

# GO REGULATOR

## PR-50 Series

Diaphragm-type High Pressure Regulator



The PR-50 Series pressure regulator is designed to meet the demands for outlet pressures up to 2000 psig while maintaining superior corrosion protection.

For reliability in operation, this precision regulator features a stainless steel body (optional brass) which provides maximum corrosion resistance and safety. The optional self-relieving feature provides an additional level in operational ease, as it allows for trapped downstream pressure to be safely vented to atmosphere through the bonnet.

To prolong regulator life, this unit is supplied with an integral inlet filter which protects the seat against any foreign contamination introduced by the upstream supply.

### Features & Specifications

- Gas or liquid service
- Inlet pressure to 6000 psig
- Outlet pressure ranges 0–500, 0–1000, and 0–2000 psig
- 316L stainless steel or brass (alloy 360) construction
- 20 micron inlet filter
- Bubble-tight shutoff
- Diaphragm material standard stainless steel, nylon or PTFE
- Flow coefficients (Cv) of 0.025, 0.06, and 0.20

### Applications

- R & D systems
- Cylinder gas regulation
- Sampling systems
- Airline charging carts
- Pilot plants
- Offshore drillings

### GO Regulator

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www.goreg.com • sales-go@circor.com

pressure regulators

# PR-50 Series

## How to Order

### PR50 –

#### BODY MATERIAL

- 1 316L stainless steel
- 2 Brass
- 4 Monel®

#### PORT CONFIGURATION

- A Standard

For more port configurations, see page 35

#### PROCESS PORT TYPES

##### (GAUGE PORT TYPES, IF SPECIFIED)

- 1 ¼" FNPT (¼" FNPT gauge ports)
- 2 ¼" tube stub, 2" long (¼" FNTP gauge ports)
- 4 ⅜" FNPT (¼" FNPT gauge ports)
- 7 AN 10050-4 (¼" FNPT gauge ports)
- 8 SAE J514 (¼" FNPT gauge ports)
- 9 M/S 33649 (¼" FNPT gauge ports)
- K ¼" sch 40 pipe stub, 4" long (¼" FNPT gauge ports)

#### SURFACE FINISH OF DIAPHRAGM CAVITY

- 1 < 25 Ra, standard

#### SEAT MATERIAL

- A Tefzel®
- C Polyimide
- H PCTFE (formerly Kel-F® 81)
- I High density PTFE
- Q PEEK™

#### FLOW COEFFICIENT (Cv)

- 3 0.06
- 5 0.2
- C 0.025

#### CAP ASSEMBLY

- 1 Standard, aluminum
- 4 Panel mount, aluminum
- 5 Captured vent, aluminum
- 6 Captured vent, panel mount, aluminum
- F Stainless steel
- V Captured vent, stainless steel
- W Panel mount, stainless steel

#### DIAPHRAGM FACING/BACKING MATERIAL

	Facing	Backing	O-rings	Actuator
1	St. steel	Nylon	Viton®	St. steel
6	Nylon	Nylon	PTFE	St. steel
8	St. steel	Nylon	Viton®	St. steel
0	Nylon	Nylon	PTFE	Monel®
H	—	Nylon	Viton®	St. steel

#### DIAPHRAGM TYPE

- 1 Non-self-relieving
- 3 Self-relieving

#### OUTLET RANGE

- J 0–500 psig
- K 0–1,000 psig
- L 0–2,000 psig

NOTE: The choices above represent an abbreviated list of the more commonly ordered options. For a complete listing of all available options, please see the Selection Wizard on the GO website at [www.gore.com](http://www.gore.com) or contact the factory.

## Maximum Temperature & Operating Inlet Pressures

### Nylon Diaphragm Backing

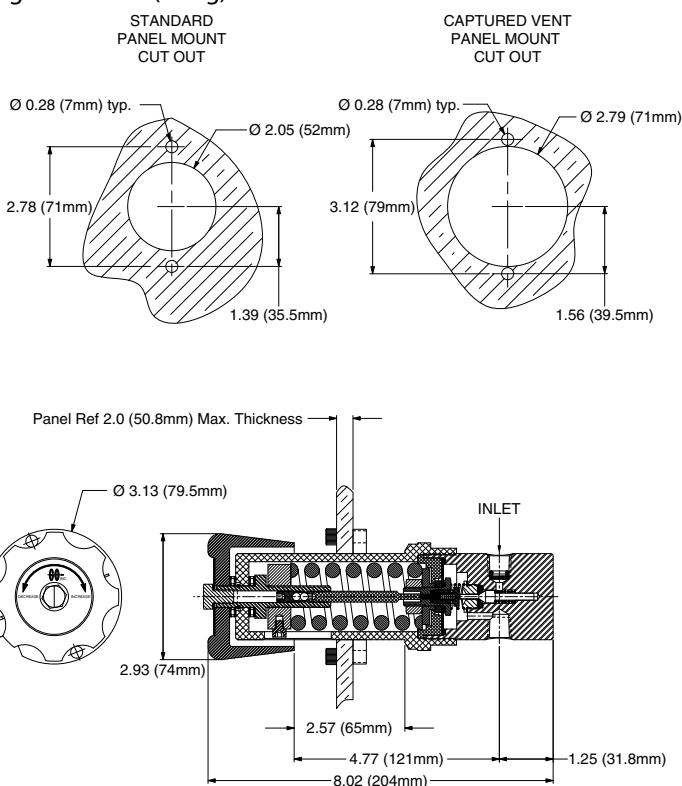
SEAT MATERIAL	MAXIMUM TEMPERATURE*	@	MAXIMUM OPERATING INLET PRESSURE
Tefzel®	150° F (66° C)	@	3600 psig (24.82 MPa)
High density PTFE	150° F (66° C)	@	3600 psig (24.82 MPa)
PCTFE (formerly Kel-F® 81)	175° F (80° C)	@	6000 psig (41.37 MPa)
Polyimide	175° F (80° C)	@	6000 psig (41.37 MPa)
PEEK™	175° F (80° C)	@	6000 psig (41.37 MPa)

### Teflon® Diaphragm Backing

SEAT MATERIAL	MAXIMUM TEMPERATURE*	@	MAXIMUM OPERATING INLET PRESSURE
Tefzel®	150° F (66° C)	@	3600 psig (24.82 MPa)
High density PTFE	150° F (66° C)	@	3600 psig (24.82 MPa)
PCTFE (formerly Kel-F® 81)	175° F (80° C)	@	6000 psig (41.37 MPa)
Polyimide	350° F (176° C)	@	6000 psig (41.37 MPa)
PEEK™	350° F (176° C)	@	6000 psig (41.37 MPa)

## Outline and Mounting Dimensions

Weight = 4.4 lbs (2.0kg)



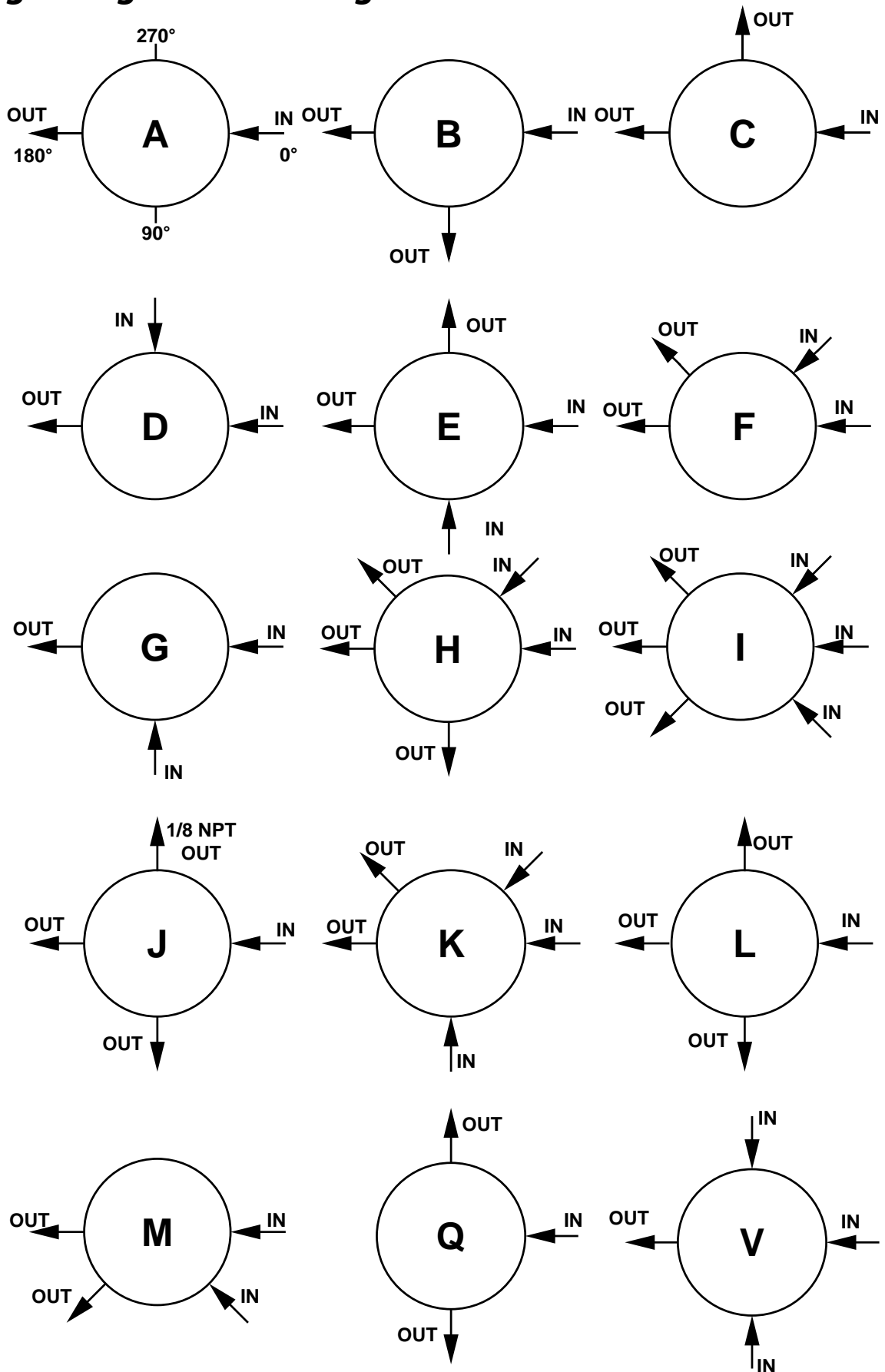
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PEEK™ is a trademark of Victrex PLC.

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# Porting Configurations for Single Stage Pressure Regulators



LOCATION OF PORTS FROM  
TOP VIEW

# GO REGULATOR

## PR-56 Series

High Pressure Brass Regulator (6,000 psig Inlet)



To meet the demands for the safe reduction of inlet pressures up to 6,000 psig, GO Regulator has designed the PR-56 Series regulator. This precision regulator features a piston sensing design which provides the operator with low adjusting torque requirements when setting the outlet pressure.

The optional self relieving feature provides an additional level in operational ease, as it allows for trapped downstream pressure to be safely vented to atmosphere through the bonnet.

### Features & Specifications

- Gas or liquid service
- Brass (alloy 360) construction
- Better than 25 Ra finish in diaphragm cavity
- Stainless steel spring loaded piston sensor
- 20 micron filter
- Bubble-tight shutoff
- Viton® seals (other elastomers optional)
- Inlet pressure maximum 6,000 psig
- Outlet pressure ranges are 0–250, 0–500, 0–750, 0–1000, 0–2000, 0–4000, and 0–6000 psig
- Cv flow coefficient 0.05 or 0.2

### Options

- Gauges and CGA fittings for cylinder gas application
- Self-relieving and captured vent
- 3/8" FNPT, 1/4" AN 10050-4, 1/4" SAE J514 or 1/4" MS 33649 ports

pressure regulators

### GO Regulator

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# PR-56 Series

## How to Order

### PR56 -

#### BODY MATERIAL

- 2 Brass

#### PORT CONFIGURATION

- A Standard

For more port configurations, see page 35

#### PROCESS PORT TYPES

(GAUGE PORT TYPES, IF SPECIFIED)

- 1 1/4" FNPT (1/4" FNPT gauge ports)
- 4 3/8" FNPT (1/4" FNPT gauge ports)
- 7 AN 10050-4 (1/4" FNPT gauge ports)
- 8 SAE J514 (1/4" FNPT gauge ports)
- 9 M/S 33649 (1/4" FNPT gauge ports)
- F 1/4" Aminco (1/4" FNPT gauge ports)

#### SURFACE FINISH OF DIAPHRAGM CAVITY

- 1 < 25 Ra
- 5 < 25 Ra with 10-32 mounting holes

#### SEAT MATERIAL

- A Tefzel®
- C Polyimide
- H PCTFE (formerly Kel-F® 81)
- Q PEEK™

#### FLOW COEFFICIENT (Cv)

- 2 0.05
- 5 0.2

#### CAP ASSEMBLY

- 1 Standard, aluminum
- 4 Panel mount, aluminum
- 5 Captured vent, aluminum
- F Stainless steel
- V Captured vent, panel mount, stainless steel
- W Panel mount, stainless steel

#### PISTON MATERIAL

- 4 Stainless steel/Teflon® cavity o-ring
- 5 Stainless steel/Viton® cavity o-ring

#### PISTON TYPE

- 1 Non-self-relieving
- 3 Self-relieving

#### OUTLET RANGE

- I 0-250 psig
- J 0-500 psig
- W 0-750 psig
- K 0-1000 psig
- L 0-2000 psig
- N 0-4000 psig
- O 0-6000 psig

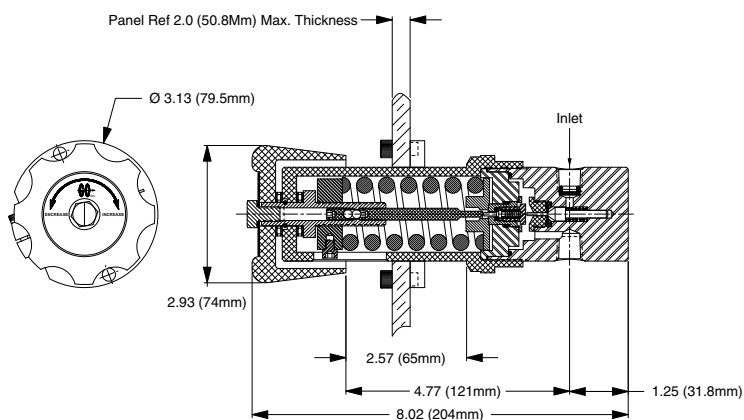
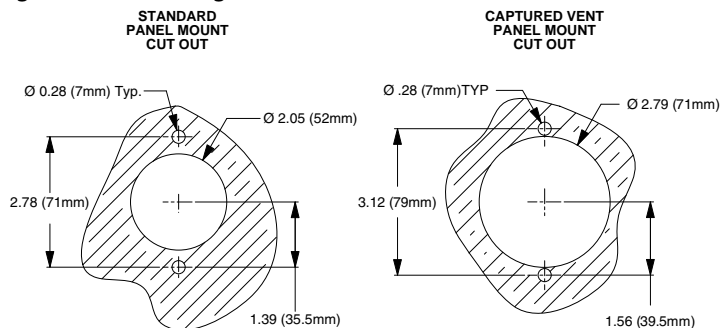
NOTE: The choices above represent an abbreviated list of the more commonly ordered options. For a complete listing of all available options, please see the Selection Wizard on the GO website at [www.goreg.com](http://www.goreg.com) or contact the factory.

## Maximum Temperature & Operating Inlet Pressures

SEAT MATERIAL	MAXIMUM TEMPERATURE	@	MAXIMUM OPERATING INLET PRESSURE
Tefzel®	150° F (66° C)	@	3600 psig (24.82 MPa)
PCTFE (formerly Kel-F® 81)	175° F (80° C)	@	6000 psig (41.37 MPa)
Polyimide	175° F (80° C)	@	6000 psig (41.37 MPa)
PEEK™	175° F (80° C)	@	6000 psig (41.37 MPa)

## Outline and Mounting Dimensions

Weight = 4.4 lbs (2.0kg)



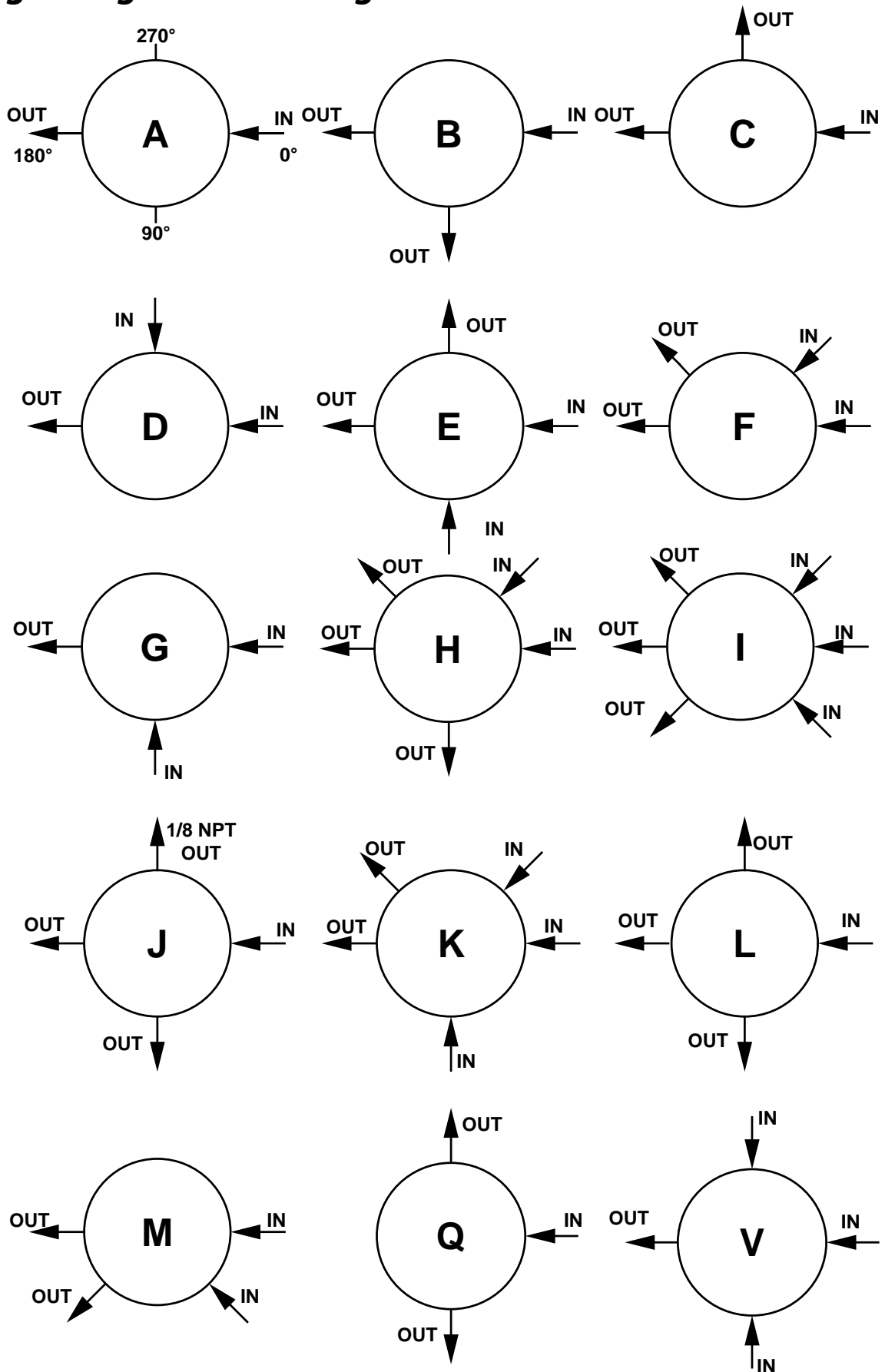
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Kel-F® is a registered trademark of 3M Company.

PEEK™ is a trademark of Victrex PLC.

Viton® is a registered trademark of DuPont Dow Elastomers.

# Porting Configurations for Single Stage Pressure Regulators



LOCATION OF PORTS FROM  
TOP VIEW

# GO REGULATOR

## PR-57 Series

High Pressure Corrosion-resistant Regulator (10,000 psig Inlet)



To meet the demands for the safe reduction of inlet pressures up to 10,000 psig, GO Regulator has designed the PR-57 Series regulator. This precision regulator features a piston sensing design which provides the operator with low adjusting torque requirements when setting the outlet pressure. The body is constructed from 316L stainless steel, providing the ultimate in safety and corrosion resistance.

The optional self-relieving feature provides an additional level in operational ease, as it allows for trapped downstream pressure to be safely vented to atmosphere through the bonnet.

### Features & Specifications

- Gas or liquid service
- 316L stainless steel construction
- Better than 25 Ra finish in diaphragm cavity
- Stainless steel spring loaded piston sensor
- 20 micron filter
- Bubble-tight shutoff
- Viton® seals (other elastomers optional)
- Inlet pressure maximum 10,000
- Outlet pressure ranges are 0–250, 0–500, 0–750, 0–1000, 0–2000, 0–4000, 0–6000, 0–7500 and 0–10,000 psig
- Operating temperatures -40° F to +150° F (-40° C to +66° C)
- Cv flow coefficient 0.05 or 0.2

### Options

- Gauges and CGA fittings for cylinder gas application
- Self-relieving and captured vent
- 3/8" FNPT, 1/4" AN 10050-4, 1/4" SAE J514 or 1/4" MS 33649 ports

pressure regulators

### GO Regulator

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# PR-57 Series

## How to Order

### PR57 -

#### BODY MATERIAL

- 1 316L stainless steel
- 4 Monel®

#### PORT CONFIGURATION

- A Standard
- For more port configurations, see page 35

#### PROCESS PORT TYPES

##### (GAUGE PORT TYPES, IF SPECIFIED)

- 1 ¼" FNPT (¼" FNPT gauge ports)
- 2 ¼" tube stub, 2" long (¼" FNTP gauge ports)
- 4 ⅜" FNPT (¼" FNPT gauge ports)
- 7 AN 10050-4 (¼" FNPT gauge ports)
- 8 SAE J514 (¼" FNPT gauge ports)
- 9 M/S 33649 (¼" FNPT gauge ports)
- K ¼" sch 40 pipe stub, 4" long (¼" FNPT gauge ports)

#### SURFACE FINISH OF DIAPHRAGM CAVITY

- 1 < 25 Ra
- 5 < 25 Ra with 10-32 mounting holes

#### SEAT MATERIAL

- C Polyimide
- Q PEEK™

#### FLOW COEFFICIENT (Cv)

- 2 0.05
- 5 0.2

#### CAP ASSEMBLY

- 1 Standard, aluminum
- 4 Panel mount, aluminum
- F Stainless steel

#### PISTON MATERIAL

- 4 Stainless steel/Teflon® cavity o-ring
- 7 Monel®/Teflon® cavity o-ring

#### PISTON TYPE

- 1 Non-self-relieving
- 3 Self-relieving

#### OUTLET RANGE

- I 0-250 psig
- J 0-500 psig
- W 0-750 psig
- K 0-1000 psig
- L 0-2000 psig
- N 0-4000 psig
- O 0-6000 psig
- P 0-7500 psig
- Q 0-10,000 psig

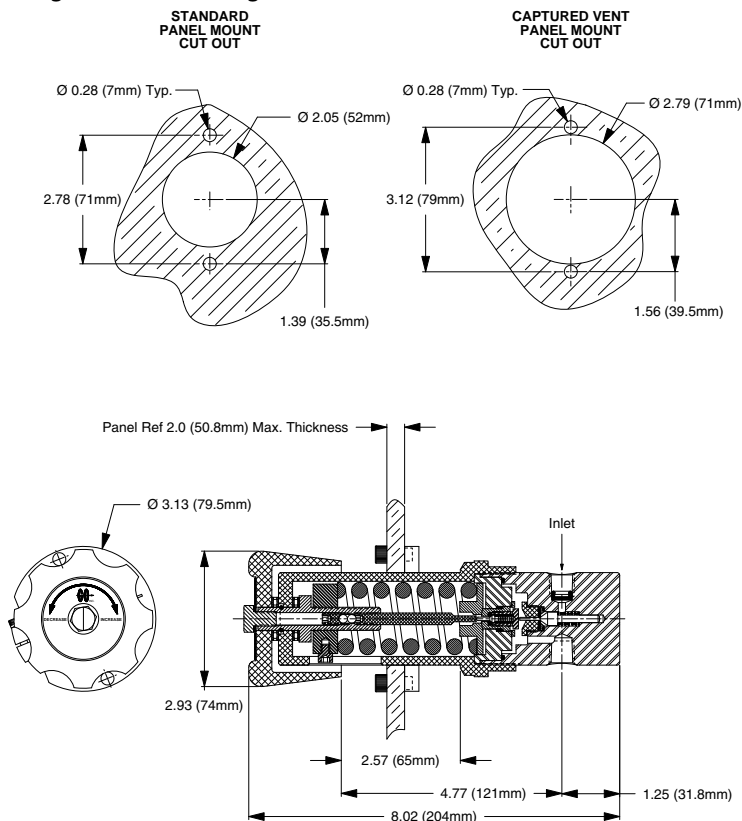
NOTE: The choices above represent an abbreviated list of the more commonly ordered options. For a complete listing of all available options, please see the Selection Wizard on the GO website at [www.goreg.com](http://www.goreg.com) or contact the factory.

## Maximum Temperature & Operating Inlet Pressures

SEAT MATERIAL	MAXIMUM TEMPERATURE	@	MAXIMUM OPERATING INLET PRESSURE
Polyimide	150° F (66° C)	@	10,000 psig (68.95 MPa)
PEEK™	150° F (66° C)	@	10,000 psig (68.95 MPa)

## Outline and Mounting Dimensions

Weight = 4.4 lbs (2.0kg)



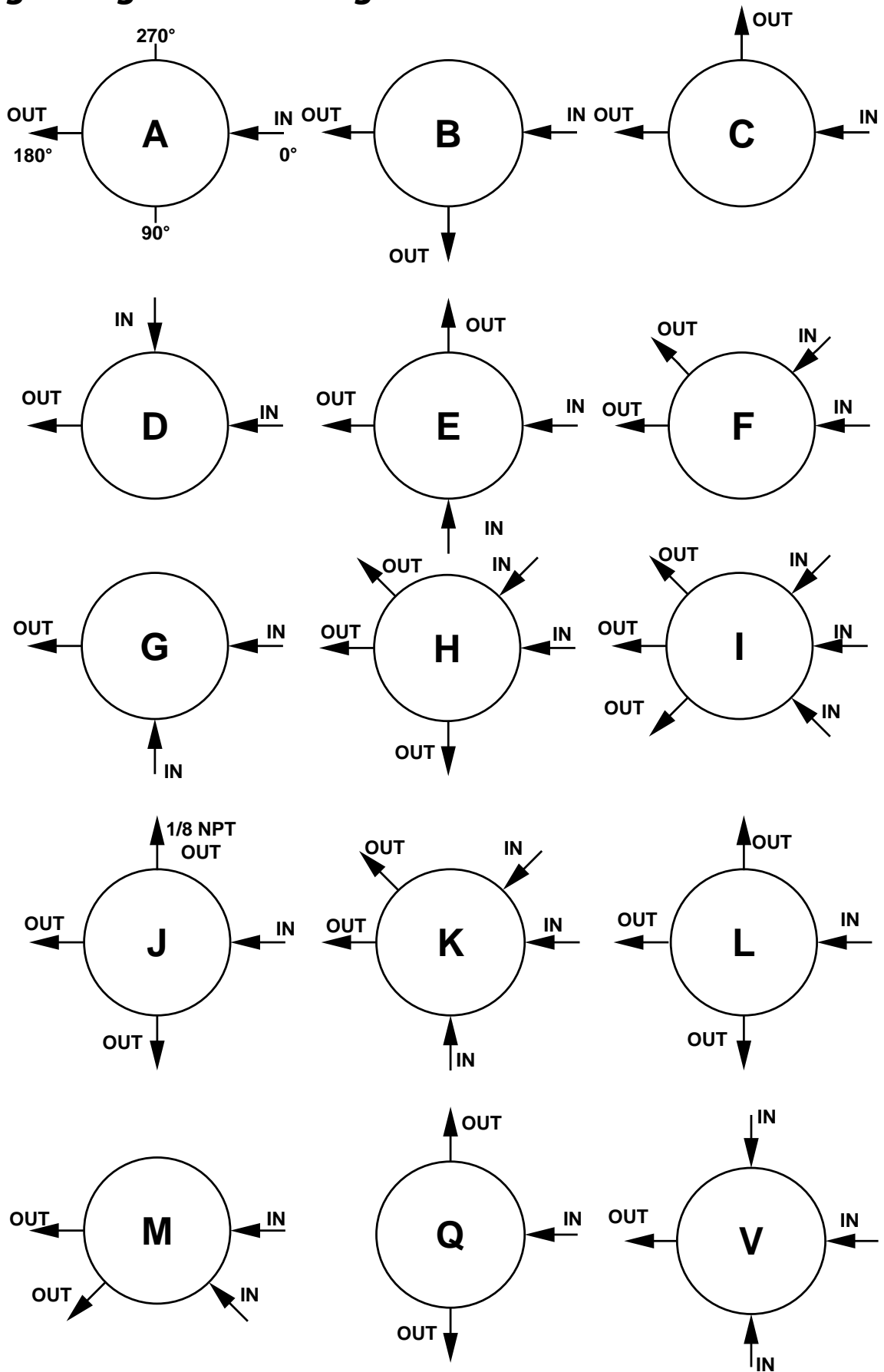
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# Porting Configurations for Single Stage Pressure Regulators



LOCATION OF PORTS FROM  
TOP VIEW

# GO REGULATOR

## PR-59 Series

High Pressure/High Flow Pressure Reducing Regulator



Designed for low and high pressures up to 4000 psig inlet, the PR-59 Series pressure reducing regulator controls high flow with its Cv flow coefficient of 1.2. Though normally supplied without self-relieving capability, this feature can be added as an option.

While primarily designed for use with gas streams, the PR-59 can be used with virtually any liquid systems that are compatible with the seals. A large size piston sensor gives good sensitivity of control even at low outlet pressures and the Kel-F® valve seat assembly gives normal bubble-tight shutoff.

### Features & Specifications

- 316L stainless steel, brass and Monel® body construction
- Inlet pressure capability up to 4000 psig
- Outlet control ranges from 250 psig up to 4000 psig
- Optional self-relieving feature
- Inlet and outlet ports of ½" or ¾" FNPT with ¼" FNPT gauge ports optional
- Balanced poppet valve design for constant pressure control
- Viton® seals (other elastomers optional)
- PCTFE seat
- Cv flow coefficient is 1.2
- Operating temperatures of -40° F to +175° F (-40° C to +80° C)

pressure regulators

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# PR-59 Series

## How to Order

### PR59 –

#### BODY MATERIAL

- 1 316L stainless steel
- 2 Brass
- 4 Monel®

#### PORT CONFIGURATION

- A Standard

For more port configurations, see page 35

#### PROCESS PORT TYPES

##### (GAUGE PORT TYPES, IF SPECIFIED)

- 5 ½" FNPT (¼" FNPT gauge ports)
- A ¾" FNPT (¼" tube gauge ports)
- B ¾" ISO-7 parallel (¼" FNPT gauge ports)

#### SURFACE FINISH OF DIAPHRAGM CAVITY

- 1 < 25 Ra

#### SEAT MATERIAL

- H PCTFE (formerly Kel-F® 81)
- I Teflon® (0–1000 psig maximum inlet)

#### FLOW COEFFICIENT (Cv)

- 9 1.2

#### CAP ASSEMBLY

- 1 Standard, stainless steel
- 4 Panel mount, stainless steel
- 5 Captured vent, stainless steel
- 6 Captured vent, panel mount, stainless steel
- 9 Plastic knob, stainless steel
- A Captured vent, plastic knob, stainless steel
- B Panel mount, plastic knob, stainless steel

#### PISTON MATERIAL

- 5 Stainless steel
- B Monel®

#### PISTON TYPE

- 1 Non-self-relieving
- 3 Self-relieving

#### OUTLET RANGE

- I 0–250 psig
- J 0–500 psig
- W 0–750 psig
- K 0–1000 psig
- L 0–2000 psig
- N 0–4000 psig

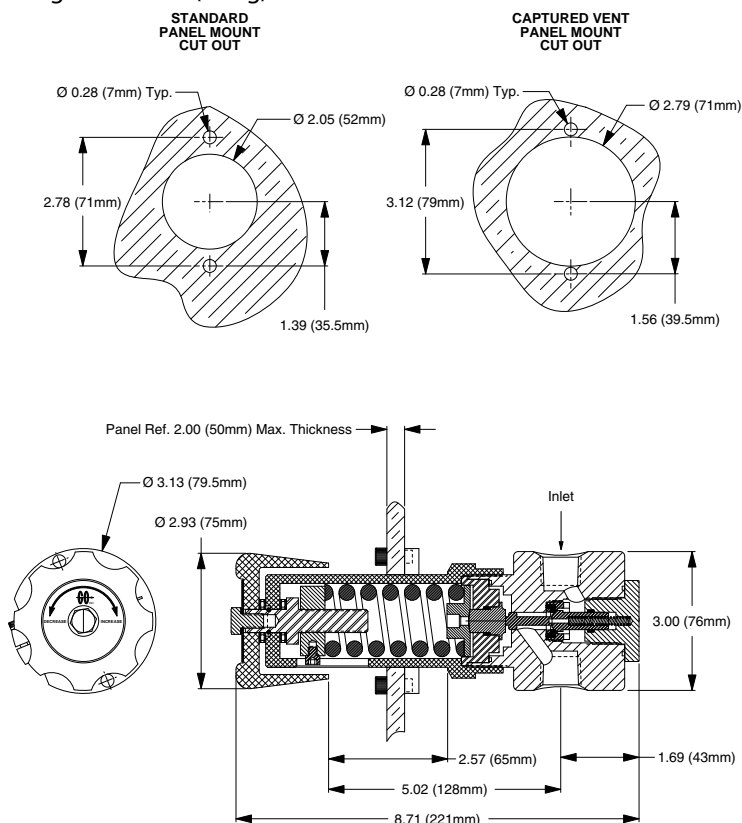
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## Maximum Temperature & Operating Inlet Pressures

SEAT MATERIAL	MAXIMUM TEMPERATURE	@	MAXIMUM OPERATING INLET PRESSURE
PCTFE (formerly Kel-F® 81)	175° F (80° C)	@	4000 psig (27.58 MPa)
Teflon®	150° F (66° C)	@	1000 psig (6.90 MPa)

## Outline and Mounting Dimensions

Weight = 4.4 lbs (2.0kg)



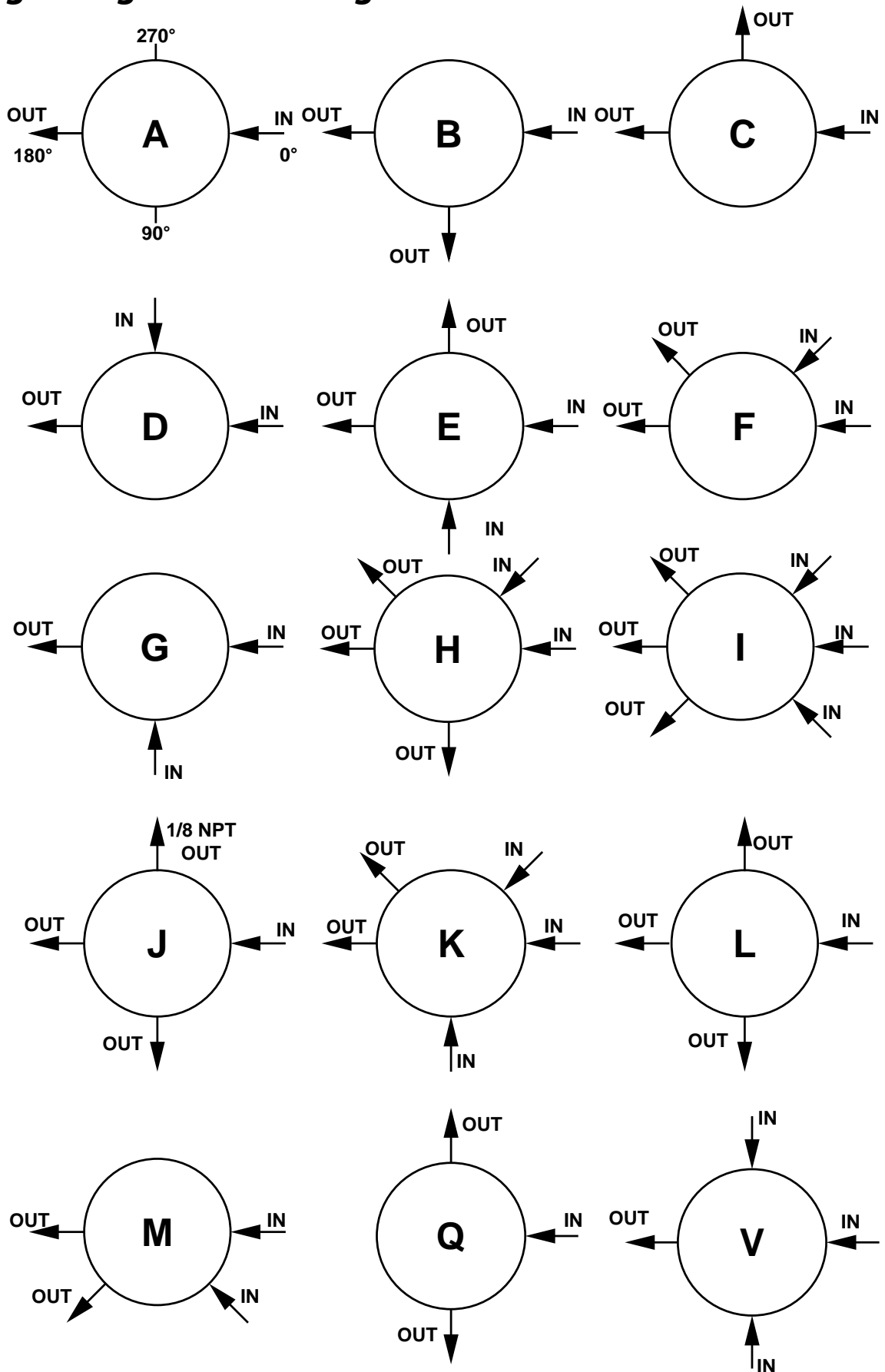
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