

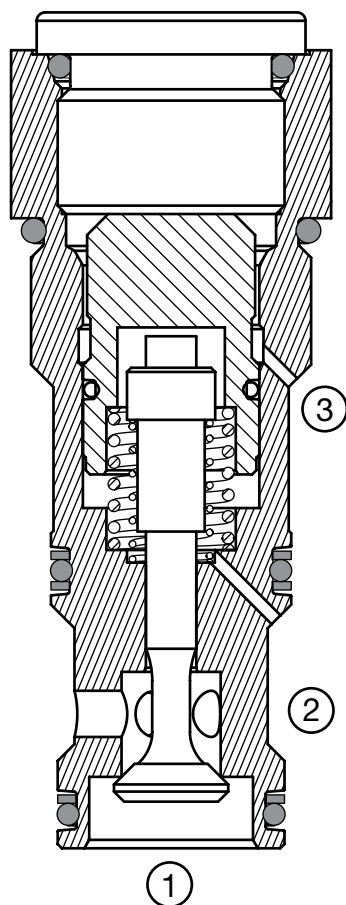
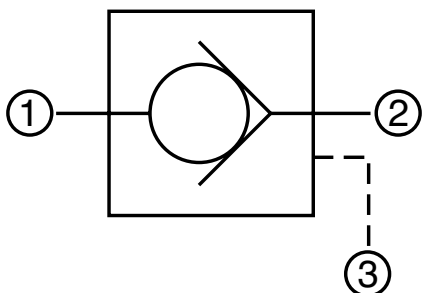
# CHECK & LOAD CONTROL VALVES

## 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

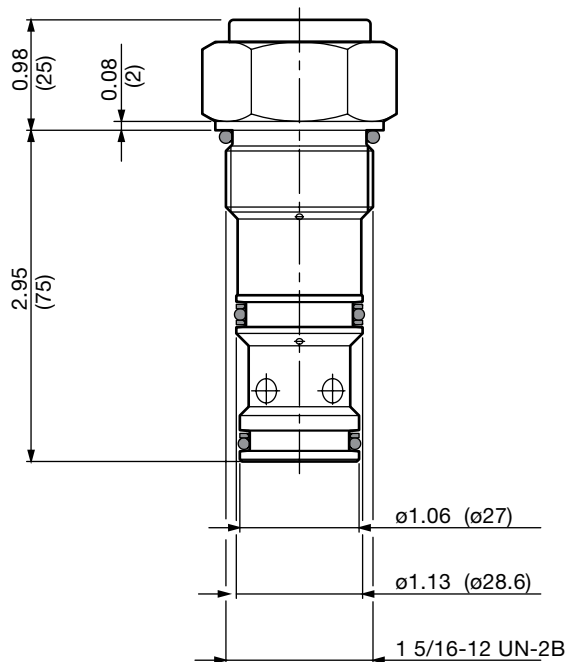
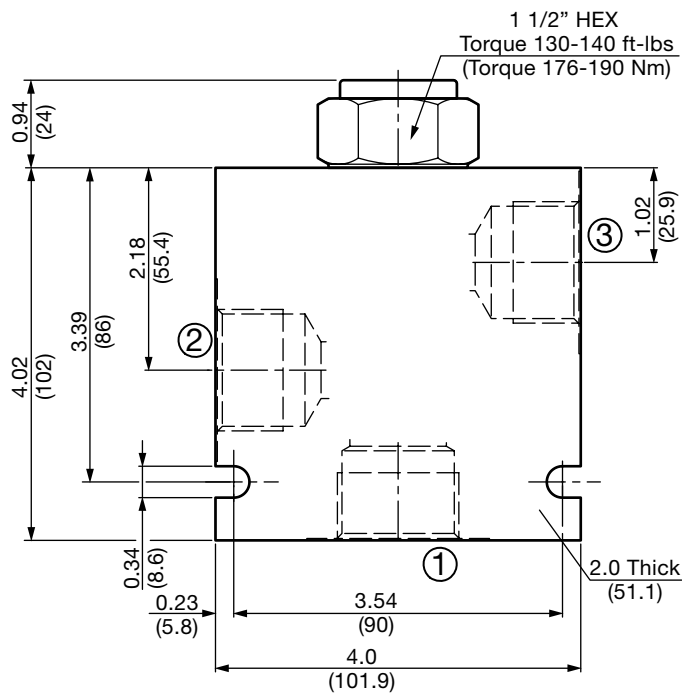
- Hardened poppet to ensure extended service life and low leakage
- Additional reseating spring for fast and reliable closing
- Optional sealed pilot piston
- Higher flow rating and low pressure drop due to pilot port at 3.
- All external surfaces zinc-plated
- Industry common cavity

#### 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) <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	FC16-3 (see <i>Line Bodies &amp; 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 FS163-N P/N: 03071303 Viton® FS082-V P/N: 03071304

# CHECK & LOAD CONTROL VALVES

## 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

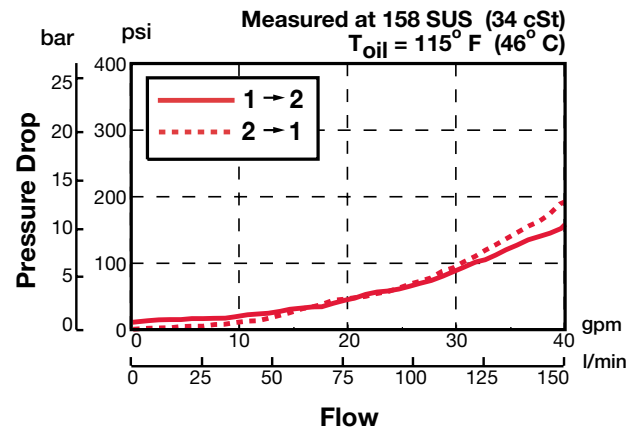
- 15 = 15 psi (1.00 bar)

### Pilot Ratio

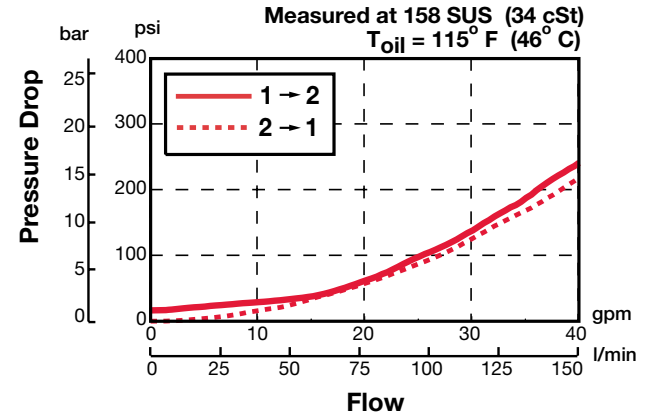
- 3 = 3:1
- 4 = 4:1

## 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