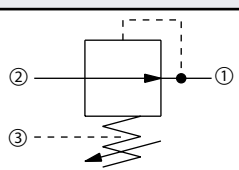
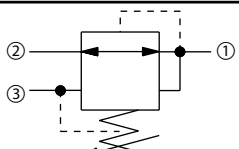
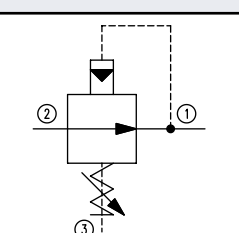
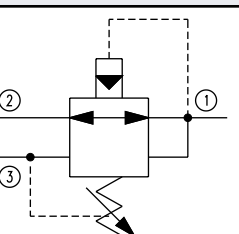


Symbol	Model No.	Cavity	Description	Flow*	Pressure	Page
	PRC 06	NCS06/3	Reducing only valve (direct acting)	40 l/min [10 US gal/min]	315 bar [4500 psi]	05.4
	CP230-2	SDC10-3		40 l/min [10 US gal/min]	210 bar [3000 psi]	05.5

Symbol	Model No.	Cavity	Description	Flow*	Pressure	Page
	CP230-1	SDC10-3	Reducing/relieving valve (direct acting)	40 l/min [10 US gal/min]	210 bar [3000 psi]	05.6

Symbol	Model No.	Cavity	Description	Flow*	Pressure	Page
	PPRC 06	NCS06/3	Reducing only valve (pilot operated)	40 l/min [10 US gal/min]	315 bar [4500 psi]	05.7
	CP230-4	SDC10-3		40 l/min [10 US gal/min]	350 bar [5000 psi]	05.8

Symbol	Model No.	Cavity	Description	Flow*	Pressure	Page
	PRMP 064	SDC10-3	Reducing/relieving valve (pilot operated)	40 l/min [10 US gal/min]	315 bar [4500 psi]	05.9
	CP231-3	CP12-3S		115 l/min [30 US gal/min]	350 bar [5000 psi]	05.10

* 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

Pressure reducing valves

Application notes

PRESSURE REDUCING VALVES

Pressure reducing valves are pressure limiting devices that limit pressure in one portion of a circuit while leaving system pressure unaffected. They are available in direct-acting and pilot-operated types and as pressure reducing/relieving valves or as pressure reducing valves only.

Pressure reducing valves



F102 010

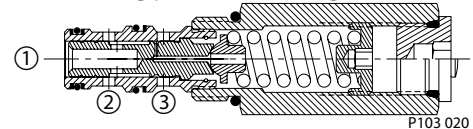
DIRECT ACTING PRESSURE REDUCING / RELIEVING VALVES

Direct-acting pressure reducing/relieving valves allow flow to pass from ② to ① until the pressure at ① reaches the predetermined setting, at which point the spool shifts to restrict input flow from ② (reducing mode) or to open flow from ① to ③ (relieving mode) as needed to maintain the regulated pressure at ①.

Advantages of direct-acting pressure reducing valves are:

- Fast response
- Economical

Direct acting pressure reducing valve



P103 020

A typical application for direct-acting pressure reducing valves is for pressure control in systems requiring two or more different pressure settings. These valves are best suited for low flow applications such as hydraulic brake or motor shift.



Cartridge Valves Technical Information

Pressure reducing valves

Application notes

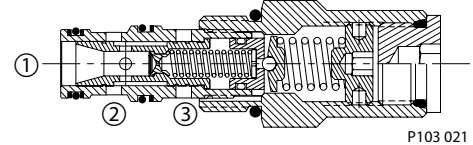
PILOT-OPERATED PRESSURE REDUCING / RELIEVING VALVES

Pilot-operated pressure reducing/relieving valves operate similarly to direct-acting pressure reducing/relieving valves -- the spool allows flow to pass from ② to ① until the pressure at ① reaches the predetermined setting and forces the pilot poppet off its seat. This creates a pressure differential across the spool that causes the spool to shift and maintain regulated pressure at ① in the same manner as the direct-acting pressure reducing/relieving valve.

Advantages of pilot-operated relief valves are:

- Smooth, stable response
- High pressure capability
- Precise pressure control with varying flow rates

Pilot-operated pressure reducing valve



A typical application for pilot-operated pressure reducing valves is for pressure control in systems requiring two or more different pressure settings where high pressure capability and/or extremely precise pressure control is required.



Cartridge Valves Technical Information

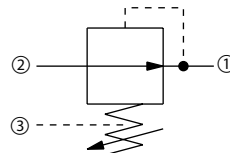
Pressure reducing valves

PRC 06

OPERATION

This is a direct-acting pressure reducing (non-relieving) valve.

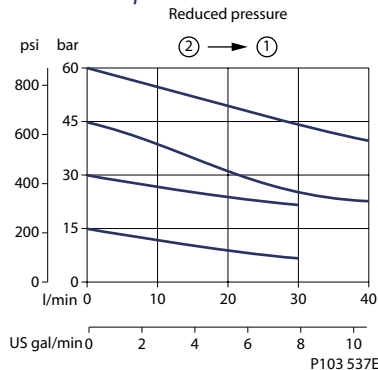
Schematic



P102 140E

SPECIFICATIONS

Theoretical performance



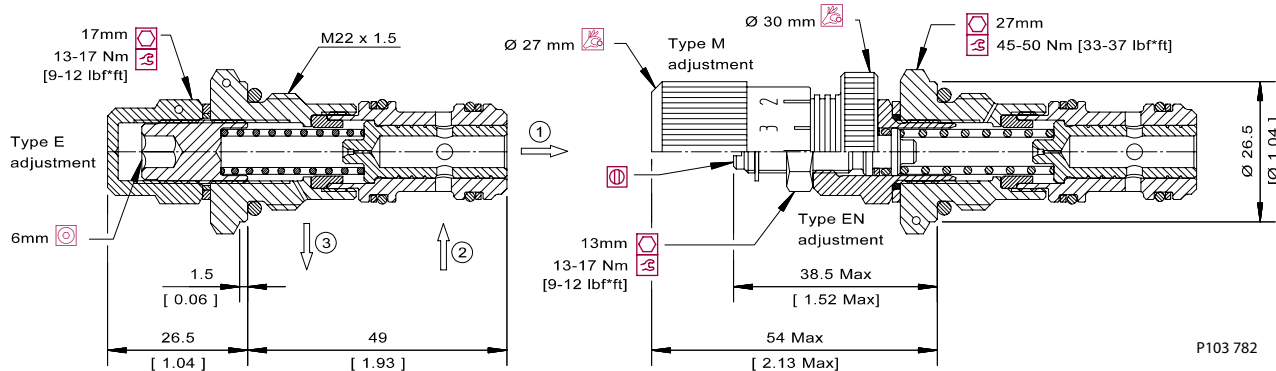
Specifications

Rated pressure	315 bar [4500 psi]
Rated flow at 7 bar [100 psi]	40 l/min [10 US gal/min]
Weight	0.14 kg [0.31 lb]
Cavity	NCS06/3

DIMENSIONS

mm [in]

Cross-sectional view



ORDERING INFORMATION

PRC 06 - EN - 1 - 00 - V

Type of adjustment

E = Internal screw
EN = External screw
M = Handwheel

Setting range

.5 = 1-10 bar [14.5-145 psi]
1 = 10 - 25 bar [145-363 psi]
2 = 25-80 bar [363-1160 psi]

Seals

V = Viton
B = Buna-N

Seal kit

230000110
230000070

Housing and ports

00 = No Housing
SE3/8 = AL, 3/8 BSP
SE1/2 = AL, 1/2 BSP
SE6S = AL, #6 SAE
SE8S = AL, #8 SAE
Other housings available

Housing P/N

No Housing
NCS06/3-SE-3/8
NCS06/3-SE-1/2
NCS06/3-SE-6S
NCS06/3-SE-8S

To order this valve with a specific factory setting, contact your Sauer-Danfoss representative P103 784E



Cartridge Valves Technical Information

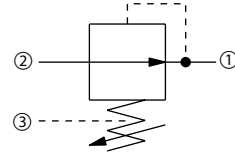
Pressure reducing valves

CP230-2

OPERATION

This is a direct-acting pressure-reducing (non-relieving) valve.

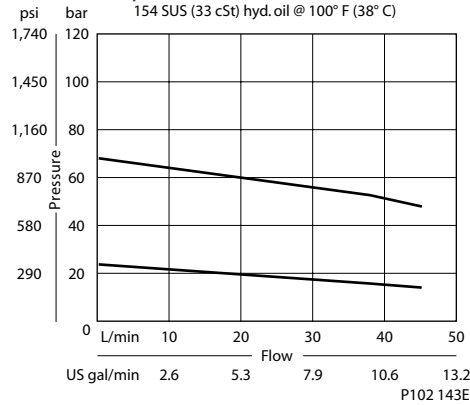
Schematic



P102 140E

SPECIFICATIONS

Theoretical performance



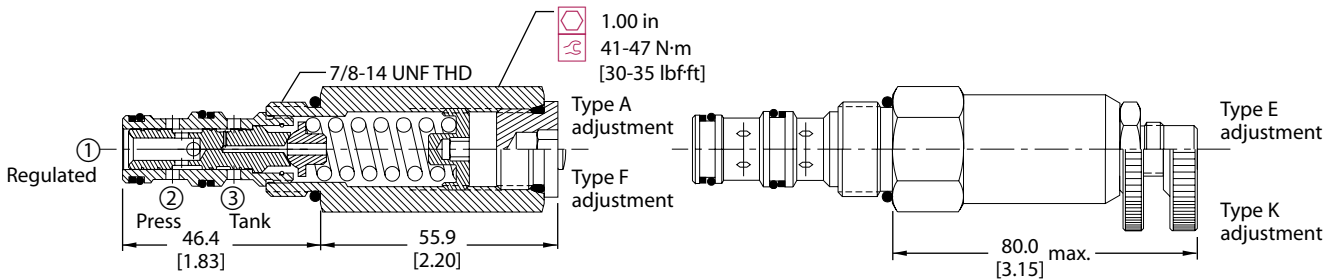
Specifications

Rated pressure	210 bar [3000 psi]
Rated flow at 7 bar [100 psi]	40 l/min [10 US gal/min]
Weight	0.25 kg [0.56 lb]
Cavity	SDC10-3

DIMENSIONS

mm [in]

Cross-sectional view



P102 141E

ORDERING INFORMATION

CP230 - 2 - B - 6S - A - C - 100

Seals
 B = Buna-N
 V = Viton

Seal kit
 120027
 120028

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

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

Crack pressure
 Code x 10 = psi
 Example: 100 = 1000 psi

Pressure range

Code	bar	[psi]
A	4-28	[50-400]
Std. setting	17	[250]
B	5-55	[75-800]
Std. setting	28	[400]
C	7-97	[100-1400]
Std. setting	69	[1000]
D	34-166	[500-2400]
Std. setting	103	[1500]

P102 144E



Cartridge Valves Technical Information

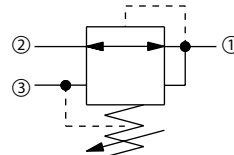
Pressure reducing valves

CP230-1

OPERATION

This is a direct-acting pressure reducing/relieving valve.

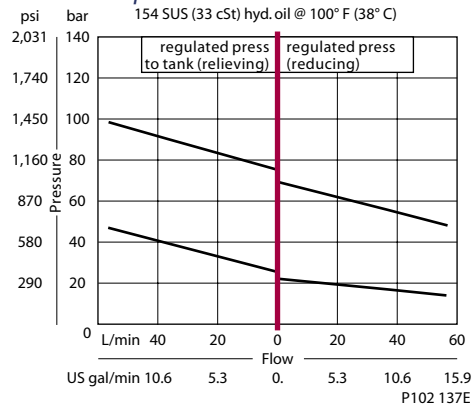
Schematic



P102 135E

SPECIFICATIONS

Theoretical performance



P102 137E

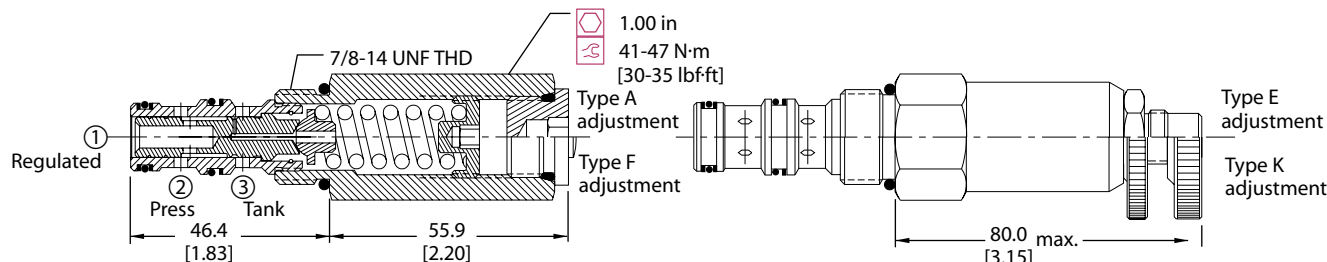
Specifications

Rated pressure	210 bar [3000 psi]
Rated flow at 7 bar [100 psi]	40 l/min [10 US gal/min]
Weight	0.23 kg [0.51 lb]
Cavity	SDC10-3

DIMENSIONS

mm [in]

Cross-sectional view



P102 136E

ORDERING INFORMATION

CP230 - 1 - B - 6S - A - C - 100

Seals
B = Buna-N
V = Viton

Seal kit
120570
120571

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

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

Pressure setting
Code x 10psi (0.69 bar)
Example: 100 = 1000 psi (70 bar)

Pressure range

Code	bar	[psi]
A	4-28	[50-400]
Std. setting	17	[250]
B	5-55	[75-800]
Std. setting	28	[400]
C	7-97	[100-1400]
Std. setting	69	[1000]
D	34-166	[500-2400]
Std. setting	103	[1500]

P102 139E



Cartridge Valves Technical Information

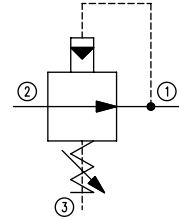
Pressure reducing valves

PPRC 06

OPERATION

This is a pilot-operated pressure reducing (non-relieving) valve.

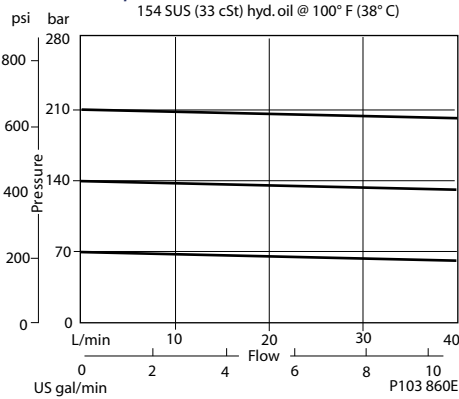
Schematic



P103 231

SPECIFICATIONS

Theoretical performance



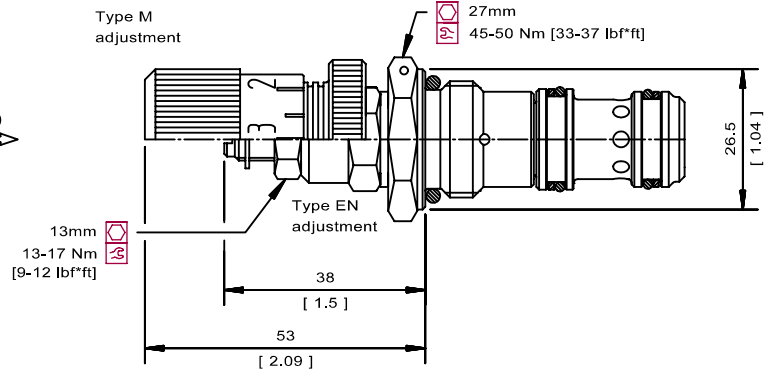
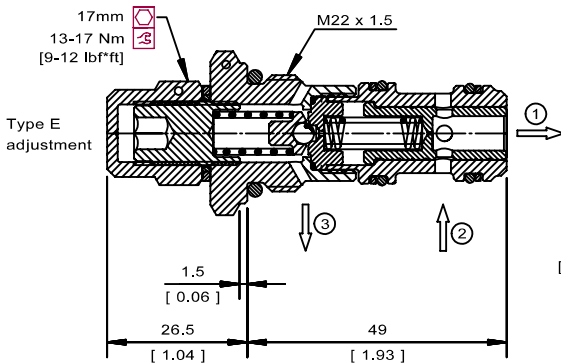
Specifications

Rated pressure	315 bar [4500 psi]
Rated flow at 7 bar [100 psi]	40 l/min [10 US gal/min]
Weight	0.14 kg [0.31 lb]
Cavity	NCS06/3

DIMENSIONS

mm [in]

Cross-sectional view



P103 913E

ORDERING INFORMATION

PPRC 06 - EN - 1 - 00 - V

<p>Type of adjustment</p> <p>E = Internal screw EN = External screw M = Handwheel</p> <p>Setting range</p> <p>1 = 10-70 bar [145-1015 psi] 2 = 30-140 bar [435-2031 psi] 3 = 70-210 bar [1015-3046 psi]</p>	<p>Seals</p> <p>V = Viton Omit = Buna-N</p> <p>Housing and ports</p> <p>00 = No Housing SE3/8 = AL, 3/8 BSP SE1/2 = AL, 1/2 BSP SE6S = AL, #6 SAE SE8S = AL, #8 SAE Other housings available</p>	<p>Seal kit</p> <p>230000110 230000070</p> <p>Housing P/N</p> <p>No Housing NCS06/3-SE-3/8 NCS06/3-SE-1/2 NCS06/3-SE-6S NCS06/3-SE-8S</p>
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To order this valve with a specific factory setting, contact your Sauer-Danfoss representative P103 794E



Cartridge Valves Technical Information

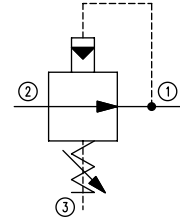
Pressure reducing valves

CP230-4

OPERATION

This is a pilot-operated pressure-reducing (non-relieving) valve.

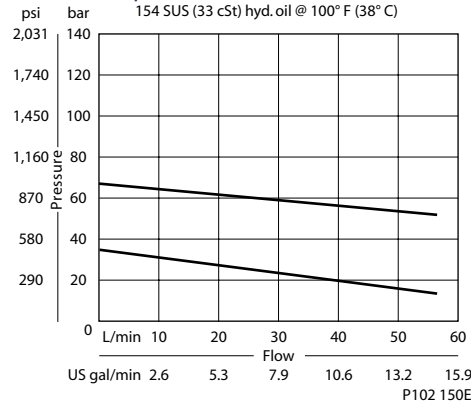
Schematic



P103 231

SPECIFICATIONS

Theoretical performance



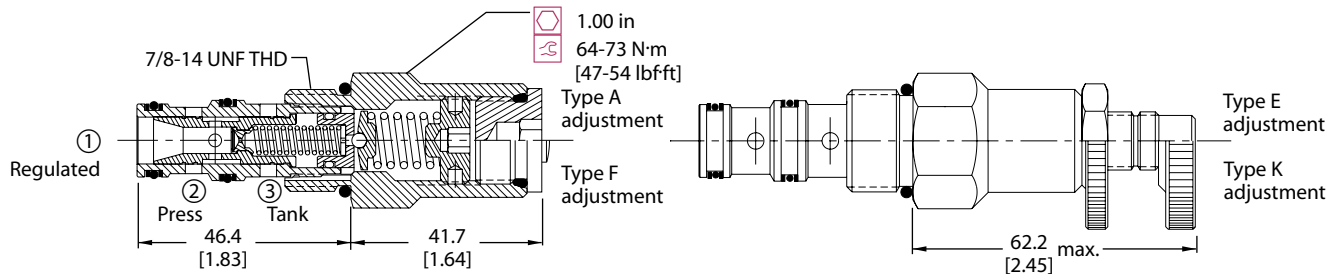
Specifications

Rated pressure	350 bar [5000 psi]
Rated flow at 7 bar [100 psi]	40 l/min [10 US gal/min]
Weight	0.20 kg [0.43 lb]
Cavity	SDC10-3

DIMENSIONS

mm [in]

Cross-sectional view



P102 149E

ORDERING INFORMATION

CP230 - 4 - B - 6S - A - C - 150

Seals

B = Buna-N
V = Viton

Seal kit

120027
120028

Housing and ports

0 = No Housing
SE3B = Al, 3/8 BSP
SE4B = Al, 1/2 BSP
6S = Al, #6 SAE
8S = Al, #8 SAE

Housing P/N

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

Other housings available

Adjustment option

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

Pressure setting

Code x 10psi (0.69 bar)
Example: 150 = 1500 psi (105 bar)

Pressure range

	bar	[psi]
A	14-55	[200-800]
Standard	28	[400]
B	21-103	[300-1500]
Standard	69	[1000]
C	28-207	[400-3000]
Standard	103	[1500]
D	28-345	[400-5000]
Standard	103	[1500]

P102 152E



Cartridge Valves Technical Information

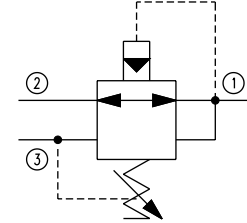
Pressure reducing valves

PRMP 064

OPERATION

This is a pilot-operated pressure reducing/relieving valve.

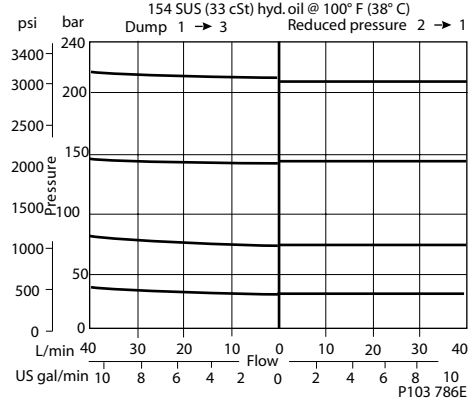
Schematic



P103 230

SPECIFICATIONS

Theoretical performance



P103 786E

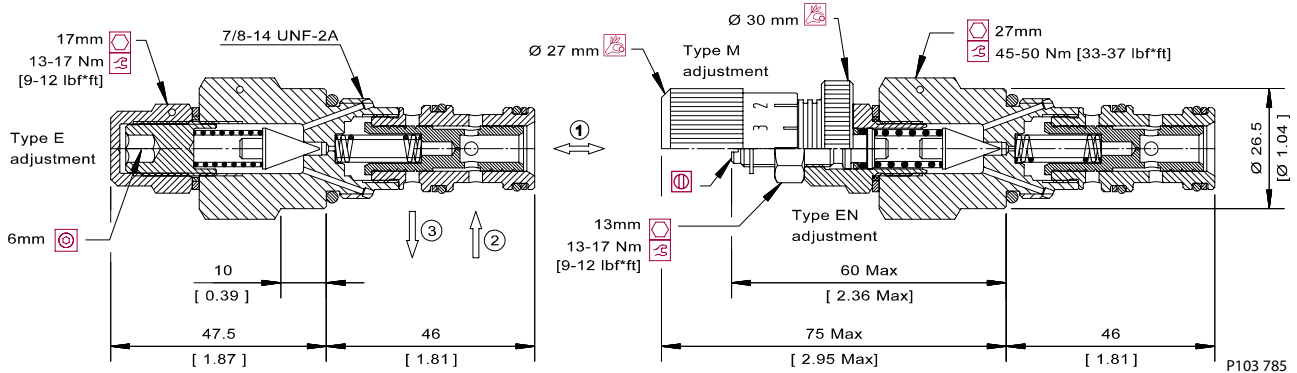
Specifications

Rated pressure	315 bar [4500 psi]
Rated flow at 7 bar [100 psi]	40 l/min [10 US gal/min]
Weight	0.21 kg [0.46 lb]
Cavity	SDC10-3

DIMENSIONS

mm [in]

Cross-sectional view



P103 785

ORDERING INFORMATION

PRMP 064 - EN - 1 - SE3/8 - V

Adjustment

E = Internal screw
EN = External screw
M = Handwheel

Setting range

1 = 10-70 bar [145-1015 psi]
2 = 30-140 bar [435-2031 psi]
3 = 70-210 bar [1015-3046 psi]

Seals

V = Viton
Omit = Buna-N

Seal Kit

354003719
230000070

Housing and ports

00 = No Housing
SE3B = Al, 3/8 BSP
SE4B = Al, 1/2 BSP
6S = Al, #6 SAE
8S = Al, #8 SAE

Housing P/N

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

Other housings available

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

P103 787E



Cartridge Valves Technical Information

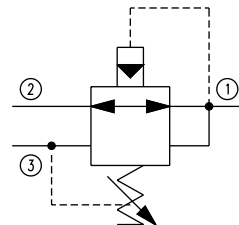
Pressure reducing valves

CP231-3

OPERATION

This is a pilot-operated pressure reducing/relieving valve.

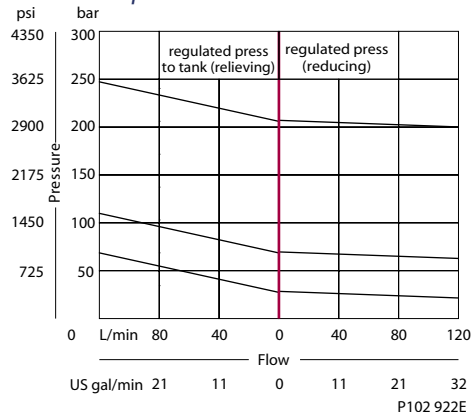
Schematic



P103 230

SPECIFICATIONS

Theoretical performance



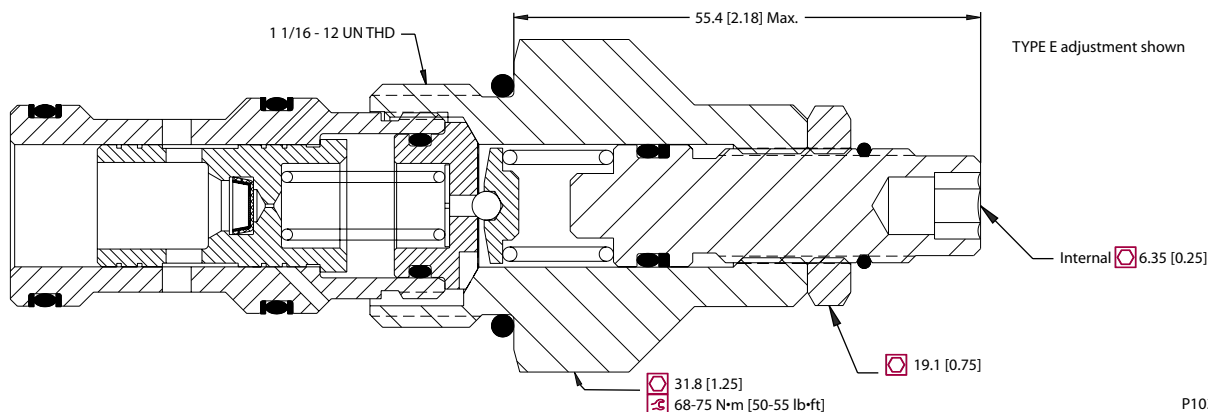
Specifications

Rated pressure	350 bar [5000 psi]
Rated flow at 7 bar [100 psi]	115 l/min [30 US gal/min]
Weight	0.27 kg [0.60 lb]
Cavity	CP12-3S

DIMENSIONS

mm [in]

Cross-sectional view



ORDERING INFORMATION

CP231-3-B-10S-A-A-050

Pressure setting
Code x 10psi (0.69 bar)
Example: 050 = 500 psi (34 bar)

Pressure range
A = 14-55 bar [200-800 psi]
B = 21-103 bar [300-1500 psi]
C = 27-207 bar [400-3000 psi]
D = 27-345 bar [400-5000 psi]

Adjustment options
A = Internal
F = Tamper Resistant
E = External
K = Knob

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

Housing P/N
No Housing
CP12-3S-4B/2B
CP12-3S-6B/2B
CP12-3S-10S/4S
CP12-3S-12S/4S

Seals
B = Buna-N
V = Viton

Seal kit
120335
120336

P102 622E

Pressure reducing valves
CP231-3