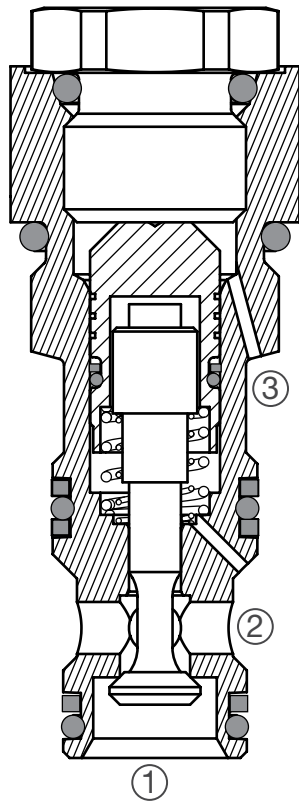
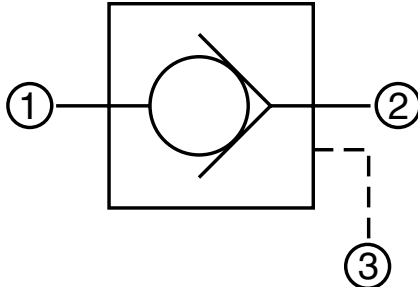


RP08A-01 Check Valve, Pilot-to-Open, Poppet Type Up to 10 gpm (38 l/min) • 6000 psi (420 bar)

Hydraulic Symbol



Description

A screw-in cartridge, poppet type pilot operated check valve for use as a blocking or load holding device.

Operation

The RP08A allows flow from port 2 to port 1, while normally blocking flow from port 1 to port 2. The valve remains closed by bias spring until sufficient pressure is applied at pilot port 3. The cartridge has 3:1 and 4:1 optional pilot ratios, meaning that at least one-third or one-fourth (respectively) of the load pressure held at port 1 is required at port 3 to open the valve. A sealed pilot piston option is available.

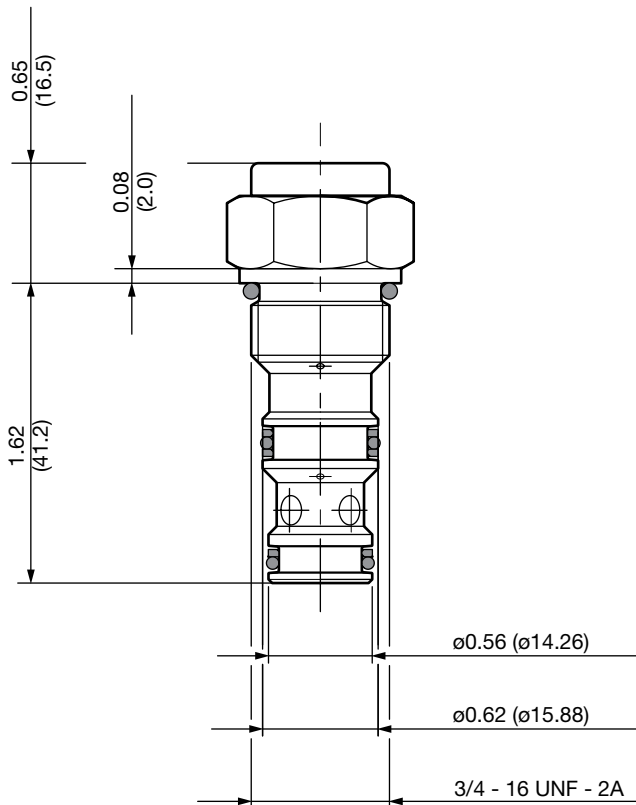
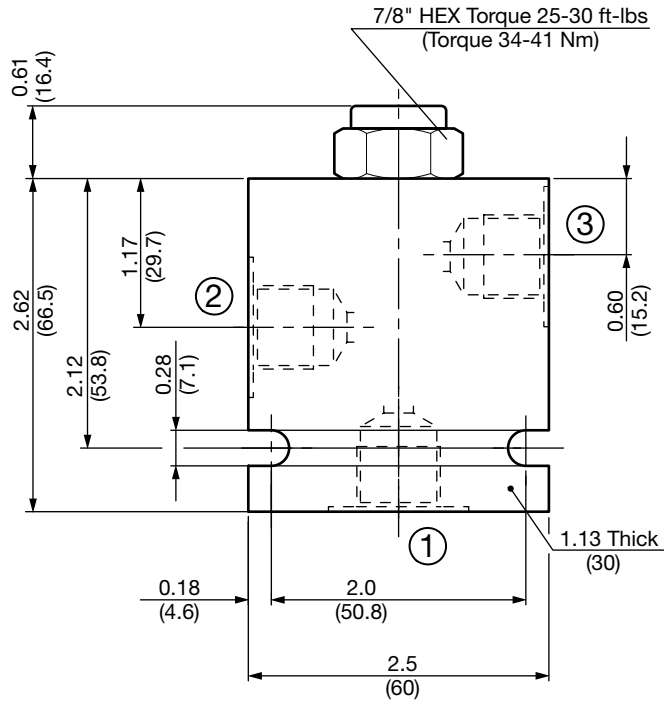
Features

- Hardened poppet to ensure extended service life and low leakage
- Additional reseating spring for fast and reliable closing
- Optional sealed pilot piston
- Higher flow rating and low pressure drop due to pilot port at 3.
- Same cavity as counterbalance valve RS08.
- All external surfaces zinc-plated or specifically treated
- Industry common cavity

Specifications

Operating Pressure	6000 psi (420 bar)
Nominal Flow	10 gpm (38 l/min)
Internal Leakage	2 drops/min. at 6000 psi (0.10 cc/min at 420 bar)
Pilot Ratio	3:1, 4:1
Standard Check Bias Spring	15 psi (1.0 bar)
Fluid Operating Temp. Range	-4° to 248°F (-20° to +120°C) (Consult factory for usage at temp. outside range.)
Fluid Compatibility	Mineral-based or synthetics with lubricating properties
Viscosity	50 to 2000 SUS (7.4 to 420 cSt)
Filtration	21/19/16 or cleaner (per ISO 4406). Use with filter rated $\beta_{10} \geq 200$.
Installation	No orientation restrictions
Cavity	FC08-3 (see <i>Line Bodies & Cavities</i> section)
Cavity Tools	Rougher: 02580086 Finisher: 02580087
Cartridge Weight	0.19 Lbs. (0.09 kg)
Cartridge Material	Steel with hardened work surfaces. Buna N or Viton® o-rings. PTFE back-up rings.
Seal Kits	Buna-N P/N: 03054795 Viton® P/N: 02591059

Dimensions



All measurements in inches (mm).
Subject to technical modifications

Model Code

RP08A-01-C-N-15-3

Valve Model

Body & Ports

- C = Cartridge only
- AS6 = SAE-6 Ports, aluminum Body
- SS6 = SAE-6 Ports, steel Body

Seals

- N = Buna-N
- NS = Buna-N with Sealed Piston
- V = Viton®
- VS = Viton® with Sealed Piston

Cracking Pressure

- 15 = 15 psi (1.00 bar)

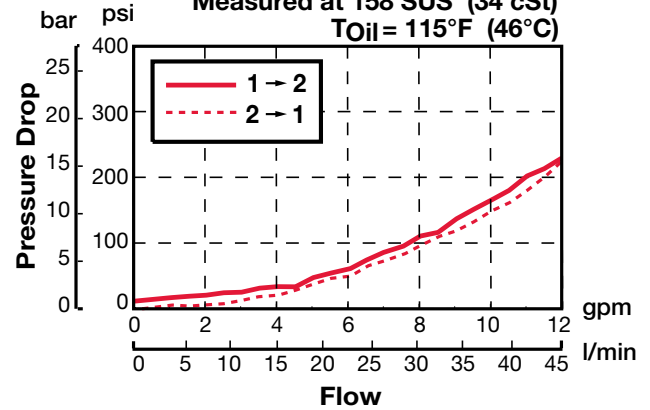
Pilot Ratio

- 3 = 3:1
- 4 = 4:1

Performance

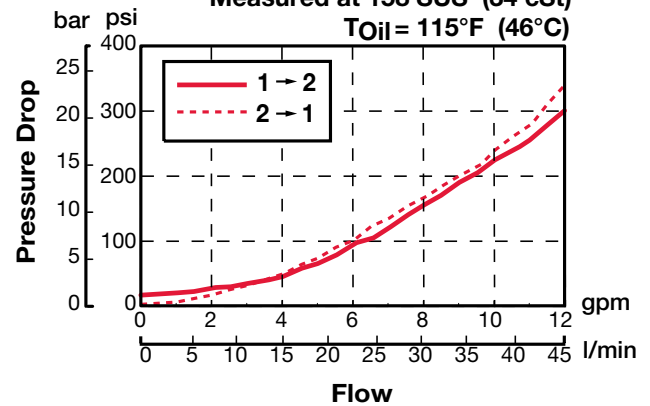
3:1 Pilot Ratio

Measured at 158 SUS (34 cSt)
TOil = 115°F (46°C)



4:1 Pilot Ratio

Measured at 158 SUS (34 cSt)
TOil = 115°F (46°C)



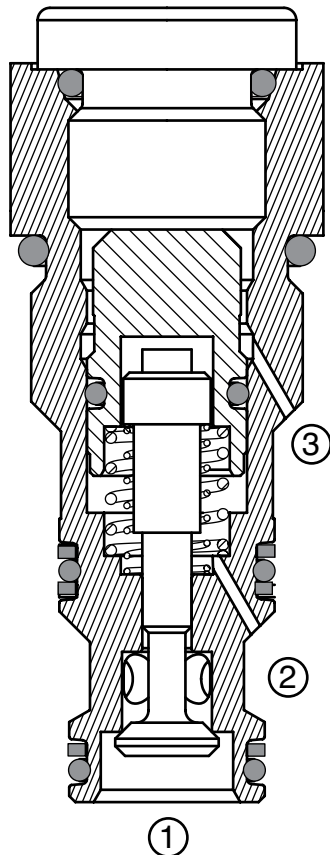
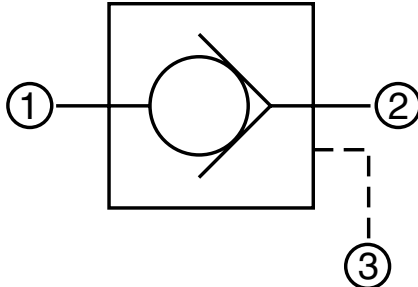
Standard Line Bodies*

Code	Part No	Material	Pressure Rating	Weight
FH083-AS6	03011424	Aluminum, anodized	3500 psi (245 bar)	0.58 lb (0.26 kg)
FH083-SS6	00560920	Steel, Zinc plated	6000 psi (420 bar)	1.70 lb (0.77 kg)

*Please refer to Line Bodies & Cavities section for details

RP10A-01 Check Valve, Pilot-to-Open, Poppet Type Up to 16 gpm (60 l/min) • 6000 psi (420 bar)

Hydraulic Symbol



Description

A screw-in cartridge, poppet type pilot operated check valve for use as a blocking or load holding device.

Operation

The RP10A allows flow from port 2 to port 1, while normally blocking flow from port 1 to port 2. The valve remains closed by bias spring until sufficient pressure is applied at pilot port 3. The cartridge has 3:1 and 4:1 optional pilot ratios, meaning that at least one-third or one-fourth (respectively) of the load pressure held at port 1 is required at port 3 to open the valve. A sealed pilot piston option is available.

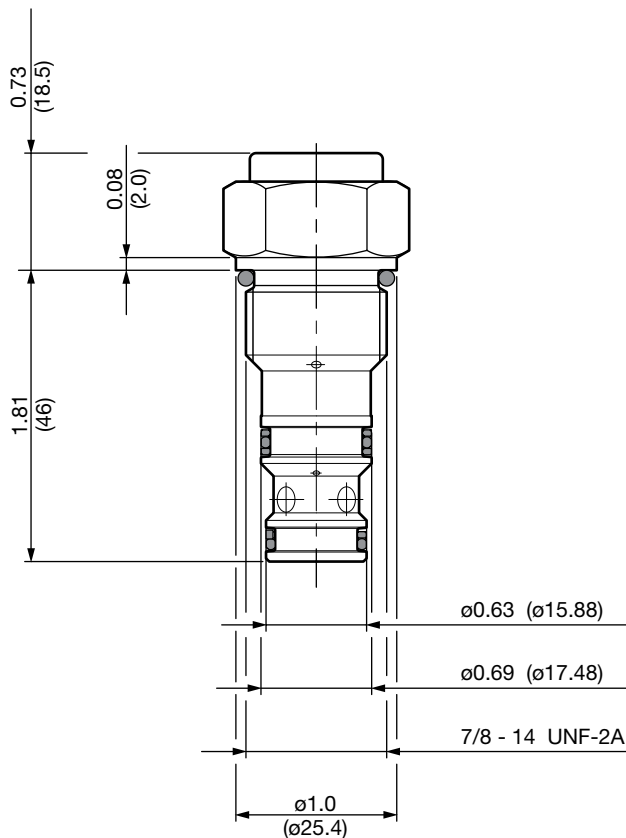
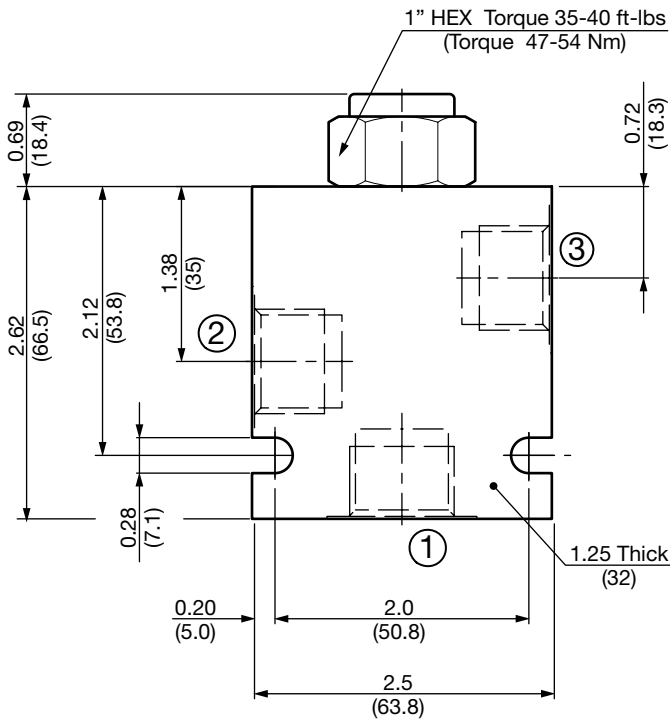
Features

- Hardened poppet to ensure extended service life and low leakage
- Additional reseating spring for fast and reliable closing
- Optional sealed pilot piston
- Higher flow rating and low pressure drop due to pilot port at 3.
- All external surfaces zinc-plated
- Industry common cavity

Specifications

Operating Pressure	6000 psi (420 bar)
Nominal Flow	16 gpm (60 l/min)
Internal Leakage	2 drops/min. at 6000 psi (0.10 cc/min at 420 bar)
Pilot Ratio	3:1, 4:1
Standard Check Bias Spring	15 psi (1.0 bar)
Fluid Operating Temp. Range	-4° to 248°F (-20° to +120°C) <i>(Consult factory for usage at temp. outside range.)</i>
Fluid Compatibility	Mineral-based or synthetics with lubricating properties
Viscosity	50 to 2000 SUS (7.4 to 420 cSt)
Filtration	21/19/16 or cleaner (per ISO 4406). Use with filter rated $\beta_{10} \geq 200$.
Installation	No orientation restrictions
Cavity	FC10-3 (see <i>Line Bodies & Cavities</i> section)
Cavity Tools	Rougher: 02580092 Finisher: 02580093
Cartridge Weight	0.31 Lbs. (0.14 kg)
Cartridge Material	Steel with hardened work surfaces. Zinc-plated exposed surfaces. Buna N or Viton® o-rings. PTFE back-up rings.
Seal Kits	Buna-N P/N: 03071274 Viton® P/N: 03049443

Dimensions



All measurements in inches (mm).
Subject to technical modifications

Model Code

RP10A-01-C-N-15-3

Valve Model

Body & Ports

- C = Cartridge only
- AS8 = SAE-8 Ports, aluminum Body
- SS8 = SAE-8 Ports, steel Body

Seals

- N = Buna-N
- NS = Buna-N with Sealed Piston
- V = Viton®
- VS = Viton® with Sealed Piston

Cracking Pressure

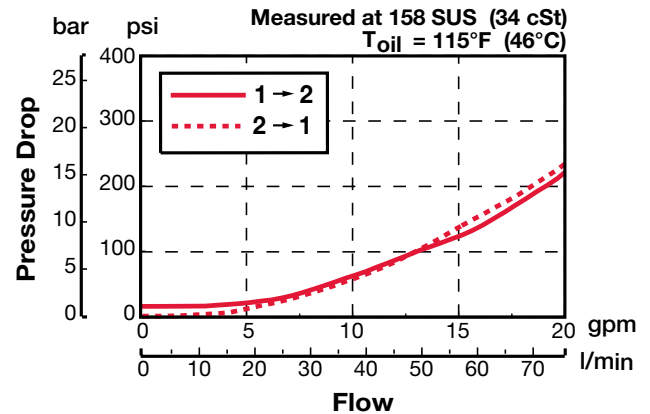
- 15 = 15 psi (1.00 bar)

Pilot Ratio

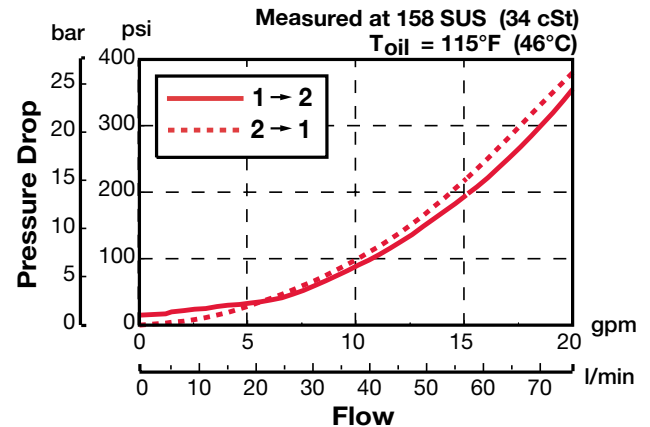
- 3 = 3:1
- 4 = 4:1

Performance

3:1 Pilot Ratio



4:1 Pilot Ratio



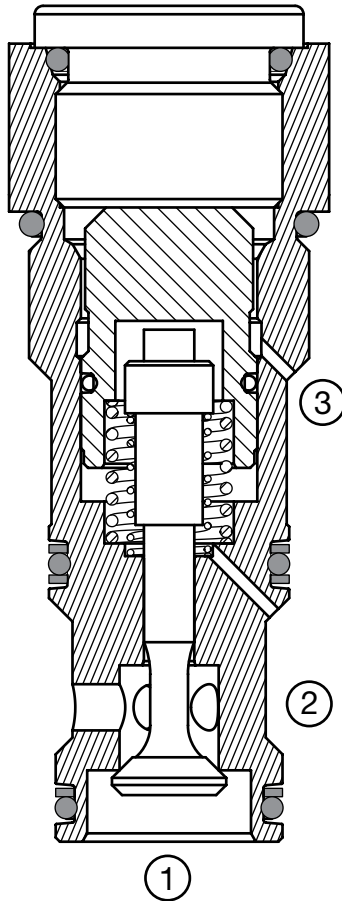
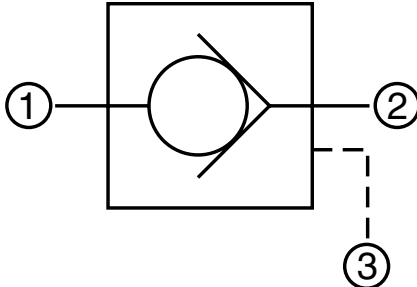
Standard Line Bodies*

Code	Part No	Material	Pressure Rating	Weight
FH103-AS8	03038095	Aluminum, anodized	3500 psi (245 bar)	0.60 lb (0.27 kg)
FH103-SS8	03037704	Steel, Zinc plated	6000 psi (420 bar)	1.74 lb (0.79 kg)

*Please refer to Line Bodies & Cavities section for details

RP16A-01 Check Valve, Pilot-to-Open, Poppet Type Up to 40 gpm (150 l/min) • 6000 psi (420 bar)

Hydraulic Symbol



Description

A screw-in cartridge, poppet type pilot operated check valve for use as a blocking or load holding device.

Operation

The RP16A allows flow from port 2 to port 1, while normally blocking flow from port 1 to port 2. The valve remains closed by bias spring until sufficient pressure is applied at pilot port 3. The cartridge has 3:1 and 4:1 optional pilot ratios, meaning that at least one-third or one-fourth (respectively) of the load pressure held at port 1 is required at port 3 to open the valve.

A sealed pilot piston option is available.

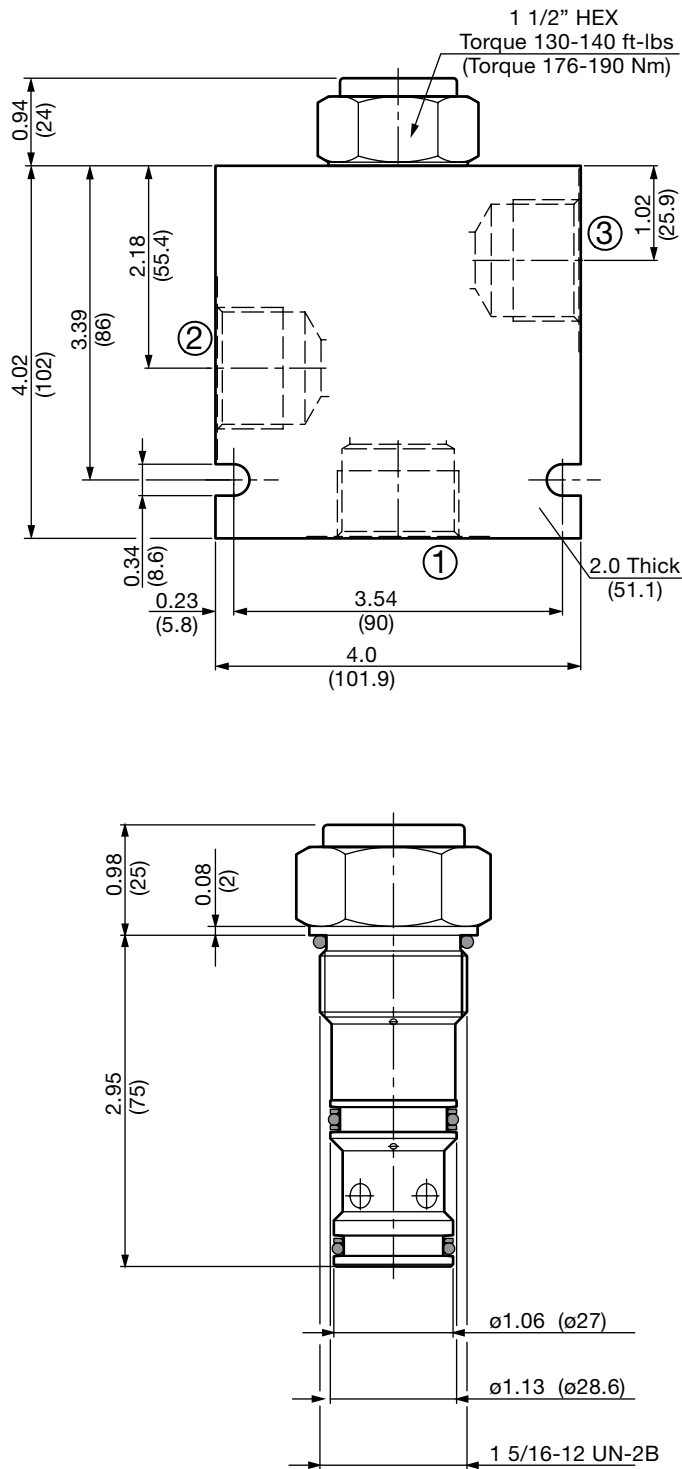
Features

- Hardened poppet to ensure extended service life and low leakage
- Additional reseating spring for fast and reliable closing
- Optional sealed pilot piston
- Higher flow rating and low pressure drop due to pilot port at 3.
- All external surfaces zinc-plated
- Industry common cavity

Specifications

Operating Pressure	6000 psi (420 bar)
Nominal Flow	40 gpm (150 l/min)
Internal Leakage	2 drops/min. at 6000 psi (0.10 cc/min at 420 bar)
Pilot Ratio	3:1, 4:1
Standard Check Bias Spring	15 psi (1.0 bar)
Fluid Operating Temp. Range	-4° to 248°F (-20° to +120°C) (Consult factory for usage at temp. outside range.)
Fluid Compatibility	Mineral-based or synthetics with lubricating properties
Viscosity	50 to 2000 SUS (7.4 to 420 cSt)
Filtration	21/19/16 or cleaner (per ISO 4406). Use with filter rated $\beta_{10} \geq 200$.
Installation	No orientation restrictions
Cavity	FC16-3 (see <i>Line Bodies & Cavities</i> section)
Cavity Tools	Rougher: 02580094 Finisher: 02580095
Cartridge Weight	1.13 Lbs. (0.51 kg)
Cartridge Material	Steel with hardened work surfaces. Zinc-plated exposed surfaces. Buna N or Viton® o-rings. PTFE back-up rings.
Seal Kits	Buna-N P/N: 03071303 Viton® P/N: 03071304

Dimensions



All measurements in inches (mm).
Subject to technical modifications

Model Code

RP16A-01-C-N-15-3

Valve Model

Body & Ports

- C = Cartridge only
- AS16 = SAE-16 Ports, aluminum Body
- SS16 = SAE-16 Ports, steel Body

Seals

- N = Buna-N
- NS = Buna-N with Sealed Piston
- V = Viton®
- VS = Viton® with Sealed Piston

Cracking Pressure

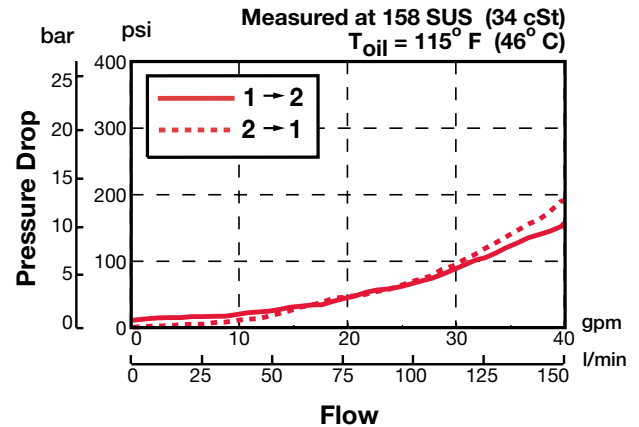
- 15 = 15 psi (1.00 bar)

Pilot Ratio

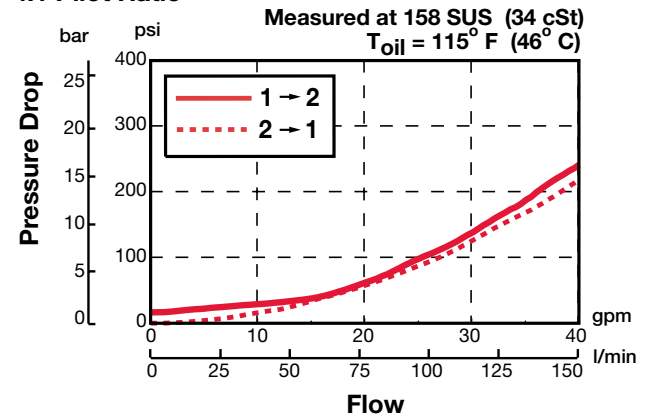
- 3 = 3:1
- 4 = 4:1

Performance

3:1 Pilot Ratio



4:1 Pilot Ratio



Standard Line Bodies*

Code	Part No	Material	Pressure Rating	Weight
FH163-AS16	03037210	Aluminum, anodized	3500 psi (245 bar)	2.34 lb (1.06 kg)
FH163-SS16	03036285	Steel, Zinc plated	6000 psi (420 bar)	6.80 lb (3.09 kg)

*Please refer to Line Bodies & Cavities section for details