

# Sensitive Diaphragm Regulators

## FCR-1S Series

### Features

- ⦿ Large diameter convoluted diaphragm to increase pressure sensitivity
- ⦿ 40  $\mu\text{m}$  filter installed at inlet
- ⦿ With special cleaning and packaging, applicable to oxygen-enriched atmospheres

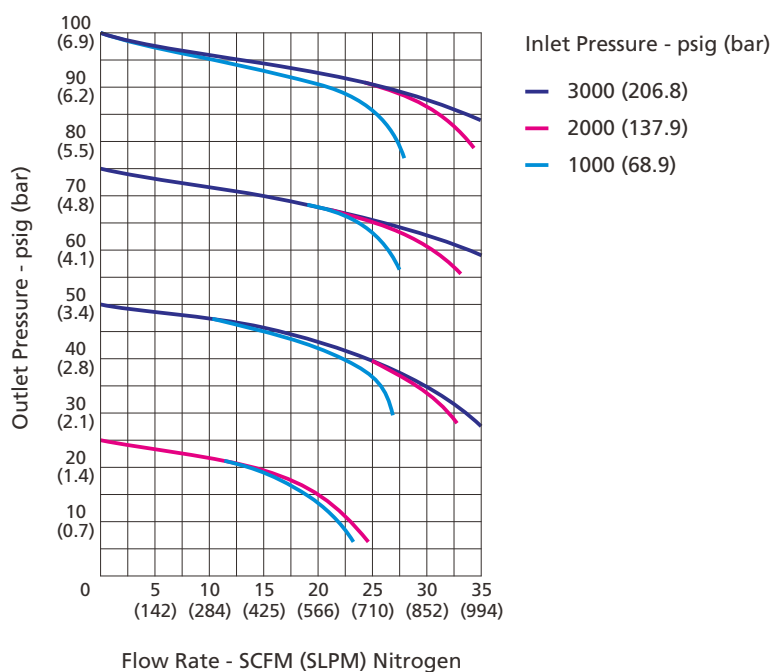
### Technical Data

- ⦿ Single-stage regulator
- ⦿ Maximum inlet pressure: 3000 or 4500 psig
- ⦿ Outlet pressure range: 0 ~ 25, 0 ~ 50, 0 ~ 100, 0 ~ 150 or 0 ~ 200 psig
- ⦿ Material of the internal components:
  - Seat: PCTFE
  - Diaphragm: Hastelloy
  - Filter: 316L SS
- ⦿ Temperature: -40 °F ~ 165 °F (-40 °C ~ 74 °C)
- ⦿ Leak rates (helium):
  - Internal:  $\leq 1 \times 10^{-7}$  std  $\text{cm}^3/\text{s}$
  - External:  $\leq 1 \times 10^{-9}$  std  $\text{cm}^3/\text{s}$
- ⦿ Flow coefficient (Cv): 0.06
- ⦿ Weight (regulator only):  $\approx 2.87$  lbs (1.3 kg)



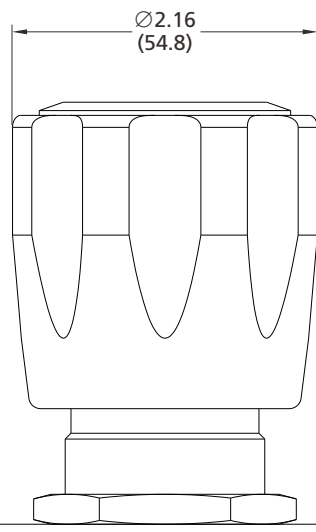
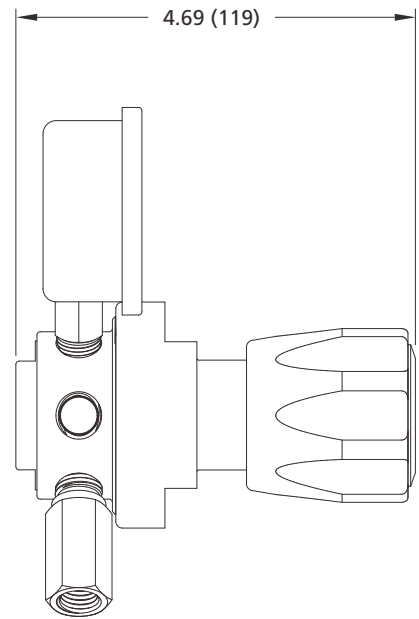
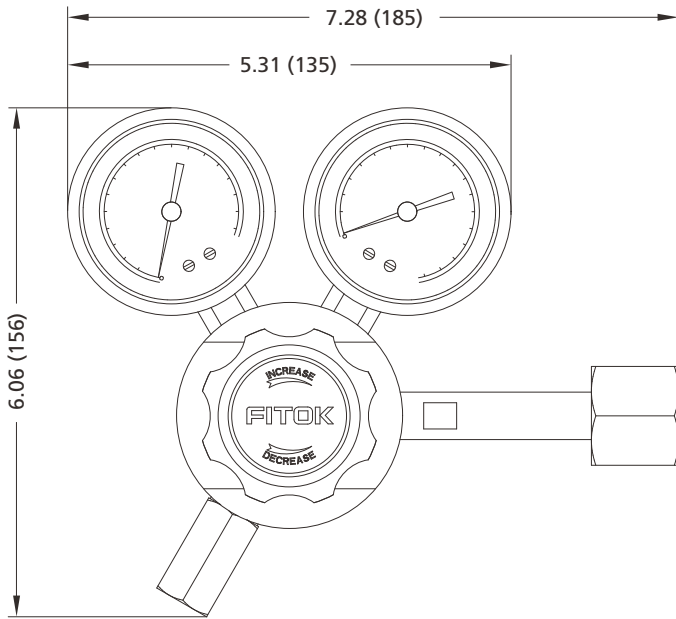
Model: FCR-1S6L-30-50-C580-B-B-00-R-P

### Typical Flow Chart

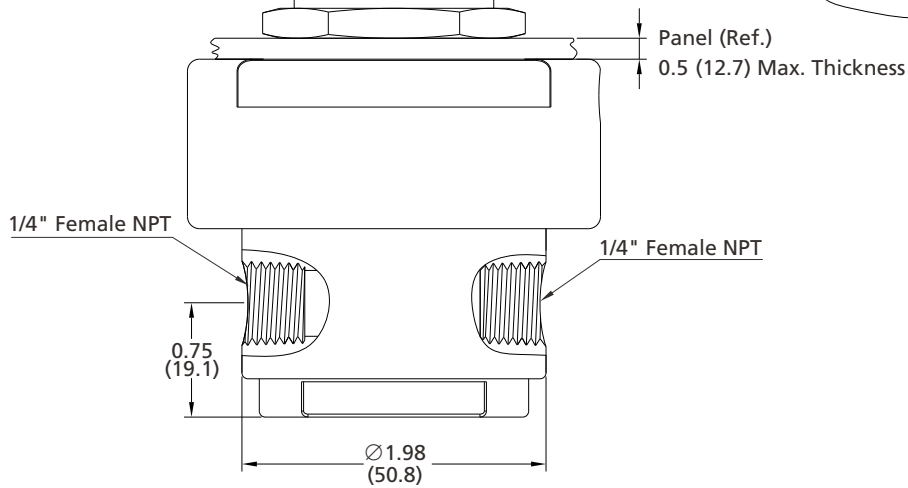
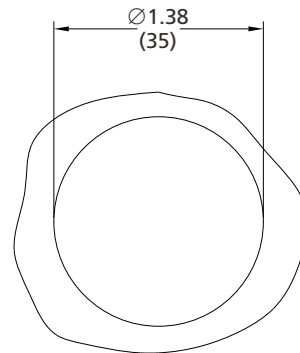


## Dimensions

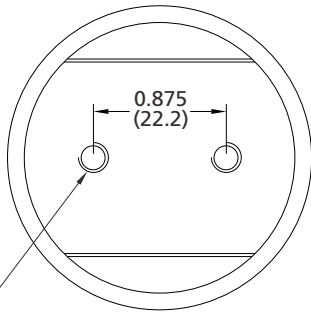
Dimensions, in inches (millimeters), are for reference only.



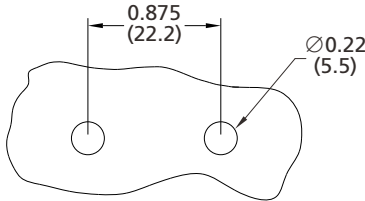
Panel Cut-Out



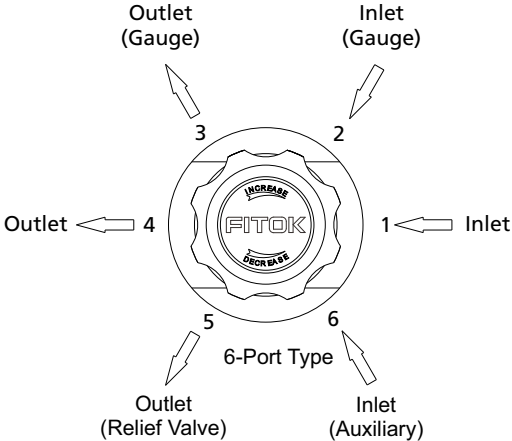
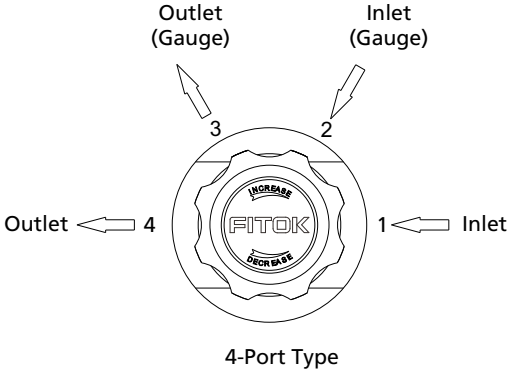
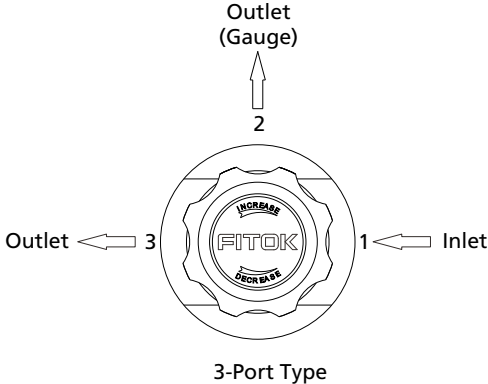
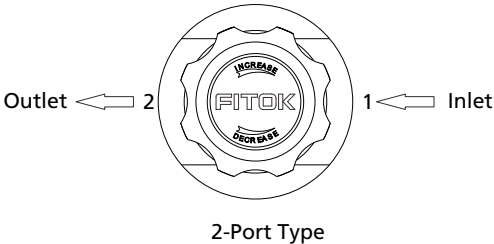
Bottom Panel Cut-Out



2×M5×0.8-6H Thread  
 The holes are compatible  
 with 10-32 mounting screws



### Port Configurations



Gas Control Equipment

Related Products

Technical References

## Ordering Number Description

FCR - 1S6L - 30 - 50 - DIN1 - M - M - 30 - R - P - Z

Body Material	
6L	316L SS
B	Brass

Inlet Pressure P1	
30	3000 psig
45	4500 psig

Outlet Pressure Range P2	
25	0~25 psig
50	0~50 psig
100	0~100 psig
150	0~150 psig
200	0~200 psig

Connection 1	
00	1/4" Female NPT
C---	CGA Number (USA)
DIN_	DIN Number (Germany)
Other connections are available upon request	
Refer to page B-30 for cylinder connections based on specific gas type. Cylinder connections compliant to other standards are available upon request. Please contact FITOK Group for details.	

Connection 2	
B	With Gauge (psi/bar)
M	With Gauge (psi/MPa)
P	Plug
Others refer to Connection 4	

Connection 3	
None	
3 ports same as Connection 1	
4 ports same as Connection 2	

Connection 4	
None	
00	1/4" Female NPT
01	1/4" Male NPT
10	1/4" Tube Fitting
11	3/8" Tube Fitting
20	6 mm Tube Fitting
21	8 mm Tube Fitting
30	Diaphragm Valve with 1/4" Female NPT
31	Diaphragm Valve with 1/4" Male NPT
32	Diaphragm Valve with 1/4" Tube Fitting
33	Diaphragm Valve with 3/8" Tube Fitting
34	Diaphragm Valve with 6 mm Tube Fitting
35	Diaphragm Valve with 8 mm Tube Fitting
Other connections are available upon request	

Connection 5	
None	
R	Relief Valve
P	Plug
00	1/4" Female NPT

Connection 6	
Same as Connection 5	

Installation Type	
Bottom Thread Hole	
Z	Installed with One Panel Nut
N	Installed with Screws at the Bottom

Notes:

1. "Ordering Number Description" is a reference to understand the combination rules of FITOK product part number. Not all combinations are available.
2. Before ordering, please read **User's Guide** on A-12.
3. The body connections are 1/4" Female NPT by default. Other options are adapted from 1/4" Male NPT.  
Examples of part number:
  - a. 2-port type (1 in, 1 out): FCR-1S6L-45-25-C580-00
  - b. 3-port type (1 in, 2 out): FCR-1SB-30-150-C330-B-00
  - c. 4-port type (2 in, 2 out): FCR-1SB-45-200-00-00-00-00

Gas Control Equipment  
Related Products  
Technical References

# General Piston Regulators

## FCR-2 Series

### Features

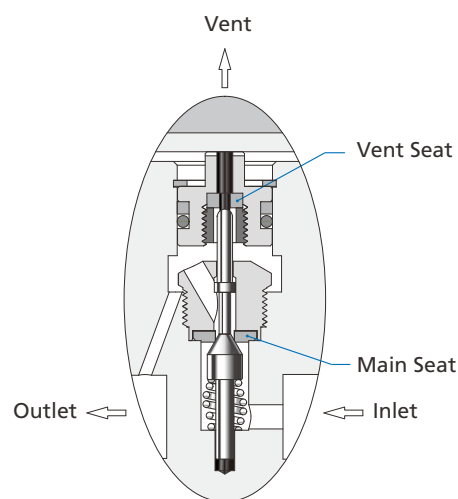
- Piston sensing design with greater outlet pressure adjustment range
- Reduced inner capacity
- 40  $\mu$ m filter installed at inlet
- With special cleaning and packaging, applicable to oxygen-enriched atmospheres



Model: FCR-26L-45-750-DIN8-B-B-00-P-P

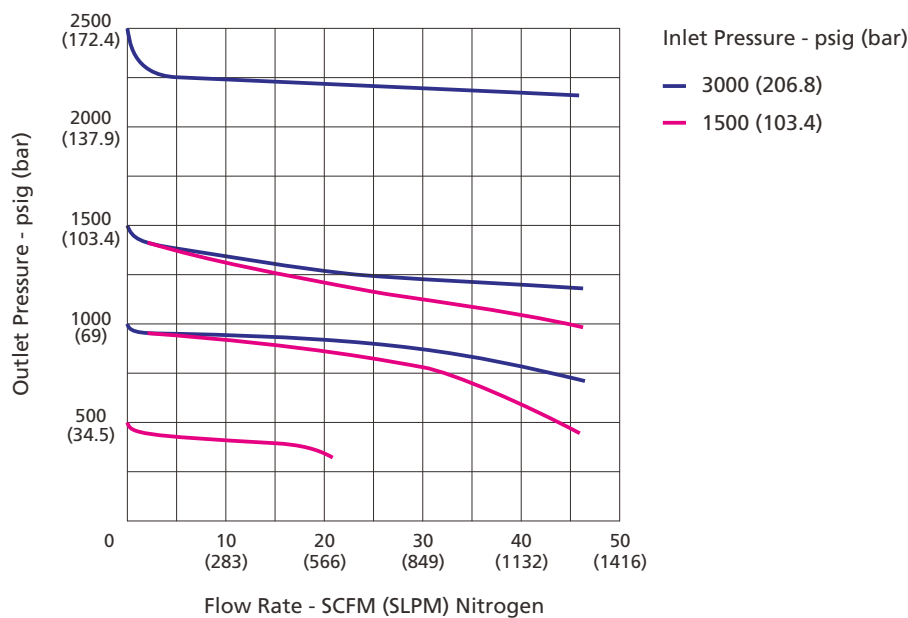
### Technical Data

- Single-stage regulator
- Maximum inlet pressure: 4500 or 6000 psig
- Outlet pressure range: 0 ~ 750, 0 ~ 1500 or 0 ~ 2500 psig
- Material of the internal components:
  - Without venting Model: Main seat PCTFE
  - Venting Model: Main seat PEEK, vent seat PCTFE
  - Vent Seat: PCTFE
  - Piston: 316L SS
  - O-ring: FKM or FFKM
  - Filter: 316L SS
- Temperature: -15 °F ~ 165 °F (-26 °C ~ 74 °C)
- Leak rates:
  - Internal: Bubble-tight
  - External: Bubble-tight
- Flow coefficient (Cv):
  - Without vent: 0.06
  - Vent: 0.1
- Weight (regulator only):  $\approx$  1.98 lbs (0.9 kg)



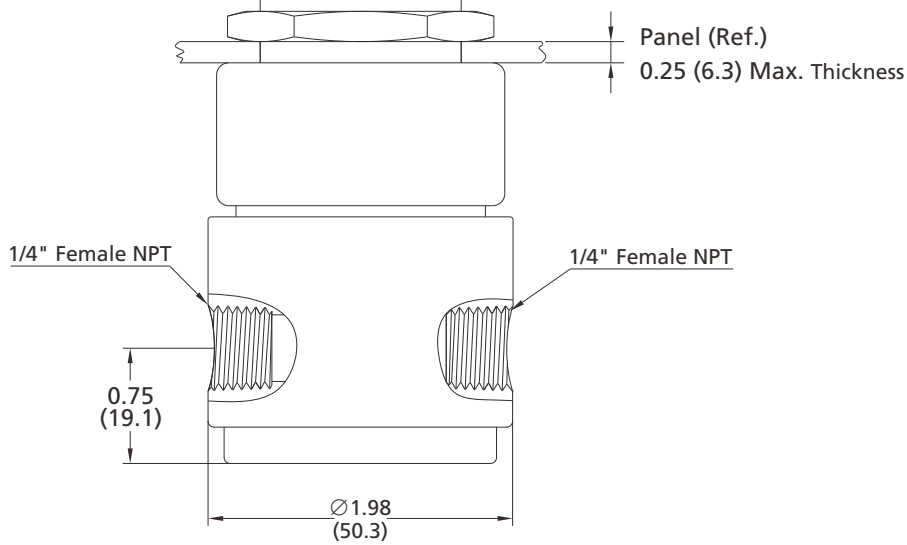
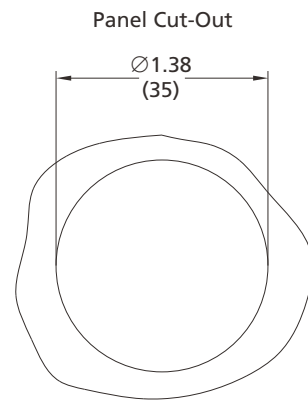
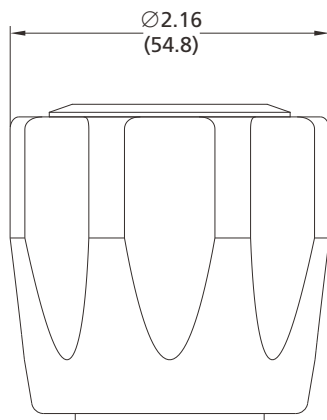
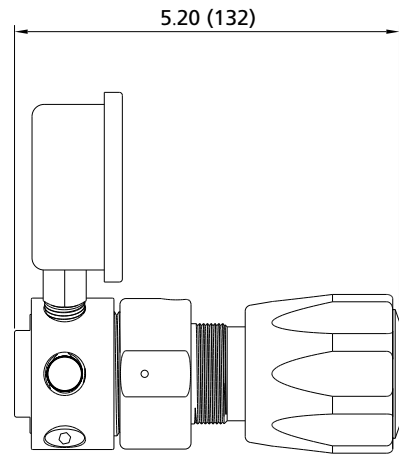
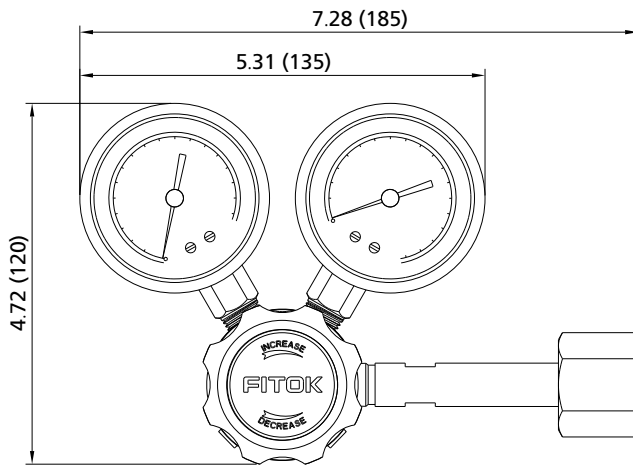
Construction Drawing with Venting Model

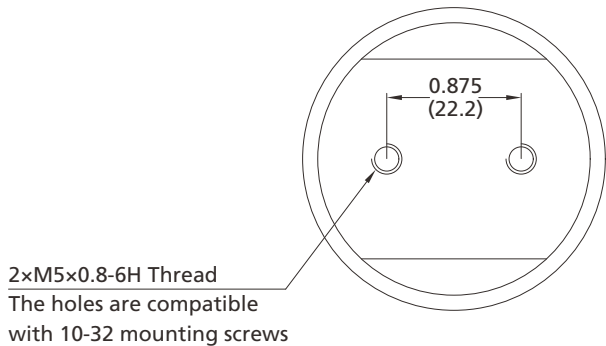
### Typical Flow Chart



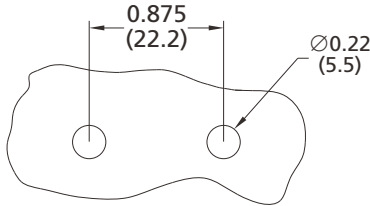
## Dimensions

Dimensions, in inches (millimeters), are for reference only.

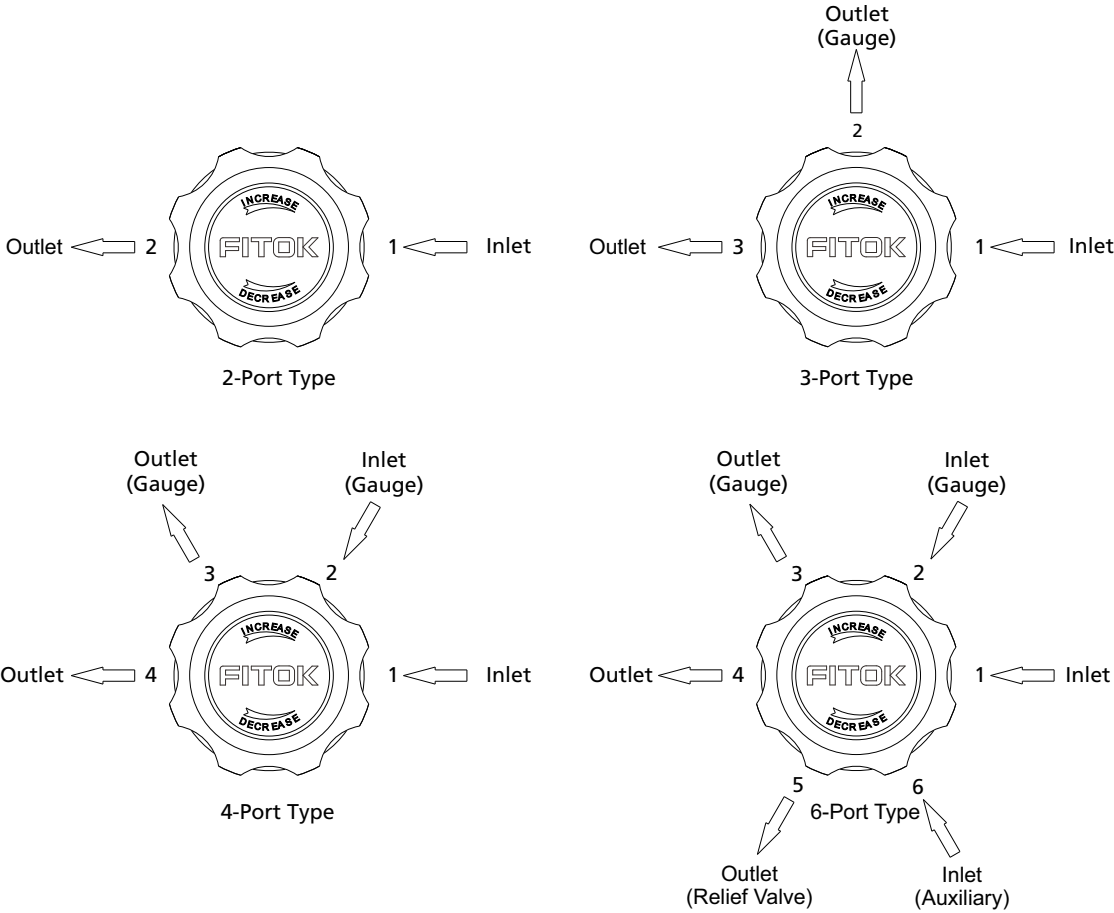




Bottom Panel Cut-Out

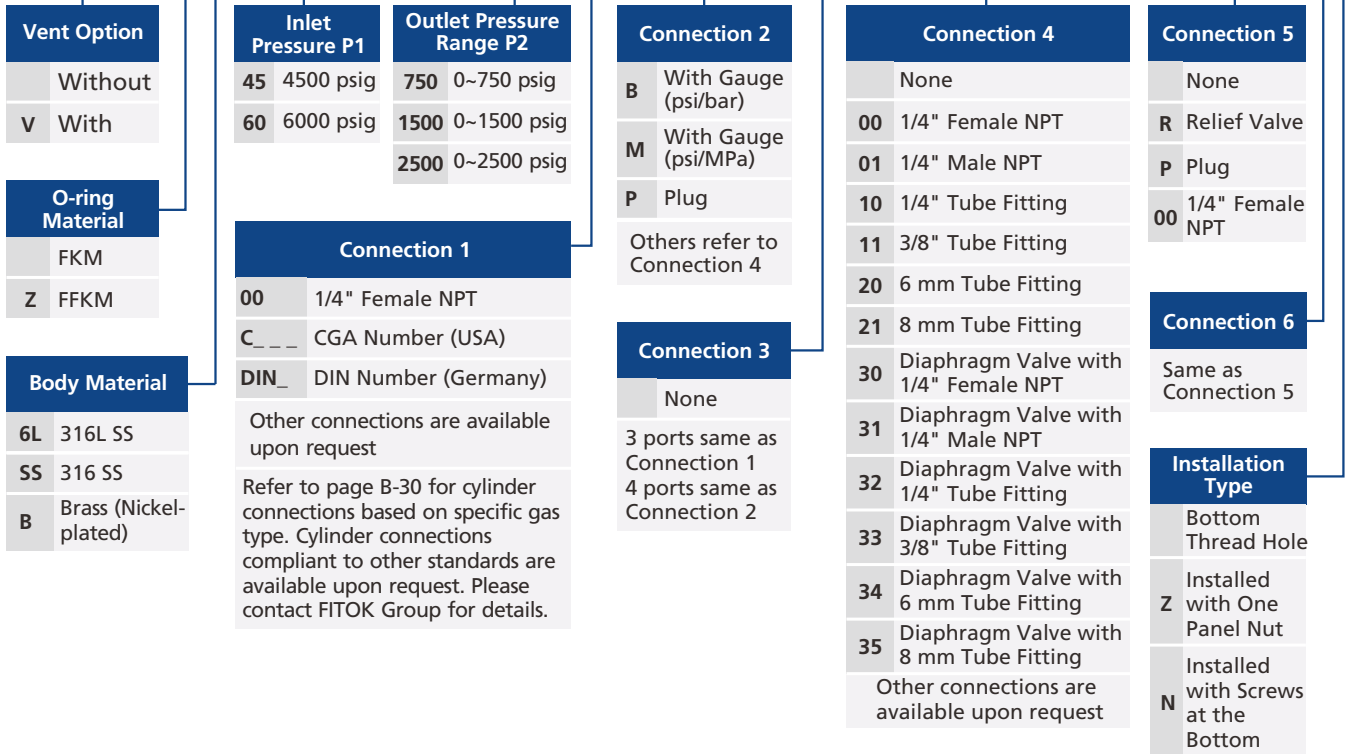


### Port Configurations



## Ordering Number Description

FCR - 2V Z 6L - 45 - 750 - DIN6 - M - M - 00 - P - P - Z



Notes:

1. "Ordering Number Description" is a reference to understand the combination rules of FITOK product part number. Not all combinations are available.
  2. Before ordering, please read **User's Guide** on A-12.
  3. The body Connections are 1/4" Female NPT by default. Other options are adapted from 1/4" Male NPT.
- Examples of part number:
- a. 2-port type (1 in, 1 out): FCR-26L-45-1500-C580-00
  - b. 3-port type (1 in, 2 out): FCR-2VB-45-750-C660-00-00
  - c. 4-port type (2 in, 2 out): FCR-2VZSS-60-2500-00-B-B-32

Gas Control Equipment  
Related Products  
Technical References