VUPS

VIGOUR

we offer solutions regarding your ideas!

ULTRA HIGH PURITY GAS SYSTEM

Gas Control Solutions

Table Of Contents

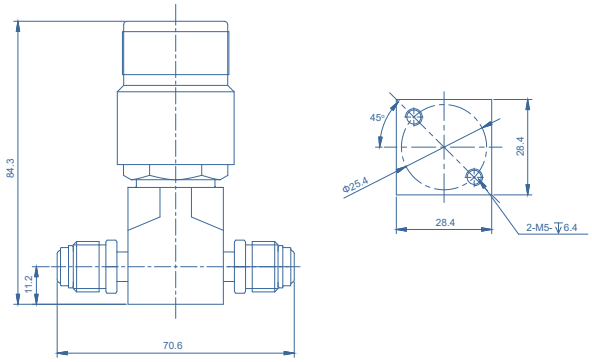
VIGOUR

Single Stage Pressure Regulators
VSR-50UB Series

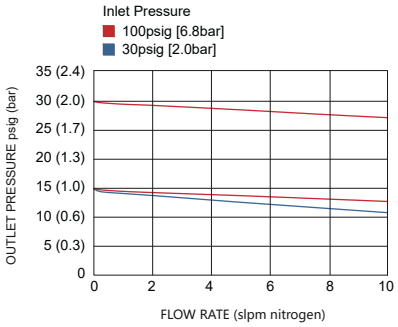
Product Feature

- Single-stage pressure regulator
- 10µin. Ra surface finish (25µin. Ra optional)
- Minimized internal volume for short purge times
- All materials used meet ASTM A479 / A484 / A276 standards
- Internal connectors for pressure gauges
- Flow capacity: to 15 slpm (standard), to 30 slpm (optional)
- 100% helium-leak-tested

Dimensions (mm)

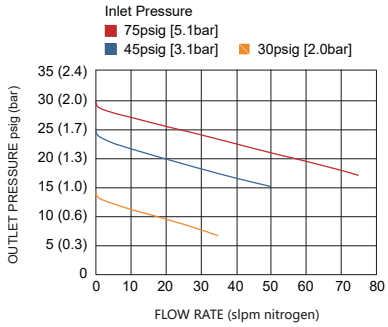


Flowchart



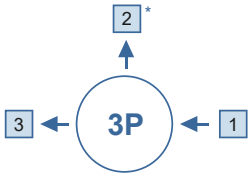
Technical Data

Type:	single-stage
Inlet pressure P_1:	Vacuum to 150 psig
Outlet pressure P_2:	10/30/60/100 psig
Surface finish:	10µin. Ra (25µin. Ra optional)
Materials	
Body:	see ordering info
Valve seat:	PCTFE (Vespel® optional)
Diaphragm:	Hastelloy® C276
Inlets and Outlets:	1/4" VFS fitting and tube weld
Temperature range:	-40°F to +160°F (-40°C to +71°C)
Leak rate: (to atmosphere)	$1x10^{-9}$ mbar l/s He
(via seat)	$1x10^{-8}$ mbar l/s He
Flow capacity:	Cv=0.06 (Cv=0.1 optional)
Supply pressure effect:	0.2 psig rise in delivery pressure per 20 psig source pressure drop @Cv=0.06 0.4 psig rise in delivery pressure per 20 psig source pressure drop @Cv=0.1
Weight:	approx. 1.25kg



VIGOUR
we offer solutions regarding your ideas!

Ordering Information



* port for gauge

Inlet/outlet Connection

FV4: 1/4" VFS female
MV4: 1/4" VFS male
TW4: 1/4" tube weld
P: gauge (1/4" VFS fitting)

* Other connection standard,consult factory

Port Selection

VSR - 50UBPS - 10 - 7 - 3P - 1 - 2 - 3 -R25-HF-VS

Installation

None: bottom mount
P: panel mount *

* Panel hole Φ36mm

Materials

S: 316L
SHP: 316L body and nozzle
Hastelloy® C22 poppet

*All options diaphragm material is Hastelloy® C276

Inlet Pressure

10: 150 psig

Outlet Pressure

V0.7: Vac to 10 psig*
V2: Vac to 30 psig*
V4: Vac to 60 psig*
V7: Vac to 100 psig*
0.7: to 10 psig *
2: to 30 psig
4: to 60 psig
7: to 100 psig

* With the V option, the negative pressure can not be adjusted, only the pressure gauge shows the negative pressure.

Valve seat Option

None: PCTFE
VS: Vespel®

Cv Option

None: Cv=0.06
HF: Cv=0.1

Surface Finish

None: 10 μin. Ra
R25: 25 μin. Ra

Port Config

2P: 2 ports
3P: 3 ports

Ordering Example

VSR - 50UBS - 10 - 7- FV4 - P - FV4

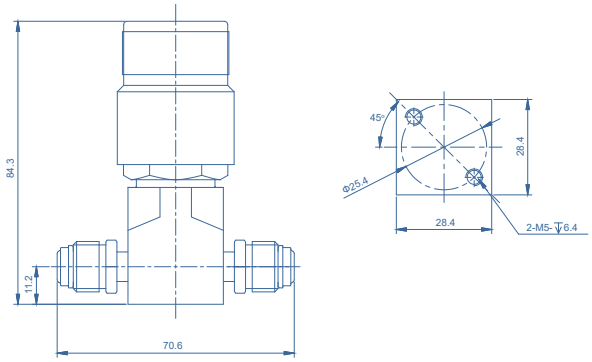
1 - 2 - 3

Single Stage Pressure Regulators
VSR-50UC Series

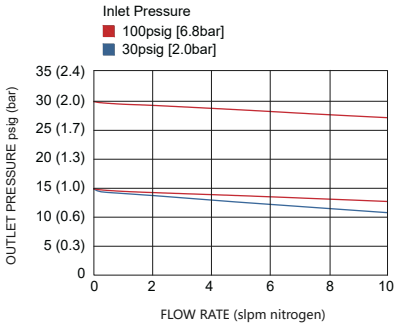
Product Feature

- Single-stage pressure regulator
- 15μin. Ra max, 10μin Ra average surface finish
  (10μin. Ra max, 7μin. Ra max. 5μin. Ra max optional)
- Minimized internal volume for short purge times
- All materials used meet ASTM A479 / A484 / A276 standards
- Internal connectors for pressure gauges
- Flow capacity: to 15 slpm (standard), to 30 slpm (optional)
- 100% helium-leak-tested

Dimensions (mm)

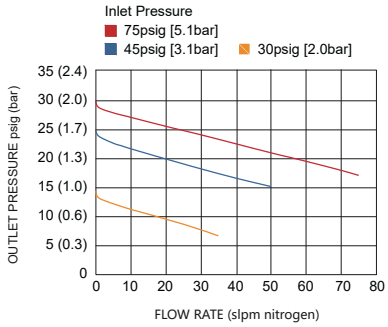


Flowchart



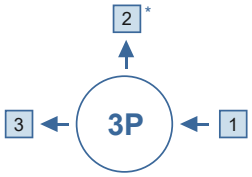
Technical Data

Type:	single-stage
Inlet pressure P_1:	Vacuum to 150 psig
Outlet pressure P_2:	10/30/60/100 psig
Surface finish:	15μin. Ra max, 10μin Ra average surface finish (10μin. Ra max, 7μin. Ra max. 5μin. Ra max optional)
Materials	
Body:	see ordering info
Valve seat:	PCTFE (Vespel® optional)
Diaphragm:	Hastelloy® C276
Inlets and Outlets:	1/4" VFS fitting and tube weld
Temperature range:	-40°F to +160°F (-40°C to +71°C)
Leak rate: (to atmosphere)	$1x10^{-9}$ mbar l/s He
(via seat)	$1x10^{-8}$ mbar l/s He
Flow capacity:	Cv=0.06 (Cv=0.1 optional)
Supply pressure effect:	0.2 psig rise in delivery pressure per 20 psig source pressure drop @Cv=0.06 0.4 psig rise in delivery pressure per 20 psig source pressure drop @Cv=0.1
Weight:	approx. 1.25kg



VIGOUR
we offer solutions regarding your ideas!

Ordering Information



* port for gauge

Inlet/outlet Connection

FV4: 1/4" VFS female
MV4: 1/4" VFS male
TW4: 1/4" tube weld
P: gauge (1/4" VFS fitting)

* Other connection standard,consult factory

Port Selection

VSR - 50UCPS - 10 - 7 - 3P - 1 - 2 - 3 -R5-HF-VS

Installation

None: bottom mount
P: panel mount *

* Panel hole Φ36mm

Materials

S: 316L secondary remelt
SHP: 316L body and nozzle
Hastelloy® C22 poppet

*All options diaphragm material is Hastelloy® C276

Inlet Pressure

10: 150 psig

Outlet Pressure

V0.7: Vac to 10 psig*
V2: Vac to 30 psig*
V4: Vac to 60 psig*
V7: Vac to 100 psig*
0.7: to 10 psig *
2: to 30 psig
4: to 60 psig
7: to 100 psig

* With the V option, the negative pressure can not be adjusted, only the pressure gauge shows the negative pressure.

Valve seat Option

None: PCTFE
VS: Vespel®

Cv Option

None: Cv=0.06
HF: Cv=0.1

Surface Finish

None: 15 μin. Ra max
R10: 10 μin. Ra max
R7: 7 μin. Ra max
R5: 5 μin. Ra max

Port Config

2P: 2 ports
3P: 3 ports

Ordering Example

VSR - 50UCS - 10 - 7- FV4 - P - FV4

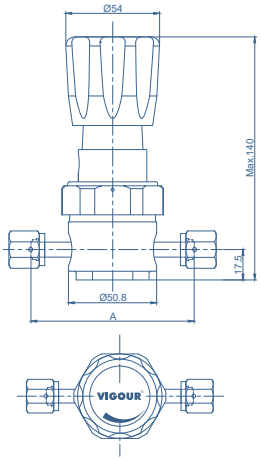
1 - 2 - 3

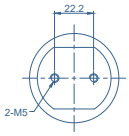
Single Stage Pressure Regulators
VSR-100UB Series

Product Feature

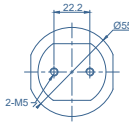
- Single-stage pressure regulator
- 10μin. Ra surface finish (25μin. Ra optional)
- Minimized internal volume for short purge times
- All materials used meet ASTM A479 / A484 / A276 standards
- Internal connectors for pressure gauges
- Flow capacity: to 30 slpm (standard), to 120 slpm (optional)
- High control accuracy
- Metal-to-metal seal to atmosphere
- Simple outlet pressure limitation by hand-wheel
- 100% helium-leak-tested

Dimensions (mm)





body of 2 ports



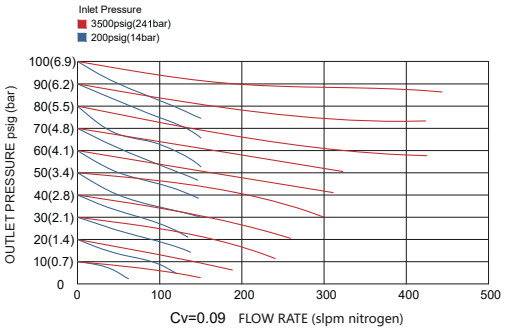
body of 3&4 ports

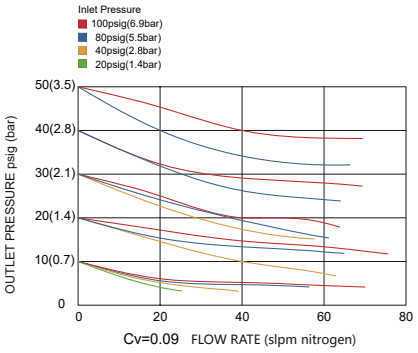
Connections	A	
	inch	(mm)
FV4	3.70	(94.0)
MV4		
TW4	2.96	(75.2)
FV6	4.70	(119.4)
MV6		
TW6	2.96	(75.2)

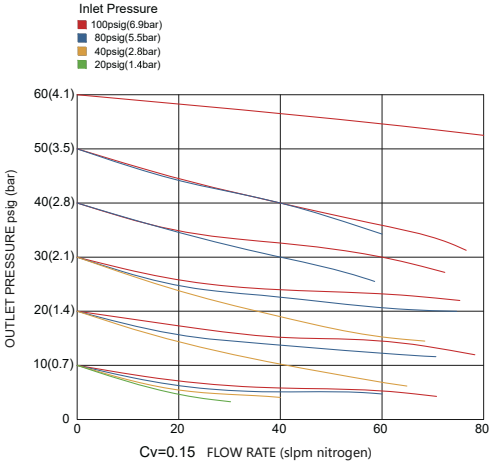
Technical Data

Type:	single-stage
Inlet pressure P_1:	max. 3500 psig
Outlet pressure P_2:	10/30/60/100/150 psig
Surface finish:	10μin. Ra (25μin. Ra optional)
Materials	
Body:	see ordering info
Valve seat:	PCTFE (Vespel® optional)
Diaphragm:	Hastelloy® C276
Inlets and Outlets:	1/4" / 3/8" VFS fitting and tube weld
Bonnet port:	1/8" NPT (on panel mount option, bonnet port is not threaded)
Temperature range:	-40°F to +160°F (-40°C to +71°C)
Leak rate: (to atmosphere)	$1x10^{-9}$ mbar l/s He
(via seat)	$1x10^{-8}$ mbar l/s He
Flow capacity:	Cv=0.09 (Cv=0.15 optional)
Supply pressure effect:	0.35 psig rise in delivery pressure per 100 psig source pressure drop @Cv=0.09
	0.5psig rise in delivery pressure per 100 psig source pressure drop @Cv=0.15
Weight:	approx. 1.35kg

Flowchart

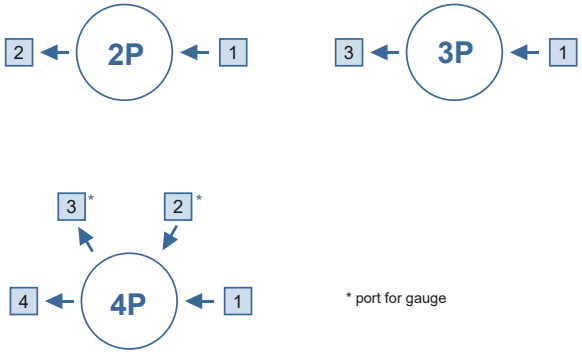






VIGOUR
we offer solutions regarding your ideas!

Ordering Information



Inlet/outlet Connection

FV4: 1/4" VFS female	IFV4: 1/4" (gauge female threaded connection machined on the body)	P: gauge (1/4" VFS fitting)
MV4: 1/4" VFS male		IP: gauge (IFV4 fitting)
FV6: 3/8" VFS female	TW4: 1/4" tube weld	
MV6: 3/8" VFS male	TW6: 3/8" tube weld	

* Other connection standard,consult factory

Port Selection

VSR - 100UBPS - 250 - 10 - 4P - 1 - 2 - 3 - 4 -R25-HF-VS

Installation

None: bottom mount
P: panel mount *

* Panel hole Φ36mm

Materials

S: 316L
SHP: 316L body and nozzle
Hastelloy® C22 poppet

*All options diaphragm material is Hastelloy® C276

Inlet Pressure

20: 300 psig
250: 3500 psig

Outlet Pressure

V0.7: Vac to 10 psig*
V2: Vac to 30 psig*
V4: Vac to 60 psig*
V7: Vac to 100 psig*
V10: Vac to 150 psig*
0.7: to 10 psig*
2: to 30 psig
4: to 60 psig
7: to 100 psig
10: to 150 psig

* When the outlet pressure is "V0.7" and "0.7", the inlet pressure can only be "20".

* With the V option, the negative pressure can not be adjusted, only the pressure gauge shows the negative pressure.

Valve seat Option

None: PCTFE
VS: Vespel®

Cv Option

None: Cv=0.09
HF: Cv=0.15

Surface Finish

None: 10 μin. Ra
R25: 25 μin. Ra

Port Config

2P: 2 ports
3P: 3 ports
4P: 4 ports

Ordering Example

VSR - 100UBS - 250 - 10 - FV4 - P - P - FV4

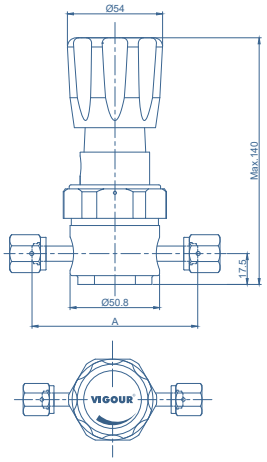
1 - 2 - 3 - 4

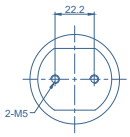
Single Stage Pressure Regulators
VSR-100UC Series

Product Feature

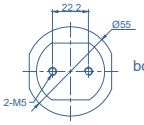
- Single-stage pressure regulator
- 15μin. Ra max, 10μin Ra average surface finish (10μin. Ra max, 7μin. Ra max. 5μin. Ra max optional)
- Minimized internal volume for short purge times
- All materials used meet ASTM A479 / A484 / A276 standards
- Internal connectors for pressure gauges
- Flow capacity: to 30 slpm (standard), to 120 slpm (optional)
- High control accuracy
- Metal-to-metal seal to atmosphere
- Simple outlet pressure limitation by hand-wheel
- 100% helium-leak-tested

Dimensions (mm)





body of 2 ports



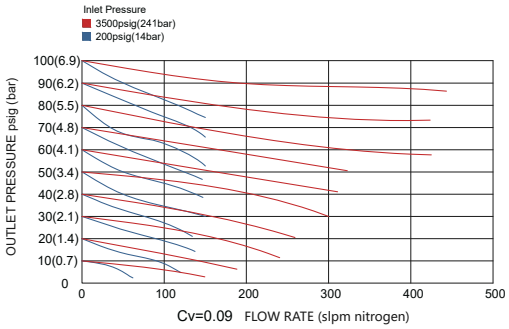
body of 3&4 ports

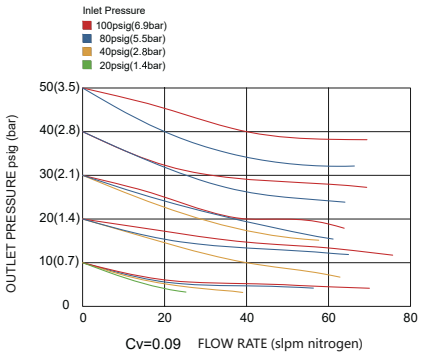
Connections	A	
	inch	(mm)
FV4	3.70	(94.0)
MV4		
TW4	2.96	(75.2)
FV6	4.70	(119.4)
MV6		
TW6	2.96	(75.2)

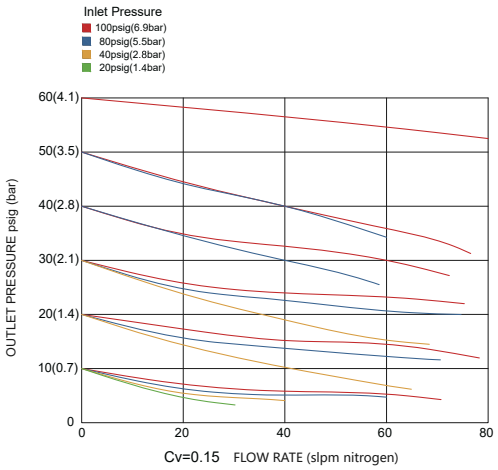
Technical Data

Type:	single-stage
Inlet pressure P_1:	max. 3500 psig
Outlet pressure P_2:	10/30/60/100/150 psig
Surface finish:	15μin. Ra max/10μin. Ra avg (10μin. Ra max, 7μin. Ra max, 5μin. Ra max optional)
Materials	
Body:	see ordering info
Valve seat:	PCTFE (Vespel® optional)
Diaphragm:	Hastelloy® C276
Inlets and Outlets:	1/4" / 3/8" VFS fitting and tube weld
Bonnet port:	1/8" NPT (on panel mount option, bonnet port is not threaded)
Temperature range:	-40°F to +160°F (-40°C to +71°C)
Leak rate: (to atmosphere)	$1x10^{-9}$ mbar l/s He
(via seat)	$1x10^{-8}$ mbar l/s He
Flow capacity:	Cv=0.09 (Cv=0.15 optional)
Supply pressure effect:	0.35 psig rise in delivery pressure per 100 psig source pressure drop @Cv=0.09
	0.5psig rise in delivery pressure per 100 psig source pressure drop @Cv=0.15
Weight:	approx. 1.35kg

Flowchart

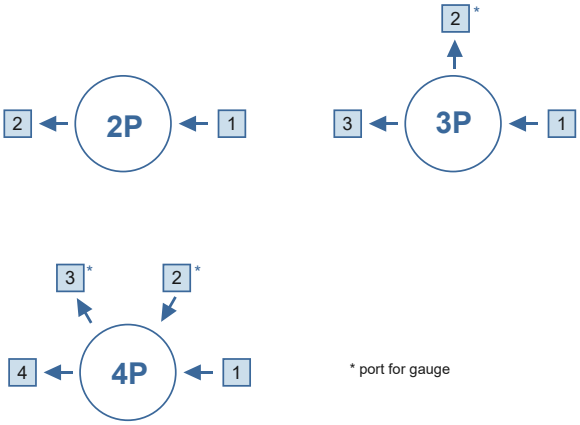






VIGOUR
we offer solutions regarding your ideas!

Ordering Information



* port for gauge

Inlet/outlet Connection

FV4: 1/4" VFS female	IFV4: 1/4" (gauge female threaded connection machined on the body)	P: gauge (1/4" VFS fitting)
MV4: 1/4" VFS male	TW4: 1/4" tube weld	IP: gauge (IFV4 fitting)
FV6: 3/8" VFS female	TW6: 3/8" tube weld	
MV6: 3/8" VFS male		

* Other connection standard,consult factory

Port Selection

VSR - 100UC PS - 250 - 10 - 4P - 1 - 2 - 3 - 4 -R5-HF-VS

Installation

None: bottom mount
P: panel mount

* Panel hole Φ36mm

Materials

S: 316L secondary remelt body 316L poppet and nozzle
SH: 316L secondary remelt body Hastelloy® C22 internals
SHP: 316L secondary remelt body Hastelloy® C22 poppet 316L nozzle
H: Hastelloy® C22 body and internals

*All options diaphragm material is Hastelloy® C276

Inlet Pressure

20: 300 psig
250: 3500 psig

Port Config

2P: 2 ports
3P: 3 ports
4P: 4 ports

Outlet Pressure

V0.7: Vac to 10 psig*
V2: Vac to 30 psig*
V4: Vac to 60 psig*
V7: Vac to 100 psig*
V10: Vac to 150 psig*
0.7: to 10 psig *
2: to 30 psig
4: to 60 psig
7: to 100 psig
10: to 150 psig

* When the outlet pressure is "V0.7" and "0.7", the inlet pressure can only be "20".

* With the V option, the negative pressure can not be adjusted, only the pressure gauge shows the negative pressure.

Valve seat Option

None: PCTFE
VS: Vespel®

Cv Option

None: Cv=0.09
HF: Cv=0.15

Surface Finish

None: 15 μin. Ra max
R10: 10 μin. Ra max
R7: 7 μin. Ra max
R5: 5 μin. Ra max

Ordering Example

VSR - 100UCS - 250 - 10 - 4P - FV4 - P - P - FV4

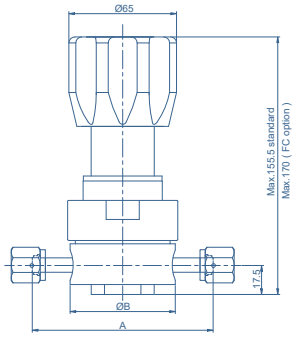
1 - 2 - 3 - 4

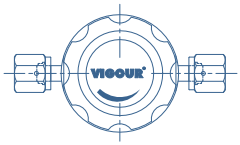
Single Stage Pressure Regulators
VSR-210UB Series

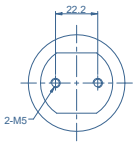
Product Feature

- Single-stage pressure regulator
- 10μin. Ra surface finish (25μin. Ra optional)
- Minimized internal volume for short purge times
- All materials used meet ASTM A479 / A484 / A276 standards
- Internal connectors for pressure gauges
- Force conpensation has wider flow cupacity
- High control accuracy
- Metal-to-metal seal to atmosphere
- Simple outlet pressure limitation by hand-wheel
- 100% helium-leak-tested
- Tied-diaphragm design

Dimensions (mm)





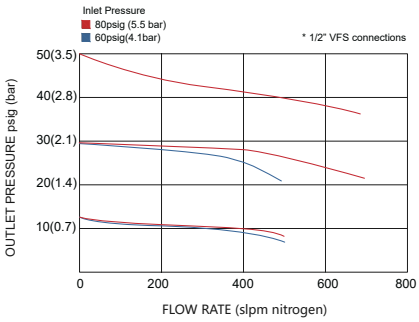


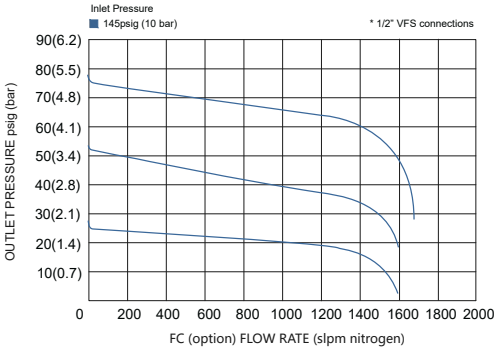
Connections	B	A	
		inch	(mm)
FV4	50.8	3.70	(94.0)
MV4		4.00	(101.6)
TW4		3.46	(87.9)
FV6	63.5	5.22	(132.6)
MV6			
TW6		4.00	(101.6)
FV8		5.22	(132.6)
MV8			
TW8		4.34	(110.2)

Technical Data

Type:	single-stage
Inlet pressure P_1:	max. 3000 psig
Outlet pressure P_2:	30/60/100/150/250 psig
Surface finish:	10μin. Ra (25μin. Ra optional)
Materials	
Body:	see ordering info
Valve seat:	PCTFE (Vespel® optional)
Diaphragm:	Hastelloy® C276
Inlets and Outlets:	1/4" / 3/8" or 1/2" VFS fitting or tube weld
Bonnet port:	1/8" NPT(F) (on panel mount option, bonnet port is not threaded)
Temperature range:	-40°F to +160°F (-40°C to +71°C)
Leak rate: (to atmosphere)	$1x10^{-9}$ mbar l/s He
(via seat)	$1x10^{-8}$ mbar l/s He
Flow capacity:	Cv=0.65, Cv=1.1 (HF option)
Supply pressure effect:	3.5 psig rise in delivery pressure per 100 psig source pressure drop
	4.2 psig rise in delivery pressure per 100 psig source pressure drop (FC option)
Weight:	approx. 2.0kg

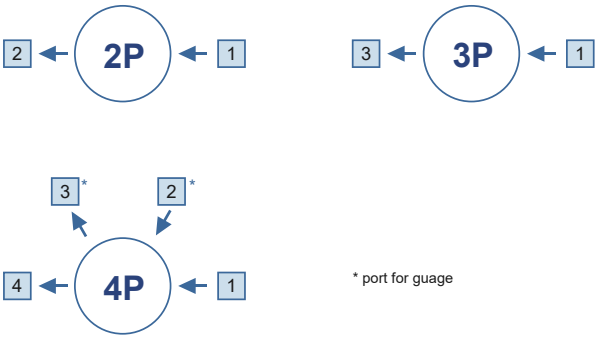
Flowchart





VIGOUR
we offer solutions regarding your ideas!

Ordering Information



* port for guage

Inlet/Outlet Connection

FV4: 1/4" VFS female	FV8: 1/2" VFS female	TW4: 1/4" tube weld
MV4: 1/4" VFS male	MV8: 1/2" VFS male	TW6: 3/8" tube weld
FV6: 3/8" VFS female	IFV4: 1/4" (gauge female threaded connection	TW8: 1/2" tube weld
MV6: 3/8" VFS male	machined on the body)	P: gauge (1/4" VFS fitting)
		IP: gauge (IFV4 fitting)

* Other connection standard,consult factory

Port Selection

VSR - 210UBPS - 117 - V4 - 4P - 1 - 2 - 3 - 4 - R25-HF-FC-VS

Installation

None: bottom mount
P: panel mount

* Panel hole Φ37mm

Materials

S: 316L
SHP: 316L body
Hastelloy® C22 poppet

*All options diaphragm material is Hastelloy® C276

Inlet Pressure

20: 300 psig
117: 1700 psig (standard)
200: 3000 psig*

* Not available with outlet pressure: V2 / V4 / 2 / 4

Port Config

2P: 2 ports
3P: 3 ports
4P: 4 ports

Outlet Pressure

V2: Vac to 30 psig*
V4: Vac to 60 psig*
V7: Vac to 100 psig*
V10: Vac to 150 psig*
2: to 30 psig
4: to 60 psig
7: to 100 psig
10: to 150 psig
P17: Preset to 250 psig*

* 250 psig outlet pressure preset at 800 psig (55 bar) inlet pressure.

* With the V option, the negative pressure can not be adjusted, only the pressure gauge shows the negative pressure.

Valve seat Option

None: PCTFE
VS: Vespel®

Option

FC: Force compensation

* Force conpensation feature inlet pressure Max. 300 psig

* FC option is available with connection size 1/2 inch

* Not available with outlet pressure: V2 / V4 / 2 / 4

Cv Option

None: Cv=0.65
HF: Cv=1.1

Surface Finish

None: 10 μin. Ra
R25: 25 μin. Ra

Ordering Example

VSR - 210UBS - 117 - V4 - 2P - MV4 - MV4

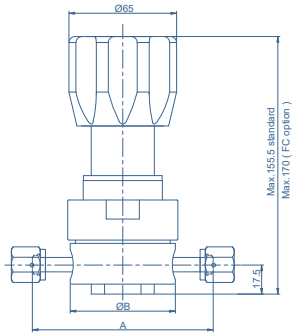
1 - 2

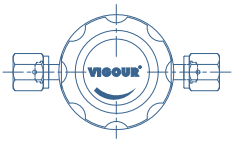
Single Stage Pressure Regulators
VSR-210UC Series

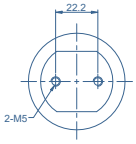
Product Feature

- Single-stage pressure regulator
- 15μin. Ra max, 10μin. Ra average surface finish (10μin. Ra max, 7μin. Ra max, 5μin. Ra max optional)
- Minimized internal volume for short purge times
- All materials used meet ASTM A479 / A484 / A276 standards
- Internal connectors for pressure gauges
- Force conpensation has wider flow cupacity
- High control accuracy
- Metal-to-metal seal to atmosphere
- Simple outlet pressure limitation by hand-wheel
- 100% helium-leak-tested
- Tied-diaphragm design

Dimensions (mm)





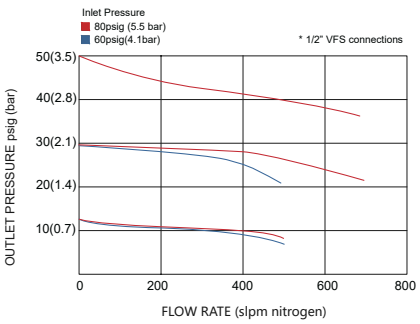


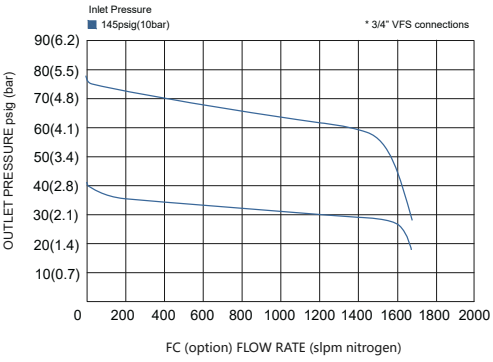
Connections	B	A	
		inch	(mm)
FV4	50.8	3.70	(94.0)
MV4		4.00	(101.6)
TW4		3.46	(87.9)
FV6	63.5	5.22	(132.6)
MV6			
TW6		4.00	(101.6)
FV8		5.22	(132.6)
MV8			
TW8		4.34	(110.2)
FV12		6.26	(159.0)
MV12			
TW12		5.00	(127.0)

Technical Data

Type:	single-stage
Inlet pressure P_1:	max. 3000 psig
Outlet pressure P_2:	30/60/100/150/250 psig
Surface finish:	15μin. Ra max / 10μin. Ra avg (10μin. Ra max., 7μin. Ra max., 5μin. Ra max optional)
Materials	
Body:	see ordering info
Valve seat:	PCTFE (Vespel® optional)
Diaphragm:	Hastelloy® C276
Inlets and Outlets:	1/4" / 3/8" / 1/2" or 3/4" VFS fitting or tube weld
Bonnet port:	1/8" NPT(F) (on panel mount option, bonnet port is not threaded)
Temperature range:	-40°F to +160°F (-40°C to +71°C)
Leak rate: (to atmosphere)	$1x10^{-9}$ mbar l/s He
(via seat)	$1x10^{-8}$ mbar l/s He
Flow capacity:	Cv=0.65, Cv=1.1 (HF option)
Supply pressure effect:	3.5 psig rise in delivery pressure per 100 psig source pressure drop 4.2 psig rise in delivery pressure per 100 psig source pressure drop (FC option)
Weight:	approx. 2.0kg

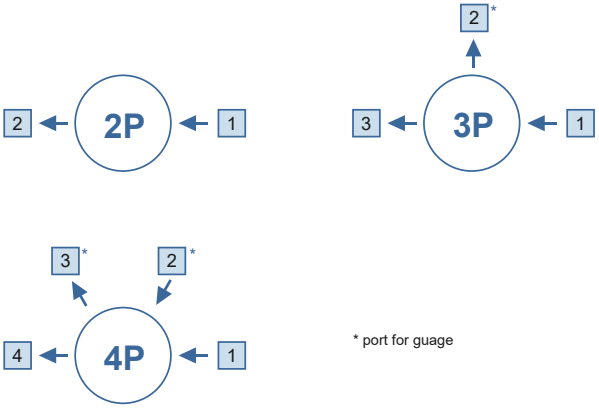
Flowchart





VIGOUR
we offer solutions regarding your ideas!

Ordering Information



* port for guage

Inlet/outlet Connection

FV4: 1/4" VFS female	MV8: 1/2" VFS male	TW4: 1/4" tube weld
MV4: 1/4" VFS male	FV12: 3/4" VFS female	TW6: 3/8" tube weld
FV6: 3/8" VFS female	MV12: 3/4" VFS male	TW8: 1/2" tube weld
MV6: 3/8" VFS male	IFV4: 1/4" (gauge female threaded connection machined on the body)	TW12: 3/4" tube weld
FV8: 1/2" VFS female		P: gauge (1/4" VFS fitting)
		IP: gauge (IFV4 fitting)

* Other connection standard,consult factory

Port Selection

VSR - 210UCPS-117-V4-4P- 1 - 2 - 3 - 4 - R5-HF-FC-VS

Installation

None: bottom mount
P: panel mount

* Panel hole Φ37mm

Materials

S: 316L secondary remelt body
316L poppet and nozzle
SH: 316L secondary remelt body
Hastelloy® C22 internals
SHP: 316L secondary remelt body
Hastelloy® C22 poppet
316L nozzle

*All options diaphragm material is Hastelloy® C276

Inlet Pressure

20: 300 psig
117: 1700 psig (standard)
200: 3000 psig*

* Not available with outlet pressure: V2 / V4 / 2 / 4

Port Config

2P: 2 ports
3P: 3 ports
4P: 4 ports

Outlet Pressure

V2: Vac to 30 psig*
V4: Vac to 60 psig*
V7: Vac to 100 psig*
V10: Vac to 150 psig*
2: to 30 psig
4: to 60 psig
7: to 100 psig
10: to 150 psig
P17: Preset to 250 psig*

* 250 psig outlet pressure preset at 800 psig (55 bar) inlet pressure.

* With the V option, the negative pressure can not be adjusted, only the pressure gauge shows the negative pressure.

Valve seat Option

None: PCTFE
VS: Vespel®

Option

FC: Force compensation

* Force conpensation feature inlet pressure Max. 300 psig
* FC option is available with connection size 1/2 or 3/4 inch
* Not available with outlet pressure: V2 / V4 / 2 / 4
* connection size 3/4 inch Max. 2400 psig

Cv Option

None: Cv=0.65
HF: Cv=1.1

Surface Finish

None: 15 μin. Ra max
R10: 10 μin. Ra max
R7: 7 μin. Ra max
R5: 5 μin. Ra max

Ordering Example

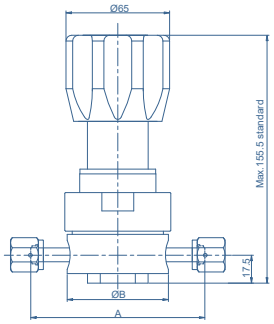
VSR - 210UCS - 117 - V4 - 2P - MV4 - FV4
1 - 2

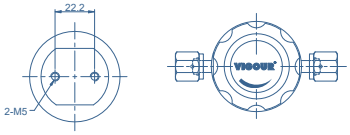
Single Stage Pressure Regulators
VSR-410UB Series

Product Feature

- Single-stage pressure regulator
- 10μin. Ra surface finish (25μin. Ra optional)
- Minimized internal volume for short purge times
- All materials used meet ASTM A479 / A484 / A276 standards
- Internal connectors for pressure gauges
- High inlet pressure type: Max. 3000 psig
- High control accuracy
- Metal-to-metal seal to atmosphere
- Simple outlet pressure limitation by hand-wheel
- 100% helium-leak-tested
- Tied-diaphragm design
- Sub-atmospheric pressure delivery optional

Dimensions (mm)



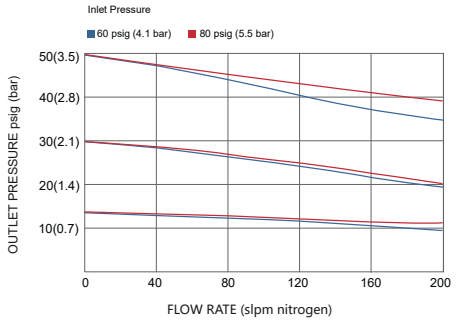


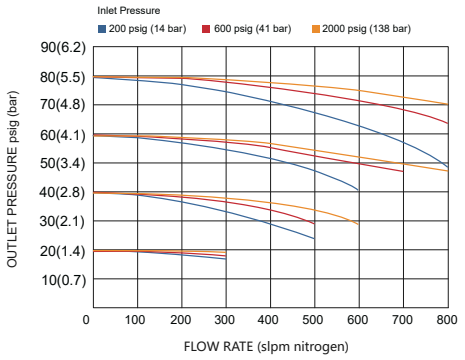
Connections	B	A	
		inch	(mm)
FV4	50.8	3.70	(94.0)
MV4		4.00	(101.6)
TW4		3.46	(87.9)
FV6	63.5	5.22	(132.6)
MV6			
TW6		4.00	(101.6)
FV8		5.22	(132.6)
MV8			
TW8		4.34	(110.2)

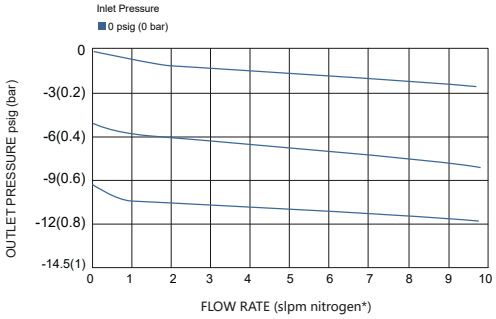
Technical Data

Type:	single-stage
Inlet pressure P_1:	max. 3000 psig
Outlet pressure P_2:	-12.5~30/30/60/100/150 psig
Surface finish:	10μin. Ra (25μin. Ra optional)
Materials	
Body:	see ordering info
Valve seat:	PCTFE (Vespel® optional)
Diaphragm:	Hastelloy® C276
Inlets and Outlets:	1/4" / 3/8" or 1/2" VFS fitting or tube weld
Bonnet port:	1/8" NPT(F) (on panel mount option, bonnet port is not threaded)
Temperature range:	-40°F to +160°F (-40°C to +71°C)
Leak rate: (to atmosphere)	$1x10^{-9}$ mbar l/s He
(via seat)	$1x10^{-8}$ mbar l/s He
Flow capacity:	Cv=0.45
Supply pressure effect:	1.6 psig rise in delivery pressure per 100 psig source pressure drop
Weight:	approx. 2.0kg

Flowchart



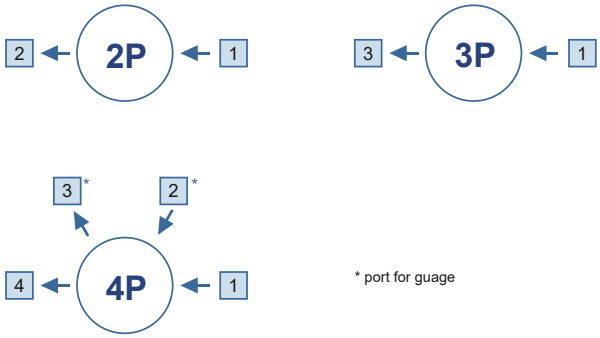




* The volumetric flow rate under normal conditions (0°C, 1 atm) when N_2 gas is flowing.

VIGOUR
we offer solutions regarding your ideas!

Ordering Information



* port for guage

Inlet/Outlet Connection

FV4: 1/4" VFS female	FV8: 1/2" VFS female	TW4: 1/4" tube weld
MV4: 1/4" VFS male	MV8: 1/2" VFS male	TW6: 3/8" tube weld
FV6: 3/8" VFS female	IFV4: 1/4" (gauge female threaded connection	TW8: 1/2" tube weld
MV6: 3/8" VFS male	machined on the body)	P: gauge (1/4" VFS fitting)
		IP: gauge (IFV4 fitting)

* Other connection standard,consult factory

Port Selection

VSR - 410UBPS - 160 - V4 - 4P- 1 - 2 - 3 - 4 - R7 -VS

Installation

None: bottom mount
P: panel mount

* Panel hole Φ40mm

Materials

S: 316L body
Hasterlloy® C22 poppet

*All options diaphragm material is Hastelloy® C276

Inlet Pressure

20: 300 psig
160: 2300 psig (standard)
200: 3000 psig*

* Not available with outlet pressure: VC2 / V2 / V4 / 2 / 4

Port Config

2P: 2 ports
3P: 3 ports
4P: 4 ports

Outlet Pressure

VC2: -12.5~30 psig*
V2: Vac to 30 psig*
V4: Vac to 60 psig*
V7: Vac to 100 psig*
V10: Vac to 150 psig*
2: to 30 psig
4: to 60 psig
7: to 100 psig
10: to 150 psig

* VC2 optional feature inlet pessure Max. 300 psig.

* With the exception of the VC2 option, the V option cannot adjust the negative pressure and can only be presented by the pressure gauge

Valve seat Option

None: PCTFE
VS: Vespel®

Surface Finish

None: 10 μin. Ra
R25: 25 μin. Ra

Ordering Example

VSR - 410UBS - 160 - V4 - 2P - MV4 - MV4

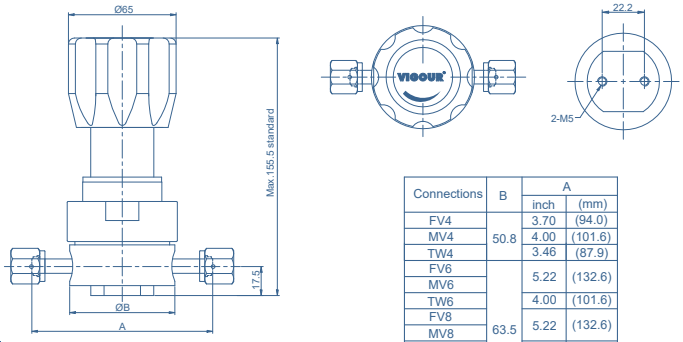
1 - 2

Single Stage Pressure Regulators
VSR-410UC Series

Product Feature

- Single-stage pressure regulator
- 15μin. Ra max, 10μin. Ra average surface finish (10μin. Ra max, 7μin. Ra max, 5μin. Ra max optional)
- Minimized internal volume for short purge times
- All materials used meet ASTM A479 / A484 / A276 standards
- Internal connectors for pressure gauges
- High inlet pressure type: Max. 3000 psig
- High control accuracy
- Metal-to-metal seal to atmosphere
- Simple outlet pressure limitation by hand-wheel
- 100% helium-leak-tested
- Tied-diaphragm design
- Sub-atmospheric pressure delivery option

Dimensions (mm)

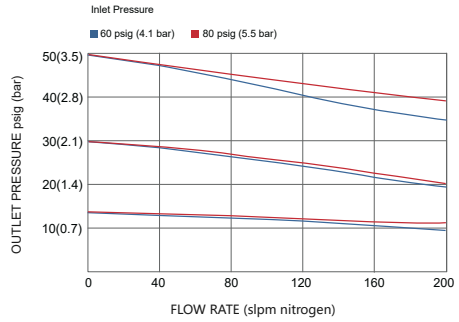


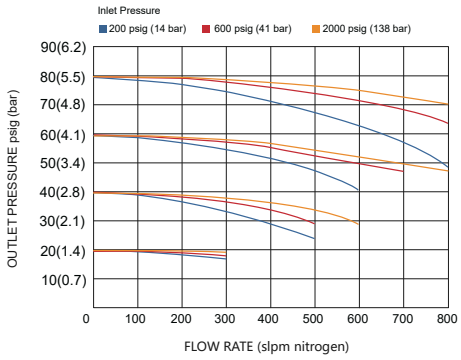
Connections	B	A	
		inch	(mm)
FV4	50.8	3.70	(94.0)
MV4		4.00	(101.6)
TW4		3.46	(87.9)
FV6	63.5	5.22	(132.6)
MV6			
TW6		4.00	(101.6)
FV8		5.22	(132.6)
MV8			
TW8		4.34	(110.2)

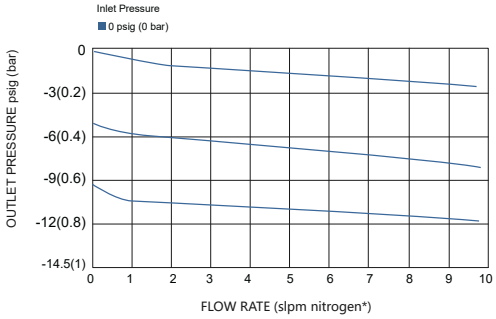
Technical Data

Type:	single-stage
Inlet pressure P_1:	max. 3000 psig
Outlet pressure P_2:	-12.5~30/30/60/100/150 psig
Surface finish:	15μin. Ra max / 10μin. Ra avg (10μin. Ra max., 7μin. Ra max., 5μin. Ra max optional)
Materials	
Body:	see ordering info
Valve seat:	PCTFE (Vespel® optional)
Diaphragm:	Hastelloy® C276
Inlets and Outlets:	1/4" / 3/8" / 1/2" or 3/4" VFS fitting or tube weld
Bonnet port:	1/8" NPT(F) (on panel mount option, bonnet port is not threaded)
Temperature range:	-40°F to +160°F (-40°C to +71°C)
Leak rate: (to atmosphere)	$1x10^{-9}$ mbar l/s He
(via seat)	$1x10^{-8}$ mbar l/s He
Flow capacity:	Cv=0.45
Supply pressure effect:	1.6 psig rise in delivery pressure per 100 psig source pressure drop
Weight:	approx. 2.0kg

Flowchart



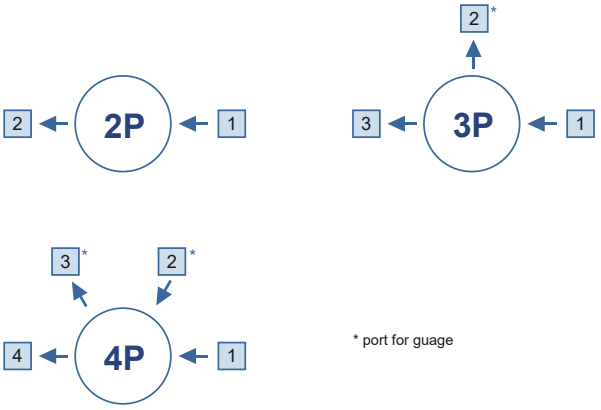




* The volumetric flow rate under normal conditions (0°C, 1 atm) when N_2 gas is flowing.

VIGOUR
we offer solutions regarding your ideas!

Ordering Information



* port for guage

Inlet/outlet Connection

FV4: 1/4" VFS female	FV8: 1/2" VFS female	TW4: 1/4" tube weld
MV4: 1/4" VFS male	MV8: 1/2" VFS male	TW6: 3/8" tube weld
FV6: 3/8" VFS female	IFV4: 1/4" (gauge female threaded connection	TW8: 1/2" tube weld
MV6: 3/8" VFS male	machined on the body)	P: gauge (1/4" VFS fitting)
		IP: gauge (IFV4 fitting)

* Other connection standard,consult factory

Port Selection

VSR - 410UC PS - 117 - V4 - 4P - 1 - 2 - 3 - 4 - R5 - VS

Installation

None: bottom mount
P: panel mount

* Panel hole Φ40mm

Materials

S: 316L secondary remelt body
Hastelloy® C22 poppet
316L nozzle
SH: 316L secondary remelt body
Hastelloy® C22 internals

*All options diaphragm material is Hastelloy® C276

Inlet Pressure

20: 300 psig
160: 2300 psig (standard)
200: 3000 psig*

* Not available with outlet pressure: VC2 / V2 / V4 / 2 / 4

Port Config

2P: 2 ports
3P: 3 ports
4P: 4 ports

Outlet Pressure

VC2: -12.5~30 psig*
V2: Vac to 30 psig*
V4: Vac to 60 psig*
V7: Vac to 100 psig*
V10: Vac to 150 psig*
2: to 30 psig
4: to 60 psig
7: to 100 psig
10: to 150 psig

* VC2 optional feature inlet pessure Max. 300 psig.

* With the exception of the VC2 option, the V option cannot adjust the negative pressure and can only be presented by the pressure gauge

Valve seat Option

None: PCTFE
VS: Vespel®

Surface Finish

None: 15 µin. Ra max
R10: 10 µin. Ra max
R7: 7 µin. Ra max
R5: 5 µin. Ra max

Ordering Example

VSR - 410UCS - 160 - V4 - 2P - MV4 - FV4

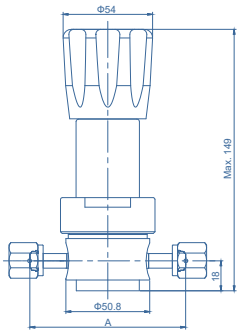
1 - 2

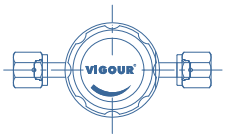
Single Stage Pressure Regulators
VSR-510UB Series

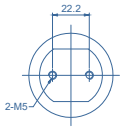
Product Feature

- Single-stage pressure regulator
- 10μin. Ra surface finish (25μin. Ra optional)
- Minimized internal volume for short purge times
- All materials used meet ASTM A479 / A484 / A276 standards
- Internal connectors for pressure gauges
- Flow capacity: to 30 slpm (standard), to 120 slpm (optional)
- High control accuracy
- Metal-to-metal seal to atmosphere
- Simple outlet pressure limitation by hand-wheel
- 100% helium-leak-tested
- Tied-diaphragm design

Dimensions (mm)

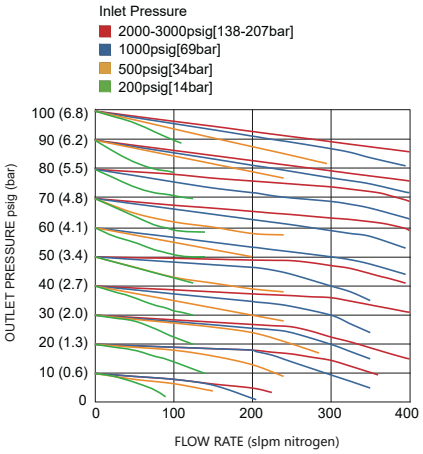


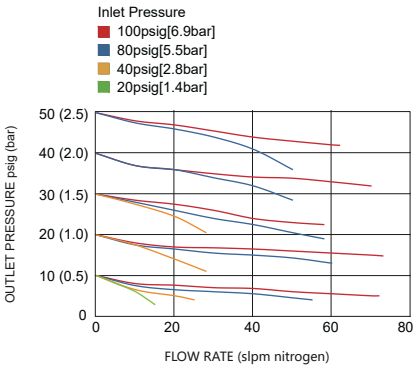




Connections	A	
	inch	(mm)
FV4	3.70	(94.0)
MV4		
TW4	2.96	(75.2)
FV6	4.70	(119.4)
MV6		
TW6	2.96	(75.2)

Flowchart

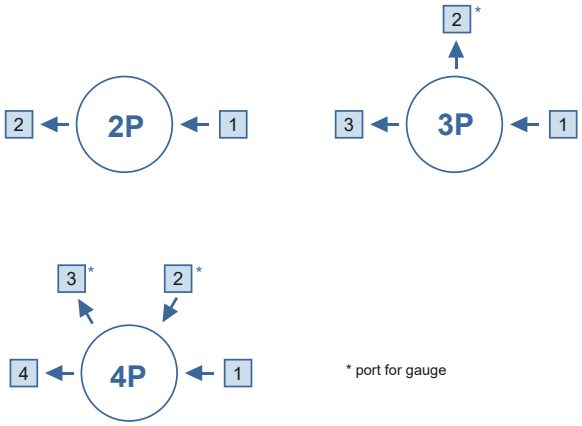




Technical Data

Type:	single-stage
Inlet pressure P_1:	max. 3500 psig
Outlet pressure P_2:	10/30/60/100/150 psig
Surface finish:	10μin. Ra (25μin. Ra optional)
Materials	
Body:	see ordering info
Valve seat:	PCTFE (Vespel® optional)
Diaphragm:	Hastelloy® C276
Inlets and Outlets:	1/4" / 3/8" VFS fitting and tube weld
Bonnet port:	1/8" NPT (on panel mount option, bonnet port is not threaded)
Temperature range:	-40°F to +160°F (-40°C to +71°C)
Leak rate: (to atmosphere)	$1x10^{-9}$ mbar l/s He
(via seat)	$1x10^{-8}$ mbar l/s He
Flow capacity:	Cv=0.09 (Cv=0.15 optional)
Supply pressure effect:	0.35 psig rise in delivery pressure per 100 psig source pressure drop @Cv=0.09 0.5psig rise in delivery pressure per 100 psig source pressure drop @Cv=0.15
Weight:	approx. 1.35kg

Ordering Information



Inlet/outlet Connection

FV4: 1/4" VFS female	IFV4: 1/4" (gauge female threaded connection machined on the body)	P: gauge (1/4" VFS fitting)
MV4: 1/4" VFS male	TW4: 1/4" tube weld	IP: gauge (IFV4 fitting)
FV6: 3/8" VFS female	TW6: 3/8" tube weld	
MV6: 3/8" VFS male		

* Other connection standard,consult factory

Port Selection

VSR - 510UBPS - 250 - 10 - 4P - 1 - 2 - 3 - 4 -R25-HF-VS

Installation

None: bottom mount
P: panel mount *

* Panel hole Φ36mm

Materials

S: 316L
SHP: 316L body and nozzle Hastelloy® C22 poppet
H: Hastlloy body

*All options diaphragm material is Hastelloy® C276

Inlet Pressure

20: 300 psig
250: 3500 psig

Outlet Pressure

V2: Vac to 30 psig*
V4: Vac to 60 psig*
V7: Vac to 100 psig*
V10: Vac to 150 psig*
2: to 30 psig
4: to 60 psig
7: to 100 psig
10: to 150 psig

* With the V option, the negative pressure can not be adjusted, only the pressure gauge shows the negative pressure.

Valve seat Option

None: PCTFE
VS: Vespel®

Cv Option

None: Cv=0.09
HF: Cv=0.15

Surface Finish

None: 10 μin. Ra
R25: 25 μin. Ra

Port Config

2P: 2 ports
3P: 3 ports
4P: 4 ports

Ordering Example

VSR - 510UBS - 250 - 10 - FV4 - P - P - FV4

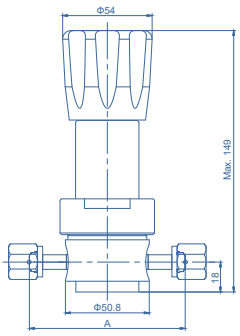
1 - 2 - 3 - 4

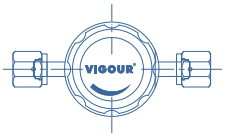
Single Stage Pressure Regulators
VSR-510UC Series

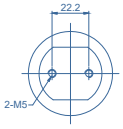
Product Feature

- Single-stage pressure regulator
- 15μin. Ra max, 10μin Ra average surface finish
  (10μin. Ra max, 7μin. Ra max. 5μin. Ra max optional)
- Minimized internal volume for short purge times
- All materials used meet ASTM A479 / A484 / A276 standards
- Internal connectors for pressure gauges
- Flow capacity: to 30 slpm (standard), to 120 slpm (optional)
- High control accuracy
- Metal-to-metal seal to atmosphere
- Simple outlet pressure limitation by hand-wheel
- 100% helium-leak-tested
- Tied-diaphragm design

Dimensions (mm)

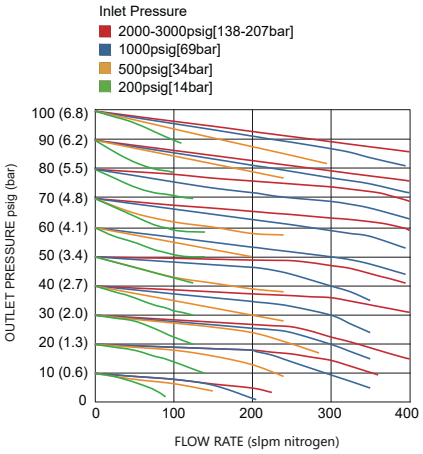


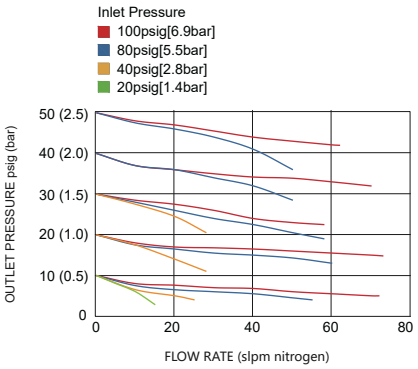




Connections	A	
	inch	(mm)
FV4	3.70	(94.0)
MV4		
TW4	2.96	(75.2)
FV6	4.70	(119.4)
MV6		
TW6	2.96	(75.2)

Flowchart



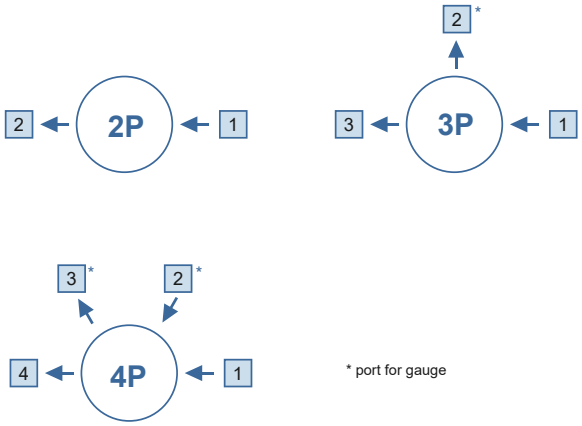


Technical Data

Type:	single-stage
Inlet pressure P_1:	max. 3500 psig
Outlet pressure P_2:	10/30/60/100/150 psig
Surface finish:	15μin. Ra max, 10μin Ra average surface finish (10μin. Ra max, 7μin. Ra max. 5μin. Ra max optional)
Materials	
Body:	see ordering info
Valve seat:	PCTFE (Vespel® optional)
Diaphragm:	Hastelloy® C276
Inlets and Outlets:	1/4" / 3/8" VFS fitting and tube weld
Bonnet port:	1/8" NPT (on panel mount option, bonnet port is not threaded)
Temperature range:	-40°F to +160°F (-40°C to +71°C)
Leak rate: (to atmosphere)	$1x10^{-9}$ mbar l/s He
(via seat)	$1x10^{-8}$ mbar l/s He
Flow capacity:	Cv=0.09 (Cv=0.15 optional)
Supply pressure effect:	0.35 psig rise in delivery pressure per 100 psig source pressure drop @Cv=0.09 0.5psig rise in delivery pressure per 100 psig source pressure drop @Cv=0.15
Weight:	approx. 1.35kg

VIGOUR
we offer solutions regarding your ideas!

Ordering Information



Inlet/outlet Connection

FV4: 1/4" VFS female	IFV4: 1/4" (gauge female threaded connection machined on the body)	P: gauge (1/4" VFS fitting)
MV4: 1/4" VFS male	TW4: 1/4" tube weld	IP: gauge (IFV4 fitting)
FV6: 3/8" VFS female	TW6: 3/8" tube weld	
MV6: 3/8" VFS male		

* Other connection standard,consult factory

Port Selection

VSR - 510UCPS - 250 - 10 - 4P - 1 - 2 - 3 - 4 -R25-HF-VS

Installation

None: bottom mount
P: panel mount *

* Panel hole Φ36mm

Materials

S: 316L secondary remelt
SHP: 316L body and nozzle
Hastelloy® C22 poppet
H: Hastlloy body

*All options diaphragm material is Hastelloy® C276

Inlet Pressure

20: 300 psig
250: 3500 psig

Port Config

2P: 2 ports
3P: 3 ports
4P: 4 ports

Outlet Pressure

V2: Vac to 30 psig*
V4: Vac to 60 psig*
V7: Vac to 100 psig*
V10: Vac to 150 psig*
2: to 30 psig
4: to 60 psig
7: to 100 psig
10: to 150 psig

* With the V option, the negative pressure can not be adjusted, only the pressure gauge shows the negative pressure.

Valve seat Option

None: PCTFE
VS: Vespel®

Cv Option

None: Cv=0.09
HF: Cv=0.15

Surface Finish

None: 15 μin. Ra max
R10: 10 μin. Ra max
R7: 7 μin. Ra max
R5: 5 μin. Ra max

Ordering Example

VSR - 510UCS - 250 - 10 - FV4 - P - P - FV4

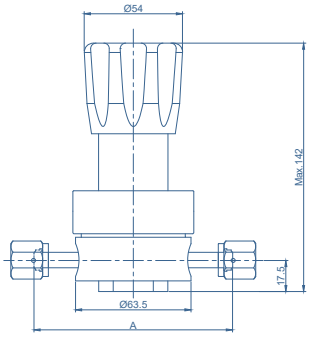
1 - 2 - 3 - 4

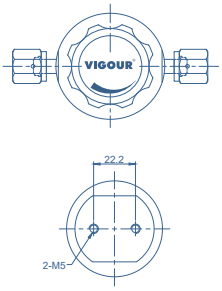
Single Stage Pressure Regulators
VSR-610UB Series

Product Feature

- Single-stage pressure regulator
- 10μin. Ra surface finish (25μin. Ra optional)
- Minimized internal volume for short purge times
- All materials used meet ASTM A479 / A484 / A276 standards
- Internal connectors for pressure gauges
- High control accuracy
- Metal-to-metal seal to atmosphere
- Simple outlet pressure limitation by hand-wheel
- 100% helium-leak-tested

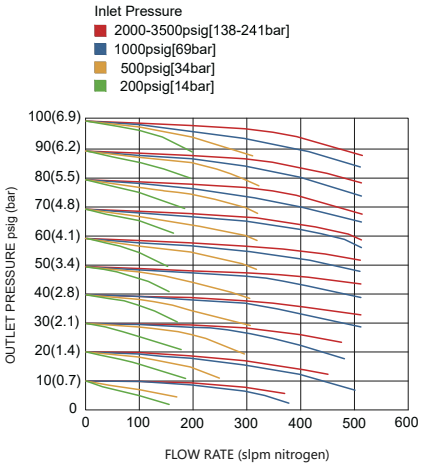
Dimensions (mm)

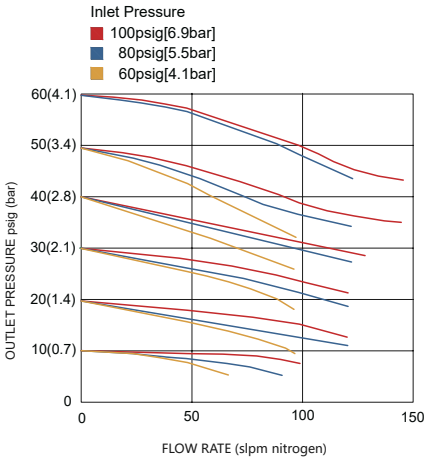




Connections	A	
	inch	(mm)
FV4 MV4	4.30	(109.2)
TW4	3.46	(87.9)
FV6 MV6	5.22	(132.6)
TW6	4.00	(101.6)
FV8 MV8	5.22	(132.6)
TW8	4.00	(101.6)

Flowchart

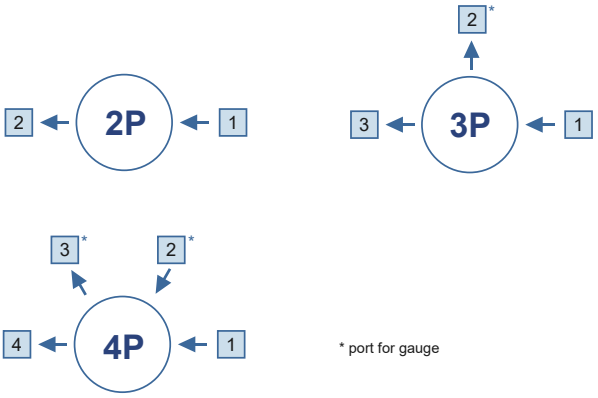




Technical Data

Type:	single-stage
Inlet pressure P_1:	max. 3500 psig
Outlet pressure P_2:	10/30/60/100 psig
Surface finish:	10μin. Ra (25μin. Ra optional)
Materials	
Body:	see ordering info
Valve seat:	PCTFE (Vespel® optional)
Diaphragm:	Hastelloy® C276
Inlets and Outlets:	1/4" / 3/8" or 1/2" VFS fitting or tube weld
Bonnet port:	1/8" NPT (on panel mount option, bonnet port is not threaded)
Temperature range:	-40°F to +160°F (-40°C to +71°C)
Leak rate: (to atmosphere)	$1x10^{-9}$ mbar l/s He
(via seat)	$1x10^{-8}$ mbar l/s He
Flow capacity:	Cv=0.13
Supply pressure effect:	0.25 psig rise in delivery pressure per 100 psig source pressure drop
Weight:	approx. 1.54kg

Ordering Information



* port for gauge

Inlet/outlet Connection

FV4: 1/4" VFS female	FV8: 1/2" VFS female	TW4: 1/4" tube weld
MV4: 1/4" VFS male	MV8: 1/2" VFS male	TW6: 3/8" tube weld
FV6: 3/8" VFS female	IFV4: 1/4" (gauge female threaded connection	TW8: 1/2" tube weld
MV6: 3/8" VFS male	machined on the body)	P: gauge (1/4" VFS fitting)
		IP: gauge (IFV4 fitting)

* Other connection standard,consult factory

Port Selection

VSR - 610UBPS - 250 - V2 - 4P - 1 - 2 - 3 - 4 - R7 - VS

Installation

None: bottom mount
P: panel mount

* Panel hole Φ37mm

Materials

S: 316L

Inlet Pressure

20: 300 psig
250: 3500 psig

Port Config

2P: 2 ports
3P: 3 ports
4P: 4 ports

Outlet Pressure

V1: Vac to 10 psig*
V2: Vac to 30 psig*
V4: Vac to 60 psig*
V7: Vac to 100 psig*
1: to 10 psig
2: to 30 psig
4: to 60 psig
7: to 100 psig

* With the V option, the negative pressure can not be adjusted, only the pressure gauge shows the negative pressure.

Valve seat Option

None: PCTFE
VS: Vespel®

Surface Finish

None: 10 μin. Ra
R25: 25 μin. Ra

Ordering Example

VSR - 610UBS - 250 - V4 - 2P - MV4 - FV4

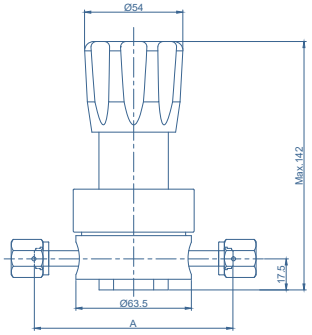
1 - 2

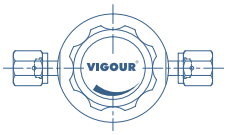
Single Stage Pressure Regulators
VSR-610UC Series

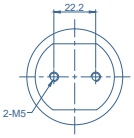
Product Feature

- Single-stage pressure regulator
- 15μin. Ra max, 10μin. Ra average surface finish (10μin. Ra max, 7μin. Ra max, 5μin. Ra max optional)
- Minimized internal volume for short purge times
- All materials used meet ASTM A479 / A484 / A276 standards
- Internal connectors for pressure gauges
- High control accuracy
- Metal-to-metal seal to atmosphere
- Simple outlet pressure limitation by hand-wheel
- 100% helium-leak-tested

Dimensions (mm)





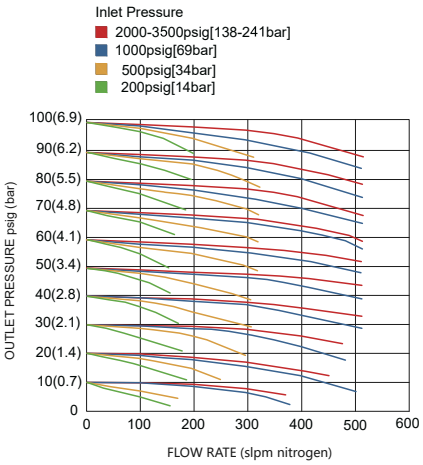


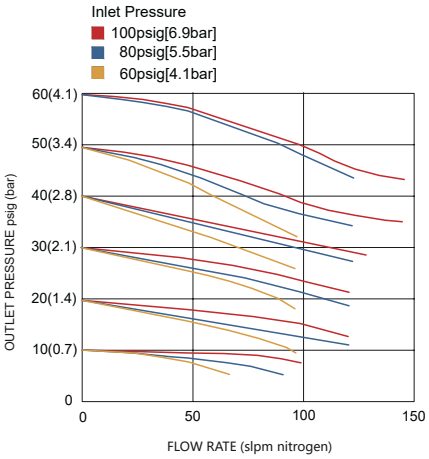
Connections	A	
	inch	(mm)
FV4	4.30	(109.2)
MV4		
TW4	3.46	(87.9)
FV6	5.22	(132.6)
MV6		
TW6	4.00	(101.6)
FV8	5.22	(132.6)
MV8		
TW8	4.00	(101.6)

Technical Data

Type:	single-stage
Inlet pressure P_1:	max. 3500 psig
Outlet pressure P_2:	10/30/60/100 psig
Surface finish:	15μin. Ra max / 10μin. Ra avg (10μin. Ra max., 7μin. Ra max., 5μin. Ra max optional)
Materials	
Body:	see ordering info
Valve seat:	PCTFE (Vespel® optional)
Diaphragm:	Hastelloy® C276
Inlets and Outlets:	1/4" / 3/8" or 1/2" VFS fitting or tube weld
Bonnet port:	1/8" NPT (on panel mount option, bonnet port is not threaded)
Temperature range:	-40°F to +160°F (-40°C to +71°C)
Leak rate: (to atmosphere)	$1x10^{-9}$ mbar l/s He
(via seat)	$1x10^{-8}$ mbar l/s He
Flow capacity:	Cv=0.13
Supply pressure effect:	0.25 psig rise in delivery pressure per 100 psig source pressure drop
Weight:	approx. 1.54kg

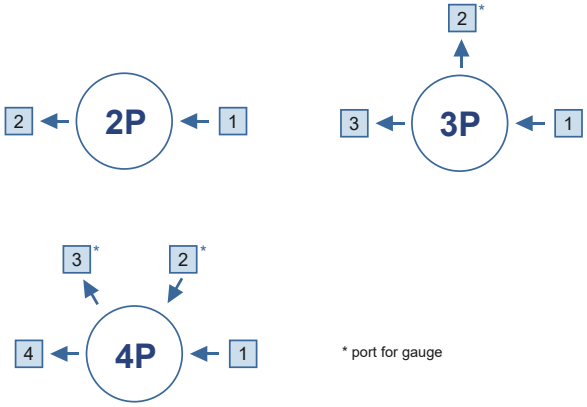
Flowchart





VIGOUR
we offer solutions regarding your ideas!

Ordering Information



Inlet/outlet Connection

FV4: 1/4" VFS female	FV8: 1/2" VFS female	TW4: 1/4" tube weld
MV4: 1/4" VFS male	MV8: 1/2" VFS male	TW6: 3/8" tube weld
FV6: 3/8" VFS female	IFV4: 1/4" (gauge female threaded connection	TW8: 1/2" tube weld
MV6: 3/8" VFS male	machined on the body)	P: gauge (1/4" VFS fitting)
		IP: gauge (IFV4 fitting)

* Other connection standard,consult factory

Port Selection

VSR - 610UCPS - 250 - V2 - 4P - 1 - 2 - 3 - 4 - R5 - VS

Installation

None: bottom mount
P: panel mount

* Panel hole Φ37mm

Materials

S: 316L secondary remelt body 316L poppet and nozzle
SH: 316L secondary remelt body Hastelloy® C22 internals

*All options diaphragm material is Hastelloy® C276

Inlet Pressure

20: 300 psig
250: 3500 psig

Port Config

2P: 2 ports
3P: 3 ports
4P: 4 ports

Outlet Pressure

V1: Vac to 10 psig*
V2: Vac to 30 psig*
V4: Vac to 60 psig*
V7: Vac to 100 psig*
1: to 10 psig
2: to 30 psig
4: to 60 psig
7: to 100 psig

* With the V option, the negative pressure can not be adjusted, only the pressure gauge shows the negative pressure.

Valve seat Option

None: PCTFE
VS: Vespel®

Surface Finish

None: 15 µin. Ra max
R10: 10 µin. Ra max
R7: 7 µin. Ra max
R5: 5 µin. Ra max

Ordering Example

VSR - 610UCS - 250 - V4 - 2P - MV4 - FV4

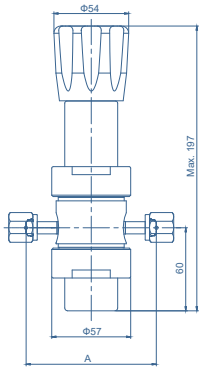
1 - 2

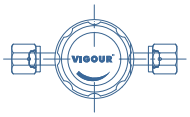
Dual Stage Pressure Regulators
VSR-710UB Series

Product Feature

- Dual-stage pressure regulator
- 10µin. Ra surface finish (25µin. Ra optional)
- Minimized internal volume for short purge times
- All materials used meet ASTM A479 / A484 / A276 standards
- Internal connectors for pressure gauges
- Flow capacity: to 30 slpm (standard), to 120 slpm (optional)
- High control accuracy
- Metal-to-metal seal to atmosphere
- Simple outlet pressure limitation by hand-wheel
- 100% helium-leak-tested
- Tied-diaphragm design

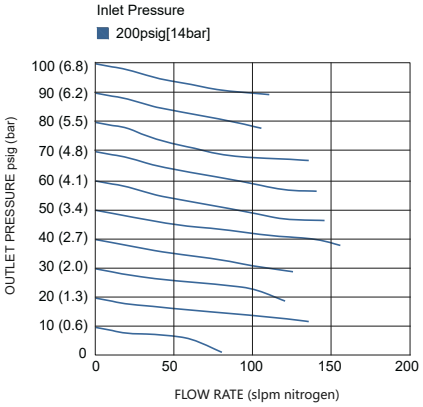
Dimensions (mm)





Connections	A	
	inch	(mm)
FV4 MV4	3.70	(94.0)
FV6 MV6	4.70	(119.4)

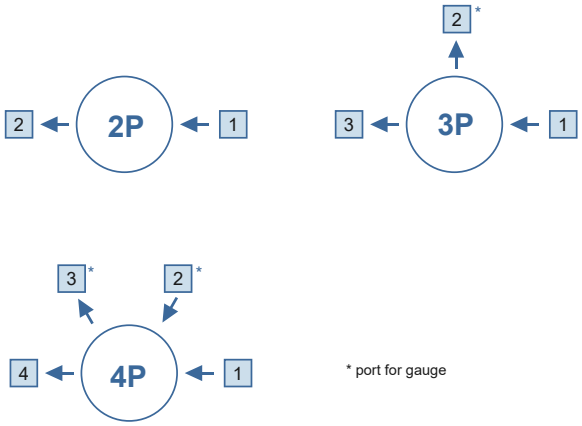
Flowchart



Technical Data

Type:	Dual-stage
Inlet pressure P_1:	max. 3500 psig
Outlet pressure P_2:	30/60/100 psig
Surface finish:	10µin. Ra (25µin. Ra optional)
Materials	
Body:	see ordering info
Valve seat:	PCTFE (Vespel® optional)
Diaphragm:	Hastelloy® C276
Inlets and Outlets:	1/4" / 3/8" VFS fitting and tube weld
Bonnet port:	1/8" NPT (on panel mount option, bonnet port is not threaded)
Temperature range:	-40°F to +160°F (-40°C to +71°C)
Leak rate: (to atmosphere)	$1x10^{-9}$ mbar l/s He
(via seat)	$1x10^{-8}$ mbar l/s He
Flow capacity:	Cv=0.05
Supply pressure effect:	0.05 psig rise in delivery pressure per 100 psig source pressure drop
Weight:	approx. 2.5kg

Ordering Information



Inlet/outlet Connection

FV4: 1/4" VFS female	IFV4: 1/4" (gauge female threaded connection machined on the body)	P: gauge (1/4" VFS fitting)
MV4: 1/4" VFS male	TW4: 1/4" tube weld	IP: gauge (IFV4 fitting)
FV6: 3/8" VFS female	TW6: 3/8" tube weld	
MV6: 3/8" VFS male		

* Other connection standard,consult factory

Port Selection

VSR - 710UBPS - 250 - 10 - 4P - 1 - 2 - 3 - 4 -R25-VS

Installation

None: bottom mount
P: panel mount *

* Panel hole Φ36mm

Materials

S: 316L
SHP: 316L body
Hastelloy® C22 poppet and nozzle

*All options diaphragm material is Hastelloy® C276

Inlet Pressure

250: 3500 psig

Outlet Pressure

V2: Vac to 30 psig*
V4: Vac to 60 psig*
V7: Vac to 100 psig*
2: to 30 psig
4: to 60 psig
7: to 100 psig

* With the V option, the negative pressure can not be adjusted, only the pressure gauge shows the negative pressure.

Valve seat Option

None: PCTFE
VS: Vespel®

Surface Finish

None: 10 μin. Ra
R25: 25 μin. Ra

Port Config

2P: 2 ports
3P: 3 ports
4P: 4 ports

Ordering Example

VSR - 710UBS - 250 - 10 - FV4 - P - P - FV4

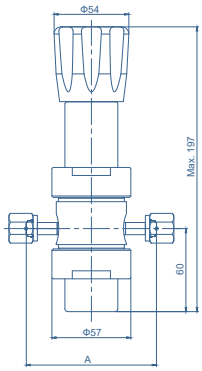
1 - 2 - 3 - 4

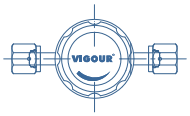
Dual Stage Pressure Regulators
VSR-710UC Series

Product Feature

- Dual-stage pressure regulator
- 15μin. Ra max, 10μin Ra average surface finish
  (10μin. Ra max, 7μin. Ra max. 5μin. Ra max optional)
- Minimized internal volume for short purge times
- All materials used meet ASTM A479 / A484 / A276 standards
- Internal connectors for pressure gauges
- Flow capacity: to 30 slpm (standard), to 120 slpm (optional)
- High control accuracy
- Metal-to-metal seal to atmosphere
- Simple outlet pressure limitation by hand-wheel
- 100% helium-leak-tested
- Tied-diaphragm design

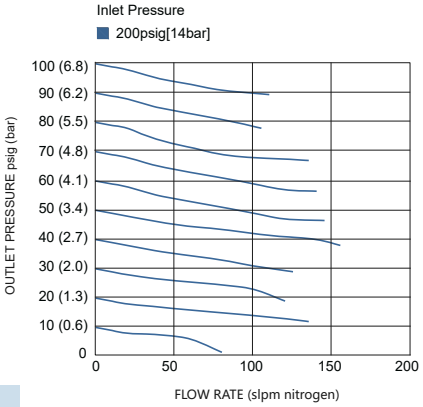
Dimensions (mm)





Connections	A	
	inch	(mm)
FV4 MV4	3.70	(94.0)
FV6 MV6	4.70	(119.4)

Flowchart

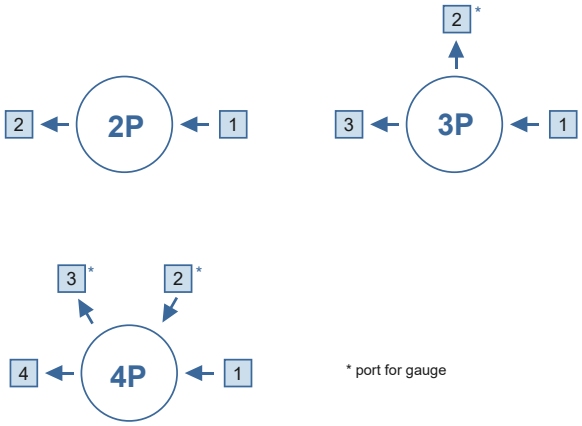


Technical Data

Type:	Dual-stage
Inlet pressure P_1:	max. 3500 psig
Outlet pressure P_2:	30/60/100 psig
Surface finish:	15μin. Ra max, 10μin Ra average surface finish (10μin. Ra max, 7μin. Ra max. 5μin. Ra max optional)
Materials	
Body:	see ordering info
Valve seat:	PCTFE (Vespel® optional)
Diaphragm:	Hastelloy® C276
Inlets and Outlets:	1/4" / 3/8" VFS fitting and tube weld
Bonnet port:	1/8" NPT (on panel mount option, bonnet port is not threaded)
Temperature range:	-40°F to +160°F (-40°C to +71°C)
Leak rate: (to atmosphere)	$1x10^{-9}$ mbar l/s He
(via seat)	$1x10^{-8}$ mbar l/s He
Flow capacity:	Cv=0.05
Supply pressure effect:	0.05 psig rise in delivery pressure per 100 psig source pressure drop
Weight:	approx. 2.5kg

VIGOUR
we offer solutions regarding your ideas!

Ordering Information



Inlet/outlet Connection

FV4: 1/4" VFS female	IFV4: 1/4" (gauge female threaded connection machined on the body)	P: gauge (1/4" VFS fitting)
MV4: 1/4" VFS male	TW4: 1/4" tube weld	IP: gauge (IFV4 fitting)
FV6: 3/8" VFS female	TW6: 3/8" tube weld	
MV6: 3/8" VFS male		

* Other connection standard,consult factory

Port Selection

VSR - 710UCPS - 250 - 10 - 4P - 1 - 2 - 3 - 4 -R25-VS

Installation

None: bottom mount
P: panel mount *

* Panel hole Φ36mm

Materials

S: 316L
SHP: 316L body Hastelloy® C22 poppet and nozzle

*All options diaphragm material is Hastelloy® C276

Inlet Pressure

250: 3500 psig

Outlet Pressure

V2: Vac to 30 psig*
V4: Vac to 60 psig*
V7: Vac to 100 psig*
2: to 30 psig
4: to 60 psig
7: to 100 psig

* With the V option, the negative pressure can not be adjusted, only the pressure gauge shows the negative pressure.

Valve seat Option

None: PCTFE
VS: Vespel®

Surface Finish

None: 15 μin. Ra max
R10: 10 μin. Ra max
R7: 7 μin. Ra max
R5: 5 μin. Ra max

Port Config

2P: 2 ports
3P: 3 ports
4P: 4 ports

Ordering Example

VSR - 710UCS - 250 - 10 - FV4 - P - P - FV4

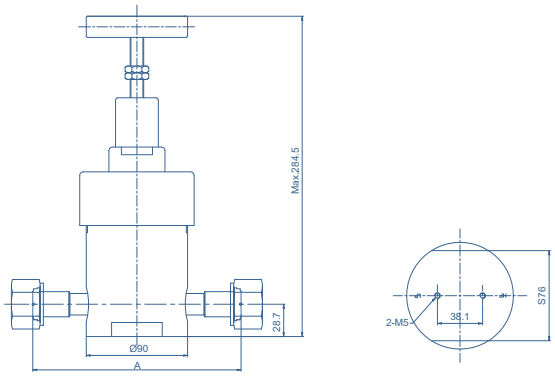
1 - 2 - 3 - 4

Single Stage Pressure Regulators
VSR-910UB Series

Product Feature

- Single-stage pressure regulator
- 15μin. Ra max. 10μin Ra max optional
- design for bulk special gas suply system
- Tied diaphragm design with bellows sensing element
- All materials used meet ASTM A479 / A484 / A276 standards
- Metal-to-metal seal to atmosphere
- 100% helium-leak-tested

Dimensions (mm)

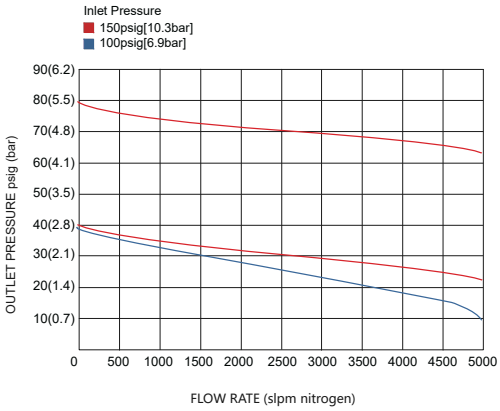


Connections	A	
	inch	(mm)
FV8	6.22	(158.0)
MV8		
TW8	9.50	(241.4)
FV12	7.28	(185.0)
MV12		
TW12	9.50	(241.4)
FV16	7.84	(199.2)
MV16		
TW16	9.50	(241.4)

Technical Data

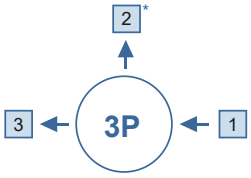
Type:	single-stage
Inlet pressure P_1:	max. 3000 psig
Outlet pressure P_2:	30/60/100/150 psig
Surface finish:	15μin. Ra max
	10μin. Ra max (optional)
Materials	
Body:	SS 316L
Valve seat:	PCTFE (Vespel® optional)
Diaphragm:	Hastelloy® C22
Inlets and Outlets:	1/2" / 3/4" or 1" VFS fitting or tube weld
Bonnet port:	1/8" FNPT(optional)
Temperature range:	-40°F to +160°F (-40°C to +71°C)
Leak rate: (to atmosphere)	$1x10^{-9}$ mbar l/s He
(via seat)	$1x10^{-8}$ mbar l/s He
Flow capacity:	Cv=3.0 / Cv=4.0
Weight:	6.7kg

Flowchart



VIGOUR
we offer solutions regarding your ideas!

Ordering Information



* port for gauge

Inlet/Outlet Connection

FV8: 1/2" VFS female	FV16: 1" VFS female	TW8: 1/2" tube weld
MV8: 1/2" VFS male	MV16: 1" VFS male	TW12: 3/4" tube weld
FV12: 3/4" VFS female	MV4: 1/4" VFS male	TW16: 1" tube weld
MV12: 3/4" VFS male	IFV4: 1/4" (gauge female threaded connection machined on the body)	P: gauge (1/4" VFS fitting)
		IP: gauge (IFV4 fitting)

* Other connection standard,consult factory

Port Selection

VSR - 910UBS - 55 - 4 - 3P - 1 - 2 - 3 - R10 - VS

Materials

S: 316L

Inlet Pressure

55: 800 psig (Cv=4.0)
117: 1700 psig (Cv=3.0)
200: 3000 psig* (Cv=3.0)

* 3000 psig: The VS option must be selected.

Port Config

2P: 2 port
3P: 3 port

Outlet Pressure

V2: Vac to 30 psig*
V4: Vac to 60 psig*
V7: Vac to 100 psig*
V10: Vac to 150 psig*
2: to 30 psig
4: to 60 psig
7: to 100 psig
10: to 150 psig

* With the V option, the negative pressure can not be adjusted, only the pressure gauge shows the negative pressure.

Valve seat Option

None: PCTFE
VS: Vespel®

Surface Finish

None: 15 μin. Ra max
R10: 10 μin. Ra max

Ordering Example

VSR - 910UBS - 55 - 10 - 2P - MV12 - FV12

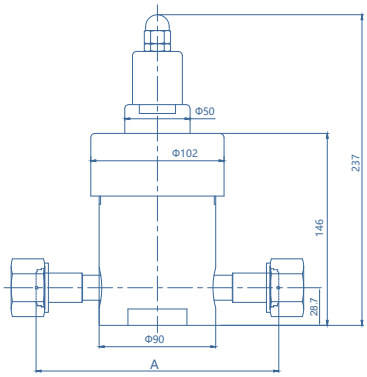
1 - 2

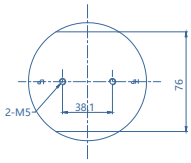
Single Stage Pressure Regulators
VSR-911UB Series

Product Feature

- Single-stage pressure regulator
- 15μin. Ra max. 10μin Ra max optional
- design for bulk special gas suply system
- Tied diaphragm design with bellows sensing element
- All materials used meet ASTM A479 / A484 / A276 standards
- Metal-to-metal seal to atmosphere
- 100% helium-leak-tested

Dimensions (mm)



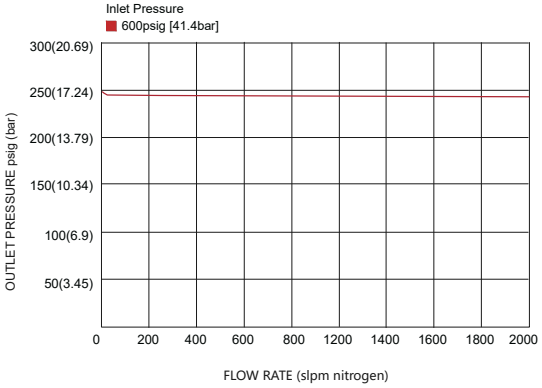


Connections	A	
	inch	(mm)
FV8	6.22	(158.0)
MV8		
TW8	9.50	(241.4)
FV12	7.28	(185.0)
MV12		
TW12	9.50	(241.4)
FV16	7.84	(199.2)
MV16		
TW16	9.50	(241.4)

Technical Data

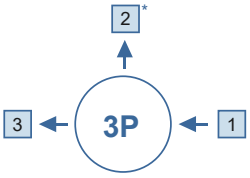
Type:	single-stage
Inlet pressure P_1:	max. 3000 psig
Outlet pressure P_2:	300 psig
Surface finish:	15μin. Ra max
	10μin. Ra max (optional)
Materials	
Body:	SS 316L
Valve seat:	PCTFE (Vespel® optional)
Diaphragm:	Hastelloy® C22
Inlets and Outlets:	1/2" / 3/4" or 1" face seal or tube weld
Bonnet port:	1/8" FNPT(option)
Temperature range:	-40°F to +160°F (-40°C to +71°C)
Leak rate: (to atmosphere)	$1x10^{-9}$ mbar l/s He
(via seat)	$1x10^{-8}$ mbar l/s He
Flow capacity:	Cv=3.0 / Cv=4.0
Weight:	6.7kg

Flowchart



VIGOUR
we offer solutions regarding your ideas!

Ordering Information



* port for gauge

Inlet/Outlet Connection

FV8: 1/2" VFS female	FV16: 1" VFS female	TW8: 1/2" tube weld
MV8: 1/2" VFS male	MV16: 1" VFS male	TW12: 3/4" tube weld
FV12: 3/4" VFS female	MV4: 1/4" VFS male	TW16: 1" tube weld
MV12: 3/4" VFS male	IFV4: 1/4" (gauge female threaded connection machined on the body)	P: gauge (1/4" VFS fitting)
		IP: gauge (IFV4 fitting)

* Other connection standard,consult factory

Port Selection

VSR - 911UBS - 55 - P21 - 3P - 1 - 2 - 3 - R10 - VS

Materials

S: 316L

Inlet Pressure

55: 800 psig (Cv=4.0)
117: 1700 psig (Cv=3.0)
200: 3000 psig* (Cv=3.0)

* 3000 psig: The VS option must be selected.

Port Config

2P: 2 port
3P: 3 port

Outlet Pressure

P21: Preset to 300 psig*

* 300 psig outlet pressure preset at 800 psig (55 bar) inlet pressure.

Valve seat Option

None: PCTFE
VS: Vespel®

Surface Finish

None: 15 µin. Ra max
R10: 10 µin. Ra max

Ordering Example

VSR - 911UBS - 55 - P21 - 2P - MV12 - FV12

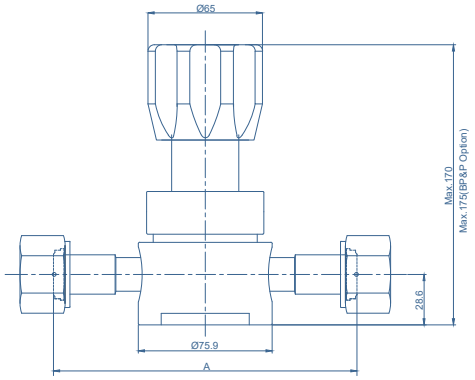
1 - 2

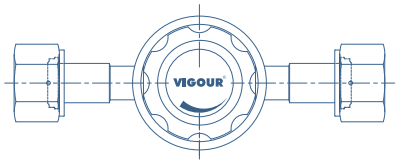
Single Stage Pressure Regulators
VSR-920UB Series

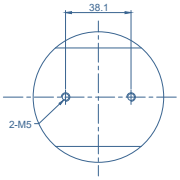
Product Feature

- Single-stage pressure regulator
- 10μin. Ra surface finish
- Minimized internal volume for short purge times
- All materials used meet ASTM A479 / A484 / A276 standards
- Internal connectors for pressure gauges
- Flow capacity: to 2000 slpm
- High control accuracy
- Metal-to-metal seal to atmosphere
- Simple outlet pressure limitation by hand-wheel
- 100% helium-leak-tested
- Tied-diaphragm design

Dimensions (mm)





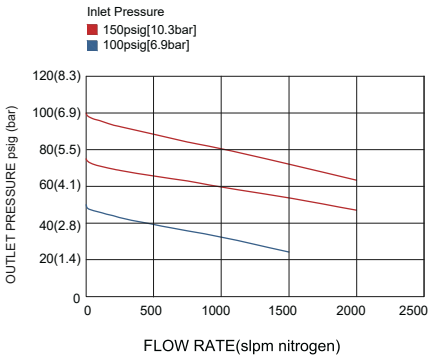


Connections	A	
	inch	(mm)
FV12	6.78	(172.2)
MV12		
TW12	6.00	(152.4)
FV16	7.34	(186.4)
MV16		
TW16	6.00	(152.4)

Technical Data

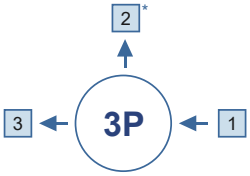
Type:	single-stage
Inlet pressure P_1:	max. 300 psig
Outlet pressure P_2:	30/60/100/150 psig
Surface finish:	10μin. Ra
Materials	
Body:	see ordering info
Valve seat:	PFA (Vespel® optional)
Diaphragm:	Hastelloy® C276
Inlets and Outlets:	3/4" / 1" VFS fitting or tube weld
Bonnet port:	1/8" FNPT(option)
Temperature range:	-40°F to +160°F (-40°C to +71°C)
Leak rate: (to atmosphere)	$1x10^{-9}$ mbar l/s He
(via seat)	$1x10^{-8}$ mbar l/s He
Flow capacity:	Cv=1.6
Weight:	approx. 2.72kg (depending on connections or options)
Supply pressure effect:	7 psig rise in delivery pressure per 100 psig source pressure drop

Flowchart



VIGOUR
we offer solutions regarding your ideas!

Ordering Information



* port for gauge

Inlet/Outlet Connection

FV12: 3/4" VFS female	FV4: 1/4" VFS female	TW12: 3/4" tube weld
MV12: 3/4" VFS male	MV4: 1/4" VFS male	TW16: 1" tube weld
FV16: 1" VFS female	IFV4: 1/4" (gauge female threaded connection	P: gauge (1/4" VFS fitting)
MV16: 1" VFS male	machined on the body)	IP: gauge (IFV4 fitting)

* Other connection standard,consult factory

Port Selection

VSR - 920UB PS - 20 - V4 - 3P - 1 - 2 - 3 - VS

Installation

None: bottom mount
P: panel mount*
BP: bonnet port (1/8" FNPT)

* Panel hole Φ39.6mm

Materials

S: 316L

Inlet Pressure

20: 300 psig

Outlet Pressure

V2: Vac to 30 psig
V4: Vac to 60 psig
V7: Vac to 100 psig
V10: Vac to 150 psig
2: to 30 psig
4: to 60 psig
7: to 100 psig
10: to 150 psig

* With the V option, the negative pressure can not be adjusted, only the pressure gauge shows the negative pressure.

Valve Seat Option

None: PFA (standard)
VS: Vespel®

Port Config

2P: 2 ports
3P: 3 ports

Ordering Example

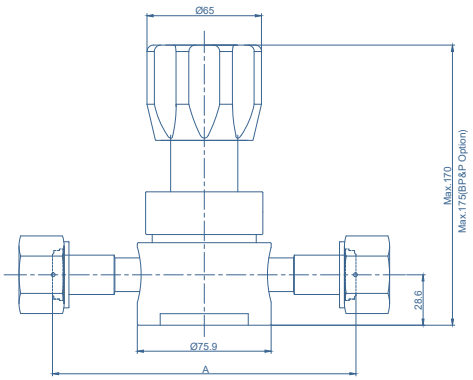
VSR - 920UBS - 20 - 10 - 2P - MV12 - FV12
1 - 2

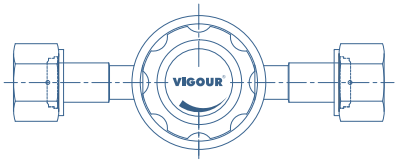
Single Stage Pressure Regulators
VSR-920UC Series

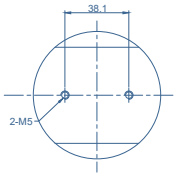
Product Feature

- Single-stage pressure regulator
- 10μin. Ra surface finish
- Minimized internal volume for short purge times
- All materials used meet ASTM A479 / A484 / A276 standards
- Internal connectors for pressure gauges
- Flow capacity: to 2000 slpm
- High control accuracy
- Metal-to-metal seal to atmosphere
- Simple outlet pressure limitation by hand-wheel
- 100% helium-leak-tested
- Tied-diaphragm design

Dimensions (mm)





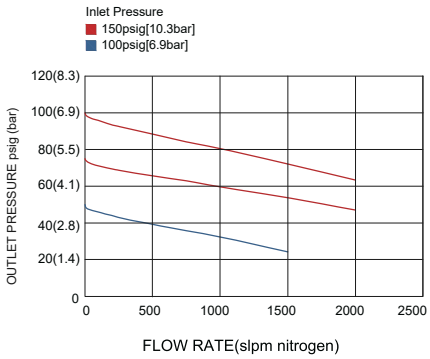


Connections	A	
	inch	(mm)
FV12	6.78	(172.2)
MV12		
TW12	6.00	(152.4)
FV16	7.34	(186.4)
MV16		
TW16	6.00	(152.4)

Technical Data

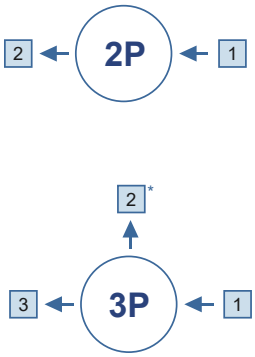
Type:	single-stage
Inlet pressure P_1:	max. 300 psig
Outlet pressure P_2:	30/60/100/150 psig
Surface finish:	15μin. Ra max / 10μin. Ra avg (10μin. Ra max optional)
Materials	
Body:	see ordering info
Valve seat:	PFA (Vespel® optional)
Diaphragm:	Hastelloy® C276
Inlets and Outlets:	3/4" / 1" VFS fitting or tube weld
Bonnet port:	1/8" FNPT(option)
Temperature range:	-40°F to +160°F (-40°C to +71°C)
Leak rate: (to atmosphere)	$1x10^{-9}$ mbar l/s He
(via seat)	$1x10^{-8}$ mbar l/s He
Flow capacity:	Cv=1.6
Weight:	approx. 2.72kg (depending on connections or options)
Supply pressure effect:	7 psig rise in delivery pressure per 100 psig source pressure drop

Flowchart



VIGOUR
we offer solutions regarding your ideas!

Ordering Information



* port for gauge

Inlet/Outlet Connection

FV12: 3/4” VFS female	FV4: 1/4” VFS female	TW12: 3/4” tube weld
MV12: 3/4” VFS male	MV4: 1/4” VFS male	TW16: 1” tube weld
FV16: 1” VFS female	IFV4: 1/4" (gauge female threaded connection	P: gauge (1/4” VFS fitting)
MV16: 1” VFS male	machined on the body)	IP: gauge (IFV4 fitting)

* Other connection standard,consult factory

Port Selection

VSR - 920UCPS - 20 - V4 - 3P - 1 - 2 - 3 - VS

Installation

None: bottom mount
P: panel mount*
BP: bonnet port (1/8” FNPT)

* Panel hole Φ39.6mm

Materials

S: 316L

Inlet Pressure

20: 300 psig

Outlet Pressure

V2: Vac to 30 psig
V4: Vac to 60 psig
V7: Vac to 100 psig
V10: Vac to 150 psig
2: to 30 psig
4: to 60 psig
7: to 100 psig
10: to 150 psig

* With the V option, the negative pressure can not be adjusted, only the pressure gauge shows the negative pressure.

Valve Seat Option

None: PFA (standard)
VS: Vespel®

Port Config

2P: 2 ports
3P: 3 ports

Ordering Example

VSR - 920UCS - 20 - 10 - 2P - MV12 - FV12

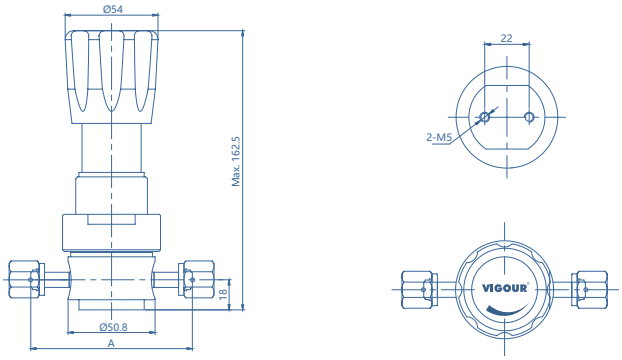
1 - 2

High Pressure Regulators
VSR-930UB Series

Product Feature

- Single-stage pressure regulator
- 10μin. Ra surface finish (25μin. Ra optional)
- Minimized internal volume for short purge times
- Piston sensing element
- All materials used meet ASTM A479 / A484 / A276 standards
- Internal connectors for pressure gauges
- Flow capacity: to 30 slpm (standard), to 120 slpm (optional)
- High control accuracy
- Metal-to-metal seal to atmosphere
- Simple outlet pressure limitation by hand-wheel
- Applies only to inert gases

Dimensions (mm)

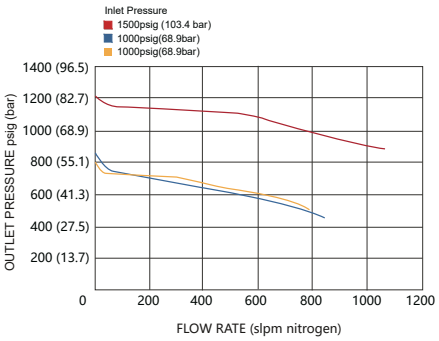


Connections	A	
	inch	mm
FV4	3.70	94
MV4		

Technical Data

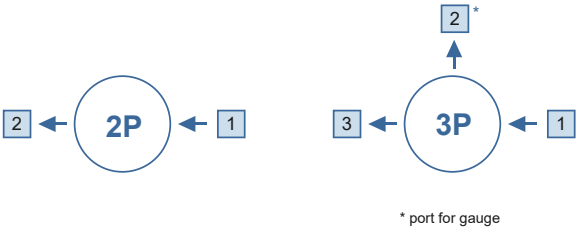
Type:	single-stage
Inlet pressure P_1:	max. 6000 psig
Outlet pressure P_2:	100~2500 psig
Surface finish:	10μin. Ra (25μin. Ra optional)
Materials	
Body:	see ordering info
Valve seat:	PCTFE (Vespel® optional)
Diaphragm:	Hastelloy® C276
Inlets and Outlets:	1/4" VFS fitting and tube weld
Bonnet port:	1/8" NPT (on panel mount option, bonnet port is not threaded)
Temperature range:	0°F to +140°F (-18°C to +60°C)
Leak rate:	Bubble tight
Flow capacity:	Cv=0.09 (Cv=0.15 optional)
Supply pressure effect:	0.35 psig rise in delivery pressure per 100 psig source pressure drop @Cv=0.09 0.5psig rise in delivery pressure per 100 psig source pressure drop @Cv=0.15
Weight:	approx. 1.8kg

Flowchart



VIGOUR
we offer solutions regarding your ideas!

Ordering Information



* port for gauge

Inlet/outlet Connection

FV4: 1/4" VFS female
MV4: 1/4" VFS male
IFV4: 1/4" (gauge female threaded connection machined on the body)
TW4: 1/4" tube weld
P: gauge (1/4" VFS fitting)
IP: gauge (IFV4 fitting)

* Other connection standard,consult factory

Port Selection

VSR - 930UBPS - 400 - 170 - 4P - 1 - 2 - 3 - 4 - HF - VS - X

Installation

None: bottom mount
P: panel mount *

* Panel hole Φ36mm

Materials

S: 316L

Inlet Pressure

400: 5800 psig

Port Config

2P: 2 ports
3P: 3 ports

Outlet Pressure

170: 100 ~ 2500 psig

Option

None: No self-relieving pressure
X: Include self-relieving pressure

Valve seat Option

None: PCTFE
VS: Vespel®

Cv Option

None: Cv=0.09
HF: Cv=0.15

Ordering Example

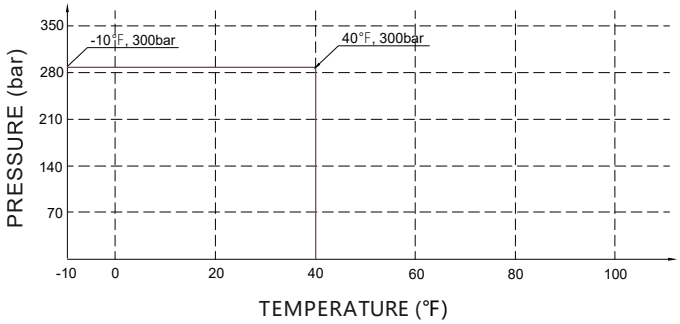
VSR - 930UBS - 400 - 170 - FV4 - P - FV4
1 - 2 - 3

Diaphragm Valves
VDV31UA Series

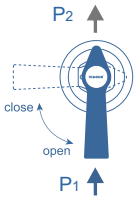
Product Feature

- Diaphragm valve
- Stainless steel 316L body for corrosive gases
- Inlet pressure max 300 bar
- Left or Right lever direction for Shutoff
- Wide range of inlets and outlets
- Metal-to-metal seal to atmosphere

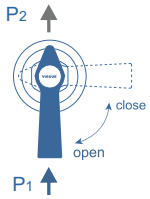
Temperature / Pressure Rating



Schematic Drawing



right lever for shutoff

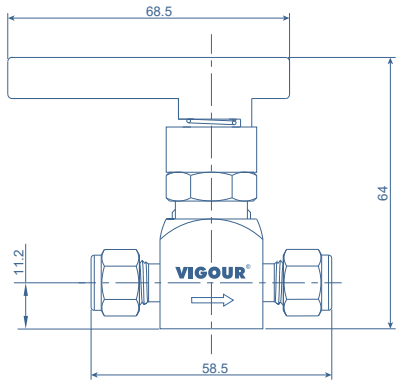


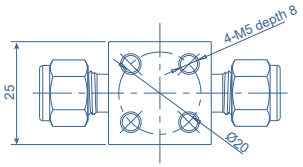
left lever for shutoff

Technical Data

Max. Working Pressure:	4500 psig (300 bar)
Max. Working Temp.:	14°F ~ 104°F (-10°C ~ 40°C)
Materials	
Body:	316L
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:	Cv=0.1
Orifice:	Φ2.7mm
Weight:	approx. 0.25kg

Dimensions (mm)





Ordering Information

VDV31UAS - 04 - 04 - L

Materials
S: 316L

Inlets / Outlets
02: 1/8” tube fitting
04: 1/4” tube fitting
6M: 6mm tube fitting
8M: 8mm tube fitting

Lever
None: right lever for shutoff
L: left lever for shutoff

Diaphragm Valves
VDV32UA Series

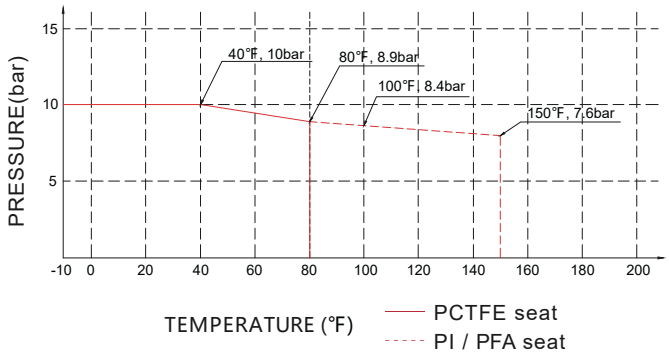
Product Feature

- Suitable for high purity, flammable or toxic fluid gases
- Direct diaphragm construction with superior sealing prerformance, remarkable durability, compactness and particle and dead-space-free performance
- Valve open and closed opsition is easily visible at a glance
- Excellent gas displacement characteristics
- Standard seat material is PCTFE, Ployimede/PFA is option

1/4 Type

1/4 Type

Temperature / Pressure Rating



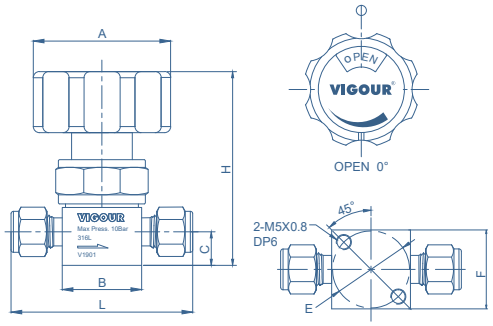
1/2 Type

1/2 Type

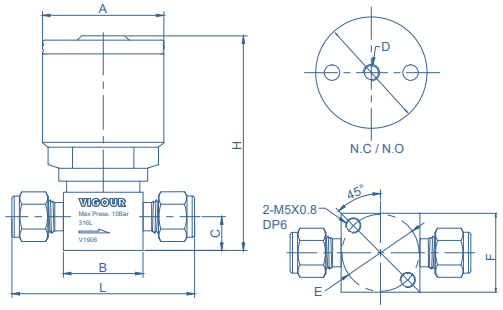
Technical Data

Max. Working Pressure:	150 psig (10 bar)
Pneumatic Operating Pressure:	58~87psig (4-6bar)
Max. Working Temp.:	14°F ~ 176°F (-10°C ~ 80°C)
Materials	
Body:	316L
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 (actuator not included)

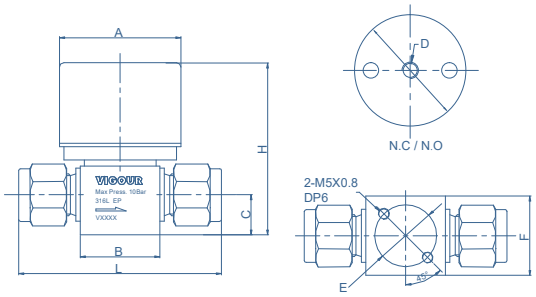
Dimensions (mm)



1/4, 3/8, 1/2 manual actuator



1/4 pneumatic actuator



3/8, 1/2 pneumatic actuator

manual actuator

End Comections	Orifice (mm)	Dimensions (mm)						
		A	B	C	E	F	L	H
1/4" Tube Fitting	4.4	Φ45	26	11	Φ25.4	26	60	64
3/8" Tube Fitting	7	Φ45	36	18.2	Φ28	36	78.8	78
1/2" Tube Fitting	7	Φ45	36	18.2	Φ28	36	83.6	78

pneumatic actuator, normally opened / normally closed

End Comections	Actuator	Orifice (mm)	Dimensions (mm)							
			A	B	C	D	E	F	L	H
1/4" Tube Fitting	N.C / N.O	4.4	Φ39.6	26	11	M5x0.8	Φ25.4	26	60	70
3/8" Tube Fitting	N.C / N.O	7	Φ55	36	18.2	RC 1/8	Φ28	36	78.8	78
1/2" Tube Fitting	N.C / N.O	7	Φ55	36	18.2	RC 1/8	Φ28	36	83.6	78

1/4", 3/8", 1/2" tube fitting dimensions for reference, other connections please contact factory.

Ordering information

VDV32UA S - M - 04 - 04 - PA

Materials
S: 316L

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

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

End Connection
04: 1/4" tube fitting
06: 3/8" tube fitting
08: 1/2" tube fitting

* Other connection standard,consult factory

Diaphragm Valves
VDV33UA Series

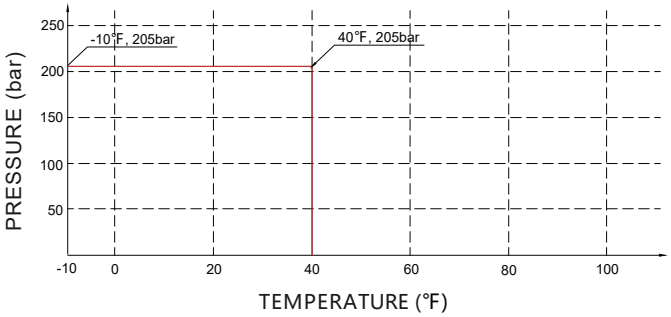
Product Feature

- Suitable for high purity, flammable or toxic gases
- Direct diaphragm construction with superior sealing prerformance, remarkable durability, compactness and particle and dead-space-free performance
- Valve open and closed opsition is easily visible at a glance
- Excellent gas displacement characteristics
- Standard seat material is PCTFE, Ploymede/PFA is option

1/4 Type

1/4 Type

Temperature / Pressure Rating



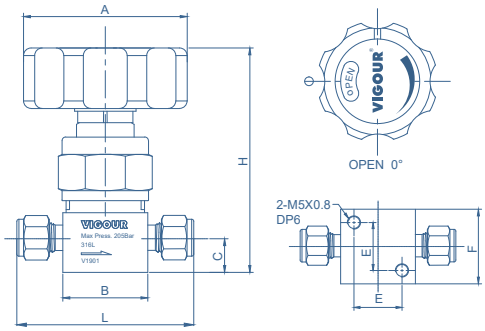
1/2 Type

1/2 Type

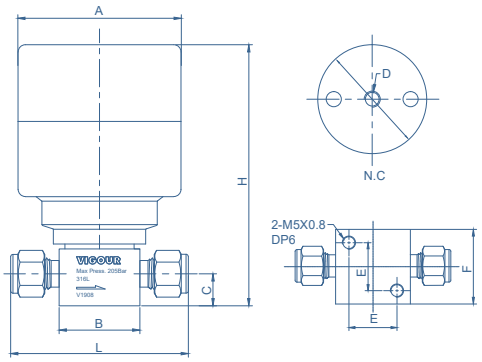
Technical Data

Max. Working Pressure:	3000 psig (206 bar)
Pneumatic Operating Pressure:	58~87psig (4-6bar)
Max. Working Temp.:	14°F ~ 104°F (-10°C ~ 40°C)
Materials	
Body:	316L
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=0.1 3/8"1/2"Cv=0.5
Weight:	approx. 0.27kg (actuator not included)

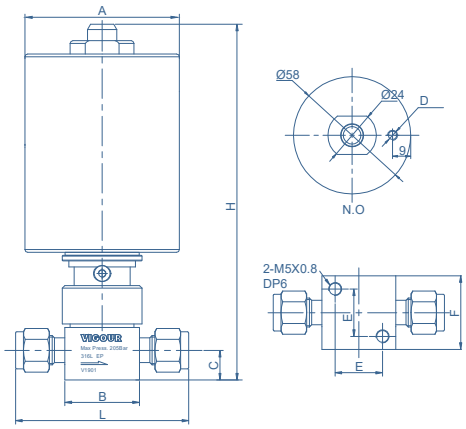
Dimensions (mm)



1/4, 3/8, 1/2 manual actuator



1/4, 3/8, 1/2 pneumatic actuator (N.C)



1/4 pneumatic actuator (N.O)

manual actuator

End Comections	Orifice (mm)	Dimensions (mm)						
		A	B	C	E	F	L	H
1/4" Tube Fitting	4.4	Φ54	28	11.1	18	28	65	74
3/8" Tube Fitting	7	Φ54	42	18.2	27	38	84.8	86
1/2" Tube Fitting	7	Φ54	42	18.2	27	38	89.6	86

pneumatic actuator, normally opened / normally closed

End Comections	Actuator	Orifice (mm)	Dimensions (mm)							
			A	B	C	D	E	F	L	H
1/4" Tube Fitting	N.C	4.4	Φ56.5	28	11.1	M5x0.8	18	28	65	90.5
1/4" Tube Fitting	N.O	4.4	Φ58	28	11.1	M5x0.8	18	28	65	134
3/8" Tube Fitting	N.C	7	Φ56.5	42	18.2	RC 1/8	27	38	84.8	105
1/2" Tube Fitting	N.C	7	Φ56.5	42	18.2	M5x0.8	27	38	89.6	105

1/4", 3/8", 1/2" tube fitting dimensions for reference, other connections please contact factory.

Ordering Information

VDV33UAS - M - 04 - 04 - PA

Materials
S: 316L

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

*Normally opened available with connetion size 1/4 thch.

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

End Connection
F4: 1/4" NPT(F)
04: 1/4" tube fitting
06: 3/8" tube fitting
08: 1/2" tube fitting

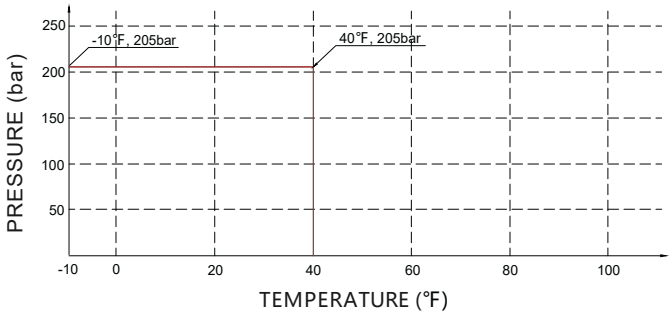
* Other connection standard,consult factory

Diaphragm Valves
VDV31UB Series

Product Feature

- Quarter-turn ON/OFF, providing easy operation
- Handle shape provides visual indication of OPEN and CLOSE position
- Available on high and low-pressure models

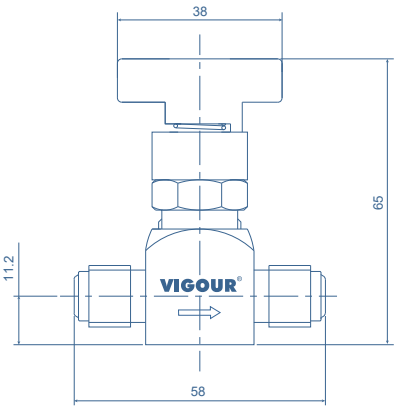
Temperature / Pressure Rating

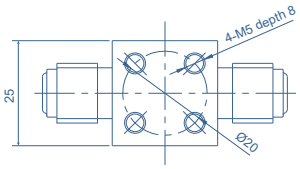


Technical Data

Max. Working Pressure:	3000 psig (206 bar)
Max. Working Temp.:	14°F ~ 104°F (-10°C ~ 40°C)
Materials	
Body:	316L secondary remelt
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:	Cv=0.1
Orifice:	Φ4.0mm
Weight:	approx. 0.25kg

Dimensions (mm)





Ordering Information

VDV31UBS - MV4 - MV4

Materials

S: 316L
SLV: 316L secondary remelt

End Connection

MV4: 1/4" VFS male

* Other connection standard,consult factory

Diaphragm Valves
VDV32UB Series

Product Feature

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

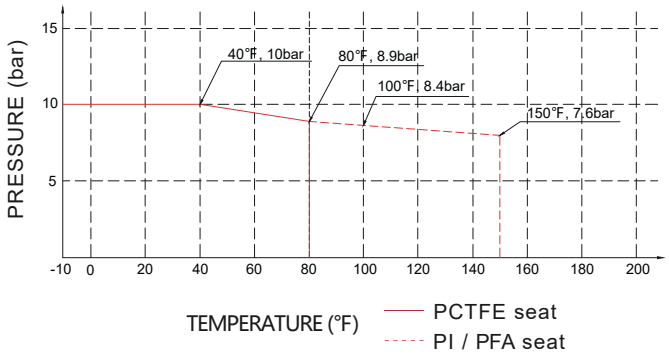
1/4 Type

1/4 Type

1/2 Type

1/2 Type

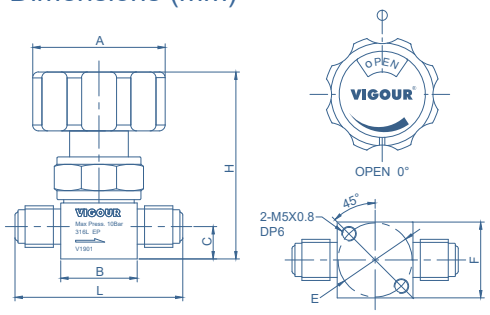
Temperature / Pressure Rating



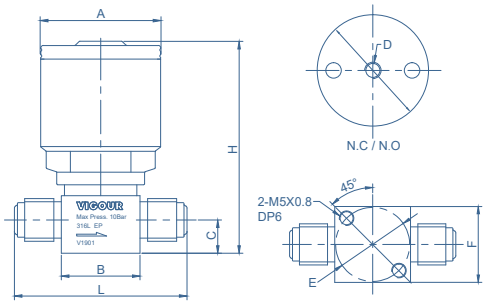
Technical Data

Max. Working Pressure:	150 psig (10 bar)
Pneumatic Operating 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 (actuator not included)

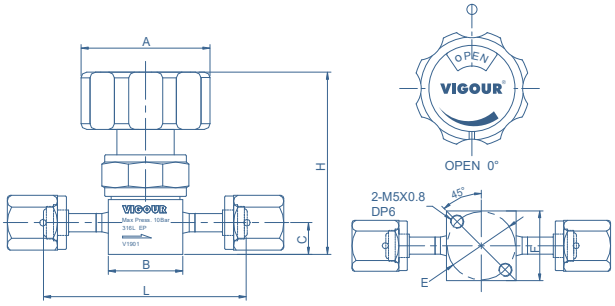
Dimensions (mm)



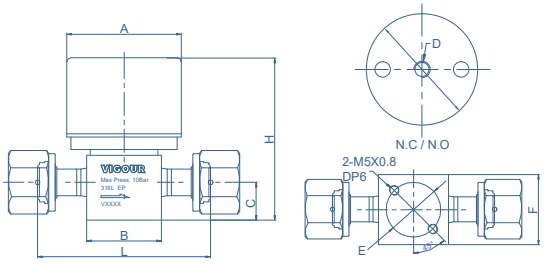
1/4, 3/8, 1/2 manual actuator (VFS male)



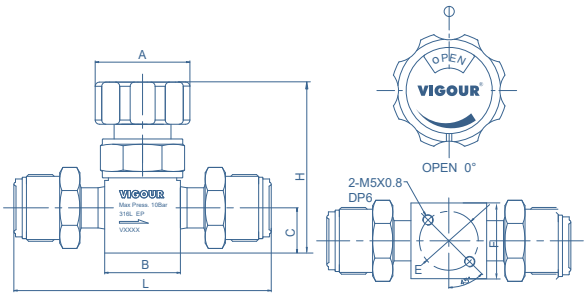
1/4 pneumatic actuator (VFS male)



1/4, 1/2, 3/4 manual actuator (VFS female)



1/2 pneumatic actuator (VFS female)



3/4 manual actuator (VFS male)

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
3/4" VFS male	7	Φ45	36	21.5	Φ28	36	122.3	82
3/4" VFS female	7	Φ45	36	21.5	Φ28	36	106.3	82

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

VDV32UB S - M - A - MV4 - MV4 - PA

Materials
S: 316L
SLV: 316L secondary remelt

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

Flow Circuit Diagram
For details, please visit the attached table P54: flow circuit diagram.

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

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
MV12: 3/4" VFS male

* Other connection standard,consult factory

Diaphragm Valves
VDV33UB Series

Product Feature

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

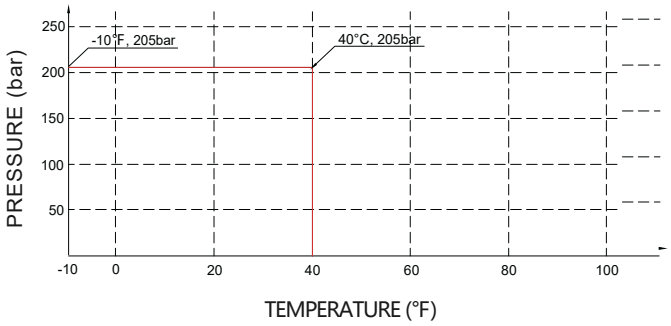
1/4 Type

1/4 Type

1/2 Type

1/2 Type

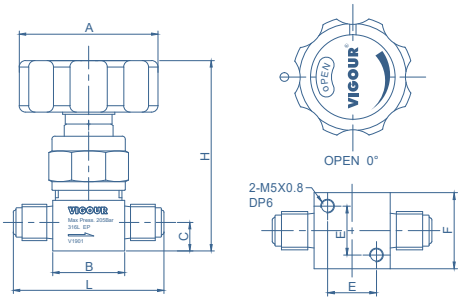
Temperature / Pressure Rating



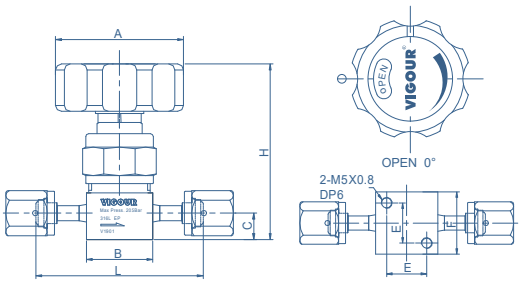
Technical Data

Max. Working Pressure:	3000 psig (206 bar)
Pneumatic Operating Pressure:	58~87psig (4-6bar)
Max. Working Temp.:	14°F ~ 104°F (-10°C ~ 40°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=0.1 3/8" 1/2" Cv=0.5
Weight:	approx. 0.27kg (actuator not included)

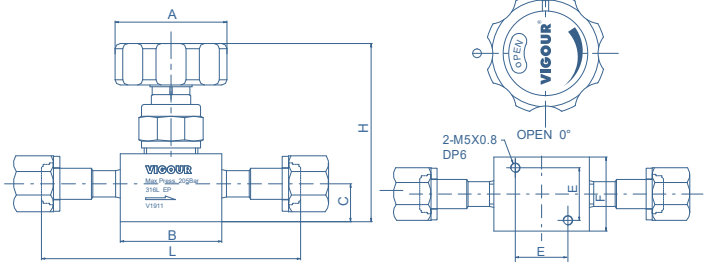
Dimensions (mm)



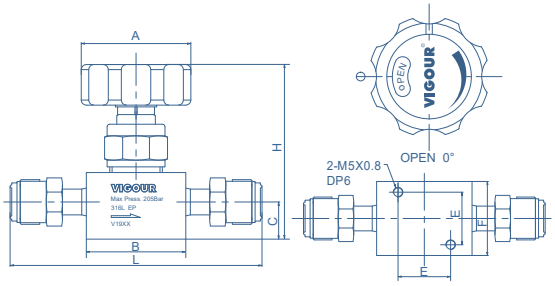
1/4 manual actuator (VFS male)



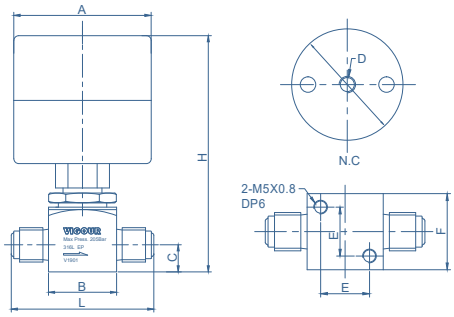
1/4 manual actuator (VFS female)



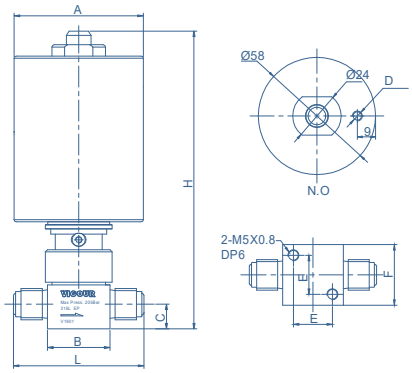
1/2 manual actuator (VFS female)



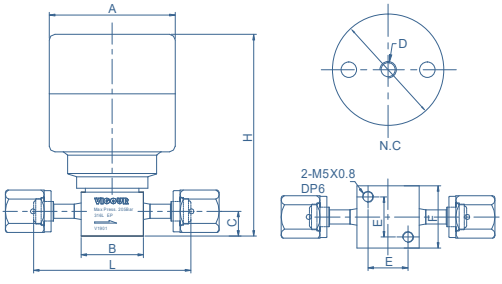
3/8, 1/2 manual actuator (VFS male)



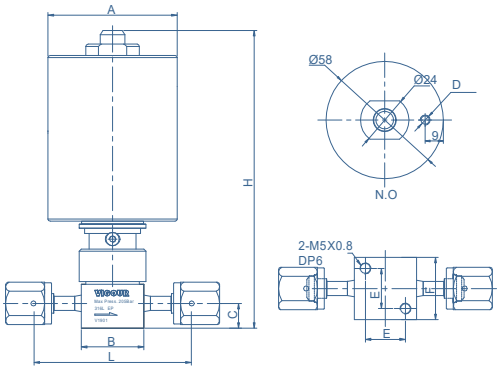
1/4 pneumatic actuator N.C (VFS male)



1/4 pneumatic actuator N.O (VFS male)

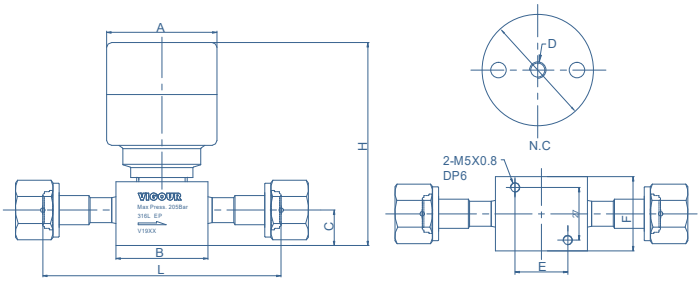


1/4 pneumatic actuator N.C (VFS female)

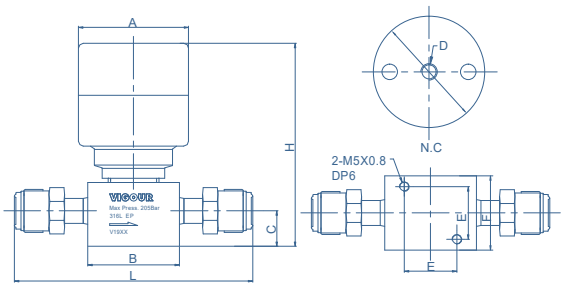


1/4 pneumatic actuator N.O (VFS female)

Diaphragm Valves
VDV33UB Series



1/2 pneumatic actuator N.C (VFS female)



3/8, 1/2 pneumatic actuator N.C (VFS male)

manual actuator

End Comections	Orifice (mm)	Dimensions (mm)						
		A	B	C	E	F	L	H
1/4" VFS male	4.4	Φ54	28	11.1	18	28	58.6	74
1/4" VFS female	4.4	Φ54	28	11.1	18	28	71.6	74
3/8" VFS male	7	Φ54	47.1	18.2	27	38	123.2	86
1/2" VFS male	7	Φ54	47.1	18.2	27	38	123.2	86
1/2" VFS female	7	Φ54	47.1	18.2	27	38	123.2	86

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	4.4	Φ56.5	28	11.1	M5x0.8	18	28	58.6	90.5
1/4" VFS male	N.O	4.4	Φ58	28	11.1	M5x0.8	18	28	58.6	134
1/4" VFS female	N.C	4.4	Φ56.5	28	11.1	M5x0.8	18	28	71.6	90.5
1/4" VFS female	N.O	4.4	Φ58	28	11.1	M5x0.8	18	28	71.6	134
3/8" VFS male	N.C	7	Φ56.5	47.1	18.2	M5x0.8	27	38	123.2	105
1/2" VFS male	N.C	7	Φ56.5	47.1	18.2	M5x0.8	27	38	123.2	105
1/2" VFS female	N.C	7	Φ56.5	47.1	18.2	M5x0.8	27	38	123.2	105

1/4", 3/8", 1/2" VFS fitting dimensions for reference, other connections please contact factory.

Ordering Information

VDV33UBS - M - A - MV4 - MV4 - PA

Materials
S: 316L
SLV: 316L secondary remelt

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

* Normally opened available with connetion size 1/4 thch.

Flow Circuit Diagram
For details, please visit the attached table P54: flow circuit diagram.

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

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

Product Feature

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

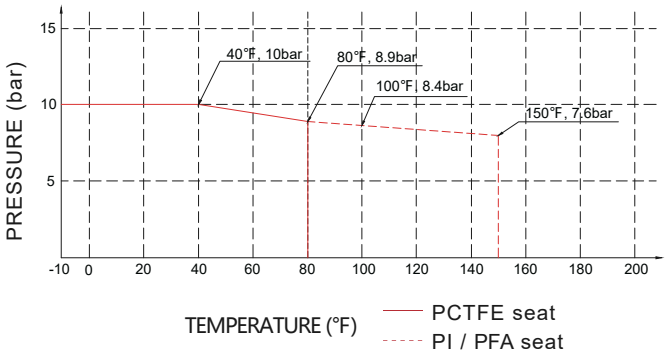
1/4 Type

1/4 Type

1/2 Type

1/2 Type

Temperature / Pressure Rating

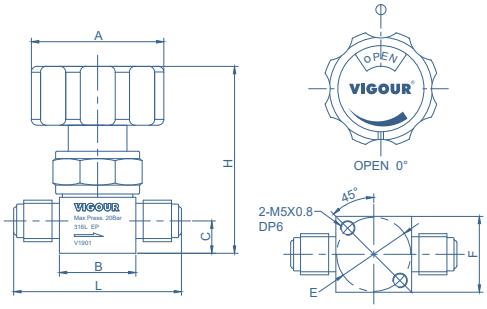


Technical Data

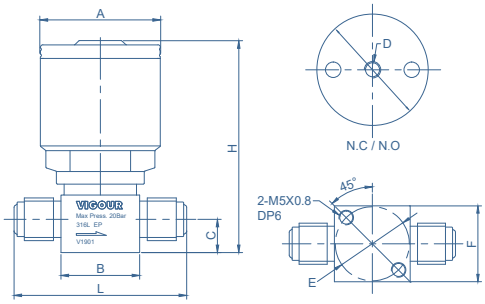
Max. Working Pressure:	300 psig (20 bar)
Pneumatic Operating Pressure:	58~87psig (4-6bar)
Max. Working Temp.:	14°F ~ 176°F (-10°C ~ 80°C)
Surface finish:	10μin. Ra
Materials	
Body:	see ordering info
Diaphragm:	Elgiloy®
Seat packing:	PCTFE
Handle:	AL
Internal Leakage Allowance:	$1x10^{-9}$ mbar l/s He
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 (actuator not included)

Diaphragm Valves
VDV52UB Series

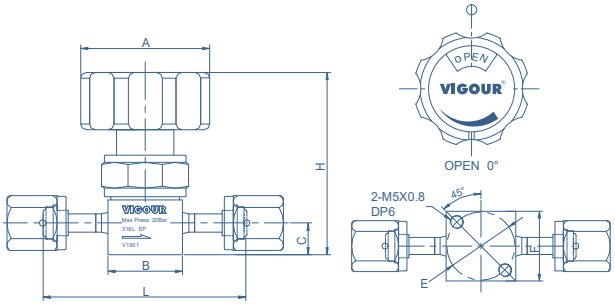
Dimensions (mm)



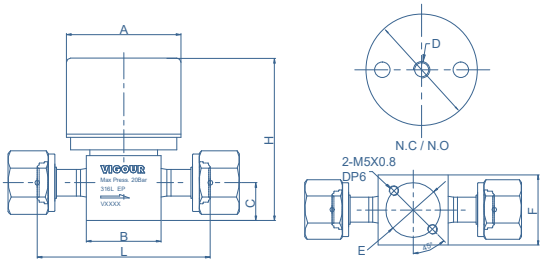
1/4, 3/8, 1/2 manual actuator (VFS male)



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

VDV52UB S - M - A - MV4 - MV4 - PA

Materials
S: 316L
SLV: 316L secondary remelt

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

Flow Circuit Diagram
For details, please visit the attached table P54: flow circuit diagram.

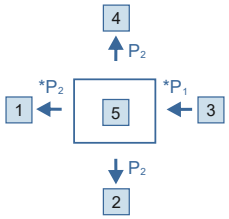
Valve Seat Option
None: PCTFE(standard)
VS: Vespel®
PA: PFA

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

VIGOUR
we offer solutions regarding your ideas!

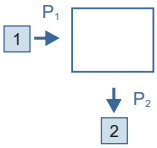
Ports Diagrammatic Drawing:



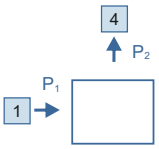
*P1: Inlet pressure
*P2: Outlet pressure

Two ports flow circuit diagram:

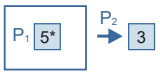
Standard model



"A" Type

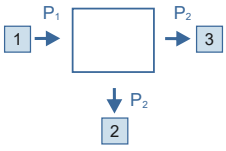


"B" Type

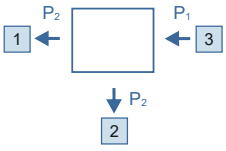


"K" Type
*Bottom interface

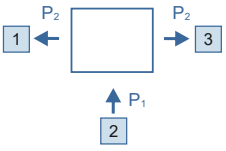
Three ports flow circuit diagram:



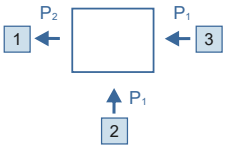
"C" Type



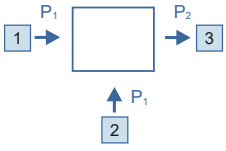
"D" Type



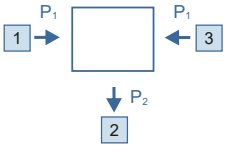
"E" Type



"F" Type

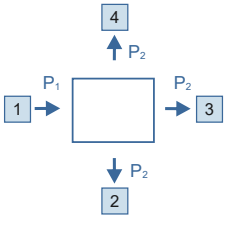


"G" Type

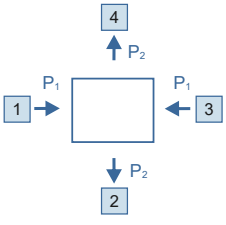


"H" Type

Four ports flow circuit diagram:



"I" Type



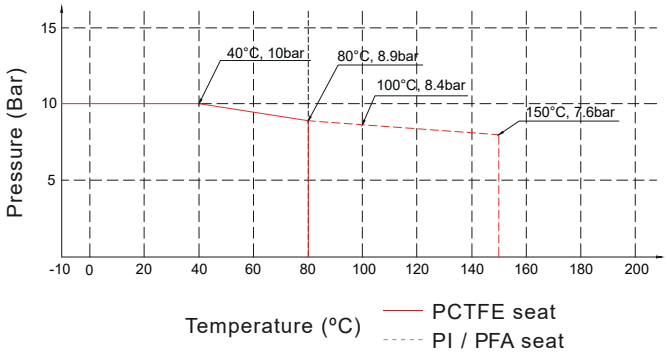
"J" Type

Diaphragm Valves
VDV22UB Series

Product Feature

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

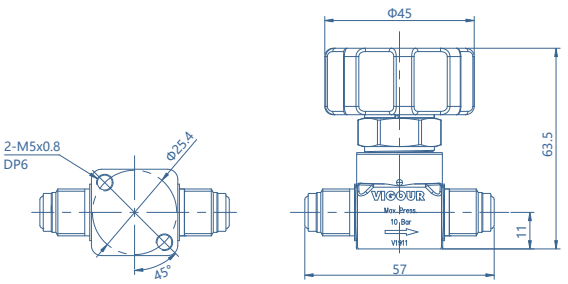
Temperature / Pressure Rating



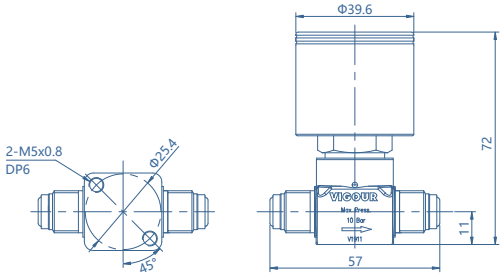
Technical Data

Max. Working Pressure:	150 psig (10 bar)
Pneumatic Operating 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 1/2" Cv=0.65
Weight:	approx. 0.27kg (actuator not included)

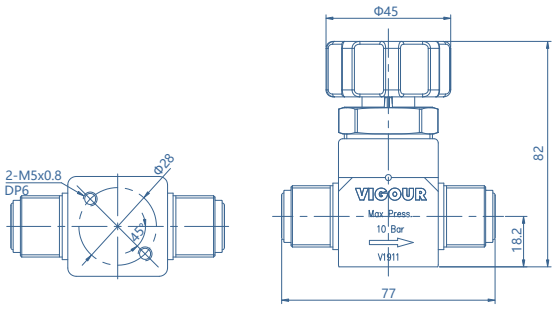
Dimensions (mm)



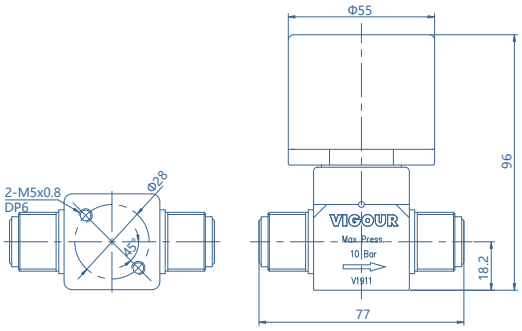
1/4 manual actuator (VFS fitting male)



1/4 pneumatic actuator (VFS fitting male)



1/2 manual actuator (VFS fitting male)



1/2 pneumatic actuator (VFS fitting male)

Ordering information

VDV22UBS - M - MV4 - MV4 - PA

Materials
S: 316L
SLV: 316L secondary remelt

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

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

End Connection
MV4: 1/4" VFS fitting male
MV8: 1/2" VFS fitting male

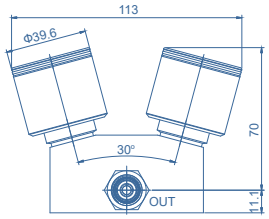
* Other connection standard,consult factory

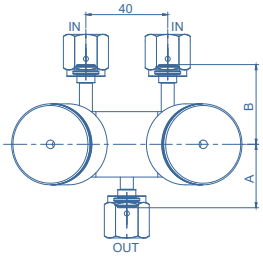
Low-pressure Diaphragm Valve Manifold
VDV36UB Series

Product Feature

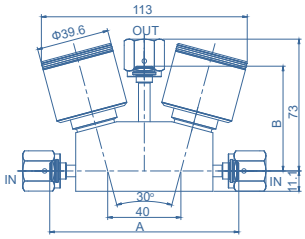
- Excellent degassing characteristics is achieved through minimized flow paths by combining 2 of VDV32、VDV33 diaphgram valves together in one valve body.
- Fewer welds over standard valve alignments
- Reduces space requirements
- Compact tubing arrangement
- Dead space free configuration

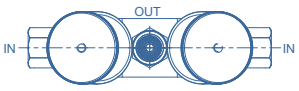
Dimensions (mm)





End Connections	Dimensions (mm)	
	A	B
VFS Female	31	39
VFS Male	46.3	46.3



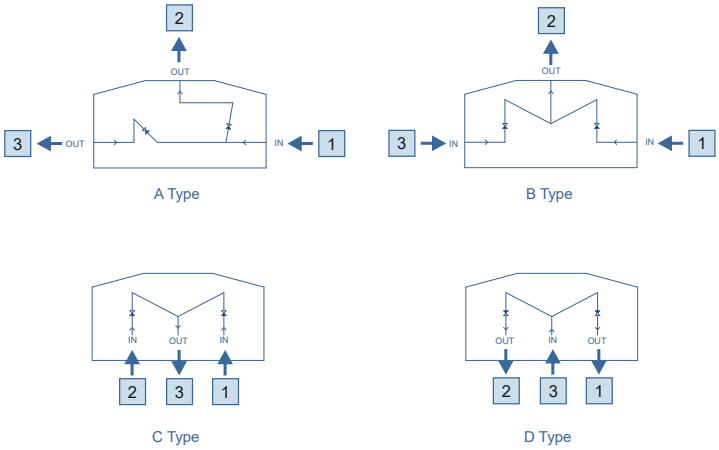


End Connections	Dimensions (mm)	
	A	B
VFS Female	103.4	57.3
VFS Male	139.6	70

Technical Data

Max. Working Pressure:	150 psig (10 bar)　3000 psig (206bar) optional
Pneumatic Operating Pressure:	58~87psig (4-6bar)
Max. Working Temp.:	14°F ~ 104°F (-10°C ~ 40°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:	Cv=0.3 (Low pressure)　Cv=0.1 (High pressure)
Weight:	approx. 0.27kg (actuator not included)

Ordering information



Inlet/Outlet Connecion

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

* Other connection standard, consult factory.

Port Selection

VDV36UB S - A - H - M - PC - 1 - 2 - 3

Materials
- S: 316L EP
- SLV: 316L secondary remelt

Flow Rate
- A: A Type
- B: B Type
- C: C Type
- D: D Type

Working Pressure
- None: 150 psig
- H: 3000 psig

Valve2 Actuator*
- M: manual actuator
- PO: pneumatic actuator,normally opened
- PC: pneumatic actuator,normally closed

* When the actuatos are the some there will be one symbol.

Valve1 Actuator
- M: manual actuator
- PO: pneumatic actuator,normally opened
- PC: pneumatic actuator,normally closed

Ordering Example

Example: VDV36UBS - A - M - PC - FV4 - FV4 - FV4

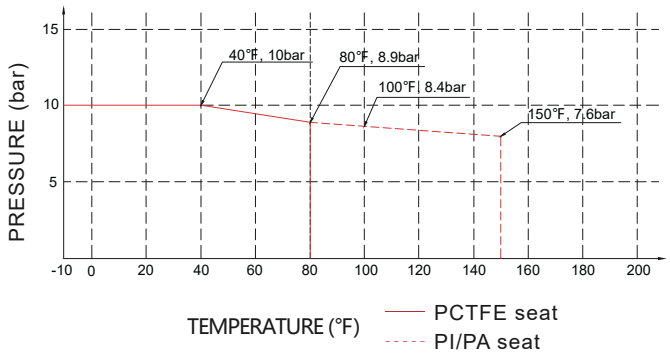
1 - 2 - 3

Diaphragm Valves
VDV39 Series

Product Feature

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

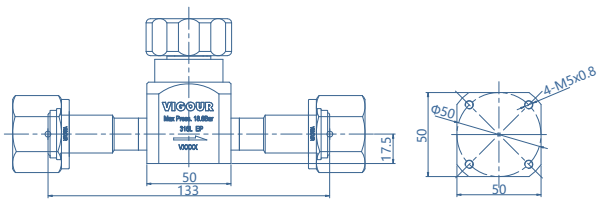
Temperature / Pressure Rating



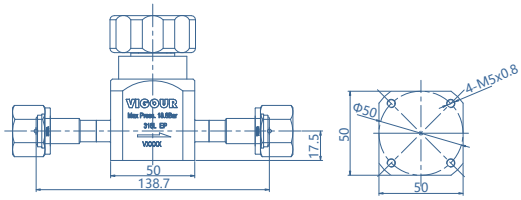
Technical Data

Max. Working Pressure:	270 psig (18.6 bar)
Max. Working Temp.:	14°F ~ 104°F (-10°C ~ 40°C)
Surface finish:	10μin. Ra
Materials	
Body:	see ordering info
Diaphragm:	Elgiloy® (316L optional)
Seat packing:	PCTFE (PFA / VESPEL optional)
Handle:	AL
Internal Leakage Allowance:	$1x10^{-9}$ mbar l/s He
External Leakage Allowance:	$1x10^{-9}$ mbar l/s He
Flow capacity:	Cv=2.8
Weight:	approx. 1.0kg (actuator not included)

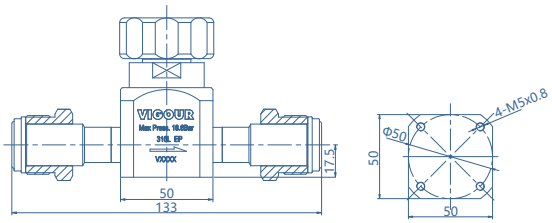
Dimensions (mm)



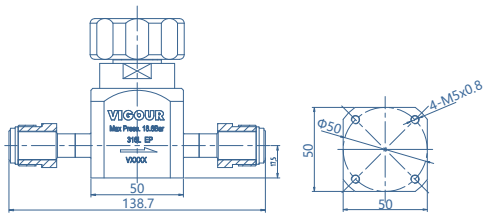
3/4 manual actuator (VFS female)



1/2 manual actuator (VFS female)



3/4 manual actuator (VFS male)



1/2 manual actuator (VFS male)

Ordering Information

VDV39S - M - MV8 - MV8 - PA

Materials
- S: 316L
- SLV: 316L secondary remelt

Actuator
- M: manual actuator

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

End Connection
- FV12: 3/4” VFS (F)
- MV12: 3/4” VFS (M)
- TW12: 3/4” tube weld
- FV8: 1/2” VFS (F)
- MV8: 1/2” VFS (M)
- TW8: 1/2” tube weld

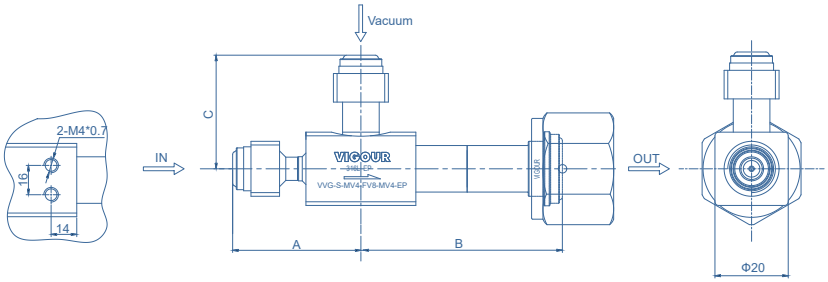
* Other connection standard,consult factory

Vacuum Generators
VVG Series

Product Feature

- Max. vacuum pressure: -90kPa
- Stainless steel 316L construction
- MMHG (Torr) vacuum generators
- With a minimum source nitragen pressure of 90 psig
- 100% helium leak test

Dimensions (mm)

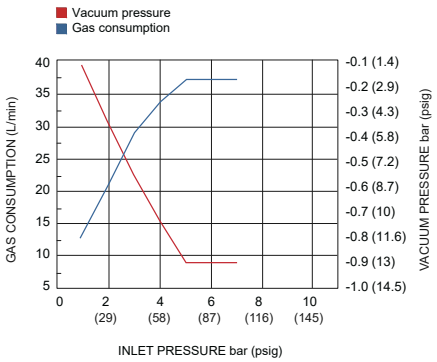


Connections		mm	inch
A	FV4	32.5	1.27
	MV4	35	1.37
B	FV8	55	2.16
	MV8	64.8	2.55
C	FV4	24	0.94
	MV4	31	1.22

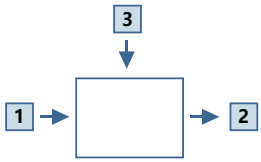
Technical Data

Type:	Vacuum Generators
Max. Vacuum pressure:	-90kPa
Inlet pressure at limiting vacuum pressure:	5 bar
Flow at limiting vacuum pressure:	37L/min
Body Material:	SS 316L
Max. Working pressure:	10 bar
Temperature range:	0~150℃
Source Gas:	Nitrogen

Vacuum and Flow Specification



Ordering Information



Inlet/Outlet Connecion

FV4: 1/4” VFS female	MV4: 1/4” VFS male
FV8: 1/2” VFS female	MV8: 1/2” VFS male

* Other connection standard, consult factory.

Port Selection

VVG - S - 1 - 2 - 3 - EP

Materials
S: 316L

Inlet Connection
MV4: 1/4” VFS male

Outlet Connection
FV8: 1/2” VFS female
MV8: 1/2” VFS male

Surface Finish
BA: 0.4 µin. Ra
EP: 0.25 µin. Ra

Vacuum Connection
FV4: 1/4” VFS female
MV4: 1/4” VFS male

Ordering Example

Example: VVG - S - MV4 - FV8 - MV4
1 - 2 - 3

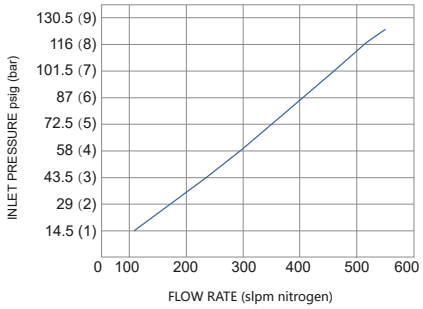
Bellows Valves
VUBV Series

Product Feature

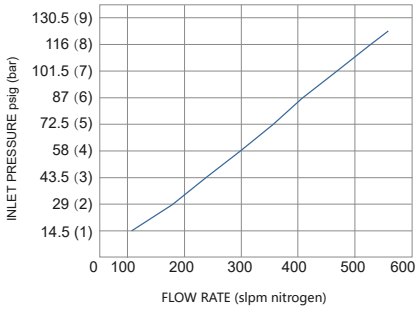
- 316L stainless steel construction
- Tube fitting, tube welding, and VFS fitting joints
- Easy to clean to keep operation clean
- Excellent gas displacement characteristics
- EP treatment is standard for all wetted sufaces
- Standard seat material is PCTFE, Polyimide is option
- All-metal seal to atmosphere

Flowchart

Maunal Actuator



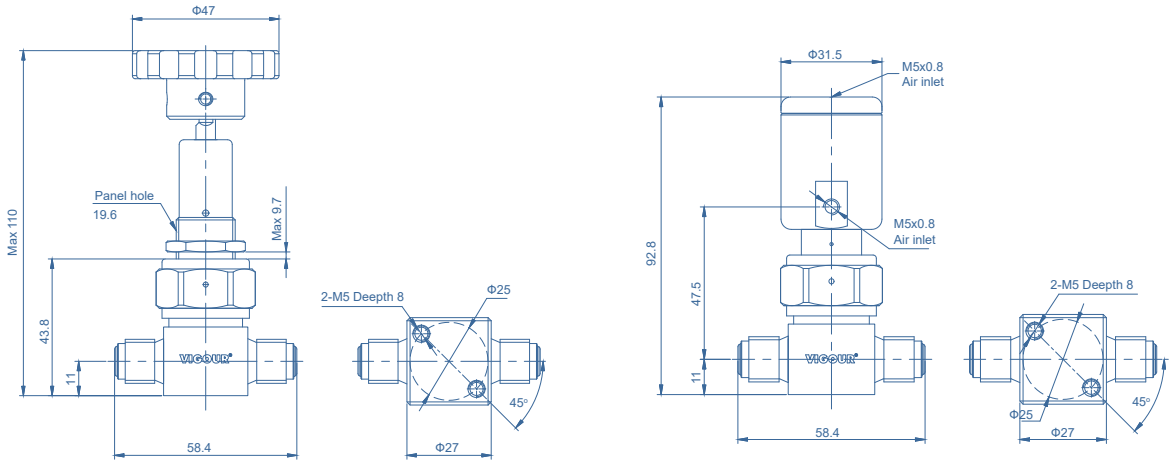
Pneumatic Actuator



Technical Data

Manual Pressure:	Vacuum 500 psig (35bar)
Pneumatic Pressure:	Vacuum 125 psig (8.6bar)
Operating Pressure:	45~120 psig (3.2~8.2bar)
Surface finish:	10μin. Ra Standard (7μin. Ra / 5μin. Ra optional)
Working Temp.:	-40°F ~ 200°F (-40°C ~ 93°C)
Materials	
Body:	316L
Bellows:	A269 / A240 stainless steel
Seat packing:	PCTFE
Handle:	AL
Internal Leakage Allowance:	$4x10^{-9}$ mbar l/s He
External Leakage Allowance:	$4x10^{-9}$ mbar l/s He
Flow capacity:	Cv=0.3
Weight:	approx. 1.54kg (actuator not included)

Dimensions (mm)



Ordering Information

VUBV S - M - MV4 - MV4 - VS

Materials
S: 316L

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

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

End Connection
04: 1/4" tube fitting
TW4: 1/4" tube weld
FV4: 1/4" VFS female
MV4: 1/4" VFS male

* Other connection standard,consult factory

* Tube fitting wetted surface Ra. 20μm machine finished, TW4、FV4、MV4 wetted surface Ra. 8μm machine finished and electropolishad

Metering Valves
VMV Series

Product Features

- Low pressure metering valves
- Body materials: 316
- Panel installation is possible
- Vernier handles Options
- Straight and Angle flow patterns
- Working pressure: Max. 2000psig (137bar)
- Straight-pattern flow coefficients (Cv) from 0.004 to 0.16

Technical Data

Series	Pressure-Temperature Ratings		Orifice in. (mm)	Shutoff Service	Stem Taper (Included Angle)
	Temperature ℃	Working Pressure bar			
A type	-23℃ to +204℃ (FKM O-rings)	137	0.032 (0.81)	No	1°
B type	-23℃ to +148℃ (Buna N, O-rings)	68.9 ①	0.056 (1.42)	No	3°
C type			0.128 (3.25)	Yes②	6°

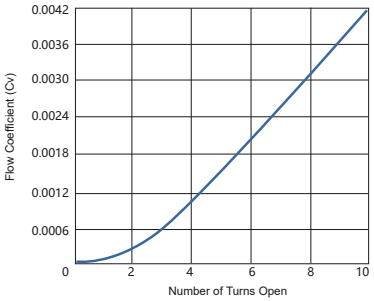
① Downstream pressure 500 psig (34.4 bar) max when valve requires adjustment at pressure due to strength limitations of the fine-pitch threads and high operating torque.

② Stainless steel L series valves are not recommended for shutoff in vacuum or gas service, or for repetitive shutoff in liquid service.

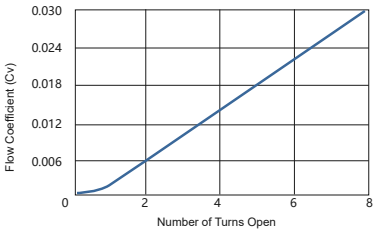
Flow Coefficient at Turns Open

Flow Data at 70°F (20°C)

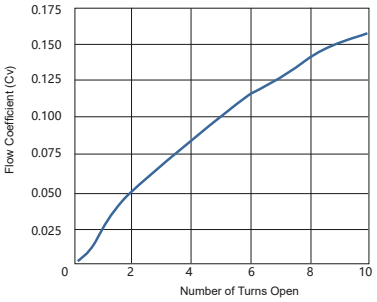
A type Metering Valves



B type Metering Valves



C type Metering Valves

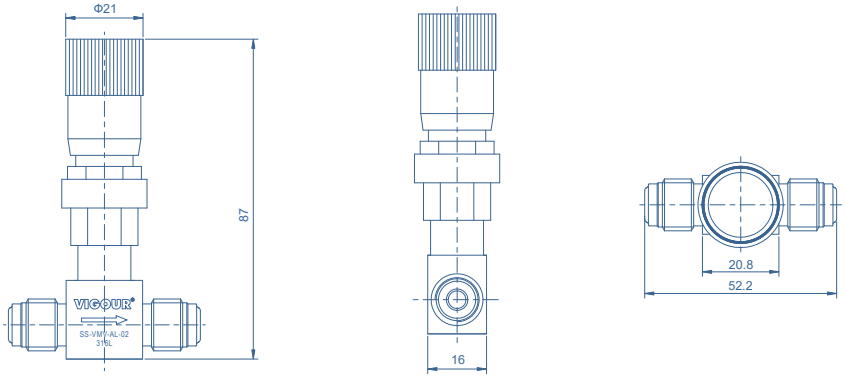


Max. Flow Cv=0.004	
Pressure Drop to Atmosphere bar	Air Flow std L/min
0.68	1.1
3.4	2.8
6.8	5.6

Max. Flow Cv=0.03	
Pressure Drop to Atmosphere bar	Air Flow std L/min
0.68	9.3
3.4	25.4
6.8	42.4

Max. Flow Cv=0.16	
Pressure Drop to Atmosphere bar	Air Flow std L/min
0.68	56.6
3.4	181
6.8	323

Dimensions



End Connections		Ordering Number	Dimensions, in. (mm)					
Inlet/Outlet	Size		L	H	H1	H2	E	G
A type (Straight Pattern)								
Tube Fittings	1/16 in.	SS-VMV-A-01	1.56 (39.6)	2.34 (59.4)	0.92 (23.4)	/	0.38 (9.6)	0.45 (11.4)
	1/8 in.	SS-VMV-A-02	1.90 (48.3)					
	1/4 in.	SS-VMV-A-04	2.04 (51.8)					
	3mm	SS-VMV-A-3M	1.90 (48.3)					
	6mm	SS-VMV-A-6M	2.04 (51.8)					
VFS Male	1/4 in.	SS-VMV-A-MV4	2.06 (52.3)					
A type (Angle Pattern)								
Tube Fittings	1/16 in.	SS-VMV-AL-01	0.81 (20.6)	3.22 (81.8)	0.92 (23.4)	0.88 (22.4)	0.38 (9.6)	0.45 (11.4)
	1/8 in.	SS-VMV-AL-02	0.98 (24.9)	3.22 (81.8)		0.98 (24.9)		
	1/4 in.	SS-VMV-AL-04	1.02 (25.9)	3.36 (85.3)		1.02 (25.9)		
	3mm	SS-VMV-AL-3M	0.98 (24.9)	3.32 (84.3)		0.99 (25.1)		
Male NPT / Tube Fittings	1/8 in.	SS-VMV-AL-M2-02	0.98 (24.9)	3.07 (78.0)		0.98 (24.9)		
B type (Straight Pattern)								
Tube Fittings	1/8 in.	SS-VMV-B-02	2.02 (51.3)	2.78 (70.6)	1.56 (39.6)	/	0.50 (12.7)	0.58 (14.7)
	1/4 in.	SS-VMV-B-04	2.20 (55.9)					
	3mm	SS-VMV-B-3M	2.02 (51.3)					
	6mm	SS-VMV-B-6M	2.20 (55.9)					
Male NPT	1/8 in.	SS-VMV-B-M2	1.50 (38.1)					
	1/4 in.	SS-VMV-B-M4	1.96 (49.8)					
Female NPT	1/8 in.	SS-VMV-B-F2	1.94 (49.3)					
VFS Male	1/4 in.	SS-VMV-B-MV4	2.06 (52.3)					
B type (Angle Pattern)								
Tube Fittings	1/8 in.	SS-VMV-BL-02	1.01 (25.7)	3.30 (83.8)	1.07 (27.2)	1.01 (25.7)	0.50 (12.7)	0.58 (14.7)
	1/4 in.	SS-VMV-BL-04	1.10 (27.9)	3.39 (86.1)		1.10 (27.9)		
	3mm	SS-VMV-BL-3M	1.01 (25.7)	3.30 (83.8)		1.01 (25.7)		
	6mm	SS-VMV-BL-6M	1.10 (27.9)	3.39 (86.1)		1.10 (27.9)		
Male NPT	1/8 in.	SS-VMV-BL-M2	0.75 (19.1)	3.04 (77.2)		0.75 (19.1)		
	1/4 in.	SS-VMV-BL-M4	0.98 (24.9)	3.27 (83.1)		1.02 (25.9)		
Male NPT / Tube Fittings	1/8 in.	SS-VMV-BL-M2-02	1.01 (25.7)	3.04 (77.2)		0.75 (19.1)		
Female NPT	1/8 in.	SS-VMV-BL-F2	0.97 (24.6)	3.26 (82.8)		0.97 (24.6)		

Metering Valves
VMV Series

Dimensions

End Connections		Ordering Number	Dimensions, in. (mm)					
Inlet/Outlet	Size		L	H	H1	H2	E	G
C type (Straight Pattern)								
Tube Fittings	1/4 in.	SS-VMV-C-04	2.34 (59.4)	2.82 (71.6)	1.26 (32.0)	/	1.13 (28.7)	0.58 (14.7)
	3/8 in.	SS-VMV-C-06	2.46 (62.5)					
	6mm	SS-VMV-C-6M	2.34 (59.4)					
Male NPT	1/4 in.	SS-VMV-C-M4	2.00 (50.8)					
C type (Angle Pattern)								
Tube Fittings	1/4 in.	SS-VMV-CL-04	1.17 (29.7)	3.77 (95.8)	1.04 (26.4)	1.17 (29.7)	1.13 (28.7)	0.58 (14.7)
	6mm	SS-VMV-CL-6M						

Options and Accessories

Vernier Handle

Product Features:

- Helps ensure repeatable flow adjustments.
- Provides readings accurate to 1/25 turn.
- Kits contain all parts necessary to add a vernier handle to an existing valve.

Ordering Example:
SS-VMV-AL-02-**Y**

Ordering Infomation

SS - VMV- B - 02 - 02 - Y

Materials
SS: 316

Series
A: A type (Straight Pattern)
AL: A type (Angle Pattern)
B: B type (Straight Pattern)
BL: B type (Angle Pattern)
C: C type (Straight Pattern)
CL: C type (Angle Pattern)

Inlet / Outlet
Tube fittings: See product size table for details
Male NPT: See product size table for details
Female NPT: See product size table for details
VFS Male: See product size table for details

Handle
None: standard
Y: Vernier Handle

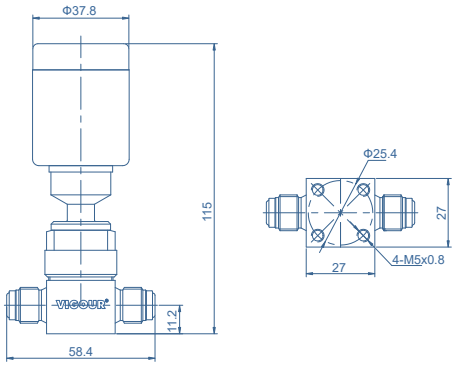
Product Feature

- Ultrahigh cycle life with high-speed actuation
- Normally open and normally closed pneumatic actuation
- Electronic or optical actuator position-sensing option
- Suitable for ultrahigh-purity applications
- Modular surface-mount, tube butt weld, and VFS end connections
- Opening and closing time of less than 5ms
- Fully swept flow path facilities
- Thermal isolation coupling optional

Technical Data

Max. Working Pressure:	150 psig (10bar)
Nominal Diameter:	Φ4.1
Working Temp.:	-9°F ~ 399°F (-23°C ~ 200°C) Body Max. Temp 200°C
Materials	
Body:	see ordering info
Diaphragm:	Elgiloy®
Seat:	High purity PFA
Flow capacity:	Cv=0.27
Weight:	approx. 1.54kg

Dimensions (mm)



Ordering Information

VALD S - PO - MV4 - MV4

Materials
- S: 316L
- SLV: 316L secondary remelt

Actuator
- PO: pneumatic actuator,normally opened
- PC: pneumatic actuator,normally closed

End Connection
- TW4: 1/4" tube weld
- FV4: 1/4" VFS (F)
- MV4: 1/4" VFS (M)

* Other connection standard,consult factory

All-Welded Check Valves
VUCV Series

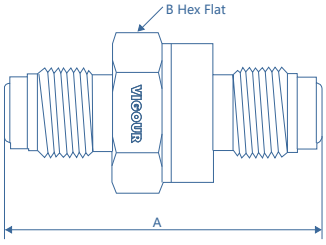
Product Feature

- All-welded design body with minimal dead space
- Cracking pressure less than 2 psig
- 316L SS Materials for ultra high punity gracle
- Strong durability as well as corrosion resistance for long cycle life
- Elgiloy® spring material with free noise in the process of useny

Technical Data

Working Pressure:	3000 psig
Cracking Pressure:	<2 psig
Working Temperature:	-10~80℃
Material	
Body:	SS 316L
Sprting:	Elgiloy®
O-ring:	FKM
Flow Capacity:	Cv=0.55 (1/4")
	Cv=0.70 (1/2")

Dimensions (mm)



End Comections	Dimensions (mm)	
	A	B
1/4" VFS male	45.7	22
1/2" VFS male	52.5	27

Ordering Information

VUCV - S - MV4 - MV4 - E

Material

S: 316L

Inlets / Outlets

MV4: 1/4" VFS male
MV8: 1/2" VFS male

Seal Materials

E: EPDM
K: Kalrez® (FFKM)

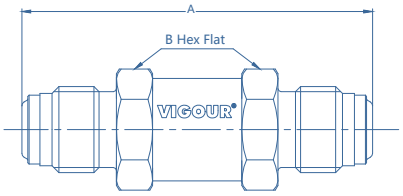
Product Feature

- Compact check valve
- O-ring Materials: VITON® standard, EPDM optional
- working pressure: Max. 300bar
- Opening pressure: 1/3psi / 1psi
- Inlet/outlet connection: NPT thread / NPT tube fitting

Typical Applications

- Designed for instrument panels and systems
- Hydrogen energy
- High-flow applications

Dimensions (mm)



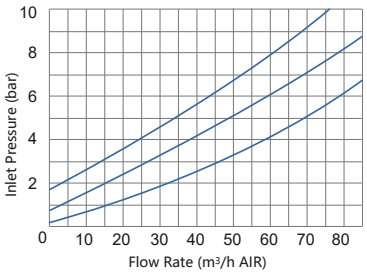
Ordering Number	Dimensions (mm)	
	A	B
VCVH-S-MV4-MV4	58.2	17.4
VCVH-S-MV8-MV8	68.3	25.4

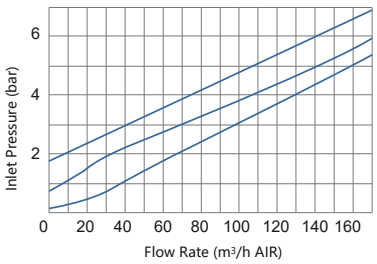
Technical Data

Working pressure:	Max. 300 bar
Opening pressure:	1/3psi / 1psi
Parent material:	see ordering info
Inlet/outlet connection:	see ordering info
O-ring:	VITON® (standard) EPDM (optional)
Leakage rate:	Bubble-tight

Flowchart

Minimum open reset pressure		Reset pressure
psi (bar)		
1/3 (0.03)	3 (0.21) under	6 (0.42) under
1 (0.07)	4 (0.28) under	5 (0.35)
5 (0.35)	3~9 (0.21~0.63)	2 (0.14)
10 (0.69)	7~15 (0.49~1.1)	3 (0.21)
25 (1.8)	20~30 (1.4~2.1)	17 (1.21)





Ordering Information

VCVH - S - MV4 - MV4 - E - 1

Materials

S: 316L

Inlet / Outlet Connection

MV4: 1/4" VFS male
MV8: 1/2" VFS male

Opening pressure

1: 1psi
1/3: 1/3 psi

O-ring

None: VITON®
E: EPDM

Gas Stick Assemblies
VUP Series

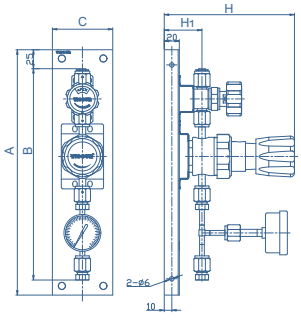
Product Features

- Ultra high purity gas stick for all gas delilery systems
  100TG: ≤30 slpm delivery 1/4" VFS
  200TG: ≤300 slpm delivery 3/8" VFS
  300TG: ≤600 slpm delivery 1/2" VFS
- High control accuracy
- All connections welded or VFS
- Manual or pneumatic diaphragm valve option
- 100% Helium-leak-tested

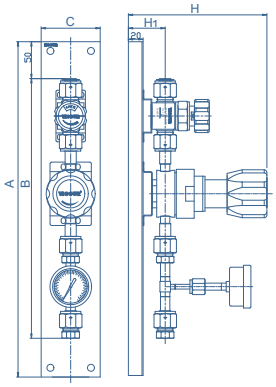
Technical Data

Inlet pressure P_1:	300 psig
Outlet pressure P_2:	30/60/100/150 psig
Diaphragm valve materials	
body:	316L
Valve seat:	PCTFE
Diaphragm:	Elgiloy®
Regulator materials	
body:	316L / 316L secondary remelt
Valve seat:	PCTFE
Diaphragm:	Hastelloy® C276
Leak rate: (to atmosphere)	$1x10^{-9}$ mbar l/s He
(via seat)	$1x10^{-8}$ mbar l/s He

Dimensions (mm)

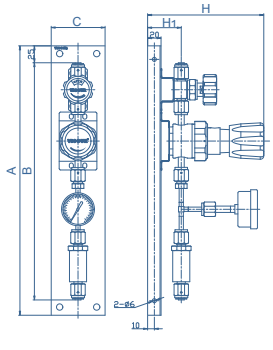


VUP-100TG (A Type)

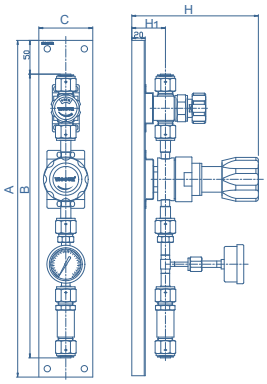


VUP-200TG / VUP-300TG (A Type)

Type	Panel Thickness mm	Ordering Number	Dimensions, mm				
			A	B	C	H	H1
100TG	20	VUP-100TG-A	325	280	80	172.5	50
200TG	20	VUP-200TG-A	455	352.4	80	188	50
300TG	20	VUP-300TG-A	455	349.2	80	188	50

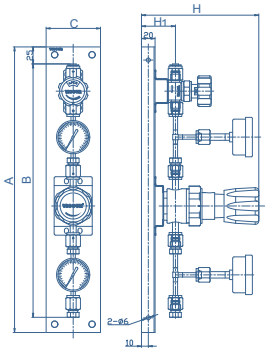


VUP-100TG (B Type)

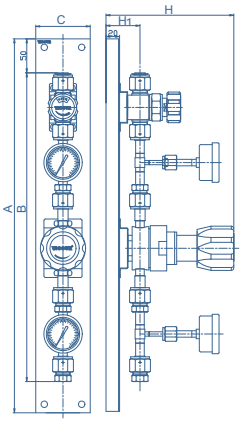


VUP-200TG / VUP-300TG (B Type)

Type	Panel Thickness mm	Ordering Number	Dimensions, mm				
			A	B	C	H	H1
100TG	20	VUP-100TG-B	400	352.3	80	172.5	50
200TG	20	VUP-200TG-B	500	421.4	80	188	50
300TG	20	VUP-300TG-B	500	418.2	80	188	50

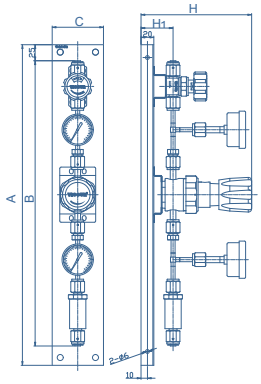


VUP-100TG (C Type)

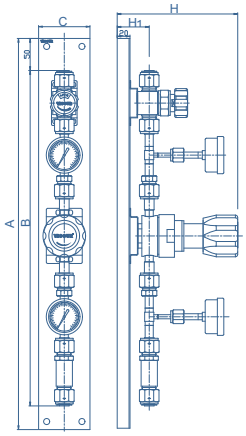


VUP-200TG / VUP-300TG (C Type)

Type	Panel Thickness mm	Ordering Number	Dimensions, mm				
			A	B	C	H	H1
100TG	20	VUP-100TG-C	420	372.6	80	172.5	50
200TG	20	VUP-200TG-C	550	454.1	80	188	50
300TG	20	VUP-300TG-C	550	447.7	80	188	50



VUP-100TG (D Type)



VUP-200TG / VUP-300TG (D Type)

Type	Panel Thickness mm	Ordering Number	Dimensions, mm				
			A	B	C	H	H1
100TG	20	VUP-100TG-D	500	444.9	80	172.5	50
200TG	20	VUP-200TG-D	610	523.1	80	188	50
300TG	20	VUP-300TG-D	610	516.7	80	188	50

Gas Stick Assemblies
VUP Series

Ordering Information

VUP - 100TG - D - 20 - 10 - FV4 - P - P - FV4 - F - PC

Series
- 100TG: ≤30 slpm delivery 1/4" VFS
- 200TG: ≤300 slpm delivery 3/8" VFS
- 300TG: ≤600 slpm delivery 1/2" VFS

Type
- A: Single guage, No filter included
- B: Single guage, included filter
- C: Dual guage, No filter included
- D: Dual guage, included filter

Inlet Pressure P_1
- 20: 20 bar

Outlet Pressure P_2
- V1: Vac to 10 psig
- V2: Vac to 30 psig
- V4: Vac to 60 psig
- V7: Vac to 100 psig
- V10: Vac to 150 psig
- 1: to 10 psig
- 2: to 30 psig
- 4: to 60 psig
- 7: to 100 psig
- 10: to 150 psig

Inlet Valve
- None: No inlet valve
- MV4: 1/4" VFS male
- FV4: 1/4" VFS female
- MV8: 1/2" VFS male
- FV8: 1/2" VFS female

Diaphragm Valve Option
- None: Manual valve
- PC: Pneumatic valve (normally closed)

Outlet Option
- None: Without
- F: Filter (0.003 μm)

Outlet Valve
- MV4: 1/4" VFS male
- FV4: 1/4" VFS female
- MV8: 1/2" VFS male
- FV8: 1/2" VFS female

Outlet Pressure Indication
- None: No inlet guage
- P: Pressure gauge
- K: Contact pressure gauge
- PT: Pressure mitter transmitter

Inlet Pressure Indication
- None: No outlet guage
- P: Pressure gauge
- K: Contact pressure gauge
- PT: Pressure mitter transmitter

Product Feature

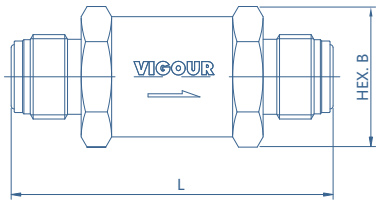
- The VFH Series is an In-Line filtration device
- Filter material: 316L
- Compact size and lightweight
- Outstanding chemical compatibility
- Tested for use with oxygen

In-line Type

Technical Data

Working Pressure:	2350 psig
Working Temperature:	-10~100℃
Material	
Body:	SS 316L
Filter Element:	SS 316L
Gasket:	SS 316L / PTFE
End Connection:	VFS Threaded Fitting

Dimensions (mm)



End Comections	Dimensions (mm)	
	L	B
1/4" VFS male	79.3	32
1/2" VFS male	84.4	32

Ordering Information

VFH - S - MV4 - MV4 - 2

Material
S: 316L

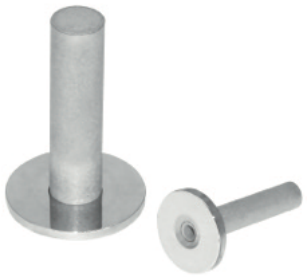
Inlets / Outlets
MV4: 1/4" VFS male
MV8: 1/2" VFS male

Nominal Pore Size
0.5: 0.5 μm
2: 2 μm
5: 5 μm
10: 10 μm
20: 20 μm
40: 40 μm
70: 70 μm

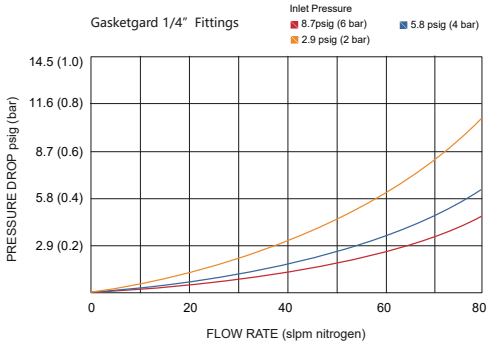
Gasket Filters
VUGF Series

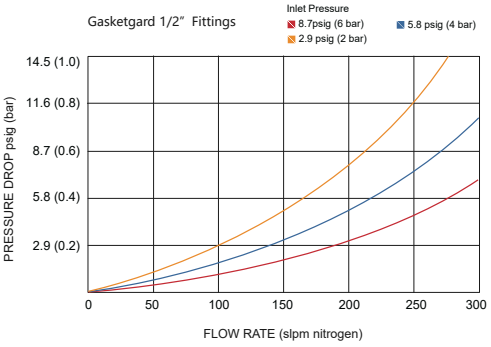
Product Feature

- All-metal filter
- Comrpact design
- Protect sensitive gas componers from particle damage
- Zntegrate into the gas system with out adding length
- Retain particles down to 0.3μm
- Dired with high purity nitragen
- Fits in place of standard 1/4", 1/2" VFS Gasket

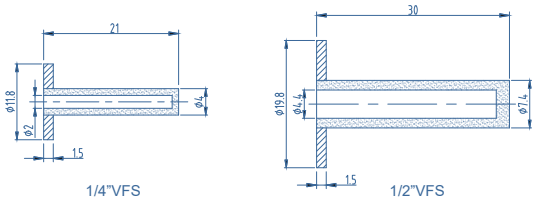


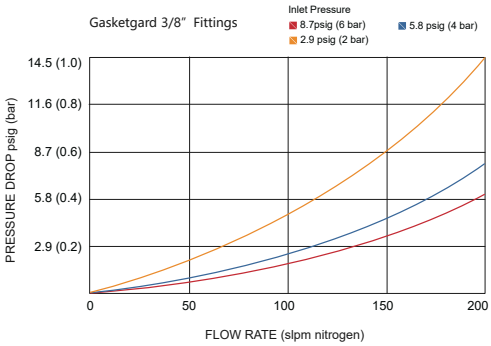
Flow Rata





Dimensions (mm)





Ordering Information

VUGF - GK - G4

Gasket Option	Option
GK: Gasket	G4: 1/4" VFS Gasket
GKR: Gasket Retainer Assembly	G6: 3/8" VFS Gasket
	G8: 1/2" VFS Gasket

VIGOUR
we offer solutions regarding your ideas!

General Information

Materials

Material	Ordering Number Designator	Specification
Glands, Bodies, and Nuts		
316L stainless steel	Standard	Bar stock: ASME SA479, ASTM A276 Forgings: ASME A182
316L secondary remelt stainless steel	-SLV	Bar stock: ASME SA479, ASTM A276 Forgings: ASME A182
Gaskets		
Nickel	-NI	ASTM B162
316L stainless steel	Standard	ASTM A240, ASTM A167

Dimensions

- Dimensions are for reference only and are subject to change
- The D1 dimension refers to the smallest nominal inside diameter of the part

Pressure Ratings

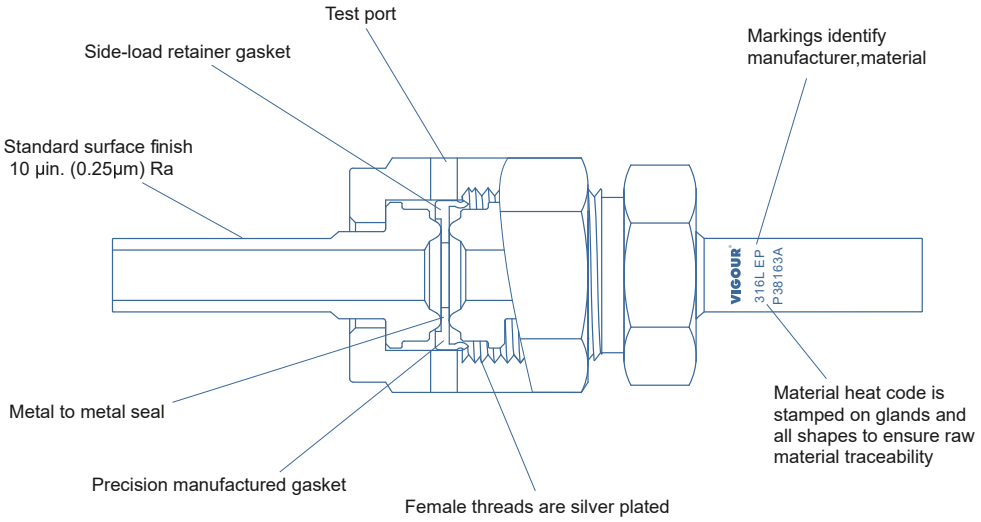
- Ratings are based upon tests conducted using VFS assemblies
- All ratings comply with calculations per ANSI Code for Pressure Piping B31.3
- To determine pressure ratings in accordance with ANSI B31.3, mutiply psig rating by 0.94
- Ratings determined at ambient temperature

Components	Material	Temperature, °F (°C)
Fittings	316L stainless steel	1000 (537)
	316L secondary remelt stainless steel	1000 (537)
Gaskets	316L stainless steel	1000 (537)
	Nickel	600 (315)

Testing

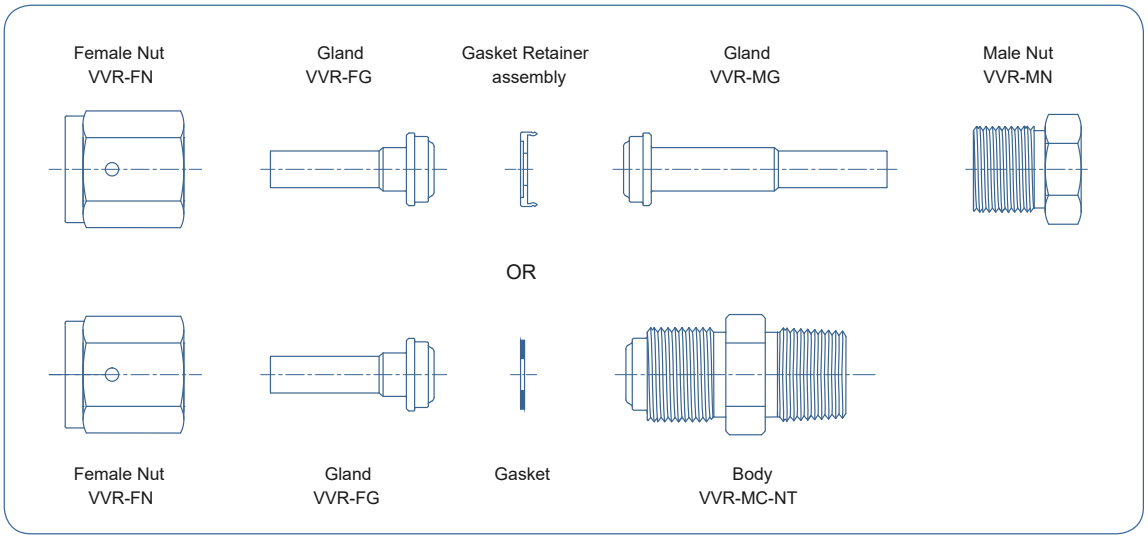
The VFS assembly with silver plating has been helium leak tested to a rate of $4x10^{-9}$ mbar l/s He and the unplated gasket to a rate of $4x10^{-11}$ mbar l/s He without leakage.

Face Seal Fittings
VVR Series



Typical VFS Assemblies

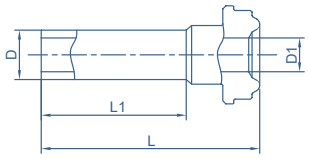
VFS assemblies are made up of four or five basic components.



VIGOUR
we offer solutions regarding your ideas!

Glands

Short Tube Butt Weld



D Tube OD in.	Wall Thickness in.	VFS Size in.	Material	Qrdering Number	Dimensions, in.(mm) L1	D1	L	Working Pressure psig (bar)
1/8	0.028	1/8	316L	VVR-FG2-TB2 ①	0.75	0.07	1.08	8500
			316L secondary remelt	VVR-FG2-TB2-SLV ①	(19.1)	(1.8)	(27.4)	(585)
1/4	0.035	1/4	316L	VVR-FG4-TB4	0.75	0.18	1.10	5100
			316L secondary remelt	VVR-FG4-TB4-SLV	(19.1)	(4.6)	(27.9)	(351)
1/4	0.035	1/4	316L	VVR-FG4-TB4-L18	0.38	0.18	0.72	5100
			316L secondary remelt	VVR-FG4-TB4-L18-SLV	(9.6)	(4.6)	(18.3)	(351)
1/4	0.035	1/4	316L	VVR-FG4-TB4-L15	0.25	0.18	0.60	5100
			316L secondary remelt	VVR-FG4-TB4-L15-SLV	(6.4)	(4.6)	(15.2)	(351)
1/4	0.035	1/2	316L	VVR-FG8-TB4	0.75	0.18	1.12	4300
			316L secondary remelt	VVR-FG8-TB4-SLV	(19.1)	(4.6)	(28.4)	(296)
1/4	0.035	1/2	316L	VVR-FG8-TB4-L15	0.25	0.18	0.62	4300
			316L secondary remelt	VVR-FG8-TB4-L15-SLV	(19.1)	(4.6)	(15.7)	(296)
1/4	0.035	1/2	316L	VVR-FG8-TB4-L19	0.75	0.18	0.76	4300
			316L secondary remelt	VVR-FG8-TB4-L19-SLV	(19.1)	(4.6)	(19.4)	(296)
3/8	0.035	1/2	316L	VVR-FG8-TB6	0.75	0.31	1.12	3300
			316L secondary remelt	VVR-FG8-TB6-SLV	(19.1)	(7.9)	(28.4)	(227)
3/8	0.035	1/2	316L	VVR-FG8-TB6-L15	0.25	0.31	0.62	3300
			316L secondary remelt	VVR-FG8-TB6-L15-SLV	(6.4)	(7.9)	(15.7)	(227)
1/2	0.049	1/2	316L	VVR-FG8-TB8	0.75	0.40	1.12	3700
			316L secondary remelt	VVR-FG8-TB8-SLV	(19.1)	(10.2)	(28.4)	(254)
1/2	0.049	1/2	316L	VVR-FG8-TB8-L18	0.38	0.40	0.74	3700
			316L secondary remelt	VVR-FG8-TB8-L18-SLV	(9.6)	(10.2)	(18.8)	(254)
1/2	0.049	1/2	316L	VVR-FG8-TB8-L15	0.25	0.40	0.62	3700
			316L secondary remelt	VVR-FG8-TB8-L15-SLV	(6.4)	(10.2)	(15.7)	(254)
3/4	0.065	3/4	316L	VVR-FG12-TB12	0.81	0.62	1.25	2400
			316L secondary remelt	VVR-FG12-TB12-SLV	(20.6)	(15.7)	(32)	(165)
1	0.065	1	316L	VVR-FG16-TB16	0.75	0.87	1.51	1900
			316L secondary remelt	VVR-FG16-TB16-SLV	(19.1)	(22.1)	(38.6)	(130)

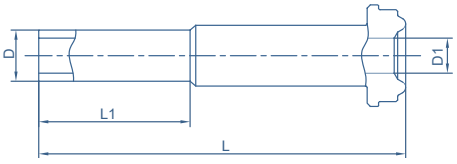
① not design for gasket retainer assembly

To order fittings manufactured for Surface Finish Ra(Average)＜0.4 add BA to the ordering number.
Example: VVR-FG4-TB4-BA

Face Seal Fittings
VVR Series

Glands

Long Tube Butt Weld

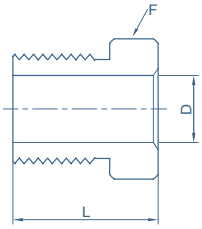


D Tube OD in.	Wall Thickness in.	VFS Size in.	Material	Qrdering Number	Dimensions, in.(mm) L1	D1	L	Working Pressure psig (bar)
1/8	0.028	1/8	316L	VVR-MG2-TB2 ①	0.75	0.07	1.42	8500
			316L secondary remelt	VVR-MG2-TB2-SLV ①	(19.1)	(1.8)	(36.1)	(585)
1/4	0.035	1/4	316L	VVR-MG4-TB4	0.75	0.18	1.70	5100
			316L secondary remelt	VVR-MG4-TB4-SLV	(19.1)	(4.6)	(43.2)	(351)
1/4	0.035	1/4	316L	VVR-MG4-TB4-L33	0.38	0.18	1.32	5100
			316L secondary remelt	VVR-MG4-TB4-L33-SLV	(9.6)	(4.6)	(33.5)	(351)
1/4	0.035	1/4	316L	VVR-MG4-TB4-L30	0.25	0.18	1.20	5100
			316L secondary remelt	VVR-MG4-TB4-L30-SLV	(6.4)	(4.6)	(30.5)	(351)
1/4	0.035	1/2	316L	VVR-MG8-TB4	0.75	0.18	1.79	4300
			316L secondary remelt	VVR-MG8-TB4-SLV	(19.1)	(4.6)	(45.5)	(296)
1/4	0.035	1/2	316L	VVR-MG8-TB4-L32	0.75	0.18	1.28	4300
			316L secondary remelt	VVR-MG8-TB4-L32-SLV	(19.1)	(4.6)	(32.7)	(296)
1/4	0.035	1/2	316L	VVR-MG8-TB4-L37	0.75	0.18	1.47	4300
			316L secondary remelt	VVR-MG8-TB4-L37-SLV	(19.1)	(4.6)	(37.4)	(296)
3/8	0.035	1/2	316L	VVR-MG8-TB6	0.75	0.31	1.79	3300
			316L secondary remelt	VVR-MG8-TB6-SLV	(19.1)	(7.9)	(45.5)	(227)
3/8	0.035	1/2	316L	VVR-MG8-TB6-L32	0.25	0.31	1.29	3300
			316L secondary remelt	VVR-MG8-TB6-L32-SLV	(6.4)	(7.9)	(32.8)	(227)
1/2	0.049	1/2	316L	VVR-MG8-TB8	0.75	0.40	1.79	3500
			316L secondary remelt	VVR-MG8-TB8-SLV	(19.1)	(10.2)	(45.5)	(241)
1/2	0.049	1/2	316L	VVR-MG8-TB8-L35	0.38	0.40	1.41	3500
			316L secondary remelt	VVR-MG8-TB8-L35-SLV	(9.6)	(10.2)	(35.8)	(241)
1/2	0.049	1/2	316L	VVR-MG8-TB8-L32	0.25	0.40	1.29	3500
			316L secondary remelt	VVR-MG8-TB8-L32-SLV	(6.4)	(10.2)	(32.8)	(241)
3/4	0.065	3/4	316L	VVR-MG12-TB12	0.75	0.65	2.03	2400
			316L secondary remelt	VVR-MG12-TB12-SLV	(19.1)	(16.5)	(51.6)	(165)
1	0.065	1	316L	VVR-MG16-TB16	0.75	0.87	2.32	2400
			316L secondary remelt	VVR-MG16-TB16-SLV	(19.1)	(22.1)	(58.9)	(165)

① not design for gasket retainer assembly

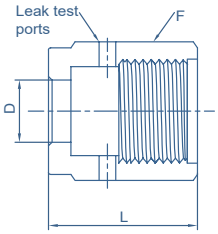
To order fittings manufactured for Surface Finish Ra(Average)＜0.4 add BA to the ordering number.
Example: VVR-MG4-TB4-BA

Male Nut



VFS Size in.	Ordering Number	Material	Dimensions, in.(mm) F Hex Flat	L	D
1/8	VVR-MN2	316L	3/8	0.50 (12.7)	0.21 (5.3)
1/4	VVR-MN4		5/8	0.71 (18.0)	0.36 (9.1)
1/2	VVR-MN8		15/16	0.81 (20.6)	0.61 (15.5)
3/4	VVR-MN12		1-5/16	1.00 (25.4)	0.89 (22.6)
1	VVR-MN16		1-5/8	1.19 (30.2)	1.20 (30.5)

Female Nut

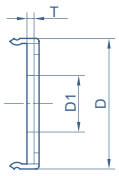


VFS Size in.	Ordering Number	Material	Dimensions, in.(mm) F Hex Flat	L	D
1/8	VVR-FN2	316L	7/16	0.53 (13.5)	0.21 (5.3)
1/4	VVR-FN4		3/4	0.81 (20.6)	0.36 (9.1)
1/2	VVR-FN8		1-1/16	0.88 (22.4)	0.61 (15.5)
3/4	VVR-FN12		1-1/2	1.12 (28.4)	0.89 (22.6)
1	VVR-FN16		1-3/4	1.34 (34.0)	1.20 (30.5)

Dimensions are for reference only
and are subject to change without prior notue

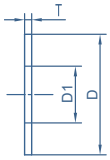
Face Seal Fittings
VVR Series

Gasket Retainer Assembly



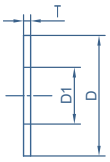
VFS Size in.	Ordering Number	Material	Dimensions, in.(mm) D1	T	D
1/4	VVR-GKR-G4 VVR-GKR-G4-NI	316L Nickel	0.24 (6.1)	0.028 (0.7)	0.50 (12.7)
1/2	VVR-GKR-G8 VVR-GKR-G8-NI	316L Nickel	0.44 (11.2)	0.028 (0.7)	0.79 (20.1)
3/4	VVR-GKR-G12 VVR-GKR-G12-NI	316L Nickel	0.66 (16.8)	0.028 (0.7)	1.14 (29.0)
1	VVR-GKR-G16 VVR-GKR-G16-NI	316L Nickel	0.89 (22.6)	0.028 (0.7)	1.40 (35.6)

Gaskets



VFS Size in.	Ordering Number	Material	Dimensions, in.(mm) D1	T	D
1/8	VVR-GK-G2 VVR-GK-G2-NI	316L Nickel	0.09 (2.3)	0.028 (0.7)	0.26 (6.6)
1/4	VVR-GK-G4 VVR-GK-G4-NI	316L Nickel	0.22 (5.6)	0.028 (0.7)	0.47 (11.9)
	VVR-GK-G4-12.7 VVR-GK-G4-12.7-NI	316L Nickel	0.22 (5.6)	0.028 (0.7)	0.50 (12.7)
1/2	VVR-GK-G8 VVR-GK-G8-NI	316L Nickel	0.44 (11.2)	0.028 (0.7)	0.78 (19.8)
3/4	VVR-GK-G12 VVR-GK-G12-NI	316L Nickel	0.66 (16.8)	0.028 (0.7)	1.14 (29.0)
1	VVR-GK-G16 VVR-GK-G16-NI	316L Nickel	0.89 (22.6)	0.028 (0.7)	1.40 (35.6)

Filter Gaskets

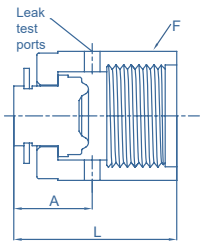


VFS Size in.	Ordering Number	Material	Dimensions, in.(mm) D1	T	D
1/4	VVR-GKF-G4 VVR-GKRF-G4	316L	0.22 (5.6)	0.028 (0.7)	0.47 (11.9)
1/2	VVR-GKF-G8 VVR-GKRF-G8	316L	0.44 (11.2)	0.028 (0.7)	0.78 (19.8)

* Element Nominal Pore Size (Optaion) : 0.5μm / 2μm / 5μm / 10μm / 20μm / 60μm
Ordering Example: VVR-GKF-G4-0.5

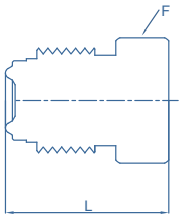
VIGOUR
we offer solutions regarding your ideas!

Cap



VFS Size in.	Ordering Number	Material	Dimensions, in.(mm) F Hex Flat	L	A
1/8	VVR-C2	316L	7/16	0.63 (16.0)	0.30 (7.6)
1/4	VVR-C4		3/4	0.94 (23.9)	0.44 (11.2)
1/2	VVR-C8		1-1/16	1.01 (25.6)	0.45 (11.4)
3/4	VVR-C12		1-1/2	1.29 (32.8)	0.54 (13.7)
1	VVR-C16		1-3/4	1.54 (39.1)	0.63 (16.0)

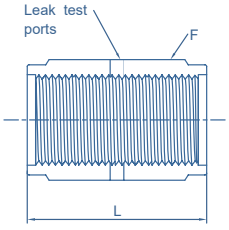
Plug



VFS Size in.	Ordering Number	Material	Dimensions, in.(mm) F Hex Flat	L
1/8	VVR-P2 ①	316L	3/8	0.68 (17.3)
1/4	VVR-P4 ②		5/8	0.92 (23.4)
1/2	VVR-P8		15/16	1.08 (27.4)
3/4	VVR-P12		1-5/16	1.43 (36.3)
1	VVR-P16		1-5/8	1.52 (38.6)

① Not designed for gasket retainer assembly.
② Also available as a rotatable plug.
Ordering number: VVR-P8-R

Coupling

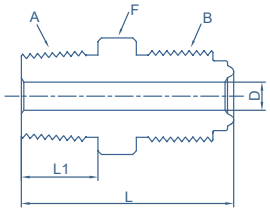


VFS Size in.	Material	Ordering Number	Dimensions, in.(mm) L	F
1/8	316L	VVR-FU2	0.66 (16.8)	7/16
1/4		VVR-FU4	1.19 (30.2)	3/4
1/2		VVR-FU8	1.31 (33.3)	1-1/16
3/4		VVR-FU12	1.68 (42.7)	1-1/2
1		VVR-FU16	2.04 (51.8)	1-3/4

Dimensions are for reference only
and are subject to change without prior notue

Face Seal Fittings
VVR Series

Male NPT Connectors ①

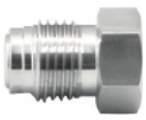


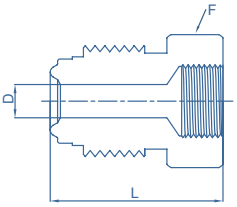
A NPT Size in.	B VFS Size in.	Material	Ordering Number	Dimensions, in.(mm) L	L1	D	F	Working Pressure psig (bar) NI	SS
1/16	1/8	316L	VVR-MC2-M1 ①	1.07 (27.2)	0.38 (9.6)	0.09 (2.3) ③	3/8	9000 (620)	9000 (620)
1/8	1/8		VVR-MC2-M2 ②	1.07 (27.2)	0.38 (9.6)	0.09 (2.3) ③	7/16	9000 (620)	9000 (620)
1/8	1/4		VVR-MC4-M2	1.31 (33.3)	0.38 (9.6)	0.18 (4.6)	5/8	10000 (689)	6400 (440)
1/4	1/4		VVR-MC4-M4	1.49 (37.8)	0.56 (14.2)	0.18 (4.6)	5/8	10000 (689)	6400 (440)
1/4	1/2		VVR-MC8-M4	1.65 (41.9)	0.56 (14.2)	0.28 (7.1) ③	15/16	4300 (296)	2800 (192)
3/8	1/2		VVR-MC8-M6	1.65 (41.9)	0.56 (14.2)	0.38 (9.6)	15/16	4300 (296)	2800 (192)
1/2	1/2		VVR-MC8-M8	1.84 (46.7)	0.75 (19.1)	0.4 (10.2)	15/16	4300 (296)	2800 (192)
3/4	3/4		VVR-MC12-M12	2.19 (55.6)	0.75 (19.1)	0.62 (15.7)	1-5/16	3700 (254)	2400 (165)
1	1		VVR-MC16-M16	2.47 (62.7)	0.94 (23.9)	0.87 (22.1)	1-5/8	2400 (165)	3000 (206)

① VFS components with fixed threads must remain stationary during installation.
These fitting connections should be assembled only to glands with rotating male or female threaded nuts.
② Not designed for gasket retainer assembly
③ May lontain internal diumeter transitions

To order fittings manufactured for Surface finish Ra(Average)<0.4 add BA to the ordering number.
Example: VVR-MC4-M4-BA

Female NPT Connectors ①





NPT Size in.	VFS Size in.	Material	Ordering Number	Dimensions, in.(mm) L	D	F flat	Working Pressure psig (bar) NI	SS
1/16	1/8	316L	VVR-MC2-F1 ①	1.10 (27.9)	0.09 (2.3)	7/16	6700 (461)	6700 (461)
1/8	1/8		VVR-MC2-F2 ②	1.19 (30.2)	0.09 (2.3)	9/16	6500 (447)	6500 (447)
1/8	1/4		VVR-MC4-F2	1.41 (35.8)	0.18 (4.6)	5/8	8000 (551)	8000 (551)
1/4	1/4		VVR-MC4-F4	1.54 (39.1)	0.18 (4.6)	3/4	6600 (454)	6600 (454)
3/8	1/2		VVR-MC8-F6	1.76 (44.7)	0.40 (10.2)	15/16	3500 (241)	4300 (296)
1/2	1/2		VVR-MC8-F8	1.99 (50.5)	0.40 (10.2)	1-1/16	3500 (241)	4300 (296)
3/4	3/4		VVR-MC12-F12	2.36 (59.9)	0.62 (15.7)	1-5/16	3000 (206)	3700 (254)
1	1		VVR-MC16-F16	2.51 (63.8)	0.87 (22.1)	1-5/8	2400 (165)	3000 (206)

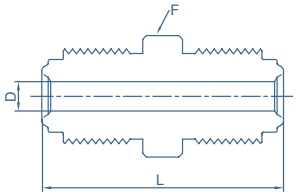
① VFS components with fixed threads must remain stationary during installation.
These fitting connections should be assembled only to glands with rotating male or female threaded nuts.
② Not designed for gasket retainer assembly

To order fittings manufactured for Surface finish Ra(Average)<0.4 add BA to the ordering number.
Example: VVR-MC4-F4-BA

VIGOUR
we offer solutions regarding your ideas!

Dimensions are for reference only
and are subject to change without prior notue

Male Union ①

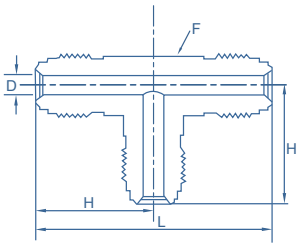


VFS Size in.	Material	Ordering Number	Dimensions, in.(mm)			Working Pressure psig (bar)	
			L	D	F	NI	SS
1/8	316L	VVR-MU2 ②	1.13 (28.7)	0.09 (2.3)	3/8	9000 (620)	11200 (771)
1/4		VVR-MU4	1.55 (39.4)	0.18 (4.6)	5/8	8000 (551)	10000 (689)
1/2		VVR-MU8	1.84 (46.7)	0.40 (10.2)	15/16	3500 (241)	4300 (296)
3/4		VVR-MU12	2.44 (62.0)	0.62 (15.7)	1-5/16	3000 (206)	3700 (254)
1		VVR-MU16	2.59 (65.8)	0.87 (22.1)	1-5/8	2400 (165)	3000 (206)

① VFS components with fixed threads must remain stationary during installation.
These fitting connections should be assembled only to glands with rotating male or female threaded nuts.
② Not designed for gasket retainer assembly

To order fittings manufactured for Surface finish Ra(Average)<0.4 add BA to the ordering number.
Example: VVR-MU4-BA

Male Union Tee



VFS Size in.	Material	Ordering Number	Dimensions, in.(mm)				Working Pressure psig (bar)	
			L	D	F	H	NI	SS
1/8	316L	VVR-MUT-2	1.78 (45.2)	0.09 (2.3)	7/16	0.89 (22.6)	9000 (620)	11200 (771)
1/4		VVR-MUT-4	2.14 (54.4)	0.18 (4.6)	1/2	1.07 (27.2)	8000 (551)	10000 (689)
1/2		VVR-MUT-8	2.90 (73.7)	0.40 (10.2)	13/16	1.45 (36.8)	3500 (241)	4300 (296)
3/4		VVR-MUT-12	3.84 (97.5)	0.62 (15.7)	1-1/4	1.92 (48.8)	3000 (206)	3700 (254)
1		VVR-MUT-16	4.00 (102)	0.87 (22.1)	1-11/16	2.00 (50.8)	2400 (165)	3000 (206)

To order fittings manufactured for Surface finish Ra(Average)<0.4 add BA to the ordering number.
Example: VVR-MUT-4-BA

Fitting Lock Device

This device is intended for use on VIGOUR VFS metal gasket face seal assemblies with standard male and female nuts.

Size in.	Material	Ordering Number
1/4	316L	VVR-FLD-4
1/2	316L	VVR-FLD-8

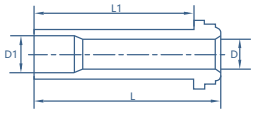
Size in.	Material	Matching product	Ordering Number
1/4	316L	VDV32	VVR-FLD-DV32-4
		VDV33	VVR-FLD-DV33-4
1/2	316L	VDV32	VVR-FLD-DV32-8
		VDV33	VVR-FLD-DV33-8

Dimensions are for reference only
and are subject to change without prior notue

Face Seal Fittings
HVVR Series

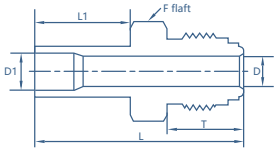
High-Flow Connections

Glands
Tube Butt Weld



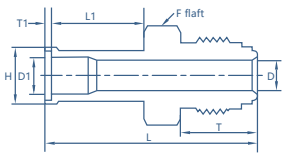
Tube Size in.	Nomlnal Wall Thickness	VFS Size in.	Material	Qrdering Number	Dimensions, in.(mm) L	L1	D	D1	Working Pressure psig (bar) Ni	316L
3/8	0.035	1/4	316L	HVVR-HG4-TB6-L15	0.60 (15.2)	0.41 (10.4)	0.25 (6.4)	0.31 (7.9)	3300 (227)	3300 (227)
3/8	0.035	1/4	316L	HVVR-HG4-TB6-L30	1.19 (30.2)	1.00 (25.4)	0.25 (6.4)	0.31 (7.9)	3300 (227)	3300 (227)
3/8	0.035	1/4	316L	HVVR-HG4-TB6-L33	1.31 (33.3)	1.12 (28.4)	0.25 (6.4)	0.31 (7.9)	3300 (227)	3300 (227)

Bodies
Tube Butt Weld



Tube Size in.	VFS Size in.	Material	Qrdering Number	Dimensions, in.(mm) L	L1	T	D	D1	F	Working Pressure psig (bar) Ni	316L
3/8	1/4	316L	HVVR-MG4-TB6	1.68 (42.7)	0.75 (19.1)	0.62 (15.7)	0.25 (6.4)	0.31 (7.9)	5/8	3300 (227)	3300 (227)

Bodies
Automatic Tube Weld



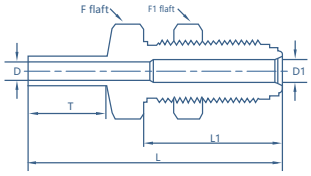
Tube Size in.	VFS Size in.	Material	Qrdering Number	Dimensions, in.(mm) L	L1	T	T1	D	D1	F	H	Working Pressure psig (bar) Ni	316L
3/8	1/4	316L	HVVR-AHG4-TW6	1.71 (43.4)	0.75 (19.1)	0.62 (15.7)	0.03 (0.8)	0.25 (6.4)	0.31 (7.9)	5/8	0.41 (10.4)	3300 (227)	3300 (227)

VIGOUR
we offer solutions regarding your ideas!

Dimensions are for reference only
and are subject to change without prior notue

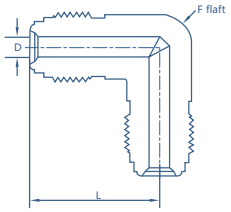
High-Flow Connections

Bodies
Bulkhead Connector



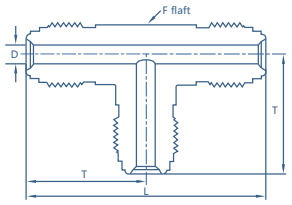
Tube Size in.	VFS Size in.	Material	Qrdering Number	Dimensions, in.(mm) L	L1	T	D	D1	F	F1	Panel Hole Dia	Max Panel Thickness	Working Pressure psig (bar) Ni	316L
3/8	1/4	316L	HVVR-BMG4-TB6	2.36 (59.9)	1.30 (33.0)	0.75 (19.1)	0.31 (7.9)	0.25 (6.4)	3/4	3/4	19/32 (15.0)	0.44 (11.2)	3300 (227)	3300 (227)

Union Elbow



VFS Size in.	Material	Qrdering Number	Dimensions, in.(mm) L	D	F	Working Pressure psig (bar) Ni	316L
1/4	316L	HVVR-UE4	1.07 (27.2)	0.25 (6.4)	1/2	8000 (551)	10000 (689)

Union Tee

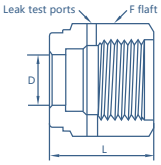


VFS Size in.	Material	Qrdering Number	Dimensions, in.(mm) L	T	D	F	Working Pressure psig (bar) Ni	316L
1/4	316L	HVVR-UT4	2.14 (54.4)	1.07 (27.2)	0.25 (6.4)	1/2	8000 (551)	10000 (689)

Dimensions are for reference only
and are subject to change without prior notue

High-Flow Connections

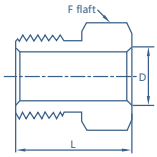
Nuts Female



VFS Size in.	Material	Qrdering Number	Dimensions, in.(mm)		
			L	D	F
1/4	316L	HVVR-FN4 ①	0.81 (20.6)	0.39 (9.9)	3/4

① Use for High Flow Connections: Glands Tube Butt Weld

Nuts Male

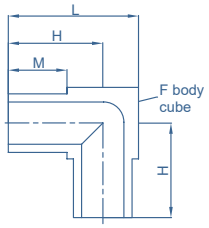


VFS Size in.	Material	Qrdering Number	Dimensions, in.(mm)		
			L	D	F
1/4	316L	HVVR-MN4	0.71 (18.0)	0.39 (9.9)	5/8

VIGOUR
we offer solutions regarding your ideas!

Dimensions are for reference only
and are subject to change without prior notue

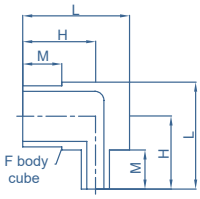
Union Elbow



Tube OD in.	Wall Thickness in.	Ordering Number	Dimensions, in.(mm) L	M	F	H	Working Pressure psig (bar)
1/8	0.028	VMW-UE2 VMW-UE2-SLV	0.56 (14.2)	0.25 (6.4)	5/16	0.41 (10.4)	8500 (585)
1/4	0.035	VMW-UE4 VMW-UE4-SLV	0.56 (14.2)		5/16	0.41 (10.4)	5100 (351)
3/8	0.035	VMW-UE6 VMW-UE6-SLV	0.69 (17.5)		7/16	0.47 (11.9)	3300 (227)
1/2	0.049	VMW-UE8 VMW-UE8-SLV	0.81 (20.6)		9/16	0.53 (13.5)	3700 (254)
3/4	0.065	VMW-UE12 VMW-UE12-SLV	1.06 (27.0)		13/16	0.66 (16.6)	2400 (165)

To order fittings manufactured for Surface Finish Ra(Average)＜0.4 add BA to the ordering number.
Example: VMW-UE6-BA

Reducing Elbow

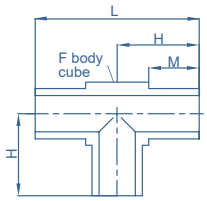


Tube OD in.	Wall Thickness in.	Tube OD in.	Wall Thickness mm	Ordering Number	Dimensions, in.(mm) L	M	F	H	Working Pressure psig (bar)
1/4	0.035	1/8	0.028	VMW-RE4-2 VMW-RE4-2-SLV	0.56 (14.2)	0.25 (6.4)	5/16	0.41 (10.3)	3300 (227)
3/8	0.035	1/4	0.035	VMW-RE6-4 VMW-RE6-4-SLV	0.69 (17.5)		7/16	0.47 (11.9)	3300 (227)
1/2	0.049	1/4	0.035	VMW-RE8-4 VMW-RE8-4-SLV	0.81 (20.6)		9/16	0.53 (13.5)	3700 (254)
1/2	0.049	3/8	0.035	VMW-RE8-6 VMW-RE8-6-SLV	0.81 (20.6)		9/16	0.53 (13.5)	3300 (227)

To order fittings manufactured for Surface Finish Ra(Average)＜0.4 add BA to the ordering number.
Example: VMW-RE6-4-BA

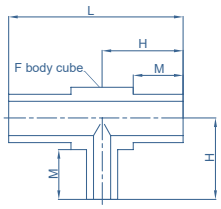
Micro Weld fittings
VMW Series

Union Tee



Tube OD in.	Wall Thickness in.	Ordering Number	Dimensions, in.(mm) L	M	F	H	Working Pressure psig (bar)
1/8	0.028	VMW-UT2 VMW-UT2-SLV	0.82 (20.8)	0.25 (6.4)	5/16	0.41 (10.4)	8500 (585)
1/4	0.035	VMW-UT4 VMW-UT4-SLV	0.82 (20.8)		5/16	0.41 (10.4)	5100 (351)
3/8	0.035	VMW-UT6 VMW-UT6-SLV	0.94 (23.9)		7/16	0.47 (11.9)	3300 (227)
1/2	0.049	VMW-UT8 VMW-UT8-SLV	1.06 (26.9)		9/16	0.53 (13.5)	3700 (254)
3/4	0.065	VMW-UT12 VMW-UT12-SLV	1.31 (33.3)		13/16	0.65 (16.6)	2400 (165)

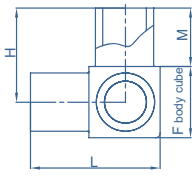
Reducing Tee



Tube OD in.	Wall Thickness in.	Tube OD in.	Wall Thickness mm	Ordering Number	Dimensions, in.(mm) L	M	F	H	Working Pressure psig (bar)
1/4	0.035	1/8	0.028	VMW-RT4-2 VMW-RT4-2-SLV	0.81 (20.6)	0.25 (6.4)	5/16	0.41 (10.3)	3300 (227)
3/8	0.035	1/4	0.035	VMW-RT6-4 VMW-RT6-4-SLV	0.94 (23.9)		7/16	0.47 (11.9)	3300 (227)
1/2	0.049	1/4	0.035	VMW-RT8-4 VMW-RT8-4-SLV	1.06 (26.9)		9/16	0.53 (13.5)	3700 (254)
1/2	0.049	3/8	0.035	VMW-RT8-6 VMW-RT8-6-SLV	1.06 (26.9)		9/16	0.53 (13.5)	3300 (227)

To order fittings manufactured for Surface Finish Ra(Average)＜0.4 add BA to the ordering number.
Example: VMW-RT6-4-BA

Tribow



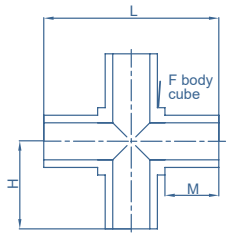
Tube OD in.	Wall Thickness in.	Ordering Number	Dimensions, in.(mm) L	M	F	H	Working Pressure psig (bar)
1/4	0.035	VMW-TB4 VMW-TB4-SLV	0.56 (14.2)	0.25 (6.4)	5/16	0.41 (10.4)	5100 (351)
3/8	0.035	VMW-TB6 VMW-TB6-SLV	0.69 (17.5)		7/16	0.47 (11.9)	3300 (227)
1/2	0.049	VMW-TB8 VMW-TB8-SLV	0.81 (20.6)		9/16	0.53 (13.5)	3700 (254)

To order fittings manufactured for Surface Finish Ra(Average)＜0.4 add BA to the ordering number.
Example: VMW-TB6-BA

VIGOUR
we offer solutions regarding your ideas!

Dimensions are for reference only
and are subject to change without prior notue

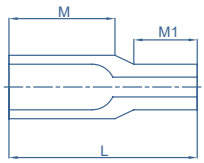
Cross Union



Tube OD in.	Wall Thickness in.	Ordering Number	Dimensions, in.(mm) L	M	F	H	Working Pressure psig (bar)
1/8	0.028	VMW-CU2 VMW-CU2-SLV	0.82 (20.8)	0.25 (6.4)	5/16	0.41 (10.4)	8500 (585)
1/4	0.035	VMW-CU4 VMW-CU4-SLV	0.82 (20.8)		5/16	0.41 (10.4)	5100 (351)
3/8	0.035	VMW-CU6 VMW-CU6-SLV	0.94 (23.9)		7/16	0.47 (11.9)	3300 (227)
1/2	0.049	VMW-CU8 VMW-CU8-SLV	1.06 (26.9)		9/16	0.53 (13.5)	3700 (254)

To order fittings manufactured for Surface Finish Ra(Average)＜0.4 add BA to the ordering number.
Example: VMW-CU4-BA

Reducing Union

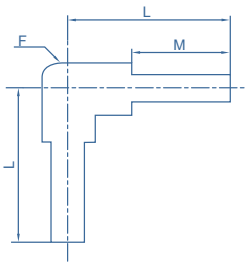


Tube OD in.	Wall Thickness in.	Tube OD in.	Wall Thickness mm	Ordering Number	Dimensions, in.(mm) L	M	M1	Working Pressure psig (bar)
1/4	0.035	1/8	0.028	VMW-RU4-2 VMW-RU4-2-SLV	0.75 (19.0)	0.42 (10.7)	0.25 (6.4)	5100 (351)
3/8	0.035	1/4	0.035	VMW-RU6-4 VMW-RU6-4-SLV				3300 (227)
1/2	0.049	1/4	0.035	VMW-RU8-4 VMW-RU8-4-SLV				3700 (254)
1/2	0.049	3/8	0.035	VMW-RU8-6 VMW-RU8-6-SLV				3300 (227)
3/4	0.065	1/4	0.035	VMW-RU12-4 VMW-RU12-4-SLV				2400 (165)
3/4	0.065	3/8	0.035	VMW-RU12-6 VMW-RU12-6-SLV				2400 (165)
3/4	0.065	1/2	0.049	VMW-RU12-8 VMW-RU12-8-SLV				2400 (165)

To order fittings manufactured for Surface Finish Ra(Average)＜0.4 add BA to the ordering number.
Example: VMW-RU6-4-BA

Tube Butt Weld fittings
VTW Series

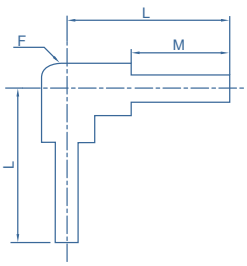
Long Elbow 90°



Tube OD in.	Wall Thickness mm	Ordering Number	Dimensions, in.(mm) L	M	F	Working Pressure psig (bar)
1/4	0.035	VTW-LE4	1.23 (31.2)		7/16	5100 (351)
3/8	0.035	VTW-LE6	1.20 (30.5)		7/16	3300 (227)
1/2	0.049	VTW-LE8	1.34 (34.0)	0.75 (19.0)	11/16	3700 (254)
3/4	0.065	VTW-LE12	1.46 (37.1)		15/16	2400 (165)
1	0.065	VTW-LE16	1.34 (34.0)		1-1/4	1900 (130)

To order fittings manufactured for Surface Finish Ra(Average)＜0.4 add BA to the ordering number.
Example: VTW-LE4-BA

Reducing Long Elbow



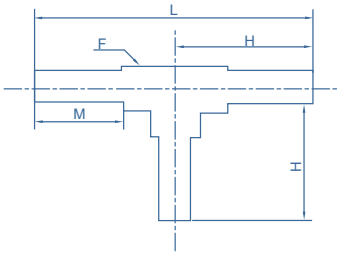
Tube OD in.	Wall Thickness in.	Tube OD in.	Wall Thickness mm	Ordering Number	Dimensions, in.(mm) L	M	F	Working Pressure psig (bar)
3/8	0.039	1/4	0.039	VTW-RLE6-4	0.98 (25)		6/16	3300 (227)
1/2	0.049	1/4	0.039	VTW-RLE8-4	1.06 (27)		7/16	3700 (254)
1/2	0.049	3/8	0.039	VTW-RLE8-6	1.06 (27)		7/16	3300 (227)
3/4	0.065	1/4	0.039	VTW-RLE12-4	1.24 (31.5)	0.75 (19.0)	15/16	2400 (165)
3/4	0.065	3/8	0.039	VTW-RLE12-6	1.24 (31.5)		15/16	2400 (165)
3/4	0.065	1/2	0.049	VTW-RLE12-8	1.24 (31.5)		15/16	2400 (165)

To order fittings manufactured for Surface Finish Ra(Average)＜0.4 add BA to the ordering number.
Example: VTW-RLE6-4-BA

VIGOUR
we offer solutions regarding your ideas!

Dimensions are for reference only
and are subject to change without prior notue

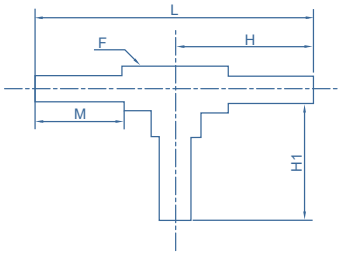
Long Tee



Tube OD in.	Wall Thickness in.	Ordering Number	Dimensions, in.(mm) L	M	F	H	Working Pressure psig (bar)
1/4	0.035	VTW-LT4	2.46 (62.5)		7/16	1.23 (31.2)	5100 (351)
3/8	0.035	VTW-LT6	2.40 (61.0)		7/16	1.20 (30.5)	3300 (227)
1/2	0.049	VTW-LT8	2.68 (68.1)	0.75 (19.0)	11/16	1.34 (34.0)	3700 (254)
3/4	0.065	VTW-LT12	2.91 (73.9)		15/16	1.46 (37.1)	2400 (165)
1	0.065	VTW-LT16	2.68 (68.1)		1-1/4	1.34 (34.0)	1900 (130)

To order fittings manufactured for Surface Finish Ra(Average)＜0.4 add BA to the ordering number.
Example: VTW-LT4-BA

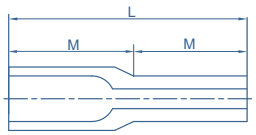
Reducing Long Tee



Tube OD in.	Wall Thickness in.	Tube OD	Wall Thickness mm	Ordering Number	Dimensions, in.(mm) L	M	F	H	H1	Working Pressure psig (bar)
3/8	0.035	1/4	0.035	VTW-RLT6-4	2.39 (60.7)		7/16	1.20 (30.5)	1.23 (31.2)	3300 (227)
1/2	0.049	1/4	0.035	VTW-RLT8-4	2.67 (67.8)		11/16	1.34 (34.0)	1.34 (34.0)	3700 (254)
1/2	0.049	3/8	0.035	VTW-RLT8-6	2.67 (67.8)		11/16	1.34 (34.0)	1.35 (34.3)	3300 (227)
3/4	0.065	1/4	0.035	VTW-RLT12-4	2.91 (73.9)	0.75 (19.0)	15/16	1.46 (37.1)	1.48 (37.6)	2400 (165)
3/4	0.065	3/8	0.035	VTW-RLT12-6	2.91 (73.9)		15/16	1.46 (37.1)	1.48 (37.6)	2400 (165)
3/4	0.065	1/2	0.049	VTW-RLT12-8	2.48 (63.0)		15/16	1.24 (31.5)	1.24 (31.5)	2400 (165)

To order fittings manufactured for Surface Finish Ra(Average)＜0.4 add BA to the ordering number.
Example: VTW-RLT6-4-BA

Reducing Long Union

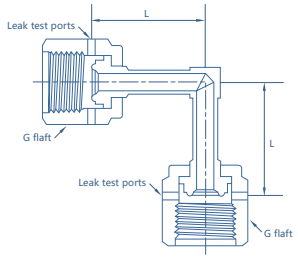


Tube OD in.	Wall Thickness in.	Tube OD in.	Wall Thickness mm	Ordering Number	Dimensions, in.(mm) L	Dimensions, in.(mm) M	Working Pressure psig (bar)
3/8	0.035	1/4	0.035	VTW-RLU6-4			3300 (227)
1/2	0.049	1/4	0.035	VTW-RLU8-4			3700 (254)
1/2	0.049	3/8	0.035	VTW-RLU8-6			3300 (227)
3/4	0.065	1/4	0.035	VTW-RLU12-4			2400 (165)
3/4	0.065	3/8	0.035	VTW-RLU12-6	1.50 (38.1)	0.75 (19.0)	2400 (165)
3/4	0.065	1/2	0.049	VTW-RLU12-8			2400 (165)
1	0.065	1/4	0.035	VTW-RLU16-4			2400 (165)
1	0.065	3/8	0.049	VTW-RLU16-6			2400 (165)
1	0.065	1/2	0.049	VTW-RLU16-8			2400 (165)
1	0.065	3/4	0.049	VTW-RLU16-12			2400 (165)

To order fittings manufactured for Surface Finish Ra(Average)＜0.4 add BA to the ordering number.
Example: VTW-RLU6-4-BA

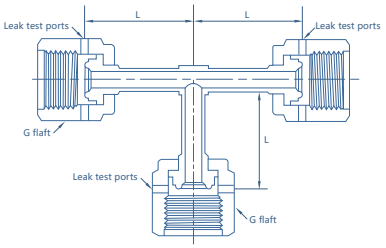
Welded Assembiles

Female Elbow



VFS Size in.	Material	Qrdering Number	Dimensions, in.(mm) L	G	Working Pressure psig (bar) Ni	316L
1/4	316L	VWR-FE4	1.00 (25.4)	3/4	8000 (551)	10000 (689)

Female Tee



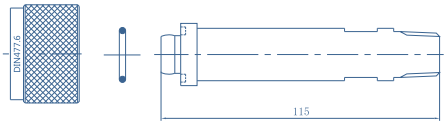
VFS Size in.	Material	Qrdering Number	Dimensions, in.(mm) L	G	Working Pressure psig (bar) Ni	316L
1/4	316L	VWR-FT4	1.00 (25.4)	3/4	8000 (551)	10000 (689)

Dimensions are for reference only
and are subject to change without prior notue

Cylinder Connections
VUC Series

Product Feature

- Cylinder Connections
- Connect to a cylinder valve
- 1/4” NPT male / 6mm tube fiffing / 6mm OD tube connection
- All connections are degrease to oxygen service
- 15μin. Ra max., 10μin. Ra average surface finish



Hand tight nut & nipple
(Example: VCC-C-HNN-DIN477.6)

Ordering Information

VUC - S - N - CGA580 - TF6M

Material
S: 316L

Parts Code
N: nut
NN: nut, nipple
HN: hand tight nut
HNN: hand tight nut, nipple
NNP: nut, nipple, plug
NNGP: nut, nipple, gasket, plug
G: gasket

Inlet Connection
None: 1/4” NPT(M)
6M: 6mm tube fitting
TW6M: 6mm tube weld
TW4: 1/4” tube weld

Cylinder Connection
Detailed description of the cylinder connection including the relevant standard and number of the connection

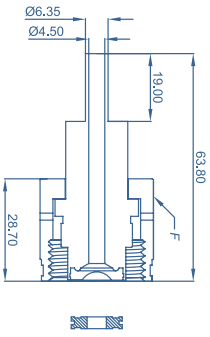
Technical Data

Materials of Construction	
Wetted	
Nuts	316 Stainless Steel
Nipples	316L Stainless Steel
Outlet Adapters	316L Stainless Steel
Cylinder Valve Outlet Caps	316L Stainless Steel
Gaskets	Nickel Standard*

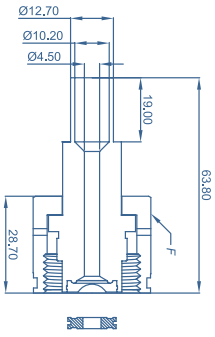
*Contact factory for other materials available.

Nut,Nipple and Nickel Gasket Assembly

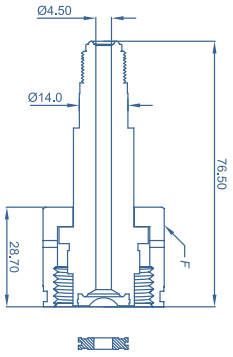
CGA/DISS Number	End Connection	F Hex Flat in.
632 ~ 642	1/4" Tube Weld 1/2" Tube Weld 1/4" VFS Male 1/4" NPT Male	1-1/4
712 ~ 728	1/4" Tube Weld 1/2" Tube Weld 1/4" VFS Male 1/4" NPT Male	1-3/8"



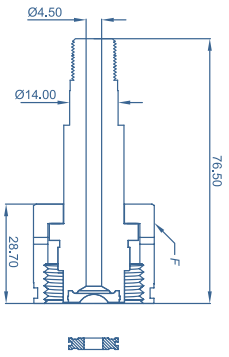
1/4" Tube Weld



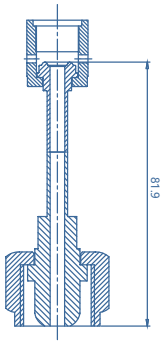
1/2" Tube Weld



1/4" VFS Male



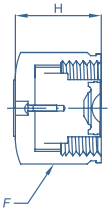
1/4" NPT Male



Cylinder Connections to 1/4" VFS Female

CAPS

CGA/DISS Number	Ordering Number	Material	F Hex Flat in.	H Length in.	Gas Tight
632 ~ 642	VUC-DISS-C-63	Nickel / PTFE	1-1/4	0.98	Yes
712 ~ 728	VUC-DISS-C-71		1-3/8		

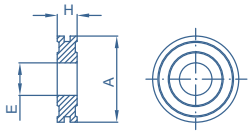


Cylinder Connections
VUC DISS Series

GASKETS

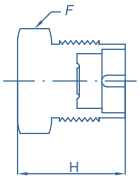
Material	Ordering Number	A	H	E
Nickle	VUC-DISS-G-NI	0.56	0.105	0.21
PCTFE	VUC-DISS-G-PC		0.125	

* Hardness Max. 105 Vickers.

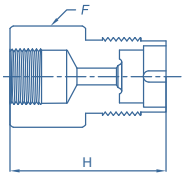


Plugs and Adapters

CGA/DISS Number	Ordering Number	End Connection	H Overal Length	F Hex Flat in.
632 ~ 642	VUC-DISS-BP-63 VUC-DISS-A-F4-63	Plug 1/4" NPT Female	1.53 1.85	1-1/8
712 ~ 718	VUC-DISS-BP-71 VUC-DISS-A-F4-71	Plug 1/4" NPT Female	1.53 1.85	1-1/4
720 ~ 728	VUC-DISS-BP-72 VUC-DISS-A-F4-72	Plug 1/4" NPT Female	1.53 1.85	1-1/4



Plug



Adaptor

Ordering Information

VUC-DISS- NNG - CGA632 - TW4 - Ni

Parts Code

N: nut
P: nipple
NNG: nut, nipple, gasket
NNGP: nut, nipple, gasket, plug

CGA Number

CGA632	CGA642	CGA720
CGA634	CGA712	CGA722
CGA636	CGA714	CGA724
CGA638	CGA716	CGA726
CGA640	CGA718	CGA728

Gasket Material

Ni: Nickle
PC: PCTFE

End Connection

MV4: 1/4" VFS male
TW4: 1/4" tube weld
TW8: 1/2" tube weld
FV4: 1/4" VFS Female
M4: 1/4" NPT male

* Other connection standard,consult factory

Product Feature

- UHP “clean” for semiconductor gas applications, in accordance with SEMI/SEMATECH
- Purged with nitrogen
- Protective cap over threaded connection
- 100% factory calibrated and helium leak tested to a maximum rate of 1x10^{-9} mbar l/s He


VRU


VGU

Technical Data

Type	pressure gauge
Materials:	
End connection	316L VAR,electropolished
Bourdon tube	316L SS
Case	304 SS
Lens	polycarbonate
Movement	stainless steel
Dial & Pointer	aluminum
Scale	psig/bar dual scale
Dial size	2"
Accuracy	Grade A per ASME B40.1
Ambient temperature	–40°F to 140°F (–40°C to 60°C)

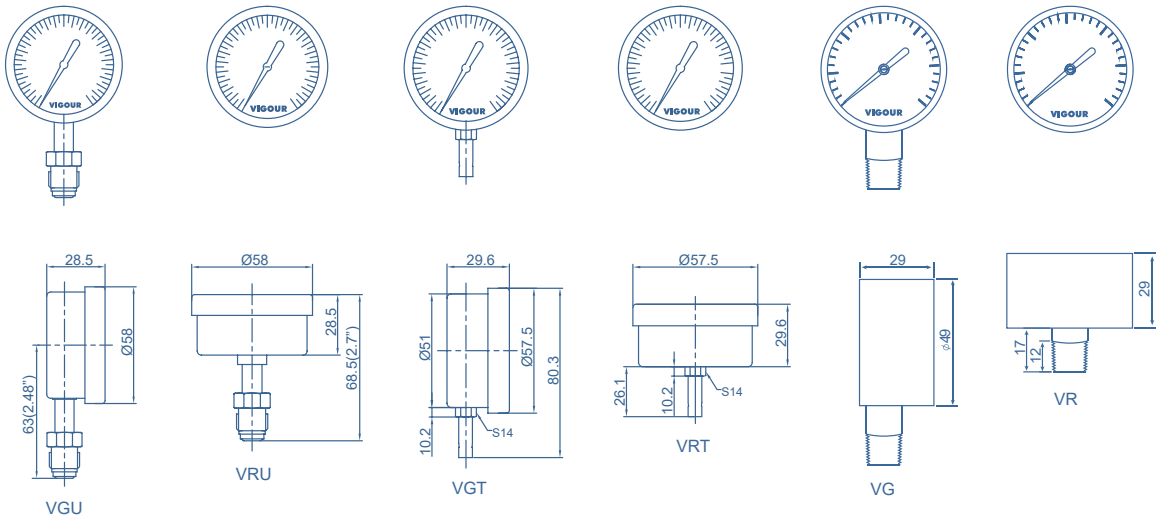

VRT


VGT


VR


VG

Dimensions



Ultra High Purity Gauge
VGU/VRU/VGT/VRT/VG/VR Series

Ordering Information

VGU/VRU Series (Ultra High Purity)

Ordering Number	Inlet Connection	Pressure Range (bar/psig)
VGU Series, Lower Mount, VFS End		
VGU20S-1.6/2.5/4/6/7/10/14/16/25/35/60B-FV4	1/4" VFS female	0~1.6/2.5/4/6/7/10/14/16/25/35/60 bar 0~23/30/60/86/100/140/200/230/350/500/860 psig
VGU20S-1.6/2.5/4/6/7/10/14/16/25/35/60B-MV4	1/4" VFS male	
VGU20S-1.6/2.5/4/6/7/10/14/16/25/35/60B-RMV4	1/4" rotatable VFS male	
VGU20S-100/150/250/315/400B-FV4	1/4" VFS female	0~100/150/250/315/400 bar 0~1500/2000/3500//4500/5800 psig
VGU20S-100/150/250/315/400B-MV4	1/4" VFS male	
VGU20S-100/150/250/315/400B-RMV4	1/4" rotatable VFS male	
VGU20S-V1.6/V2.5/V4/V6/V7/V10/V14/V16B-FV4	1/4" VFS female	Vac~1.6/2.5/4/6/7/10/14/16 bar Vac~23/30/60/86/100/140/200/230 psig
VGU20S-V1.6/V2.5/V4/V6/V7/V10/V14/V16B-MV4	1/4" VFS male	
VGU20S-V1.6/V2.5/V4/V6/V7/V10/V14/V16B-RMV4	1/4" rotatable VFS male	
VRU Series, Center-Back Mount, VFS End		
VRU20S-1.6/2.5/4/6/7/10/14/16/25/35/60B-FV4	1/4" VFS female	0~1.6/2.5/4/6/7/10/14/16/25/35/60 bar 0~23/30/60/86/100/140/200/230/350/500/860 psig
VRU20S-1.6/2.5/4/6/7/10/14/16/25/35/60B-MV4	1/4" VFS male	
VRU20S-1.6/2.5/4/6/7/10/14/16/25/35/60B-RMV4	1/4" rotatable VFS male	
VRU20S-100/150/250/315/400B-FV4	1/4" VFS female	0~100/150/250/315/400 bar 0~1500/2000/3500/4500/5800 psig
VRU20S-100/150/250/315/400B-MV4	1/4" VFS male	
VRU20S-100/150/250/315/400B-RMV4	1/4" rotatable VFS male	
VRU20S-V1.6/V2.5/V4/V6/V7/V10/V14/V16B-FV4	1/4" VFS female	Vac~1.6/2.5/4/6/7/10/14/16 bar Vac~23/30/60/86/100/140/200/230 psig
VRU20S-V1.6/V2.5/V4/V6/V7/V10/V14/V16B-MV4	1/4" VFS male	
VRU20S-V1.6/V2.5/V4/V6/V7/V10/V14/V16B-RMV4	1/4" rotatable VFS male	

VGT/VRT Series(Tube Connection)

Ordering Number	Inlet Connection	Pressure Range (bar/psig)
VGT Series, Lower Mount, Tube End		
VGT20S-1.6/2.5/4/6/7/10/14/16/25/35/60B-T4	1/4"tube	0~1.6/2.5/4/6/7/10/14/16/25/35/60 bar 0~23/30/60/86/100/140/200/230/350/500/860 psig
VGT20S-1.6/2.5/4/6/7/10/14/16/25/35/60B-T6M	6mm tube	
VGT20S-100/150/250/315/400B-T4	1/4"tube	0~100/150/250/315/400 bar 0~1500/2000/3500//4500/5800 psig
VGT20S-100/150/250/315/400B-T6M	6mm tube	
VGT20S-V2.5/V4/V16B-T4	1/4"tube	Vac~1.6/2.5/4/6/7/10/14/16 bar Vac~23/30/60/86/100/140/200/230 psig
VGT20S-V2.5/V4/V16B-T6M	6mm tube	
VRT Series, Center-Back Mount, Tube End		
VRT20S-1.6/2.5/4/6/7/10/14/16/25/35/60B-T4	1/4"tube	0~1.6/2.5/4/6/7/10/14/16/25/35/60 bar 0~23/30/60/86/100/140/200/230/350/500/860 psig
VRT20S-1.6/2.5/4/6/7/10/14/16/25/35/60B-T6M	6mm tube	
VRT20S-100/150/250/315/400B-T4	1/4"tube	0~100/150/250/315/400 bar 0~1500/2000/3500/4500/5800 psig
VRT20S-100/150/250/315/400B-T6M	6mm tube	
VRT20S-V1.6/V2.5/V4/V6/V7/V10/V14/V16B-T4	1/4"tube	Vac~1.6/2.5/4/6/7/10/14/16 bar Vac~23/30/60/86/100/140/200/230 psig
VRT20S-V1.6/V2.5/V4/V6/V7/V10/V14/V16B-T6M	6mm tube	

VG/VR Series(NPT Connection)

Ordering Number	Inlet Connection	Pressure Range (bar/psig)
VG Series, Lower Mount, NPT End		
VG20S-1.6/2.5/4/6/10/16/25/35/60B-M4	1/4"male NPT	0~1.6/2.5/4/6/10/16/25/35/60 bar 0~23/30/60/86/140/230/350/500/860 psig
VG20S-100/150/250/315/400B-M4	1/4"male NPT	0~100/150/250/315/400 bar 0~1500/2000/3500//4500/5800 psig
VG20S-V1.6/V2.5/V4/V6/V10/V16B-M4	1/4"male NPT	Vac~1.6/2.5/4/6/10/16 bar Vac~23/30/60/86/140/230 psig
VR Series, Center-Back Mount, NPT End		
VR20S-1.6/2.5/4/6/10/16/25/35/60B-M4	1/4"male NPT	0~1.6/2.5/4/6/10/16/25/35/60 bar 0~23/30/60/86/140/230/350/500/860 psig
VR20S-100/150/250/315/400B-M4	1/4"male NPT	0~100/150/250/315/400 bar 0~1500/2000/3500/4500/5800 psig
VR20S-V1.6/V2.5/V4/V6/V10/V16B-M4	1/4"male NPT	Vac~1.6/2.5/4/6/10/16 bar Vac~23/30/60/86/140/230 psig

Contact Gauges
VGU20SE / VRU20SE Series

Product Feature

- Contact gauge (KI) with inductance contact
- For monitoring gas supply pressure and shortage
- For inert, combustible, oxidizing, and corrosive gases and gas mixtures
- standard surface finish 10μin. (0.25μm) Ra
- Line 0.5m
- With NAMUR sensor
- Set point adjustable over 0~24% of scale
- Tested for use with oxygen

VGU

VRU

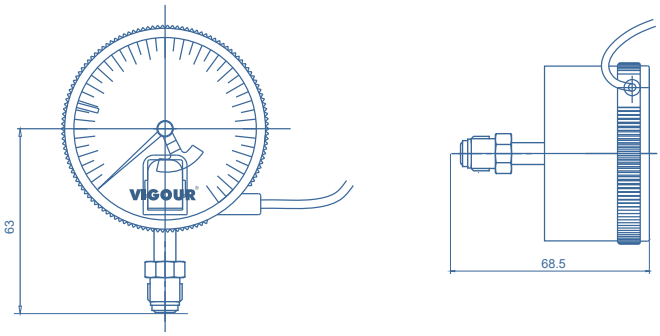
Typical Applications

Gas panels may be optionally equipped with contact pressure gauges. Contact pressure gauges combine the advantages of in situ readings with the demands of electrical signal transmissions. In combination with signal boxes, this creates visual and acoustic warning signals in the case of pres-sure drop and the monitoring of line pressure according to adjustable thresholds.

Technical Data

Dual scale:	bar / psi
Connection:	1/4" VFS Male / 1/4" VFS Female
Size:	2”
Accuracy:	±2.5%
Body Material:	316L
Switching function:	NC
Outlet type:	NAMUR
Temperature:	-25~100°C

Dimensions (mm)



Ordering Information

VGU 20 SE - 400

Series	Material	Pressure Range
GU: radial direction	S: 316L EP	400: 0~400bar
RU: axial direction		250: 0~250bar
		60: 0~60bar
		25: 0~25bar

Contact Gauges
VCG20S/VRG20S Series

Product Features

- Contact gauge (KI) with inductance contact
- For monitoring gas supply pressure and shortage
- For inert, combustible, oxidizing, and corrosive gases and gas mixtures
- standard surface finish 10μin. (0.25μm) Ra
- internals are electropolishod to optionally meet purrty standards
- 100% helium-leak-tested

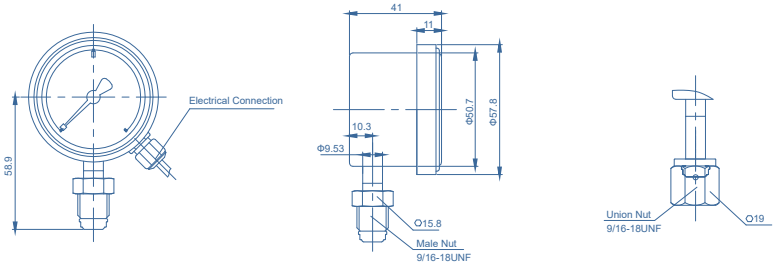
Typical Applications

Gas panels may be optionally equipped with contact pressure gauges. Contact pressure gauges combine the advantages of in situ readings with the demands of electrical signal transmissions. In combination with signal boxes, this creates visual and acoustic warning signals in the case of pres-sure drop and the monitoring of line pressure according to adjustable thresholds.

Technical Data

Dual scale:	bar / psi
Connection:	VFS connection
Size:	2”
Accuracy:	Grade A per ASME B40.1
Body Material:	316L
Switching function:	NC / NO
Electrical rating	switching voltage ≤ AC 24V / DC 24V switching current ≤ 0.5A switching power ≤ 10VA / W

Dimensions (mm)



Ordering Information

VCG 20 S - 400

Series
CG: radial direction
RG: axial direction

Material
S: 316L EP

Pressure Range
400: 0~400bar
250: 0~250bar
60: 0~60bar
25: 0~25bar
V2.5 : Vac~2.5 bar
V4 : Vac~4 bar
V7 : Vac~7 bar
V10 : Vac~10 bar
V16 : Vac~16 bar
V25 : Vac~25 bar

Conversion Factors

Pressure

	atm	bar	ft of H_2O	in of hg	in of H_2O	kg/cm^2	kPa	mm of Hg	PSI
MULTIPLY				BY					
atm	....	1.01325	33.932	29.921	407.1827	1.0332	101.3171	760	14.696
bar	0.98692	....	33.4883	29.530	401.8596	1.019716	100	750.062	14.50368
ft of H_2O	0.02947	0.029891	....	0.882646	12	0.03048	2.9890	22.4198	0.433107
in of hg	0.03342	0.033864	1.1340	....	13.6	0.034532	3.376895	25.4	0.49115
in of H_2O	0.00246	0.002499	0.083333	0.073556	....	0.00254	0.0249089	1.86832	0.03609
kg/cm^2	0.9678	0.980665	32.8084	28.95903	393.7008	....	98.03922	735.5592	14.22334
kPa	0.00987	0.010	0.33456	0.29613	4.01472	0.01020	....	7.5006	0.14504
mm of Hg	0.00132	0.001333	0.044603	0.03937	0.535240	0.001360	0.133322	....	0.019337
PSI	0.06805	0.068948	2.3089	2.0360	27.70851	0.070307	6.89465	51.175	....

Flow

	cm^3/min	cm^3/sec	ft^3/hr	ft^3/min	m^3/hr	m^3/min	L/hr	Lpm
MULTIPLY				BY				
cm^3/min	....	0.0166667	0.0021189	0.0000353	0.00006	0.000001	0.06	0.001
cm^3/sec	60	....	0.1271340	0.0021189	0.0036	0.00006	3.6	0.06
ft^3/hr	471.9474	7.865790	....	0.0166667	0.0283168	0.0004719	28.31685	0.4719474
ft^3/min	28,316.85	471.9474	60	....	1.699008	0.0283168	1699.008	28.31686
m^3/hr	16,666.67	277.7778	35.31467	0.5885777	....	0.0166667	1000	16.66667
m^3/min	1,000,000	16,666.67	2118.876	35.31467	60	....	60,000	1000
L/hr	16.66667	0.2777778	0.0353147	0.0005885	0.001	0.0000167	....	0.0166667
Lpm	1000	16.66667	2.118876	0.0353147	0.06	0.001	60	....

Density

	gms/cm^3	kg/m^3	lbs/ft^3	lbs/in^3	lbs/U.S. gal
MULTIPLY			BY		
gms/cm^3	....	1000	62.428	0.0361273	8.3454
kg/m^3	0.001	....	0.062428	3.61273×10^{-5}	0.0083454
lbs/ft^3	0.0160185	16.018463	....	5.78704×10^{-4}	0.13368
lbs/in^3	27.679905	27.679.9	1728	....	231
lbs/U.S. gal	0.1198264	119.8264	7.4805195	0.004329	....

Material Compatibility

Material Compatibility									
Process Gas	chemical formula	materials							
		metal			plastic			synthetic rubber	
		stainless steel	nickel	hastelloy	PCTFE	VESPEL	PFA	FKM	EPDM
Ammonia	NH_3	1	1	1	1	3	1	3	1
Argon	Ar	1	1	1	1	1	1	1	1
Arsine	AsH_3	1	2	2	1	0	1	1	0
Boron Trichloride	BCl_3	2	1	1	1	2	1	1	0
Boron Trifluoride	BF_3	2	1	1	1	0	1	1	0
Carbon Dioxide	CO_2	1	1	1	1	1	1	2	2
Carbon Monoxide	CO	1	2	2	1	1	1	2	2
Carbon Tetraflouride	CF_4	1	1	1	1	0	1	1	0
Chlorine	Cl_2	2	1	1	1	0	1	2	3
Diborane	B_2H_6	1	2	0	1	0	1	0	0
Dichlorosilane	SiH_2Cl_2	2	1	1	1	0	1	1	0
Fluorine	F_2	2	1	1	1	0	1	1	0
Freon 23 Trifluoromethane	CHF_3	1	1	1	1	0	1	1	0
Freon 116 Hexafluoroethane	C_2F_6	1	1	0	1	0	1	1	0
Germane	GeH_4	1	1	1	1	0	1	1	0
Helium	He	1	1	1	1	1	1	1	1
Hydrogen	H_2	1	1	1	1	1	1	1	2
Hydrogen Bromide	HBr	2	1	1	1	0	1	1	0
Hydrogen Chloride	HCl	2	1	1	1	0	1	2	0
Hydrogen Fluoride	HF	2	1	1	1	0	1	1	3
Hydrogen Sulfide	H_2S	1	1	0	1	0	1	3	1
Krypton	Kr	1	1	1	1	1	1	1	1
Methane	CH_4	1	1	0	1	1	1	3	2
Methyl Fluoride	CH_3F	1	1	0	1	0	1	1	0
Nitric Oxide	NO	1	1	1	1	0	1	1	0
Nitrogen	N2	1	1	1	1	1	1	1	1
Nitrogen Trifluoride	NF3	1	1	1	1	0	1	1	0
Nitrous Oxide	N2O	1	1	1	2	1	2	1	1
Neon	Ne	2	2	1	1	1	1	1	1
Oxygen	O_2	1	1	1	1	1	1	1	1
Ozone	O_3	2	2	1	1	0	1	2	1
Perflouropropane	C_3F_8	1	1	1	1	1	1	1	0
Phosphine	PH_3	1	2	2	1	1	1	1	0
Phosphorus Trifluoride	PF_3	2	1	1	1	0	1	0	0
Silane	SiH_4	1	1	1	1	1	1	1	2
Silicon Tetrachloride	$SiCl_4$	2	1	1	1	0	1	0	0
Silicon Tetrafluoride	SiF_4	2	1	1	1	0	1	0	1
Sulfur Hexafluoride	SF_6	1	1	1	1	0	1	1	1
Tetraethyl Orthosilicate	TEOS	1	1	1	1	0	1	0	0
Trichlorosilane	$SiHCl_3$	2	1	1	1	0	1	1	0
Tungsten Hexafluoride	WF_6	2	1	1	1	0	1	0	0
Xenon	Xe	1	1	1	1	1	1	1	1

"0" no data / "1" recommend to use / "2" Part resistant, can be used / "3" Unavailable

Pressure Regulator and Valve Selection Guide

Process Gas	Max. Flow (slpm)	Source Valves UA/UB/UC	Max. Flow (slpm)	Distribution Valves UA/UB/UC	Max. Flow (slpm)	Source Regulator UA/UB/UC	Max. Flow (slpm)	Distribution Regulator UA/UB/UC
Acetylene (C2 H2)	200	VDV33 1/4"	25	VDV32 1/4"	3	VSR-510S	3	VSR-100S
			45	VDV32 1/2"	50	VSR-410S	6	VSR-100S HF
	280	VDV33 1/2"	400	VDV37 PC	75	VSR-210S	50	VSR-410S
				VDV37 M			75	VSR-210S
				VDV39			95	VSR-210S HF
Air	150	VDV33 1/4"	90	VDV32 1/4"	30	VSR-510S	30	VSR-100S
			160	VDV32 1/2"	100	VSR-510S HF	50	VSR-100S HF
	250	VDV33 1/2"		VDV37 M	200	VSR-410S	150	VSR-410S
			890	VDV37 PC	800	VSR-210S	400	VSR-210S
	500	VDV33 1/2"		VDV37 M			600	VSR-210S HF
				VDV39				
Ammonia (NH3)	250	VDV32 1/4"	100	VDV32 1/4"	5	VSR-510S	5	VSR-100S
		VDV33 1/4"			50	VSR-410S	30	VSR-100S HF
	450	VDV32 1/2"	225	VDV32 1/2"	75	VSR-210S	60	VSR-410S
					400	VSR-210S	125	VSR-210S
	1000	VDV38	1000	VDV37 PC	600	VSR-210S HF	250	VSR-210S HF
				VDV37 M	1100	VSR-910S	500	VSR-210S FC
				VDV39			1000	VSR-910S
Argon (Ar)	200	VDV33 1/4"	80	VDV32 1/4"	10	VSR-510S	10	VSR-100S
					100	VSR-510S HF	25	VSR-100S HF
	350	VDV33 1/2"	150	VDV32 1/2"	250	VSR-510S HF	50	VSR-410S
		VDV33 1/4"			600	VSR-210S	100	VSR-210S
	1000	VDV38H	800	VDV37 PC			200	VSR-210S HF
				VDV37 M			400	VSR-210S FC
				VDV39			1000	VSR-910S
Arsine (AsH3)	140	VDV32 1/4"	55	VDV32 1/4"	5	VSR-510S	5	VSR-100S
		VDV33 1/4"			40	VSR-410S	20	VSR-100S HF
	240	VDV32 1/2"	95	VDV32 1/2"				
Arsine Mixtures (Nitrogen Balance)	185	VDV33 1/4"	90	VDV32 1/4"	15	VSR-510S	15	VSR-100S
					50	VSR-510S HF	50	VSR-100S HF
	225	VDV33 1/2"	160	VDV32 1/2"	150	VSR-410S	150	VSR-410S
		VDV33 1/4"						
Boron Trichloride (BCl3)	20	VDV32 1/2"	15	VDV32 1/2"	6	VSR-410S-VC2	6	VSR-410S-VC2
Boron Trichloride Mix (Nitrogen Balance)	185	VDV33 1/4"	90	VDV32 1/4"	15	VSR-510S	15	VSR-100S
					60	VSR-410S	30	VSR-100S HF
	225	VDV33 1/2"	160	VDV32 1/2"			60	VSR-410S
		VDV33 1/4"						
Boron Trifluoride (BF3)	115	VDV33 1/4"	60	VDV32 1/4"	5	VSR-510S	5	VSR-100S
					25	VSR-410S	10	VSR-100S HF
	145	VDV33 1/2"	100	VDV32 1/2"			25	VSR-410S
		VDV33 1/4"						
Boron 11 Trifluoride (11BF3)	115	VDV33 1/4"	60	VDV32 1/4"	5	VSR-510S	5	VSR-100S
					25	VSR-410S	10	VSR-100S HF
	145	VDV33 1/2"	100	VDV32 1/2"			25	VSR-410S
		VDV33 1/4"						
Butadiene (C4 H6)	60	VDV32 1/2"	60	VDV32 1/2"	3	VSR-510S	3	VSR-100S
					40	VSR-410S	5	VSR-100S HF

Pressure Regulator and Valve Selection Guide

Butadiene (normal) (C4 H10)	60	VDV32 1/2"	60	VDV32 1/2"	3	VSR-510S	3	VSR-100S
					40	VSR-410S	5	VSR-100S HF
Butene-1 (C4 H8)	65	VDV32 1/2"	60	VDV32 1/2"	3	VSR-510S	3	VSR-100S
					50	VSR-410S	5	VSR-100S HF
Carbon Dioxide (CO2)	200	VDV33 1/4"	75	VDV32 1/4"	3	VSR-510S	8	VSR-100S
					75	VSR-410S	20	VSR-100S HF
	500	VDV33 1/2"	140	VDV32 1/2"	150	VSR-210S VS	40	VSR-410S
					500	VSR-210S VS	100	VSR-210S
	2500	VDV38H	750	VDV37 PC		VSR-210S HF VS	160	VSR-210S HF
				VDV37 M	1000	VSR-910S VS	325	VSR-210S FC
				VDV39			800	VSR-910S
Carbon Monoxide (CO)	185	VDV33 1/4"	90	VDV32 1/4"	5	VSR-510S	5	VSR-100S
					15	VSR-510S HF	15	VSR-100S HF
	225	VDV33 1/2"	160	VDV32 1/2"	50	VSR-410S	50	VSR-410S
		VDV33 1/4"						
Chlorine (Cl2)	75	VDV32 1/4"	50	VDV32 1/4"	3	VSR-510SH	5	VSR-510H
		VDV33 1/4"			50	VSR-410S	15	VSR-510H HF
	150	VDV32 1/2"	100	VDV32 1/2"	75	VSR-210SH	30	VSR-410SH
					200	VSR-210SH HF	75	VSR-210SH
	300	VDV38	400	VDV37 PC			125	VSR-210SH HF
				VDV37 M				
				VDV39			250	VSR-210SH FC
Chlorine Trifluoride (ClF3)	20	VDV32 1/2"	15	VDV32 1/2"	6	VSR-410S-VC2	6	VSR-410S-VC2
Diborane Mixtures (Nitrogen Balance)	185	VDV33 1/4"	90	VDV32 1/4"	5	VSR-710S	10	VSR-100S
							20	VSR-100S HF
	225	VDV33 1/2"	160	VDV32 1/2"				
		VDV33 1/4"						
Dichlorosilane (SiH2 Cl2)	20	VDV32 1/2"	20	VDV32 1/2"	7	VSR-410S-VC2	7	VSR-410S-VC2
Diethyltelluride (Te(C2 H5)2)	70	VDV33 1/4"	35	VDV32 1/4"	3	VSR-510S	3	VSR-100S
					5	VSR-510S HF	5	VSR-100S HF
	85	VDV33 1/2"	60	VDV32 1/2"	25	VSR-410S	25	VSR-410S
		VDV33 1/4"						
Difluoroethylene (C2 H2 F2)	140	VDV33 1/4"	55	VDV32 1/4"	3	VSR-510S	3	VSR-100S
					50	VSR-410S	6	VSR-100S HF
	200	VDV33 1/2"	100	VDV32 1/2"	75	VSR-210S	50	VSR-410S
		VDV33 1/4"					75	VSR-210S
Dimethylsilane (C2 SiH8)	14	VDV32 1/2"	7	VDV32 1/2"	3	VSR-510S	3	VSR-100S
					50	VSR-410S	50	VSR-410S
	150	VDV37 PC	75	VDV37 PC	75	VSR-210S	75	VSR-210S
		VDV37 M		VDV37 M				
Disilane (Si2 H6)	14	VDV32 1/2"	7	VDV32 1/2"	1	VSR-100S	1	VSR-100S
					7	VSR-410S-VC2	7	VSR-410S-VC2
Ethylene (C2 H4)	380	VDV33 1/4"	90	VDV32 1/4"	3	VSR-510S	3	VSR-100S
					50	VSR-410S	5	VSR-100S HF
	485	VDV33 1/2"	160	VDV32 1/2"	75	VSR-210S	50	VSR-410S
		VDV33 1/4"					75	VSR-210S
Fluorine (F2)	Consult Factory	Consult Factory	Consult Factory	Consult Factory	Consult Factory	Consult Factory	Consult Factory	Consult Factory

Pressure Regulator and Valve Selection Guide

Process Gas	Max. Flow (slpm)	Source Valves UA/UB/UC	Max. Flow (slpm)	Distribution Valves UA/UB/UC	Max. Flow (slpm)	Source Regulator UA/UB/UC	Max. Flow (slpm)	Distribution Regulator UA/UB/UC
Fluorine Mixtures (20% maximum F2)	185	VDV33 1/4"	90	VDV32 1/4"	5	VSR-510SH	5	VSR-510H
					50	VSR-510SH HF	10	VSR-510H HF
	225	VDV33 1/2"	160	VDV32 1/2"			50	VSR-410SH
		VDV33 1/4"						
Germane (GeH4)	10	VDV32 1/4"	4	VDV32 1/4"	1	VSR-100S	1	VSR-100S
		VDV33 1/4"			7	VSR-410S-VC2	7	VSR-410S-VC2
	18	VDV32 1/2"	7	VDV32 1/2"				
Germane Mixtures (Nitrogen Balance)	185	VDV33 1/4"	90	VDV32 1/4"	10	VSR-510S	10	VSR-100S
					20	VSR-510S HF	20	VSR-100S HF
	225	VDV33 1/2"	160	VDV32 1/2"	50	VSR-410S	50	VSR-410S
		VDV33 1/4"						
Halocarbon 12 (CCl2 F2)	55	VDV32 1/2"	40	VDV32 1/2"	3	VSR-510S	3	VSR-100S
					50	VSR-410S	5	VSR-100S HF
							50	VSR-410S
Halocarbon 12B2 (CBr2 F2)	15	VDV32 1/2"	15	VDV32 1/2"	5	VSR-410SA	5	VSR-410S-VC2
Halocarbon 13 (CClF3)	140	VDV33 1/4"	40	VDV32 1/4"	3	VSR-510S	3	VSR-100S
					50	VSR-410S	5	VSR-100S HF
	170	VDV33 1/2"	70	VDV32 1/2"			50	VSR-410S
		VDV33 1/4"						
Halocarbon 13B1 (CBrF3)	110	VDV32 1/4"	35	VDV32 1/4"	3	VSR-510S	3	VSR-100S
					50	VSR-410S	5	VSR-100S HF
	190	VDV32 1/2"	65	VDV32 1/2"			50	VSR-410S
Halocarbon 14 (CF4)	10	VDV33 1/4"	50	VDV32 1/4"	10	VSR-510S	5	VSR-100S
					40	VSR-510S HF	15	VSR-100S HF
	200	VDV33 1/2"	100	VDV32 1/2"	80	VSR-510S HF	30	VSR-410S
		VDV33 1/4"			500	VSR-210S	60	VSR-210S
	600	VDV38H	500	VDV37 PC			100	VSR-210S HF
				VDV37 M			250	VSR-210S FC
				VDV39			500	VSR-910S
Halocarbon 21 (CHCl2F)	25	VDV32 1/2"	15	VDV32 1/2"	5	VSR-410S-VC2	5	VSR-410S-VC2
Halocarbon 23 (CHF3)	115	VDV33 1/4"	145	VDV32 1/4"	10	VSR-510S	10	VSR-100S
					50	VSR-410S	20	VSR-100S HF
	140	VDV33 1/2"	250	VDV32 1/2"			50	VSR-410S
		VDV33 1/4"						
Halocarbon 32 (CH2 F2)	140	VDV33 1/4"	55	VDV32 1/4"	3	VSR-510S	3	VSR-100S
					50	VSR-410S	6	VSR-100S HF
	175	VDV33 1/2"	100	VDV32 1/2"	75	VSR-210S	50	VSR-410S
							75	VSR-210S
Halocarbon 114 (C2 ClF4)	30	VDV32 1/2"	25	VDV32 1/2"	7	VSR-410S-VC2	1	VSR-100S
							7	VSR-410S-VC2
Halocarbon 115 (C2 ClF5)	60	VDV32 1/2"	40	VDV32 1/2"	3	VSR-510S	3	VSR-100S
					50	VSR-410S	5	VSR-100S HF
					75	VSR-210S	50	VSR-410S
							75	VSR-210S
Halocarbon 116 (C2 F6)	60	VDV33 1/4"	40	VDV32 1/4"	3	VSR-510S	3	VSR-100S
					50	VSR-410S	10	VSR-100S HF
	100	VDV33 1/2"	80	VDV32 1/2"	75	VSR-210S	25	VSR-410S
		VDV33 1/4"			125	VSR-210S HF	50	VSR-210S
	275	VDV38	400	VDV37 PC			90	VSR-210S HF
				VDV37 M				
				VDV39			175	VSR-210S FC
							450	VSR-910S

Pressure Regulator and Valve Selection Guide

Process Gas	Max. Flow (slpm)	Source Valves UA/UB/UC	Max. Flow (slpm)	Distribution Valves UA/UB/UC	Max. Flow (slpm)	Source Regulator UA/UB/UC	Max. Flow (slpm)	Distribution Regulator UA/UB/UC
Halocarbon 125 (C2 HF5)	180	VDV32 1/2"	70	VDV32 1/2"	3	VSR-510S	3	VSR-100S
					25	VSR-410S	5	VSR-100S HF
					75	VSR-210S	25	VSR-410S
							75	VSR-210S
Halocarbon 134A (C2 H2 F4)	55	VDV32 1/2"	40	VDV32 1/2"	3	VSR-510S	3	VSR-100S
		VDV38			50	VSR-410S	5	VSR-100S HF
					75	VSR-210S	50	VSR-410S
	350	VDV37 PC	230	VDV37 PC			75	VSR-210S
		VDV37 M		VDV37 M				
Halocarbon R218 (C2 F8)	35	VDV32 1/4"	20	VDV32 1/4"	3	VSR-510S	3	VSR-100S
		VDV33 1/4"			50	VSR-410S	5	VSR-100S HF
	60	VDV32 1/2"	40	VDV32 1/2"	75	VSR-210S	50	VSR-410S
							75	VSR-210S
Halocarbon C318 (C4 F8)	25	VDV32 1/2"	20	VDV32 1/2"	6	VSR-410S-VC2	6	VSR-410S-VC2
Halocarbon C1418 (Octafluorocyclopentene) (C5 F8)	7	VDV32 1/2"	7	VDV32 1/2"	3	VSR-410S-VC2	N/A	Regulator not required
Helium (He)	750	VDV33 1/4"	250	VDV32 1/4"	125	VSR-510S	65	VSR-100S
					500	VSR-510S HF	125	VSR-100S HF
	1000	VDV33 1/2"	450	VDV32 1/2"	2000	VSR-210S	275	VSR-410S
							625	VSR-210S
	2500	VDV38H	2500	VDV37 PC			900	VSR-210S HF
				VDV37 M			1200	VSR-210S FC
				VDV39			2500	VSR-910S
Hexafluoropropane (C3 H2 F6)	20	VDV32 1/2"	15	VDV32 1/2"	6	VSR-410S-VC2	6	VSR-410S-VC2
Hexafluoropropylene (C3 F6)	60	VDV32 1/2"	40	VDV32 1/2"	3	VSR-510S	3	VSR-100S
					50	VSR-410S	5	VSR-100S HF
					75	VSR-210S	50	VSR-410S
							75	VSR-210S
Hydrogen (H2)	800	VDV33 1/4"	300	VDV32 1/4"	125	VSR-510S	65	VSR-100S
					500	VSR-510S HF	125	VSR-100S HF
	1600	VDV33 1/2"	600	VDV32 1/2"	1200	VSR-210S	275	VSR-410S
		VDV33 1/4"					625	VSR-210S
	3000	VDV33 1/4"	3000	VDV33 1/4"			900	VSR-210S HF
		VDV38H		VDV37 PC				
				VDV37 M			1200	VSR-210S FC
				VDV39			3000	VSR-910S
Hydrogen Bromide (HBr)	155	VDV33 1/4"	55	VDV32 1/4"	1	VSR-510SH	1	VSR-510H
					30	VSR-410S	2	VSR-510H HF
	190	VDV33 1/2"	95	VDV32 1/2"	50	VSR-210SH	30	VSR-410S
		VDV33 1/4"					50	VSR-210SH
Hydrogen Chloride (HCl)	350	VDV33 1/4"	75	VDV32 1/4"	2	VSR-510SH	8	VSR-510H
					90	VSR-410S	20	VSR-510H HF
	500	VDV33 1/2"	150	VDV32 1/2"	150	VSR-210SH	40	VSR-410SH
		VDV33 1/4"			600	VSR-210SH HF	85	VSR-210SH
	2000	VDV38	850	VDV37 PC	2000	VSR-910S	160	VSR-210SH HF
				VDV37 M			300	VSR-210SH FC
				VDV39			800	VSR-910SH

Pressure Regulator and Valve Selection Guide

Process Gas	Max. Flow (slpm)	Source Valves UA/UB/UC	Max. Flow (slpm)	Distribution Valves UA/UB/UC	Max. Flow (slpm)	Source Regulator UA/UB/UC	Max. Flow (slpm)	Distribution Regulator UA/UB/UC
Hydrogen Chloride Mixtures (Nitrogen Balance)	210	VDV33 1/4"	105	VDV32 1/4"	10	VSR-510SH	10	VSR-510H
					20	VSR-510SH HF	20	VSR-510H HF
	265	VDV33 1/2"	190	VDV32 1/2"	40	VSR-410S	40	VSR-410SH
		VDV33 1/4"						
Hydrogen Fluoride (HF)	20	VDV32 1/2"	20	VDV32 1/2"	5	VSR-410S-VC2	5	VSR-410S-VC2
Hydrogen Selenide (H2 Se)	125	VDV32 1/4"	55	VDV32 1/4"	5	VSR-510S	5	VSR-100S
		VDV33 1/4"			40	VSR-410S	20	VSR-100S HF
	215	VDV32 1/2"	95	VDV32 1/2"			40	VSR-410S
Hydrogen Selenide Mixtures (Nitrogen Balance)	185	VDV33 1/4"	90	VDV32 1/4"	10	VSR-510S	10	VSR-100S
					20	VSR-510S HF	20	VSR-100S HF
	225	VDV33 1/2"	160	VDV32 1/2"	50	VSR-410S	50	VSR-410S
		VDV33 1/4"						
Hydrogen Sulfide (H2 S)	210	VDV33 1/4"	80	VDV32 1/4"	5	VSR-510S	5	VSR-100S
					40	VSR-410S	10	VSR-100S HF
	260	VDV33 1/2"	140	VDV32 1/2"			40	VSR-410S
		VDV33 1/4"						
Krypton (Kr)	105	VDV33 1/4"	50	VDV32 1/4"	20	VSR-510S	20	VSR-100S
					60	VSR-410S	30	VSR-100S HF
	130	VDV33 1/2"	90	VDV32 1/2"			60	VSR-410S
		VDV33 1/4"						
Methane (CH4)	245	VDV33 1/4"	120	VDV32 1/4"	10	VSR-510S	10	VSR-100S
					20	VSR-510S HF	20	VSR-100S HF
	295	VDV33 1/2"	210	VDV32 1/2"	40	VSR-410S	40	VSR-410S
		VDV33 1/4"						
Methanol (CH3 OH)	70	VDV32 1/2"	40	VDV32 1/2"	3	VSR-510S	3	VSR-100S
					50	VSR-410S	5	VSR-100S HF
Methyl Bromide (CH3 Br)	25	VDV32 1/2"	15	VDV32 1/2"	5	VSR-410S-VC2	5	VSR-410S-VC2
Methyl Chloride (CH3 Cl)	60	VDV32 1/2"	45	VDV32 1/2"	1	VSR-100S	10	VSR-410S-VC2
					10	VSR-410S-VC2		
Methysilane (CH3 SiH3)	200	VDV32 1/4"	70	VDV32 1/4"	3	VSR-510S	3	VSR-100S
					50	VSR-410S	5	VSR-100S HF
	350	VDV32 1/2"	120	VDV32 1/2"	75	VSR-210S	50	VSR-410S
							75	VSR-210S
Methyl Fluoride 甲基氟 (CH3 F)	400	VDV33 1/4"	120	VDV32 1/4"	5	VSR-510S	5	VSR-100S
					50	VSR-410S	10	VSR-100S HF
	490	VDV33 1/2"	200	VDV32 1/2"			50	VSR-410S
		VDV33 1/4"						
Neon (Ne)	215	VDV33 1/4"	110	VDV32 1/4"	20	VSR-510S	20	VSR-100S
					40	VSR-510S HF	40	VSR-100S HF
	260	VDV33 1/2"	190	VDV32 1/2"	300	VSR-210S	100	VSR-410S
		VDV33 1/4"						
Nitrogen (N2)	250	VDV33 1/4"	100	VDV32 1/4"	50	VSR-510S	25	VSR-100S
					50	VSR-710S	50	VSR-100S HF
	400	VDV33 1/2"	200	VDV32 1/2"	250	VSR-510S HF	150	VSR-410S
		VDV33 1/4"			1000	VSR-210S	250	VSR-210S
	1000	VDV38H	1000	VDV37 PC			300	VSR-210S HF
				VDV37 M			300	1300S
				VDV39			400	VSR-210S FC
							1000	VSR-910S

Pressure Regulator and Valve Selection Guide

Process Gas	Max. Flow (slpm)	Source Valves UA/UB/UC	Max. Flow (slpm)	Distribution Valves UA/UB/UC	Max. Flow (slpm)	Source Regulator UA/UB/UC	Max. Flow (slpm)	Distribution Regulator UA/UB/UC
Nitrogen Dioxide (NO2)	60	VDV32 1/2"	60	VDV32 1/2"	4	VSR-510S	4	VSR-100S
					45	VSR-410S	6	VSR-100S
Nitrogen Trifluoride (NF3)	75	VDV33 1/4"	60	VDV32 1/4"	5	VSR-510S	6	VSR-100S
					60	VSR-410S	15	VSR-100S HF
	100	VDV33 1/2"	110	VDV32 1/2"	150	VSR-410S	30	VSR-410S
		VDV33 1/4"			400	VSR-210S	75	VSR-210S
	350	VDV38H	500	VDV37 PC	1000	VSR-910S	125	VSR-210S HF
		VDV38H		VDV37 M			250	VSR-210S FC
				VDV39			600	VSR-910S
Nitric Oxide (NO)	310	VDV33 1/4"	75	VDV32 1/4"	3	VSR-510S	3	VSR-100S
					50	VSR-410S	6	VSR-100S HF
	380	VDV33 1/2"	125	VDV32 1/2"	75	VSR-210S	50	VSR-410S
		VDV33 1/4"					75	VSR-210S
Nitrous Oxide (N2O)	300	VDV33 1/4"VS	70	VDV32 1/4" VS	3	VSR-510S VS	8	VSR-100S VS
					60	VSR-410S VS	20	VSR-100S HF VS
	500	VDV33 1/2"VS	140	VDV32 1/2" VS	100	VSR-210S VS	35	VSR-410S VS
					150	VSR-210S HF VS	85	VSR-210S VS
	1500	VDV38 VS	750	VDV37 PC VS	500	VSR-210S HF VS	160	VSR-210S HF VS
				VDV37 M VS	1000	VSR-910S VS	320	VSR-210S FC VS
				VDV39 VS			800	VSR-910S VS
Oxygen (O2)	250	VDV33 1/4"	75	VDV32 1/4"	10	VSR-510S	10	VSR-100S
					80	VSR-510S HF	25	VSR-100S HF
	400	VDV33 1/2"	150	VDV32 1/2"	150	VSR-510S HF	50	VSR-410S
		VDV33 1/4"			1000	VSR-210S	120	VSR-210S
			1000	VDV37 PC			200	VSR-210S HF
				VDV37 M			400	VSR-210S FC
				VDV39			1000	VSR-910S
Perfluoropropane (C3 F8)	70	VDV32 1/4"	35	VDV32 1/4"	2	VSR-510S	2	VSR-100S
		VDV33 1/4"			20	VSR-410S	4	VSR-100S HF
	125	VDV32 1/2"	60	VDV32 1/2"			20	VSR-410S
Perfluorobutadiene (C4 F6)	25	VDV32 1/2"	25	VDV32 1/2"	5	VSR-410S-VC2	5	VSR-410S-VC2
Phosphine (PH3)	320	VDV33 1/4"	80	VDV32 1/4"	5	VSR-510S	5	VSR-100S
					40	VSR-410S	10	VSR-100S HF
	390	VDV33 1/2"	145	VDV32 1/2"				
		VDV33 1/4"						
Phosphine Mixtures (Nitrogen Balance)	185	VDV33 1/4"	90	VDV32 1/4"	10	VSR-510S	10	VSR-100S
					20	VSR-510S HF	20	VSR-100S HF
	225	VDV33 1/2"	160	VDV32 1/2"				
		VDV33 1/4"						
Phosphorous Pentafluoride (PF5)	15	VDV33 1/4"	5	VDV32 1/4"	10	VSR-510S	10	VSR-100S
					20	VSR-510S HF	20	VSR-100S HF
	19	VDV33 1/2"	9	VDV32 1/2"				
		VDV33 1/4"	52	VDV37 PC				
	41	VDV38H		VDV37 M				
				VDV39				
Propane (C3 H8)	65	VDV32 1/4"	42	VDV32 1/4"	3	VSR-510S	3	VSR-100S
		VDV33 1/4"			50	VSR-410S	5	VSR-100S HF
	115	VDV32 1/2"	75	VDV32 1/2"		VSR-210S	50	VSR-410S

Pressure Regulator and Valve Selection Guide

Process Gas	Max. Flow (slpm)	Source Valves UA/UB/UC	Max. Flow (slpm)	Distribution Valves UA/UB/UC	Max. Flow (slpm)	Source Regulator UA/UB/UC	Max. Flow (slpm)	Distribution Regulator UA/UB/UC
Propane (C3 H6)	185	VDV32 1/4"	75	VDV32 1/4"	3	VSR-510S	3	VSR-100S
		VDV33 1/4"			50	VSR-410S	5	VSR-100S HF
	320	VDV32 1/2"	125	VDV32 1/2"			50	VSR-410S
Silane (SiH4)	150	VDV33 1/4"	75	VDV32 1/4"	5	VSR-510S	10	VSR-100S
					40	VSR-410S	25	VSR-100S HF
	250	VDV33 1/2"	150	VDV32 1/2"	50	2700S	50	VSR-410S
		VDV33 1/4"			60	VSR-210S	120	VSR-210S
	600	VDV38H	750	VDV37 PC	100	VSR-210S HF	200	VSR-210S HF
		VDV38H		VDV37 M	500	SR-210S & VSR-210S H	400	VSR-210S FC
				VDV39			1000	VSR-910S
Silane Mixtures (Nitrogen Balance)	185	VDV33 1/4"	90	VDV32 1/4"	10	VSR-510S	10	VSR-100S
					20	VSR-510S HF	20	VSR-100S HF
	225	VDV33 1/2"	160	VDV32 1/2"	40	VSR-410S	40	VSR-410S
		VDV33 1/4"						
Silicon Tetrachloride (SiCl4)	10	VDV32 1/2"	10	VDV32 1/2"	2	VSR-410S-VC2	2	VSR-410S-VC2
Silicon Tetrafluoride (SiF4)	95	VDV33 1/4"	45	VDV32 1/4"	10	VSR-510S	10	VSR-100S
					40	VSR-410S	20	VSR-100S HF
	115	VDV33 1/2"	80	VDV32 1/2"			40	VSR-410S
		VDV33 1/4"						
Sulfur Dioxide (SO2)	80	VDV32 1/2"	30	VDV32 1/2"	1	VSR-100S	6	VSR-410S-VC2
					6	VSR-410S-VC2		
Sulfur Hexafluoride (SF6)	125	VDV33 1/4"	35	VDV32 1/4"	3	VSR-510S	5	VSR-100S
					40	VSR-410S	12	VSR-100S HF
	200	VDV33 1/2"	75	VDV32 1/2"	60	VSR-210S	25	VSR-410S
		VDV33 1/4"			150	VSR-210S HF	60	VSR-210S
	500	VDV38	400	VDV37 PC	500	VSR-910S	90	VSR-210S HF
				VDV37 M			180	VSR-210S FC
				VDV39			400	VSR-910S
Sulfur Tetrafluoride (SF4)	200	VDV32 1/2"	80	VDV32 1/2"	3	VSR-510S	3	VSR-100S
					15	VSR-410S	5	VSR-100S HF
							15	VSR-410S
Trichlorosilane (SiHCl3)	35	VDV32 1/2"	30	VDV32 1/2"	10	VSR-410S-VC2	10	VSR-410S-VC2
Trimethylsilane ((CH3)3SiH)	30	VDV32 1/2"	25	VDV32 1/2"	7	VSR-410S-VC2	7	VSR-410S-VC2
Tungsten Hexafluoride (WF6)	10	VDV32 1/2"	10	VDV32 1/2"	5	VSR-410S-VC2	5	VSR-410S-VC2
Xenon (Xe)	85	VDV33 1/4"	40	VDV32 1/4"	5	VSR-510S	5	VSR-100S
					25	VSR-410S	10	VSR-100S
	100	VDV33 1/2"	70	VDV32 1/2"			25	VSR-410S
		VDV33 1/4"						

Product Warranty Service

1. Warranty Term

One year after purchase. For any malfunction of a product purchased from VIGOUR that occurs during the warranty term as a result of failure, at the time of delivery, to fulfill the specifications intended, VIGOUR will repair or replace the product at no charge.

2. Range of Warranty

The warranty is limited to our products that were produced at and delivered from our VIGOUR.

Regardless of the warranty term, this warranty does not cover troubles or accidents, or any customer's opportunity loss, lost profit, secondary damage or damage to anything other than our products, as well as replacement work, readjustment of local machinery or quipment or trial operation by the customer. Safety management associated with the use of a product purchased from VIGOUR and peripheral equipment will be the responsibility of the user.

[Exclusions]

The warranty does not cover any of the following cases, even if it occurs during the term of the warranty.

1) Cases where failure occurs resulting from the replacement (maintenance) of parts by a person other than a VIGOUR engineer.
2) Cases where failure occurs due to a natural disaster or force majeure.
3) Cases where failure occurs due to misuse of the product or not taking the required precautions in handling the product.
4) Cases where the product is used or stored in an unsuitable environment.
5) Cases where the product is used for purposes other than the designated objectives, the product is used at s range exceeding the range of conditions specified in the design, or a purchased product is modified.
6) Cases where corrosion and failure occurs due to external factors or a corrosive liquid.
7) Any other case judged to be outside of the responsibility of VIGOUR.

VIGOUR

we offer solutions regarding your ideas!

Email : info@vigourco.com
Website : www.vigourco.com

Office - GERMANY:
Fraunhoferstrasse 5
82152 Martinsried
Germany
Phone : +49 (0)89 / 74 49 26-0
Fax : +49 (0)89 / 74 49 26-10
Email : Europe@vigourco.com

Office – SINGAPORE:
NO.1 Sunview Road #03-46 Eco-Tech@
Sunview Singapore 627615
Phone : (65) 6255 2825
Fax : (65) 6255 2825
Email : Sales@vigourco.com.sg

Office - USA:
7755 Center Ave, Suite 1050,
Huntington Beach, California
92647
Email : America@vigourco.com

Office - CHINA:
Floor 2, Building 26, Lane 5355, Beisong Road,
SongJiang District, Shanghai China.
Email : China@vigourco.com
info@vigourco.com

pay attention to us
Get more product information

Distributed By :

Al Fateh Systems Trading Co
Jubail Industrial City, KSA
info@alfateh-sa.com
Sales@alfateh-sa.com
www.alfateh-sa.com

NOTE:
Product availability and specifications contained herein are subject to change without notice.
Consult local distributor or factory for potential revisions and/or service related issues.

VUPS Catalog EN Ver 4.0 CATA# **03082024**