rotork®
Instruments

HP High Pressure Regulators

Engineered for Precision Control in High Pressure Applications

Precision Control High Pressure Regulators

Rotork Fairchild's HPD, DHP, and HPP regulators eliminate leakage and provide superior life for high accuracy control of supply pressures up to 6,000 psi.

Using Inconel diaphragms in the HPP and DHP and stainless steel pistons in the HPP, they reliably regulate gas or liquid pressures down as low as 0-25 psi output or up to 0-3,000 psi in the HPP. Constructed with 316 stainless steel bodies, the HPP, DHP, and HPD ranges feature patent pending improved valve seat sealing that eliminates the risk of media leakage often associated with conventional high pressure regulators.

A variety of seat materials (see chart on page 2) permit high pressure and/or high temperature operation with two flow rates available.

HPD and DHP Style Regulators

These models feature standard Inconel diaphragms to eliminate drift and provide long term accuracy and stability.

The HPD is available in standard, tamper proof or panel mount knob configurations and the DHP is a dome loaded regulator. With 2 or 4 ports and standard NPT, BSPT or SAE style port threads, five available output ranges allow selection from 0-25 psi to 0-500 psi.

HPD Regulator

- Diaphragm operated regulator
- 316 stainless steel body and Inconel diaphragms
- 6,000 psi supply
- Five ranges up to 500 psi (35 bar)
- -40 to +500 °F (-40 to +260 °C)

HPD Regulator

- Dome loaded diaphragm operated regulator
- 316 stainless steel body and Inconel diaphragms
- 6,000 psi supply
- Five ranges up to 500 psi (35 bar)
- -40 to +500 °F (-40 to +260 °C)

HPP Regulators

Using a high pressure piston rather than diaphragm, the HPP series has similar configurations as HPD but is designed for much higher output pressures.

Three available ranges regulate to 3,000 psi output pressure. Note: the supply pressure must always be higher than the desired output pressure.

HPP Regulator

- Piston operated regulator
- All 316 stainless steel
- 6,000 psi supply
- Three ranges up to 3,000 psi (200 bar)
- -40 to +500 °F (-40 to +260 °C)

Redefining Flow Control

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Instruments

Ordering Information

Catalog Number HPD — 2 _ _ _ _ _ _ _ _ _

Flow Capacity:
- Cv 0.06 . . . 1
- Cv 0.25 . . . 3

Pressure Ranges:
- 0-25 psi . . . 3
- 0-50 psi . . . 4
- 1-100 psi . . . 5
- 2-250 psi . . . 7
- 5-500 psi . . . 9

Inlet/Outlet Port Size:
- 1/4" . . . 2

Port Thread:
- NPTF . . . N
- BSPT . . . U
- SAE AS5202-4 . . . S

Port Configuration:
- 2 Port (1 Inlet, 1 Outlet) . . . A
- 4 Port (2 Inlets, 2 Outlets) . . . B

Body Material:
- 316 Stainless Steel . . . S

Seat Material:
- PEEK . . . P
- CTFE . . . T
- Vespel . . . V

Actuator:
- Knob . . . K
- Tamper Proof . . . T

Relief:
- Relieving . . . R
- Non Relieving* . . . N

Mounting:
- None . . . N
- Panel . . . P

*Bubble Tight Shutoff in Most Conditions

Catalog Number HPP — 2 _ _ _ _ _ _ _ _ _

Flow Capacity:
- Cv 0.06 . . . 1
- Cv 0.25 . . . 3

Pressure Ranges:
- 0-1000 psi . . . 2
- 0-2000 psi . . . 4
- 0-3000 psi . . . 5

Inlet/Outlet Port Size:
- 1/4" . . . 2

Port Thread:
- NPTF . . . N
- BSPT . . . U
- SAE AS5202-4 . . . S

Port Configuration:
- 2 Port (1 Inlet, 1 Outlet) . . . A
- 4 Port (2 Inlets, 2 Outlets) . . . B

Body Material:
- 316 Stainless Steel . . . S

Seat Material:
- PEEK . . . P
- CTFE . . . T
- Vespel . . . V

Actuator:
- Knob . . . K
- Tamper Proof . . . T

Relief:
- Relieving . . . R
- Non Relieving* . . . N

Mounting:
- None . . . N
- Panel . . . P

*Bubble Tight Shutoff in Most Conditions

Catalog Number DHP — 2 _ _ _ _ _ _ _ _ _

Flow Capacity:
- Cv 0.06 . . . 1
- Cv 0.25 . . . 3

Pressure Ranges:

PSIG	BAR	
0-25	0-1.7	3
0-50	0-3.5	4
1-100	0.07-7.0	5
2-250	0.15-17.0	7
5-500	0.365-35.0	9

Inlet/Outlet Port Size:
- 1/4" . . . 2

Port Thread:
- NPTF . . . N
- BSPT . . . U
- SAE AS5202-4 . . . S

Port Configuration:
- 2 Port (1 Inlet, 1 Outlet) . . . A
- 4 Port (2 Inlets, 2 Outlets) . . . B

Body Material:
- 316 Stainless Steel . . . S
- Brass . . . C

Seat Material:

	PSIG	BAR	
PEEK	6000	414	P
CTFE	3500	230	T
Vespel	6000	414	V

*Bubble Tight Shutoff in Most Conditions

Specifications

1 Supply Valve Cv 0.06
3 Supply Valve Cv 0.25

Maximum Supply Pressure
6000 psig, [414 BAR], (41400 kPa)
*Consult seat material chart for maximum pressure

Supply Pressure Effect
0.6 psig change for 100 psig change in supply pressure (HPD)
<2 psig change for 100 psig change in supply pressure (HPP)

Ambient Temperature
-40 °F to +500 °F, (-40 °C to 260 °C)
*Consult seat material chart for maximum temperature

Materials of Construction

Body and Housing	Alloy 316L Stainless Steel
Valve	316L Stainless Steel
Diaphragm	Alloy X-750 Inconel (HPD)
Seal	Viton A (HPP)

Seat Material	Maximum Temperature*	@	Maximum Inlet Pressure
CTFE	175 °F (80 °C)	@	3,500 psig (241 bar)
PEEK	500 °F (260 °C)	@	3,500 psig (241 bar)
PEEK	175 °F (80 °C)	@	6,000 psig (414 bar)
VESPEL	500 °F (260 °C)	@	3,500 psig (241 bar)
VESPEL	175 °F (80 °C)	@	6,000 psig (414 bar)

* Temperatures in excess of 175 °F (80 °C) require a tamper-proof option.

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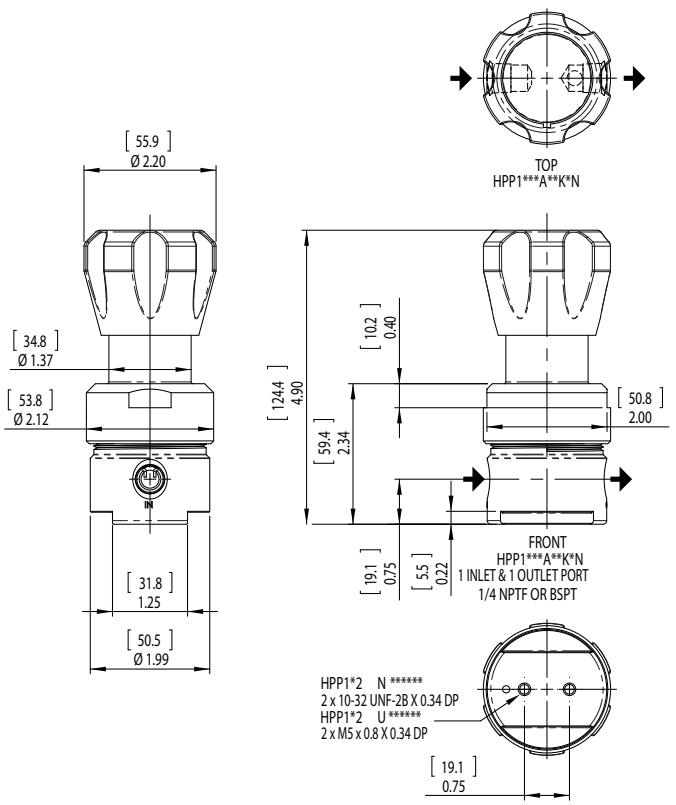
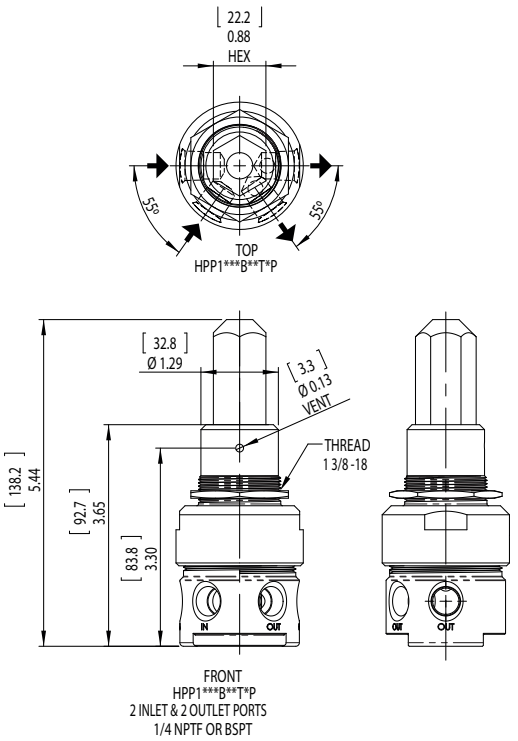
Dimensional Data

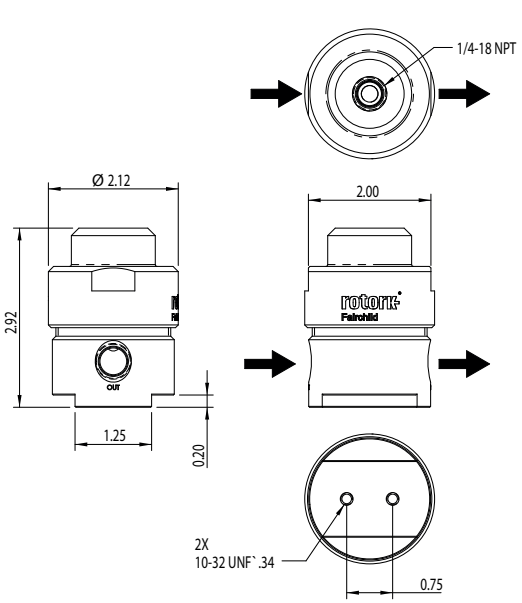
HPD, HPP Regulators



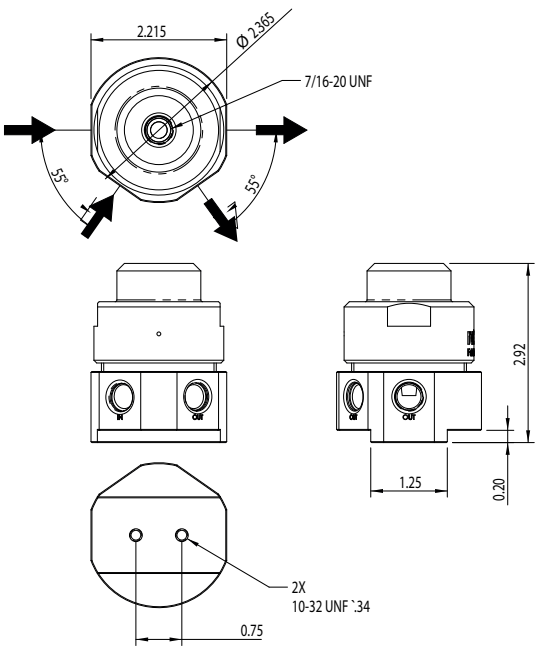
Tamper Proof Option



DHP Regulator



SAE Port Dimensions



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