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# High Pressure Diaphragm Regulators

## PR1 Series

### Features

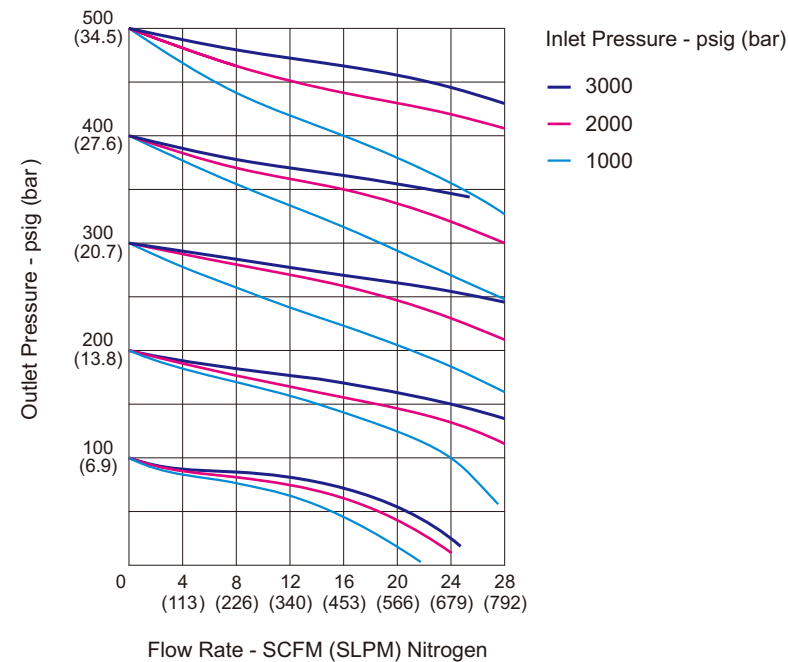
- Metal-to-metal seal to minimize external leak
- Convuluted diaphragm design to improve regulation precision and cycle life
- Applicable to corrosive or toxic gases
- With special cleaning and packaging, applicable to oxygen-enriched environments
- Adjustable relief pressure
- 20 µm filter installed at inlet



### Technical Data

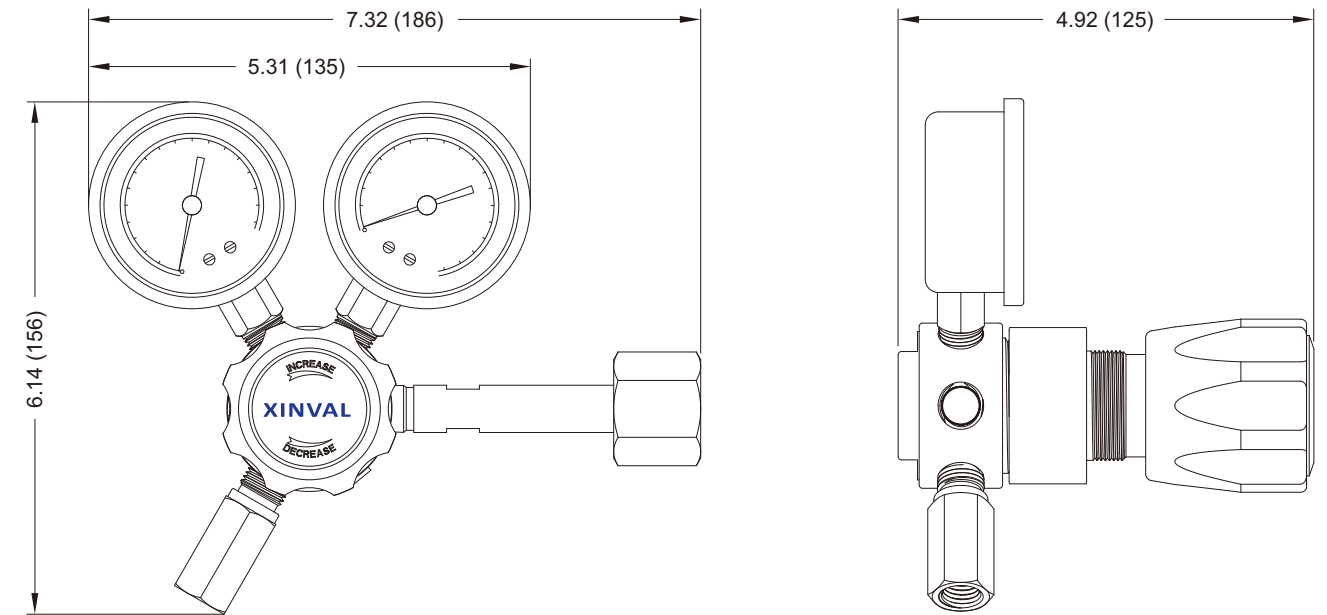
- Single-stage regulator
- Maximum inlet pressure: 3000 or 4500 psig
- Outlet pressure range: 0~25, 0~50, 0~100, 0~250 or 0~500 psig
- Material of the internal components:
  - Seat: PCTFE
  - Diaphragm: Hastelloy
  - Filter: 316L
- Temperature: -40°F~+165°F (-40°C~+74°C)
- Leak rates:
  - Internal:  $\leq 1 \times 10^{-7}$  mbar·l/s helium
  - External:  $\leq 1 \times 10^{-9}$  mbar·l/s helium
- Flow coefficient (Cv): 0.06
- Weight (regulator only): 1.98 lbs (0.9 kg)
- Body ports: 1/4" female NPT for inlet, outlet, gauge and relief valve

### Typical Flow Chart

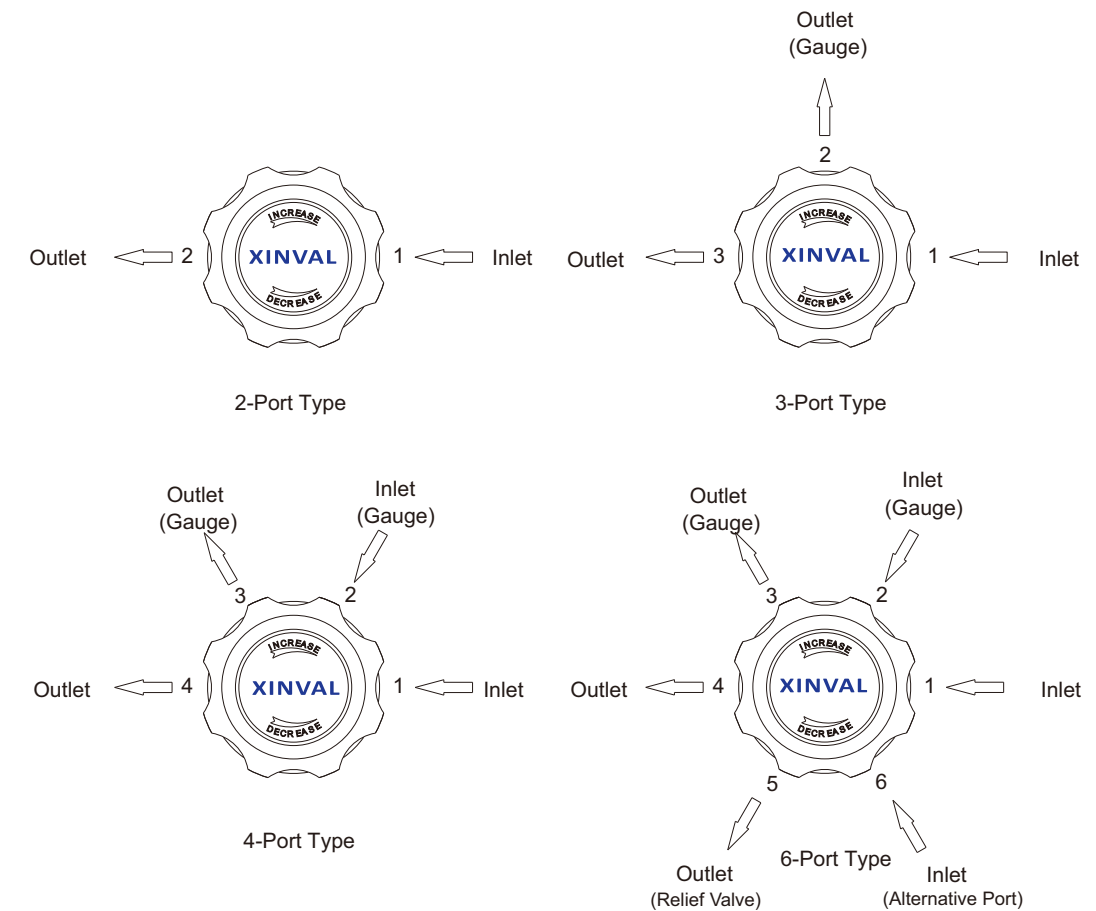


### Dimensions

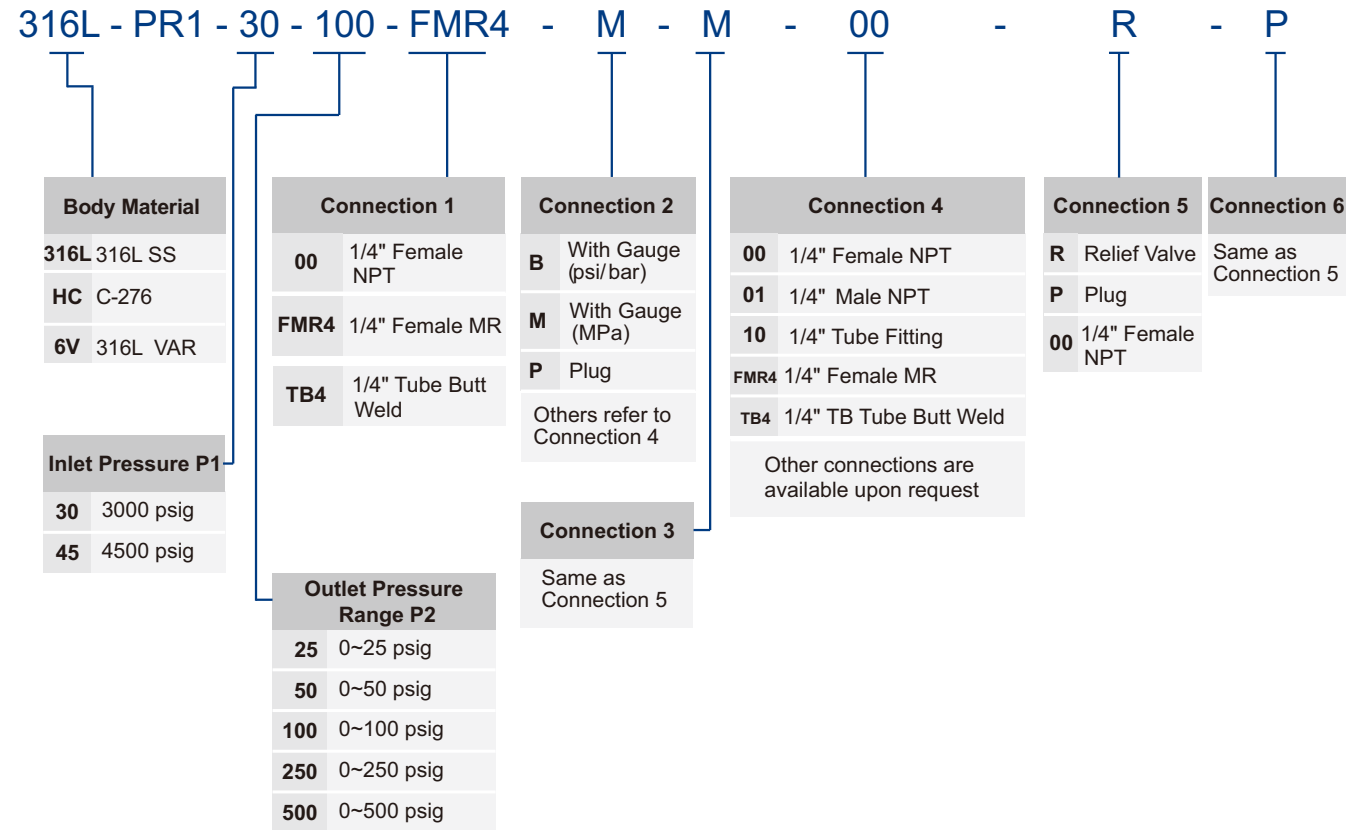
Dimensions, in inches (millimeters), are for reference only.



### Porting Configurations



## Part Number Description



# Sensitive Diaphragm Pressure Regulators

## PR2 Series

### Features

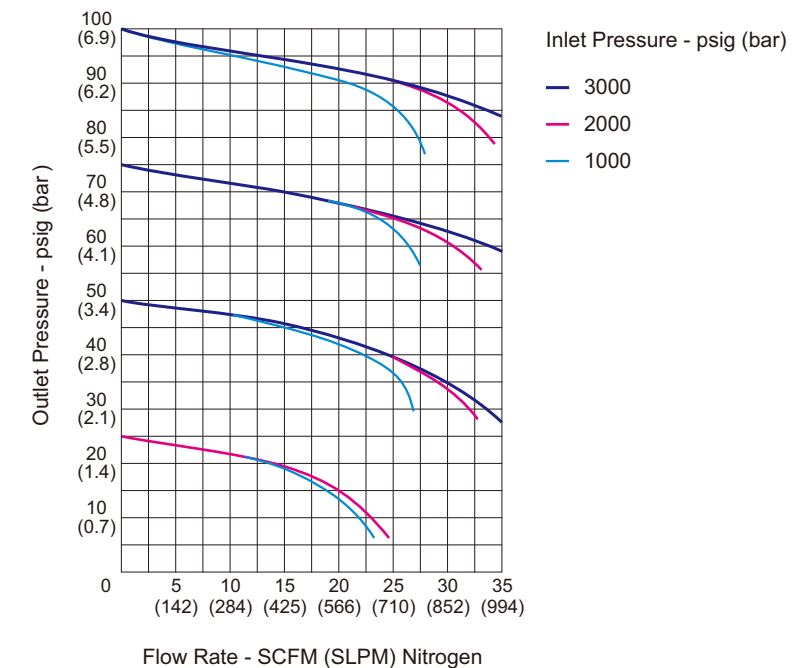
- Large diameter convoluted diaphragm to increase pressure sensitivity and minimize pressure drop
- Fitted with captured vent as standard
- 316L SS and Brass available for valve
- With special cleaning and packaging, applicable to oxygen-enriched environments
- Die spring for stable outlet pressure
- 20 µm filter installed at inlet



### Technical Data

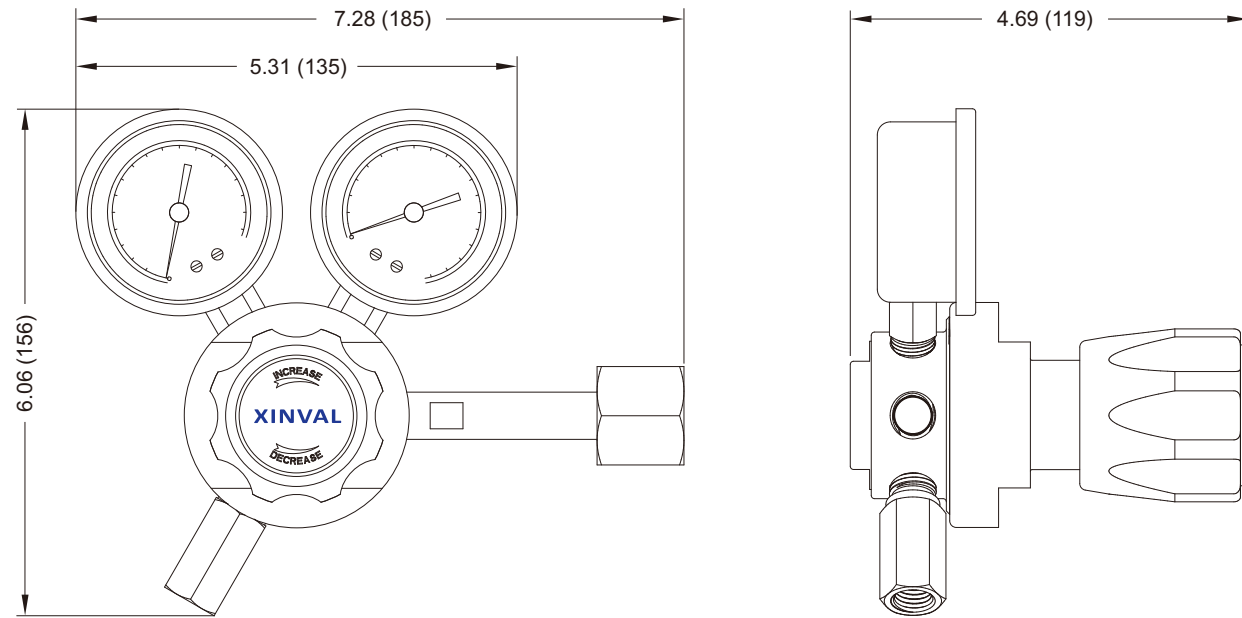
- Single-stage regulator
- Maximum inlet pressure: 3000 ±500 psig
- Outlet pressure range: 0~25, 0~50, 0~100, 0~150 or 0~200 psig
- Material of the internal components:
  - Seat: PCTFE
  - Diaphragm: 316L
  - Filter: 316L
- Temperature: -40°F~+165°F (-40°C~+74°C)
- Leak rates:
  - Internal:  $\leq 1 \times 10^{-7}$  mbar·l/s helium
  - External:  $\leq 1 \times 10^{-9}$  mbar·l/s helium
- Flow coefficient (Cv): 0.06
- Weight (regulator only): 2.87 lbs (1.3 kg)
- Body ports: 1/4" female NPT for inlet, outlet, gauge and relief valve

### Typical Flow Chart

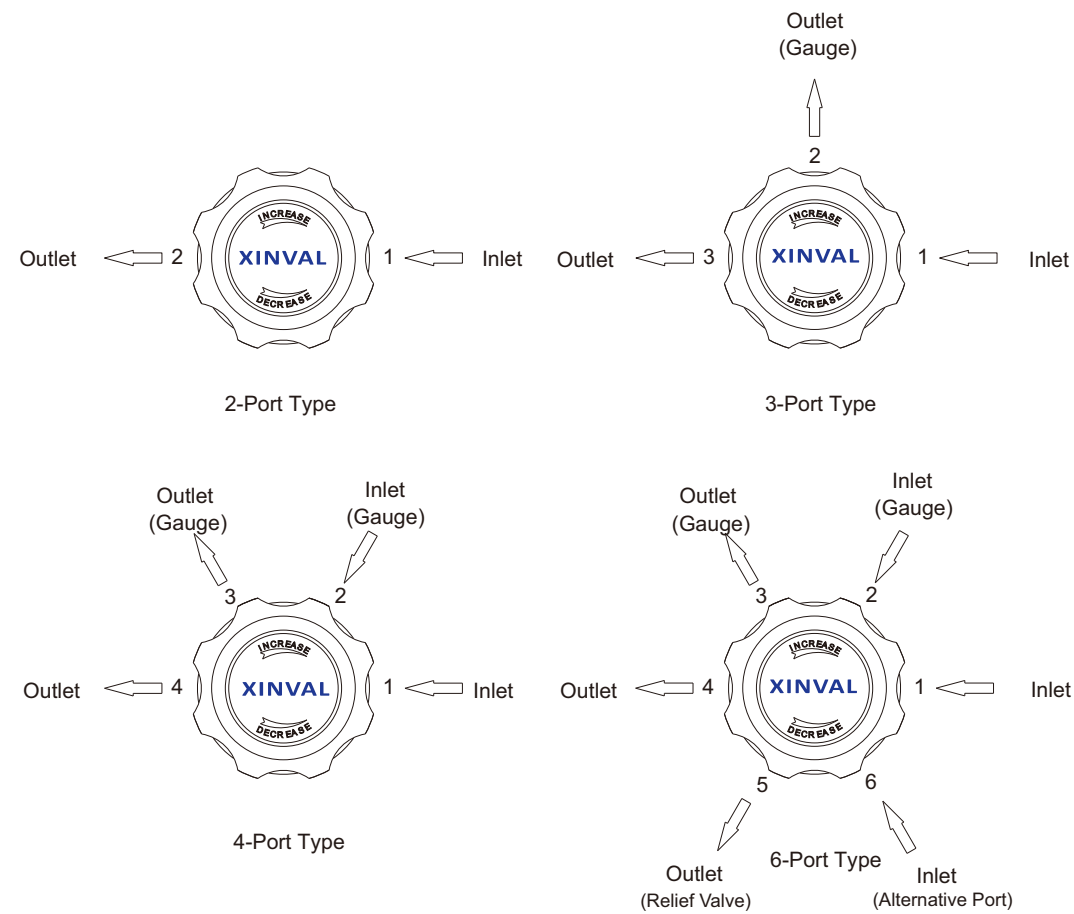


## Dimensions

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



## Porting Configurations



## Part Number Description

**316L - PR2 - 30 - 100 - FMR4 - M - M - 00 - R - P**

<b>Body Material</b>	<b>Connection 1</b>	<b>Connection 2</b>	<b>Connection 4</b>	<b>Connection 5</b>	<b>Connection 6</b>
316L 316L SS	00 1/4" Female NPT	B With Gauge (psi/bar)	00 1/4" Female NPT	R Relief Valve	Same as Connection 5
HC C-276	FMR4 1/4" Female MR	M With Gauge (MPa)	01 1/4" Male NPT	P Plug	
6V 316L VAR	TB4 1/4" Tube Butt Weld	P Plug	10 1/4" Tube Fitting	00 1/4" Female NPT	
		Others refer to Connection 4	FMR4 1/4" Female MR		
			TB4 1/4" TB Tube Butt Weld		
			Other connections are available upon request		
<b>Inlet Pressure P1</b>		<b>Connection 3</b>			
30 3000 psig		Same as Connection 5			
45 4500 psig					
	<b>Outlet Pressure Range P2</b>				
	25 0~25 psig				
	50 0~50 psig				
	100 0~100 psig				
	150 0~150 psig				
	200 0~200 psig				

# High Pressure Piston Pressure Regulators

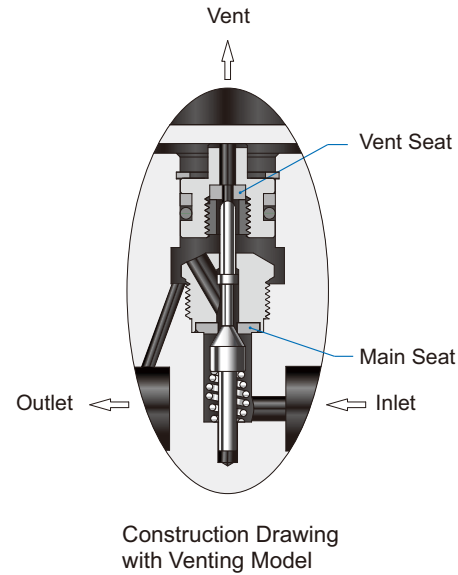
## PR3 Series

### Features

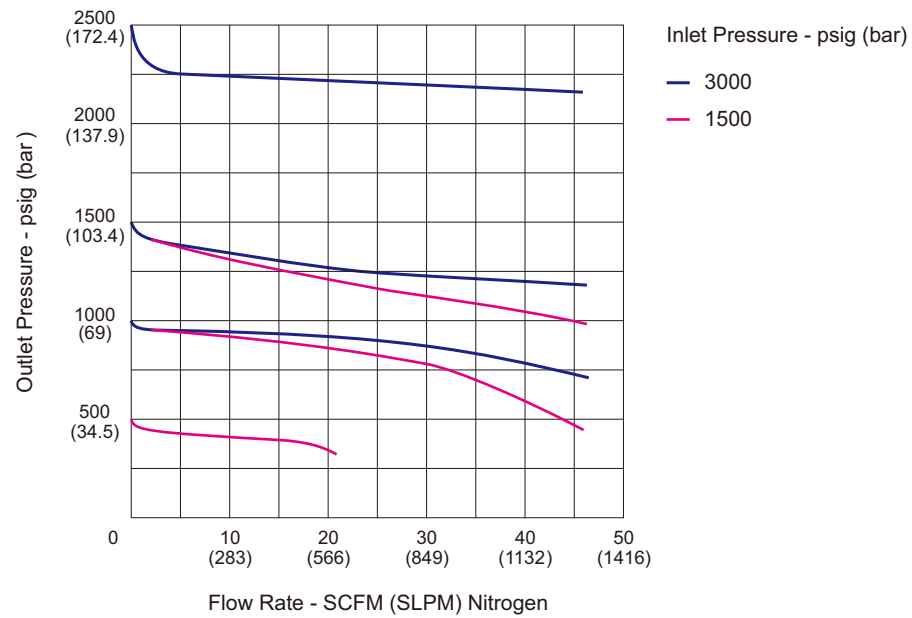
- For high pressure applications
- Robust piston-sensed design to ensure safety and reliability
- 316L SS or Nickel-plated Brass body optional
- For non-corrosive gases (due to seal limit)
- With special cleaning and packaging, applicable to oxygen-enriched environments
- Venting model available
- 20 µm filter installed at inlet

### 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:
  - Main Seat: PCTFE (PEEK for Venting Model)
  - Vent Seat: PCTFE
  - Piston: 316L
  - O-ring: Viton or Kalrez
  - Filter: 316L
- 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): 1.98 lbs (0.9 kg)
- Body ports: 1/4" female NPT for inlet, outlet and gauge

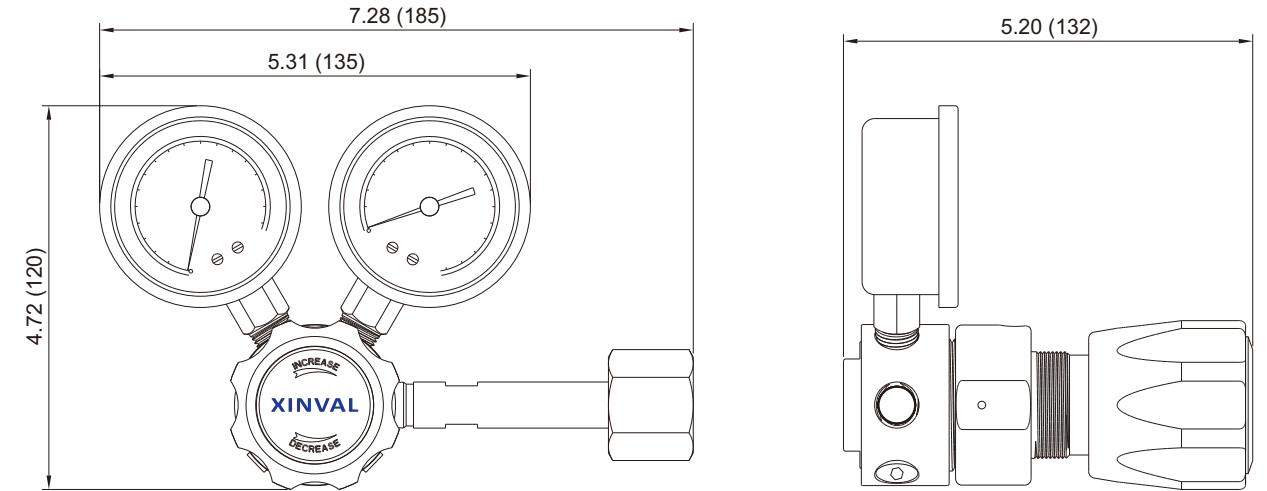


### Typical Flow Chart

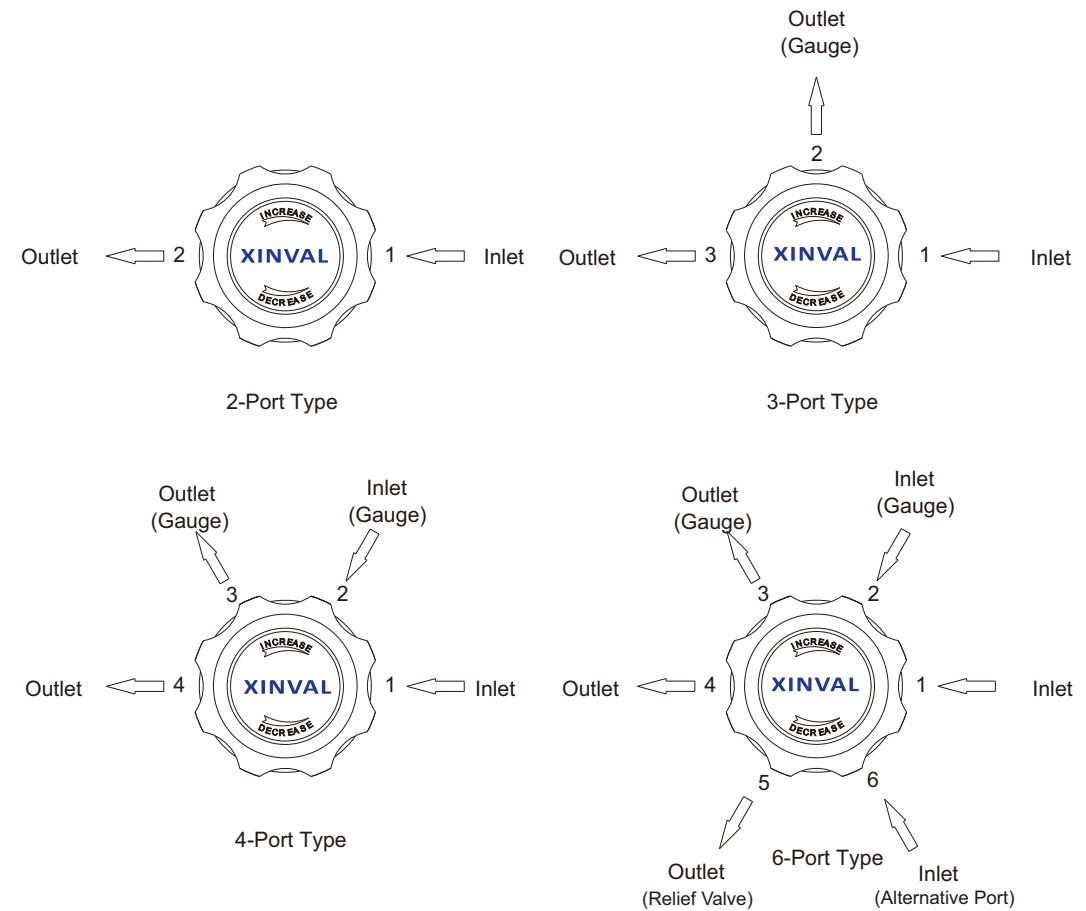


### Dimensions

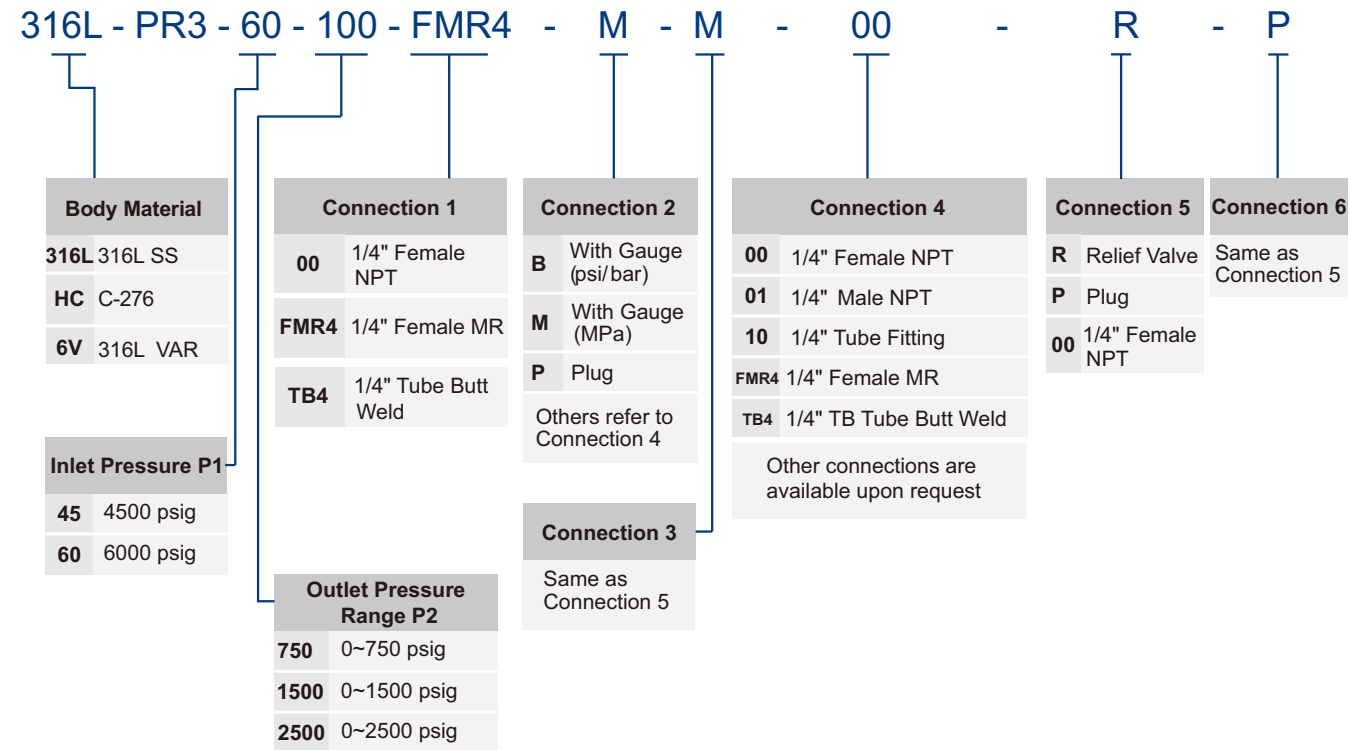
Dimensions, in inches (millimeters), are for reference only.



### Porting Configurations



## Part Number Description



# Dual-stage Pressure Regulators

## PR4 Series

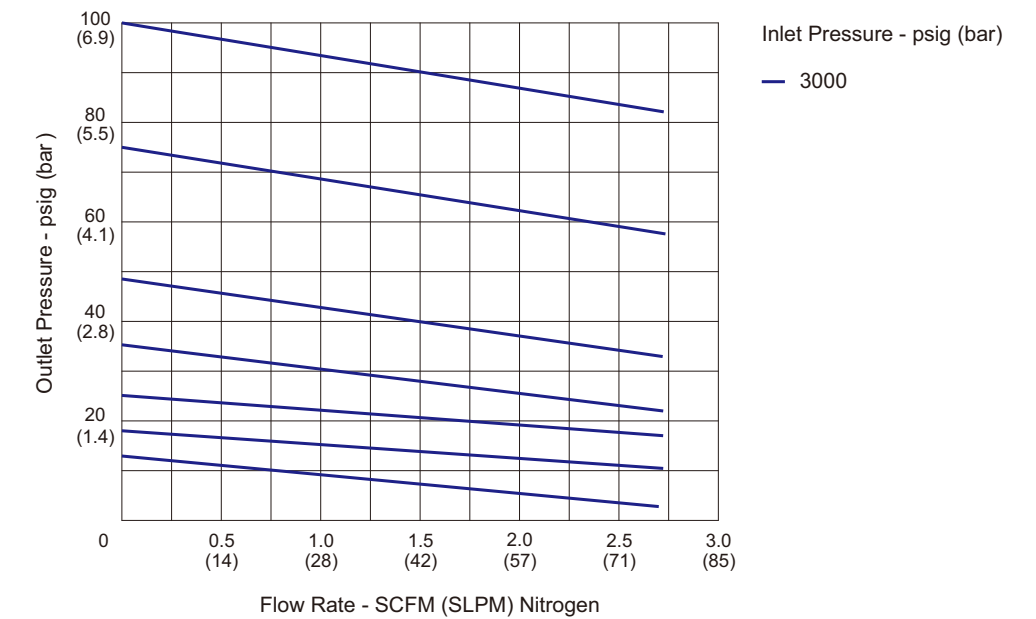
### Features

- Compact design
- Dual-stage pressure reducing construction to provide accurate and stable pressure
- 20 µm filter installed at inlet
- With special cleaning and packaging, applicable to oxygen-enriched environments

### Technical Data

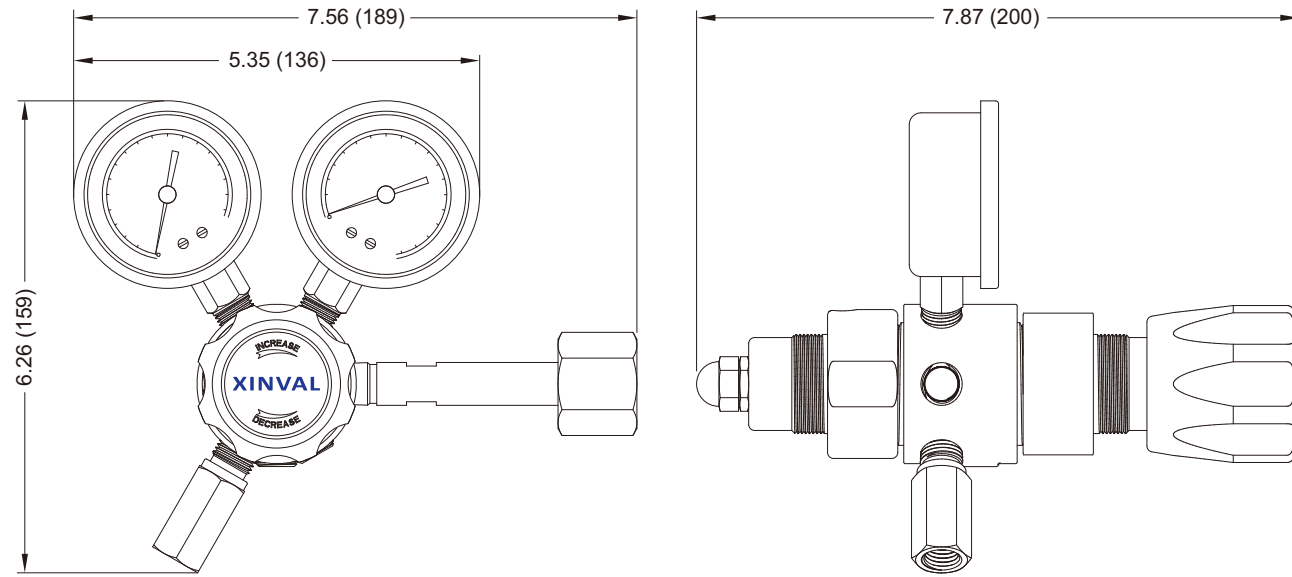
- Maximum inlet pressure: 3000 or 4500 psig
- 1st stage outlet pressure range: 480~500 psig  
2nd stage outlet pressure range: 0~25, 0~50, 0~100, 0~150, 0~250 psig
- Material of the internal components:  
Seat: PCTFE  
Diaphragm: Hastelloy  
Filter: 316L
- Temperature: -40°F~+165°F (-40°C~+74°C)
- Leak rates:  
Internal:  $\leq 1 \times 10^{-7}$  mbar-l/s helium  
External:  $\leq 1 \times 10^{-9}$  mbar-l/s helium
- Flow coefficient (Cv): 0.05
- Weight (regulator only): 3.3 lbs (1.5 kg)
- Body ports: 1/4" female NPT for inlet, outlet, gauge and relief valve

### Typical Flow Chart

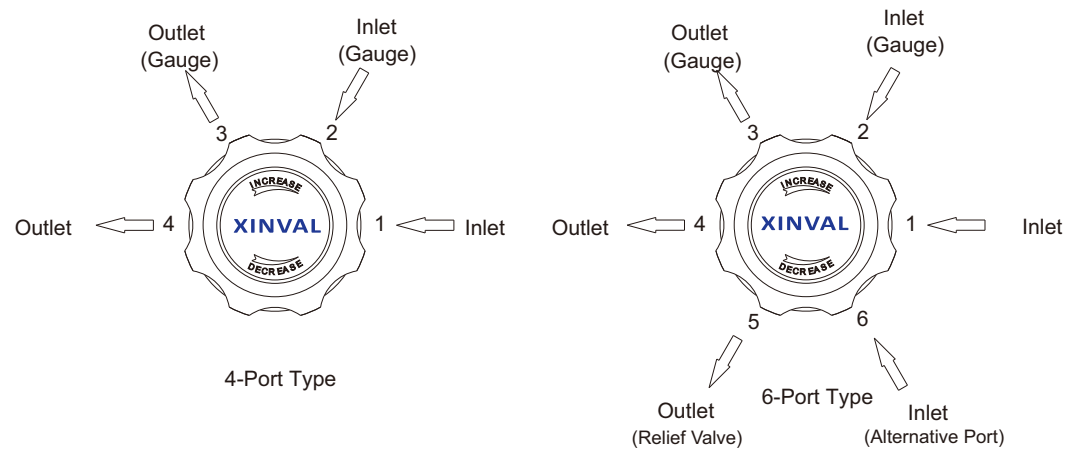


## Dimensions

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



## Porting Configurations



## Part Number Description

316L - PR4 - 30 - 100 - FMR4 - M - M - 00 - R - P

<b>Body Material</b>	<b>Connection 1</b>	<b>Connection 2</b>	<b>Connection 4</b>	<b>Connection 5</b>	<b>Connection 6</b>
316L 316L SS	00 1/4" Female NPT	B With Gauge (psi/bar)	00 1/4" Female NPT	R Relief Valve	Same as Connection 5
HC C-276	FMR4 1/4" Female MR	M With Gauge (MPa)	01 1/4" Male NPT	P Plug	
6V 316L VAR	TB4 1/4" Tube Butt Weld	P Plug	10 1/4" Tube Fitting	00 1/4" Female NPT	
		Others refer to Connection 4	FMR4 1/4" Female MR		
			TB4 1/4" TB Tube Butt Weld		
			Other connections are available upon request		
<b>Inlet Pressure P1</b>		<b>Connection 3</b>			
30 3000 psig		Same as Connection 5			
45 4500 psig					
	<b>Outlet Pressure Range P2</b>				
	25 0~25 psig				
	50 0~50 psig				
	100 0~100 psig				
	250 0~250 psig				
	500 0~500 psig				

# Low Pressure Diaphragm Regulators

## PR5 Series

### Features

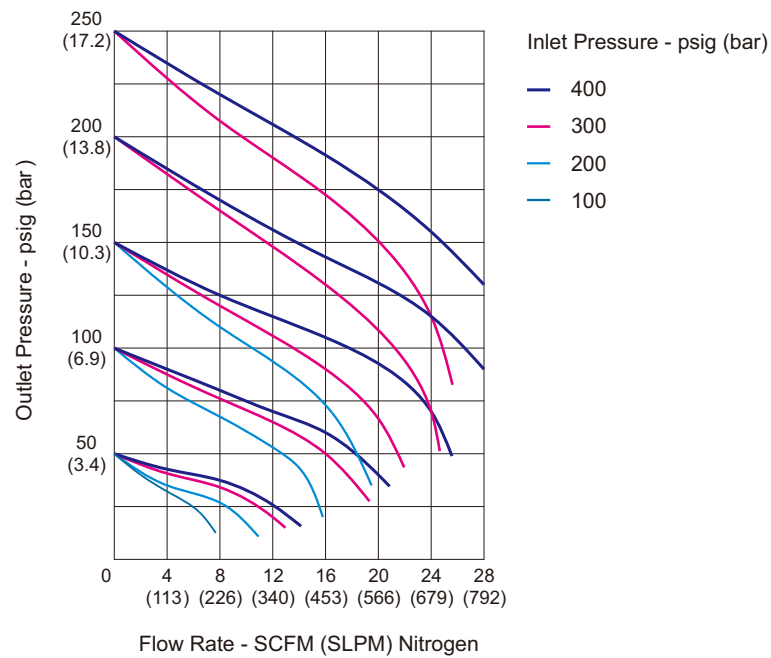
- Similar to PR1 Series Regulators with larger orifice to provide higher flow capacity
- Three port configurations available
- 316L SS body for corrosive or toxic gases, Nickel-plated Brass body for non-corrosive gases
- With special cleaning and packaging, applicable to oxygen-enriched environments
- Configuration with filter installed at inlet as standard
- Panel mounted or installed with screw at the bottom

### Technical Data

- Single-stage regulator
- Maximum inlet pressure: 500 or 1500 psig
- Outlet pressure range: 0~25, 0~50, 0~100 or 0~250 psig
- Material of the internal components:
  - Seat: PCTFE
  - Diaphragm: Hastelloy
  - Filter: 316L
- Temperature: -40°F~-+165°F (-40°C~-+74°C)
- Leak rates:
  - Internal:  $\leq 1 \times 10^{-7}$  mbar·l/s helium
  - External:  $\leq 1 \times 10^{-9}$  mbar·l/s helium
- Flow coefficient (Cv): 0.14
- Weight (regulator only): 1.98 lbs (0.9 kg)
- Body ports: 1/4" female NPT for inlet, outlet and gauge

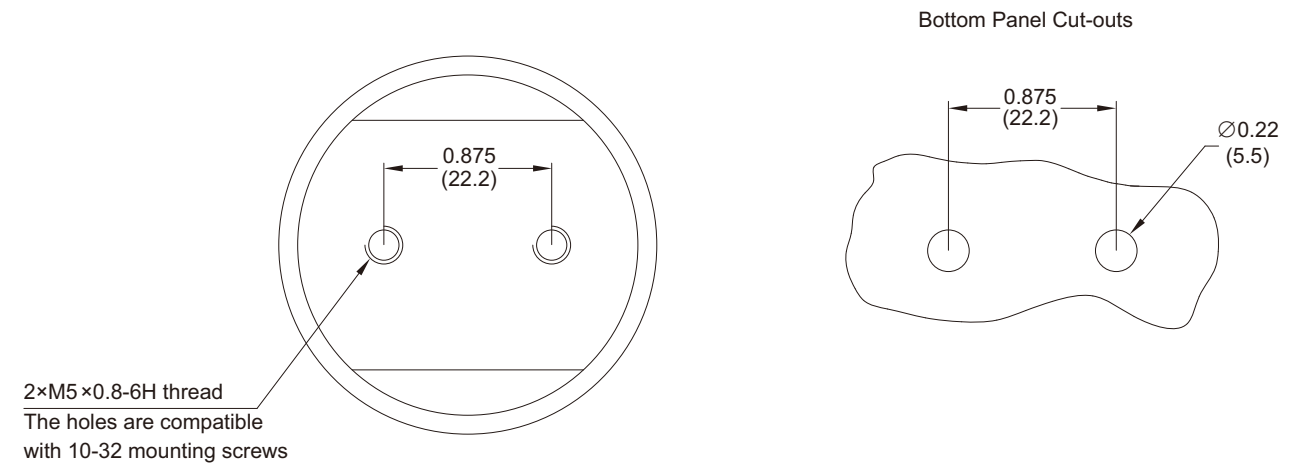
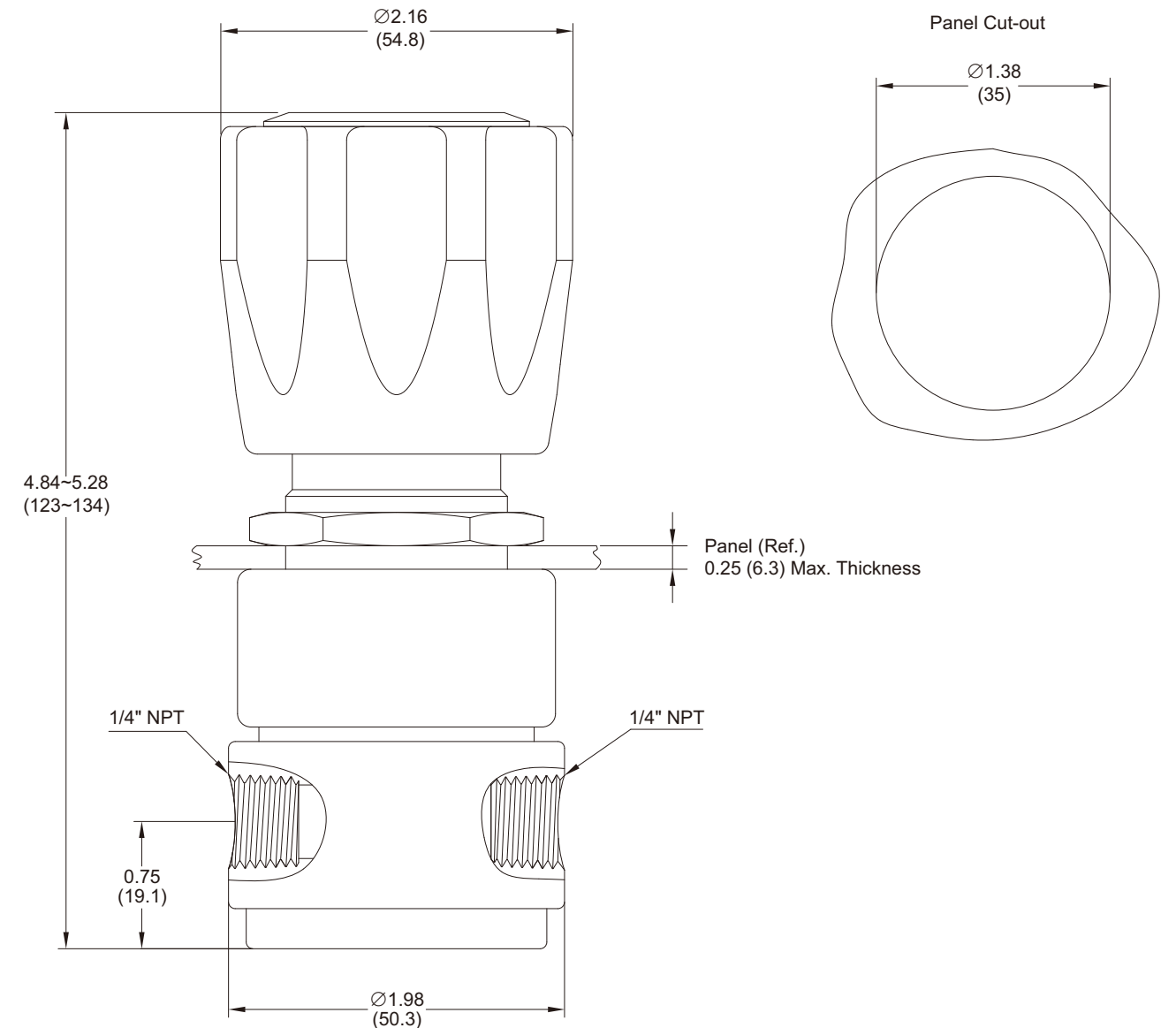


### Typical Flow Chart



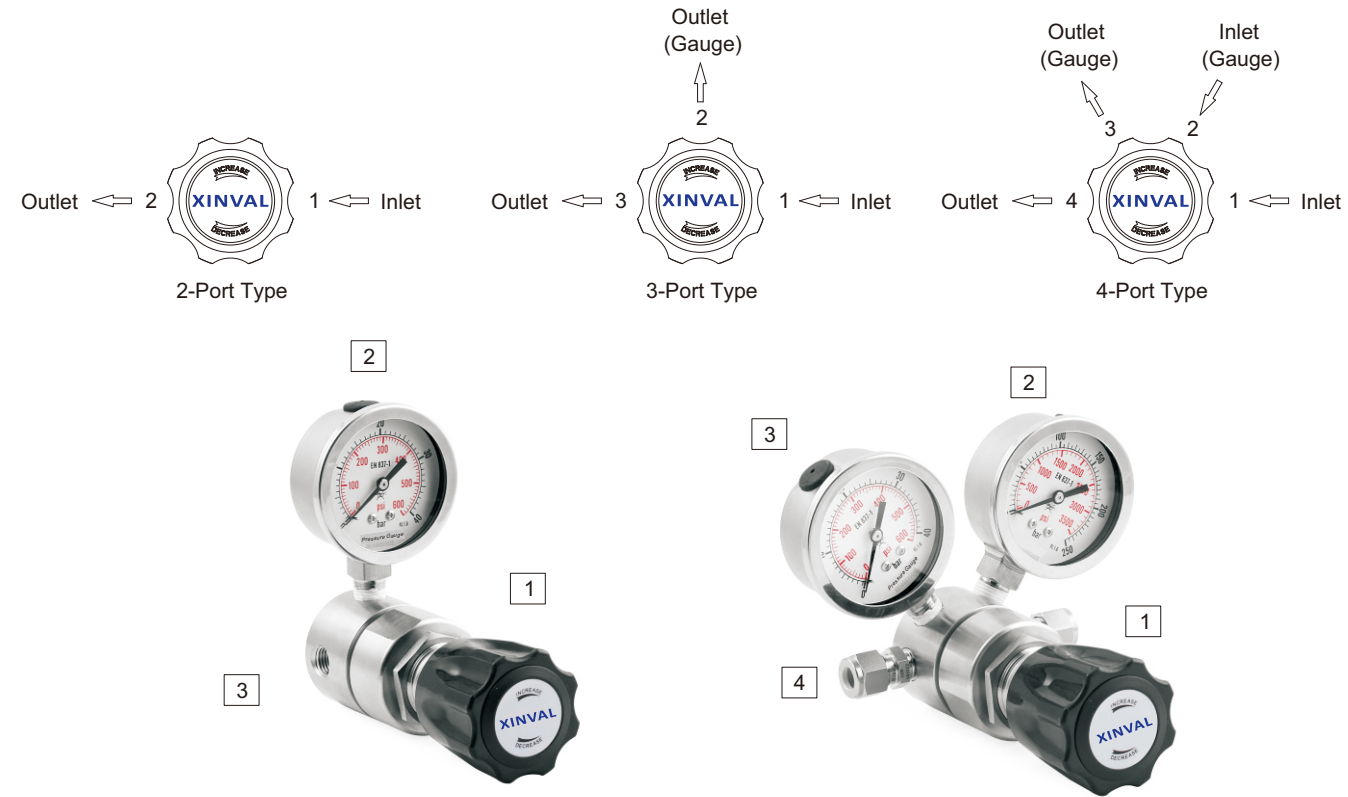
### Dimensions

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





### Port Configurations



### Part Number Description

316L - PR5 - 15 - 100 - FMR4 - M - M - 00

<b>Body Material</b>	<b>Connection 1</b>	<b>Connection 2</b>	<b>Connection 4</b>
316L 316L SS	00 1/4" Female NPT	B With Gauge (psi/bar)	00 1/4" Female NPT
HC C-276	FMR4 1/4" Female MR	M With Gauge (MPa)	01 1/4" Male NPT
6V 316L VAR	TB4 1/4" Tube Butt Weld	P Plug	10 1/4" Tube Fitting
		Others refer to Connection 4	FMR4 1/4" Female MR
			TB4 1/4" TB Tube Butt Weld
			Other connections are available upon request
<b>Inlet Pressure P1</b>		<b>Connection 3</b>	
05 500 psig		Same as Connection 5	
15 1500 psig			
	<b>Outlet Pressure Range P2</b>		
	25 0~25 psig		
	50 0~50 psig		
	100 0~100 psig		
	250 0~250 psig		

# Medium Flow Pressure Regulators

## PR6 Series

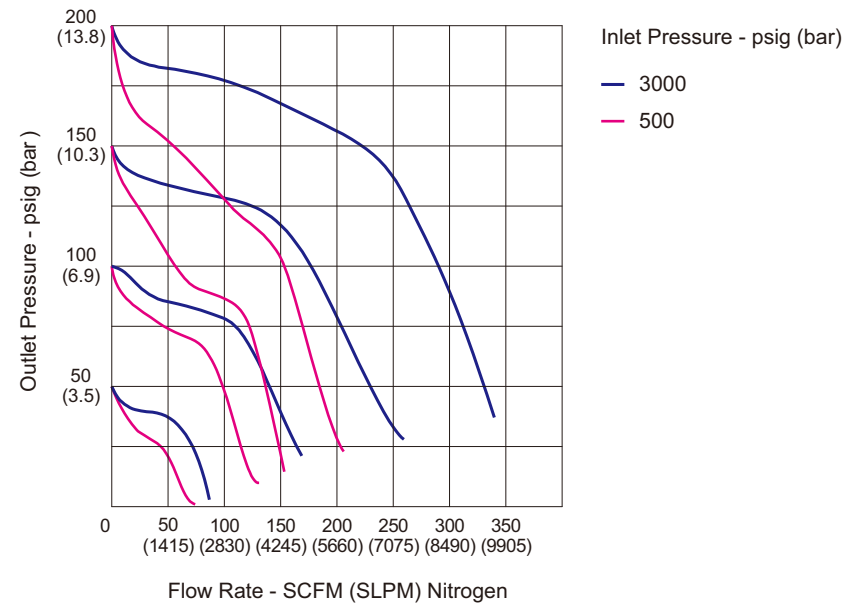
### Features

- For high inlet pressure applications
- Balanced poppet
- With large orifice to minimize outlet pressure change when inlet pressure reduces
- Large diameter convoluted diaphragm to increase pressure sensitivity
- 316L SS body for corrosive or toxic gases, Brass body for non-corrosive gases
- With special cleaning and packaging, applicable to oxygen-enriched environments
- Three port configurations available
- Panel mounted or installed with screws at the bottom
- Fitted with captured vent as standard

### Technical Data

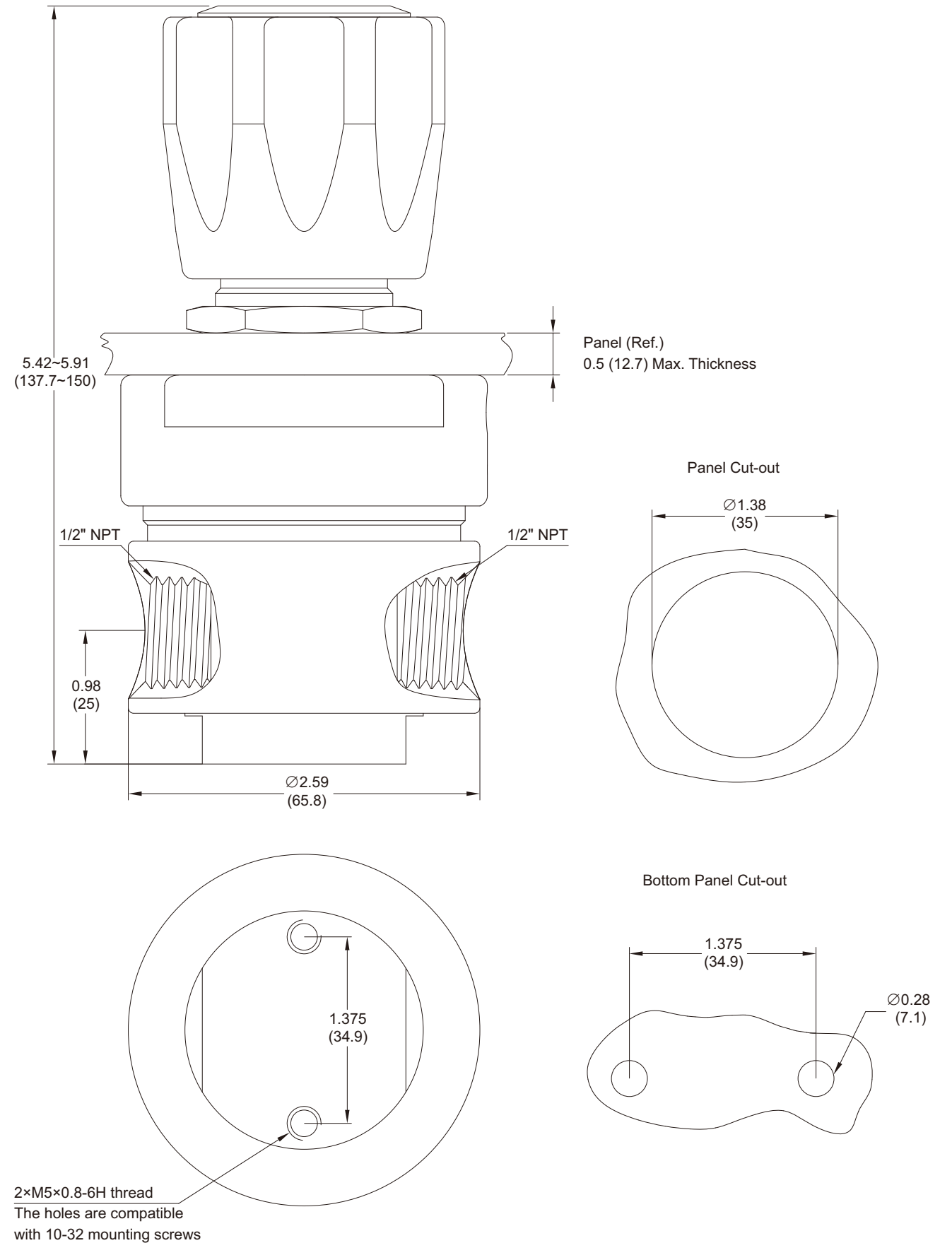
- Single-stage regulator
- Maximum inlet pressure: 500 psig (34.5 bar)
- Outlet pressure range: 0~25, 0~50, 0~100, 0~150 or 0~200 psig
- Material of the internal components:  
 Seat: PCTFE  
 Diaphragm: Hastelloy
- Temperature: -40°F~+140°F (-40°C~+60°C)
- Leak rates:  
 Internal: Bubble-tight  
 External:  $\leq 1 \times 10^{-9}$  mbar·l/s helium
- Flow coefficient (Cv): 1.0
- Weight ( regulator only ):  $\approx 3.53$  lbs (1.6 kg)
- Body ports: 1/2" female NPT for inlet, outlet  
 1/4" female NPT for gauge

### Typical Flow Chart

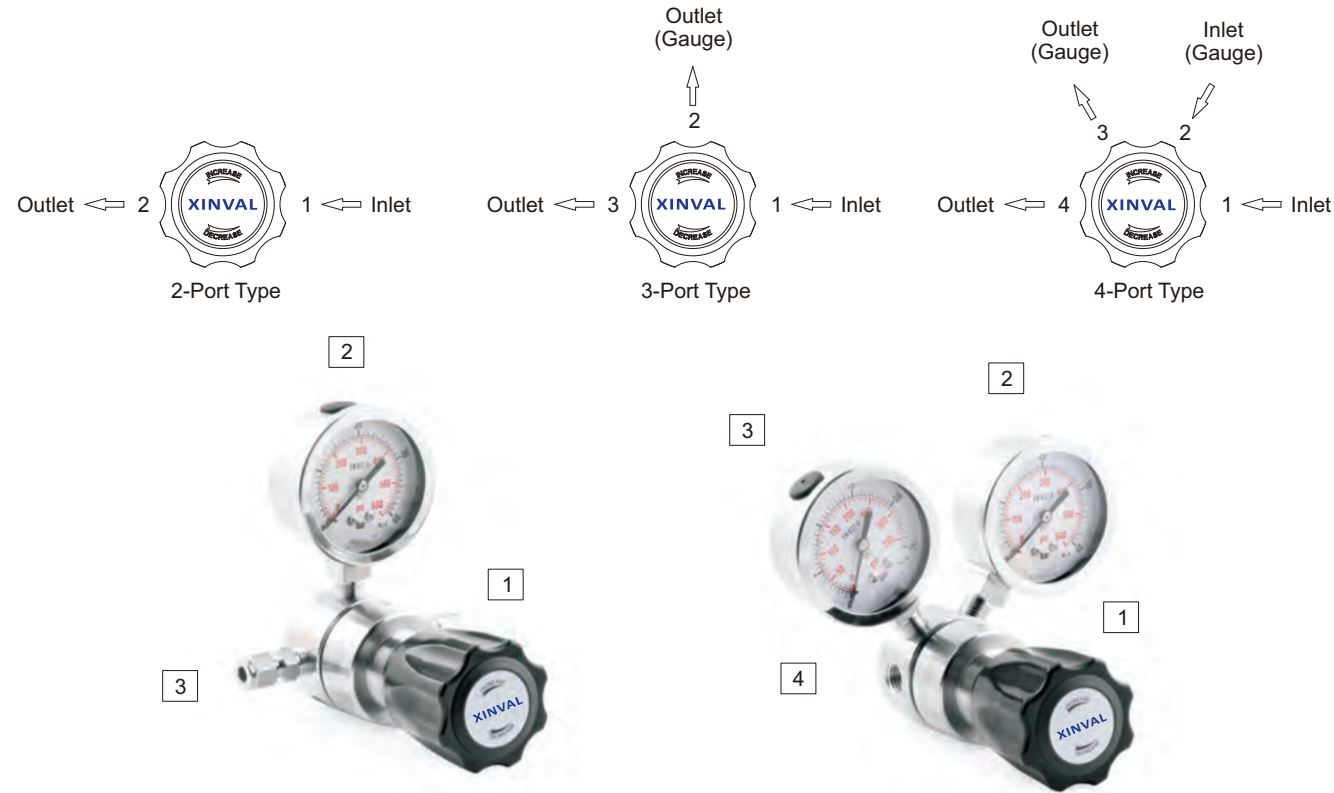


### Dimensions

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



## Port Configurations



## Part Number Description

316 - PR6 - 30 - 100 - 04 - B - B - 04 - Z

Body Material	Inlet Pressure P1	Outlet Pressure Range P2	Connection 1	Connection 2	Connection 3	Connection 4	Installation Type
316L 316L SS	05 500 psig	25 0~25 psig	04 1/2" Female NPT	B With Gauge (psi/bar)	3 Ports Same as Connection 1	Same as Connection 1	Not Required
6V 316L VAR	30 3000 psig	50 0~50 psig	11 3/8" Tube Fitting	M With Gauge (psi/MPa)	4 Ports Same as Connection 2		Installed with One Panel Nut
		100 0~100 psig	12 1/2" Tube Fitting	P Plug			Installed with Two Panel Nuts
		150 0~150 psig	22 10 mm Tube Fitting	00 1/4" Female NPT			Installed with Screws at the Bottom
		200 0~200 psig	23 12 mm Tube Fitting	01 1/4" Male NPT			
			FMR8 1/2" FMR	10 1/4" Tube Fitting			
			TB8 1/2" TB Weld	11 3/8" Tube Fitting			
			Other connections are available upon request	20 6 mm Tube Fitting			
				21 8 mm Tube Fitting			
				Other connections are available upon request			

Notes:  
1. Most configurations are available.

# High Flow Pressure Regulators

## PR7 Series

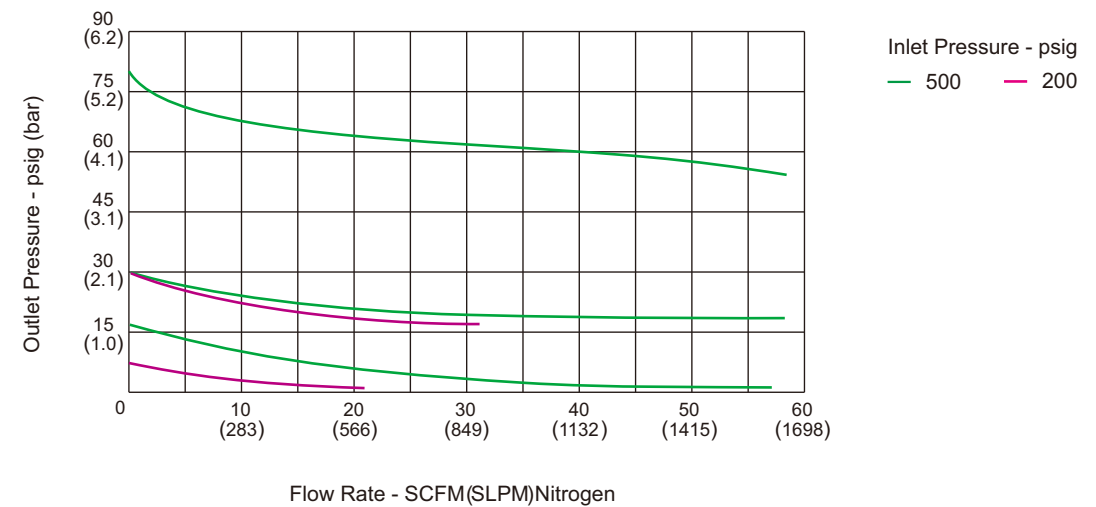
### Features

- Suitable for low pressure and high flow applications
- Large diameter convoluted diaphragm to increase pressure sensitivity
- 316L SS body for corrosive gases, and Brass body for non-corrosive gases
- Fitted with captured vent as standard
- With special cleaning and packaging, applicable to oxygen-enriched environments
- Panel mounted or installed with screws at the bottom

### Technical Data

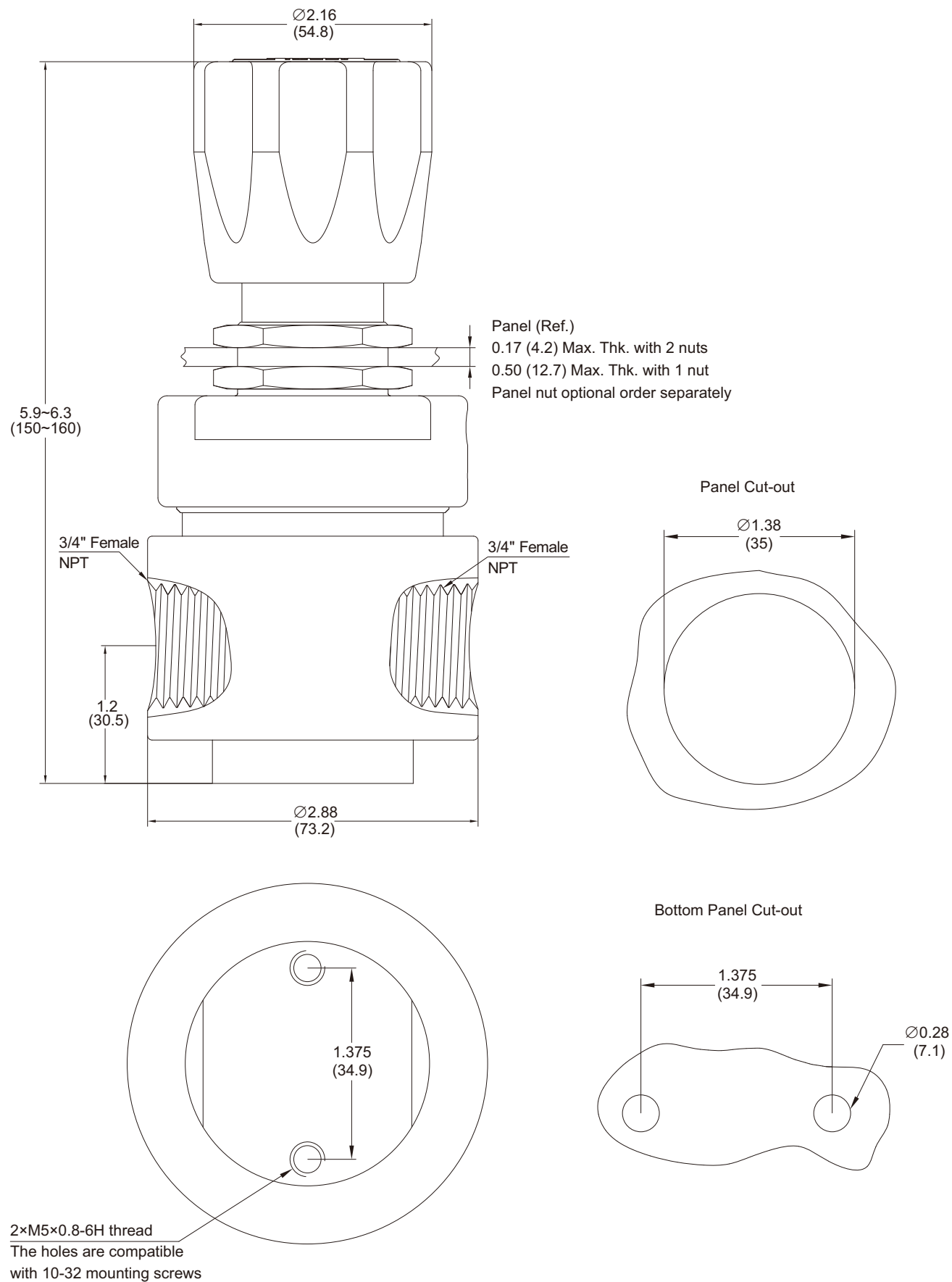
- Single-stage regulator
- Maximum inlet pressure: 500 psig
- Outlet pressure ranges: 0~15, 0~30, 0~75, 0~150 psig
- Material of the internal components:  
Seat: PCTFE  
Diaphragm: Hastelloy
- Temperature: -40°F~+165°F (-40°C~+74°C)
- Leak rates:  
Internal: Bubble-tight  
External:  $\leq 1 \times 10^{-9}$  mbar.l/s helium
- Flow coefficient (Cv): 1.8
- Weight (regulator only):  $\approx 5.95$  lbs (2.7 Kg)
- Body ports: 3/4"female NPT for inlet, outlet, 1/4"female NPT for gauge

### Typical Flow Chart

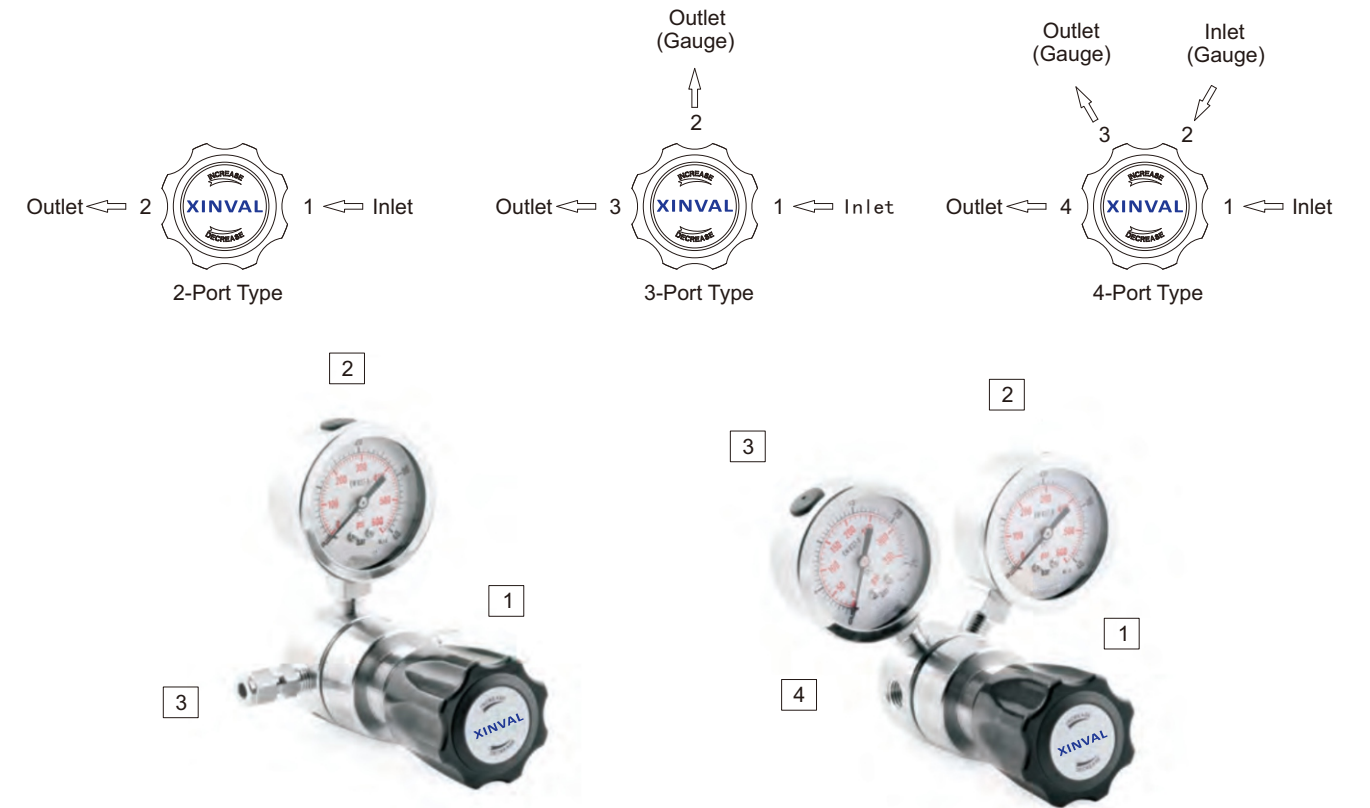


## Dimensions

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



## Port Configurations



## Part Number Description

316L - PR7 - 05 - 150 - 05 - B - B - 05 - Z

Body Material	Inlet Pressure P1	Connection 1	Connection 2	Connection 3	Connection 4	Installation Type
316L 316L SS	05 500 psig	05 3/4" Female NPT	B With Gauge (psi/bar)	Same as Connection 2	Same as Connection 1	Not Required
6V 316L VAR		14 3/4" Tube Fitting	M With Gauge (psi/MPa)			Installed with Z One Panel Nut
		16 1" Tube Fitting	P Plug			Installed with M Two Panel Nuts
		25 16 mm Tube Fitting	00 1/4" Female NPT			Installed with N Screws at the Bottom
		26 18 mm Tube Fitting	01 1/4" Male NPT			
		27 20 mm Tube Fitting	10 1/4" Tube Fitting			
		28 22 mm Tube Fitting	11 3/8" Tube Fitting			
		MR12 3/4" MR	20 6 mm Tube Fitting			
		TB12 3/4" TB Weld	21 8 mm Tube Fitting			

**Outlet Pressure Range P2**

15	0~15 psig
30	0~30 psig
75	0~75 psig
150	0~150 psig

**Notes:**

1. Most configurations are available.

Other connections are available upon request

Other connections are available upon request