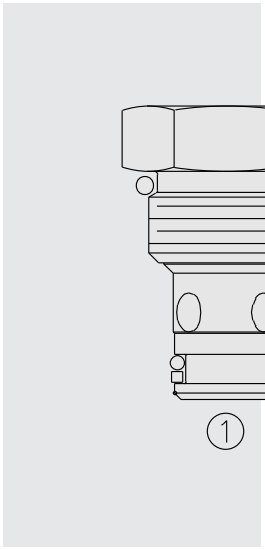
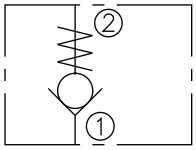
Blue rectangles are links to other catalog pages.

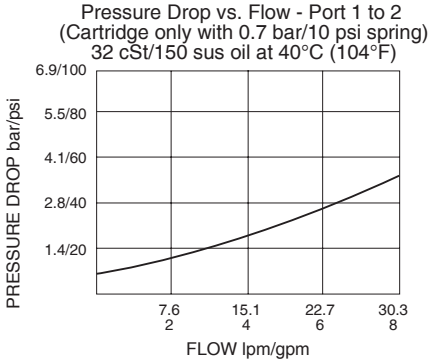
CV08-20 Check Valve



ISO SYMBOL



PERFORMANCE (Cartridge Only)



DESCRIPTION

A screw-in, cartridge-style, hydraulic check valve for use as a blocking or load-holding device.

OPERATION

The **CV08-20** allows flow passage from 1 to 2, while normally blocking oil flow in the opposite direction.

The cartridge has a fully guided check which is spring-biased closed until sufficient pressure is applied at 1 to open to 2.

FEATURES

- Hardened seat for long life and low leakage.
- Optional bias springs for back-pressure application flexibility.
- Fully guided check assembly.
- Compact size.
- Fast closing and seating.

RATINGS

Operating Pressure: 240 bar (3500 psi)

Flow Rating: See Performance Chart

Internal Leakage: 0.10 ml/minute (2 drops/minute) max. at 240 bar (3500 psi)

Temperature: -40 to 100°C (-40 to 212°F) with Buna N seals; -26 to 204°C (-15 to 400°F) with fluorocarbon seals; -54 to 107°C (-56 to 225°F) with polyurethane or urethane seals.

Filtration: See page 9.010.1

Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 sus); See Temperature and Oil Viscosity, page 9.060.1

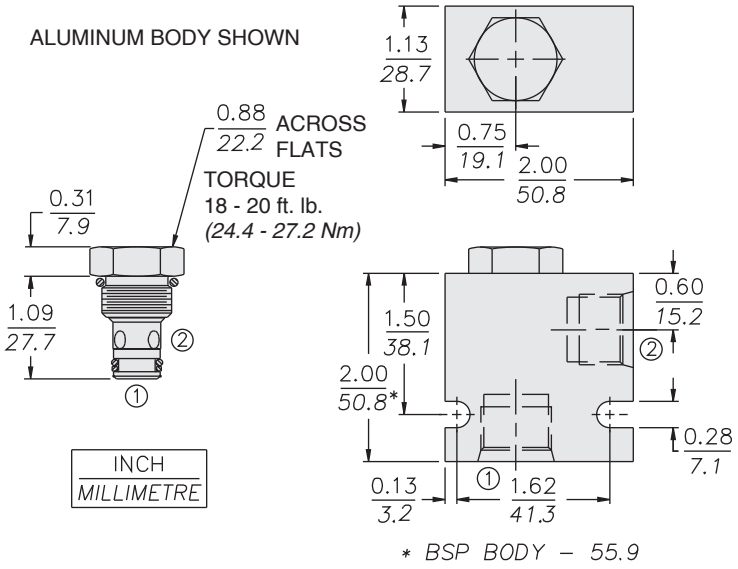
Installation: No restrictions; See page 9.020.1

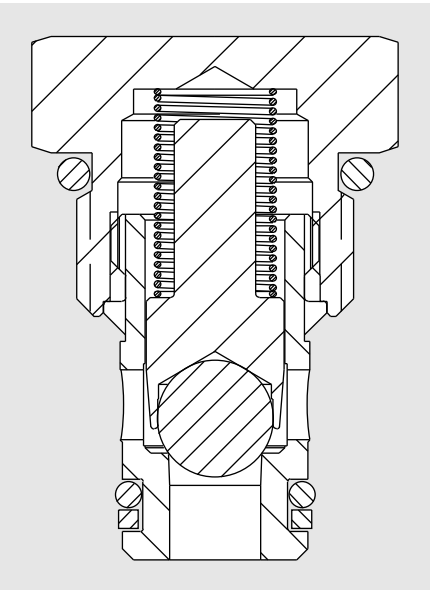
Cavity: VC08-2; See page 9.108.1

Cavity Tool: CT08-2XX; See page 8.600.1

Seal Kit: SK08-2X-X; See page 8.650.1

DIMENSIONS





MATERIALS

Cartridge: Weight: 0.05 kg. (0.12 lbs.) Steel with hardened work surfaces. Zinc-plated exposed surfaces. Buna N O-rings and back-up standard.

Standard Ported Body: Weight: 0.16 kg. (0.35 lbs.) Anodized high-strength aluminum alloy, rated to 207 bar (3000 psi). Ductile iron bodies available; dimensions may differ. See page 8.008.1

TO ORDER

CV08-20 - __ __ __ - __ - __ __

Porting

Cartridge Only	**0**
SAE 4	**4T**
SAE 6	**6T**
1/4 in. BSP*	**2B**
3/8 in. BSP*	**3B**
1/2 in. BSP*	**4B**

*BSP Body; U.K. Mfr. Only

Seals

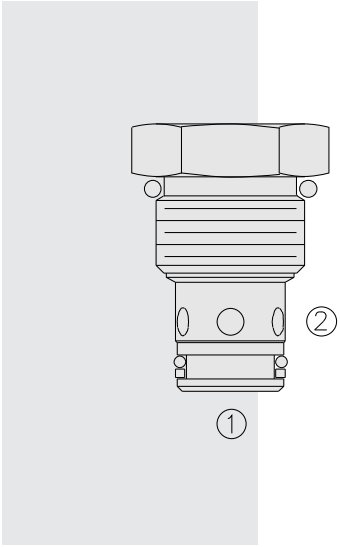
N	Buna N (Std.)
V	Fluorocarbon
HV	Fluorocarbon
P	Polyurethane
U	Urethane

Bias Spring

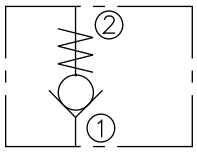
04	0.3 bar (4 psi)
10	0.7 bar (10 psi)
25	1.7 bar (25 psi)
40	2.8 bar (40 psi)
60	4.1 bar (60 psi)
100	6.9 bar (100 psi)
150	10.3 bar (150 psi)
200	13.8 bar (200 psi)
270	18.3 bar (270 psi)
M25	25.0 bar (363 psi)

Blue rectangles are links to other catalog pages.

CV10-20 Check Valve



ISO SYMBOL



DESCRIPTION

A screw-in, cartridge-style, hydraulic check valve for use as a blocking or load-holding device.

OPERATION

The **CV10-20** allows flow passage from 1 to 2, while normally blocking oil flow in the opposite direction.

The cartridge has a fully guided check which is spring-biased closed until sufficient pressure is applied at 1 to open to 2.

FEATURES

- Hardened seat for long life and low leakage.
- Optional bias springs for back-pressure application flexibility.
- 300 psi bias spring option with tall cap available.
- Fully guided check assembly.
- Industry common cavity.

RATINGS

Operating Pressure: 240 bar (3500 psi)

Proof Pressure: 350 bar (5075 psi)

Flow Rating: 75.8 lpm (20 gpm)

Internal Leakage: 0.10 ml/minute (2 drops/minute) max. at 240 bar (3500 psi)

Temperature: -40 to 100°C (-40 to 212°F) with Buna N seals;
-26 to 204°C (-15 to 400°F) with fluorocarbon seals;
-54 to 107°C (-56 to 225°F) with polyurethane or urethane seals.

Filtration: See page 9.010.1

Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 sus); See Temperature and Oil Viscosity, page 9.060.1

Installation: No restrictions; See page 9.020.1

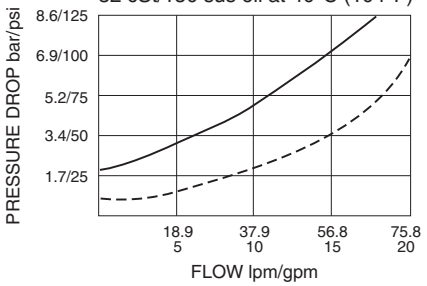
Cavity: VC10-2; See page 9.110.1

Cavity Tool: CT10-2XX; See page 8.600.1

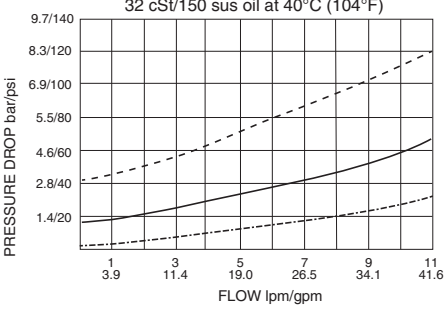
Seal Kit: SK10-2X-T; See page 8.650.1

PERFORMANCE (Cartridge Only)

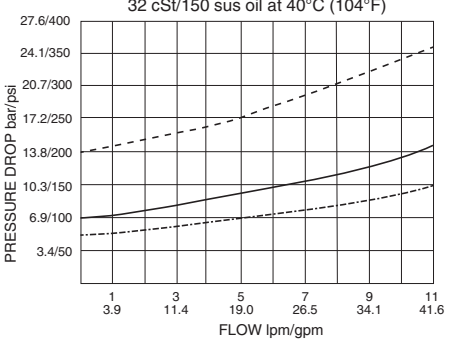
Pressure Drop vs. Flow - Port 1 to 2
with 2.1 bar/30 psi spring —;
with 0.34 bar/5 psi spring - - -;
32 cSt/150 sus oil at 40°C (104°F)



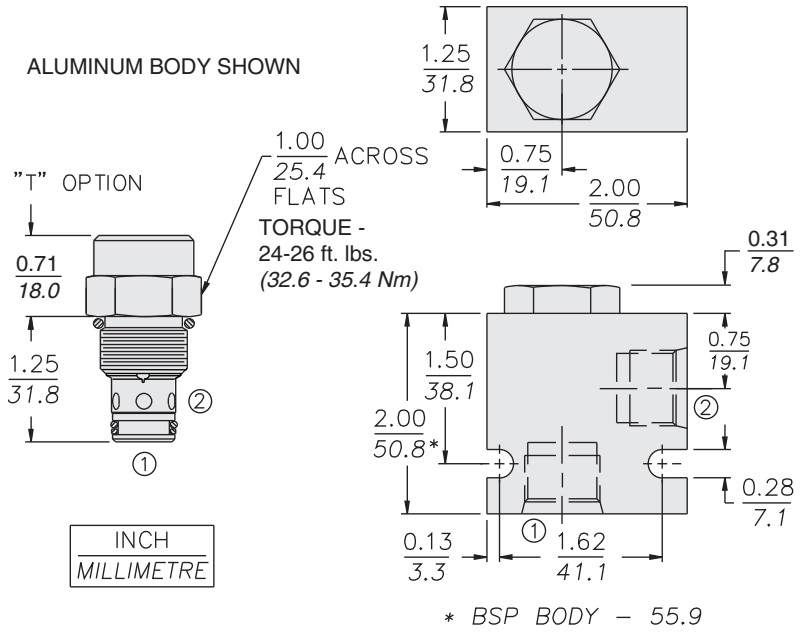
Pressure Drop vs. Flow
- - - 40 psi —15 psi ---- 2 psi
32 cSt/150 sus oil at 40°C (104°F)

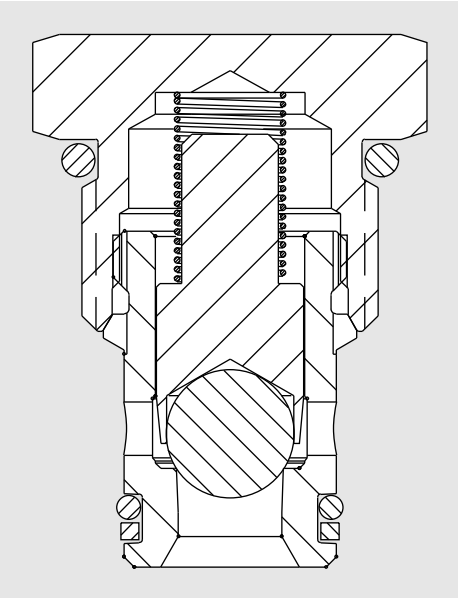


Pressure Drop vs. Flow
- - - 200 psi —100 psi ---- 70 psi
32 cSt/150 sus oil at 40°C (104°F)



DIMENSIONS





MATERIALS

Cartridge: Weight: 0.08 kg. (0.18 lbs.) T option weight: 0.12 kg. (0.26 lb.) Steel with hardened work surfaces. Zinc-plated exposed surfaces. Buna N O-rings and polyester elastomer back-ups standard.

Standard Ported Body: Weight: 0.16 kg. (0.35 lbs.) Anodized high-strength aluminum alloy, rated to 207 bar (3000 psi). Ductile iron bodies available; dimensions may differ. See page 8.010.1

TO ORDER

CV10-20 - __ - __ __ __ - __ - __ __

Adaptor Option
Tall Adaptor **T**
*Required for 300 psi spring

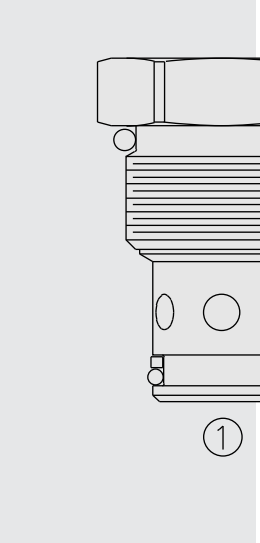
Porting
Cartridge Only **0**
SAE 6 **6T**
SAE 8 **8T**
1/4 in. BSP* **2B**
3/8 in. BSP* **3B**
1/2 in. BSP* **4B**
*BSP Body; U.K. Mfr. Only

Seals
N Buna N (Std.)
V Fluorocarbon
HV Fluorocarbon
P Polyurethane

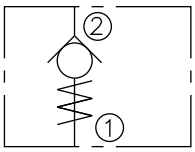
Bias Spring
02 0.14 bar (2 psi)
05 0.34 bar (5 psi)
15 1 bar (15 psi)
30 2.1 bar (30 psi)
40 2.8 bar (40 psi)
70 4.8 bar (70 psi)
100 6.9 bar (100 psi)
200 13.6 bar (200 psi)
300* 20.4 bar (300 psi)
*Requires "T" Option

Blue rectangles are links to other catalog pages.

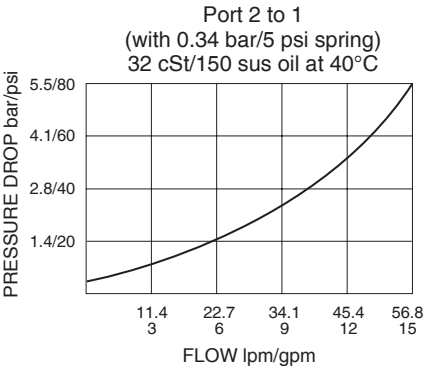
CV10-24 Check Valve



ISO SYMBOL



PERFORMANCE (Cartridge Only)



DESCRIPTION

A screw-in, cartridge-style, hydraulic check valve for use as a blocking or load-holding device.

OPERATION

The **CV10-24** allows flow passage from 2 to 1, while blocking flow from 1 to 2.

The cartridge has a fully guided check which is spring-biased closed until sufficient pressure is applied at 2 to open to 1.

FEATURES

- Low check mass for anti-cavitation applications.
- Hardened seat for long life and low leakage.
- Optional bias springs for back-pressure application flexibility.
- Industry common cavity.

RATINGS

Operating Pressure: 240 bar (3500 psi)

Flow: See Performance Chart

Internal Leakage: 0.25 ml/minute (5 drops/minute) max. at 241 bar (3500 psi)

Crack Pressure Defined: Gauge psi evident at 2 at 16.4 cc/minute (1 cu. in./minute) attained at 1

Standard Bias Springs at Crack: 0.35 bar (5 psi); 1.7 bar (25 psi); 3.8 bar(55 psi)

Temperature: -40° to 120°C (-40°F to 250°F with Buna N seals; -35°C to 204°C (-31°F to 400°F) with Viton seals

Filtration: See page 9.010.1

Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 sus); See Temperature and Oil Viscosity, page 9.060.1

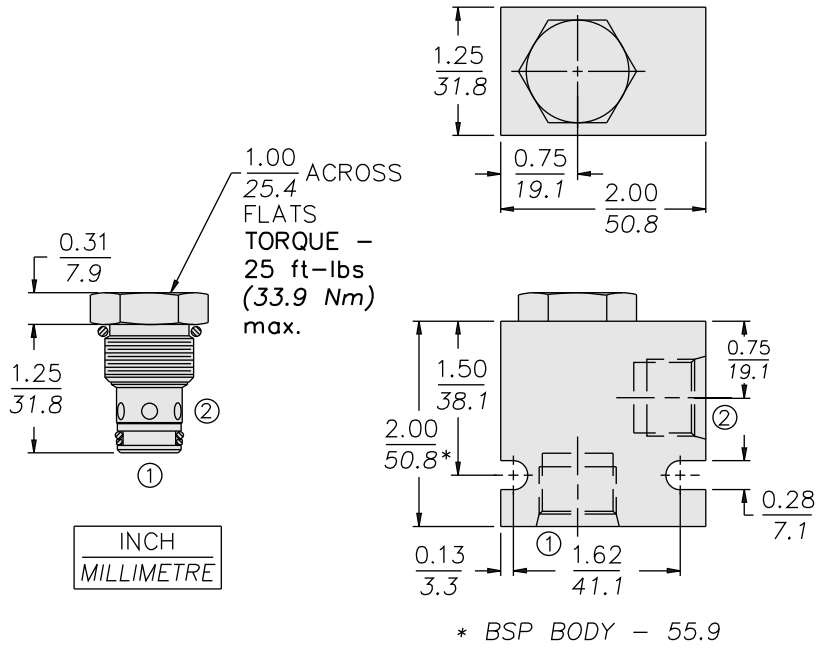
Installation: No restrictions; See page 9.020.1

Cavity: VC10-2; See page 9.110.1

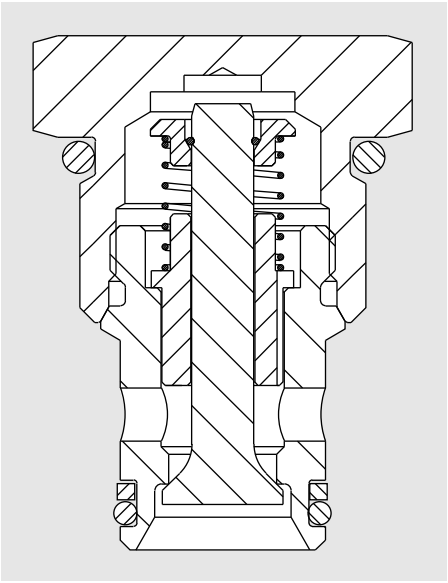
Cavity Tool: CT10-2XX; See page 8.600.1

Seal Kits: SK10-2X-B; See page 8.650.1

DIMENSIONS



* BSP BODY – 55.9



MATERIALS

Cartridge: Weight: 0.9 kg. (0.20 lbs.) Steel with hardened work surfaces. Zinc-plated exposed surfaces. Buna N O-rings and polyester elastomer back-ups standard.

Standard Ported Body: Weight: 0.16 kg. (0.35 lbs.); Anodized high-strength 6061 T6 aluminum alloy, rated to 240 bar (3500 psi). Ductile iron bodies available; dimensions may differ. See page 8.010.1

TO ORDER

CV10-24 - __ - __ - __ __

Porting

Cartridge Only	**0**
SAE 6	**6T**
SAE 8	**8T**
1/4 in. BSP*	**2B**
3/8 in. BSP*	**3B**
1/2 in. BSP*	**4B**

*BSP Body; U.K. Mfr. Only

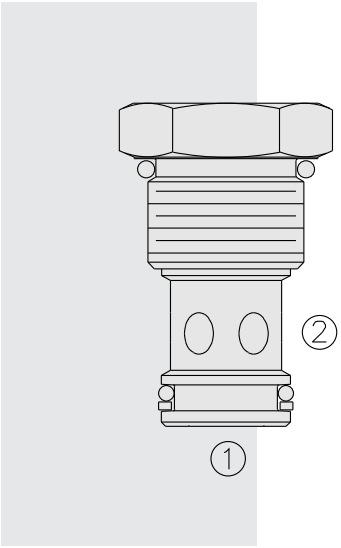
Seals

N Buna N (Std.)
V Viton

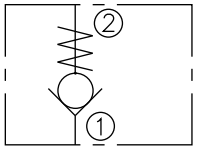
Bias Spring

05 0.34 bar (5 psi)
25 1.7 bar (25 psi)
55 3.8 bar (55 psi)

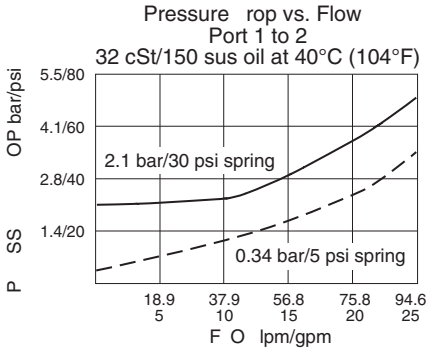
CV12-20 Check Valve



ISO SYMBOL



PERFORMANCE (Cartridge Only)



DESCRIPTION

A screw-in, cartridge-style, hydraulic check valve for use as a blocking or load-holding device.

OPERATION

The **CV12-20** allows flow passage from 1 to 2, while normally blocking oil flow in the opposite direction.

The cartridge has a fully guided check which is spring-biased closed until sufficient pressure is applied at 1 to open to 2.

FEATURES

- Hardened seat for long life and low leakage.
- Optional bias springs for back-pressure application flexibility.
- Fully guided check assembly.
- Cost-effective cavity.

RATINGS

Operating Pressure: 240 bar (3500 psi)

Proof Pressure: 420 bar (6090 psi)

Flow: See Performance Chart

Internal Leakage: 0.25 ml/minute (5 drops/minute) max. at 240 bar (3500 psi)

Crack Pressure Defined: Gauge bar (psi) evident at 1 at 16.4 cc/minute (1 cu. in./minute) attained

Standard Bias Springs at Crack: 0.34 bar (5 psi); 1.7 bar (25 psi); 4.1 bar (60 psi)

Temperature: -40 to 100°C (-40 to 212°F) with Buna N seals;
-26 to 204°C (-15 to 400°F) with fluorocarbon seals;
-54 to 107°C (-56 to 225°F) with polyurethane or urethane seals.

Filtration: See page 9.010.1

Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 sus); See Temperature and Oil Viscosity, page 9.060.1

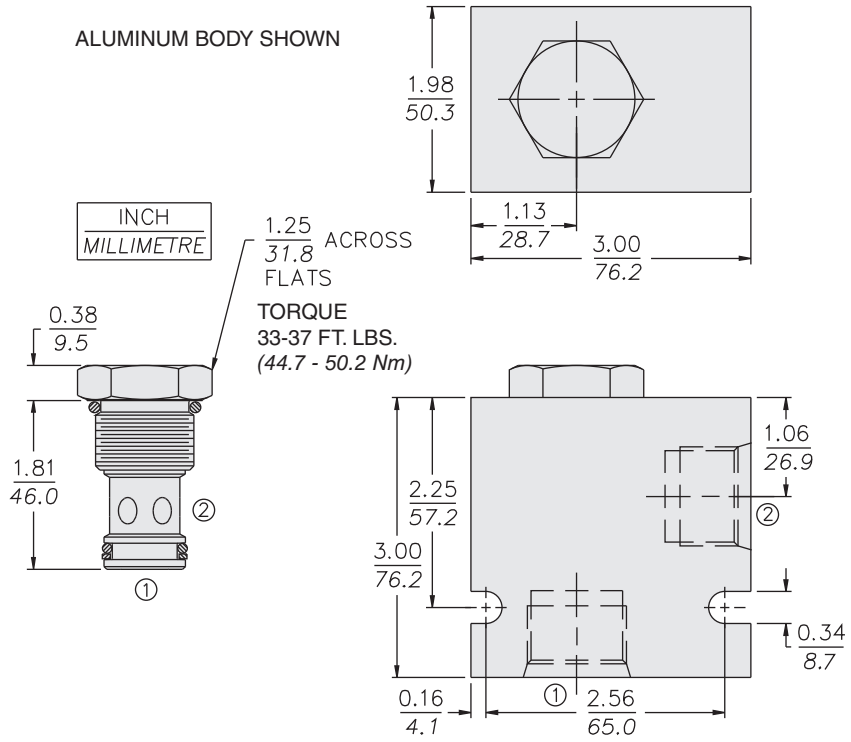
Installation: No restrictions; See page 9.020.1

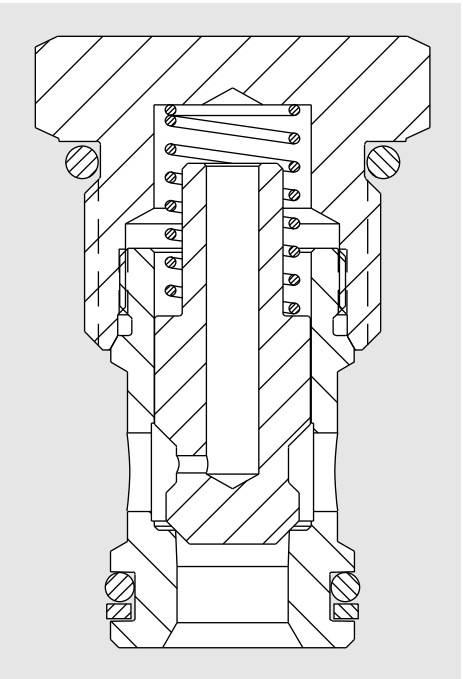
Cavity: VC12-2; See page 9.112.1

Cavity Tool: CT12-2XX; See page 8.600.1

Seal Kit: SK12-2X-T; See page 8.650.1

DIMENSIONS





MATERIALS

Cartridge: Weight: 0.17 kg. (0.38 lbs.) Steel with hardened work surfaces. Zinc-plated exposed surfaces. Buna N O-rings and polyester elastomer back-ups standard.

Standard Ported Body: Weight: 0.57 kg. (1.25 lbs.) Anodized high-strength aluminum alloy, rated to 207 bar (3000 psi). Ductile iron bodies available; dimensions may differ. See page 8.012.1

TO ORDER

CV12-20 - ___ ___ ___ - ___ - ___ ___

Porting

Cartridge Only	**0**
SAE 10	**10T**
SAE 12	**12T**
SAE 16	**16T**

Seals

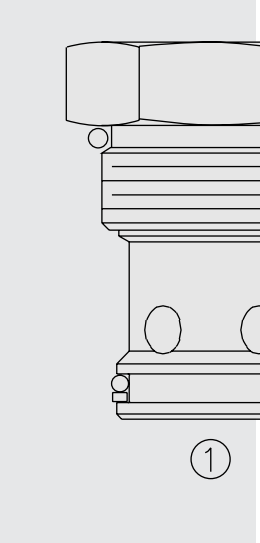
N	Buna N (Std.)
V	Fluorocarbon
HV	High durometer fluorocarbon
P	Polyurethane

Bias Spring*

05	0.34 bar (5 psi)
25	1.7 bar (25 psi)
30	2.1 bar (30 psi)
40	2.8 bar (40 psi)
50	3.4 bar (50 psi)
60	4.1 bar (60 psi)
80	5.5 bar (80 psi)

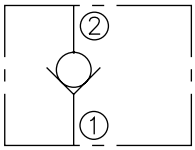
Blue rectangles are links to other catalog pages.

CV16-20 Check Valve

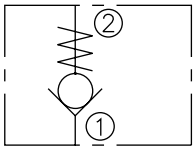


SYMBOLS

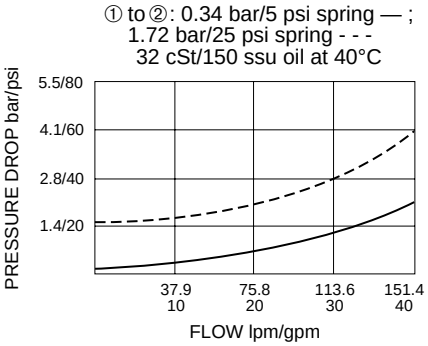
USASI:



ISO:



PERFORMANCE (Cartridge Only)



DESCRIPTION

A screw-in, cartridge-style, hydraulic check valve for use as a blocking or load-holding device.

OPERATION

The **CV16-20** allows flow from ① to ②, while blocking oil flow in the opposite direction.

The cartridge has a fully guided poppet which is spring-biased to closed until sufficient pressure is applied at ① to open to ②.

FEATURES

- Hardened seat for long life and low leakage.
- Optional bias springs for back-pressure application flexibility.
- Industry common cavity.

RATINGS

Operating Pressure: 240 bar (3500 psi)

Proof Pressure: 350 bar (5075 psi)

Flow: See Performance Chart

Internal Leakage: 0.25 cc/minute (5 drops/minute) max. at 240 bar (3500 psi)

Crack Pressure Defined: Gauge pressure evident at ① at 0.95 lpm (0.25 gpm) attained

Standard Bias Springs at Crack: 0.35 bar (5 psi); 1.7 bar (25 psi); 4.1 bar (60 psi)

Temperature: -40 to 120°C

Filtration: See page 9.010.1

Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 sus); See Temperature and Oil Viscosity, page 9.060.1

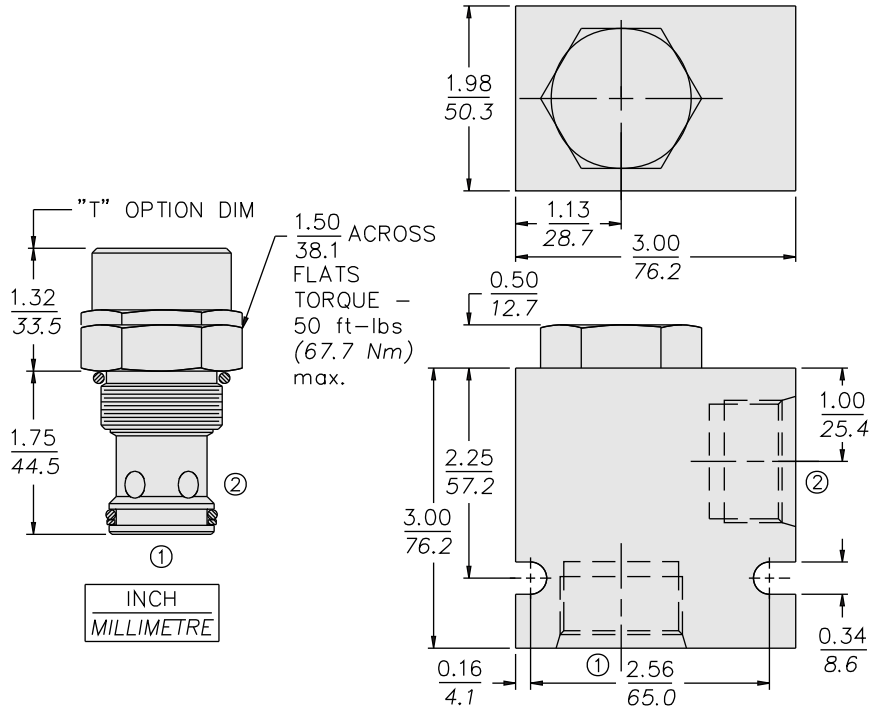
Installation: No restrictions; See page 9.020.1

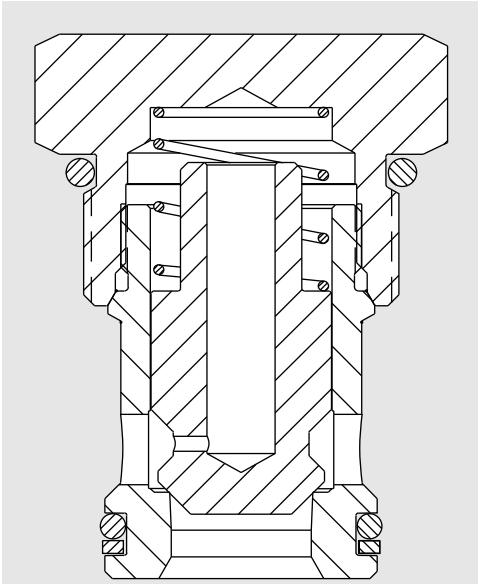
Cavity: VC16-2; See page 9.116.1

Cavity Tool: CT16-2XX; See page 8.600.1

Seal Kit: SK16-2X-T; See page 8.650.1

DIMENSIONS





MATERIALS

Cartridge: Weight: 0.29 kg. (0.63 lbs.) Steel with hardened work surfaces. Zinc-plated exposed surfaces. Buna N O-rings and polyester elastomer back-ups standard.

Standard Ported Body: Weight: 0.57 kg. (1.25 lbs.) Anodized high-strength 6061 T6 aluminum alloy, rated to 207 bar (3000 psi). Ductile iron bodies available; dimensions may differ. See page 8.016.1

TO ORDER

CV16-20 - __ - __ __ __ - __ - __ __

"T" Option* **T**
*Required for 100 or 150 psi spring.

Porting

Cartridge Only	**0**
SAE 12	**12T**
SAE 16	**16T**
3/4 in. BSP*	**6B**
1 in. BSP*	**8B**

*BSP Body; U.K. Mfr. Only

Seals

N	Buna N (Std.)
V	Fluorocarbon

Bias Spring (Crack)

5	0.35 bar (5 psi)
25	1.7 bar (25 psi)
60	4.1 bar (60 psi)
100	6.9 bar (100 psi)*
150	10.3 bar (150 psi)*

*Requires "T" Option