

Manual Push/Pull	Model No.	Cavity	Description	Flow*	Pressure	Page
	CP600-1	SDC10-2	Directional Mechanical, Poppet, Pull to Open	68 l/min [18 US gal/min]	210 bar [3000 psi]	12.8

Manual Push/Pull	Model No.	Cavity	Description	Flow*	Pressure	Page
	CE 06	NCS06/2	Directional Mechanical, Poppet, Pull to Open	20 l/min [5 US gal/min]	210 bar [3000 psi]	12.9
	CP600-2	SDC10-2		50 l/min [13 US gal/min]		12.10

Manual Push/Pull	Model No.	Cavity	Description	Flow*	Pressure	Page
	DMP08-NC	SDC08-2	Directional Mechanical, Poppet, Normally Closed	38 l/min [10 US gal/min]		12.11

Manual Push/Pull	Model No.	Cavity	Description	Flow*	Pressure	Page
	DMP08-NO	SDC08-2	Directional Mechanical, Poppet, Normally Open	38 l/min [10 US gal/min]		12.12

\* Flow ratings are based on a pressure drop of 7 bar [100 psi] unless otherwise noted. They are for comparison purposes only.

Manual Rotary Valve	Model No.	Cavity	Description	Flow*	Pressure	Page
	CP620-1	SDC10-2	Directional Manual, Rotary, 2-Position, 2-Way	75 l/min [20 US gal/min]	210 bar [3000 psi]	12.13

Manual Rotary Valve	Model No.	Cavity	Description	Flow*	Pressure	Page
	CP630-1	SDC10-3	Directional Manual, Rotary, 2-Position, 3-Way	30.3 l/min [8 US gal/min]	210 bar [3000 psi]	12.14

Manual Rotary Valve	Model No.	Cavity	Description	Flow*	Pressure	Page
	CP640-1	SDC10-4	Directional Manual, Rotary, 2-Position, 4-Way	10 l/min [3 US gal/min]	210 bar [3000 psi]	12.15

Directional control valves  
 Quick reference

\* Flow ratings are based on a pressure drop of 7 bar [100 psi] unless otherwise noted. They are for comparison purposes only.

Hydraulic Piloted	Model No.	Cavity	Description	Flow*	Pressure	Page
	CP710-8	SDC10-4	Directional Control Valve, 2-Position, 2-Way	40 l/min [11 US gal/min]	210 bar [3000 psi]	12.16
	CP712-11	CP16-4		130 l/min [34 US gal/min]	450 bar [6500 psi]	12.17
	CP712-8	CP16-4		130 l/min [34 US gal/min]	210 bar [3000 psi]	12.18

Hydraulic Piloted	Model No.	Cavity	Description	Flow*	Pressure	Page
	CP710-1	SDC10-3	Directional Control Valve, 2-Position, 2-Way, Atmospheric Vent	40 l/min [11 US gal/min]	210 bar [3000 psi]	12.19
	CP712-1	SDC16-3		130 l/min [34 US gal/min]	210 bar [3000 psi]	12.20
	CP713-1	SDC20-3		265 l/min [70 US gal/min]	210 bar [3000 psi]	12.21

Hydraulic Piloted	Model No.	Cavity	Description	Flow*	Pressure	Page
	CP710-3	SDC10-3	Directional Control Valve, 2-Position, 2-Way, Hydraulic Vent	40 l/min [11 US gal/min]	210 bar [3000 psi]	12.22

Hydraulic Piloted	Model No.	Cavity	Description	Flow*	Pressure	Page
	CP710-2	SDC10-3	Directional Control Valve, 2-Position, 2-Way, External Pilot	40 l/min [11 US gal/min]	210 bar [3000 psi]	12.23
	CP712-2	SDC16-3		130 l/min [34 US gal/min]	210 bar [3000 psi]	12.24
	CP713-2	SDC20-3		265 l/min [70 US gal/min]	210 bar [3000 psi]	12.25

\* Flow ratings are based on a pressure drop of 7 bar [100 psi] unless otherwise noted. They are for comparison purposes only.

Hydraulic Piloted	Model No.	Cavity	Description	Flow*	Pressure	Page
	CP720-1	SDC10-4	Directional Control Valve, 2-Position, 3-Way,	30 l/min [8 US gal/min]	210 bar [3000 psi]	12.26
	CP722-1	CP16-4	Atmospheric Vent	130 l/min [34 US gal/min]	210 bar [3000 psi]	12.27
	CP723-1	SDC20-4		265 l/min [70 US gal/min]	210 bar [3000 psi]	12.28

Hydraulic Piloted	Model No.	Cavity	Description	Flow*	Pressure	Page
	CP720-2	SDC10-4	Directional Control Valves, 2-Position, 3-Way, External	25 l/min [7 US gal/min]	210 bar [3000 psi]	12.29
	CP722-2	CP16-4	Pilot	130 l/min [34 US gal/min]	210 bar [3000 psi]	12.30
	CP723-2	SDC20-4		265 l/min [70 US gal/min]	210 bar [3000 psi]	12.31

Hydraulic Piloted	Model No.	Cavity	Description	Flow*	Pressure	Page
	CP720-5	SDC10-4	Directional Control Valve, 2-Position, 3-Way,	40 l/min [11 US gal/min]	210 bar [3000 psi]	12.32
	CP722-11	CP16-4	Hydraulic Vent	125 l/min [33 US gal/min]	450 bar [6500 psi]	12.33
	CP722-5	CP16-4		130 l/min [34 US gal/min]	210 bar [3000 psi]	12.34
	CP723-5	SDC20-4		265 l/min [70 US gal/min]	210 bar [3000 psi]	12.35

Hydraulic Piloted	Model No.	Cavity	Description	Flow*	Pressure	Page
<p>Normally open</p> <p>Normally closed</p>	CP712-7	CP16-4	Directional Control Valve, Normally Closed/Open, Hydraulically Piloted, Proportional	220 l/min [58 US gal/min]	210 bar [3000 psi]	12.36

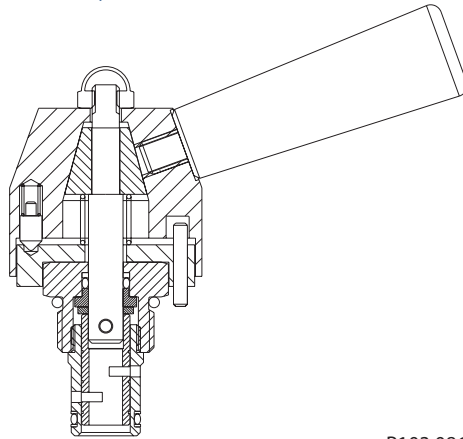
\* Flow ratings are based on a pressure drop of 7 bar [100 psi] unless otherwise noted. They are for comparison purposes only.

**TYPES OF DIRECTIONAL CONTROL VALVES**

Directional valves are either manually or hydraulically actuated spools.

Manually-actuated valves are available as 2-way, 3-way, and 4-way valves, and are used either for flow or direction control.

Manually actuated valve



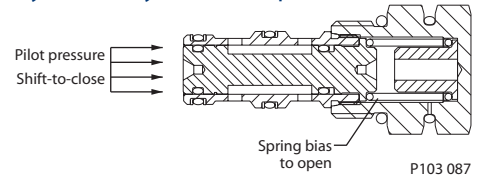
P103 086

Hydraulically-actuated spool valves are available as 2-way (normally-open or normally-closed), 3-way, and 4-way valves, and are used for direction control. These are all 2-position valves that are spring-biased to a neutral position and use 3-10 bar [40-150 psi] hydraulic pressure to shift the spool.

Directional control valves



Hydraulically actuated spool valve



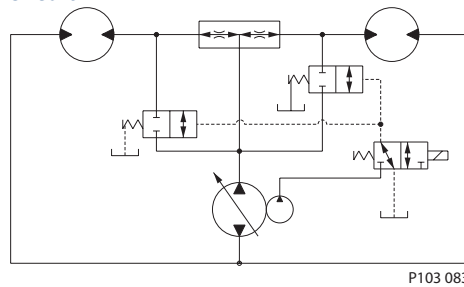
P103 087

**APPLICATIONS**

Common applications include:

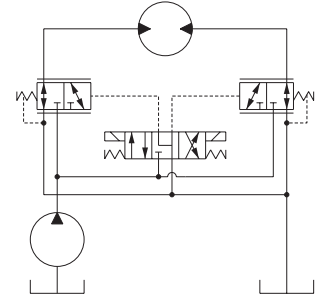
- Directional control valves for high flow with pilot pressure controlled by solenoid valves.
- Bypass valves for flow dividers in vehicle traction circuits.

Pilot-operated bypass valves for traction circuit

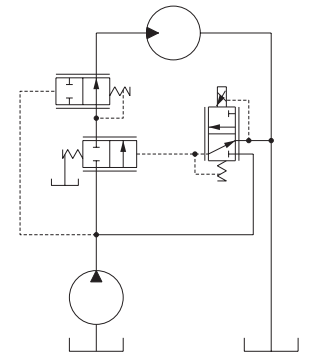


A hydraulically-actuated spool valve (CP712-7) is also available to create an infinitely variable orifice that is controlled by pilot pressure. This valve is typically used in a circuit with a proportional pressure reducing valve (e.g. CP558-24) and a pressure compensator (e.g. CP312-4). Such a circuit creates a pressure-compensated proportional flow control for flows too large for direct-acting proportional valves.

Pilot-operated directional valve circuit



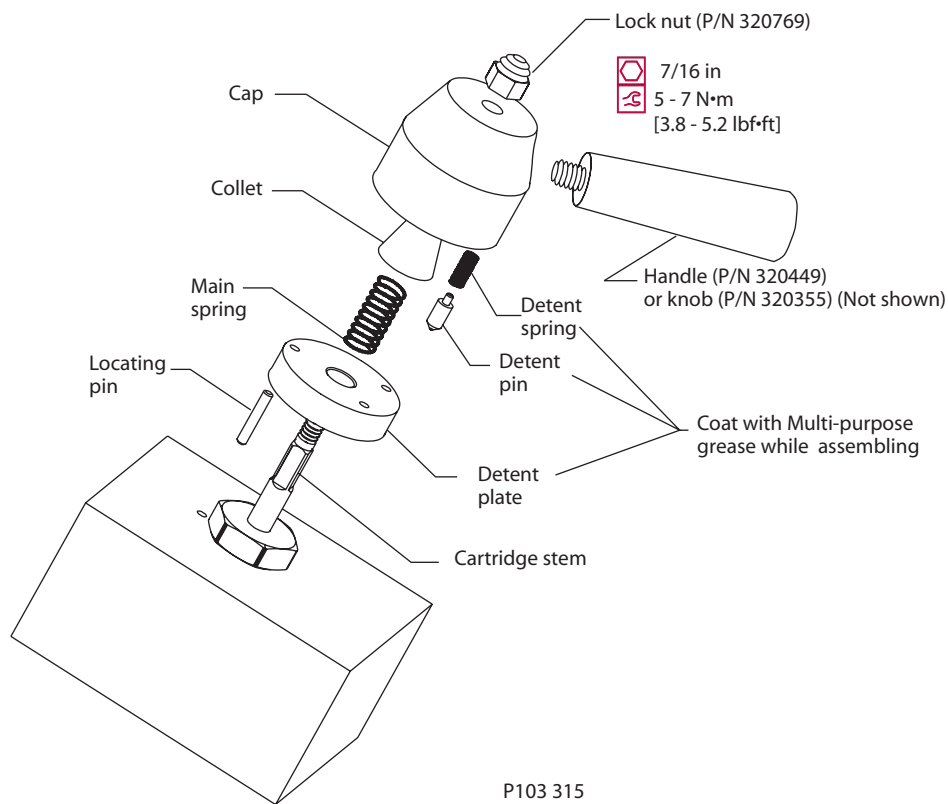
Pilot-operated proportional flow control circuit



**INSTALLATION**

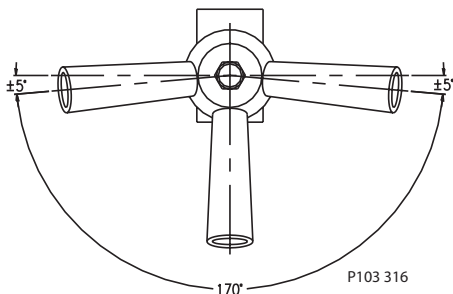
1. Install cartridge.
2. Place locating pin in the hole in the block.
3. Install detent plate over the cartridge stem and locating pin.
4. Place the main spring over the cartridge stem.
5. Install the collet into the cap.
6. Place the detent spring and detent pin into cap and install cap over the assembly as shown.
7. Place the lock nut and torque as shown.
8. Thread handle or knob into cap.

Assembly Drawing

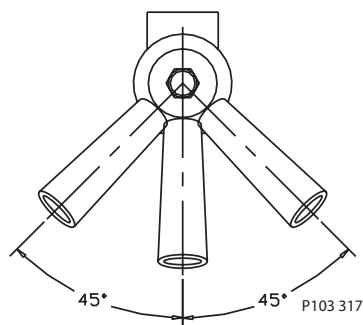


Directional control valves  
Quick reference

Handle orientation for 2-way valve.



Handle orientation for 3-way and 4-way valves.



# Cartridge Valves Technical Information

## Directional Control Valves

### Manual Push/Pull

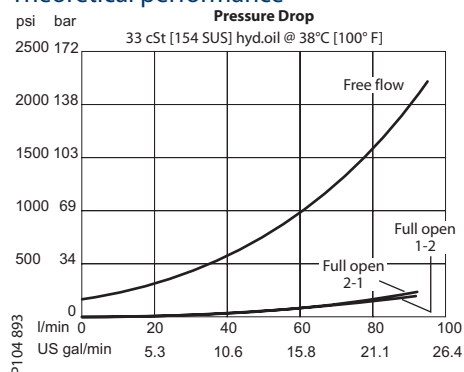
### CP600-1

#### OPERATION

This valve allows free-flow from 1 to 2 and blocks from 2 to 1. It is manually operated with or without knob.

#### SPECIFICATIONS

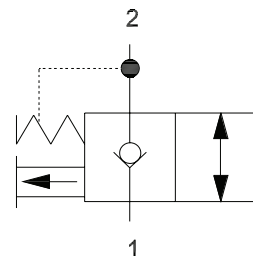
##### Theoretical performance



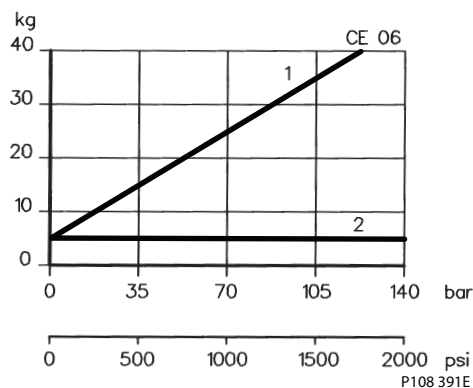
##### Specifications

Rated pressure	207 bar [3002 psi]
Rated flow at 7 bar [100 psi]	68 l/min [18 US gal/min]
Leakage	6 drops/min @ at rated pressure
Weight	0.11 kg [0.24 lb]
Cavity	SDC10-2

#### Schematic



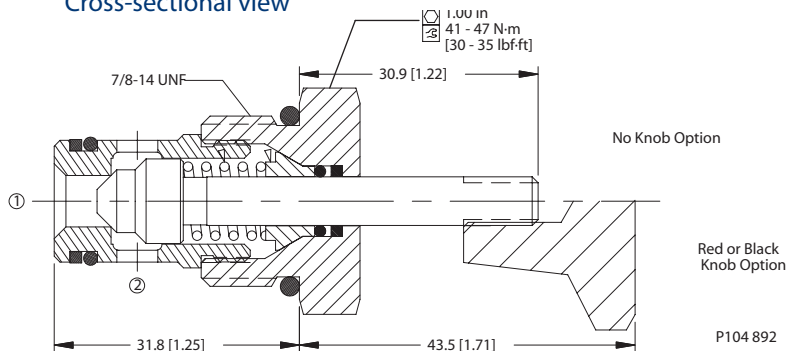
#### Force required to operate override



#### DIMENSIONS

mm [in]

#### Cross-sectional view



#### ORDERING INFORMATION

CP600-1-B-6S-00-K

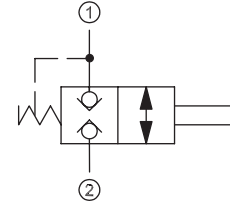
<b>Seals</b>	<b>Seal kit</b>	<b>Knob Option</b>
B = BUNA-N	120015	28 = 1/4-28 UNF-2A (NO KNOB)
V = VITON	120016	20 = 1/4-20 UNF-2A (NO KNOB)
<b>Body &amp; Ports</b>	<b>Body P/N</b>	K = BLACK KNOB
0 = Cartridge only	No Body	R = RED KNOB
6S = Aluminum, #6 SAE	CP10-2-6S	<b>Force Required to Operate Override</b>
8S = Aluminum, #8 SAE	CP10-2-8S	10 = 44 N [10 lbf] P104 894
3B = Aluminum, 3/8 BSPP	SDC10-2-DG-3B	27 = 120 N [27 lbf]
4B = Aluminum, 1/2 BSPP	SDC10-2-LG2-4B	



**OPERATION**

This is a normally-closed, manually-operated, bi-directional poppet valve.

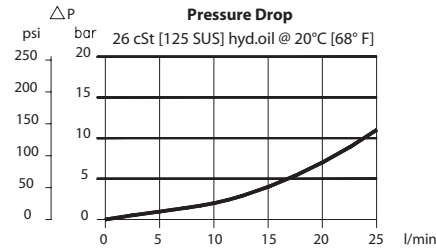
**Schematic**



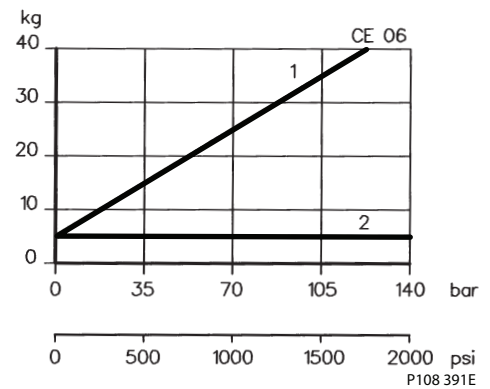
P104 551E

**SPECIFICATIONS**

**Theoretical performance**



**Force required to operate override**



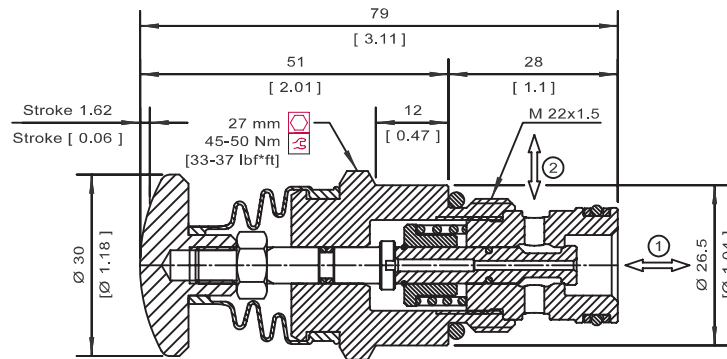
**Specifications**

Rated pressure	315 bar [4500 psi]
Rated flow at 7 bar [100 psi]	20 l/min [5 US gal/min]
Weight	0.20 kg [0.44 lb]
Cavity	NCS06/2

**DIMENSIONS**

mm [in]

**Cross-sectional view**



P103 899E

**ORDERING INFORMATION**

CE 06 - 00 - V

**Seals**  
 V = Viton Seal kit 230000380  
 Omit = Buna-N Seal kit 230000060

**Housing and ports**  
 00 = No Housing  
 DG3/8 = AL, 3/8 BSP  
 DG1/2 = AL, 1/2 BSP  
 DG6S = AL, #6 SAE  
 DG8S = AL, #8 SAE  
 Other housings available

**Housing P/N**  
 No Housing  
 NCS06/2-DG-3/8  
 NCS06/2-DG-1/2  
 NCS06/2-DG-6S  
 NCS06/2-DG-8S

P103 837E

# Cartridge Valves Technical Information

## Directional Control Valves

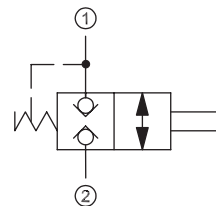
### Manual Push/Pull

### CP600-2

#### OPERATION

This valve is a normally closed, manually operated, bi-directional poppet valve.

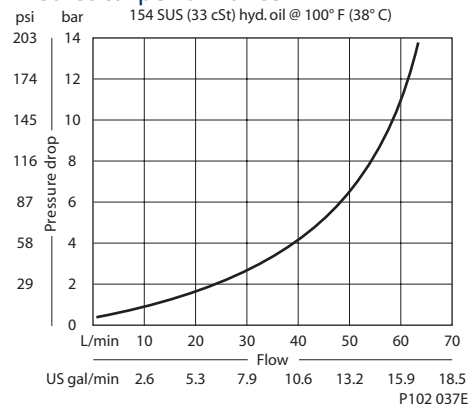
#### Schematic



P104 551E

#### SPECIFICATIONS

#### Theoretical performance



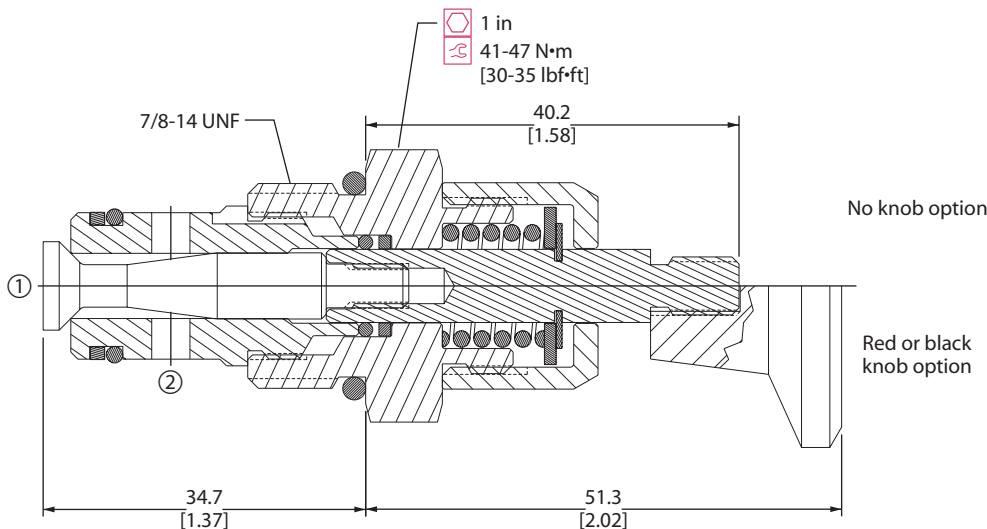
#### Specifications

Rated pressure	210 bar [3000 psi]
Rated flow at 7 bar [100 psi]	50 l/min [13 US gal/min]
Leakage	6 drops/min @ Rated pressure
Weight	0.11 kg [0.25 lb]
Cavity	SDC10-2

#### DIMENSIONS

mm [in]

#### Cross-sectional view



#### ORDERING INFORMATION

CP600 - 2 - B - 8S - 10 - B

<b>Seals</b>	Seal kit	<b>Knob option</b>
B = Buna-N	120015	0 = No knob (1/4-28 UNF threads)
V = Viton	120016	B = Black knob
<b>Housing and ports</b>	<b>Housing P/N</b>	R = Red knob
0 = No Housing	No Housing	
DG3B = AL, 3/8 BSP	SDC10-2-DG-3B	
DG4B = AL, 1/2 BSP	SDC10-2-DG-4B	
6S = AL, #6 SAE	CP10-2-6S	
8S = AL, #8 SAE	CP10-2-8S	
Other housings available		<b>Spring load</b>
		10 = 44 N [10 lbf]
		15 = 67 N [15 lbf]

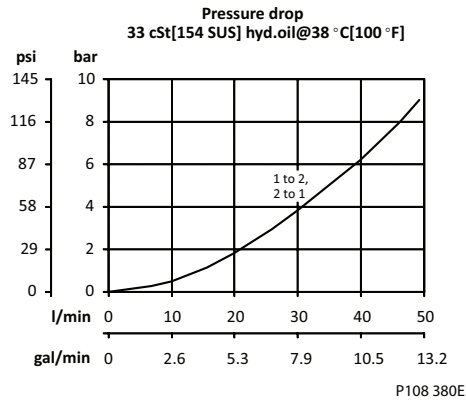
P102 765E

**OPERATION**

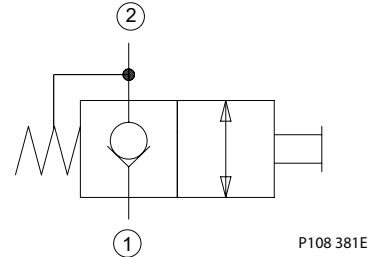
This valve is a normally closed, manually operated, poppet type valve with free reverse flow..

**SPECIFICATIONS**

**Theoretical performance**



**Schematic**



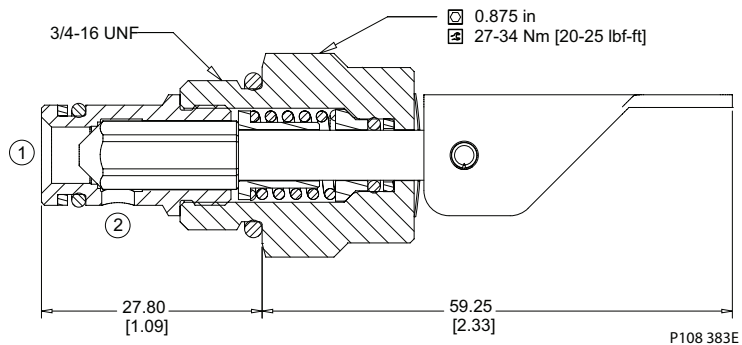
**Specifications**

Rated pressure	207 bar [3000 psi]
Rated flow at 7 bar [100 psi]	48 l/min [12.7 US gal/min]
Leakage	6 drops/min @ Rated pressure
Weight	0.12 kg [0.27 lb]
Cavity	SDC08-2

**DIMENSIONS**

mm [in]

**Cross-sectional view**



**ORDERING INFORMATION**

**DMP08-NC-18-LD-B-00**

Shift Force  
 18 = 18 N [4 lbf]

Handle Option  
 LD = Detented Lever

Housing and ports  
 00 = No Housing  
 DG-2B = Al, 1/4 BSP  
 DG-3B = Al, 3/8 BSP  
 4S = Al, #4 SAE  
 6S = Al, #6 SAE

Housing Part #  
 No Housing  
 SDC08-2-DG-2B  
 SDC08-2-DG-3B  
 CP08-2-4S  
 CP08-2-6S

Seals  
 B = Buna-N  
 V = Viton

Seal Kit  
 120221  
 120222

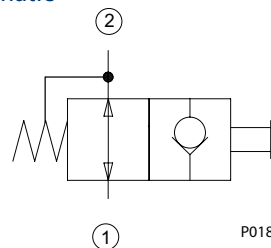
P108 382E

Directional control valves  
 DMP08-NC

**OPERATION**

This valve is a normally open, manually operated, poppet type valve with free reverse flow..

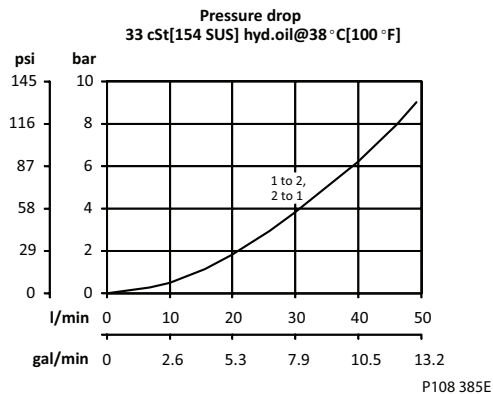
**Schematic**



P018 384E

**SPECIFICATIONS**

**Theoretical performance**



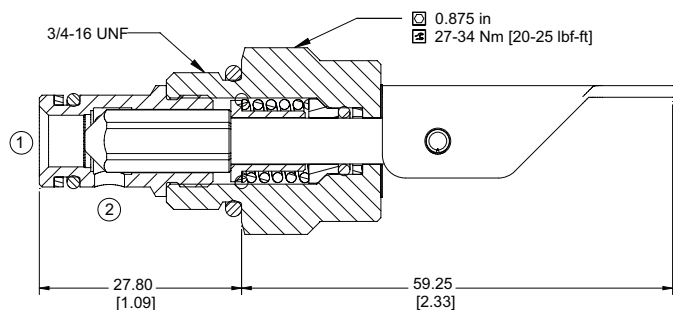
**Specifications**

Rated pressure	207 bar [3000 psi]
Rated flow at 7 bar [100 psi]	48 l/min [12.7 US gal/min]
Leakage	6 drops/min @ Rated pressure
Weight	0.12 kg [0.27 lb]
Cavity	SDC08-2

**DIMENSIONS**

mm [in]

**Cross-sectional view**



P108 387E

**ORDERING INFORMATION**

**DMP08-NO-18-LD-B-00**

Shift Force 18 = 18 N [4 lbf]		Housing and ports 00 = No Housing DG-2B = Al, 1/4 BSP DG-3B = Al, 3/8 BSP 4S = Al, #4 SAE 6S = Al, #6 SAE	Housing Part # No Housing SDC08-2-DG-2B SDC08-2-DG-3B CP08-2-4S CP08-2-6S
Handle Option LD = Detented Lever		Seals B = Buna-N V = Viton	Seal Kit 120221 120222

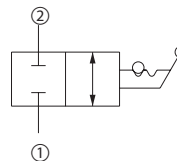
P108 387E

**OPERATION**

This valve is a non-compensated, adjustable flow control.

Refer to application notes for installation details.

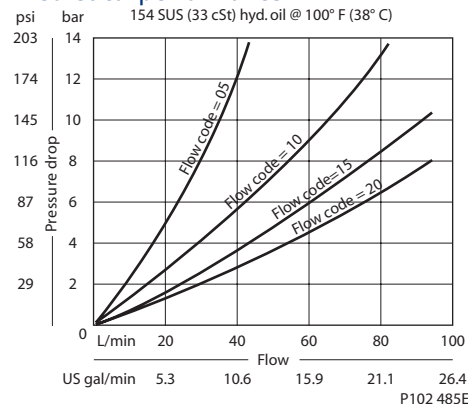
**Schematic**



P102 503E

**SPECIFICATIONS**

**Theoretical performance**



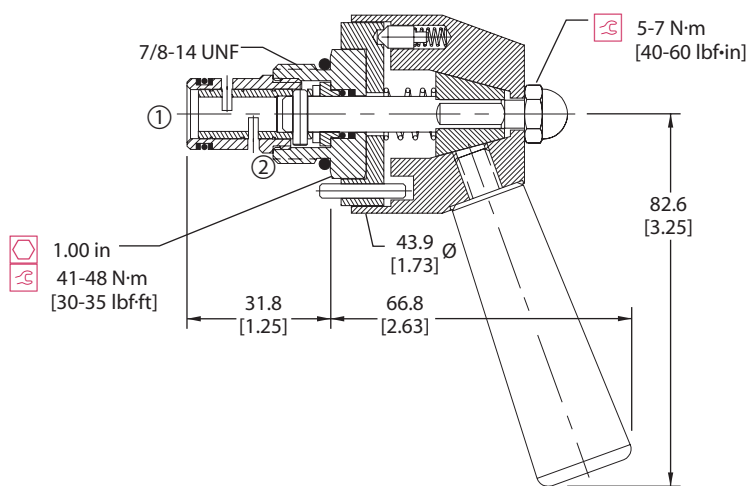
**Specifications**

Rated pressure	210 bar [3000 psi]
Rated flow at 7 bar [100 psi]	75 l/min [20 US gal/min]
Leakage	82 cm <sup>3</sup> /min [5 in <sup>3</sup> /min] @ Rated pressure
Weight	0.31 kg [0.69 lb]
Cavity	SDC10-2

**DIMENSIONS**

mm [in]

**Cross-sectional view**



P102 473E

**ORDERING INFORMATION**

CP620 - 1 - B - 8S - 20 - 2 - DR

**Seals**  
B - Buna-N  
V - Viton

**Housing and ports**  
0 = No Housing  
DG3B = AL, 3/8 BSP  
DG4B = AL, 1/2 BSP  
6S = AL, #6 SAE  
8S = AL, #8 SAE  
Other housings available

**Seal kit**  
120073  
120074

**Housing P/N**  
No Housing  
SDC10-2-DG-3B  
SDC10-2-DG-4B  
CP10-2-6S  
CP10-2-8S

**Flow**  
05 = 19 l/min [5 US gpm]  
10 = 38 l/min [10 US gpm]  
15 = 57 l/min [15 US gpm]  
20 = 77 l/min [20 US gpm]

**Rotation to close**  
R - Clockwise  
L - Counterclockwise

**Detent**  
D = Detent with handle  
K = Knob (not shown)  
knob is not detented

**Position**  
2 - 2 Position detent  
3 - 3 Position detent  
10 - 10 Position detent

P102 893E

# Cartridge Valves Technical Information

## Directional Control Valves

### Manual Rotary Valve

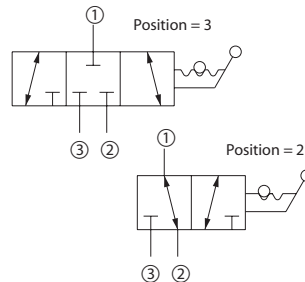
#### CP630-1

### OPERATION

This valve is a 2 position 3 way manual directional control.

Refer to application notes for installation details.

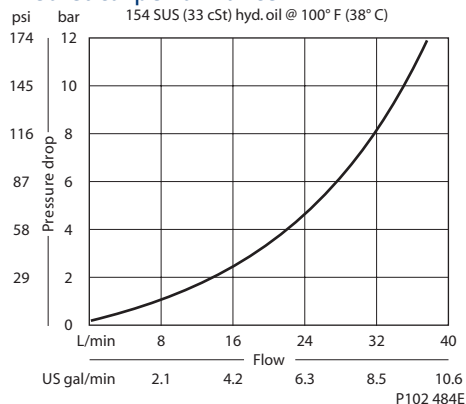
### Schematic



P102 502E

### SPECIFICATIONS

#### Theoretical performance



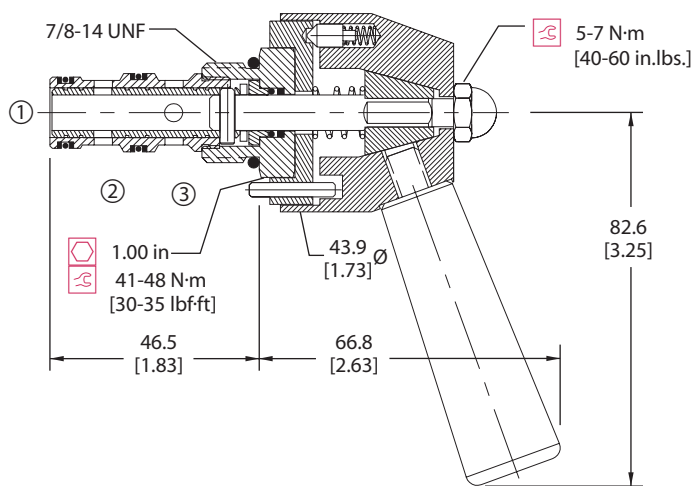
### Specifications

Rated pressure	210 bar [3000 psi]
Rated flow at 7 bar [100 psi]	30 l/min [8 US gal/min]
Leakage	82 cm <sup>3</sup> /min [5 in <sup>3</sup> /min] @ Rated pressure
Weight	0.32 kg [0.71 lb]
Cavity	SDC10-3

### DIMENSIONS

mm [in]

#### Cross-sectional view



P102 472E

### ORDERING INFORMATION

CP630 - 1 - B - 8S - 3 - D

#### Seals

B = Buna-N  
V = Viton

Seal kit  
120009  
120010

#### Housing and ports

0 = No Housing  
SE3B = AL, 3/8 BSP  
SE4B = AL, 1/2 BSP  
6S = AL, #6 SAE  
8S = AL, #8 SAE  
Other housings available

#### Housing P/N

No Housing  
SDC10-3-SE-3B  
SDC10-3-SE-4B  
CP10-3-6S  
CP10-3-8S

#### Detent

D = Detent with handle  
K = Knob (not shown)  
knob is not detented

#### Position

2 = 2 Position detent  
3 = 3 Position detent

P102 957E

# Cartridge Valves Technical Information

## Directional Control Valves

### Manual Rotary Valve

#### CP640-1

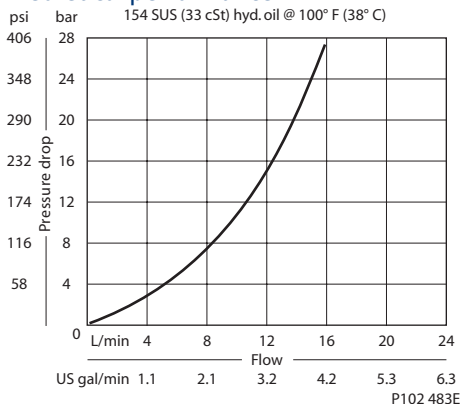
### OPERATION

This valve is a 3 position 4 way manual directional control.

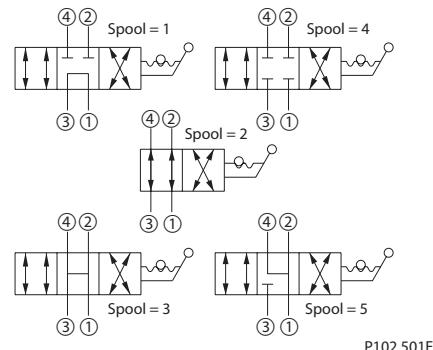
Refer to application notes for installation details.

### SPECIFICATIONS

#### Theoretical performance



#### Schematic



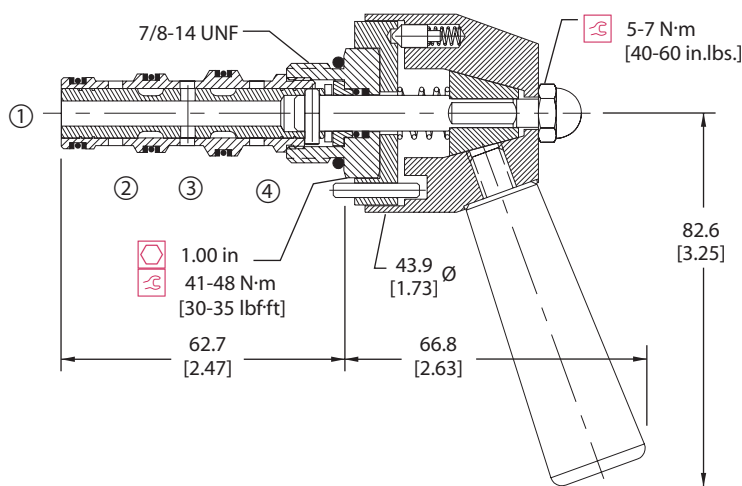
#### Specifications

Rated pressure	210 bar [3000 psi]
Rated flow at 7 bar [100 psi]	10 l/min [3 US gal/min]
Leakage	82 cm <sup>3</sup> /min [5 in <sup>3</sup> /min] @ Rated pressure
Weight	0.35 kg [0.77 lb]
Cavity	SDC10-4

### DIMENSIONS

mm [in]

#### Cross-sectional view



### ORDERING INFORMATION

CP640 - 1 - B - 8S - 3 - 3 - D

**Seals**

B = Buna-N  
 V = Viton

**Housing and ports**

0 = No Housing  
 LE3B = AL, 3/8 BSP  
 LE4B = AL, 1/2 BSP  
 6S = AL, #6 SAE  
 8S = AL, #8 SAE  
 Other housings available

**Seal kit**

120023  
 120024

**Housing P/N**

No Housing  
 SDC10-4-L-3B  
 SDC10-4-L-4B  
 SDC10-4-6S  
 SDC10-4-8S

**Detent**

D = Detent with handle  
 K = Knob (not shown)  
 knob is not detented

**Position**

2 = 2 Position detent  
 3 = 3 Position detent

**Spool**

1 = Tandem  
 2 = 2 position  
 3 = All open  
 4 = All closed  
 5 = Motor

P102 002E

Directional control valves  
 CP640-1

# Cartridge Valves Technical Information

## Directional Control Valves

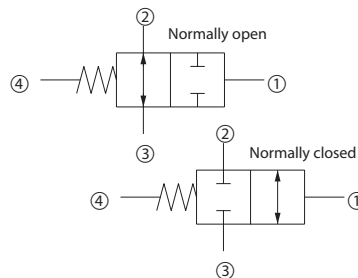
### Hydraulic Piloted

### CP710-8

#### OPERATION

This valve is a 2-way double hydraulically piloted spool.

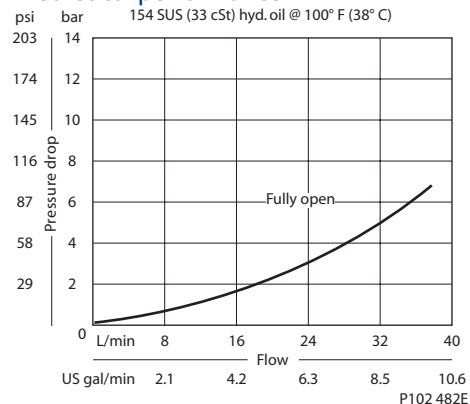
#### Schematic



P102 959

#### SPECIFICATIONS

#### Theoretical performance



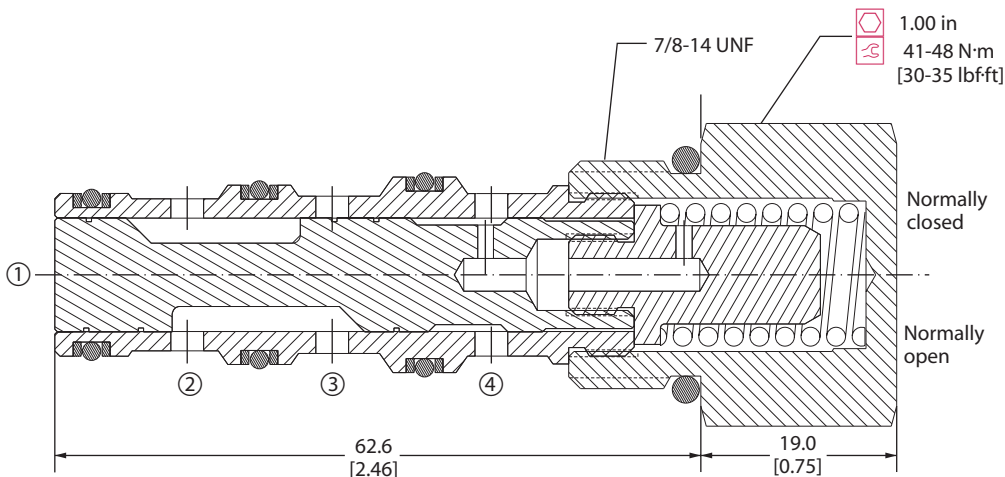
#### Specifications

Rated pressure	210 bar [3000 psi]
Rated flow at 7 bar [100 psi]	40 l/min [11 US gal/min]
Weight	0.15 kg [0.33 lb]
Cavity	SDC10-4

#### DIMENSIONS

mm [in]

#### Cross-sectional view



#### ORDERING INFORMATION

CP710 - 8 - B - 16S - C - 080

<b>Seals</b>		
B = Buna-N	Seal kit 120009	
V = Viton	Seal kit 120010	
<b>Housing and ports</b>	<b>Housing P/N</b>	<b>Shift pressure</b>
0 = No Housing	No Housing	040 = 2.8 bar [40 psi]
L3B = AL, 3/8 BSP	SDC10-4-L-3B	080 = 5.5 bar [80 psi]
L4B = AL, 1/2 BSP	SDC10-4-L-4B	150 = 10.3 bar [150 psi]
6S = AL, #6 SAE	CP10-4-6S	
8S = AL, #8 SAE	CP10-4-8S	
Other housings available		
<b>Configuration</b>		
O = Normally open		
C = Normally closed		

P102 935E



# Cartridge Valves Technical Information

## Directional Control Valves

### Hydraulic Piloted

#### CP712-11

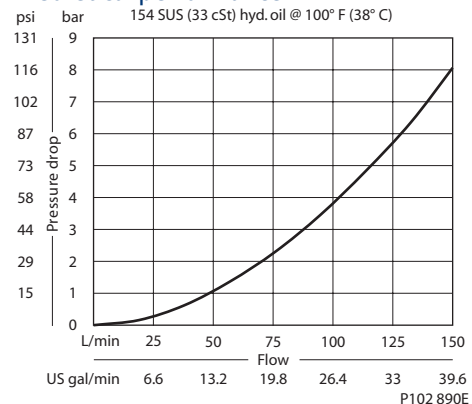
### OPERATION

This valve is a 2-way double hydraulically piloted spool.

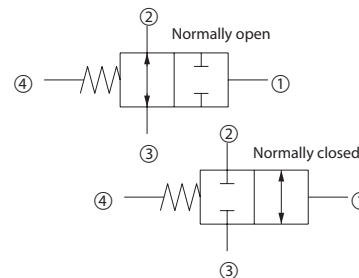
Note: Maximum pressure at port 4 is 207 bar [3000 psi].

### SPECIFICATIONS

#### Theoretical performance



### Schematic



P102 959

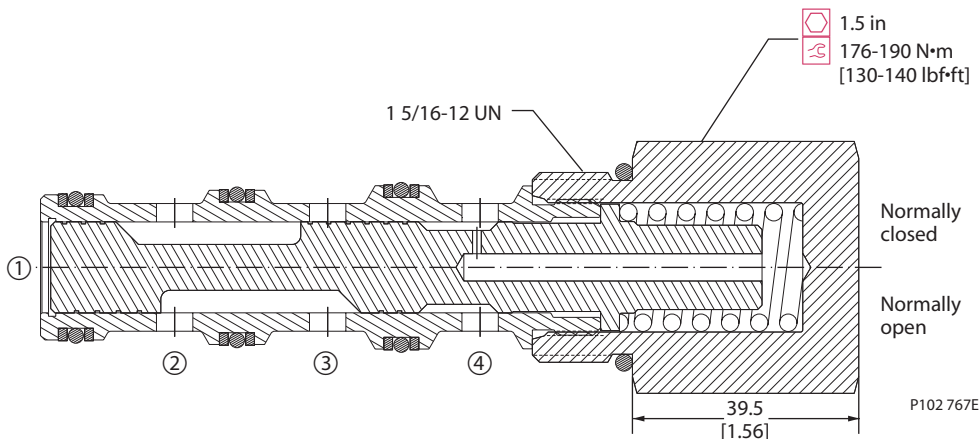
### Specifications

Rated pressure	450 bar [6500 psi]
Rated flow at 7 bar [100 psi]	130 l/min [34 US gal/min]
Leakage	328 cm <sup>3</sup> /min [20 in <sup>3</sup> /min] @ 210 bar [3000 psi]
Weight	0.61 kg [1.34 lb]
Cavity	CP16-4

### DIMENSIONS

mm [in]

### Cross-sectional view



P102 767E

### ORDERING INFORMATION

CP712-11-U-0-C-040

- Shift pressure**  
 040 = 2.8 bar [40 psi]  
 080 = 5.5 bar [80 psi]
- Configuration**  
 O = Normally open  
 C = Normally closed
- Housing and ports**  
 0 = No Housing  
 6B = AL, 3/4 BSP  
 8B = AL, 1 BSP  
 12S = AL, #12 SAE  
 16S = AL, #16 SAE  
 Other housings available
- Seals**  
 U = Urethane Seal kit 120677

**Housing P/N**  
 No Housing  
 CP16-4-6B  
 CP16-4-8B  
 CP16-4-12S  
 CP16-4-16S

Directional control valves  
 CP712-11

# Cartridge Valves Technical Information

## Directional Control Valves

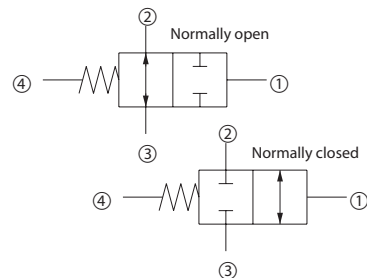
### Hydraulic Piloted

#### CP712-8

### OPERATION

This valve is a 2-way double hydraulically piloted spool.

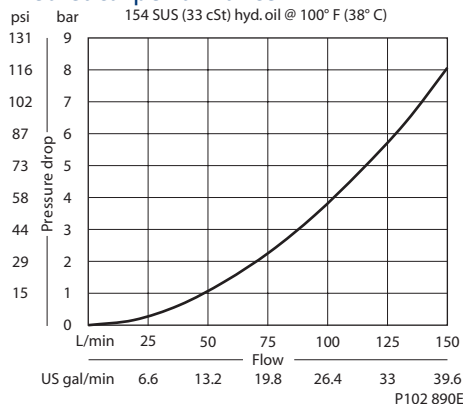
### Schematic



P102 959

### SPECIFICATIONS

#### Theoretical performance



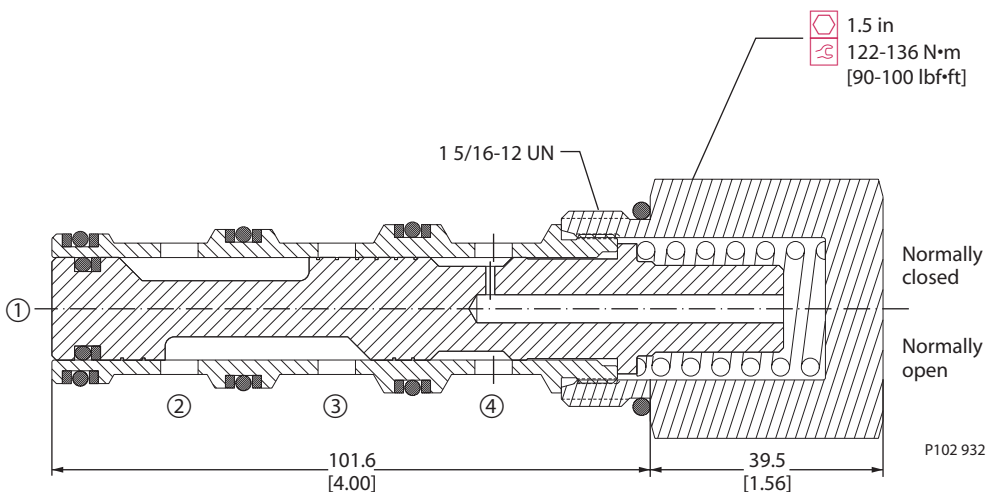
### Specifications

Rated pressure	210 bar [3000 psi]
Rated flow at 7 bar [100 psi]	130 l/min [34 US gal/min]
Weight	0.61 kg [1.34 lb]
Cavity	CP16-4

### DIMENSIONS

mm [in]

#### Cross-sectional view



### ORDERING INFORMATION

CP712 - 8 - B - 16S - C - 080 - S1

#### Seals

B = Buna-N  
 V = Viton

#### Housing and ports

0 = No Housing  
 6B = AL, 3/4 BSP  
 8B = AL, 1 BSP  
 12S = AL, #12 SAE  
 16S = AL, #16 SAE  
 Other housings available

#### Housing P/N

No Housing  
 CP16-4-6B  
 CP16-4-8B  
 CP16-4-12S  
 CP16-4-16S

#### Spool seal

S3 = No seal  
 S4 = Seal included

#### Shift pressure

040 = 2.8 bar [40 psi]  
 080 = 5.5 bar [80 psi]  
 150 = 10.3 bar [150 psi]  
 shift pressure assumes no seals

#### Configuration

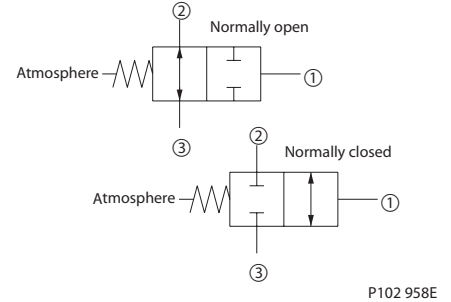
O = Normally open  
 C = Normally closed

P102 933E

**OPERATION**

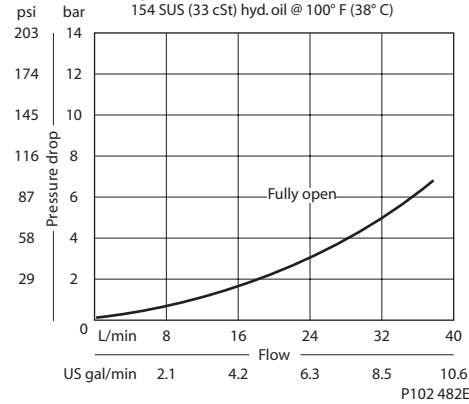
This valve is a hydraulically operated spool with atmospheric vent.

**Schematic**



**SPECIFICATIONS**

**Theoretical performance**



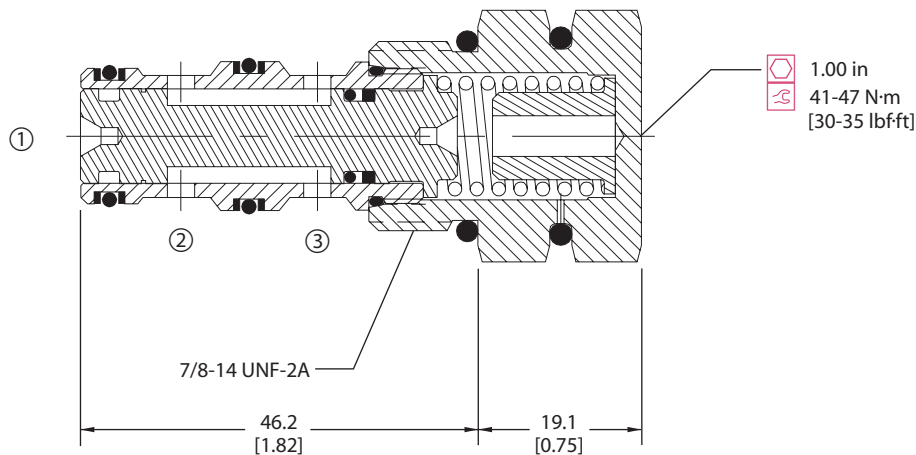
**Specifications**

Rated pressure	210 bar [3000 psi]
Rated flow at 7 bar [100 psi]	40 l/min [11 US gal/min]
Weight	0.13 kg [0.29 lb]
Cavity	SDC10-3

**DIMENSIONS**

mm [in]

**Cross-sectional view**



P102 470E

**ORDERING INFORMATION**

CP710 - 1 - B - 8S - C - 150 - S1

**Seals**  
 B = Buna-N  
 V = Viton

**Housing and ports**  
 0 = No Housing  
 SE3B = AL, 3/8 BSP  
 SE4B = AL, 1/2 BSP  
 6S = AL, #6 SAE  
 8S = AL, #8 SAE  
 Other housings available

**Seal kit**  
 120009  
 120010

**Housing P/N**  
 No Housing  
 SDC10-3-SE-3B  
 SDC10-3-SE-4B  
 CP10-3-6S  
 CP10-3-8S

**Spool seals**  
 S1 = Seal at top of spool  
 S2 = Seals at top and bottom of spool

**Shift pressure**  
 bar [psi]  
 050 = 3.5 [50]  
 080 = 5.5 [80]  
 150 = 10.3 [150]

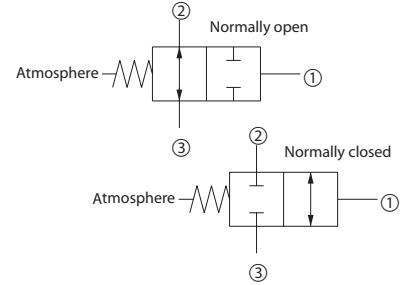
**Configuration**  
 O = Normally open  
 C = Normally closed

P102 004E

**OPERATION**

This valve is a hydraulically operated spool with atmospheric vent.

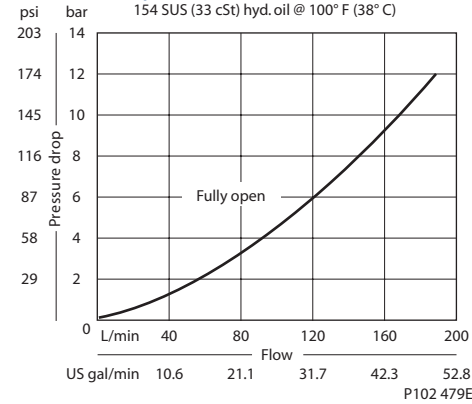
**Schematic**



P102 958E

**SPECIFICATIONS**

**Theoretical performance**



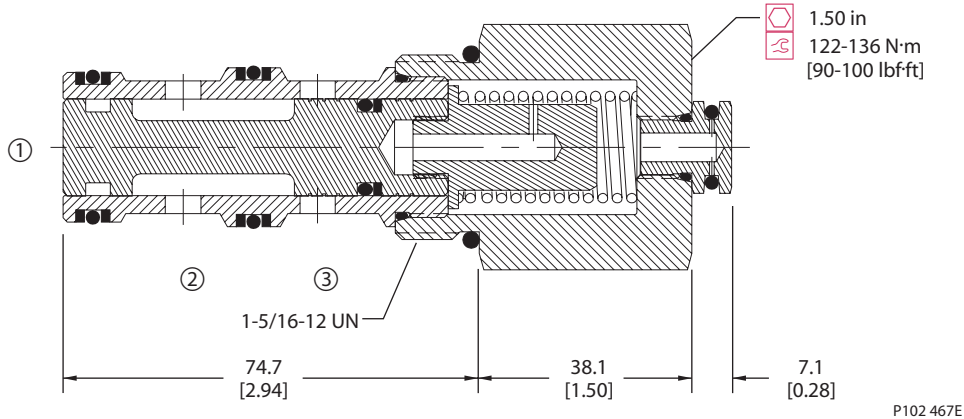
**Specifications**

Rated pressure	210 bar [3000 psi]
Rated flow at 7 bar [100 psi]	130 l/min [34 US gal/min]
Weight	0.57 kg [1.25 lb]
Cavity	SDC16-3

**DIMENSIONS**

mm [in]

**Cross-sectional view**



**ORDERING INFORMATION**

CP712 - 1 - B - 16S - C - 080 - S1

**Seals**  
B = Buna-N  
V = Viton  
Seal kit 120202  
120203

**Housing and ports**  
0 = No Housing  
SE6B = AL, 3/4 BSP  
SE8B = AL, 1 BSP  
12S = AL, #12 SAE  
16S = AL, #16 SAE  
Other housings available

**Housing P/N**  
No Housing  
SDC16-3-SE-6B  
SDC16-3-SE-8B  
CP16-3-12S  
CP16-3-16S

**Spool seals**  
S1 = Seal at top of spool  
S2 = Seals at top and bottom of spool

**Shift pressure**

	bar	[psi]
040	= 2.8	[40]
080	= 5.5	[80]
150	= 10.3	[150]

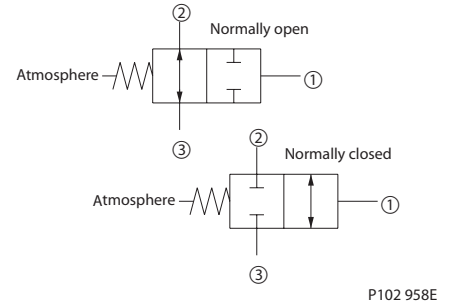
**Configuration**  
O = Normally open  
C = Normally closed

P102 953E

**OPERATION**

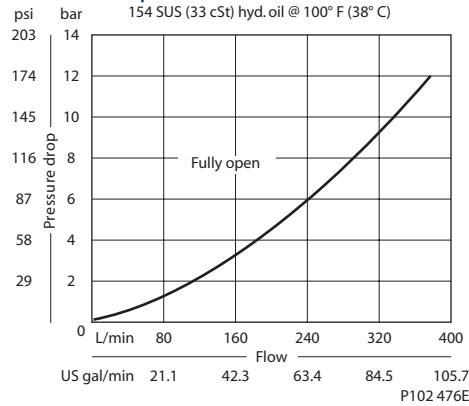
This valve is a hydraulically operated spool with atmospheric vent.

**Schematic**



**SPECIFICATIONS**

**Theoretical performance**



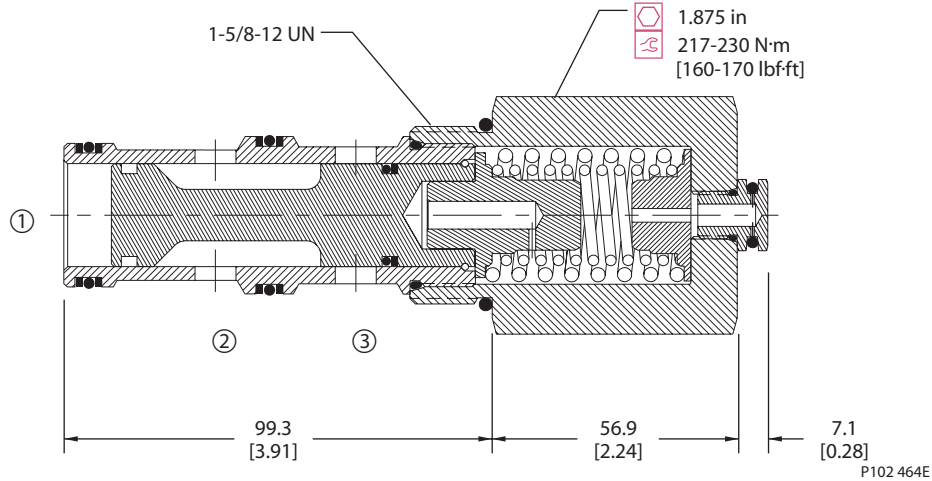
**Specifications**

Rated pressure	210 bar [3000 psi]
Rated flow at 7 bar [100 psi]	265 l/min [70 US gal/min]
Weight	1.26 kg [2.78 lb]
Cavity	SDC20-3

**DIMENSIONS**

mm [in]

**Cross-sectional view**



**ORDERING INFORMATION**

CP713 - 1 - B - 20S - C - 150 - S1

**Seals**

B = Buna-N  
 V = Viton

**Housing and ports**

0 = No Housing  
 8B = AL, 1 BSP  
 10B = AL, 1-1/4 BSP  
 16S = AL, #16 SAE  
 20S = AL, #20 SAE  
 Other housings available

**Configuration**

O = Normally open  
 C = Normally closed

Seal kit  
 120200  
 120201

**Housing P/N**

No Housing  
 CP20-3-8B  
 CP20-3-10B  
 CP20-3-16S  
 CP20-3-20S

**Spool seals**

S1 = Seal at top of spool  
 S2 = Seals at both ends of spool

**Shift pressure**

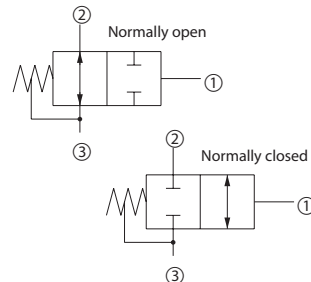
	bar	[psi]
050	3.5	[50]
080	5.5	[80]
100	6.9	[100]
130	9.0	[130]
150	10.3	[150]

P102 954E

**OPERATION**

This valve is a 2-way hydraulically piloted spool.

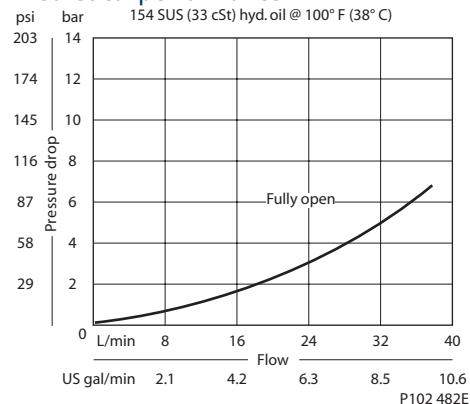
**Schematic**



P102 756

**SPECIFICATIONS**

**Theoretical performance**



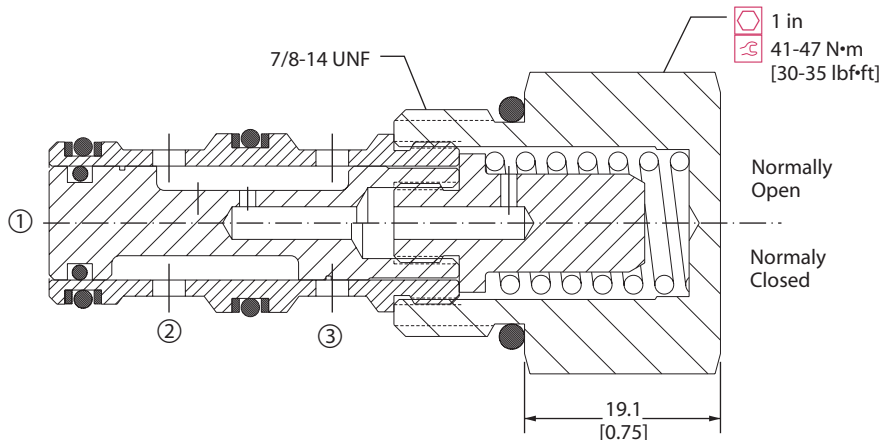
**Specifications**

Rated pressure	210 bar [3000 psi]
Rated flow at 7 bar [100 psi]	40 l/min [11 US gal/min]
Weight	0.13 kg [0.29 lb]
Cavity	SDC10-3

**DIMENSIONS**

mm [in]

**Cross-sectional view**



P102 755

**ORDERING INFORMATION**

CP710 - 3 - B - 16S - C - 150 - S1

**Seals**

B = Buna-N  
V = Viton

Seal kit  
120009  
120010

**Housing and ports**

0 = No Housing  
SE3B = AL, 3/8 BSP  
SE4B = AL, 1/2 BSP  
6S = AL, #6 SAE  
8S = AL, #8 SAE  
Other housings available

**Housing P/N**

No Housing  
SDC10-3-SE-3B  
SDC10-3-SE-4B  
CP10-3S-6S  
CP10-3S-8S

**Spool seal**

S3 = No seal  
S4 = With seal

**Shift pressure**

bar [psi]  
150 = 10.3 [150]  
shift pressure assumes no seal

**Configuration**

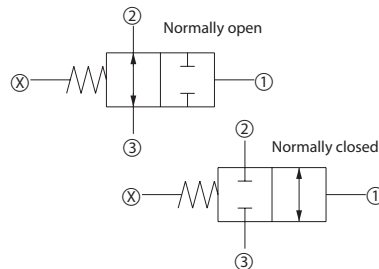
O = Normally open  
C = Normally closed

P102 754E

**OPERATION**

This valve is a 2-way double hydraulically piloted spool.

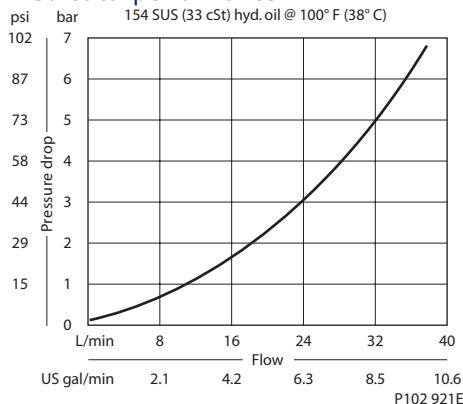
**Schematic**



P102 499E

**SPECIFICATIONS**

**Theoretical performance**



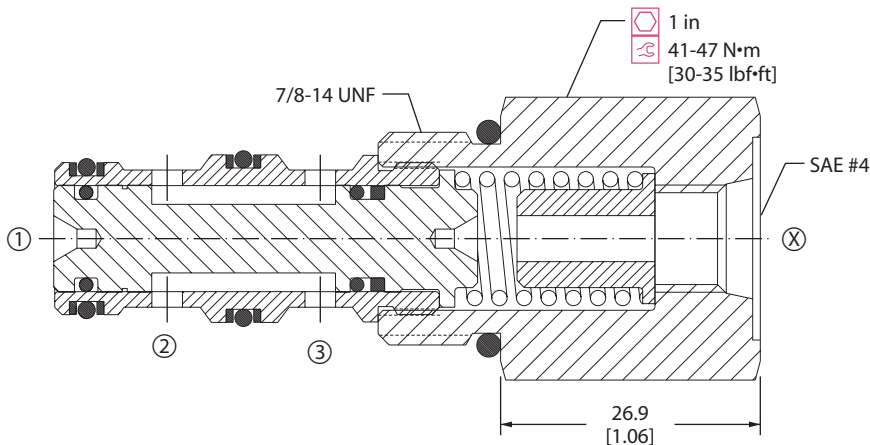
**Specifications**

Rated pressure	210 bar [3000 psi]
Rated flow at 7 bar [100 psi]	40 l/min [11 US gal/min]
Weight	0.13 kg [0.29 lb]
Cavity	SDC10-3

**DIMENSIONS**

mm [in]

**Cross-sectional view**



P102 752

**ORDERING INFORMATION**

CP710 - 2 - B - 16S - C - 080 - S1

**Seals**  
 B = Buna-N  
 V = Viton

**Housing and ports**  
 0 = No Housing  
 SE3B = AL, 3/8 BSP  
 SE4B = AL, 1/2 BSP  
 6S = AL, #6 SAE  
 8S = AL, #8 SAE  
 Other housings available

**Housing P/N**  
 No Housing  
 SDC10-3-SE-3B  
 SDC10-3-SE-4B  
 CP10-3-6S  
 CP10-3-8S

**Configuration**  
 O = Normally open  
 C = Normally closed

**Spool seals**  
 S1 = Seal at top of spool  
 S2 = Seal at top and bottom of spool  
 S3 = No seals  
 S4 = Seal at bottom of spool

**Shift pressure**

	bar	[psi]
040	2.8	[40]
050	3.4	[50]
080	5.5	[80]
125	8.6	[125]
150	10.3	[150]

shift pressure assumes no seals

P102 753E

Directional control valves  
 CP710-2

# Cartridge Valves Technical Information

## Directional Control Valves

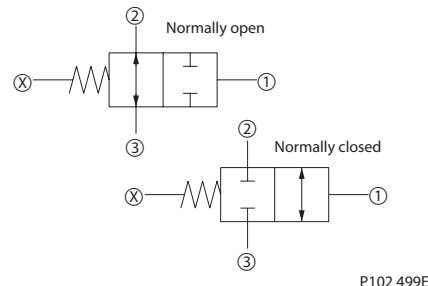
### Hydraulic Piloted

#### CP712-2

### OPERATION

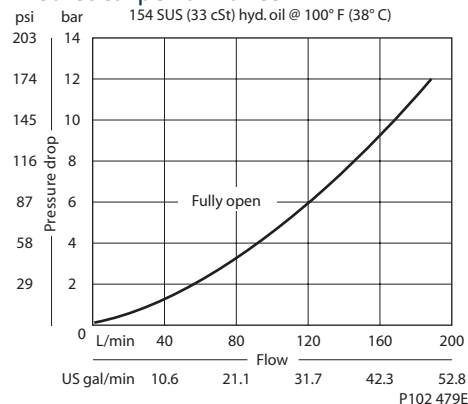
This valve is a 2-way double hydraulically piloted spool.

### Schematic



### SPECIFICATIONS

#### Theoretical performance



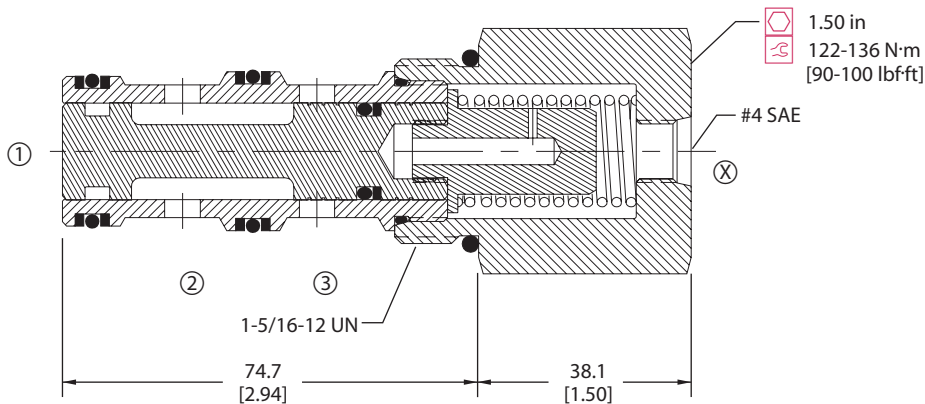
### Specifications

Rated pressure	210 bar [3000 psi]
Rated flow at 7 bar [100 psi]	130 l/min [34 US gal/min]
Weight	0.57 kg [1.25 lb]
Cavity	SDC16-3

### DIMENSIONS

mm [in]

#### Cross-sectional view



### ORDERING INFORMATION

**CP712 - 2 - B - 16S - C - 080 - S1**

<p><b>Seals</b></p> <p>B = Buna-N V = Viton</p> <p><b>Seal kit</b> 120202 120203</p> <p><b>Housing and ports</b> 0 = No Housing SE6B = AL, 3/4 BSP SE8B = AL, 1BSP 12S = AL, #12 SAE 16S = AL, #16 SAE Other housings available</p>	<p><b>Housing P/N</b> No Housing SDC16-3-SE-6B SDC16-3-SE-8B CP16-3-12S CP16-3-16S</p>	<p><b>Spool seals</b> S1 = Seal at top of spool S2 = Seals at top and bottom of spool S3 = No seals S4 = Seal at bottom of spool</p> <p><b>Shift pressure</b></p> <table border="0"> <tr> <td></td> <td>bar</td> <td>[psi]</td> </tr> <tr> <td>040</td> <td>= 2.8</td> <td>[40]</td> </tr> <tr> <td>080</td> <td>= 5.5</td> <td>[80]</td> </tr> <tr> <td>150</td> <td>= 10.3</td> <td>[150]</td> </tr> </table> <p>shift pressure assumes no seals</p>		bar	[psi]	040	= 2.8	[40]	080	= 5.5	[80]	150	= 10.3	[150]
	bar	[psi]												
040	= 2.8	[40]												
080	= 5.5	[80]												
150	= 10.3	[150]												

**Configuration**  
O = Normally open  
C = Normally closed

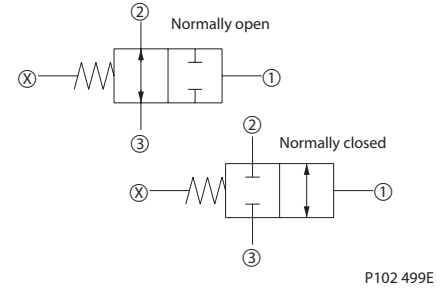
P102 007E



**OPERATION**

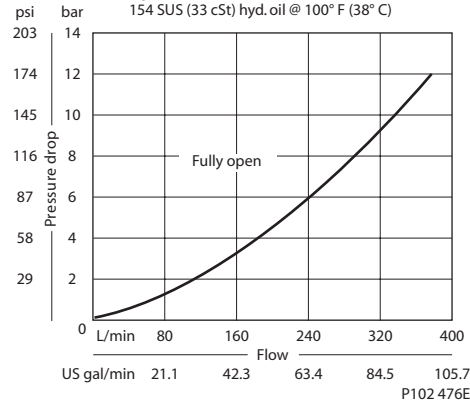
This valve is a 2-way double hydraulically piloted spool.

**Schematic**



**SPECIFICATIONS**

**Theoretical performance**



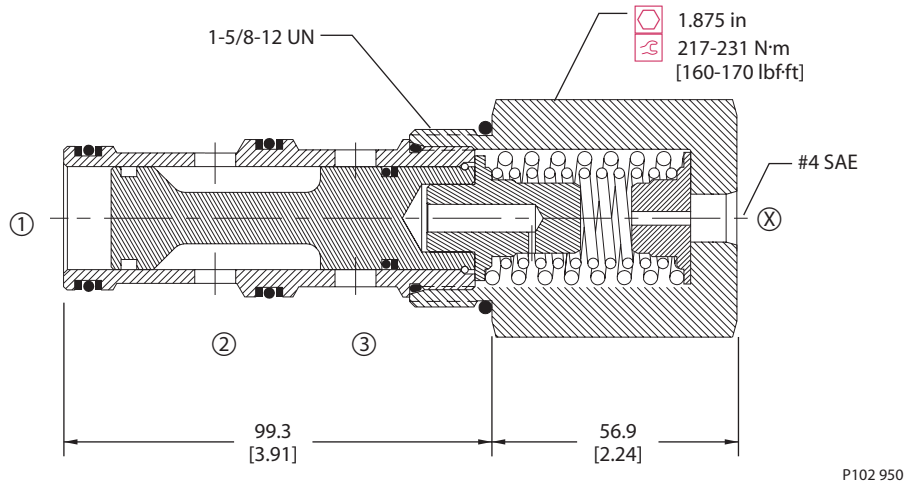
**Specifications**

Rated pressure	210 bar [3000 psi]
Rated flow at 7 bar [100 psi]	265 l/min [70 US gal/min]
Weight	1.26 kg [2.78 lb]
Cavity	SDC20-3

**DIMENSIONS**

mm [in]

**Cross-sectional view**



**ORDERING INFORMATION**

CP713 - 2 - B - 20S - C - 150 - S1

**Seals**  
 B = Buna-N  
 V = Viton

**Housing and ports**  
 0 = No Housing  
 8B = AL, 1 BSP  
 10B = AL, 1-1/4 BSP  
 16S = AL, #16 SAE  
 20S = AL, #20 SAE  
 Other housings available

**Configuration**  
 0 = Normally open  
 C = Normally closed

**Seal kit**  
 120200  
 120201

**Housing P/N**  
 No Housing  
 CP20-3-8B  
 CP20-3-10B  
 CP20-3-16S  
 CP20-3-20S

**Spool seals**  
 S1 = Seal at top of spool  
 S2 = Seals at top and bottom of spool  
 S3 = No seals  
 S4 = Seal at bottom of spool

**Shift pressure**

	bar	[psi]
050	3.5	[50]
080	5.5	[80]
100	6.9	[100]
130	9.0	[130]
150	10.3	[150]

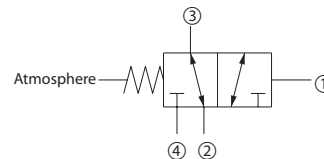
shift pressure assumes no seals

P102 014E

**OPERATION**

This valve is a 3-way hydraulically piloted spool with atmospheric vent.

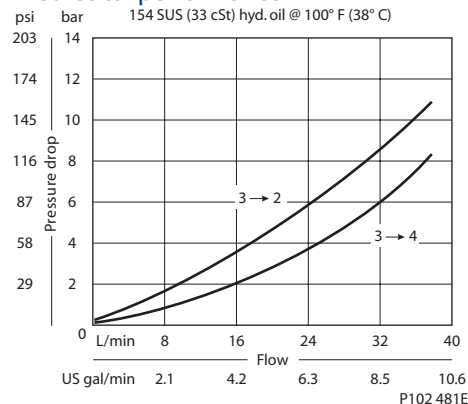
**Schematic**



P102 498E

**SPECIFICATIONS**

**Theoretical performance**



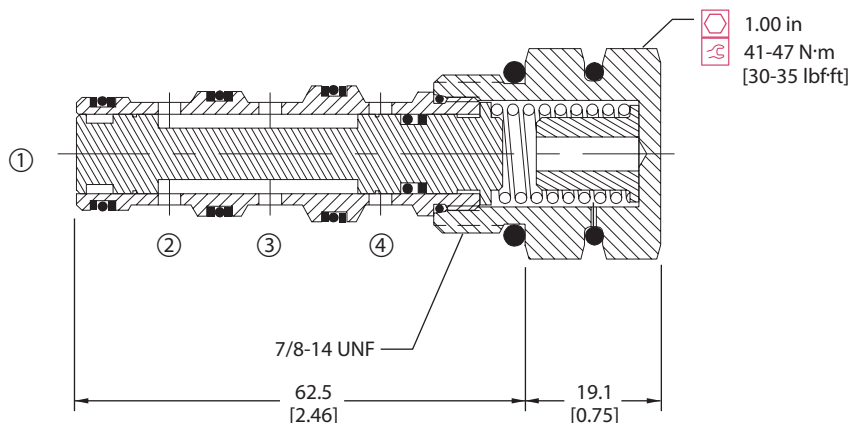
**Specifications**

Rated pressure	210 bar [3000 psi]
Rated flow at 7 bar [100 psi]	30 l/min [8 US gal/min]
Weight	0.15 kg [0.33 lb]
Cavity	SDC10-4

**DIMENSIONS**

mm [in]

**Cross-sectional view**



P102 469E

**ORDERING INFORMATION**

CP720 - 1 - B - 8S - 150 - S1

**Seals**

B = Buna-N  
V = Viton

Seal kit  
120023  
120024

**Housing and ports**

0 = No Housing  
L3B = AL, 3/8 BSP  
L4B = AL, 1/2 BSP  
6S = AL, #6 SAE  
8S = AL, #8 SAE  
Other housings available

**Housing P/N**

No Housing  
SDC10-4-L-3B  
SDC10-4-L-4B  
CP10-4-6S  
CP10-4-8S

**Spool seals**

S1 = Seal at top of spool  
S2 = Seals at both ends of spool

**Shift pressure**

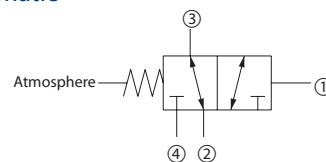
	bar	[psi]
040	2.8	[40]
050	3.5	[50]
080	5.5	[80]
125	8.6	[125]
150	10.3	[150]

P102 005E

**OPERATION**

This valve is a 3-way hydraulically piloted spool with atmospheric vent.

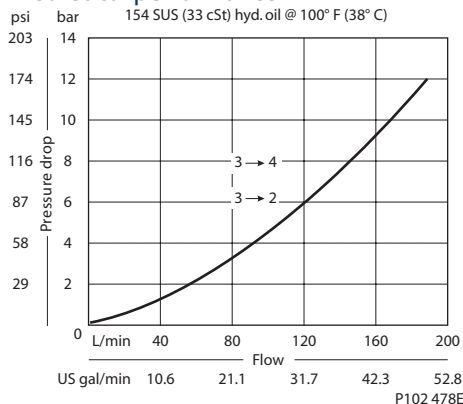
**Schematic**



P102 498E

**SPECIFICATIONS**

**Theoretical performance**



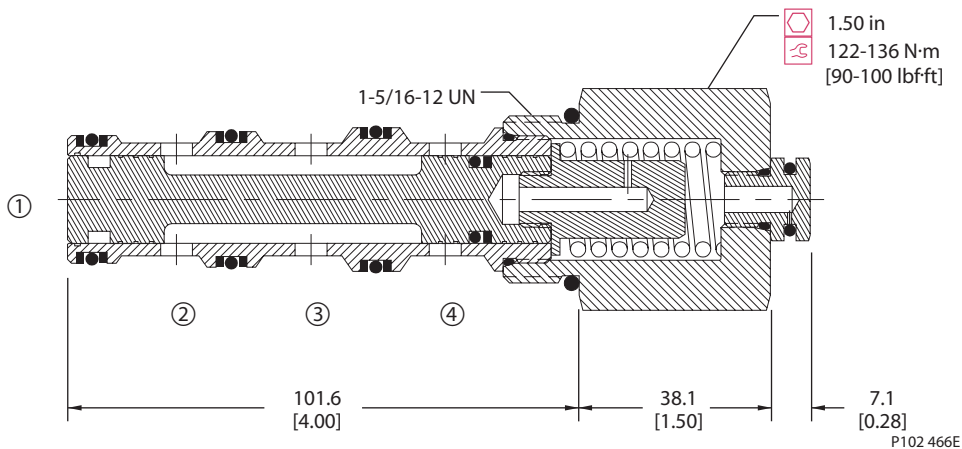
**Specifications**

Rated pressure	210 bar [3000 psi]
Rated flow at 7 bar [100 psi]	130 l/min [34 US gal/min]
Weight	0.61 kg [1.34 lb]
Cavity	CP16-4

**DIMENSIONS**

mm [in]

**Cross-sectional view**



**ORDERING INFORMATION**

CP722 - 1 - B - 16S - 150 - S1

**Seals**

B = Buna-N  
V = Viton

**Housing and ports**

0 = No Housing  
6B = AL, 3/4 BSP  
8B = AL, 1 BSP  
12S = AL, #12 SAE  
16S = AL, #16 SAE  
Other housings available

Seal kit  
120025  
120026

**Housing P/N**

No Housing  
CP16-4-6B  
CP16-4-8B  
CP16-4-12S  
CP16-4-16S

**Spool seals**

S1 = No seals  
S2 = Seal at bottom of spool

**Shift pressure**

040 = 2.8 bar [40] psi  
080 = 5.5 bar [80] psi  
150 = 10.3 bar [150] psi

shift pressure assumes no seals

P102 010E

Directional control valves  
CP722-1

# Cartridge Valves Technical Information

## Directional Control Valves

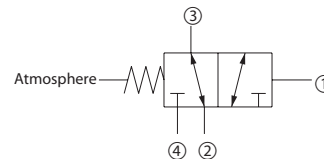
### Hydraulic Piloted

### CP723-1

#### OPERATION

This valve is a 3-way hydraulically piloted spool with atmospheric vent.

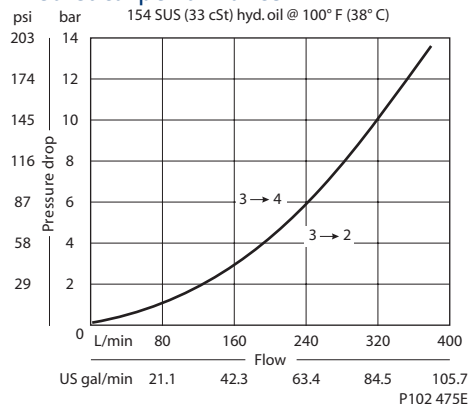
#### Schematic



P102 498E

#### SPECIFICATIONS

#### Theoretical performance



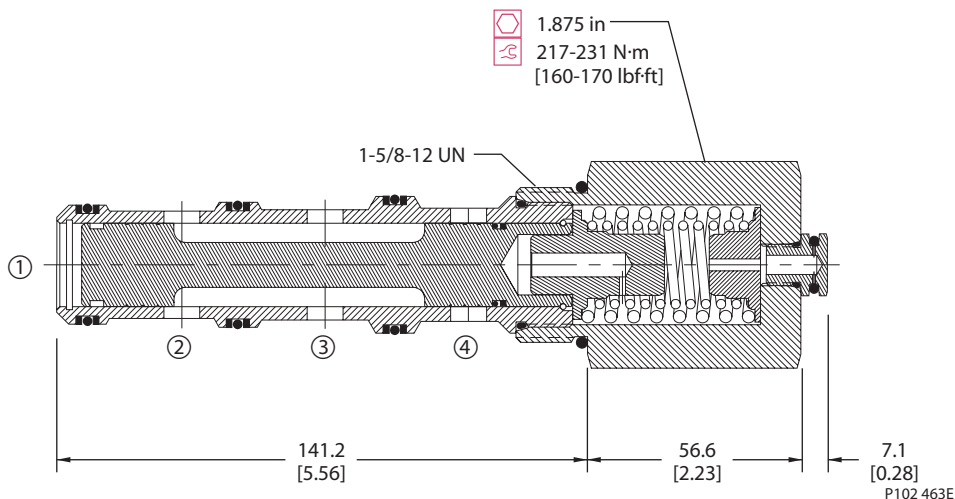
#### Specifications

Rated pressure	210 bar [3000 psi]
Rated flow at 7 bar [100 psi]	265 l/min [70 US gal/min]
Weight	1.22 kg [2.68 lb]
Cavity	SDC20-4

#### DIMENSIONS

mm [in]

#### Cross-sectional view



#### ORDERING INFORMATION

CP723 - 1 - B - 20S - 150 - S1

#### Seals

B = Buna-N  
V = Viton

Seal kit  
120181  
120182

#### Housing and ports

0 = No Housing  
8B = AL, 1 BSP  
10B = AL, 1-1/4 BSP  
16S = AL, #16 SAE  
20S = AL, #20 SAE  
Other housings available

#### Housing P/N

No Housing  
CP20-4-8B  
CP20-4-10B  
CP20-4-16S  
CP20-4-20S

#### Spool seals

S1 = Seal at top of spool (required)  
S2 = Seals at both ends of spool

#### Shift pressure

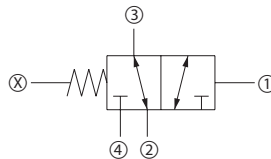
Shift pressure (bar)	Shift pressure (psi)
050	3.5 [50]
080	5.5 [80]
100	6.9 [100]
130	9.0 [130]
150	10.3 [150]

P102 015E

**OPERATION**

This valve is a 3-way double hydraulically piloted spool.

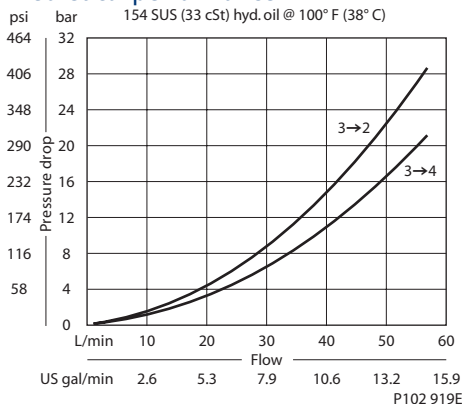
**Schematic**



P102 938E

**SPECIFICATIONS**

**Theoretical performance**



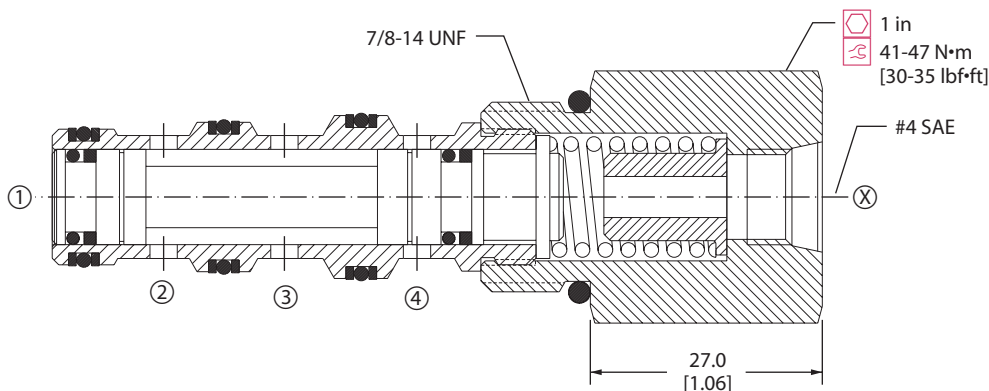
**Specifications**

Rated pressure	210 bar [3000 psi]
Rated flow at 7 bar [100 psi]	25 l/min [7 US gal/min]
Weight	0.15 kg [0.33 lb]
Cavity	SDC10-4

**DIMENSIONS**

mm [in]

**Cross-sectional view**



P102 758

**ORDERING INFORMATION**

CP720 - 2 - B - 4S - 150 - S1

**Seals**

B = Buna-N  
V = Viton

**Housing and ports**

0 = No Housing  
L3B = AL, 3/8 BSP  
L4B = AL, 1/2 BSP  
6S = AL, #6 SAE  
8S = AL, #8 SAE  
Other housings available

Seal kit  
120200  
120201

**Housing P/N**

No Housing  
SDC10-4-L-3B  
SDC10-4-L-4B  
CP10-4-6S  
CP10-4-8S

**Spool seals**

S1=Seal at top of spool  
S2=Seals at both ends of spool  
S3= No seal  
S4= Seals at bottom of spool

**Shift pressure**

bar	[psi]
040	[40]
050	[50]
080	[80]
125	[125]
150	[150]

shift pressure assumes no seals

Directional control valves  
CP720-2

# Cartridge Valves Technical Information

## Directional Control Valves

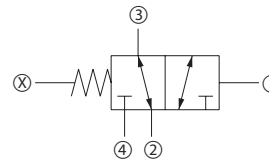
### Hydraulic Piloted

#### CP722-2

### OPERATION

This valve is a 3-way double hydraulically piloted spool.

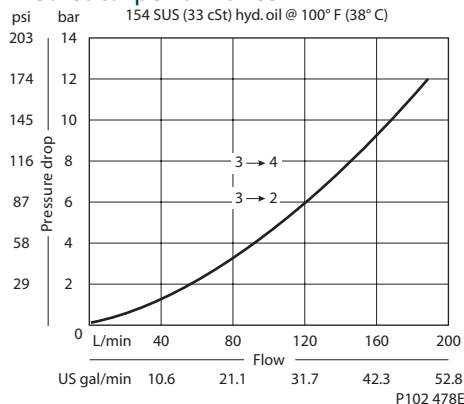
### Schematic



P102 938E

### SPECIFICATIONS

#### Theoretical performance



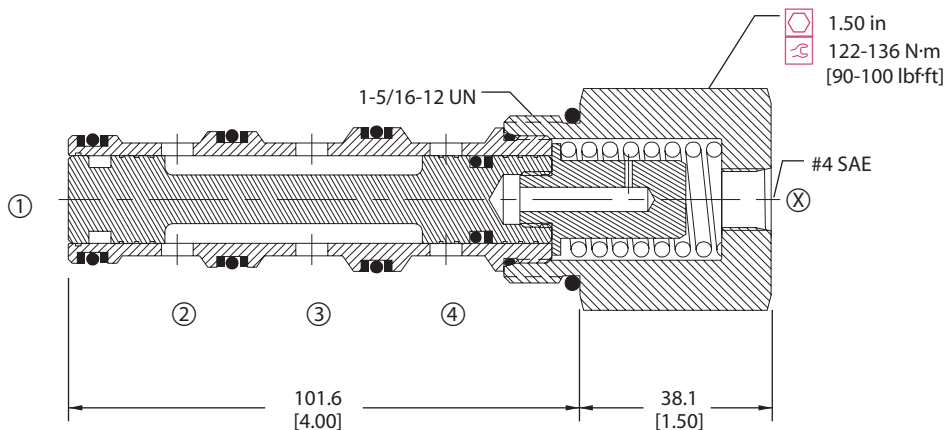
#### Specifications

Rated pressure	210 bar [3000 psi]
Rated flow at 7 bar [100 psi]	130 l/min [34 US gal/min]
Weight	0.61 kg [1.34 lb]
Cavity	CP16-4

### DIMENSIONS

mm [in]

#### Cross-sectional view



P102 951

### ORDERING INFORMATION

CP722 - 2 - B - 16S - 150 - S1

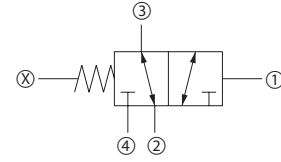
<b>Seals</b>		<b>Seal kit</b>		<b>Spool seals</b>	
B = Buna-N		120025		S1 = Seal at top of spool	
V = Viton		120026		S2 = Seals at both ends of spool	
				S3 = No seals	
				S4 = Seal at bottom of spool	
<b>Housing and ports</b>		<b>Housing P/N</b>		<b>Shift pressure</b>	
0 = No Housing		No Housing		bar	[psi]
6B = AL, 3/4 BSP		CP16-4-6B		040 = 2.8	[40]
8B = AL, 1 BSP		CP16-4-8B		080 = 5.5	[80]
12S = AL, #12 SAE		CP16-4-12S		150 = 10.3	[150]
16S = AL, #16 SAE		CP16-4-16S		shift pressure assumes no seals	
Other housings available					

P102 955E

**OPERATION**

This valve is a 3-way double hydraulically piloted spool.

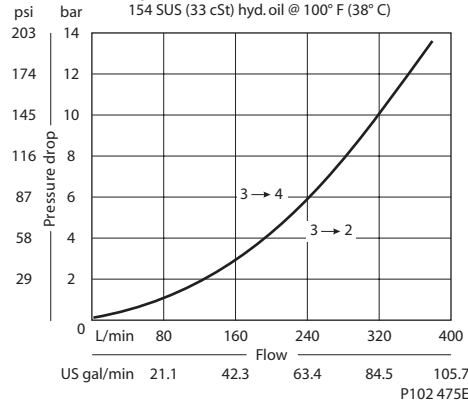
**Schematic**



P102 938E

**SPECIFICATIONS**

**Theoretical performance**



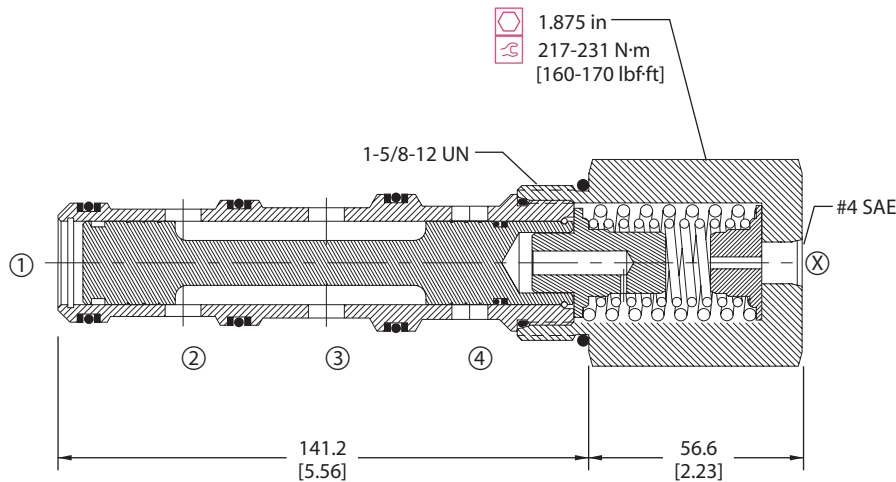
**Specifications**

Rated pressure	210 bar [3000 psi]
Rated flow at 7 bar [100 psi]	265 l/min [70 US gal/min]
Weight	1.22 kg [2.68 lb]
Cavity	SDC20-4

**DIMENSIONS**

mm [in]

**Cross-sectional view**



P102 952

**ORDERING INFORMATION**

CP723 - 2 - B - 20S - 150 - S1

**Seals**

B = Buna-N  
 V = Viton

**Housing and ports**

0 = No Housing  
 8B = AL, 1 BSP  
 10B = AL, 1-1/4 BSP  
 16S = AL, #16 SAE  
 20S = AL, #20 SAE  
 Other housings available

Seal kit  
 120181  
 120182

**Housing P/N**

No Housing  
 CP20-4-8B  
 CP20-4-10B  
 CP20-4-16S  
 CP20-4-20S

**Spool seals**

S1 = Seal at top of spool  
 S2 = Seals at top and bottom of spool  
 S3 = No seals  
 S4 = Seal at bottom of spool

**Shift pressure**

	bar	[psi]
050	3.5	[50]
080	5.5	[80]
100	6.9	[100]
130	9.0	[130]
150	10.3	[150]

shift pressure assumes no seals

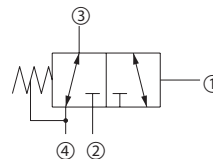
P102 956E

Directional control valves  
 CP723-2

**OPERATION**

This valve is a 3-way hydraulically piloted spool.

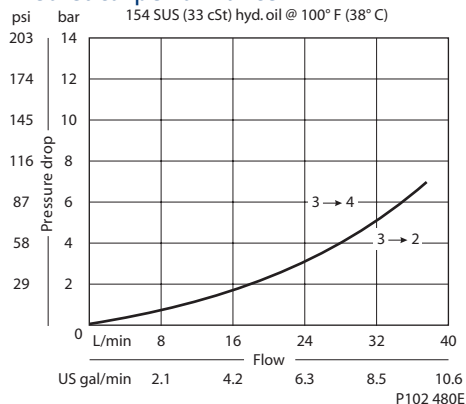
**Schematic**



P102 500E

**SPECIFICATIONS**

**Theoretical performance**



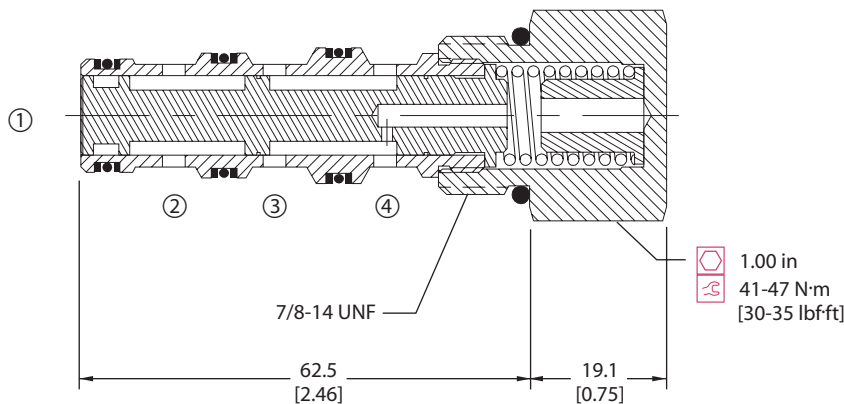
**Specifications**

Rated pressure	210 bar [3000 psi]
Rated flow at 7 bar [100 psi]	40 l/min [11 US gal/min]
Weight	0.15 kg [0.33 lb]
Cavity	SDC10-4

**DIMENSIONS**

mm [in]

**Cross-sectional view**



**ORDERING INFORMATION**

CP720 - 5 - B - 8S - 150 - S3

**Seals**

B = Buna-N  
V = Viton

**Housing and ports**

0 = No Housing  
L3B = AL, 3/8 BSP  
L4B = AL, 1/2 BSP  
6S = AL, #6 SAE  
8S = AL, #8 SAE  
Other housings available

**Housing P/N**

No Housing  
SDC10-4-L-3B  
SDC10-4-L-4B  
CP10-4-6S  
CP10-4-8S

**Spool seals**

S3 = No seal  
S4 = Seal at bottom of spool

**Shift pressure**

	bar	[psi]
050	= 3.5	[50]
080	= 5.5	[80]
125	= 8.6	[125]
150	= 10.3	[150]

shift pressure assumes no seals

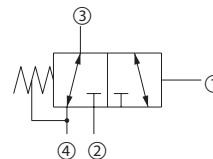
P102 006E



**OPERATION**

This valve is a 3-way hydraulically-piloted spool.

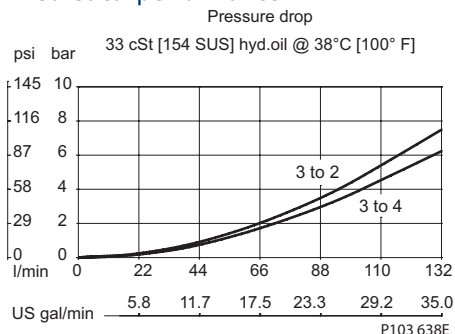
**Schematic**



P102 500E

**SPECIFICATIONS**

**Theoretical performance**



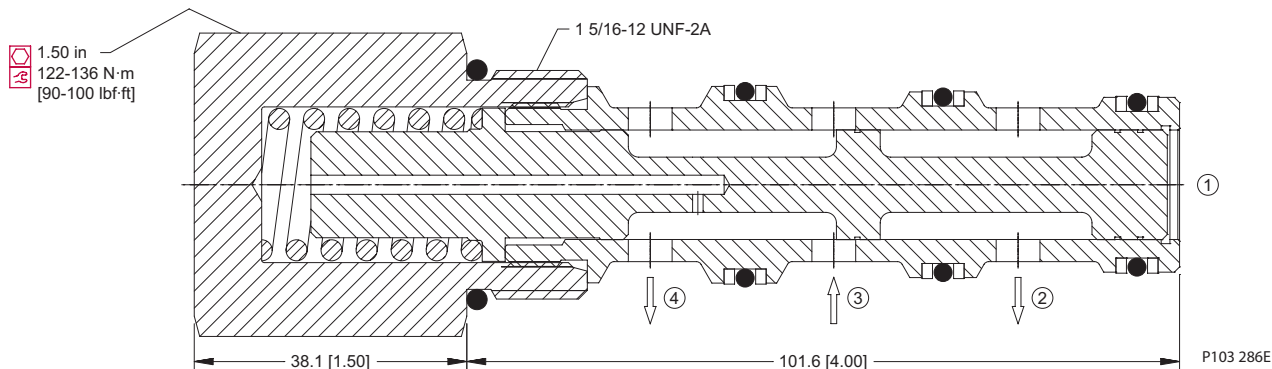
**Specifications**

Rated pressure	450 bar [6500 psi]
Rated flow at 7 bar [100 psi]	125 l/min [33 US gal/min]
Leakage	164 cm <sup>3</sup> /min [10 in <sup>3</sup> /min] @ Oil temperature range -20° to 80°C [-4° to 180°F]
Weight	0.61 kg [1.34 lb]
Cavity	CP16-4

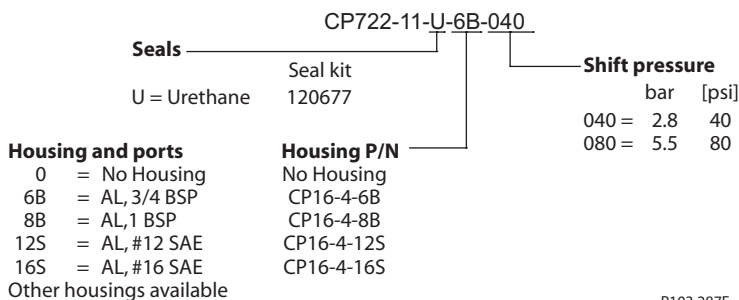
**DIMENSIONS**

mm [in]

**Cross-sectional view**



**ORDERING INFORMATION**



Directional control valves  
CP722-11

# Cartridge Valves Technical Information

## Directional Control Valves

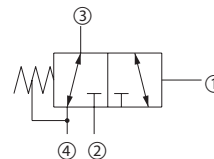
### Hydraulic Piloted

### CP722-5

#### OPERATION

This valve is a 3-way hydraulically piloted spool.

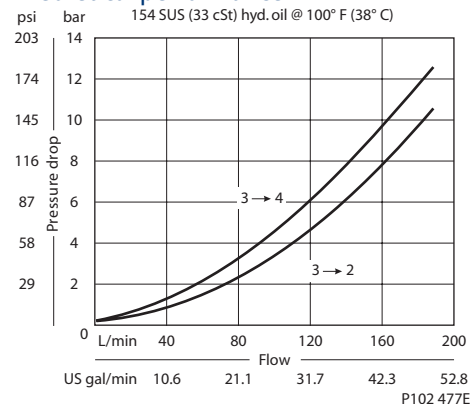
#### Schematic



P102 500E

#### SPECIFICATIONS

#### Theoretical performance



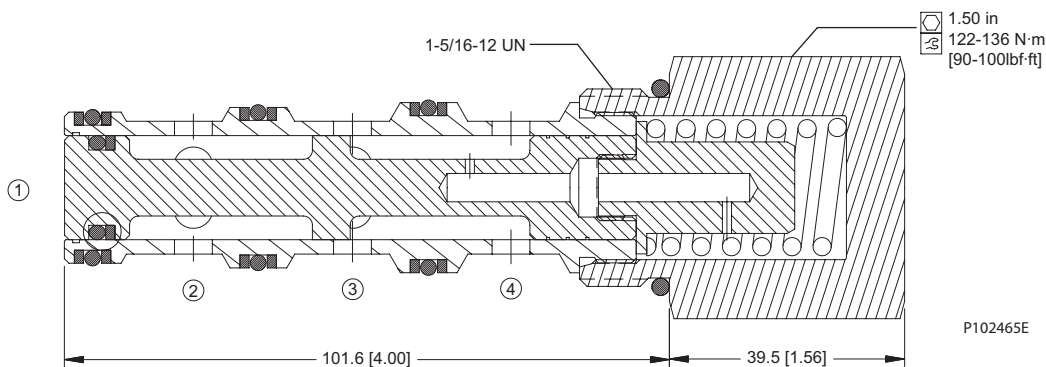
#### Specifications

Rated pressure	210 bar [3000 psi]
Rated flow at 7 bar [100 psi]	130 l/min [34 US gal/min]
Weight	0.61 kg [1.34 lb]
Cavity	CP16-4

#### DIMENSIONS

mm [in]

#### Cross-sectional view



#### ORDERING INFORMATION

CP722 - 5 - B - 16S - 150 - S3

#### Seals

B = Buna-N  
 V = Viton

#### Housing and ports

0 = No Housing  
 6B = AL, 3/4 BSP  
 8B = AL, 1 BSP  
 12S = AL, #12 SAE  
 16S = AL, #16 SAE  
 Other housings available

Seal kit  
 120025  
 120026

#### Housing P/N

No Housing  
 CP16-4-6B  
 CP16-4-8B  
 CP16-4-12S  
 CP16-4-16S

#### Spool seals

S3 = No seal  
 S4 = Seal at bottom of spool

#### Shift pressure

bar [psi]  
 040 = 2.8 [40]  
 080 = 5.5 [80]  
 150 = 10.3 [150]

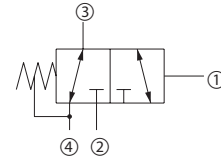
shift pressure assumes no seals

P102 013E

**OPERATION**

This valve is a 3-way hydraulically piloted spool.

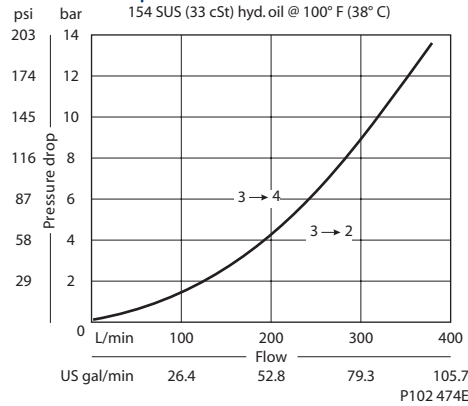
**Schematic**



P102 500E

**SPECIFICATIONS**

**Theoretical performance**



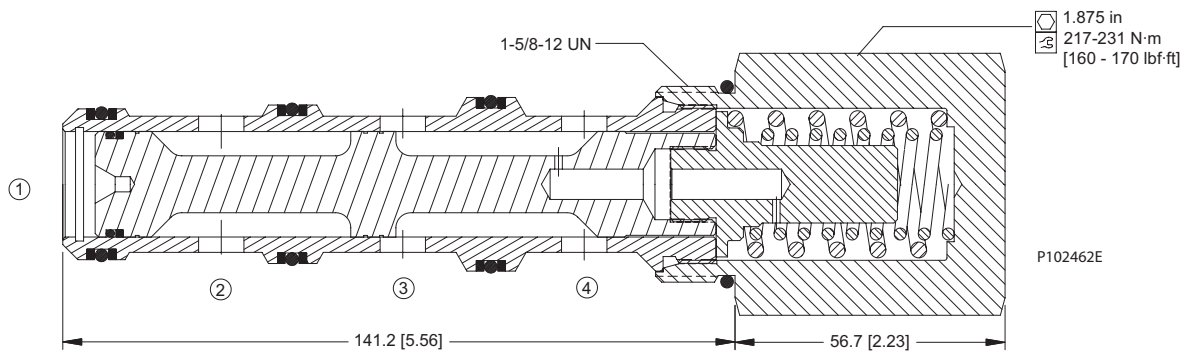
**Specifications**

Rated pressure	210 bar [3000 psi]
Rated flow at 7 bar [100 psi]	265 l/min [70 US gal/min]
Weight	1.22 kg [2.68 lb]
Cavity	SDC20-4

**DIMENSIONS**

mm [in]

**Cross-sectional view**



Directional control valves  
 CP723-5

**ORDERING INFORMATION**

CP723 - 5 - B - 20S - 150 - S3

**Seals**

B = Buna-N  
 V = Viton

**Housing and ports**

00 = No Housing  
 8B = AL, 1 BSP  
 10B = AL, 1-1/4 BSP  
 16S = AL, #16 SAE  
 20S = AL, #20 SAE  
 Other housings available

Seal kit  
 120181  
 120182

**Housing P/N**

No Housing  
 CP20-4-8B  
 CP20-4-10B  
 CP20-4-16S  
 CP20-4-20S

**Spool seals**

S3 = No seal  
 S4 = Seal at bottom of spool

**Shift pressure**

	bar	[psi]
050	= 3.5	[50]
080	= 5.5	[80]
100	= 6.9	[100]
130	= 9.0	[130]
150	= 10.3	[150]

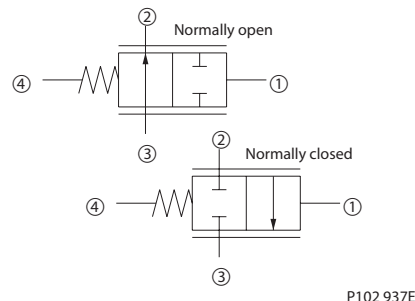
shift pressure assumes no seals

P102 018E

**OPERATION**

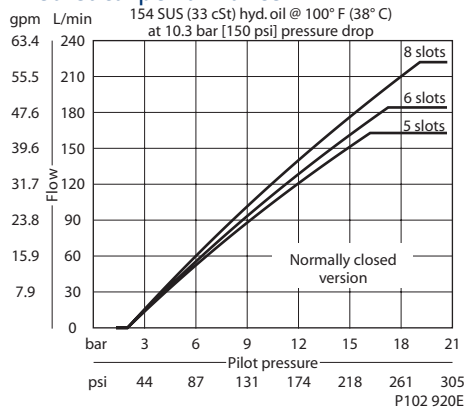
This valve is a hydraulically piloted proportional flow control.

**Schematic**



**SPECIFICATIONS**

**Theoretical performance**



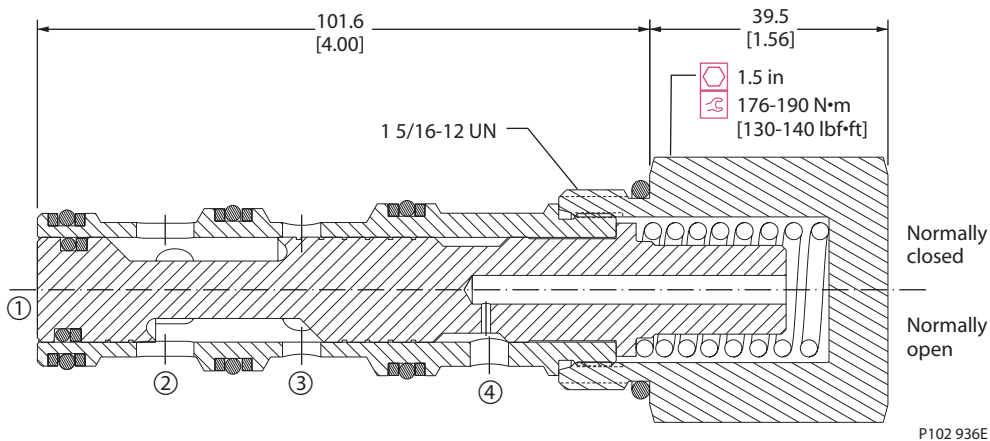
**Specifications**

Rated pressure	210 bar [3000 psi]
Rated flow at 10 bar [150 psi]	220 l/min [58 US gal/min]
Weight	0.61 kg [1.34 lb]
Cavity	CP16-4

**DIMENSIONS**

mm [in]

**Cross-sectional view**



**ORDERING INFORMATION**

CP712-7-B-12S-C-5-S4

**Spool seal**

- S3 = No spool seal
- S4 = With spool seal

**Spool configuration**

- C = Normally closed
- O = Normally open

**Sleeve option**

- 5 = 5 slots
- 6 = 6 slots
- 8 = 8 slots

**Seals**

- B = Buna-N
- V = Viton

- Seal kit 120025
- Seal kit 120026

**Housing and ports**

- 0 = No Housing
- 6B = AL, 3/4 BSP
- 8B = AL, 1 BSP
- 12S = AL, #12 SAE
- 16S = AL, #16 SAE
- Other housings available

**Housing P/N**

- No Housing
- CP16-4-6B
- CP16-4-8B
- CP16-4-12S
- CP16-4-16S

P102 894E

Directional control valves  
 CP712-7