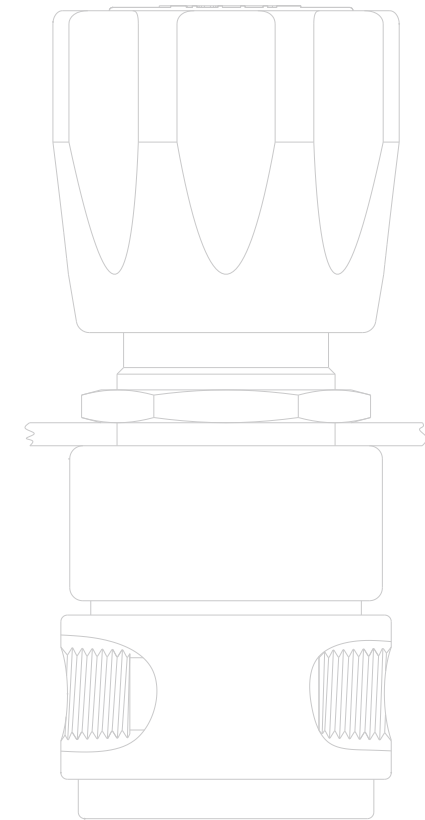


Pressure Reducing Regulators



Climate Control
Electromechanical
Filtration
Fluid & Gas Handling
Hydraulics
Process Control
Sealing & Shielding



VFK

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VFK
Advanced Fluid Control

CONTENTS

Compact Pressure Reducing Regulator

R21 Series	1
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Pressure Reducing Regulator
R21 Series

R21 series, single-stage diaphragm construction, stainless steel diaphragm pressure transmission, output stability, applied to pure gases, corrosive gases and non-corrosive gases

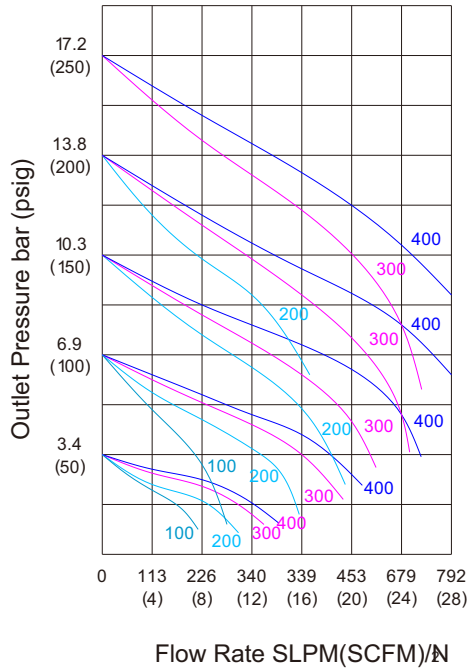
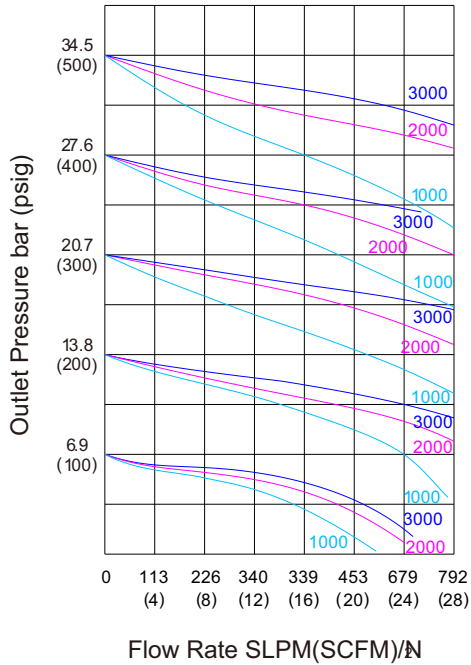
Features

- ◎ Compact
- ◎ 316 stainless steel or brass body
- ◎ Convolute diaphragm provides accurate pressure adjustment
- ◎ Metal-to-metal diaphragm seal
- ◎ Spring loaded pressure reducing regulator
- ◎ A filter installed in inlet
- ◎ Panel mounting available
- ◎ Maximum inlet pressure: 500, 3000 psig
- ◎ Outlet pressure ranges: 0~25, 0~50, 0~100, 0~250, 0~500 psig
- ◎ Flow coefficient (Cv):

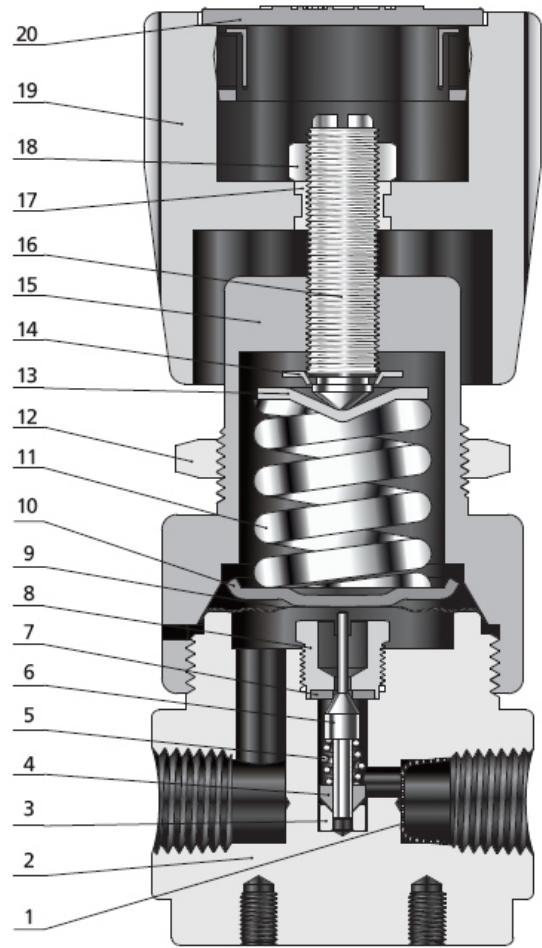
Technical Data

- ◎ 500 psig Inlet pressure: 0.15
- ◎ 3000 psig Inlet pressure: 0.06
- ◎ Working temperature: -40°F~+165°F (-40°C~+74°C)
- ◎ Leak rate:
 - Internal: Bubble-tight
 - External: ≤ 2x10-8 atm · cc/sec He
- Weight: ≈ 1.98 lbs (0.9 Kg)
- Ports: Inlet, Outlet, Gauge, Relief valve — 1/4" Female NPT

Flow Charts



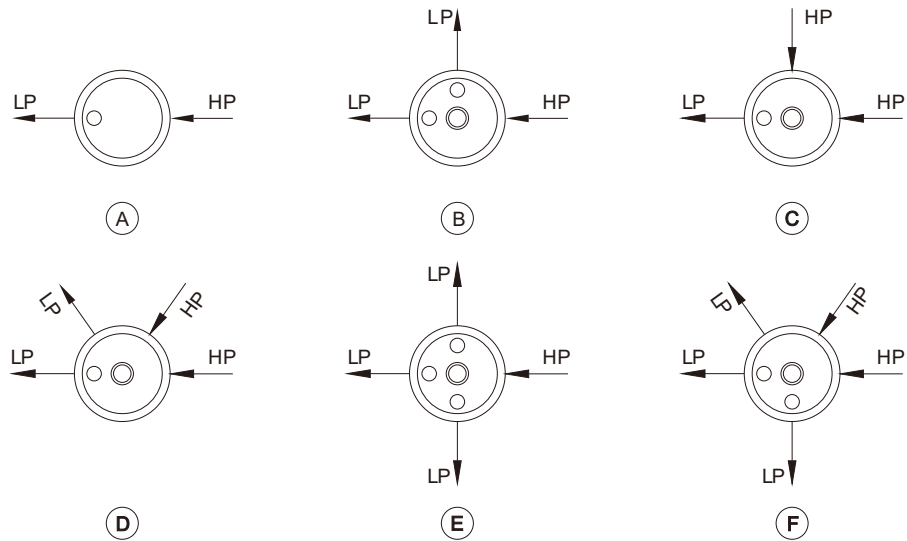
Normal Materials of Construction



Component		Material Grade/ASTM Specification
1	Filter	316L SS
2	Body	316L SS/A479
3	Friction sleeve	316L SS/A276
4	Poppet damper	PTFE/D1710
5	Poppet spring	316L SS/A313
6	Lift poppet	316L SS/A276
7	Seat	PCTFE/D1430
8	Seat retainer	316L SS/A276
9	Diaphragm	316L SS/A240
10	Stop plate	304 SS/A240
11	Range spring	Alloy
12	Mounting nut	304 SS/A276
13	Spring button	304 SS/A240
14	Lock ring	304 SS/A240
15	Bonnet	304 SS/A479
16	Stem	C36000/B16
17	Embedded nut	C36000/B16
18	Stem nut	C36000/B16
19	Knob handle	ABS
20	Hole plug	ABS

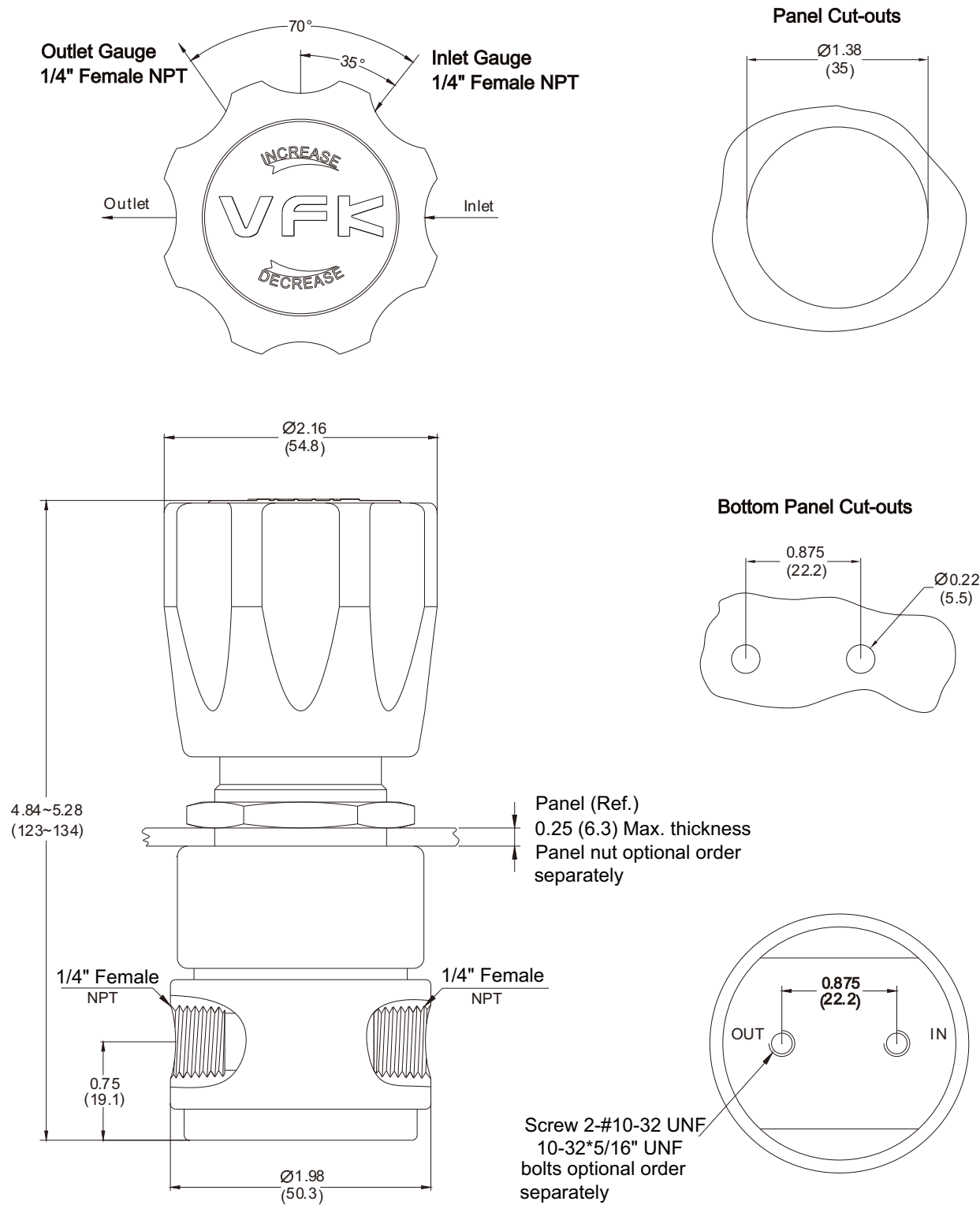
Porting Configurations

6 Configurations as follows: A, B, C, D, E and F. All ports are 1/4" Female NPT.
HP: High pressure inlet LP: Low pressure outlet



Dimensions

Dimensions, in. (mm), are for reference only and are subject to change.



Ordering Number



Basic Ordering Number	Porting Config-urations	Cv	Max. Inlet Pressure (psig)	Outlet Pressure Range (psig)
R21 -F64MM-G10C-FX4-R	F	0.06	3000	0~250
R21 -F63PP-G10-FN4-R-F2				0~100
R21 -F62BB-G10CLH-MX6-R				0~50



Basic Ordering Number	Porting Config-urations	Cv	Max. Inlet Pressure (psig)	Outlet Pressure Range (psig)
R21 -D64MM-FX4-N	D	0.06	3000	0~250
R21 -D53BB-MX6-FN4		0.15	500	0~100
R21 -F62BP-FN4-R	F	0.06	3000	0~50



Basic Ordering Number	Porting Config-urations	Cv	Max. Inlet Pressure (psig)	Outlet Pressure Range (psig)
R21 -A61WW-FN4-Z	A	0.06	3000	0~25
R21 -B63WB-FX4	B			0~100
R21 -C52MW-FN4-N	C	0.15	500	0~50
R21 -E63WP-FN4	E	0.06	3000	0~100

Note: The others are available, please contact VFK group or authorized agent for the others.

R21 Series How to Order

A	B	C	D	E	F	G	H	I	J
Body Material	Valve Series	Ports	Outlet Pressure	Inlet Gauge	Outlet Gauge	Inlet Type	Inlet Size	Outlet Type	Outlet Size
SS	R21	E	2	W	M	FN	4	N	4
		K	H	H					
		Seat Material	Panel	NACE MR0175					
		V	Z	SG					

A	Body Material
SS:	316 SS
6L:	316L SS
S4:	304 SS
4L:	304L SS
TI:	Titanium
A20:	Alloy 20
M:	Alloy 400
INC:	Alloy 600
HC:	Alloy C-276
B:	Brass

D	Outlet Pressure
1	0-25 psig
2	0-50 psig
3	0-100 psig
4	0-250 psig
5	0-500 psig (Only for inlet pressure 3000 psig)

G	Inlet/Outlet Type
FN	Female NPT
N	Male NPT
FR	Female BSPT
RT	Male BSPT
FX	Fractional Tube Fitting
MX	Metric Tube Fitting
Cylinder connection and the other fittings are available	

L	Panel
NO	
Z	Panel Nut
N	Bolts for Assembly

H NACE MR0175
Standard with no NACE applicable

SG	With NACE MR0175
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B	Valve Series
R21	R21 Series

E	Inlet Gauge
W	Without Gauge
M	With Gauge (Mpa)
P	With Gauge (psig)
B	With Gauge (bar)

HJ	Inlet/Outlet Size
2	1/8"
4	1/4"
6	3/8" or 6 mm
8	1/2" or 8 mm

C	Ports
A	1 In 1 Out
B	1 In 2 Out
C	2 In 1 Out
D	2 In 2 Out
E	1 In 3 Out
F	2 In 3 Out

F	Outlet Gauge
W	Without Gauge
M	With Gauge (Mpa)
P	With Gauge (psig)
B	With Gauge (bar)

K	Seat Materials
Standard with PCTFE	
V	Vespel

Note:

- "Part Number Description" is used for composition rules of VFK product model, not suitable for specific product part number selection, not random combinations;
- The ports from body are 1/4 Female NPT, the other port types and sizes could be chosen with adapters, for further detail, please contact VFK group or authorized agent;
- Gauge configurations description for regulator:
Pay attention to the ordering number cause the ports from body for gauges are one part of the total number. For further detail, please read the stylebook of gauge or contact VFK group;