
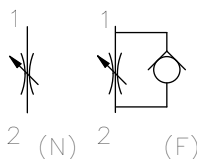
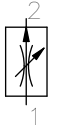
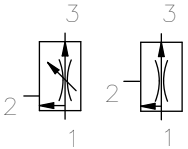

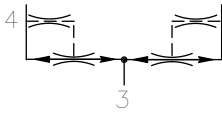

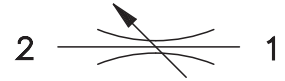


# Flow Control Valves

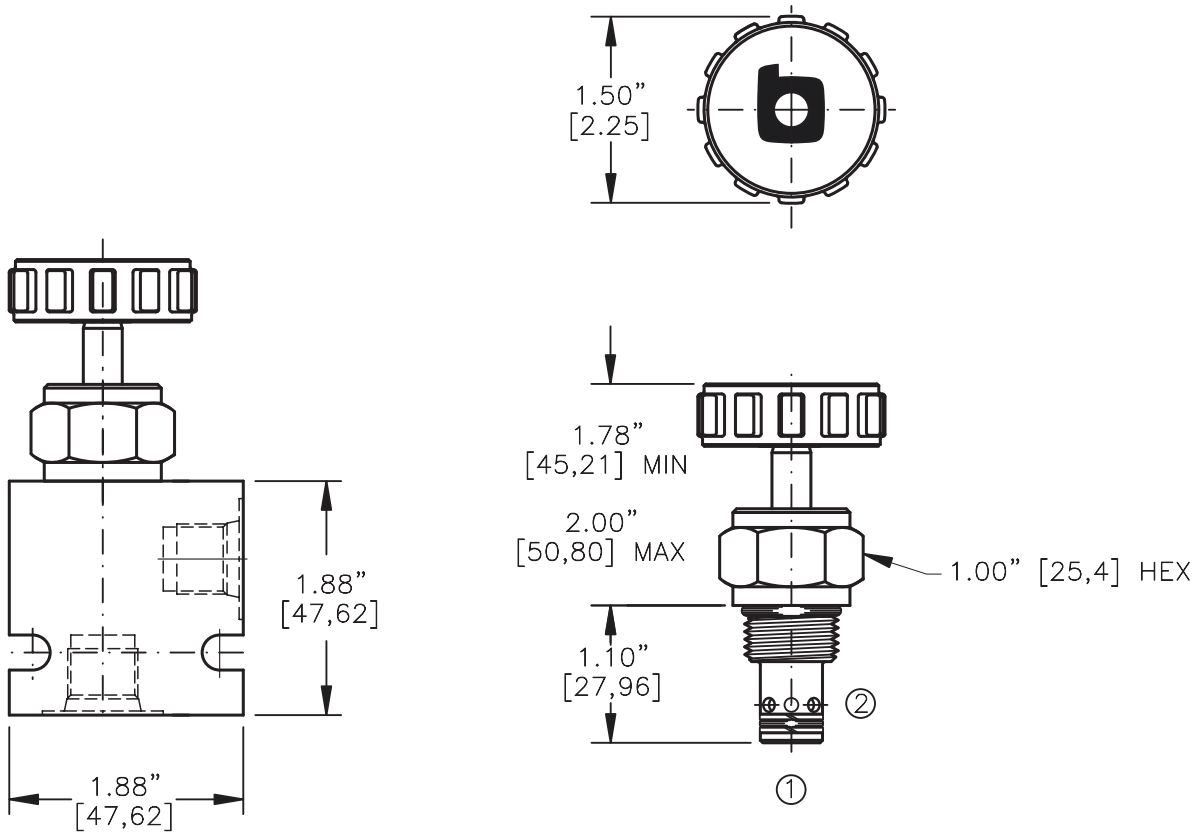
	MODEL	DESCRIPTION	FLOW	CAVITY	PAGE NO.
	NFCV-08 NFCV-10 NFFC-10	BI-DIRECTIONAL NEEDLE VALVE BI-DIRECTIONAL NEEDLE VALVE BI-DIR NEEDLE VALVE FINE ADJUST	10 GPM 18 GPM 8 GPM	C0820 C1020 C1020	2-011.0 2-012.0 2-002.0
	FCVL-08 FCVL-10 FCVL-12	FORWARD GUIDED POPPET TYPE	10 GPM 18 GPM 36 GPM	C0820 C1020 C1220	2-021.0 2-022.0 2-023.0
	PCFC-08 PCFC-10 PCFC-12	PRESS COMP FIXED ORIFICE RESTRICTIVE	6 GPM 12 GPM 24 GPM	C0820 C1020 C1220	2-031.0 2-032.0 2-033.0
	BFCV-08 BFCV-10 BFCV-12 BFCV-16	PRESS COMP FIXED ORIFICE PRIORITY	6 GPM 12 GPM 20 GPM 30 GPM	C0830 C1030 C1230 C1630	2-051.0 2-052.0 2-053.0 2-054.0
	FDCV-08 FDCV-10 FDCV-12	FLOW DIVIDER/COMBINER SPOOL TYPE	8 GPM 16 GPM 32 GPM	C0840 C1040 C1240	2-101.0 2-102.0 2-103.0
	FDCT-08	FLOW DIVIDER/COMBINER TRACTION VALVE	8 GPM	C0840	2-111.0
	MRFC-10	MANUAL ROTARY FLOW CONTROL VALVE	18 GPM	C1020	2-202.0

NEEDLE VALVE BI-DIRECTIONAL,  
POSITIVE SHUT-OFF



TORQUE:

Steel = 35/40 Ft-Lb. [47/54 Nm]  
Aluminum = 25/30 Ft-Lb. [34/41 Nm]



FOR ALUMINUM OR STEEL VALVE HOUSING CONFIGURATIONS SEE PAGE 0-011.1

**NFCV-08-X-X-X**

BASIC

SIZE

08 = 3/4"-16 UNF

SEALS

N = BUNA "N"  
V = VITON

ADJUSTMENT

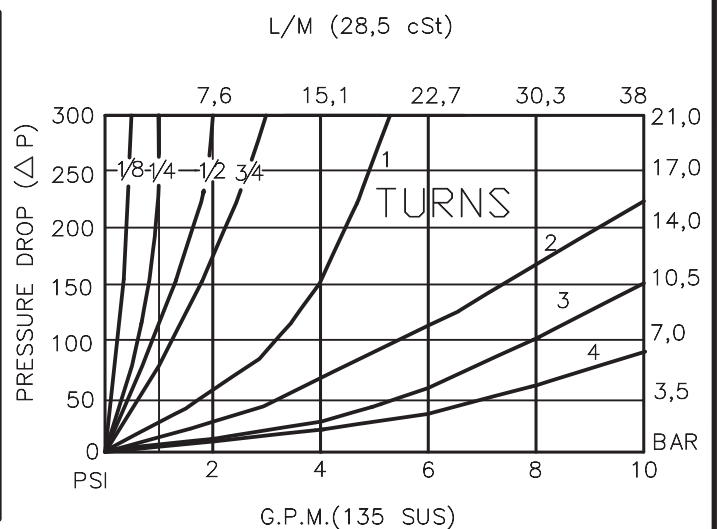
K = HANDKNOB  
H = METAL HANDKNOB  
O = NO KNOB

FOR ADJUSTMENT CONTROL  
OPTIONS SEE PAGE 0-050.0

PORTS

0 = CARTRIDGE ONLY  
02BX = G 1/4" BSPP  
06TX = SAE - #6

"A" - ALUM. HOUSING  
"S" - STEEL HOUSING



**NEEDLE VALVE BI-DIRECTIONAL,  
POSITIVE SHUT-OFF****DESCRIPTION**

This unit is a SCREW IN, cartridge type, non-compensated, adjustable, bi-directional needle flow control valve.

**OPERATIONS**

This valve increases its orifice value from fully closed to fully open in 4 1/2 turns with counterclockwise rotation. Positive shut-off.

**FEATURES AND BENEFITS**

Fine and low effort leakproof adjustment.  
Effective adjustment is linear to 4 1/2 turns.  
All external carbon steel parts are plated for longer life against the elements.  
All cartridge valves are 100% functionally tested.  
Industry common cavity.

**SPECIFICATIONS**

OPERATING PRESSURE: 5,000 PSI [350 Bar]

PROOF PRESSURE: 10,000 PSI [700 Bar]

FLOW: 10.0 GPM [38 l/m] nominal. See performance chart.

INTERNAL LEAKAGE: ZERO drops per minute maximum @ 5,000 PSI (350 Bar)

VALVE HOUSINGS: 2500 PSI [175 Bar] = Aluminum - Anodized.

5000 PSI [350 Bar] = Steel - Unplated.

OPERATING TEMPERATURE: -40° to +250° F. [-40° to +120° C.]

OPERATING MEDIA: All general purpose hydraulic fluids such as  
MIL-H-5606, SAE-#10, SAE-#20, etc.

INSTALLATION: No restrictions.

SEAL KIT: SKN-0822 Buna "N".

SKV-0822 Viton.

WEIGHT: .22 lb [.10 kg] cartridge only.

VALVE CAVITY: #C0820, See Page 0-011.0.

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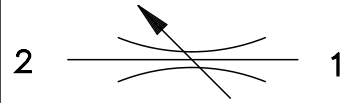
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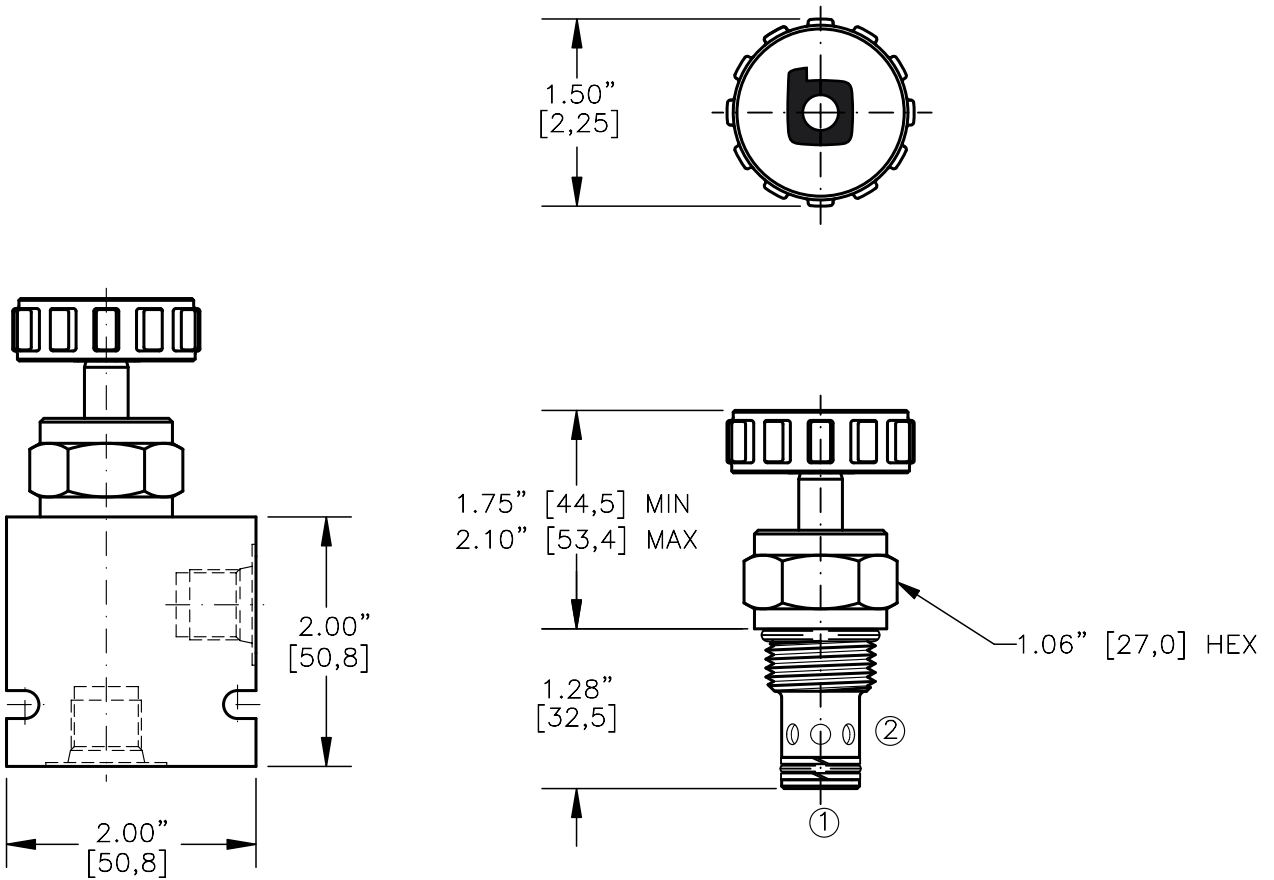
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NEEDLE VALVE BI-DIRECTIONAL,  
POSITIVE SHUT-OFF.

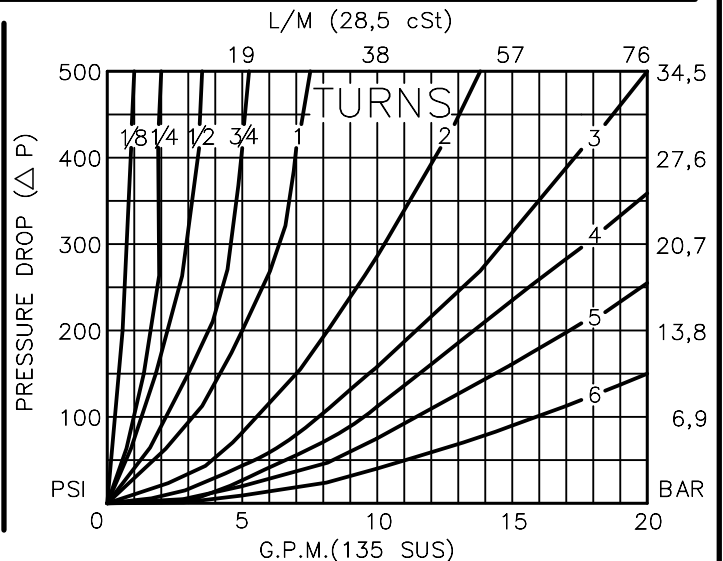
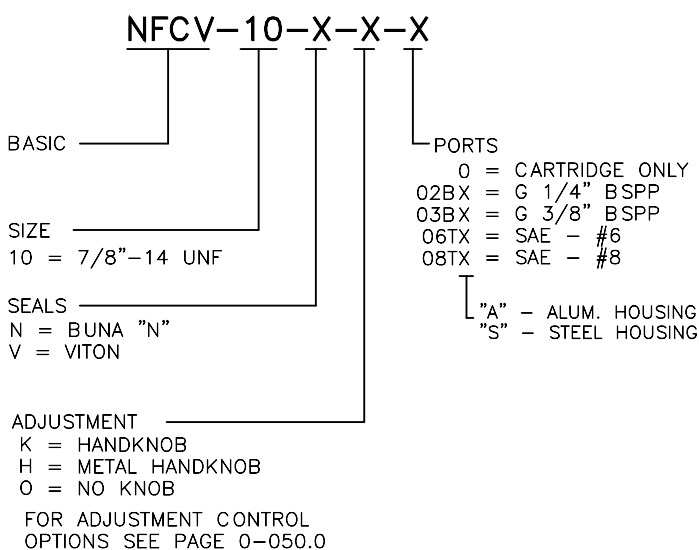


TORQUE:

Steel = 55/60 Ft-Lb. [74/81 Nm]  
Aluminum = 35/40 Ft-Lb. [47/54 Nm]



FOR ALUMINUM OR STEEL VALVE HOUSING CONFIGURATIONS SEE PAGE 0-012.1



**NEEDLE VALVE BI-DIRECTIONAL, POSITIVE SHUT-OFF.****DESCRIPTION**

This unit is a SCREW IN, cartridge type, non-compensated, adjustable, bi-directional needle flow control valve.

**OPERATIONS**

This valve increases its orifice value from fully closed to fully open in 7 turns with counterclockwise rotation.

Positive shut-off.

**FEATURES AND BENEFITS**

Fine and low effort leakproof adjustment.  
Effective adjustment is linear to seven turns.  
All external carbon steel parts are plated for longer life against the elements.  
All cartridge valves are 100% functionally tested.  
Industry common cavity.

**SPECIFICATIONS**

OPERATING PRESSURE: 5,000 PSI [350 Bar]  
PROOF PRESSURE: 10,000 PSI [700 Bar]  
FLOW: 18.0 GPM [68 l/m] nominal. See performance chart.  
INTERNAL LEAKAGE: ZERO drops per minute maximum @ 5,000 PSI (350 Bar)  
VALVE HOUSINGS: 2500 PSI [175 Bar] = Aluminum - Anodized.  
5000 PSI [350 Bar] = Steel - Unplated.  
OPERATING TEMPERATURE: -40° to +250° F. [-40° to +120° C.]  
OPERATING MEDIA: All general purpose hydraulic fluids such as  
MIL-H-5606, SAE-#10, SAE-#20, etc.  
INSTALLATION: No restrictions.  
SEAL KIT: SKN-1022 Buna "N".  
SKV-1022 Viton.  
WEIGHT: .31 lb [.14 kg] cartridge only.  
VALVE CAVITY: #C 1020, See Page 0-012.0.

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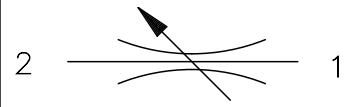
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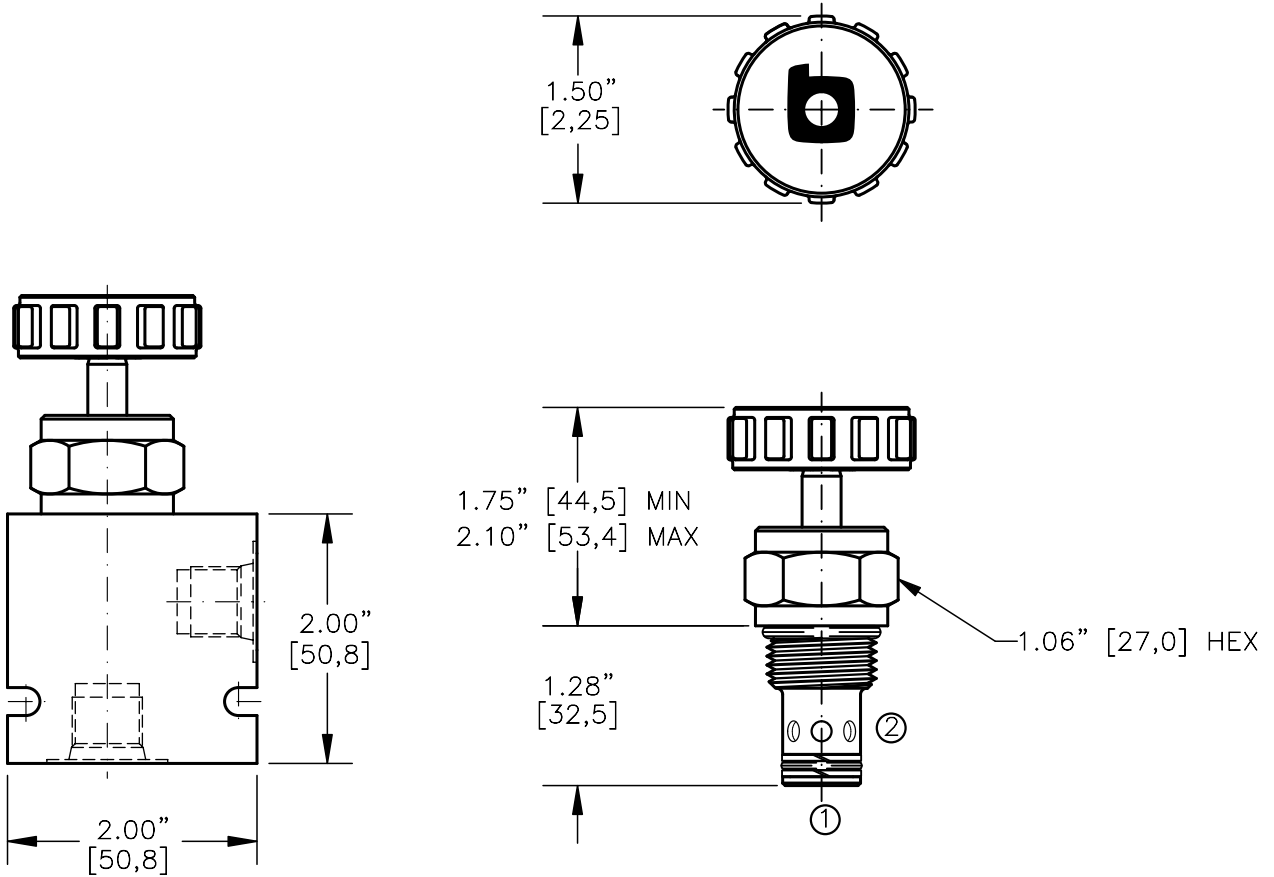
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NEEDLE VALVE BI-DIRECTIONAL,  
POSITIVE SHUT-OFF, FINE ADJUSTMENT

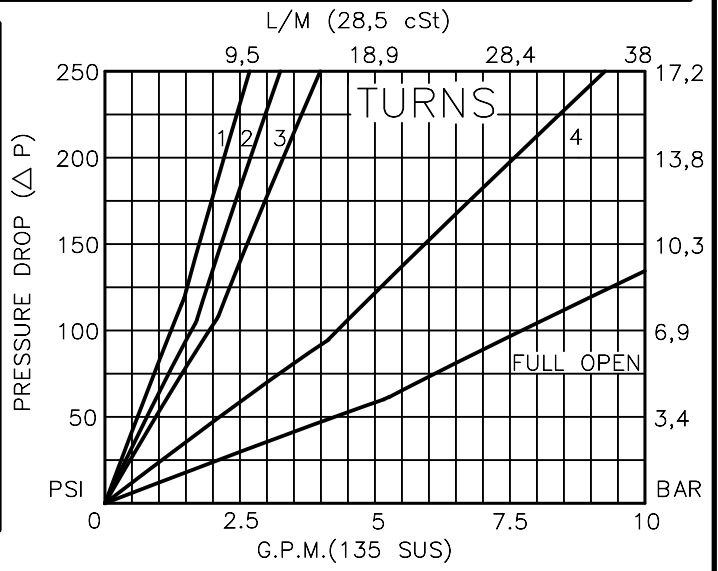
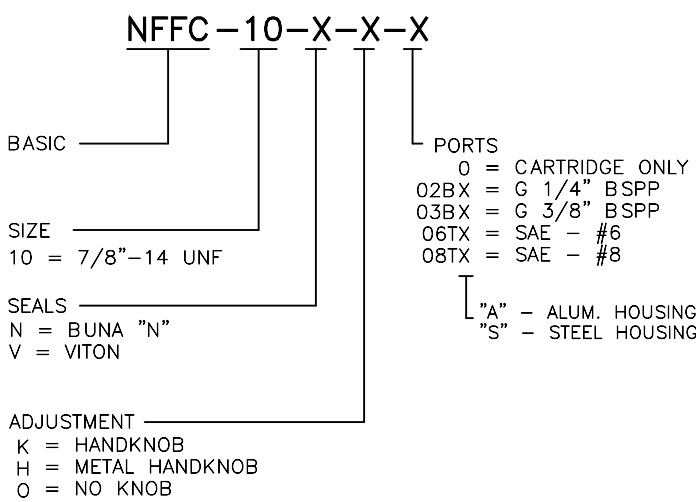


TORQUE:

Steel = 55/60 Ft-Lb. [74/81 Nm]  
Aluminum = 35/40 Ft-Lb. [47/54 Nm]



FOR ALUMINUM OR STEEL VALVE HOUSING CONFIGURATIONS SEE PAGE 0-012.1



## NEEDLE VALVE BI-DIRECTIONAL POSITIVE SHUT-OFF, FINE ADJUSTMENT

### DESCRIPTION

This unit is a SCREW IN, cartridge type, non-compensated, adjustable, bi-directional fine adjustment needle flow control valve.

### OPERATIONS

This valve increases its orifice value from fully closed to fully open in 4 1/2 turns with counterclockwise rotation.

Positive shut-off.

### FEATURES AND BENEFITS

Fine and low effort leakproof adjustment.

Effective adjustment is precisely controlled to 4 1/2 turns.

All external carbon steel parts are plated for longer life against the elements.

All cartridge valves are 100% functionally tested.

Industry common cavity.

### SPECIFICATIONS

OPERATING PRESSURE: 5,000 PSI [350 Bar]

PROOF PRESSURE: 10,000 PSI [700 Bar]

FLOW: 8.0 GPM [30 l/m] nominal. See performance chart.

INTERNAL LEAKAGE: ZERO drops per minute maximum @ 5,000 PSI (350 Bar)

VALVE HOUSINGS: 2500 PSI [175 Bar] = Aluminum - Anodized.

5000 PSI [350 Bar] = Steel - Unplated.

OPERATING TEMPERATURE: -40° to +250° F. [-40° to +120° C.]

OPERATING MEDIA: All general purpose hydraulic fluids such as

MIL-H-5606, SAE-#10, SAE-#20, etc.

INSTALLATION: No restrictions.

SEAL KIT: SKN-1022 Buna "N".

SKV-1022 Viton.

WEIGHT: .31 lb [.14 kg] cartridge only.

VALVE CAVITY: #C1020, See Page 0-012.0.

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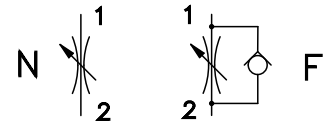
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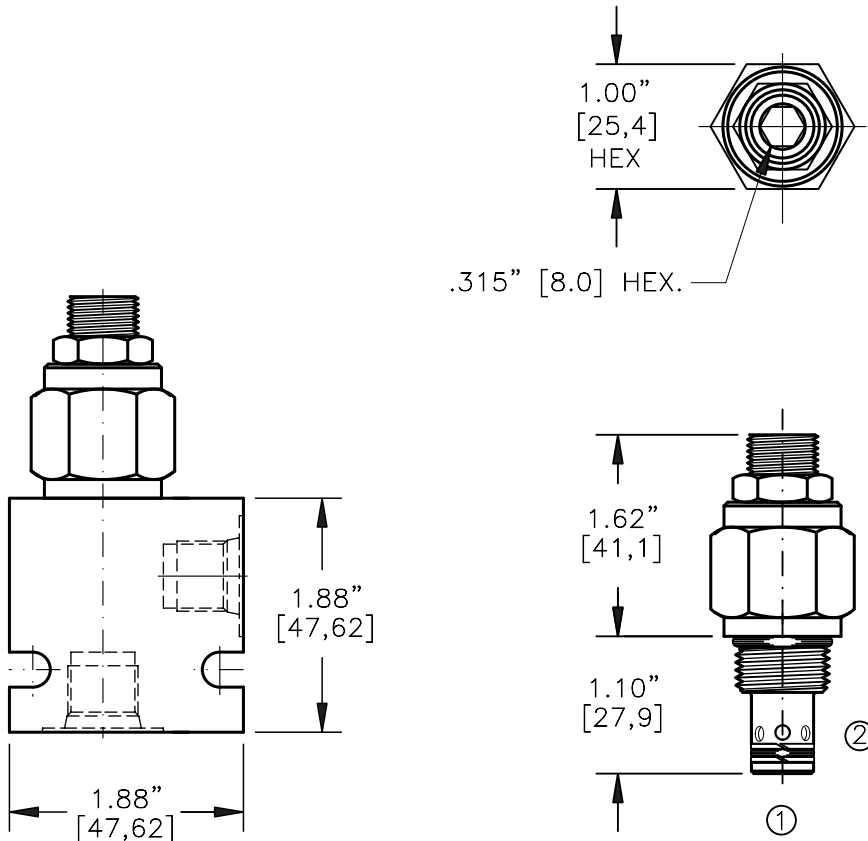
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FLOW CONTROL VALVE WITH OR WITHOUT  
FREE REVERSE FLOW CHECK

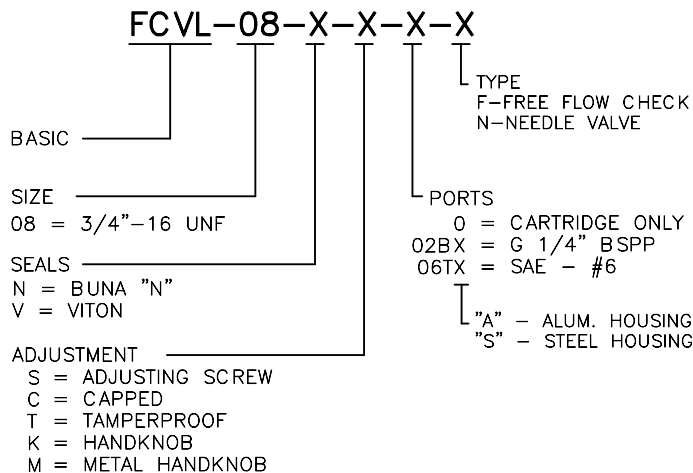


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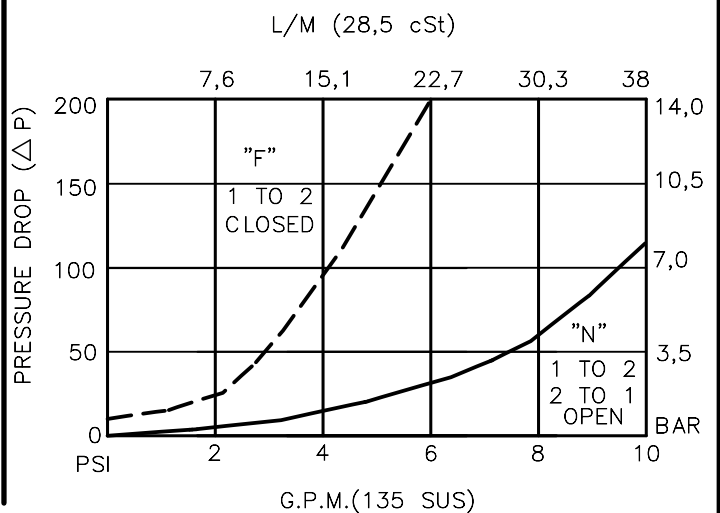
Steel = 35/40 Ft-Lb. [47/54 Nm]  
Aluminum = 25/30 Ft-Lb. [34/41 Nm]



FOR ALUMINUM OR STEEL VALVE HOUSING CONFIGURATIONS SEE PAGE 0-011.1



FOR ADJUSTMENT CONTROL  
OPTIONS SEE PAGE 0-050.0





## FLOW CONTROL VALVE WITH OR WITHOUT FREE REVERSE FLOW CHECK

### DESCRIPTION

This unit is a SCREW IN, cartridge type, adjustable, poppet type, hydraulic flow control valve with or without free reverse flow check.

### OPERATIONS

This valve increases its orifice value from fully closed to fully open with counter-clockwise rotation.

### FEATURES AND BENEFITS

Desired settings can be locked down.  
Valve adjustment is difficult while subjected to high pressure.  
Valve is available with a screw, tamperproof, capped or knob adjustment.  
All external carbon steel parts are plated for longer life against the elements.  
All cartridge valves are 100% functionally tested.  
Industry common cavity.

### SPECIFICATIONS

OPERATING PRESSURE: 5,000 PSI [350 Bar]  
PROOF PRESSURE: 10,000 PSI [700 Bar]  
FLOW: 10.0 GPM [38,0 l/m] nominal. See performance chart.  
INTERNAL LEAKAGE: 5 drops per minute maximum @ 5,000 PSI (350 Bar)  
VALVE HOUSINGS: 2500 PSI [175 Bar] = Aluminum – Anodized.  
5000 PSI [350 Bar] = Steel – Unplated.  
OPERATING TEMPERATURE: -40° to +250° F. [-40° to +120° C.]  
OPERATING MEDIA: All general purpose hydraulic fluids such as  
MIL-H-5606, SAE-#10, SAE-#20, etc.  
INSTALLATION: No restrictions.  
SEAL KIT: SKN-0822 Buna "N".  
SKV-0822 Viton.  
WEIGHT: .30 lb [.14 kg] cartridge only.  
VALVE CAVITY: #C0820, See Page 0-011.0.

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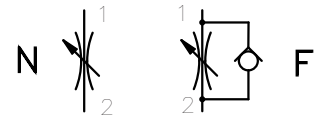
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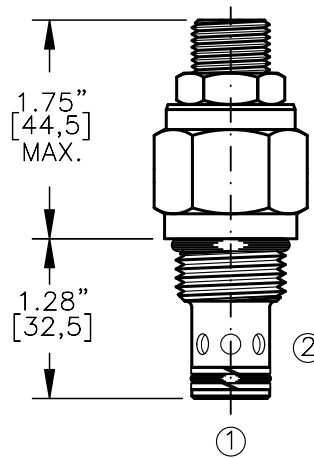
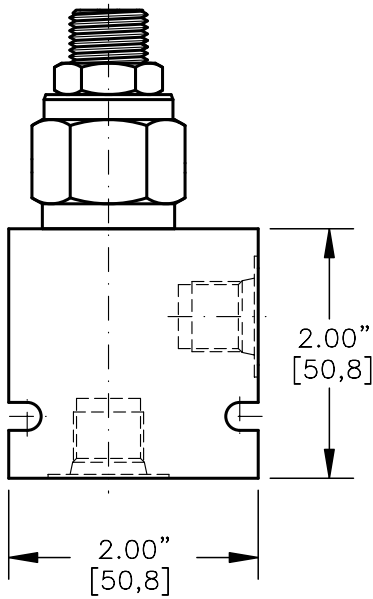
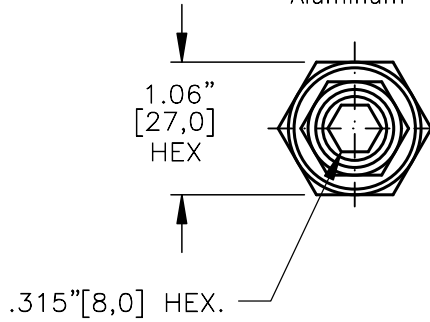
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FLOW CONTROL VALVE WITH OR WITHOUT  
FREE REVERSE FLOW CHECK



TORQUE:

Steel = 55/60 Ft-Lb. [74/81 Nm]  
Aluminum = 35/40 Ft-Lb. [47/54 Nm]

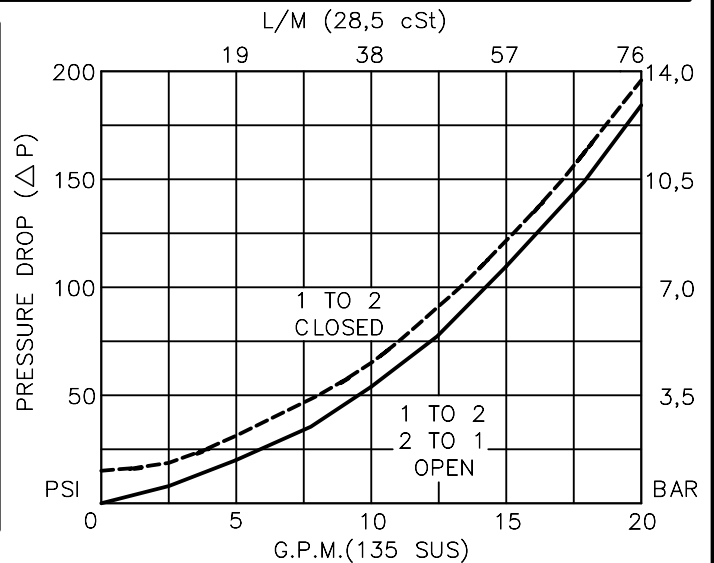


FOR ALUMINUM OR STEEL VALVE HOUSING CONFIGURATIONS SEE PAGE 0-012.1

**FCVL-10-X-X-X-X**

- BASIC \_\_\_\_\_
- SIZE \_\_\_\_\_  
10 = 7/8"-14 UNF
- SEALS \_\_\_\_\_  
N = BUNA "N"  
V = VITON
- ADJUSTMENT \_\_\_\_\_  
S = ADJUSTING SCREW  
C = CAPPED  
T = TAMPERPROOF  
K = HANDKNOB  
M = METAL HANDKNOB
- TYPE \_\_\_\_\_  
F - FREE FLOW CHECK  
N - NEEDLE VALVE
- PORTS \_\_\_\_\_  
0 = CARTRIDGE ONLY  
02BX = G 1/4" BSPP  
03BX = G 3/8" BSPP  
06TX = SAE - #6  
08TX = SAE - #8
- "A" - ALUM. HOUSING  
"S" - STEEL HOUSING

FOR ADJUSTMENT CONTROL  
OPTIONS SEE PAGE 0-050.0



## FLOW CONTROL VALVE WITH OR WITHOUT FREE REVERSE FLOW CHECK

### DESCRIPTION

This unit is a SCREW IN, cartridge type, adjustable, poppet type, hydraulic flow control valve with or without free reverse flow check.

### OPERATIONS

This valve increases its orifice value from fully closed to fully open with counter-clockwise rotation.

### FEATURES AND BENEFITS

Desired settings can be locked down.  
Valve adjustment is difficult while subjected to high pressure.  
Valve is available with a screw, tamperproof, capped or knob adjustment.  
All external carbon steel parts are plated for longer life against the elements.  
All cartridge valves are 100% functionally tested.  
Industry common cavity.

### SPECIFICATIONS

OPERATING PRESSURE: 5,000 PSI [350 Bar]  
PROOF PRESSURE: 10,000 PSI [700 Bar]  
FLOW: 18.0 GPM [68 l/m] nominal. See performance chart.  
INTERNAL LEAKAGE: 5 drops per minute maximum @ 5,000 PSI (350 Bar)  
VALVE HOUSINGS: 2500 PSI [175 Bar] = Aluminum – Anodized.  
5000 PSI [350 Bar] = Steel – Unplated.  
OPERATING TEMPERATURE: -40° to +250° F. [-40° to +120° C.]  
OPERATING MEDIA: All general purpose hydraulic fluids such as MIL-H-5606, SAE-#10, SAE-#20, etc.  
INSTALLATION: No restrictions.  
SEAL KIT: SKN-1022 Buna "N".  
SKV-1022 Viton.  
WEIGHT: .38 lb [.17 kg] cartridge only.  
VALVE CAVITY: #C1020, See Page 0-012.0.

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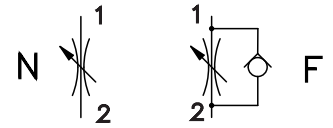
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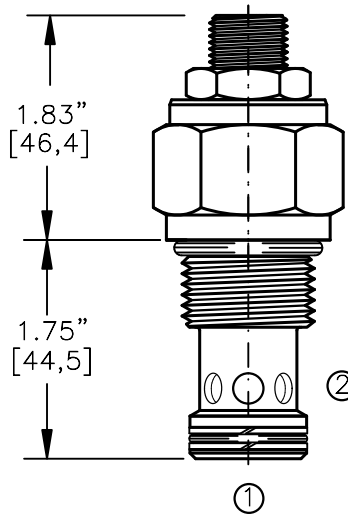
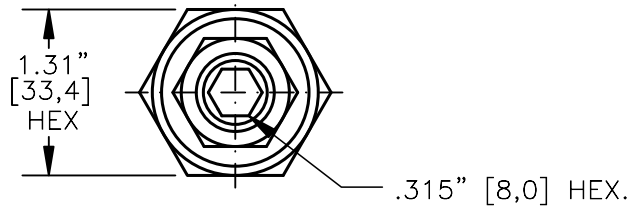
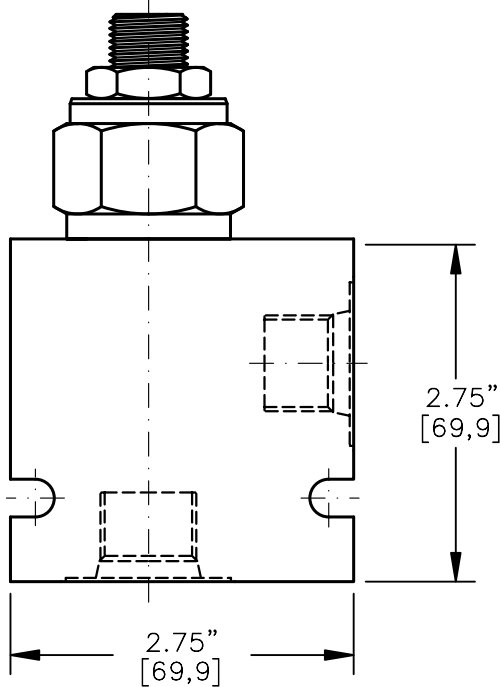
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FLOW CONTROL VALVE WITH OR WITHOUT FREE REVERSE FLOW CHECK



TORQUE:

Steel = 70/75 Ft-Lb. [95/102 Nm]  
Aluminum = 55/60 Ft-Lb. [74/81 Nm]

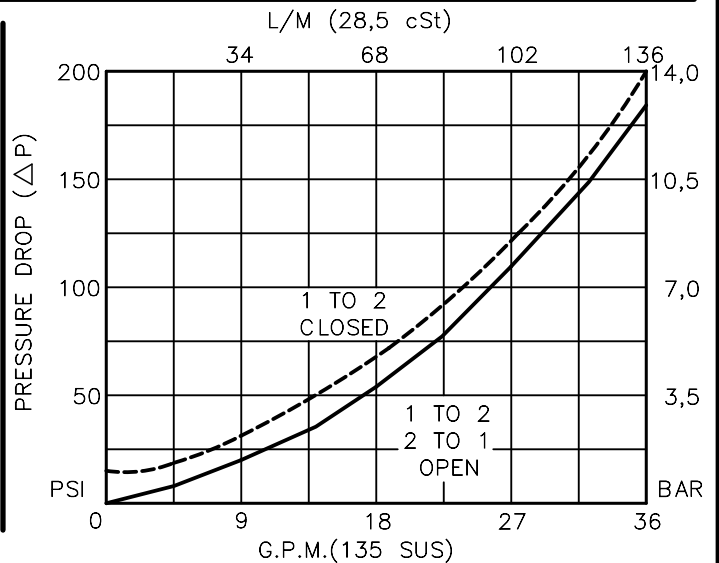


FOR ALUMINUM OR STEEL VALVE HOUSING CONFIGURATIONS SEE PAGE 0-013.1

**FCVL-12-X-X-X-X**

- BASIC \_\_\_\_\_
- SIZE \_\_\_\_\_  
12 = 1.062-12 UNF
- SEALS \_\_\_\_\_  
N = BUNA "N"  
V = VITON
- ADJUSTMENT \_\_\_\_\_  
S = ADJUSTING SCREW  
C = CAPPED  
T = TAMPERPROOF  
K = HANDKNOB  
M = METAL HANDKNOB
- TYPE \_\_\_\_\_  
F - FREE FLOW CHECK  
N - NEEDLE VALVE
- PORTS \_\_\_\_\_  
0 = CARTRIDGE ONLY  
04BX = G 1/2" BSPP  
06BX = G 3/4" BSPP  
10TX = SAE - #10  
12TX = SAE - #12
- \_\_\_\_\_ "A" - ALUM. HOUSING  
\_\_\_\_\_ "S" - STEEL HOUSING

FOR ADJUSTMENT CONTROL  
OPTIONS SEE PAGE 0-050.0



## FLOW CONTROL VALVE WITH OR WITHOUT FREE REVERSE FLOW CHECK

### DESCRIPTION

This unit is a SCREW IN, cartridge type, adjustable, poppet type, hydraulic flow control valve with or without free reverse flow check.

### OPERATIONS

This valve increases its orifice value from fully closed to fully open with counter-clockwise rotation.

### FEATURES AND BENEFITS

Desired settings can be locked down.  
Valve adjustment is difficult while subjected to high pressure.  
Valve is available with a screw, tamperproof, capped or knob adjustment.  
All external carbon steel parts are plated for longer life against the elements.  
All cartridge valves are 100% functionally tested.  
Industry common cavity.

### SPECIFICATIONS

OPERATING PRESSURE: 5,000 PSI [350 Bar]

PROOF PRESSURE: 10,000 PSI [700 Bar]

FLOW: 36.0 GPM [136 l/m] nominal. See performance chart.

INTERNAL LEAKAGE: 5 drops per minute maximum @ 5,000 PSI (350 Bar)

VALVE HOUSINGS: 2500 PSI [175 Bar] = Aluminum – Anodized.

5000 PSI [350 Bar] = Steel – Unplated.

OPERATING TEMPERATURE: -40° to +250° F. [-40° to +120° C.]

OPERATING MEDIA: All general purpose hydraulic fluids such as  
MIL-H-5606, SAE-#10, SAE-#20, etc.

INSTALLATION: No restrictions.

SEAL KIT: SKN-1222 Buna "N".

SKV-1222 Viton.

WEIGHT: .63 lb [.25 kg] cartridge only.

VALVE CAVITY: #C1220, See Page 0-013.0.

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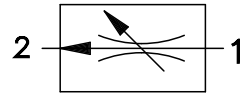
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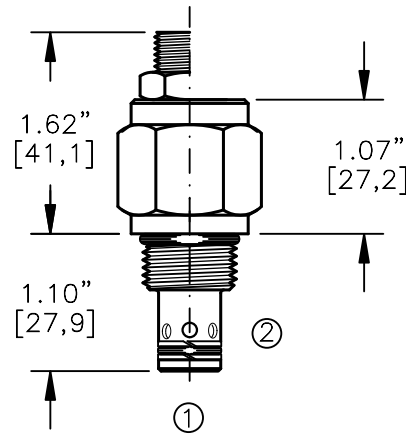
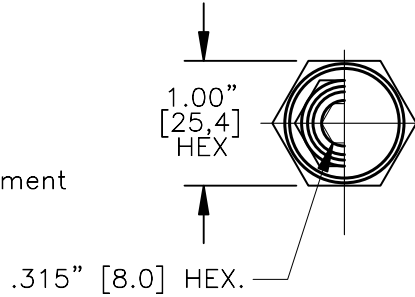
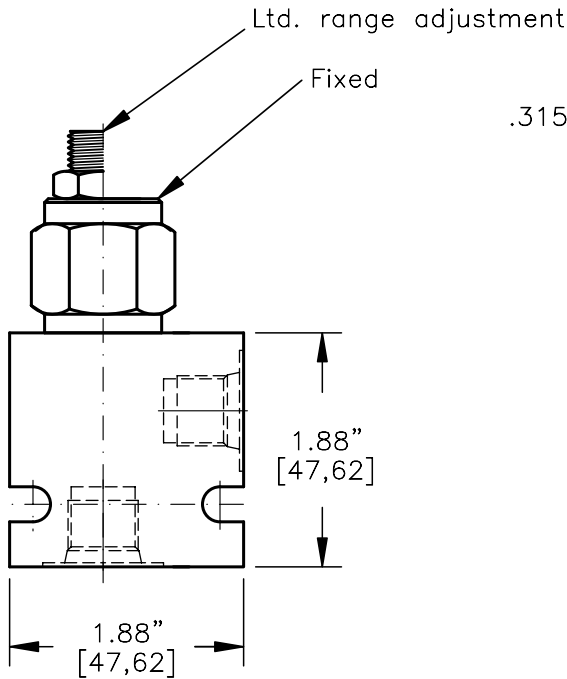
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FLOW CONTROL VALVE PRESSURE COMPENSATED,  
FIXED ORIFICE, RESTRICTIVE TYPE



TORQUE:

Steel = 35/40 Ft-Lb. [47/54 Nm]  
Aluminum = 25/30 Ft-Lb. [34/41 Nm]



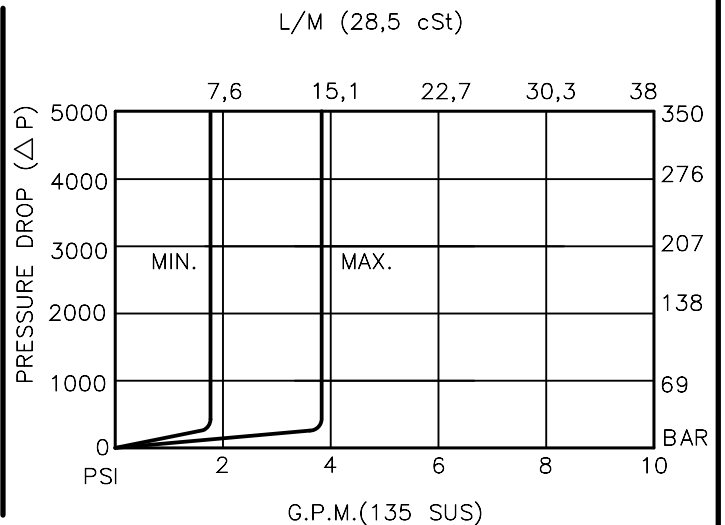
FOR ALUMINUM OR STEEL VALVE HOUSING CONFIGURATIONS SEE PAGE 0-011.1

**PCFC-08-X-X-X-XX**

- BASIC
- SIZE  
08 = 3/4"-16 UNF
- SEALS  
N = BUNA "N"  
V = VITON
- ADJUSTMENT  
F = FIXED (FACTORY SET)  
S = ADJUSTING SCREW  
C = CAPPED  
T = TAMPERPROOF  
K = HANDKNOB  
M = METAL HANDKNOB

- REGULATED FLOW TO BE SPECIFIED  
EXAMPLE  
1.5=1.5 GPM (5,7l/m)
- PORTS  
0 = CARTRIDGE ONLY  
02BX = G 1/4" BSPP  
06TX = SAE - #6
- "A" - ALUM. HOUSING  
"S" - STEEL HOUSING

FOR ADJUSTMENT CONTROL  
OPTIONS SEE PAGE 0-050.0



**FLOW CONTROL VALVE PRESSURE COMPENSATED,  
FIXED ORIFICE, RESTRICTIVE TYPE.****DESCRIPTION – FIXED**

This unit is a SCREW IN, cartridge type, pressure compensated, fixed orifice, restrictive hydraulic flow control valve.

FLOW RANGE: 0.2 TO 4.0 GPM [0,8 TO 15,1 L

**DESCRIPTION – ADJUSTABLE**

This unit is a SCREW IN, cartridge type, pressure compensated, fixed orifice, 30% flow adjustment, restrictive hydraulic flow control valve.

FLOW RANGE: 0.2 TO 6.0 GPM [0,8 TO 22,7 L

Flow adjustment under pressure is difficult.

**OPERATIONS**

Valve maintains constant flow from port 1 to 2 regardless of system pressure or load and non-compensated flow from port 2 to 1 and goes thru the control orifice.

**FEATURES AND BENEFITS**

Valve is available with a screw, tamperproof, capped or knob adjustment. All external carbon steel parts are plated for longer life against the elements. All cartridge valves are 100% functionally tested. Industry common cavity.

**SPECIFICATIONS**

OPERATING PRESSURE: 5,000 PSI (350 Bar)

PROOF PRESSURE: 10,000 PSI (700 Bar)

FLOW: 0.2 to 6.0 GPM [0,8 to 22,7 l/m] nominal. See performance chart.

FLOW ACCURACY:

0.2 to 1.5 GPM [ 0,9 to 6,0 L??– 10.0%

1.5 to 6.0 GPM [ 6,0 to 22,7 L??– 7.5%

VALVE HOUSINGS: 2500 PSI [175 Bar] = Aluminum – Anodized.

5000 PSI [350 Bar] = Steel – Unplated.

OPERATING TEMPERATURE: -40° to +250° F. [-40° to +120° C.]

OPERATING MEDIA: All general purpose hydraulic fluids such as MIL-H-5606, SAE-#10, SAE-#20, etc.

INSTALLATION: No restrictions.

SEAL KIT: SKN-0822 Buna "N".

SKV-0822 Viton.

WEIGHT: .26 lb [.12 kg] cartridge only.

VALVE CAVITY: #C0820, See Page 0-011.0.

info.el@bucherhydraulics.com

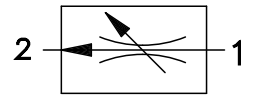
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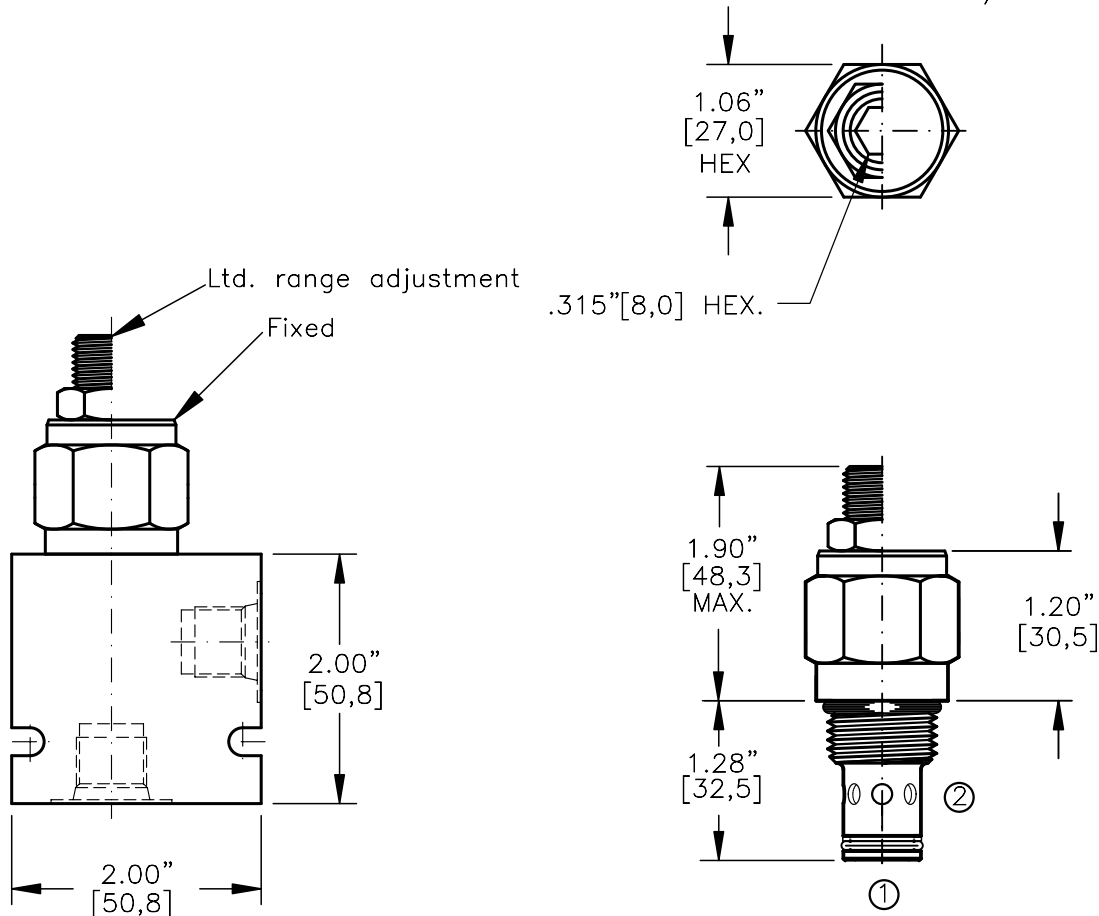
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FLOW CONTROL VALVE PRESSURE COMPENSATED,  
FIXED ORIFICE, RESTRICTIVE TYPE.



TORQUE:

Steel = 55/60 Ft-Lb. [74/81 Nm]  
Aluminum = 35/40 Ft-Lb. [47/54 Nm]

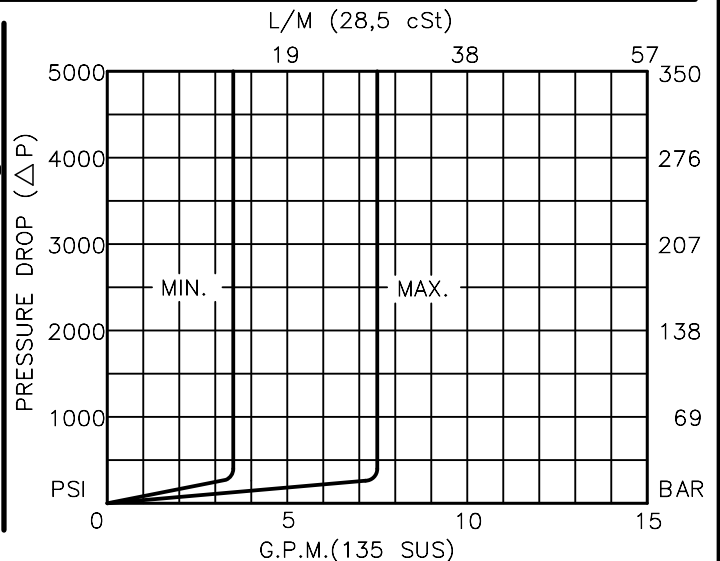


FOR ALUMINUM OR STEEL VALVE HOUSING CONFIGURATIONS SEE PAGE 0-012.1

**PCFC-10-X-X-X-XX**

- BASIC
- SIZE  
10 = 7/8"-14 UNF
- SEALS  
N = BUNA "N"  
V = VITON
- ADJUSTMENT  
F = FIXED (FACTORY SET)  
S = ADJUSTING SCREW  
C = CAPPED  
T = TAMPERPROOF  
K = HANDKNOB  
M = METAL HANDKNOB
- REGULATED FLOW TO BE SPECIFIED  
EXAMPLE  
1.5=1.5 GPM (5,7l/m)
- PORTS  
0 = CARTRIDGE ONLY  
02BX = G 1/4" BSPP  
03BX = G 3/8" BSPP  
06TX = SAE - #6  
08TX = SAE - #8
- "A" - ALUM. HOUSING  
"S" - STEEL HOUSING

FOR ADJUSTMENT CONTROL  
OPTIONS SEE PAGE 0-050.0





**FLOW CONTROL VALVE PRESSURE COMPENSATED,  
FIXED ORIFICE, RESTRICTIVE TYPE.****DESCRIPTION – FIXED**

This unit is a SCREW IN, cartridge type, pressure compensated, fixed orifice, restrictive hydraulic flow control valve.

FLOW RANGE: 0.2 TO 8.0 GPM [0,8 TO 30,0 L

**DESCRIPTION – ADJUSTABLE**

This unit is a SCREW IN, cartridge type, pressure compensated, fixed orifice, 30% flow adjustment, restrictive hydraulic flow control valve.

FLOW RANGE: 0.2 TO 12.0 GPM [0,8 TO 45,0 L

Flow adjustment under pressure is difficult.

**OPERATIONS**

Valve maintains constant flow from port 1 to 2 regardless of system pressure or load and non-compensated flow from port 2 to 1 and goes thru the control orifice.

**FEATURES AND BENEFITS**

Valve is available with a screw, tamperproof, capped or knob adjustment. All external carbon steel parts are plated for longer life against the elements. All cartridge valves are 100% functionally tested. Industry common cavity.

**SPECIFICATIONS**

OPERATING PRESSURE: 5,000 PSI (350 Bar)

PROOF PRESSURE: 10,000 PSI (700 Bar)

FLOW: 0.2 to 12.0 GPM [0,8 to 45,0 l/m] nominal. See performance chart.

FLOW ACCURACY:

0.2 to 1.5 GPM [ 0,9 to 6,0 L??– 10.0%

1.5 to 4.0 GPM [ 6,0 to 15,0 L??– 7.5%

4.0 to 12.0 GPM [15,0 to 45,0 L??– 5.0%

VALVE HOUSINGS: 2500 PSI [175 Bar] = Aluminum – Anodized.

5000 PSI [350 Bar] = Steel – Unplated.

OPERATING TEMPERATURE: -40° to +250° F. [-40° to +120° C.]

OPERATING MEDIA: All general purpose hydraulic fluids such as MIL-H-5606, SAE-#10, SAE-#20, etc.

INSTALLATION: No restrictions.

SEAL KIT: SKN-1021 Buna "N".

SKV-1021 Viton.

WEIGHT: .38 lb [.17 kg] cartridge only.

VALVE CAVITY: #C1020, See Page 0-012.0.

info.el@bucherhydraulics.com

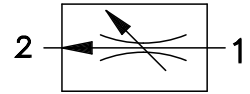
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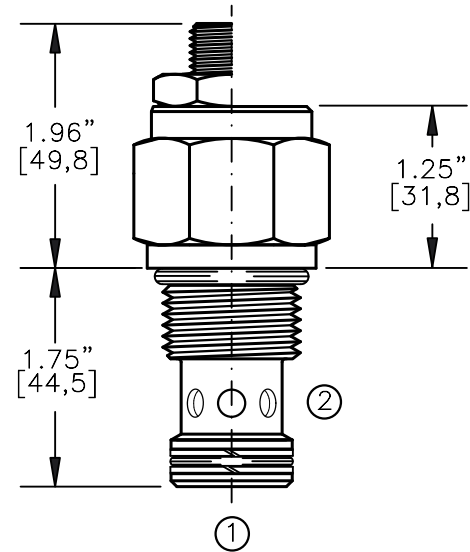
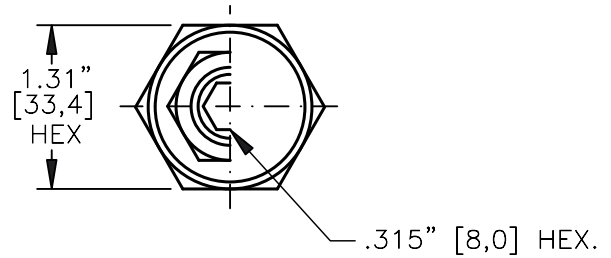
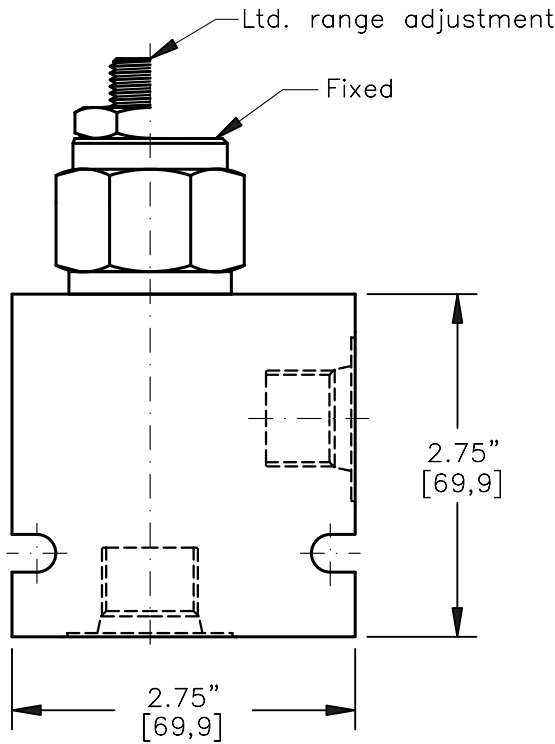
**FLOW CONTROL VALVE PRESSURE COMPENSATED,  
FIXED ORIFICE, RESTRICTIVE TYPE.**



**TORQUE:**

Steel = 70/75 Ft-Lb. [95/102 Nm]

Aluminum = 55/60 Ft-Lb. [74/81 Nm]



FOR ALUMINUM OR STEEL VALVE HOUSING CONFIGURATIONS SEE PAGE 0-013.1

**PCFC-12-X-X-X-XX**

BASIC

SIZE

12 = 1.062"-12UNF

SEALS

N = BUNA "N"

V = VITON

ADJUSTMENT

F = FIXED (FACTORY SET)

S = ADJUSTING SCREW

C = CAPPED

T = TAMPERPROOF

REGULATED FLOW

TO BE SPECIFIED

EXAMPLE

1.5=1.5 GPM (5,7l/m)

PORTS

0 = CARTRIDGE ONLY

04BX = G 1/2" BSPP

06BX = G 3/4" BSPP

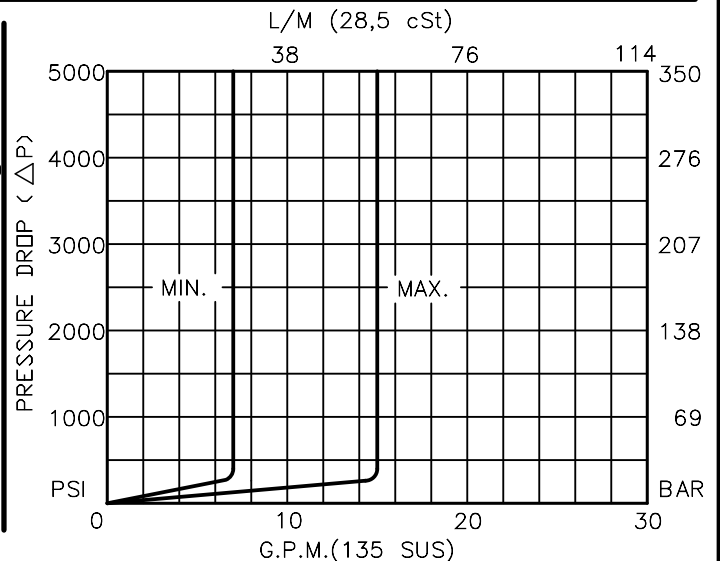
10TX = SAE - #10

12TX = SAE - #12

"A" - ALUM. HOUSING

"S" - STEEL HOUSING

FOR ADJUSTMENT CONTROL  
OPTIONS SEE PAGE 0-050.0



**FLOW CONTROL VALVE PRESSURE COMPENSATED,  
FIXED ORIFICE, RESTRICTIVE TYPE.****DESCRIPTION – FIXED**

This unit is a SCREW IN, cartridge type, pressure compensated, fixed orifice, restrictive hydraulic flow control valve.

FLOW RANGE: 0.2 TO 16.0 GPM [0,8 TO 60,0 L

**DESCRIPTION – ADJUSTABLE**

This unit is a SCREW IN, cartridge type, pressure compensated, fixed orifice, 30% flow adjustment, restrictive hydraulic flow control valve.

FLOW RANGE: 0.2 TO 24.0 GPM [0,8 TO 90,0 L

Flow adjustment under pressure is difficult.

**OPERATIONS**

Valve maintains constant flow from port 1 to 2 regardless of system pressure or load and non-compensated flow from port 2 to 1 and goes thru the control orifice.

**FEATURES AND BENEFITS**

Valve is available with a screw, tamperproof, capped or knob adjustment. All external carbon steel parts are plated for longer life against the elements. All cartridge valves are 100% functionally tested. Industry common cavity.

**SPECIFICATIONS**

OPERATING PRESSURE: 5,000 PSI (350 Bar)

PROOF PRESSURE: 10,000 PSI (700 Bar)

FLOW: 0.2 to 24.0 GPM [0,8 to 90,0 l/m] nominal. See performance chart.

FLOW ACCURACY:

0.2 to 3.0 GPM [ 0,9 to 12,0 L??– 10.0%

3.0 to 8.0 GPM [12,0 to 30,0 L??– 7.5%

8.0 to 24.0 GPM [30,0 to 90,0 L??– 5.0%

VALVE HOUSINGS: 2500 PSI [175 Bar] = Aluminum – Anodized.

5000 PSI [350 Bar] = Steel – Unplated.

OPERATING TEMPERATURE: -40° to +250° F. [-40° to +120° C.]

OPERATING MEDIA: All general purpose hydraulic fluids such as MIL-H-5606, SAE-#10, SAE-#20, etc.

INSTALLATION: No restrictions.

SEAL KIT: SKN-1222 Buna "N".

SKV-1222 Viton.

WEIGHT: .38 lb [.17 kg] cartridge only.

VALVE CAVITY: #C1220, See Page 0-013.0.

info.el@bucherhydraulics.com

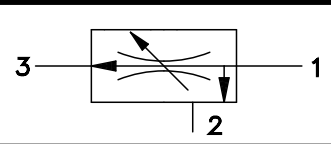
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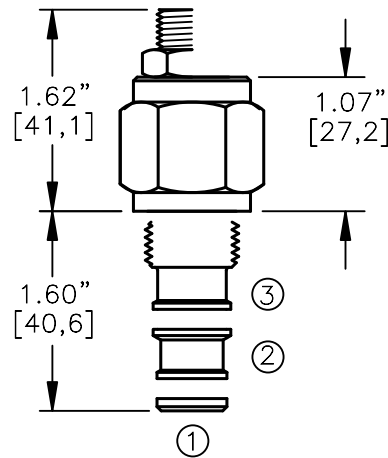
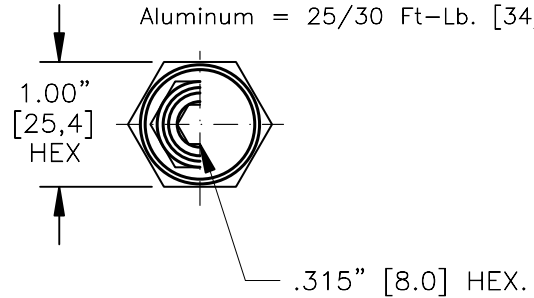
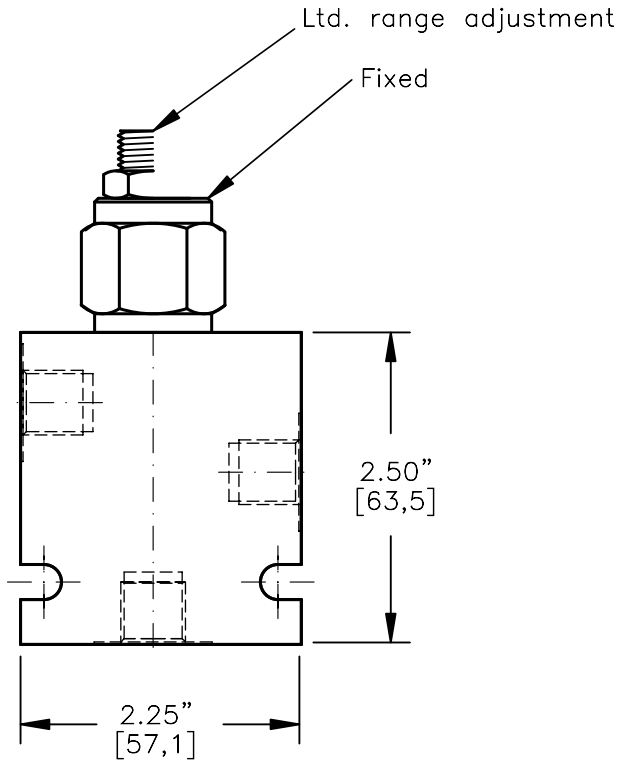
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**FLOW CONTROL VALVE PRESSURE COMPENSATED,  
FIXED ORIFICE, PRIORITY TYPE.**



TORQUE:

Steel = 35/40 Ft-Lb. [47/54 Nm]  
Aluminum = 25/30 Ft-Lb. [34/41 Nm]



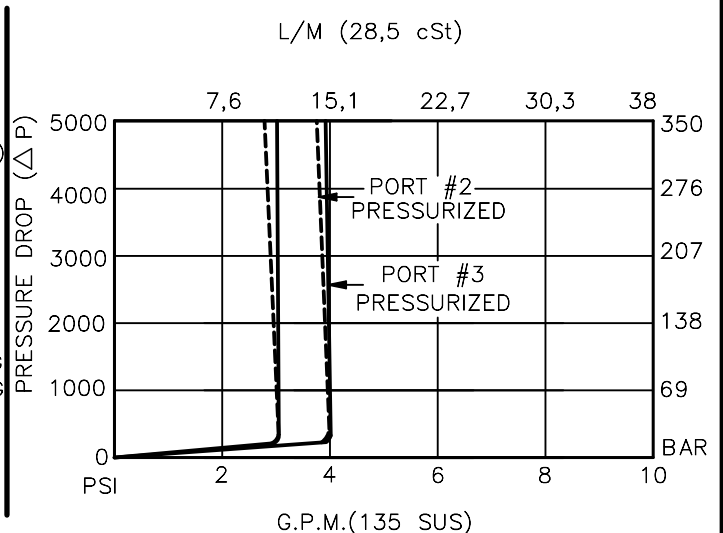
FOR ALUMINUM OR STEEL VALVE HOUSING CONFIGURATIONS SEE PAGE 0-031.1

**BFCV-08-X-X-X-XX**

- BASIC \_\_\_\_\_
- SIZE \_\_\_\_\_  
08 = 3/4"-16 UNF
- SEALS \_\_\_\_\_  
N = BUNA "N"  
V = VITON
- ADJUSTMENT \_\_\_\_\_  
F = FIXED (FACTORY SET)  
S = ADJUSTING SCREW  
C = CAPPED  
T = TAMPERPROOF  
K = HANDKNOB  
M = METAL HANDKNOB

- REGULATED FLOW TO BE SPECIFIED  
EXAMPLE  
1.5=1.5 GPM (5,7l/m)
- PORTS  
0 = CARTRIDGE ONLY  
02BX = G 1/4" BSPP  
06TX = SAE - #6
- "A" - ALUM. HOUSING  
"S" - STEEL HOUSING

FOR ADJUSTMENT CONTROL  
OPTIONS SEE PAGE 0-050.0



## FLOW CONTROL VALVE PRESSURE COMPENSATED, FIXED ORIFICE, PRIORITY TYPE.

### DESCRIPTION — FIXED

This unit is a SCREW IN, cartridge type, pressure compensated, fixed orifice, priority type hydraulic flow control valve.

FLOW RANGE: 0.2 TO 4.0 GPM [0,8 TO 15,1 L

### DESCRIPTION — ADJUSTABLE

This unit is a SCREW IN, cartridge type, pressure compensated, fixed orifice, 30% flow adjustment, priority type hydraulic flow control valve.

FLOW RANGE: 0.2 TO 6.0 GPM [0,8 TO 22,7 L

Flow adjustment under pressure is difficult.

### OPERATIONS

Valve maintains constant flow from port 1 to 3 regardless of system pressure or load and excess flow is diverted to port 2. Flow from port 3 goes thru the control orifice to port 1 at non-compensated flow.

### FEATURES AND BENEFITS

Valve is available with a screw, tamperproof, capped or knob adjustment. All external carbon steel parts are plated for longer life against the elements. All cartridge valves are 100% functionally tested. Industry common cavity.

### SPECIFICATIONS

OPERATING PRESSURE: 5,000 PSI (350 Bar)

PROOF PRESSURE: 10,000 PSI (700 Bar)

FLOW: 0.2 to 6.0 GPM [0,8 to 22,7 l/m] nominal. See performance chart.

FLOW ACCURACY:

0.2 to 1.5 GPM [ 0,9 to 6,0 L??– 10.0%

1.5 to 6.0 GPM [ 6,0 to 22,7 L??– 7.5%

VALVE HOUSINGS: 2500 PSI [175 Bar] = Aluminum – Anodized.

5000 PSI [350 Bar] = Steel – Unplated.

OPERATING TEMPERATURE: -40° to +250° F. [-40° to +120° C.]

OPERATING MEDIA: All general purpose hydraulic fluids such as MIL-H-5606, SAE-#10, SAE-#20, etc.

INSTALLATION: No restrictions.

SEAL KIT: SKN-0832 Buna "N".

SKV-0832 Viton.

WEIGHT: .28 lb [.13 kg] cartridge only.

VALVE CAVITY: #C0830, See Page 0-031.0.

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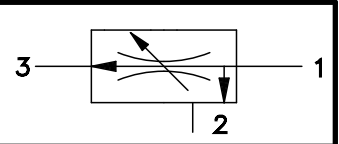
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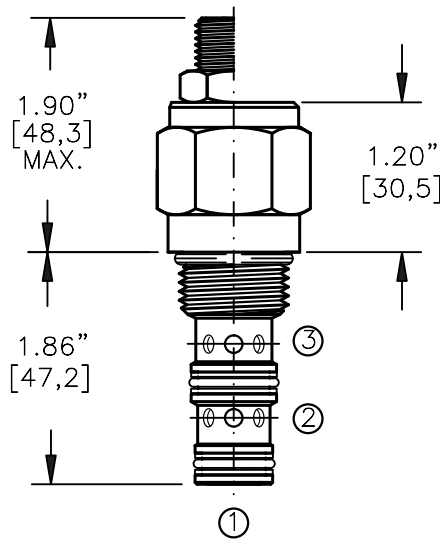
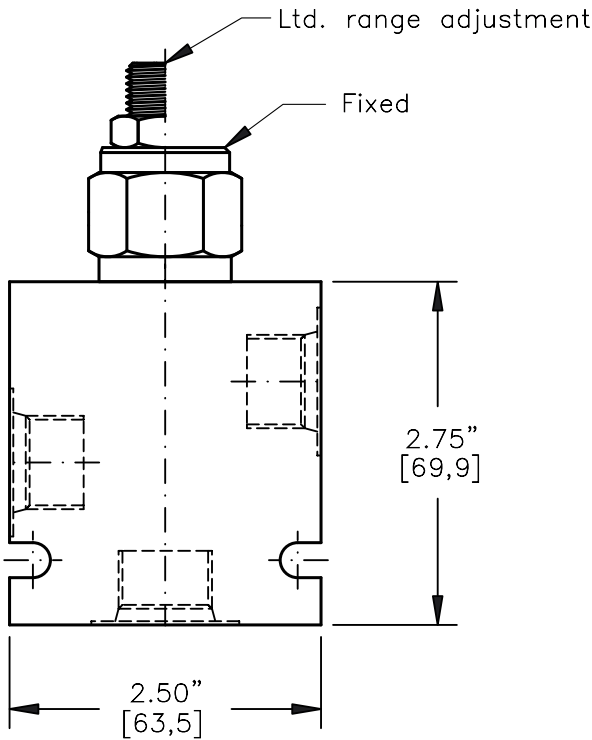
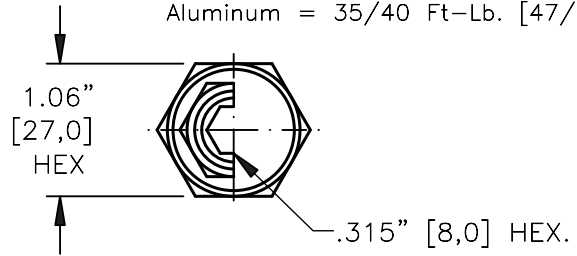
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**FLOW CONTROL VALVE PRESSURE COMPENSATED,  
FIXED ORIFICE, PRIORITY TYPE.**



TORQUE:

Steel = 55/60 Ft-Lb. [74/81 Nm]  
Aluminum = 35/40 Ft-Lb. [47/54 Nm]

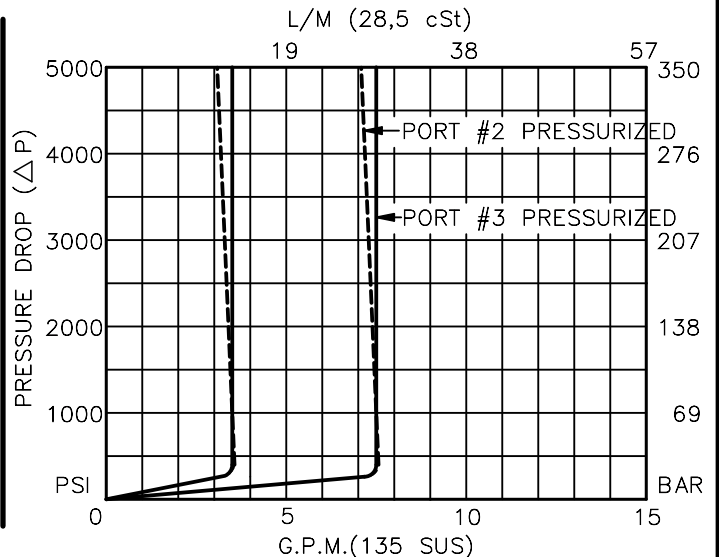


FOR ALUMINUM OR STEEL VALVE HOUSING CONFIGURATIONS SEE PAGE 0-032.1

**BFCV-10-X-X-X-XX**

- BASIC
- SIZE  
10 = 7/8"-14 UNF
- SEALS  
N = BUNA "N"  
V = VITON
- ADJUSTMENT  
F = FIXED (FACTORY SET)  
S = ADJUSTING SCREW  
C = CAPPED  
T = TAMPERPROOF  
K = HANDKNOB  
M = METAL HANDKNOB
- FOR ADJUSTMENT CONTROL  
OPTIONS SEE PAGE 0-050.0

- REGULATED FLOW  
TO BE SPECIFIED  
EXAMPLE  
1.5=1.5 GPM (5,7l/m)
- PORTS  
0 = CARTRIDGE ONLY  
02BX = G 1/4" BSPP  
03BX = G 3/8" BSPP  
06TX = SAE - #6  
08TX = SAE - #8  
"A" - ALUM. HOUSING  
"S" - STEEL HOUSING



## FLOW CONTROL VALVE PRESSURE COMPENSATED, FIXED ORIFICE, PRIORITY TYPE.

### DESCRIPTION — FIXED

This unit is a SCREW IN, cartridge type, pressure compensated, fixed orifice, priority type hydraulic flow control valve.

FLOW RANGE: 0.2 TO 8.0 GPM [0,8 TO 30,0 L

### DESCRIPTION — ADJUSTABLE

This unit is a SCREW IN, cartridge type, pressure compensated, fixed orifice, 30% flow adjustment, priority type hydraulic flow control valve.

FLOW RANGE: 0.2 TO 12.0 GPM [0,8 TO 45,0 L

Flow adjustment under pressure is difficult.

### OPERATIONS

Valve maintains constant flow from port 1 to 3 regardless of system pressure or load and excess flow is diverted to port 2. Flow from port 3 goes thru the control orifice to port 1 at non-compensated flow.

### FEATURES AND BENEFITS

Valve is available with a screw, tamperproof, capped or knob adjustment. All external carbon steel parts are plated for longer life against the elements. All cartridge valves are 100% functionally tested. Industry common cavity.

### SPECIFICATIONS

OPERATING PRESSURE: 5,000 PSI (350 Bar)

PROOF PRESSURE: 10,000 PSI (700 Bar)

FLOW: 0.2 to 12.0 GPM [0,8 to 45,0 l/m] nominal. See performance chart.

FLOW ACCURACY:

0.2 to 1.5 GPM [ 0,9 to 6,0 L??- 10.0%

1.5 to 4.0 GPM [ 6,0 to 15,0 L??- 7.5%

4.0 to 12.0 GPM [15,0 to 45,0 L??- 5.0%

VALVE HOUSINGS: 2500 PSI [175 Bar] = Aluminum – Anodized.

5000 PSI [350 Bar] = Steel – Unplated.

OPERATING TEMPERATURE: -40° to +250° F. [-40° to +120° C.]

OPERATING MEDIA: All general purpose hydraulic fluids such as MIL-H-5606, SAE-#10, SAE-#20, etc.

INSTALLATION: No restrictions.

SEAL KIT: SKN-1032 Buna "N".

SKV-1032 Viton.

WEIGHT: .42 lb [.19 kg] cartridge only.

VALVE CAVITY: #C 1030, See Page 0-032.0.

info.el@bucherhydraulics.com

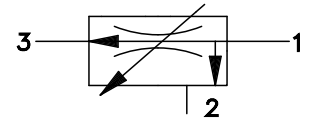
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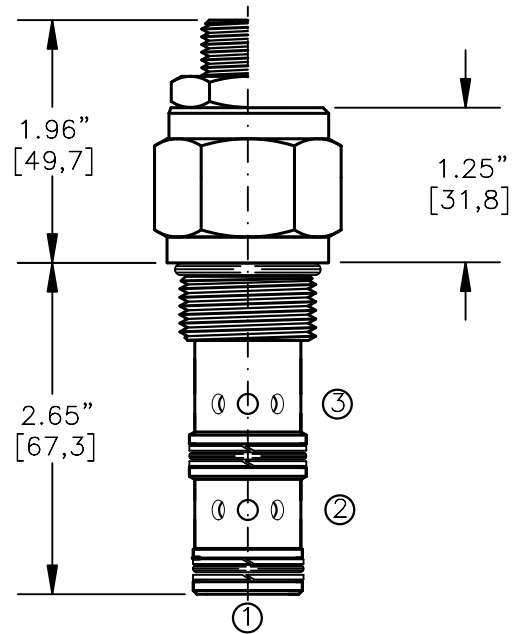
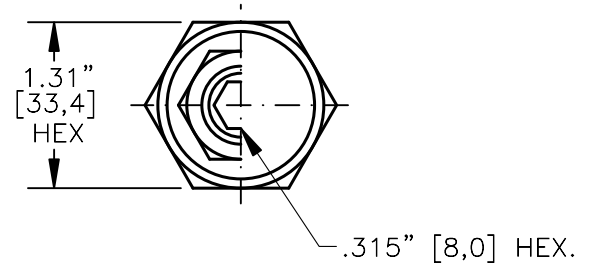
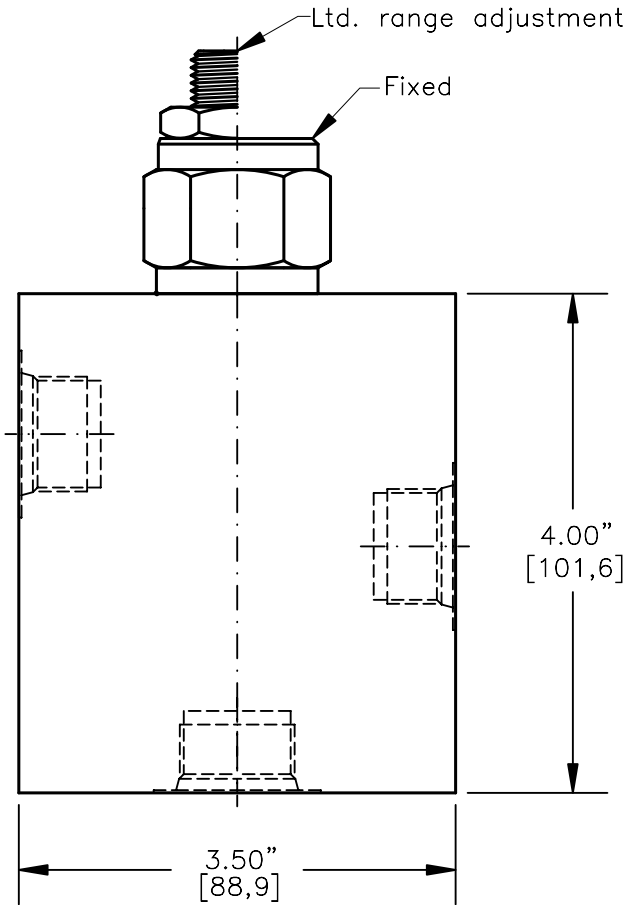
**FLOW CONTROL VALVE PRESSURE  
COMPENSATED, FIXED ORIFICE, PRIORITY TYPE.**



**TORQUE:**

Steel = 70/75 Ft-Lb. [95/102 Nm]

Aluminum = 55/60 Ft-Lb. [74/81 Nm]



FOR ALUMINUM OR STEEL VALVE HOUSING CONFIGURATIONS SEE PAGE 0-033.1

**BFCV-12-X-X-X-XX**

BASIC

SIZE

12 = 1.062"-12 UNF

SEALS

N = BUNA "N"  
V = VITON

ADJUSTMENT

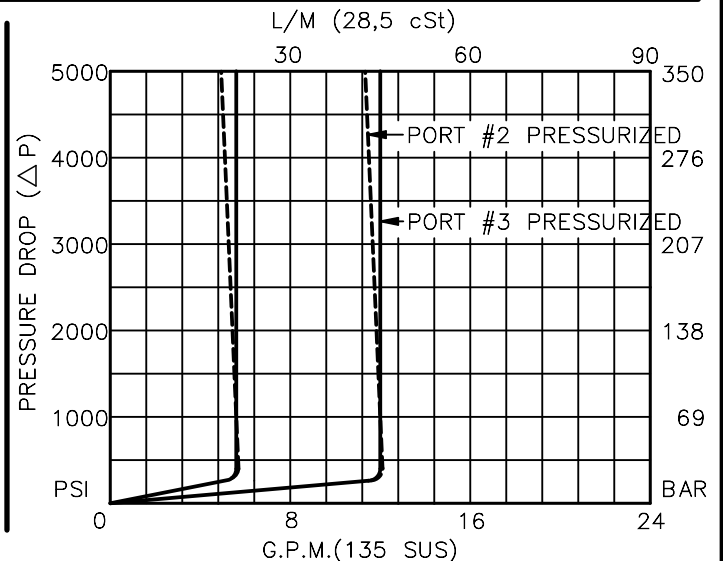
F = FIXED (FACTORY SET)  
S = ADJUSTING SCREW  
C = CAPPED  
T = TAMPERPROOF

REGULATED FLOW  
TO BE SPECIFIED  
EXAMPLE  
1.5=1.5 GPM (5,7l/m)

PORTS

0 = CARTRIDGE ONLY  
04BX = G 1/2" BSPP  
06BX = G 3/4" BSPP  
10TX = SAE - #10  
12TX = SAE - #12  
"A" - ALUM. HOUSING  
"S" - STEEL HOUSING

FOR ADJUSTMENT CONTROL  
OPTIONS SEE PAGE 0-050.0





**FLOW CONTROL VALVE PRESSURE COMPENSATED,  
FIXED ORIFICE, PRIORITY TYPE.****DESCRIPTION – FIXED**

This unit is a SCREW IN, cartridge type, pressure compensated, fixed orifice, priority type hydraulic flow control valve.

FLOW RANGE: 0.5 TO 16.0 GPM [1,8 TO 60,0 L

**DESCRIPTION – ADJUSTABLE**

This unit is a SCREW IN, cartridge type, pressure compensated, fixed orifice, 30% flow adjustment, priority type hydraulic flow control valve.

FLOW RANGE: 0.5 TO 20.0 GPM [1,8 TO 76,0 L

Flow adjustment under pressure is difficult.

**OPERATIONS**

Valve maintains constant flow from port 1 to 3 regardless of system pressure or load and excess flow is diverted to port 2. Flow from port 3 goes thru the control orifice to port 1 at non-compensated flow.

**FEATURES AND BENEFITS**

Valve is available with a screw, tamperproof or capped adjustment. All external carbon steel parts are plated for longer life against the elements. All cartridge valves are 100% functionally tested. Industry common cavity.

**SPECIFICATIONS**

OPERATING PRESSURE: 5,000 PSI (350 Bar)

PROOF PRESSURE: 10,000 PSI (700 Bar)

FLOW: 0.5 to 20.0 GPM [1,8 to 76,0 l/m] nominal. See performance chart.

FLOW ACCURACY:

0.5 to 4.0 GPM [ 1,8 to 15,0 L??– 10.0%

4.0 to 12.0 GPM [15,0 to 46,0 L??– 7.5%

12.0 to 20.0 GPM [46,0 to 76,0 L??– 5.0%

VALVE HOUSINGS: 2500 PSI [175 Bar] = Aluminum – Anodized.

5000 PSI [350 Bar] = Steel – Unplated.

OPERATING TEMPERATURE: –40° to +250° F. [–40° to +120° C.]

OPERATING MEDIA: All general purpose hydraulic fluids such as MIL-H-5606, SAE-#10, SAE-#20, etc.

INSTALLATION: No restrictions.

SEAL KIT: SKN-1232 Buna "N".

SKV-1232 Viton.

WEIGHT: .72 lb [,34 kg] cartridge only.

VALVE CAVITY: #C1230, See Page 0-033.0.

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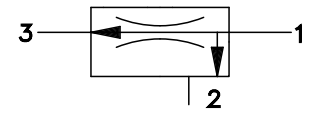
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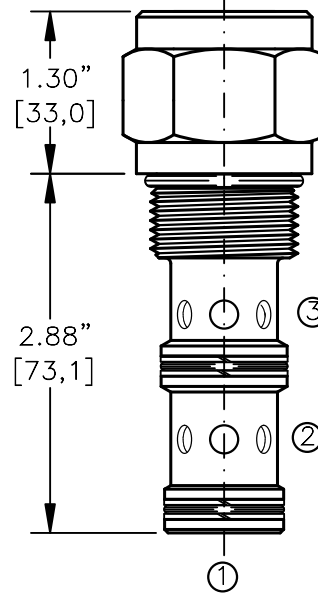
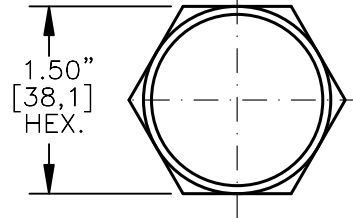
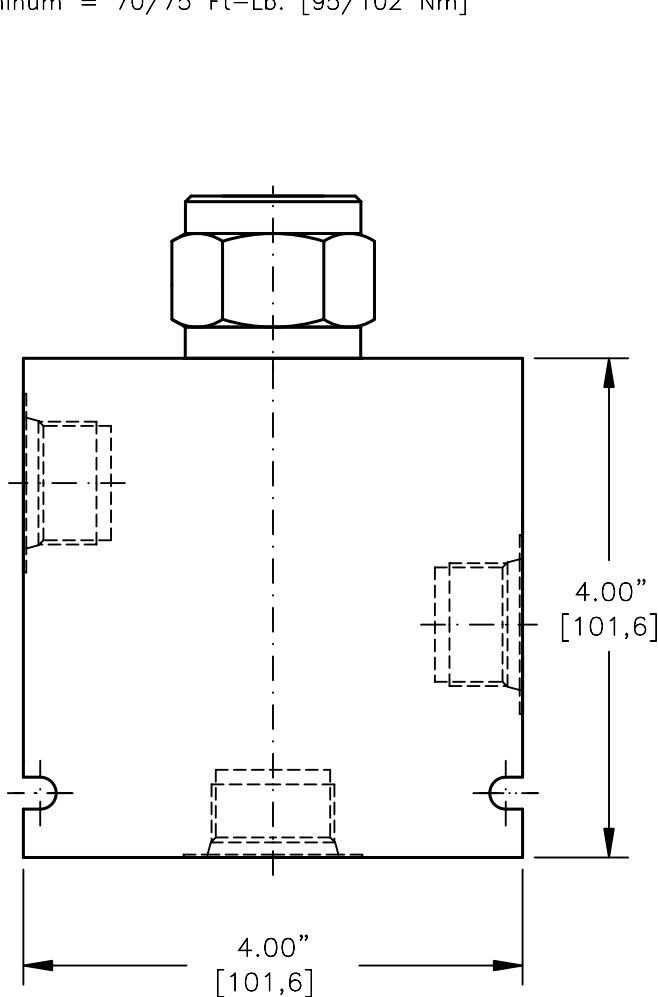
**FLOW CONTROL VALVE PRESSURE  
COMPENSATED, FIXED ORIFICE, PRIORITY TYPE**



**TORQUE:**

Steel = 95/100 Ft-Lb. [129/136 Nm]

Aluminum = 70/75 Ft-Lb. [95/102 Nm]

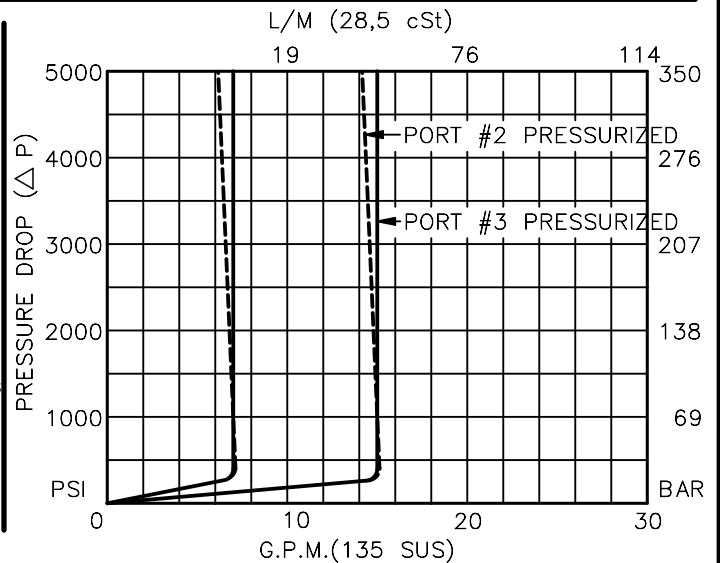


FOR ALUMINUM OR STEEL VALVE HOUSING CONFIGURATIONS SEE PAGE 0-034.1

**BFCV-16-X-F-X-XX**

- BASIC
- SIZE  
16 = 1.312"-12 UNF
- SEALS  
N = BUNA "N"  
V = VITON
- ADJUSTMENT  
F = FIXED (FACTORY SET)

- REGULATED FLOW TO BE SPECIFIED  
EXAMPLE  
1.5=1.5 GPM (5,7l/m)
- PORTS  
0 = CARTRIDGE ONLY  
06BX = G 3/4" BSPP  
08BX = G 1" BSPP  
12TX = SAE - #12  
16TX = SAE - #16
- "A" - ALUM. HOUSING  
"S" - STEEL HOUSING



## FLOW CONTROL VALVE PRESSURE COMPENSATED, FIXED ORIFICE, PRIORITY TYPE

### DESCRIPTION – FIXED

This unit is a SCREW IN, cartridge type, pressure compensated, fixed orifice, priority type hydraulic flow control valve.

FLOW RANGE: 0.5 TO 30.0 GPM [1,8 TO 114,0 L

### OPERATIONS

Valve maintains constant flow from port 1 to 3 regardless of system pressure or load and excess flow is diverted to port 2. Flow from port 3 goes thru the control orifice to port 1 at non-compensated flow.

### FEATURES AND BENEFITS

Valve is available with a fixed flow setting only.  
All external carbon steel parts are plated for longer life against the elements.  
All cartridge valves are 100% functionally tested.  
Externally removable flow orifice disc.  
Industry common cavity.

### SPECIFICATIONS

OPERATING PRESSURE: 5,000 PSI (350 Bar)

PROOF PRESSURE: 10,000 PSI (700 Bar)

FLOW: 0.5 to 30.0 GPM [1,8 to 114,0 l/m] nominal. See performance chart.

FLOW ACCURACY:

0.5 to 4.0 GPM [ 1,8 to 15,0 L??– 10.0%

4.0 to 16.0 GPM [15,0 to 60,0 L??– 7.5%

16.0 to 30.0 GPM [60,0 to 114,0 L??– 5.0%

VALVE HOUSINGS: 2500 PSI [175 Bar] = Aluminum – Anodized.

5000 PSI [350 Bar] = Steel – Unplated.

OPERATING TEMPERATURE: -40° to +250° F. [-40° to +120° C.]

OPERATING MEDIA: All general purpose hydraulic fluids such as  
MIL-H-5606, SAE-#10, SAE-#20, etc.

INSTALLATION: No restrictions.

SEAL KIT: SKN-1632 Buna "N".

SKV-1632 Viton.

WEIGHT: 1.40 lb [.64 kg] cartridge only.

VALVE CAVITY: #C1630, See Page 0-034.0.

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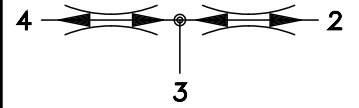
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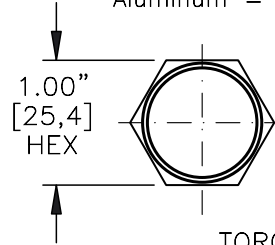
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FLOW DIVIDER/COMBINER VALVE, SPOOL TYPE

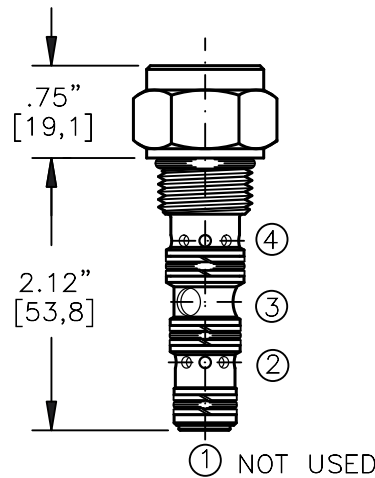
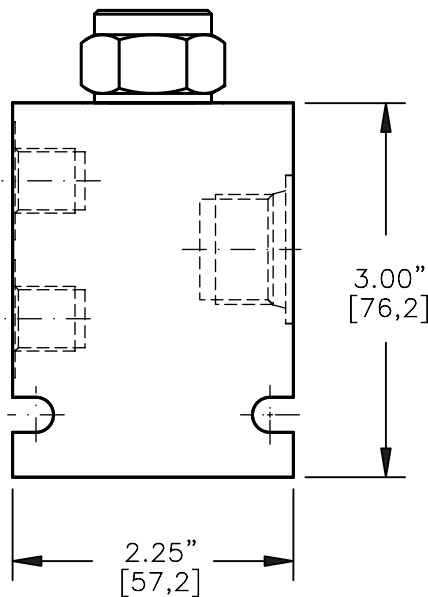


TORQUE:

Steel = 35/40 Ft-Lb. [47/54 Nm]  
Aluminum = 25/30 Ft-Lb. [34/41 Nm]



TORQUE to 35/40 Ft-Lb.  
[47/54 N-m].

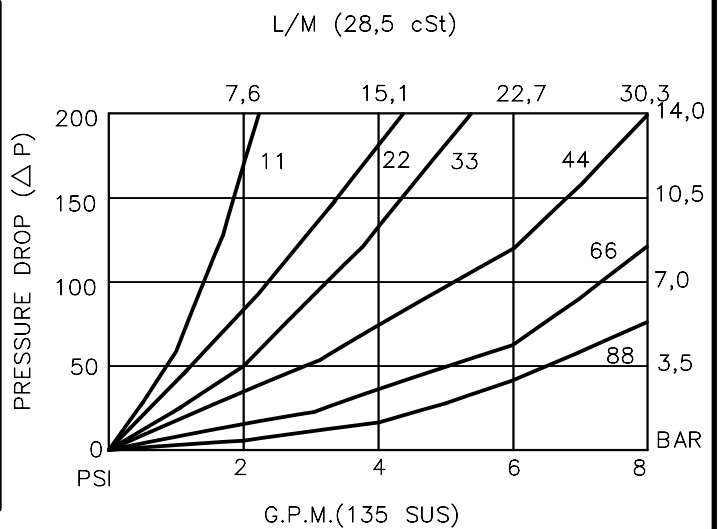


PORT #3 (INLET) IS ONE SIZE LARGER THAN PORTS #2 & #4 (OUTLET).  
FOR ALUMINUM OR STEEL VALVE HOUSING CONFIGURATIONS SEE PAGE 0-041.2

**FDCV-08-X-X-XX**

BASIC \_\_\_\_\_  
SIZE \_\_\_\_\_  
08 = 3/4"-16 UNF  
SEALS \_\_\_\_\_  
N = BUNA "N"  
V = VITON  
PORT#3 \_\_\_\_\_  
0 = CARTRIDGE ONLY  
03BX = G 3/8" BSPP  
08TX = SAE - #8  
"A" - ALUM. HOUSING  
"S" - STEEL HOUSING

		FLOW DIVISION		
CODE	PORT#2	PORT#4	MAX	FLOW
11	50%	50%	1.0	GPM
22	50%	50%	2.0	GPM
33	50%	50%	3.0	GPM
44	50%	50%	4.0	GPM
66	50%	50%	6.0	GPM
88	50%	50%	8.0	GPM
12	33.3%	66.6%	1.5	GPM
13	25%	75%	2.0	GPM
24	33.3%	66.6%	3.0	GPM
26	25%	75%	4.0	GPM
36	33.3%	66.6%	4.5	GPM
48	33.3%	66.6%	6.0	GPM
21	66.6%	33.3%	1.5	GPM
31	75%	25%	2.0	GPM
42	66.6%	33.3%	3.0	GPM
62	75%	25%	4.0	GPM
63	66.6%	33.3%	4.5	GPM
84	66.6%	33.3%	6.0	GPM



## FLOW DIVIDER/COMBINER VALVE, SPOOL TYPE

### DESCRIPTION

This unit is a spool type, screw in cartridge style, flow divider/combiner valve.

### OPERATIONS

This valve divides flow from port 3 to ports 2 and 4 and combines flow from ports 2 and 4 to port 3 at the specified flow division regardless of load or system pressure.

Should the circuit operation result in blockage of either port 2 or 4, the opposite port will continue to flow but at a reduced flow rate to synchronize a cylinder.

### FEATURES AND BENEFITS

Flow accuracy dividing or combining:

+/-5.0% of flows under 40% of the rated flow.

+/-2.5% of flows over 40% of the rated flow.

Quiet and stable operation over wide varying flow, pressure and temperature range.

All external carbon steel parts are plated for longer life against the elements.

All cartridge valves are 100% functionally tested.

Industry common cavity.

### SPECIFICATIONS

OPERATING PRESSURE: 5,000 PSI [350 Bar]

PROOF PRESSURE: 10,000 PSI [700 Bar]

FLOW: 8.0 GPM [30 l/m] nominal. See performance chart.

VALVE HOUSINGS: 2500 PSI [175 Bar] = Aluminum - Anodized.

5000 PSI [350 Bar] = Steel - Unplated.

OPERATING TEMPERATURE: -40° to +250° F. [-40° to +120° C.]

OPERATING MEDIA: All general purpose hydraulic fluids such as MIL-H-5606, SAE-#10, SAE-#20, etc.

INSTALLATION: No restrictions.

SEAL KIT: SKN-0842 Buna "N".

SKV-0842 Viton.

WEIGHT: .24 lb [.11 kg] cartridge only.

VALVE CAVITY: #C0840, See Page 0-041.0.

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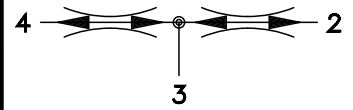
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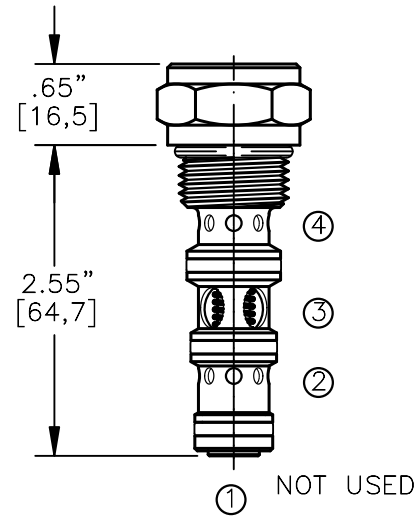
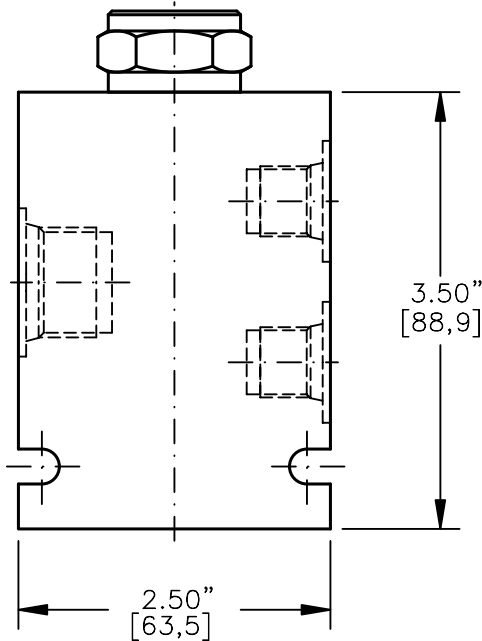
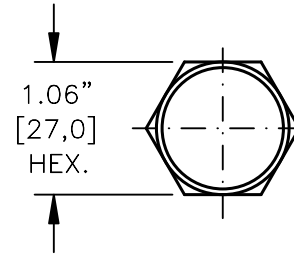
FLOW DIVIDER/COMBINER VALVE  
SPOOL TYPE.



TORQUE:

Steel = 55/60 Ft-Lb. [74/81 Nm]

Aluminum = 35/40 Ft-Lb. [47/54 Nm]



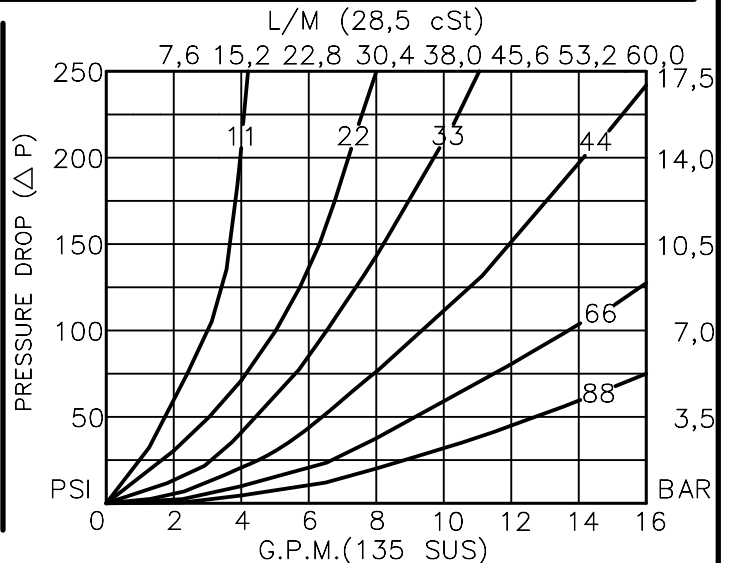
PORT #3 (INLET) IS ONE SIZE LARGER THAN PORTS #2 & #4 (OUTLET).

FOR ALUMINUM OR STEEL VALVE HOUSING CONFIGURATIONS SEE PAGE 0-042.2

**FDCV-10-X-X-XX**

- BASIC \_\_\_\_\_
- SIZE \_\_\_\_\_  
10 = 7/8"-14 UNF
- SEALS \_\_\_\_\_  
N = BUNA "N"  
V = VITON
- PORT#3 \_\_\_\_\_  
0 = CARTRIDGE ONLY  
03BX = G 3/8" BSPP  
04BX = G 1/2" BSPP  
08TX = SAE - #8  
10TX = SAE - #10  
"A" - ALUM. HOUSING  
"S" - STEEL HOUSING

CODE	FLOW DIVISION		MAX FLOW
	PORT#2	PORT#4	
11	50%	50%	2.0 GPM
22	50%	50%	4.0 GPM
33	50%	50%	6.0 GPM
44	50%	50%	8.0 GPM
66	50%	50%	12.0 GPM
88	50%	50%	16.0 GPM
12	33.3%	66.6%	3.0 GPM
13	25%	75%	4.0 GPM
24	33.3%	66.6%	6.0 GPM
26	25%	75%	8.0 GPM
36	33.3%	66.6%	9.0 GPM
48	33.3%	66.6%	12.0 GPM
21	66.6%	33.3%	3.0 GPM
31	75%	25%	4.0 GPM
42	66.6%	33.3%	6.0 GPM
62	75%	25%	8.0 GPM
63	66.6%	33.3%	9.0 GPM
84	66.6%	33.3%	12.0 GPM



## FLOW DIVIDER/COMBINER VALVE SPOOL TYPE.

### DESCRIPTION

This unit is a spool type, screw in cartridge style, flow divider/combiner valve.

### OPERATIONS

This valve divides flow from port 3 to ports 2 and 4 and combines flow from ports 2 and 4 to port 3 at the specified flow division regardless of load or system pressure.

Should the circuit operation result in blockage of either port 2 or 4, the opposite port will continue to flow but at a reduced flow rate to synchronize a cylinder.

### FEATURES AND BENEFITS

Flow accuracy dividing or combining:

+/-5.0% of flows under 40% of the rated flow.

+/-2.5% of flows over 40% of the rated flow.

Quiet and stable operation over wide varying flow, pressure and temperature range.

All external carbon steel parts are plated for longer life against the elements.

All cartridge valves are 100% functionally tested.

Industry common cavity.

### SPECIFICATIONS

OPERATING PRESSURE: 5,000 PSI [350 Bar]

PROOF PRESSURE: 10,000 PSI [700 Bar]

FLOW: 16.0 GPM [60 l/m] nominal. See performance chart.

VALVE HOUSINGS: 2500 PSI [175 Bar] = Aluminum – Anodized.

5000 PSI [350 Bar] = Steel – Unplated.

OPERATING TEMPERATURE: -40° to +250° F. [-40° to +120° C.]

OPERATING MEDIA: All general purpose hydraulic fluids such as MIL-H-5606, SAE-#10, SAE-#20, etc.

INSTALLATION: No restrictions.

SEAL KIT: SKN-1040 Buna "N".

SKV-1040 Viton.

WEIGHT: .31 lb [.14 kg] cartridge only.

VALVE CAVITY: #C1040, See Page 0-042.0.

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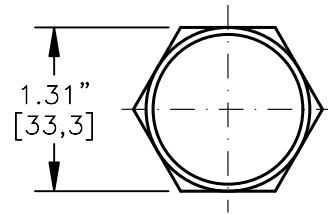
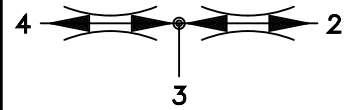
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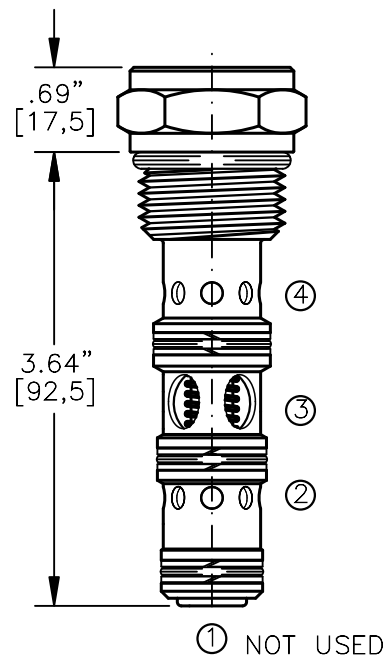
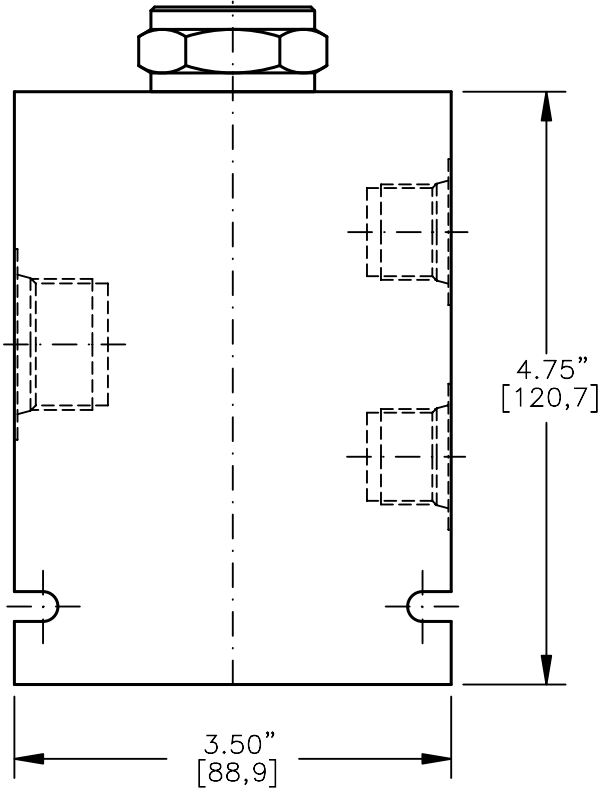
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FLOW DIVIDER/COMBINER VALVE  
SPOOL TYPE



TORQUE to 80/90 Ft-Lb.  
[108/122 N-m]

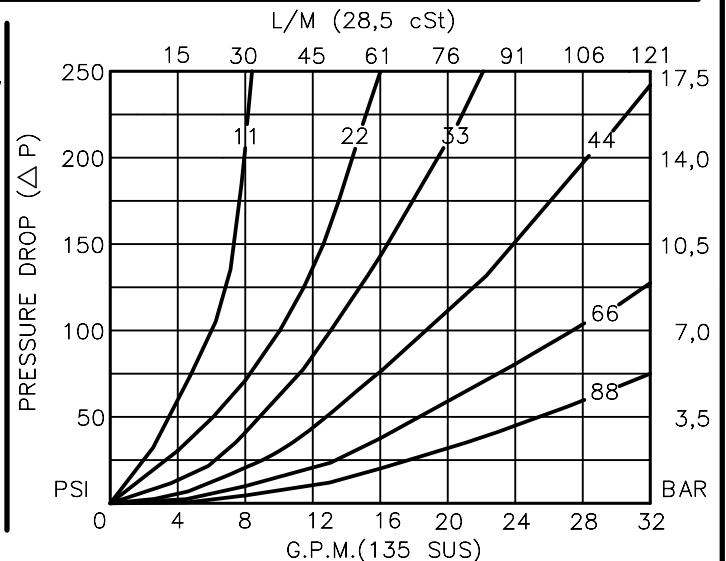


PORT #3 (INLET) IS ONE SIZE LARGER THAN PORTS #2 & #4 (OUTLETS).  
FOR ALUMINUM OR STEEL VALVE HOUSING CONFIGURATIONS SEE PAGE 0-043.2

**FDCV-12-X-X-XX**

- BASIC \_\_\_\_\_
- SIZE \_\_\_\_\_  
12 = 1.062-12 UNF
- SEALS \_\_\_\_\_  
N = BUNA "N"  
V = VITON
- PORT#3 \_\_\_\_\_  
0 = CARTRIDGE ONLY  
06BX = G 3/4" BSPP  
12TX = SAE - #12  
"A" - ALUM. HOUSING  
"S" - STEEL HOUSING

CODE	FLOW DIVISION		MAX FLOW
	PORT#2	PORT#4	
11	50%	50%	4.0 GPM
22	50%	50%	8.0 GPM
33	50%	50%	12.0 GPM
44	50%	50%	16.0 GPM
66	50%	50%	24.0 GPM
88	50%	50%	32.0 GPM
12	33.3%	66.6%	6.0 GPM
13	25%	75%	8.0 GPM
24	33.3%	66.6%	12.0 GPM
26	25%	75%	16.0 GPM
36	33.3%	66.6%	18.0 GPM
48	33.3%	66.6%	24.0 GPM
21	66.6%	33.3%	6.0 GPM
31	75%	25%	8.0 GPM
42	66.6%	33.3%	12.0 GPM
62	75%	25%	16.0 GPM
63	66.6%	33.3%	18.0 GPM
84	66.6%	33.3%	24.0 GPM





## FLOW DIVIDER/COMBINER VALVE SPOOL TYPE

### DESCRIPTION

This unit is a spool type, screw in cartridge style, flow divider/combiner valve.

### OPERATIONS

This valve divides flow from port 3 to ports 2 and 4 and combines flow from ports 2 and 4 to port 3 at the specified flow division regardless of load or system pressure.

Should the circuit operation result in blockage of either port 2 or 4, the opposite port will continue to flow but at a reduced flow rate to synchronize a cylinder.

### FEATURES AND BENEFITS

Flow accuracy dividing or combining:

+/-5.0% of flows under 40% of the rated flow.

+/-2.5% of flows over 40% of the rated flow.

Quiet and stable operation over wide varying flow, pressure and temperature range.

All external carbon steel parts are plated for longer life against the elements. All cartridge valves are 100% functionally tested.

Ports 2 & 4 (outlets) are stepped down one size from port #3 (inlet).

### SPECIFICATIONS

OPERATING PRESSURE: 5,000 PSI [350 Bar]

PROOF PRESSURE: 10,000 PSI [700 Bar]

FLOW: 32.0 GPM [121 l/m] nominal. See performance chart.

VALVE HOUSINGS: 2500 PSI [175 Bar] = Aluminum - Anodized.

5000 PSI [350 Bar] = Steel - Unplated.

OPERATING TEMPERATURE: -40° to +250° F. [-40° to +120° C.]

OPERATING MEDIA: All general purpose hydraulic fluids such as MIL-H-5606, SAE-#10, SAE-#20, etc.

INSTALLATION: No restrictions.

SEAL KIT: SKN-1242 Buna "N".

SKV-1242 Viton.

WEIGHT: .62 lb [.28 kg] cartridge only.

VALVE CAVITY: #C1240, See Page 0-043.0.

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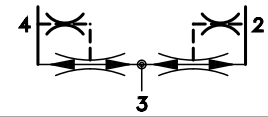
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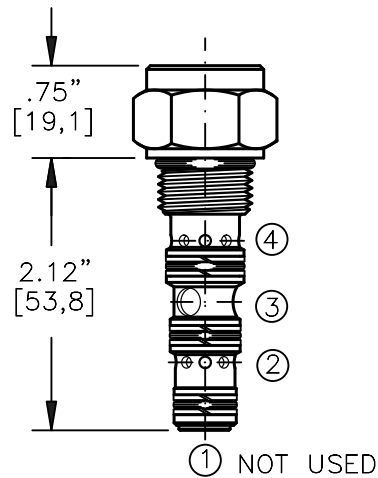
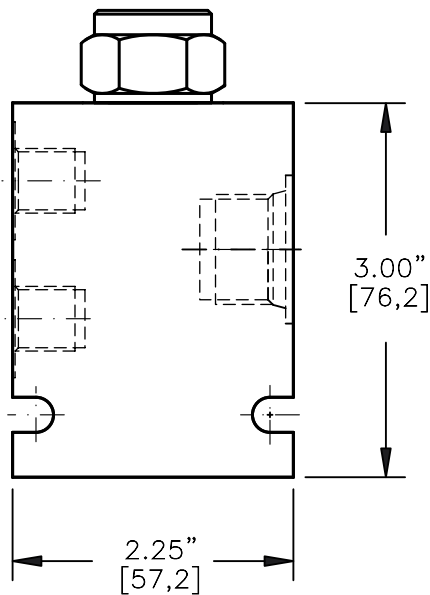
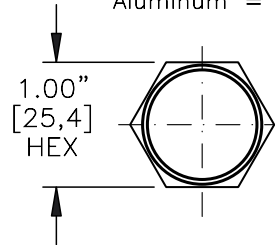
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FLOW DIVIDER/COMBINER TRACTION VALVE



TORQUE:

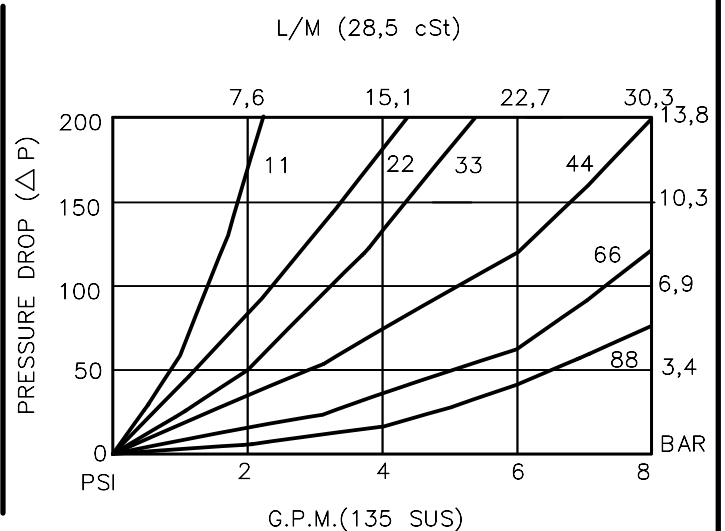
Steel = 35/40 Ft-Lb. [47/54 Nm]  
Aluminum = 25/30 Ft-Lb. [34/41 Nm]



PORT #3 (INLET) IS ONE SIZE LARGER THAN PORTS #2 & #4 (OUTLET).  
FOR ALUMINUM OR STEEL VALVE HOUSING CONFIGURATIONS SEE PAGE 0-041.2

**FDCT-08-X-X-XX**

BASIC	INLET FLOW
SIZE	CODE
08 = 3/4"-16 UNF	11 1.0 GPM
SEALS	22 2.0 GPM
N = BUNA "N"	33 3.0 GPM
V = VITON	44 4.0 GPM
PORT#3	66 6.0 GPM
0 = CARTRIDGE ONLY	88 8.0 GPM
03BX = G 3/8" BSPP	
08TX = SAE - #8	
"A" - ALUM. HOUSING	
"S" - STEEL HOUSING	



## FLOW DIVIDER/COMBINER TRACTION VALVE

### DESCRIPTION

This unit is a spool type, screw in cartridge style, flow divider/combiner traction valve. This valve is used when hydraulic motors are used as drive motors on each side of a machine.

### OPERATIONS

This valve divides flow from port 3 to ports 2 and 4 and combines flow from ports 2 and 4 to port 3 at the specified flow division regardless of load or system pressure. When the machine turns a corner the valve shifts part of the flow from the inside motor to the outside motor. This allows the wheels to adjust their speed relative to the turn radius to prevent the wheels from skidding.

### FEATURES AND BENEFITS

Equal flow sent to each motor when the machine is driving in a straight line. During a turn, the flow is adjusted between the motors to keep both wheels driving, while adjusting the speed to match the turn. Quiet and stable operation over wide varying flow, pressure and temperature range. All external carbon steel parts are plated for longer life against the elements. All cartridge valves are 100% functionally tested. Industry common cavity.

### SPECIFICATIONS

OPERATING PRESSURE: 5,000 PSI [350 Bar]

PROOF PRESSURE: 10,000 PSI [700 Bar]

FLOW: 8.0 GPM [30 l/m] nominal. See performance chart.

VALVE HOUSINGS: 2500 PSI [175 Bar] = Aluminum – Anodized.

5000 PSI [350 Bar] = Steel – Unplated.

OPERATING TEMPERATURE: -40° to +250° F. [-40° to +120° C.]

OPERATING MEDIA: All general purpose hydraulic fluids such as MIL-H-5606, SAE-#10, SAE-#20, etc.

INSTALLATION: No restrictions.

SEAL KIT: SKN-0842 Buna "N".

SKV-0842 Viton.

WEIGHT: .24 lb [.11 kg] cartridge only.

VALVE CAVITY: #C0840, See Page 0-041.2.

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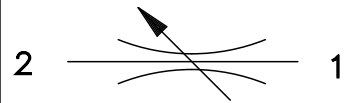
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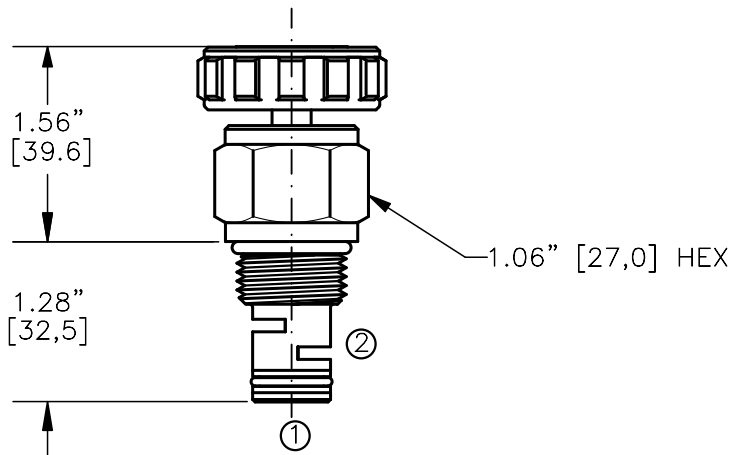
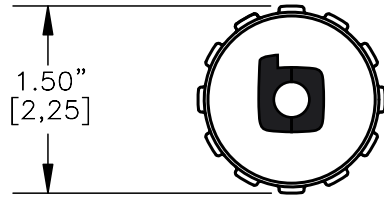
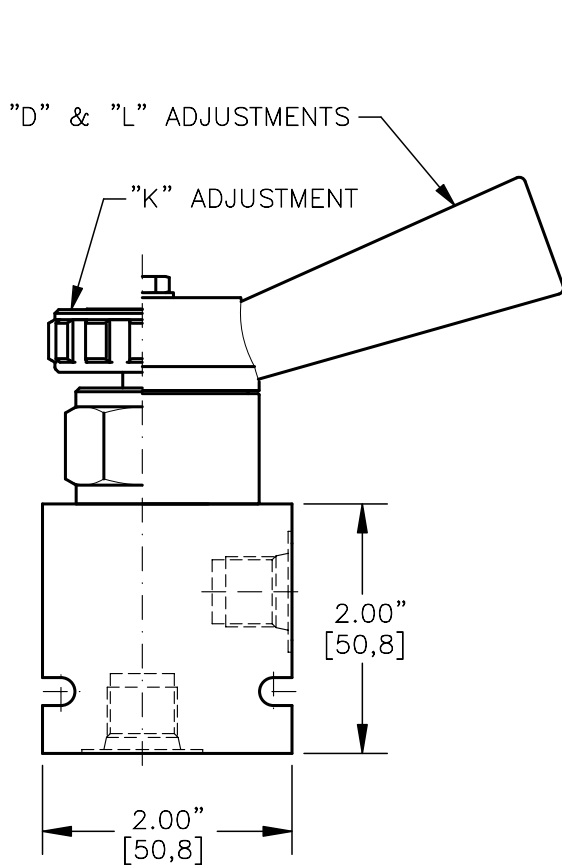
Data is provided for the purpose of product description only, and must not be construed as warranted characteristics in the legal sense. The information does not relieve users from the duty of conducting their own evaluations and tests. Because the products are subject to continual improvement, we reserve the right to amend the product specifications contained in this catalogue.

MANUAL ROTARY FLOW CONTROL VALVE



TORQUE:

Steel = 55/60 Ft-Lb. [74/81 Nm]  
Aluminum = 35/40 Ft-Lb. [47/54 Nm]

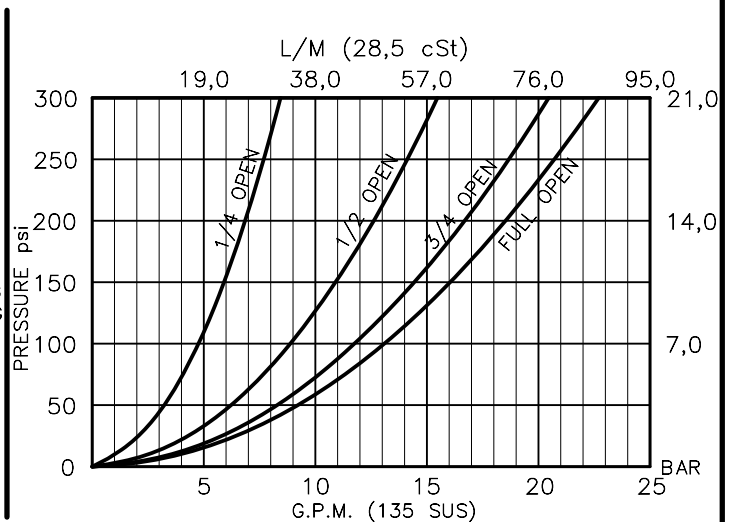


FOR ALUMINUM OR STEEL VALVE HOUSING CONFIGURATIONS SEE PAGE 0-012.1

**MRFC-10-X-X-X**

- BASIC
- SIZE  
10 = 7/8"-14UNF
- SEALS  
N = BUNA "N" = VITON  
V
- ADJUSTMENT  
K = HANDKNOB  
H = METAL HANDKNOB  
O = NO KNOB  
G = GRADUATED METAL KNOB  
D = LEVER WITH DETENTS  
L = LEVER WITH FRICTION LOCK
- PORTS  
0 = CARTRIDGE ONLY  
02BX = G 1/4" BSPP  
03BX = G 3/8" BSPP  
06TX = SAE - #6  
08TX = SAE - #8  
L "A" = ALUM. HOUSING  
"S" = STEEL HOUSING

FOR ADJUSTMENT CONTROL  
OPTIONS SEE PAGE 0-050.1



## MANUAL ROTARY FLOW CONTROL VALVE

### DESCRIPTION

This unit is a SCREW IN, cartridge type, non-compensated, adjustable, bi-directional rotary flow control valve.

### OPERATIONS

This valve increases its orifice value from fully closed to fully open in 1/2 turn with counterclockwise rotation.

### FEATURES AND BENEFITS

Fine and low effort leakproof adjustment; knob is optional.  
All external carbon steel parts are plated for longer life against the elements.  
All cartridge valves are 100% functionally tested.  
Industry common cavity.

### SPECIFICATIONS

OPERATING PRESSURE: 5,000 PSI [350 Bar]  
PROOF PRESSURE: 10,000 PSI [700 Bar]  
FLOW: 18.0 GPM [68 l/m] nominal. See performance chart.  
SHAFT ROTATION IS 160° FROM FULL OPEN TO CLOSED  
INTERNAL LEAKAGE: 5 cu.in./min. [82 cc/m] @ 5,000 PSI (350 Bar)  
VALVE HOUSINGS: 2500 PSI [175 Bar] = Aluminum - Anodized.  
5000 PSI [350 Bar] = Steel - Unplated.  
OPERATING TEMPERATURE: -40° to +250° F. [-40° to +120° C.]  
OPERATING MEDIA: All general purpose hydraulic fluids such as  
MIL-H-5606, SAE-#10, SAE-#20, etc.  
INSTALLATION: No restrictions.  
SEAL KIT: SKN-1022 Buna "N".  
SKV-1022 Viton.  
WEIGHT: .31 lb [.14 kg] cartridge only.  
VALVE CAVITY: #C1020, See Page 0-012.0.

info.el@bucherhydraulics.com

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