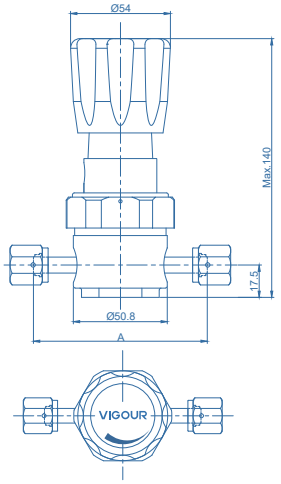
Single Stage Pressure Regulators
VSR-100UB Series

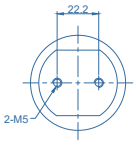
VIGOUR

Product Feature

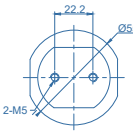
- Single-stage pressure regulator
- 10μin. Ra surface finish (25μin. Ra optional)
- Minimized internal volume for short purge times
- All materials used meet ASTM A479 / A484 / A276 standards
- The product is fabricated in compliance with the VS001B process specification
- Internal connectors for pressure 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



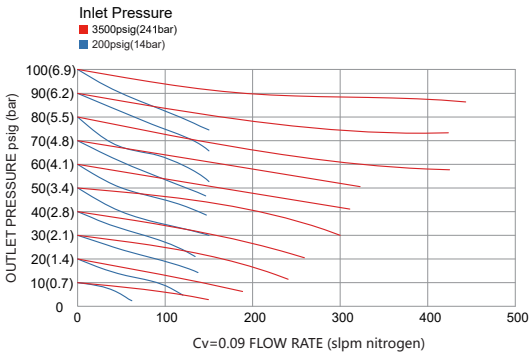
body of 3&4 ports

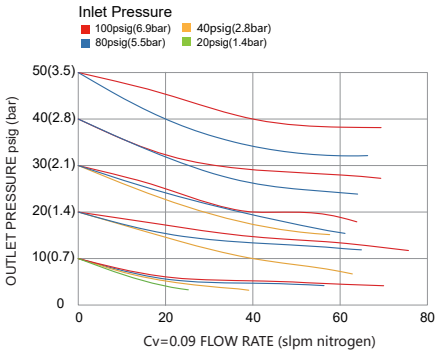
Connections	A	
	inch	(mm)
FV4	3.70	(94.0)
MV4		
TW4	2.96	(75.2)
FV6	4.70	(119.4)
MV6		
TW6	2.96	(75.2)

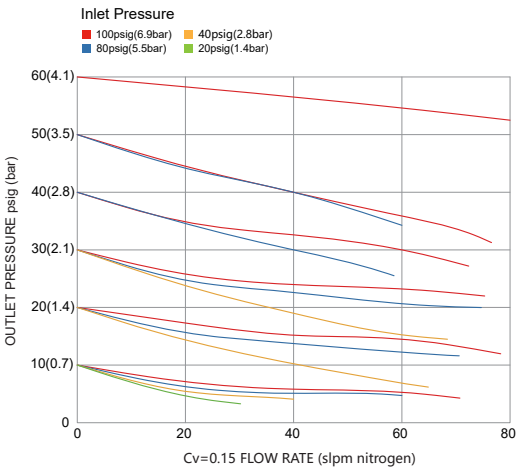
Technical Data

Type:	single-stage
Inlet pressure P_1:	Max. 3500 psig (250bar)
Outlet pressure P_2:	Vac to 10/30/60/100/150 psig (0.7/2/4/7/10bar)
Prosf pressure:	5000 psig (340bar)
Burst pressure:	10000 psig (690bar)
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 (depending on connections or options)

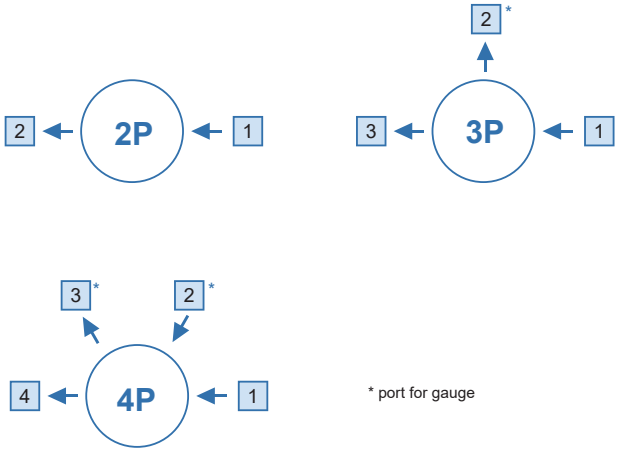
Flowchart







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 - 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