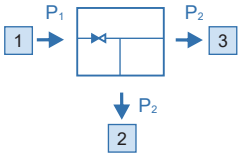


"B" Type

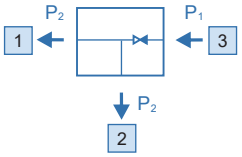


"K" Type
*Bottom interface

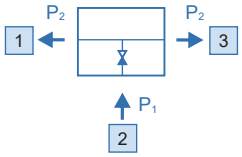
Three ports flow circuit diagram:



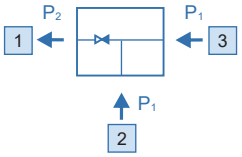
"C" Type



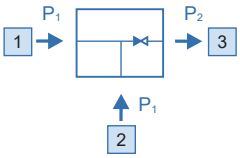
"D" Type



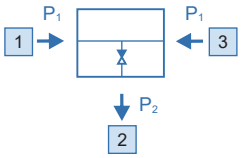
"E" Type



"F" Type

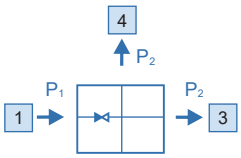


"G" Type

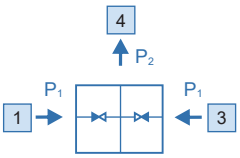


"H" Type

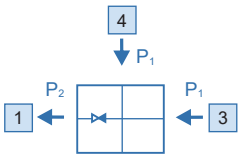
Four ports flow circuit diagram:



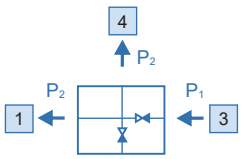
"I" Type



"J" Type



"L" Type



"M" Type

Diaphragm Valve
VDV40UC 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 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 is option

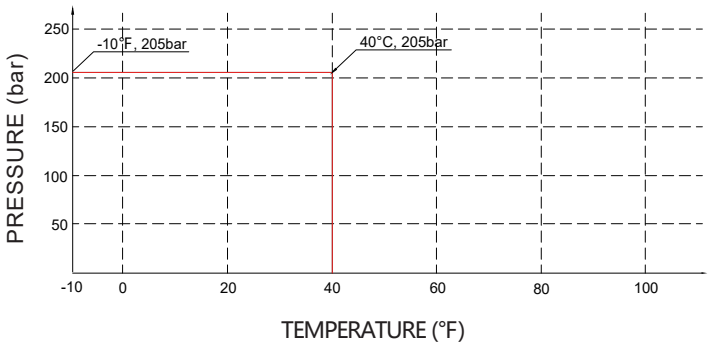
1/4" pneumatic actuator

1/4" manual actuator

1/4" Right-angle handle

1/4" manual actuator (Lockable)

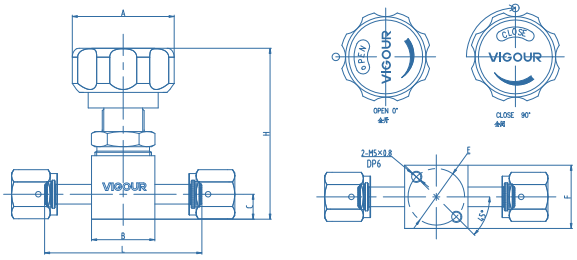
Temperature / Pressure Rating



Technical Data

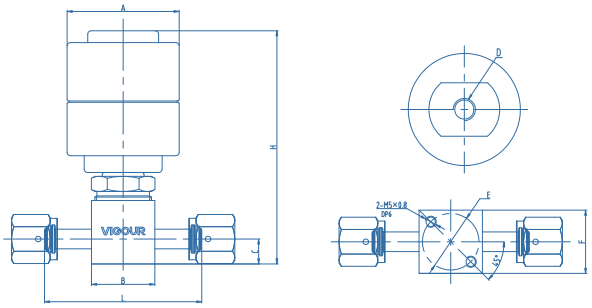
Max. Working Pressure:	3000 psig (200bar)
Actuation Pressure:	70~110 psig (5~8bar)
Max. Working Temp.:	-40°F ~ 160°F (-40°C ~ 71°C)
Surface finish:	10μin. Ra
Materials	
Body:	see ordering info
Diaphragm:	Elgiloy®
Seat packing:	PCTFE
Handle:	AL
Internal Leakage Allowance:	$1x10^{-9}$ mbar l/s He
External Leakage Allowance:	$1x10^{-9}$ mbar l/s He
Flow capacity:	pneumatic actuator Cv=0.23 manual actuator Cv=0.29
Weight:	approx 1.27kg (depending on connections or options)

Dimensions (mm)



manual actuator

End Comections	Orifice (mm)	Dimensions (mm)						
		A	B	C	E	F	L	H
1/4" VFS male	4.4	Φ47.5	28.4	11.2	Φ25.4	28.4	70.6	77
1/4" VFS female	4.4	Φ47.5	28.4	11.2	Φ25.4	28.4	70.6	77
3/8" VFS male	4.4	Φ47.5	28.4	11.2	Φ25.4	28.4	98	77
3/8" VFS female	4.4	Φ47.5	28.4	11.2	Φ25.4	28.4	98	77



pneumatic actuator (normally closed)

End Comections	Orifice (mm)	Dimensions (mm)							
		A	B	C	D	E	F	L	H
1/4" VFS male	4.4	Φ50.3	28.4	11.2	M5x0.8	Φ25.4	28.4	70.6	105
1/4" VFS female	4.4	Φ50.3	28.4	11.2	M5x0.8	Φ25.4	28.4	70.6	105
3/8" VFS male	4.4	Φ50.3	28.4	11.2	M5x0.8	Φ25.4	28.4	98	105
3/8" VFS female	4.4	Φ50.3	28.4	11.2	M5x0.8	Φ25.4	28.4	98	105

Ordering Information

VDV40UCSLV - M - A - MV4 - MV4 - VS - LO - P

Materials
SLV: 316L secondary remelt

Actuator
M: manual actuator
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

* Other connection standard,consult factory

Process Specification
P: VS001A
* For details, please refer to the appendix..

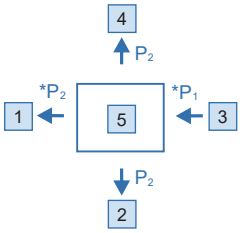
Optional
None: Round Knob
LO: Round Knob
Pull, then turn to open
lock out / tag out
L: Right-angle handle

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

VIGOUR

Diaphragm Valve
Flow Circuit Diagram

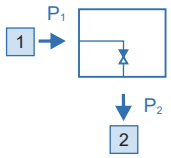
Ports Diagrammatic Drawing:



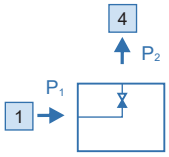
*P1: Inlet pressure
*P2: Outlet pressure

Two ports flow circuit diagram:

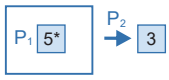
Standard model



"A" Type

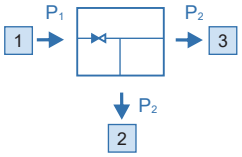


"B" Type

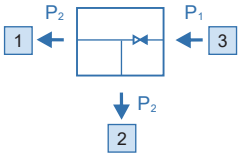


"K" Type
*Bottom interface

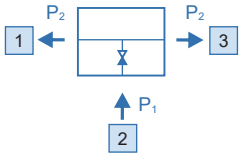
Three ports flow circuit diagram:



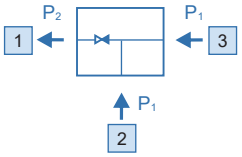
"C" Type



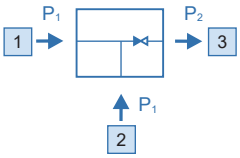
"D" Type



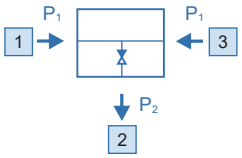
"E" Type



"F" Type

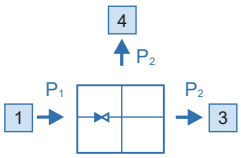


"G" Type

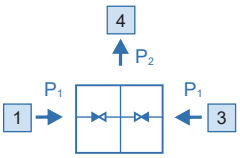


"H" Type

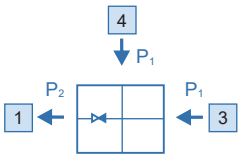
Four ports flow circuit diagram:



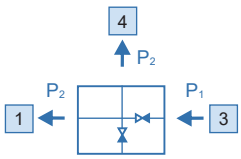
"I" Type



"J" Type



"L" Type



"M" Type