

Single Stage Pressure Regulators

VSR-210UC Series

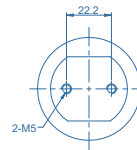
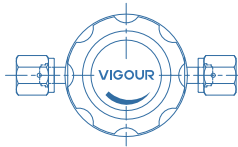
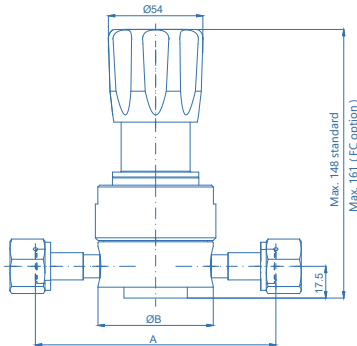
VIGOUR

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
- The product is fabricated in compliance with the VS001A process specification
- Internal connectors for pressure gauges
- Force compensation has wider flow capacity
- 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)

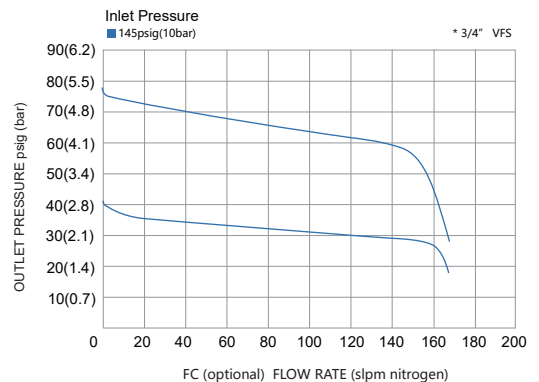
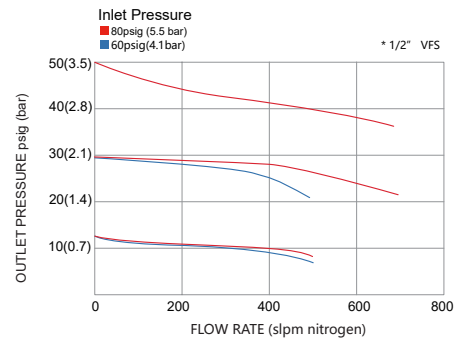


Connections	B	A	
		inch	(mm)
FV4	50.8	3.70	(94.0)
MV4		4.00	(101.6)
TW4		3.46	(87.9)
FV6		5.22	(132.6)
MV6	63.5	4.00	(101.6)
TW6		5.22	(132.6)
FV8		4.34	(110.2)
MV8		6.26	(159.0)
TW8	63.5	5.00	(127.0)
FV12		6.26	(159.0)
MV12		5.00	(127.0)
TW12		5.00	(127.0)

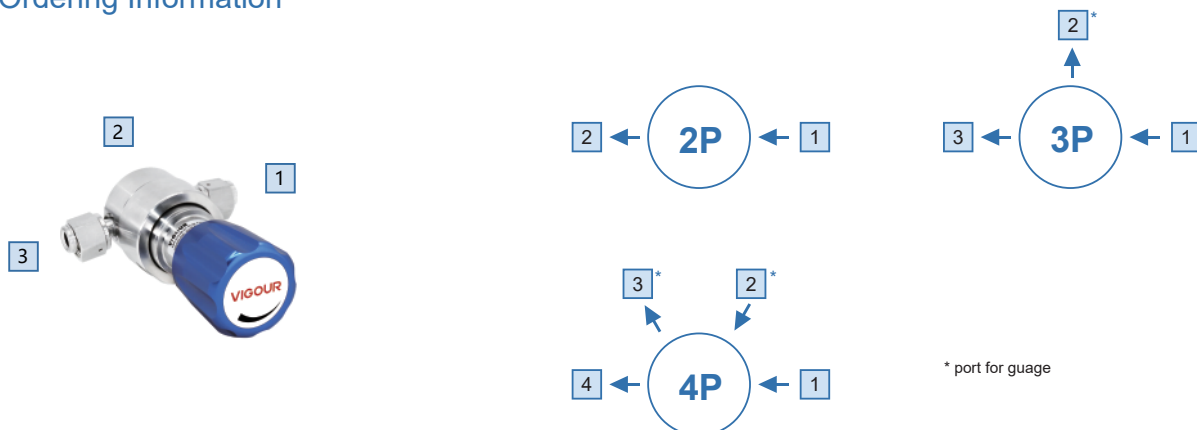
Technical Data

Type:	single-stage
Inlet pressure P1:	Max. 3000 psig (200bar)
Outlet pressure P2:	Vac to 30/60/100/150/250 psig (2/4/7/10/17bar)
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 (depending on connections or options)

Flowchart



Ordering Information



Inlet/outlet Connection

FV4: 1/4" VFS female
MV4: 1/4" VFS male
FV6: 3/8" VFS female
MV6: 3/8" VFS male
FV8: 1/2" VFS female

MV8: 1/2" VFS male
FV12: 3/4" VFS female
MV12: 3/4" VFS male
IFV4: 1/4" (gauge female threaded connection machined on the body)

TW4: 1/4" tube weld
TW6: 3/8" tube weld
TW8: 1/2" tube weld
TW12: 3/4" tube weld
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 $\Phi 37\text{mm}$

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 compensation 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 $\mu\text{in. Ra max}$
R10: 10 $\mu\text{in. Ra max}$
R7: 7 $\mu\text{in. Ra max}$
R5: 5 $\mu\text{in. Ra max}$

Ordering Example

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

1 - 2

2



1

