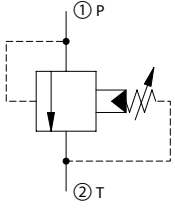
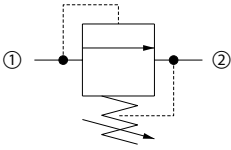
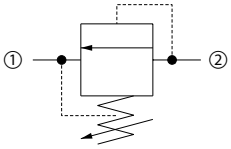


Symbol	Model No.	Cavity	Description	Flow*	Pressure	Page
	RV10-POP	SDC10-2	Pilot-operated poppet relief valve	120 l/min [32 US gal/min]	250 bar [3625 psi]	04.6

Symbol	Model No.	Cavity	Description	Flow*	Pressure	Page
	CP208-4	SDC08-2	Relief valve (direct acting poppet)	1.1 l/min [0.3 US gal/min]	415 bar [6000 psi]	04.7
	VEN 06	NCS06/2		40 l/min [11 US gal/min]	315 bar [4500 psi]	04.8
	RV08-DR	SDC08-2		30 l/min [8 US gal/min]	250 bar [3600 psi]	04.9
	CP208-3	SDC08-2		30 l/min [8 US gal/min]	250 bar [3600 psi]	04.10
	CP200-3	SDC10-2		40 l/min [11 US gal/min]	250 bar [3600 psi]	04.11
	VME 06	VME06		40 l/min [11 US gal/min]	315 bar [4500 psi]	04.12
	VME 07	VME07		50 l/min [13 US gal/min]	315 bar [4500 psi]	04.13
	VME 08	VME08		80 l/min [21 US gal/min]	315 bar [4500 psi]	04.14

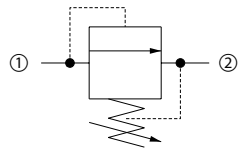
Symbol	Model No.	Cavity	Description	Flow*	Pressure	Page
	CP208-1	SDC08-2	Relief valve (differential area poppet)	40 l/min [11 US gal/min]	250 bar [3600 psi]	04.15
	CP200-2	SDC10-2		40 l/min [11 US gal/min]	350 bar [5000 psi]	04.16
	CP200-1	SDC10-2		75 l/min [20 US gal/min]	250 bar [3600 psi]	04.17
	CP201-1	CP12-2		150 l/min [40 US gal/min]	250 bar [3600 psi]	04.18

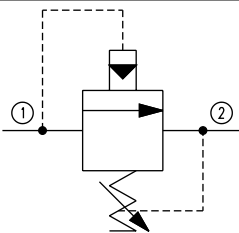
\* Flow ratings are based on a pressure drop of 7 bar [100 psi] unless otherwise noted. They are for comparison purposes only.

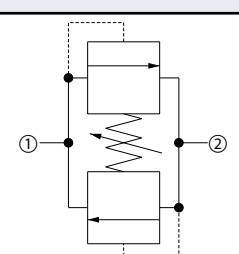
## Cartridge Valves Technical Information

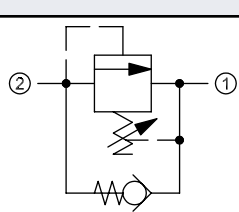
## Relief valves

## Quick reference

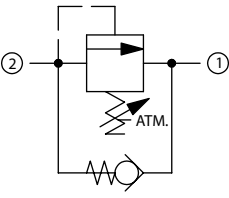
Symbol	Model No.	Cavity	Description	Flow*	Pressure	Page
	CP210-1	SDC10-2	Relief valve (direct acting spool)	45 l/min [12 US gal/min]	210 bar [3000 psi]	04.19
	CP211-1	CP12-2		75 l/min [20 US gal/min]	40 bar [600 psi]	04.20

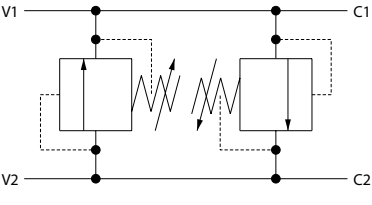
Symbol	Model No.	Cavity	Description	Flow*	Pressure	Page
	RPP 06	NCS06/2	Relief valve (pilot operated spool)	100 l/min [26 US gal/min]	315 bar [4500 psi]	04.21
	CP210-2	SDC10-2		115 l/min [30 US gal/min]	350 bar [5000 psi]	04.22
	CP211-2	CP12-2		190 l/min [50 US gal/min]	350 bar [5000 psi]	04.23

Symbol	Model No.	Cavity	Description	Flow*	Pressure	Page
	CP200-7	SDC10-2	Relief valve (bi-directional poppet)	40 l/min [11 US gal/min]	250 bar [3600 psi]	04.24

Symbol	Model No.	Cavity	Description	Flow*	Pressure	Page
	VSB 06-EN	NCS06/2	Relief valve (free reverse flow)	80 l/min [21 US gal/min]	350 bar [5000 psi]	04.25
	VSB 12-EN	NCS12/2		140 l/min [37 US gal/min]	350 bar [5000 psi]	04.26

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

Symbol	Model No.	Cavity	Description	Flow*	Pressure	Page
	VSB 06-CN	NCS06/2	Relief valve (free reverse flow, atmospheric vent)	80 l/min [21 US gal/min]	350 bar [5000 psi]	04.27
	VSB 12-CN	NCS12/2		140 l/min [37 US gal/min]	350 bar [5000 psi]	04.28

Symbol	Model No.	Cavity	Description	Flow*	Pressure	Page
	VA-E06	none	Relief valve (cross-over)	40 l/min [11 US gal/min]	210 bar [3045 psi]	04.29
	CP220-1	none		75 l/min [20 US gal/min]	250 bar [3600 psi]	04.30
	CP221-1	none		190 l/min [50 US gal/min]	250 bar [3600 psi]	04.31

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

## Cartridge Valves Technical Information

## Relief valves

## Application notes

## APPLICATIONS

Relief valves are used as pressure limiting devices to protect hydraulic systems and components. They are available in direct-acting poppet, differential area poppet, bi-directional poppet, and pilot-operated spool types.

## Relief valves

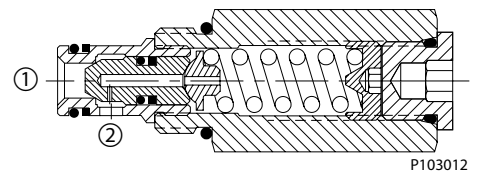


F102 012

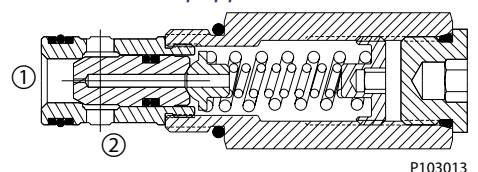
## OPERATION

**Direct-acting poppet**

The direct-acting poppet blocks flow from ① to ② until sufficient pressure is present at ① to force the spring-opposed poppet from its seat. This pressure is commonly known as the crack pressure. The valve will remain open until the pressure drops to a level allowing the spring to close the valve. This pressure is known as the re-seat pressure and is typically 70-80% of the crack pressure. The difference between crack and re-seat pressure is commonly referred to as hysteresis.

*Direct acting poppet relief valve***Differential-area poppet**

The differential area poppet operates in the same manner except flow is blocked from ② to ① until sufficient pressure is present at ② to force the spring-opposed poppet from its seat.

*Differential area poppet relief valve*

Advantages of direct-acting poppet and differential area poppet relief valves are:

- Fast response
- Contamination tolerant
- Low leakage
- Low cost

## Cartridge Valves Technical Information

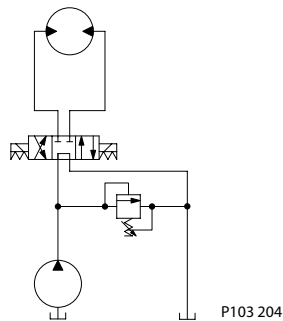
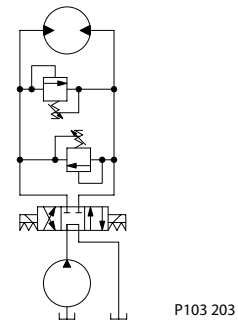
## Relief valves

## Application notes

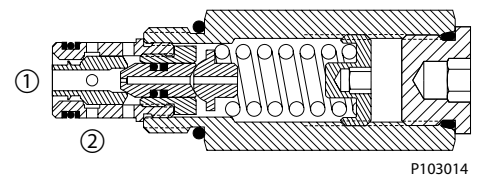
OPERATION  
(continued)

Because of these features some common applications for direct-acting and differential area poppet relief valves are:

- Main system relief valve if flow is relatively constant, or as a safety relief valve for “spike clipping” to protect components from overpressure
- Work port cross-over relief to protect a cylinder or motor from overpressure

*System Relief Valve**Work Port Cross-Relief Valves***Bi-directional poppet**

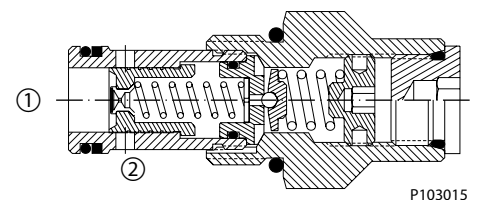
The bi-directional poppet is a dual cross-over relief in a single cartridge. When pressure at ① exceeds the nominal setting, the lower poppet acts as a direct-acting relief valve and opens flow from ① to ②. When pressure at ② exceeds the nominal setting, the upper poppet acts as a differential area relief valve and opens flow from ② to ①. Note that the valve is designed so that the crack pressure is the same in either direction

*Bi-directional poppet relief valve*

A common application for a bi-directional relief valve is as a work port cross-over relief where one bi-directional valve can replace two direct-acting valves.

**Pilot operated spool**

The pilot operated spool blocks flow from ① to ② until sufficient pressure is present at ① to force the pilot poppet off its seat. This creates a pressure differential across the spool that causes the spool to shift and open flow from ① to ②.

*Pilot operated spool relief valve*

Advantages of pilot-operated relief valves are:

- Smooth, stable response
- High flow and high pressure capability
- Precise pressure control with varying flow rates. Low pressure rise
- Low hysteresis

A common application for pilot-operated relief valves is as a main system relief where high pressure or flow capability and/or extremely precise pressure control is required.



# Cartridge Valves Technical Information

## Relief valves

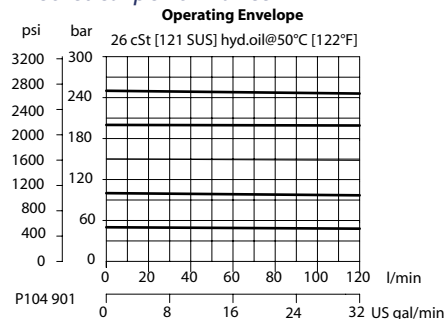
### RV10-POP

### OPERATION

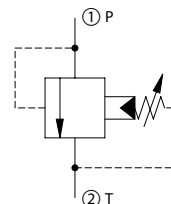
This is a pilot-operated poppet relief valve.

### SPECIFICATIONS

#### Theoretical performance



#### Schematic



P104 899

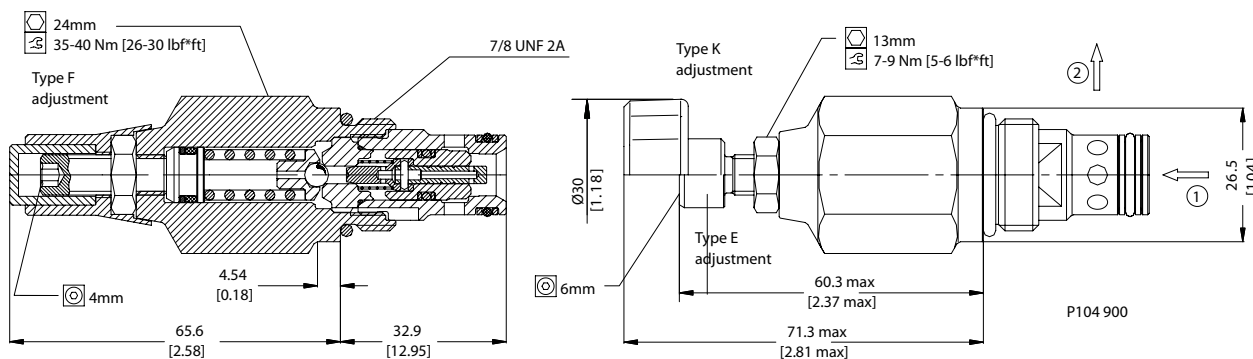
#### Specifications

<b>Rated pressure</b>	250 bar [3625 psi]
<b>Rated flow at 7 bar [100 psi]</b>	120 l/min [32 US gal/min]
<b>Leakage</b>	6 drops/min @ 80% of pressure setting
<b>Weight</b>	0.22 kg [0.49 lb]
<b>Cavity</b>	SDC10-2

### DIMENSIONS

mm [in]

#### Cross-sectional view



P104 900

### ORDERING INFORMATION

#### RV10 - POP - 3 - E - XXX - B - 00

**Pressure Range**  
3 = 25-250 Bar [360-3600 psi]

**Adjustment option**  
E = External adjustment  
F = Tamper resistant  
K = Knob adjustment

**Cracking pressure**  
Code = Std. setting in bar:  
100 = 100 Bar [1500 psi]  
XXX = No specific setting

**Body and Ports**  
Omit = Cartridge only  
6S = Al, #6 SAE  
8S = Al, #8 SAE  
DG3B = Al, 3/8 BSP  
DG4B = Al, 1/2 BSP  
Other housing available

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

**Body Nomenclature**  
No Body  
CP10-2-6S  
CP10-2-8S  
SDC10-2-DG3B  
SDC10-2-DG4B

**Seal Kit**  
354004019  
354003419  
P104 902

Relief valves  
RV10-POP



# Cartridge Valves Technical Information

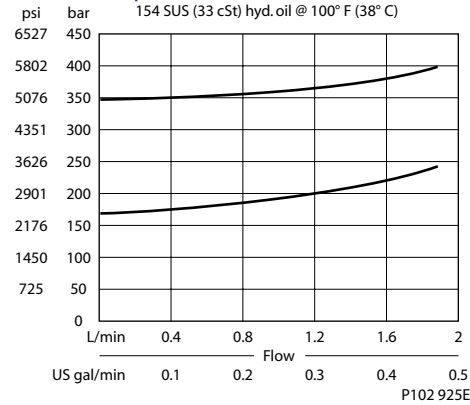
## Relief valves CP208-4

### OPERATION

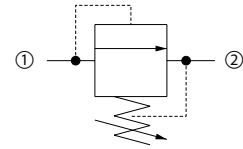
This is a direct-acting poppet type relief valves that relieves from 1 to 2.

### SPECIFICATIONS

#### Theoretical performance



#### Schematic



P102 628

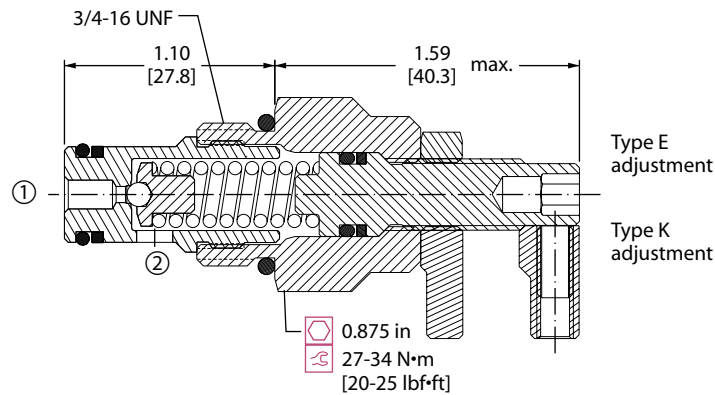
#### Specifications

<b>Rated pressure</b>	415 bar [6000 psi]
<b>Rated flow at 7 bar [100 psi]</b>	1.1 l/min [0.3 US gal/min]
<b>Leakage</b>	10 drops/min @ 80% of pressure setting
<b>Weight</b>	0.23 kg [0.50 lb]
<b>Cavity</b>	SDC08-2

### DIMENSIONS

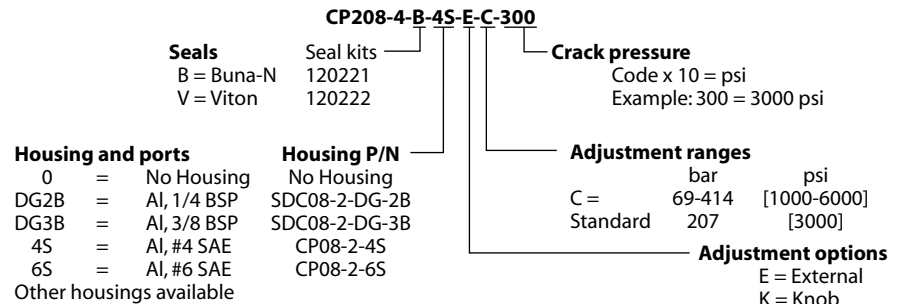
mm [in]

#### Cross-sectional view



P102 612E

### ORDERING INFORMATION



P102 614E



# Cartridge Valves Technical Information

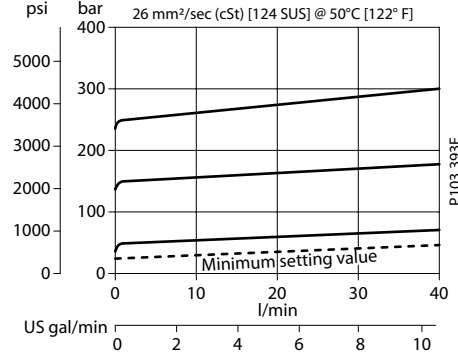
## Relief valves VEN 06

### OPERATION

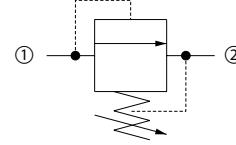
This is a direct-acting, poppet-type relief valve that relieves from 1 to 2.

### SPECIFICATIONS

#### Theoretical performance



#### Schematic



P102 628

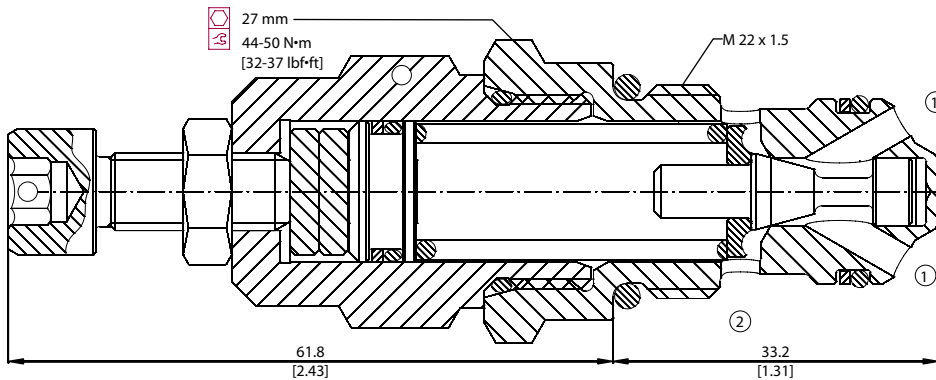
#### Specifications

<b>Rated pressure</b>	315 bar [4500 psi]
<b>Rated flow at 7 bar [100 psi]</b>	40 l/min [11 US gal/min]
<b>Weight</b>	0.20 kg [0.44 lb]
<b>Cavity</b>	NCS06/2

### DIMENSIONS

mm [in]

#### Cross-sectional view



P103 392

### ORDERING INFORMATION

VEN 06 - M - 1 - DG3/8 - V - XXX

#### Type of adjustment

EN = External screw  
M = Handwheel

#### Setting range

1 = 20 - 80 bar [290 - 1160 psi]  
2 = 35 - 160 bar [508 - 2321 psi]  
3 = 70 - 315 bar [1015 - 4569 psi]

#### Seals

V = Viton seals 230000380  
Omit = Buna-N 230000060

#### Housing and ports

0 = No Housing  
DG3/8 = AL, 3/8 BSP NCS06/2-DG-3/8  
DG1/2 = AL, 1/2 BSP NCS06/2-DG-1/2  
DG6S = AL, #6 SAE NCS06/2-DG-6S  
DG8S = AL, #8 SAE NCS06/2-DG-8S  
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

To order this valve with a specific factory setting, contact your Sauer-Danfoss representative

P103 394E





# Cartridge Valves Technical Information

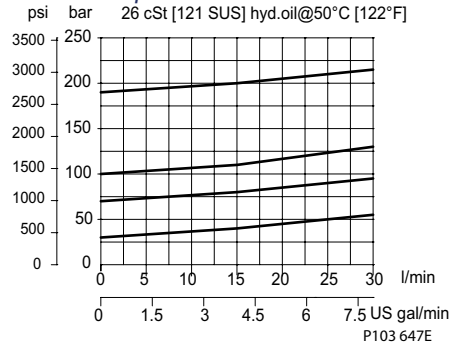
## Relief valves RV08-DR

### OPERATION

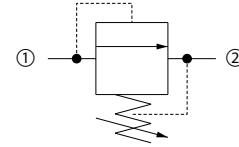
This is a direct-acting, poppet-type relief valve that relieves from 1 to 2. It features a highly damped poppet for smooth and stable response.

### SPECIFICATIONS

#### Theoretical performance



#### Schematic



P102 628

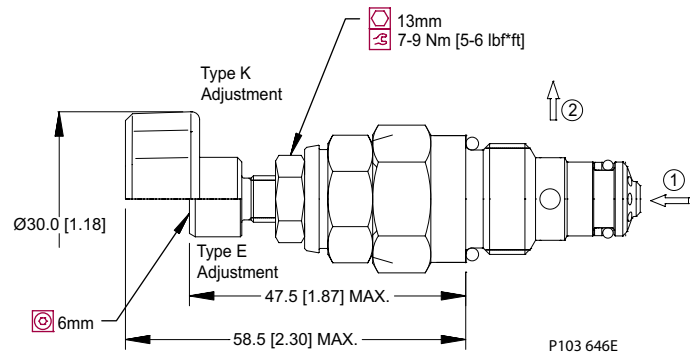
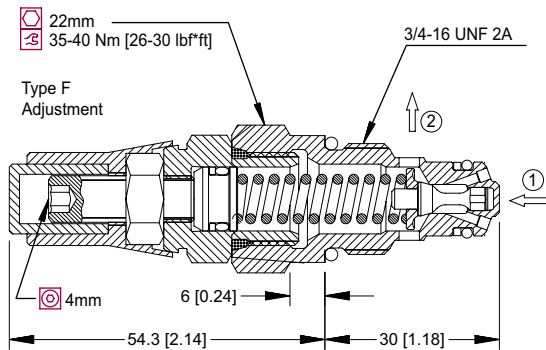
#### Specifications

<b>Rated pressure</b>	250 bar [3600 psi]
<b>Rated flow at 7 bar [100 psi]</b>	30 l/min [8 US gal/min]
<b>Leakage</b>	10 drops/min @ 80% of pressure setting
<b>Weight</b>	0.10 kg [0.22 lb]
<b>Cavity</b>	SDC08-2

### DIMENSIONS

mm [in]

#### Cross-sectional view



P103 646E

### ORDERING INFORMATION

<b>RV08-DR-1-E-XXX-B-4S</b>		
<b>Pressure range</b>	<b>Housing and ports</b>	<b>Housing P/N</b>
1 = 20-80 Bar [290-1150 psi]	00 = No Housing	No Housing
2 = 35-160 Bar [500-2300 psi]	DG2B = Al, 1/4 BSP	SDC08-2-DG-2B
3 = 60-250 Bar [870-3600 psi]	DG3B = Al, 3/8 BSP	SDC08-2-DG-3B
<b>Adjustment option</b>	4S = Al, #4 SAE	CP08-2-4S
E = External	6S = Al, #6 SAE	CP08-2-6S
F = Tamper resistant	Other housings available	
K = Knob	<b>Seals</b>	<b>Seal Kit</b>
<b>Crack pressure</b>	B = Buna-N	35400011
Code = Setting in Bar	V = Viton	35400021
XXX = No specific setting		

P103 648E

Relief valves  
RV08-DR



# Cartridge Valves Technical Information

## Relief valves

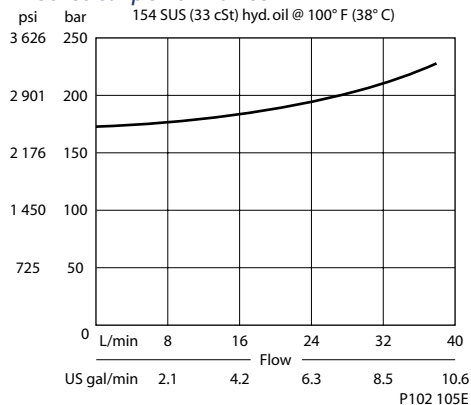
### CP208-3

### OPERATION

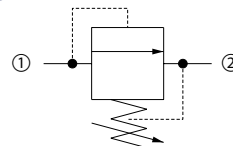
This is a direct-acting poppet type relief valves that relieves from 1 to 2.

### SPECIFICATIONS

#### Theoretical performance



#### Schematic



P102 628

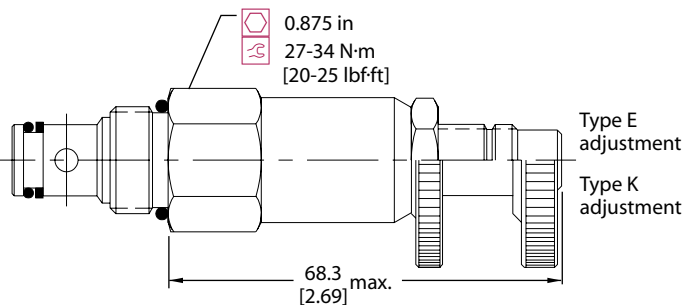
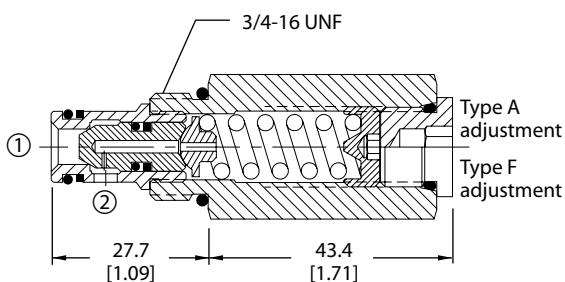
#### Specifications

<b>Rated pressure</b>	250 bar [3600 psi]
<b>Rated flow at 7 bar [100 psi]</b>	30 l/min [8 US gal/min]
<b>Leakage</b>	10 drops/min @ 80% of pressure setting
<b>Weight</b>	0.15 kg [0.32 lb]
<b>Cavity</b>	SDC08-2

### DIMENSIONS

mm [in]

#### Cross-sectional view



P102 104E

### ORDERING INFORMATION

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

**Housing and ports**  
 0 = No Housing  
 DG2B = Al, 1/4 BSP  
 DG3B = Al, 3/8 BSP  
 45 = Al, #4 SAE  
 65 = Al, #6 SAE  
 Other housings available

**Adjustment option**  
 A = Internal  
 E = External  
 F = Tamper resistant  
 K = Knob

**Seal Kit**  
 120221  
 120222

**Housing P/N**  
 No Housing  
 SDC08-2-DG-2B  
 SDC08-2-DG-3B  
 CP08-2-45  
 CP08-2-65

**CP208-3-B-65-A-C-150**

**Crack pressure**  
 Code x 10 = psi  
 Example: 150 = 1500 psi

**Pressure range**

Code	bar	[psi]
A	7-69	[100-1000]
Standard	28	[400]
B	14-138	[200-2000]
Standard	69	[1000]
C	35-248	[500-3600]
Standard	103	[1500]

P102 107E



# Cartridge Valves Technical Information

## Relief valves

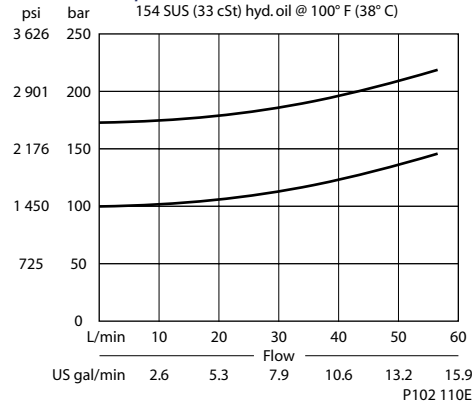
### CP200-3

### OPERATION

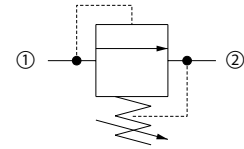
This is a direct-acting poppet type relief valves that relieves from 1 to 2.

### SPECIFICATIONS

#### Theoretical performance



#### Schematic



P102 628

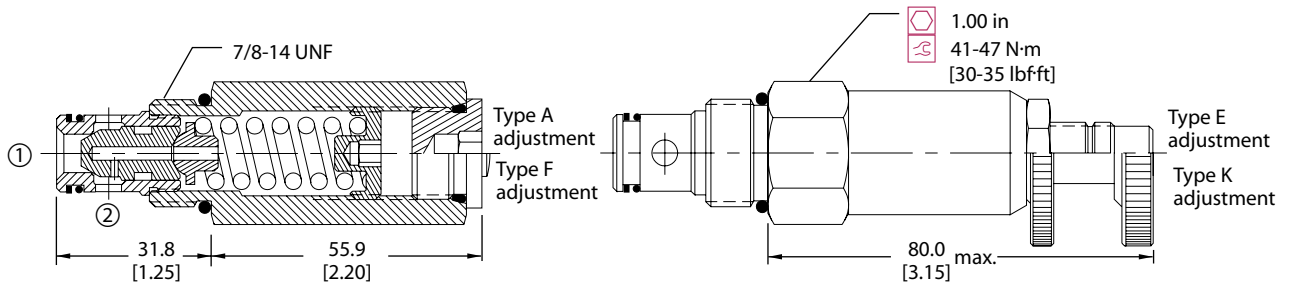
#### Specifications

<b>Rated pressure</b>	250 bar [3600 psi]
<b>Rated flow at 7 bar [100 psi]</b>	40 l/min [11 US gal/min]
<b>Leakage</b>	10 drops/min @ 80% of pressure setting
<b>Weight</b>	0.21 kg [0.47 lb]
<b>Cavity</b>	SDC10-2

### DIMENSIONS

mm [in]

#### Cross-sectional view



P102 108E

### ORDERING INFORMATION

**CP200 - 3 - B - 6S - A - C - 150**

- 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
- Adjustment option**  
A = Internal  
E = External  
F = Tamper resistant  
K = Knob
- Seal kit**  
120015  
120016
- Housing P/N**  
No Housing  
SDC10-2-DG-3B  
SDC10-2-DG-4B  
CP10-2-6S  
CP10-2-8S
- Crack pressure**  
Code x 10 = psi  
Example: 150 = 1500 psi
- Pressure range**  
A = bar 7-69 [psi 100-1000]  
Standard 28 [400]  
B = 17-172 [250-2500]  
Standard 69 [1000]  
C = 41-248 [600-3600]  
Standard 103 [1500]

P102 111E

Relief valves  
CP200-3



# Cartridge Valves Technical Information

## Relief valves

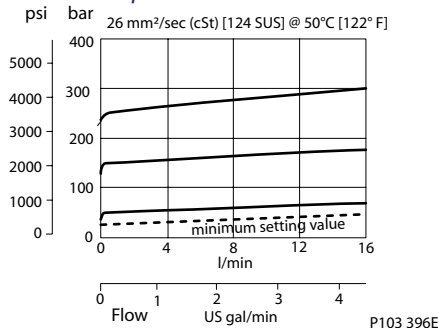
### VME 06

#### OPERATION

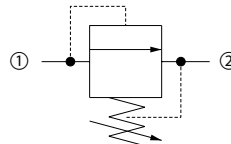
This is a direct-acting, poppet-type relief valve that relieves from 1 to 2.

#### SPECIFICATIONS

##### Theoretical performance



##### Schematic



P102 628

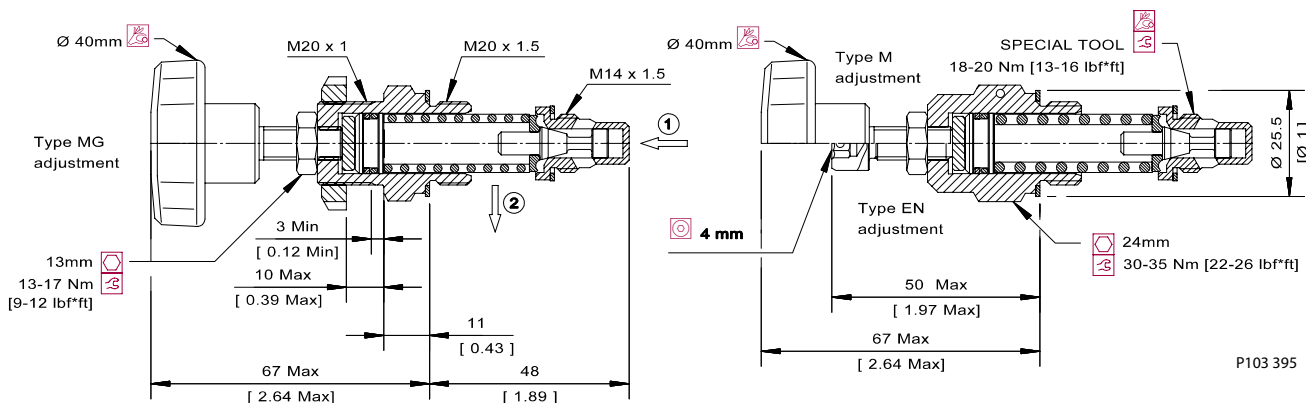
##### Specifications

<b>Rated pressure</b>	315 bar [4500 psi]
<b>Rated flow at 7 bar [100 psi]</b>	40 l/min [11 US gal/min]
<b>Weight</b>	0.13 kg [0.29 lb]
<b>Cavity</b>	VME06

#### DIMENSIONS

mm [in]

##### Cross-sectional view



#### ORDERING INFORMATION

VME 06 - EN - 2 - DG3/8 - V - XXX

##### Adjustment

- EN = External screw
- M = Handwheel
- MG = Handwheel (panel mounted)

##### Setting range

- 1 = 25 - 70 bar [363-1015 psi]
- 2 = 35 - 170 bar [508-2466 psi]
- 3 = 70 - 315 bar [1015-4569 psi]

##### Housing and ports

- 00 = No Housing
- DG3/8 = Al, 3/8 BSP
- DG6S = Al, #6 SAE
- Other housings available

**Seals**  
V = Viton seals  
Omit = Buna-N

##### Housing P/N

- No Housing
- VME06-DG-3/8
- VME06-DG-6S

To order this valve with a specific factory setting, contact your Sauer-Danfoss representative

P103 397E

Relief valves  
VME 06



# Cartridge Valves Technical Information

## Relief valves

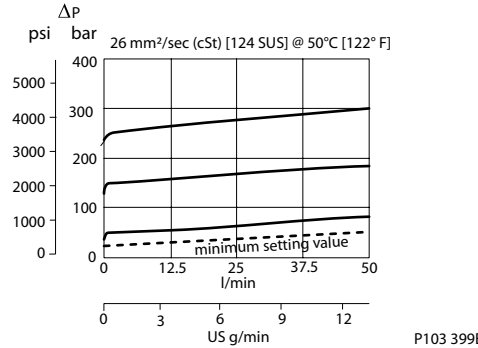
### VME 07

#### OPERATION

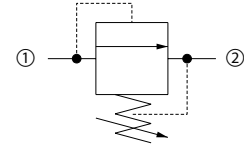
This is a direct-acting, poppet-type relief valve that relieves from 1 to 2.

#### SPECIFICATIONS

##### Theoretical performance



##### Schematic



P102 628

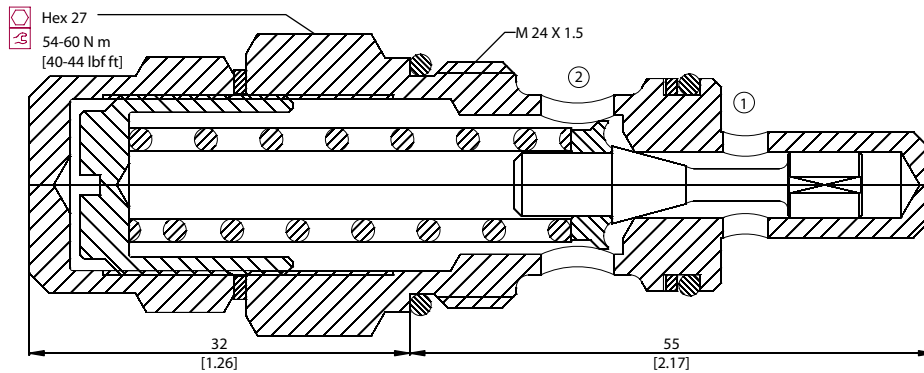
##### Specifications

<b>Rated pressure</b>	315 bar [4500 psi]
<b>Rated flow at 7 bar [100 psi]</b>	50 l/min [13 US gal/min]
<b>Weight</b>	0.20 kg [0.44 lb]
<b>Cavity</b>	VME07

#### DIMENSIONS

mm [in]

##### Cross-sectional view



P103 398

#### ORDERING INFORMATION

VME 07 - E - 2 - DG1/2 - V - XXX

##### Adjustment

E = Internal screw  
M = Handwheel

##### Setting range

1 = 25 - 80 bar [363-1160 psi]  
2 = 35 - 180 bar [508-2611 psi]  
3 = 70 - 315 bar [1015-4569 psi]

##### Seals

V = Viton  
Omit = Buna-N

Seal kit

Consult factory  
Consult factory

##### Housing and ports

00 = No Housing  
DG1/2 = Al, 1/2 BSP  
DG8S = Al, #8 SAE  
Other housings available

##### Housing P/N

No Housing  
VME07-DG-1/2  
VME07-DG-8S

To order this valve with a specific factory setting, contact your Sauer-Danfoss representative

P103 400E

Relief valves  
VME 07



# Cartridge Valves Technical Information

## Relief valves

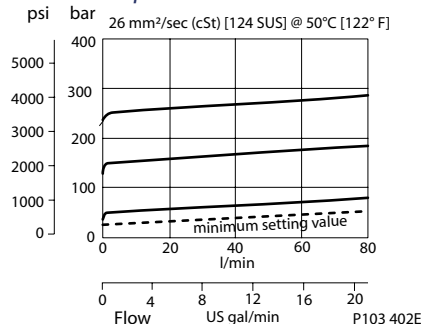
### VME 08

#### OPERATION

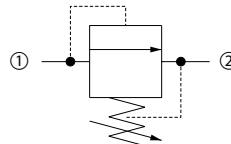
This is a direct-acting, poppet-type relief valve that relieves from 1 to 2.

#### SPECIFICATIONS

##### Theoretical performance



##### Schematic



P102 628

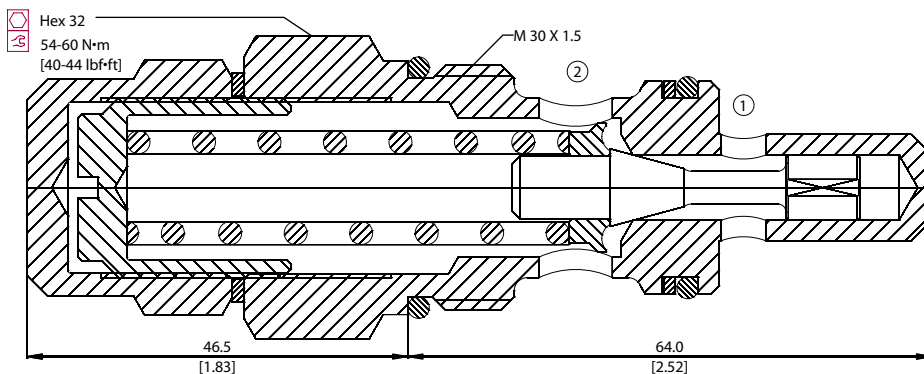
##### Specifications

<b>Rated pressure</b>	315 bar [4500 psi]
<b>Rated flow at 7 bar [100 psi]</b>	80 l/min [21 US gal/min]
<b>Weight</b>	0.35 kg [0.77 lb]
<b>Cavity</b>	VME08

#### DIMENSIONS

mm [in]

##### Cross-sectional view



P103 401

#### ORDERING INFORMATION

VME 08 - E - 2 - DG3/4 - V - XXX

##### Adjustment

E = Internal screw  
M = Handwheel

##### Setting range

1 = 25 - 80 bar [363-1160 psi]  
2 = 35 - 160 bar [508-2321 psi]  
3 = 70 - 315 bar [1015-4569 psi]

##### Seals

V = Viton  
Omit = Buna-N

Seal kit  
Consult factory  
Consult factory

##### Housing and ports

00 = No Housing  
DG3/4 = Al, 3/4 BSP  
DG12S = Al, #12 SAE  
Other housings available

##### Housing P/N

No Housing  
VME08-DG-3/4  
VME08-DG-12S

To order this valve with a specific factory setting, contact your Sauer-Danfoss representative

P103 403E



# Cartridge Valves Technical Information

## Relief valves

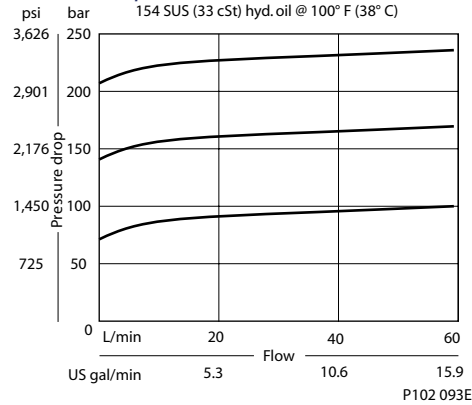
### CP208-1

### OPERATION

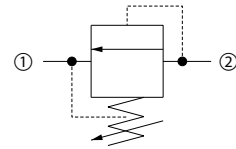
This is a direct acting differential area poppet type relief valve that relieves from 2 to 1.

### SPECIFICATIONS

#### Theoretical performance



#### Schematic



P102 627

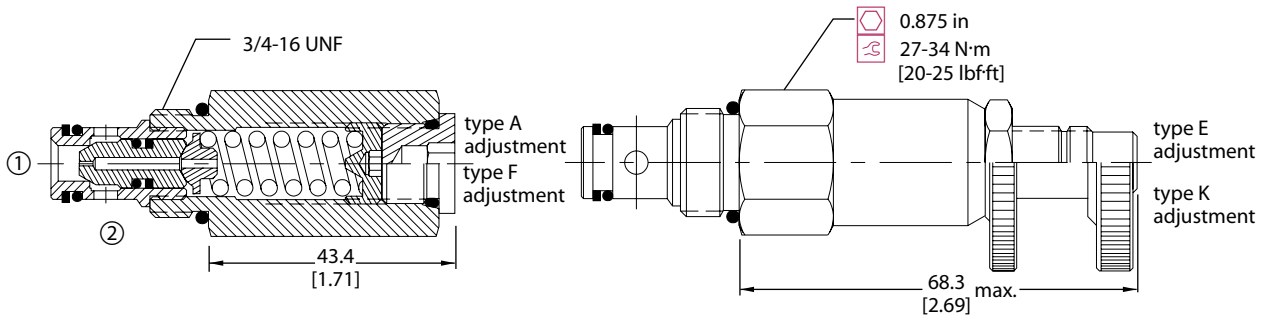
#### Specifications

<b>Rated pressure</b>	250 bar [3600 psi]
<b>Rated flow at 7 bar [100 psi]</b>	40 l/min [11 US gal/min]
<b>Leakage</b>	10 drops/min @ 80% of pressure setting
<b>Weight</b>	0.15 kg [0.32 lb]
<b>Cavity</b>	SDC08-2

### DIMENSIONS

mm [in]

#### Cross-sectional view



### ORDERING INFORMATION

**CP208 - 1 - B - 6S - A - C - 150 - XXX**

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

**Housing and ports**  
 0 = No Housing  
 DG2B = Al, 1/4 BSP  
 DG3B = Al, 3/8 BSP  
 4S = Al, #4 SAE  
 6S = Al, #6 SAE  
 Other housings available

**Adjustment option**  
 A = Internal  
 E = External  
 F = Tamper resistant  
 K = Knob

**Seal Kit**  
 120221  
 120222

**Housing P/N**  
 No Housing  
 SDC08-2-DG-2B  
 SDC08-2-DG-3B  
 CP08-2-4S  
 CP08-2-6S

**Crack pressure**  
 Code x 10 = psi  
 Example: 150 = 1500 psi

**Pressure range**

	bar	[psi]
A =	7-69	[100-1000]
Standard	28	[400]
B =	14-138	[200-2000]
Standard	69	[1000]
C =	35-248	[500-3600]
Standard	103	[1500]

P102 095E

Relief valves  
CP208-1



# Cartridge Valves Technical Information

## Relief valves

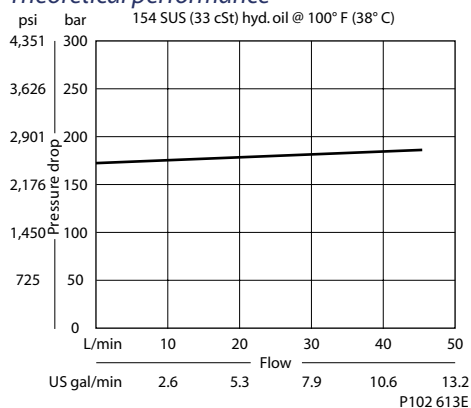
### CP200-2

### OPERATION

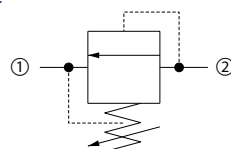
This is a direct acting differential area poppet type relief valve that relieves from 2 to 1.

### SPECIFICATIONS

#### Theoretical performance



#### Schematic



P102 627

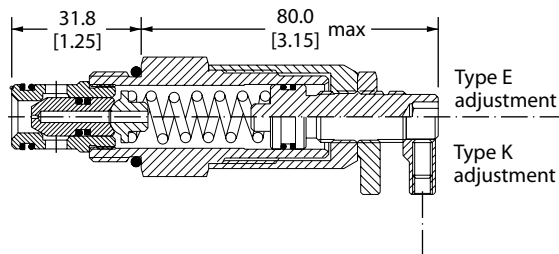
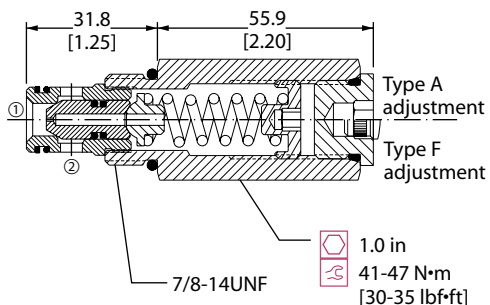
#### Specifications

<b>Rated pressure</b>	350 bar [5000 psi]
<b>Rated flow at 7 bar [100 psi]</b>	40 l/min [11 US gal/min]
<b>Leakage</b>	10 drops/min @ 80% of crack pressure
<b>Weight</b>	0.21 kg [0.46 lb]
<b>Cavity</b>	SDC10-2

### DIMENSIONS

mm [in]

#### Cross-sectional view



P102 589E

### ORDERING INFORMATION

**CP200-2-B-6S-E-D-150**

<p><b>Seals</b></p> <p>B = Buna-N V = Viton</p> <p><b>Seal kits</b></p> <p>120015 120016</p>	<p><b>Housing and ports</b></p> <p>0 = No Housing DG3B = Al, 3/8 BSP DG4B = Al, 1/2 BSP 6S = Al, #6 SAE 8S = Al, #8 SAE Other housings available</p>	<p><b>Housing P/N</b></p> <p>No Housing SDC10-2-DG-3B SDC10-2-DG-4B CP10-2-6S CP10-2-8S</p>	<p><b>Crack pressure</b></p> <p>Code x 10 = psi Example: 150 = 1500 psi</p>	<p><b>Adjustment ranges</b></p> <table border="1"> <tr> <th></th> <th>bar</th> <th>psi</th> </tr> <tr> <td>D = Standard</td> <td>69-345</td> <td>[1000-5000]</td> </tr> <tr> <td></td> <td>103</td> <td>[1500]</td> </tr> </table>		bar	psi	D = Standard	69-345	[1000-5000]		103	[1500]
	bar	psi											
D = Standard	69-345	[1000-5000]											
	103	[1500]											
<p><b>Adjustment options</b></p> <p>A = Internal F = Tamper resistant E = External K = Knob</p>													

P102 590E





# Cartridge Valves Technical Information

## Relief valves

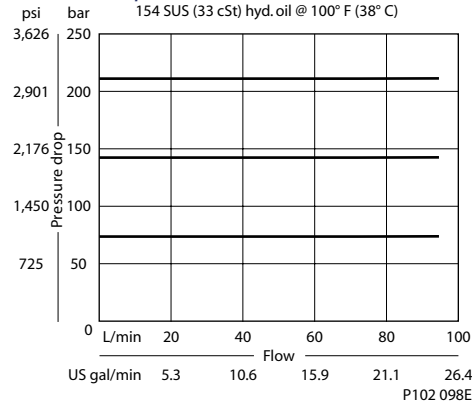
### CP200-1

### OPERATION

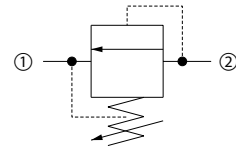
This is a direct acting differential area poppet type relief valve that relieves from 2 to 1.

### SPECIFICATIONS

#### Theoretical performance



#### Schematic



P102 627

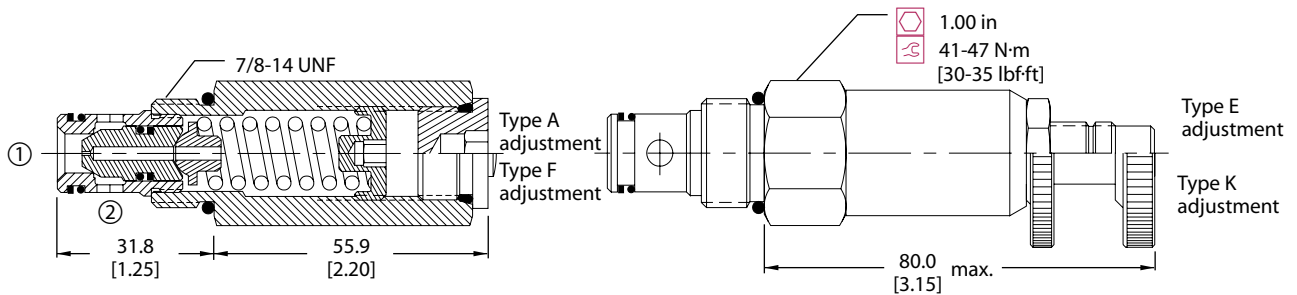
#### Specifications

<b>Rated pressure</b>	250 bar [3600 psi]
<b>Rated flow at 7 bar [100 psi]</b>	75 l/min [20 US gal/min]
<b>Leakage</b>	10 drops/min @ 80% of pressure setting
<b>Weight</b>	0.21 kg [0.46 lb]
<b>Cavity</b>	SDC10-2

### DIMENSIONS

mm [in]

#### Cross-sectional view



P102 096E

### ORDERING INFORMATION

**CP200 - 1 - B - 8S - A - C - 150**

- 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
- Adjustment option**
  - A = Internal
  - E = External
  - F = Tamper resistant
  - K = Knob
- Seal kit**
  - 120015
  - 120016
- Housing P/N**
  - No Housing
  - SDC10-2-DG-3B
  - SDC10-2-DG-4B
  - SDC10-2-6S
  - SDC10-2-8S
- Crack pressure**
  - Code x 10 = psi
  - Example: 150 = 1500 psi
- Pressure range**

Code	bar	[psi]
A = Standard	7-55	[100-800]
B = Standard	28	[400]
B = Standard	17-138	[250-2000]
C = Standard	69	[1000]
C = Standard	41-248	[600-3600]
C = Standard	103	[1500]

P102 099E

Relief valves  
CP200-1



# Cartridge Valves Technical Information

## Relief valves

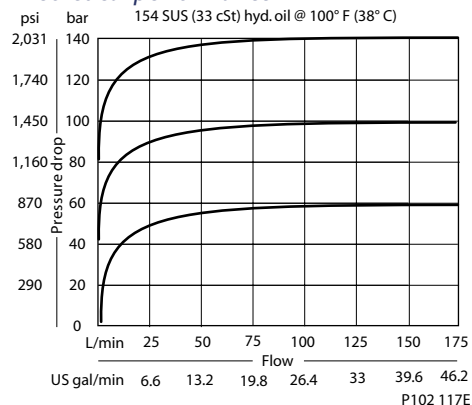
### CP201-1

### OPERATION

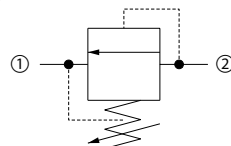
This is a direct acting differential area poppet type relief valve that relieves from 2 to 1.

### SPECIFICATIONS

#### Theoretical performance



#### Schematic



P102 627

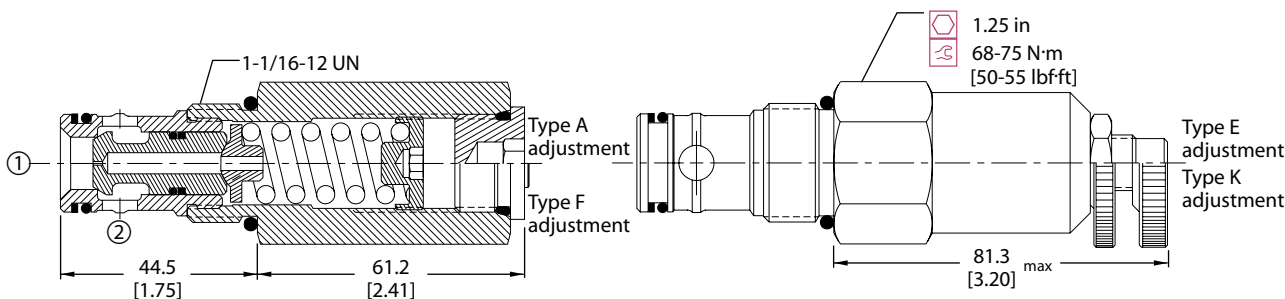
#### Specifications

<b>Rated pressure</b>	250 bar [3600 psi]
<b>Rated flow at 7 bar [100 psi]</b>	150 l/min [40 US gal/min]
<b>Leakage</b>	10 drops/min @ 80% of pressure setting
<b>Weight</b>	0.42 kg [0.92 lb]
<b>Cavity</b>	CP12-2

### DIMENSIONS

mm [in]

#### Cross-sectional view



P102 100E

### ORDERING INFORMATION

**CP201 - 1 - B - 12S - A - C - 150**

<b>Seals</b>	B = Buna-N	Seal kit	120017
	V = Viton		120018
<b>Housing and ports</b>	0 = No Housing	<b>Housing P/N</b>	No Housing
	4B = Al, 1/2 BSP		CP12-2-4B
	6B = Al, 3/4 BSP		CP12-2-6B
	10S = Al, #10 SAE		CP12-2-10S
	12S = Al, #12 SAE		CP12-2-12S
	Other housings available		
<b>Adjustment option</b>	A = Internal		
	E = External		
	F = Tamper resistant		
	K = Knob		
		<b>Crack pressure</b>	Code x 10 = psi
			Example: 150 = 1500 psi
		<b>Pressure range</b>	bar [psi]
		A =	7-69 [100-1000]
		Standard	28 [400]
		B =	17-172 [250-2500]
		Standard	69 [1000]
		C =	35-248 [500-3600]
		Standard	103 [1500]

P102 103E



# Cartridge Valves Technical Information

## Relief valves

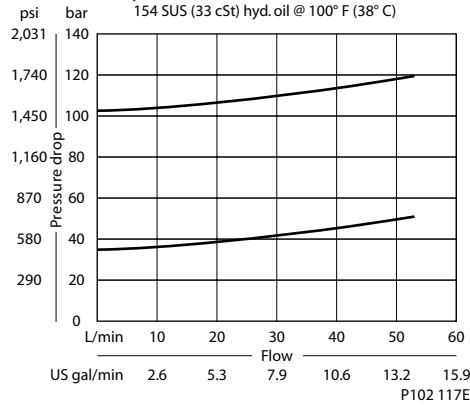
### CP210-1

#### OPERATION

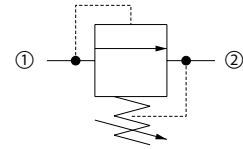
This is a direct acting spool-type relief valve that relieves from 1 to 2.

#### SPECIFICATIONS

##### Theoretical performance



##### Schematic



P102 628

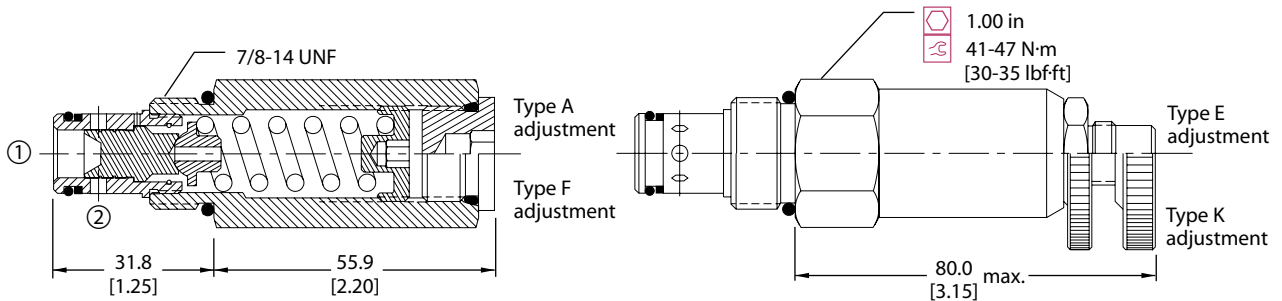
##### Specifications

<b>Rated pressure</b>	210 bar [3000 psi]
<b>Rated flow at 7 bar [100 psi]</b>	45 l/min [12 US gal/min]
<b>Leakage</b>	82 cm <sup>3</sup> /min [5 in <sup>3</sup> /min] @ 80% of pressure setting
<b>Weight</b>	0.22 kg [0.48 lb]
<b>Cavity</b>	SDC10-2

#### DIMENSIONS

mm [in]

##### Cross-sectional view



P102 116E

#### ORDERING INFORMATION

**CP210 - 1 - B - 6S - A - C - 075**

**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

**Adjustment option**  
 A = Internal  
 E = External  
 F = Tamper resistant  
 K = Knob

**Seal kit**  
 120015  
 120016

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

**Crack pressure**  
 Code x 10 = psi  
 Example: 075 = 750 psi

**Pressure range**

	bar	[psi]
A =	3.4-28	[50-400]
Standard	17	[250]
B =	5.5-55	[80-800]
Standard	28	[400]
C =	6.9-97	[100-1400]
Standard	52	[750]
D =	34-166	[500-2400]
Standard	103	[1500]

P102 119E

Relief valves  
CP210-1



# Cartridge Valves Technical Information

## Relief valves

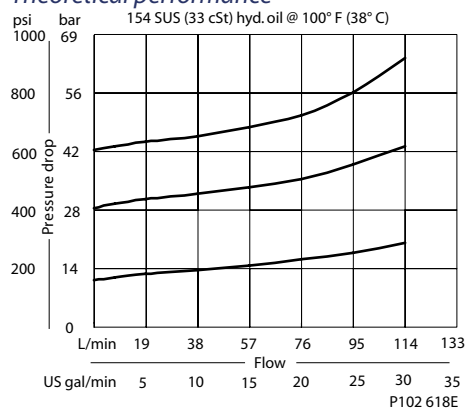
### CP211-1

### OPERATION

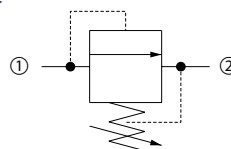
This is a direct acting spool-type relief valve that relieves from 1 to 2.

### SPECIFICATIONS

#### Theoretical performance



#### Schematic



P102 628

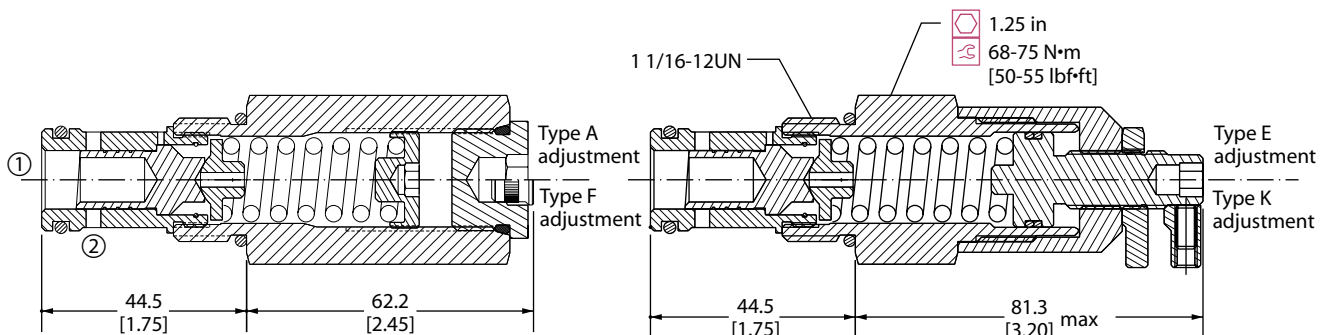
#### Specifications

<b>Rated pressure</b>	40 bar [600 psi]
<b>Rated flow at 7 bar [100 psi]</b>	75 l/min [20 US gal/min]
<b>Leakage</b>	82 cm <sup>3</sup> /min [5 in <sup>3</sup> /min] @ 80% of pressure setting
<b>Weight</b>	0.41 kg [0.90 lb]
<b>Cavity</b>	CP12-2

### DIMENSIONS

mm [in]

#### Cross-sectional view



P102 616E

### ORDERING INFORMATION

#### CP211-1-B-10S-A-C-040

<b>Pressure range</b>	<b>Crack pressure</b>
A = 0-10 bar [0-150 psi]	Code x 10 = psi
B = 3.4-34 bar [50-400 psi]	Example: 040 = 400 psi
C = 5.2-41 bar [80-600 psi]	
<b>Housing and ports</b>	<b>Adjustment option</b>
0 = No Housing	A = Internal
4B = Al, 1/2 BSP	E = External
6B = Al, 3/4 BSP	F = Tamper resistant
10S = Al, #10 SAE	K = Knob
12S = Al, #12 SAE	
Other housings available	
<b>Housing P/N</b>	<b>Seals</b>
No Housing	B = Buna-N
CP12-2-4B	V = Viton
CP12-2-6B	
CP12-2-10S	<b>Seal kit</b>
CP12-2-12S	120017
	120018

P102 617E



# Cartridge Valves Technical Information

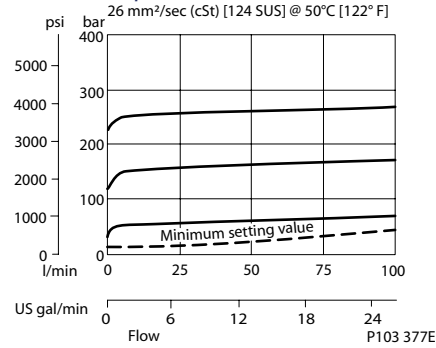
## Relief valves RPP 06

### OPERATION

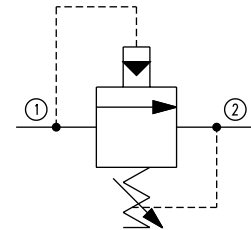
This is a pilot-operated, spool-type relief valve that relieves from 1 to 2.

### SPECIFICATIONS

#### Theoretical performance



#### Schematic



P102 629

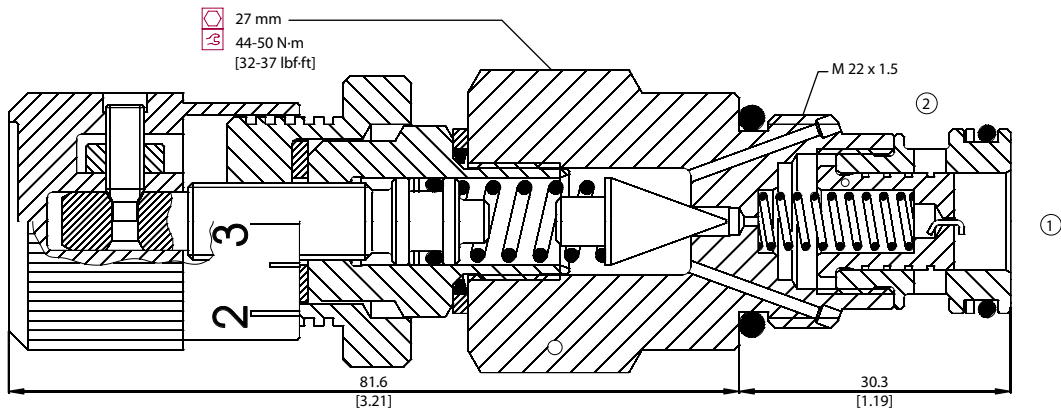
#### Specifications

<b>Rated pressure</b>	315 bar [4500 psi]
<b>Rated flow at 7 bar [100 psi]</b>	100 l/min [26 US gal/min]
<b>Weight</b>	0.27 kg [0.60 lb]
<b>Cavity</b>	NCS06/2

### DIMENSIONS

mm [in]

#### Cross-sectional view



P103 376

### ORDERING INFORMATION

RPP 06 - EN - 1 - 00 - V - XXX

#### Type of adjustment

- E = Internal screw
- EN = External screw
- M = Handwheel

#### Setting range

- 1 = 10 - 70 bar [145 - 1015 psi]
- 2 = 30 - 170 bar [435 - 2466 psi]
- 3 = 70 - 315 bar [1015 - 4569 psi]

To order this valve with a specific factory setting, contact your Sauer-Danfoss representative

#### Seals

- V = Viton
- Omit = Buna-N

#### Seal Kit

Consult factory  
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 378E



# Cartridge Valves Technical Information

## Relief valves

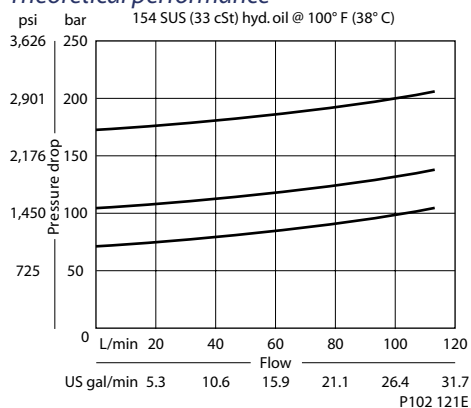
### CP210-2

### OPERATION

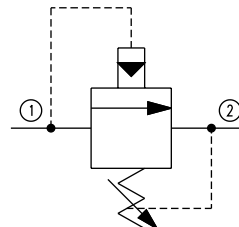
This is a pilot operated pool type relief valve that relieves pressure from 1 to 2.

### SPECIFICATIONS

#### Theoretical performance



#### Schematic



P102 629

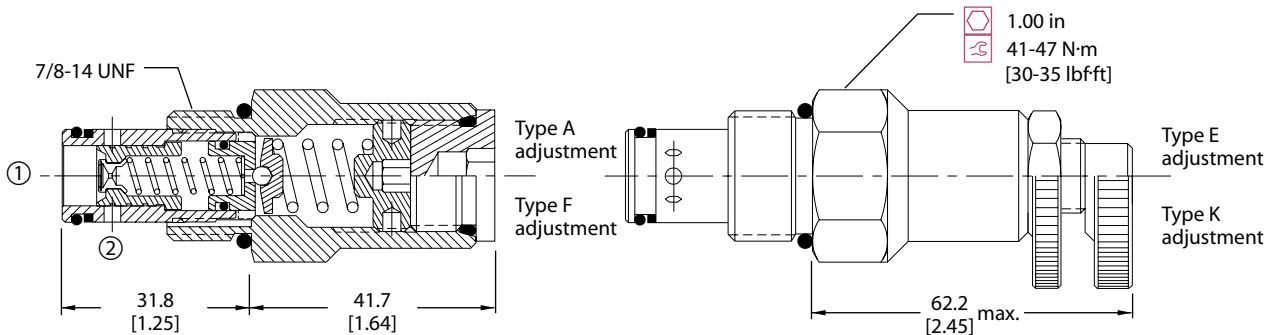
#### Specifications

<b>Rated pressure</b>	350 bar [5000 psi]
<b>Rated flow at 7 bar [100 psi]</b>	115 l/min [30 US gal/min]
<b>Leakage</b>	82 cm <sup>3</sup> /min [5 in <sup>3</sup> /min] @ 207 bar [3000 psi]
<b>Weight</b>	0.18 kg [0.40 lb]
<b>Cavity</b>	SDC10-2

### DIMENSIONS

mm [in]

#### Cross-sectional view



P102 120E

### ORDERING INFORMATION

**CP210 - 2 - B - 6S - A - C - 150**

- Seals**
  - B = Buna-N
  - V = Viton
- Seal kit**
  - 120015
  - 120016
- 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
- Housing P/N**
  - No Housing
  - SDC10-2-DG-3B
  - SDC10-2-DG-4B
  - CP10-2-6S
  - CP10-2-8S
- Adjustment option**
  - A = Internal
  - E = External
  - F = Tamper resistant
  - K = Knob
- Crack pressure**
  - Code x 10 = psi
  - Example: 150 = 1500 psi
- Pressure range**

Code	bar	[psi]
A	14-69	[200-800]
Standard	28	[400]
B	14-103	[200-1500]
Standard	69	[1000]
C	28-207	[400-3000]
Standard	103	[1500]
D	28-345	[400-5000]
Standard	103	[1500]

P102 123E



# Cartridge Valves Technical Information

## Relief valves

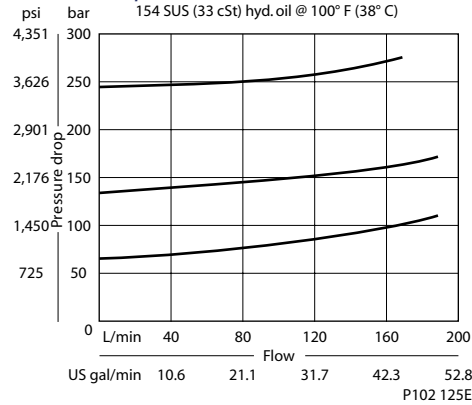
### CP211-2

### OPERATION

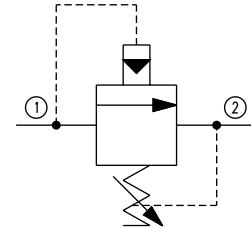
This valve relieves from 1 to 2 and is a pilot operated spool type relief.

### SPECIFICATIONS

#### Theoretical performance



#### Schematic



P102 629

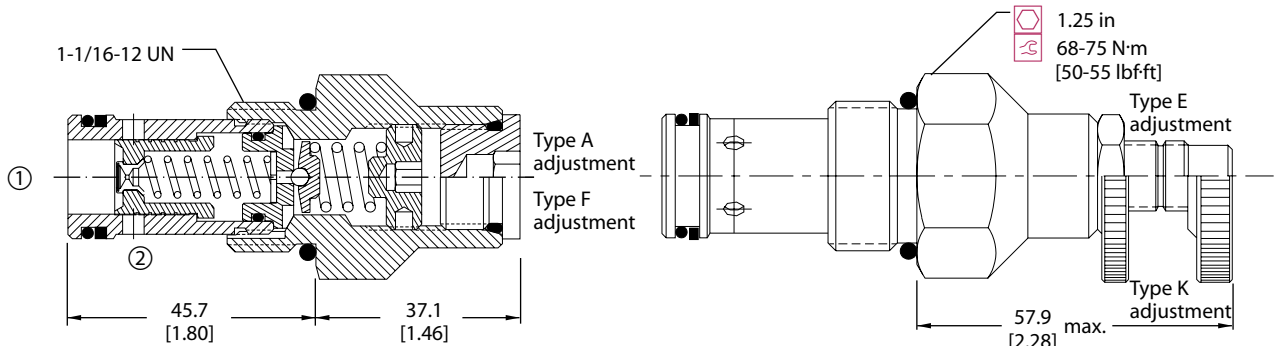
#### Specifications

<b>Rated pressure</b>	350 bar [5000 psi]
<b>Rated flow at 7 bar [100 psi]</b>	190 l/min [50 US gal/min]
<b>Leakage</b>	82 cm <sup>3</sup> /min [5 in <sup>3</sup> /min] @ 207 bar [3000 psi]
<b>Weight</b>	0.17 kg [0.37 lb]
<b>Cavity</b>	CP12-2

### DIMENSIONS

mm [in]

#### Cross-sectional view



P102 124E

### ORDERING INFORMATION

**CP211 - 2 - B - 12S - A - C - 150**

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

**Housing and ports**  
0 = No Housing  
4B = Al, 1/2 BSP  
6B = Al, 3/4 BSP  
10S = Al, #10 SAE  
12S = Al, #12 SAE  
Other housings available

**Adjustment option**  
A = Internal  
E = External  
F = Tamper resistant  
K = Knob

**Seal kit**  
120017  
120018

**Housing P/N**  
No Housing  
CP12-2-4B  
CP12-2-6B  
CP12-2-10S  
CP12-2-12S

**Crack pressure**  
Code x 10 = psi  
Example: 150 = 1500 psi

**Pressure range**

	bar	[psi]
A =	14-69	[200-800]
Standard	28	[400]
B =	14-103	[300-1500]
Standard	69	[1000]
C =	28-207	[400-3000]
Standard	103	[1500]
D =	28-345	[400-5000]
Standard	103	[1500]

P102 127E

Relief valves  
CP211-2



# Cartridge Valves Technical Information

## Relief valves

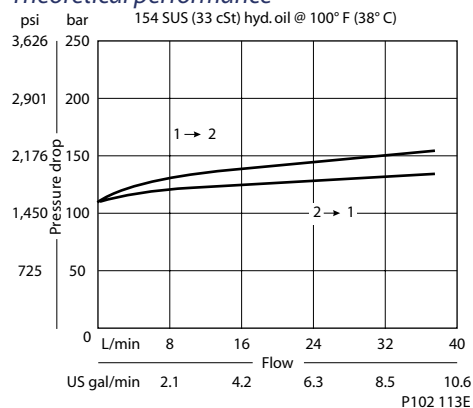
### CP200-7

### OPERATION

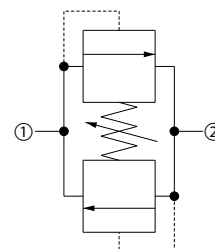
This valve relieves pressure from 1 to 2 and 2 to 1.

### SPECIFICATIONS

#### Theoretical performance



#### Schematic



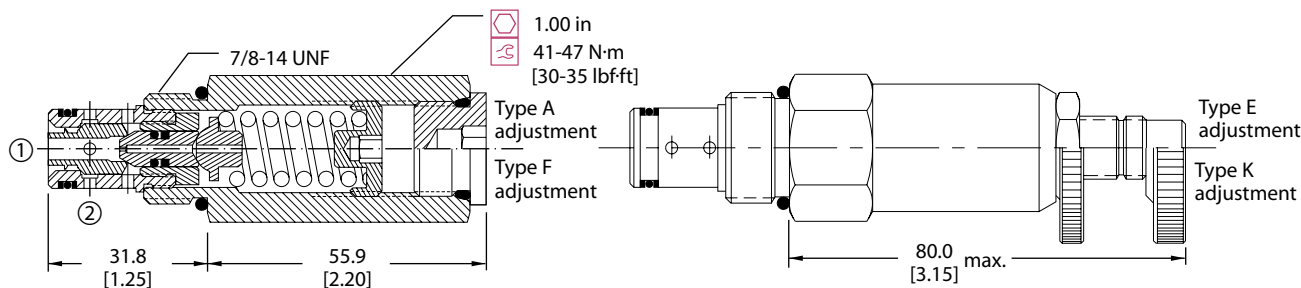
#### Specifications

<b>Rated pressure</b>	250 bar [3600 psi]
<b>Rated flow at 7 bar [100 psi]</b>	40 l/min [11 US gal/min]
<b>Leakage</b>	5 cm <sup>3</sup> /min [0.3 in <sup>3</sup> /min] @ 80% of pressure setting
<b>Weight</b>	0.20 kg [0.43 lb]
<b>Cavity</b>	SDC10-2

### DIMENSIONS

mm [in]

#### Cross-sectional view



### ORDERING INFORMATION

**CP200 - 7 - B - 8S - A - C - 150**

<b>Seals</b>	B = Buna-N	V = Viton	Seal kit 120073	Seal kit 120074	<b>Crack pressure</b> Code x 10 = psi Example: 150 = 1500 psi
<b>Housing and ports</b>	0 = No Housing	DG3B = Al, 3/8 BSP	DG4B = Al, 1/2 BSP	6S = Al, #6 SAE	
<b>Adjustment option</b>	A = Internal	E = External	F = Tamper resistant	K = Knob	<b>Pressure range</b>
					bar [psi]
					A = 7-41 [100-600]
					Standard 28 [400]
					B = 17-138 [250-2000]
					Standard 69 [1000]
					C = 41-248 [600-3600]
					Standard 103 [1500]

P102 115E

Relief valves  
CP200-7





# Cartridge Valves Technical Information

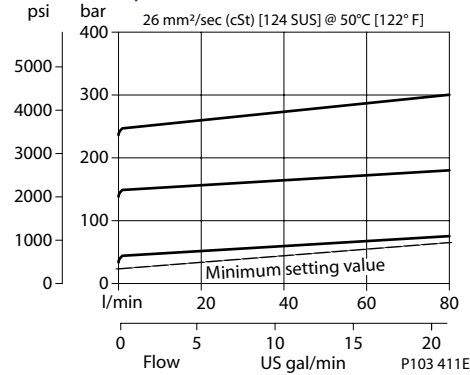
## Relief valves VSB 06-EN

### OPERATION

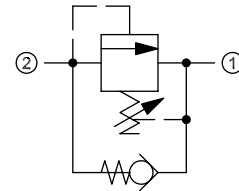
This is a direct-acting, differential area, poppet-type relief valve that relieves from 2 to 1 with an integral free-flow check from 1 to 2.

### SPECIFICATIONS

#### Theoretical performance



#### Schematic



P103 524

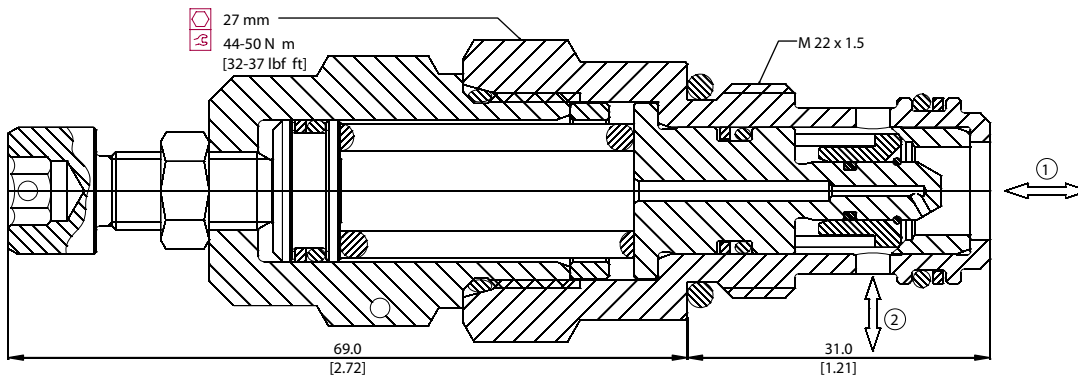
#### Specifications

<b>Rated pressure</b>	350 bar [5000 psi]
<b>Rated flow at 7 bar [100 psi]</b>	80 l/min [21 US gal/min]
<b>Weight</b>	0.22 kg [0.49 lb]
<b>Cavity</b>	NCS06/2

### DIMENSIONS

mm [in]

#### Cross-sectional view



P103 413

### ORDERING INFORMATION

#### VSB 06-EN - 1 - 00 - V - XXX

#### Setting range

- 1 = 20 - 80 bar [363 - 2031 psi]
- 2 = 70 - 210 bar [1015 - 3046 psi]
- 3 = 105 - 350 bar [1523 - 5076 psi]

#### Seals

- V = Viton
- Omit = Buna-N

#### Seal Kit

- 230000380
- 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

To order this valve with a specific factory setting, contact your Sauer-Danfoss representative

P103 414E



# Cartridge Valves Technical Information

## Relief valves

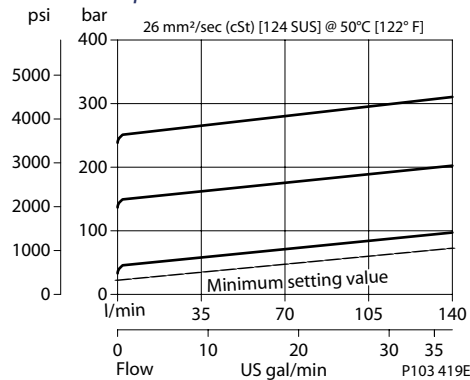
### VS8 12-EN

#### OPERATION

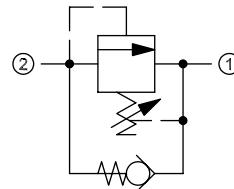
This is a direct-acting, differential area, poppet-type relief valve that relieves from 2 to 1 with an integral free-flow check from 1 to 2.

#### SPECIFICATIONS

##### Theoretical performance



##### Schematic



P103 524

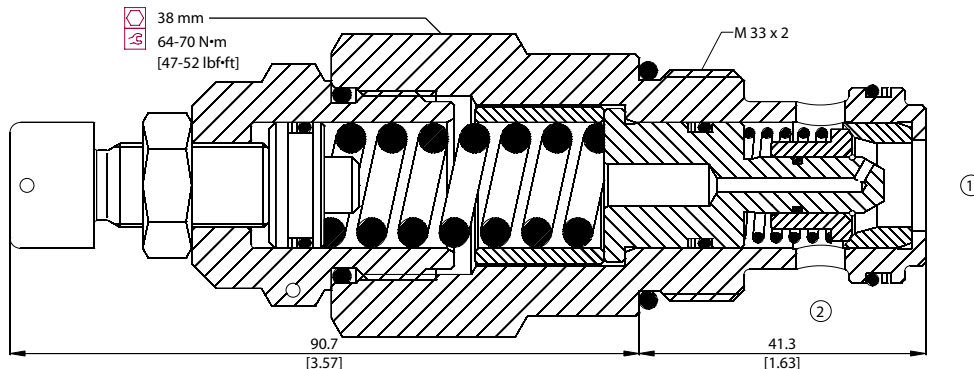
##### Specifications

<b>Rated pressure</b>	350 bar [5000 psi]
<b>Rated flow at 7 bar [100 psi]</b>	140 l/min [37 US gal/min]
<b>Weight</b>	0.60 kg [1.32 lb]
<b>Cavity</b>	NCS12/2

#### DIMENSIONS

mm [in]

##### Cross-sectional view



P103 421

#### ORDERING INFORMATION

### VS8 12-EN - 1 - 00 - V - XXX

##### Setting range

- 1 = 25 - 170 bar [363 - 2466 psi]
- 2 = 70 - 270 bar [1015 - 3916 psi]
- 3 = 105 - 350 bar [1523 - 5076 psi]

- Seals**  
 V = Viton 230000470  
 Omit = Buna-N 230000120

- Housing and ports**  
 00 = No Housing  
 DG1/2 = AL, 1/2 BSP  
 DG3/4 = AL, 3/4 BSP  
 DG8S = AL, #8 SAE  
 DG12S = AL, #12 SAE  
 Other housings available

- Seal Kit**  
 230000470  
 230000120
- Housing P/N**  
 No Housing  
 NCS12/2-DG-1/2  
 NCS12/2-DG-3/4  
 NCS12/2-DG-8S  
 NCS12/2-DG-12S

P103 422E

Relief valves  
VS8 12-EN



# Cartridge Valves Technical Information

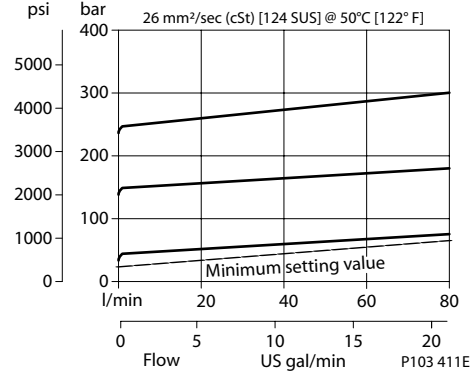
## Relief valves VSB 06-CN

### OPERATION

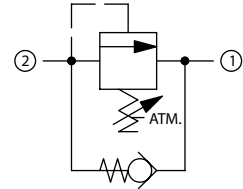
This is a direct-acting, differential area, atmospherically-vented, poppet-type relief valve that relieves from 2 to 1 with an integral free-flow check from 1 to 2.

### SPECIFICATIONS

#### Theoretical performance



#### Schematic



P1

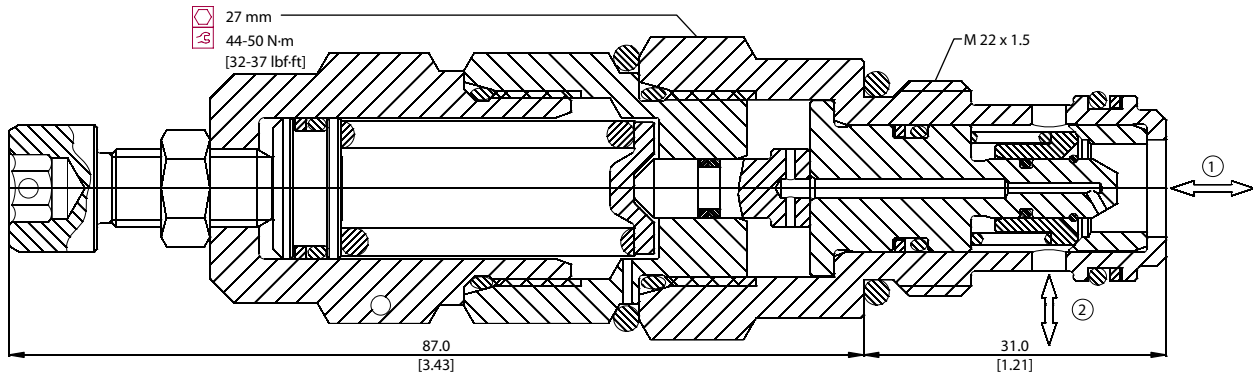
#### Specifications

<b>Rated pressure</b>	350 bar [5000 psi]
<b>Rated flow at 7 bar [100 psi]</b>	80 l/min [21 US gal/min]
<b>Weight</b>	0.29 kg [0.64 lb]
<b>Cavity</b>	NCS06/2

### DIMENSIONS

mm [in]

#### Cross-sectional view



P103 410

### ORDERING INFORMATION

#### VSB 06-CN - 1 - 00 - V - XXX

<b>Setting range</b>	1 = 25 - 140 bar [363 - 2031 psi]	<b>Seals</b>	<b>Seal Kit</b>
	2 = 70 - 210 bar [1015 - 3046 psi]	V = Viton	230000380
3 = 105 - 350 bar [1523 - 5076 psi]	Omit = Buna-N	230000060	
		<b>Housing and ports</b>	<b>Housing P/N</b>
		00 = No Housing	No Housing
		DG3B = AL, 3/8 BSP	NCS06/2-DG-3/8
		DG4B = AL, 1/2 BSP	NCS06/2-DG-1/2
		DG6S = AL, #6 SAE	NCS06/2-DG-6S
		DG8S = AL, #8 SAE	NCS06/2-DG-8S
		Other housings available	

To order this valve with a specific factory setting, contact your Sauer-Danfoss representative

P103 412E

Relief valves  
VSB 06-CN



# Cartridge Valves Technical Information

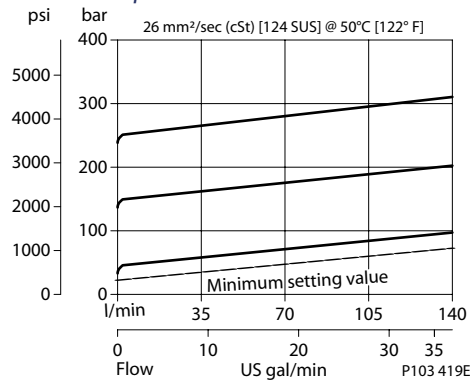
## Relief valves VSB 12-CN

### OPERATION

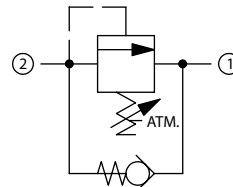
This is a direct-acting, differential area, atmospherically-vented, poppet-type relief valve that relieves from 2 to 1 with an integral free-flow check from 1 to 2.

### SPECIFICATIONS

#### Theoretical performance



#### Schematic



P1

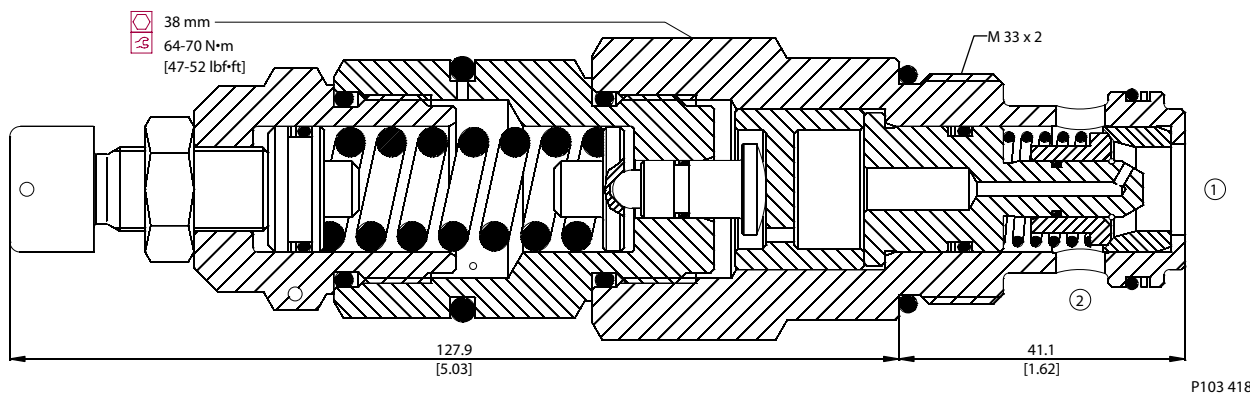
#### Specifications

<b>Rated pressure</b>	350 bar [5000 psi]
<b>Rated flow at 7 bar [100 psi]</b>	140 l/min [37 US gal/min]
<b>Weight</b>	0.75 kg [1.65 lb]
<b>Cavity</b>	NCS12/2

### DIMENSIONS

mm [in]

#### Cross-sectional view



P103 418

### ORDERING INFORMATION

#### VSB 12-CN - 1 - 00 - V - XXX

#### Setting range

- 1 = 25 - 170 bar [363 - 2466 psi]
- 2 = 70 - 270 bar [1015 - 3916 psi]
- 3 = 105 - 350 bar [1523 - 5076 psi]

#### Seals

- V = Viton
- Omit = Buna-N

#### Seal Kit

- 230000470
- 230000120

#### Housing and ports

- 00 = No Housing
- DG1/2 = AL, 1/2 BSP
- DG3/4 = AL, 3/4 BSP
- DG8S = AL, #8 SAE
- DG12S = AL, #12 SAE
- Other housings available

#### Housing P/N

- No Housing
- NCS12/2-DG-1/2
- NCS12/2-DG-3/4
- NCS12/2-DG-8S
- NCS12/2-DG-12S

To order this valve with a specific factory setting, contact your Sauer-Danfoss representative

P103 420E



# Cartridge Valves Technical Information

## Relief valves

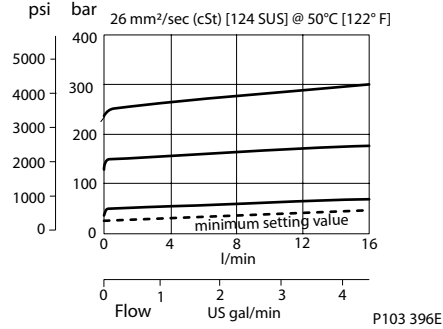
### VA-E06

### OPERATION

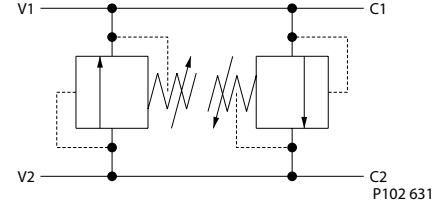
This valve is an inline cross relief. It uses two VME 06 direct-acting relief valves.

### SPECIFICATIONS

#### Theoretical performance



#### Schematic



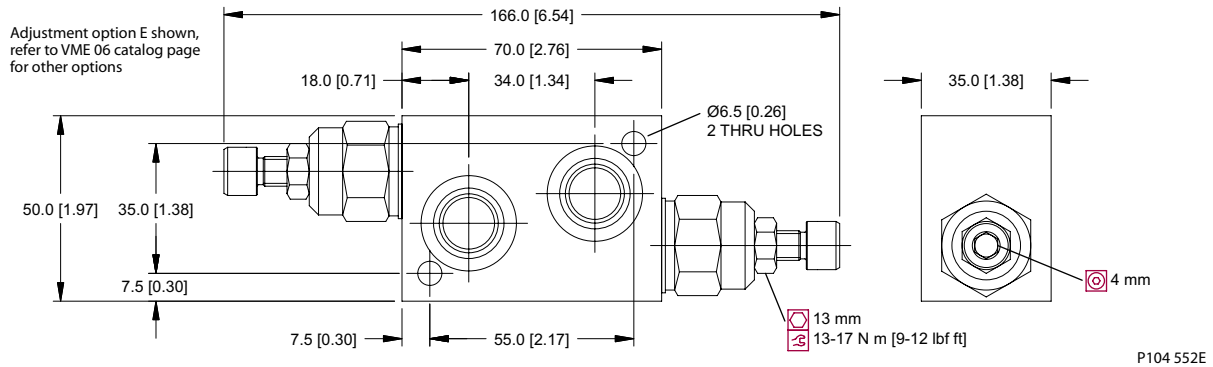
#### Specifications

<b>Rated pressure</b>	210 bar [3045 psi]
<b>Rated flow at 7 bar [102 psi]</b>	40 l/min [11 US gal/min]
<b>Weight</b>	1.11 kg [2.45 lb]
<b>Cavity</b>	none

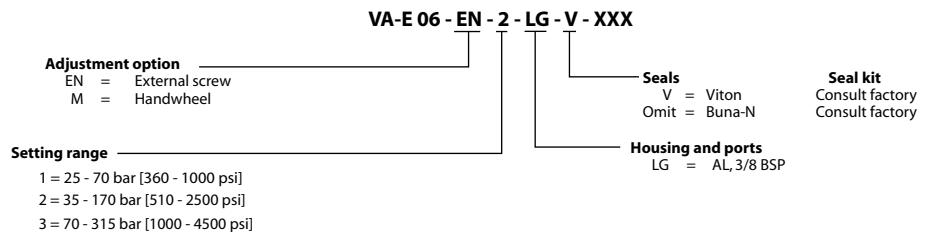
### DIMENSIONS

mm [in]

#### Cross-sectional view



### ORDERING INFORMATION



To order this valve with a specific factory setting, contact your Sauer-Danfoss representative

P104 553E



# Cartridge Valves Technical Information

## Relief valves

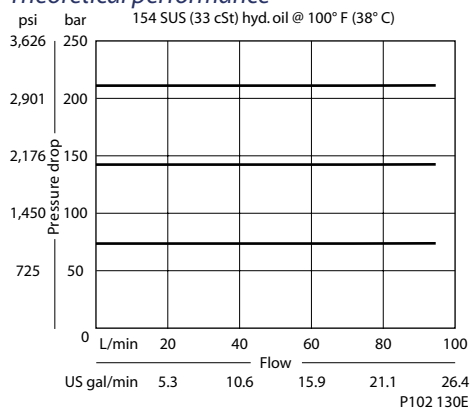
### CP220-1

### OPERATION

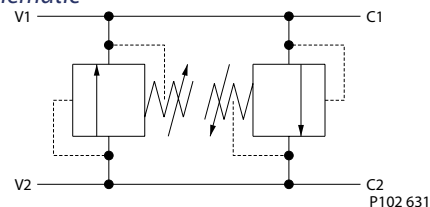
This valve is an inline cross relief. It uses two CP200-1 differential area relief valves.

### SPECIFICATIONS

#### Theoretical performance



#### Schematic



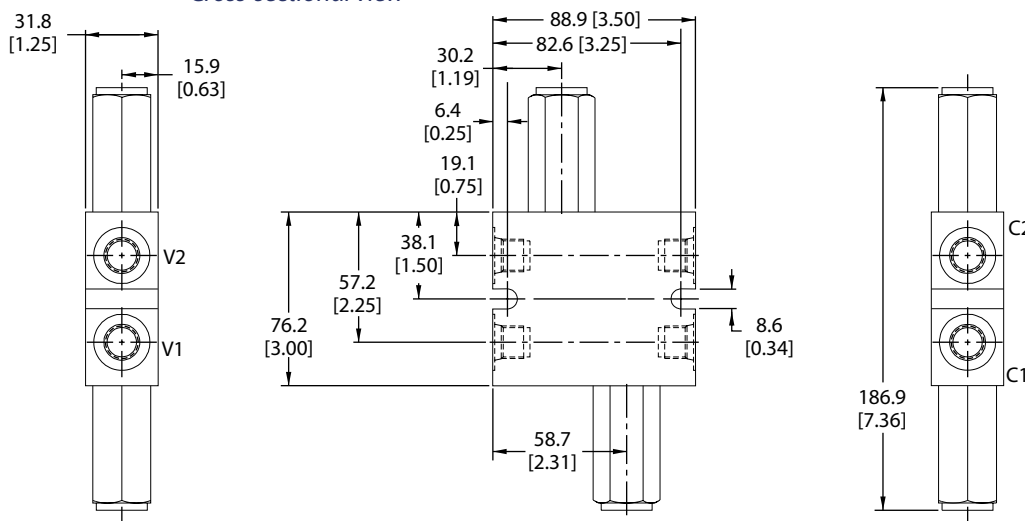
#### Specifications

<b>Rated pressure</b>	250 bar [3600 psi]
<b>Rated flow at 7 bar [100 psi]</b>	75 l/min [20 US gal/min]
<b>Weight</b>	0.82 kg [1.80 lb]
<b>Cavity</b>	none

### DIMENSIONS

mm [in]

#### Cross-sectional view



P102 129

### ORDERING INFORMATION

#### CP220 - 1 - 8S - B - 0 - A - C - 150

##### Housing and ports

3B	=	Al, 3/8 BSP	221743
4B	=	Al, 1/2 BSP	221744
6S	=	Al, #6 SAE	220216
8S	=	Al, #8 SAE	220217

Other housings available

##### Housing P/N

221743
221744
220216
220217

##### Seals

B	=	Buna-N
V	=	Viton

Seal kit
120072
120161

##### Adjustment option

A	=	Internal
E	=	External
F	=	Tamper resistant
K	=	Knob

##### Crack pressure

Code x 10 = psi  
Example: 150 = 1500 psi

##### Pressure range

A	=	7-55	bar	[psi]
Standard		28		[400]
B	=	17-138		[250-2000]
Standard		69		[1000]
C	=	41-248		[600-3600]
Standard		103		[1500]

P102 131E



# Cartridge Valves Technical Information

## Relief valves

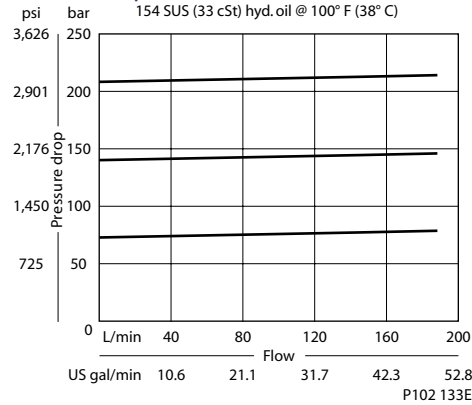
### CP221-1

### OPERATION

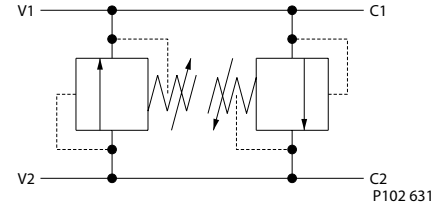
This valve is an inline cross relief. It uses two CP201-1 type differential area relief valves.

### SPECIFICATIONS

#### Theoretical performance



#### Schematic



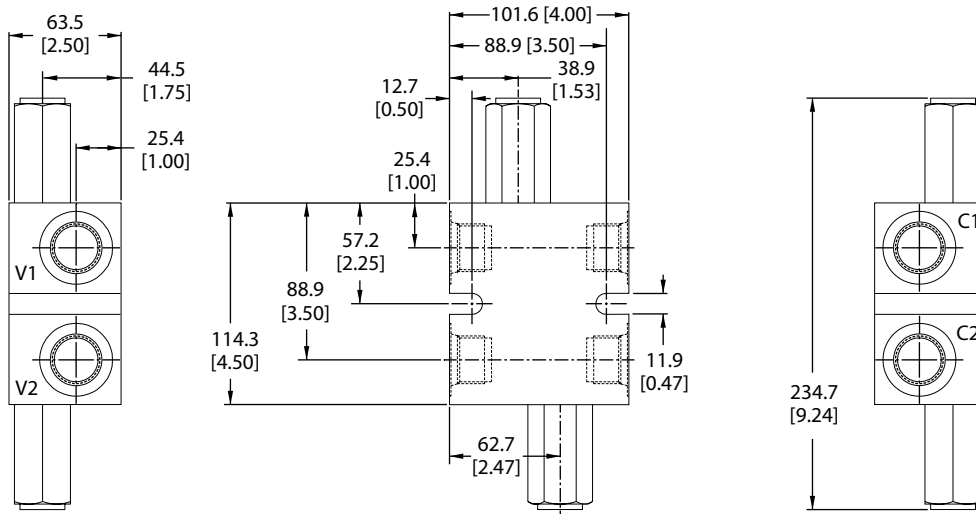
#### Specifications

<b>Rated pressure</b>	250 bar [3600 psi]
<b>Rated flow at 7 bar [100 psi]</b>	190 l/min [50 US gal/min]
<b>Weight</b>	2.25 kg [4.95 lb]
<b>Cavity</b>	none

### DIMENSIONS

mm [in]

#### Cross-sectional view



P102 132

### ORDERING INFORMATION

#### CP221 - 1 - 16S - B - 0 - A - C - 150

##### Housing and ports

- 12S = AL, #12 SAE
- 16S = AL, #16 SAE
- 6B = AL, 3/4 BSP
- 8B = AL, 1 BSP

##### Seals

- B = Buna-N
- V = Viton

##### Adjustment option

- A = Internal
- E = External
- F = Tamper resistant
- K = Knob

##### Housing P/N

- 220223
- 220222
- 221742
- 221690

- Seal kit  
120162  
120163

##### Cracking pressure

Code x 10 = psi  
Example: 150 = 1500 psi

##### Pressure range

	bar	[psi]
A = Standard	7-69	[100-1000]
B = Standard	28	[400]
B = Standard	17-172	[250-2500]
C = Standard	69	[1000]
C = Standard	41-248	[500-3600]
C = Standard	103	[1500]

P102 134E

Relief valves  
CP221-1



## Cartridge Valves Technical Information

Relief valves

Notes