

2/2-way slip-in cartridge valves

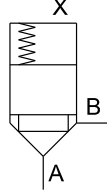
- $Q_{max} = 360$ l/min
- $p_{max} = 630$ bar

NG 16
DIN ISO 7368

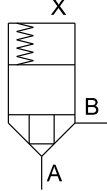
2/2-WAY FUNCTION

Area ratio
A:X

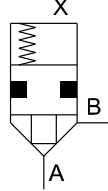
1:1,06



1:1,5



1:1,5


Type
Execution

CSEN16-11
Standard

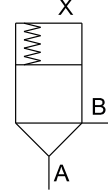
CSEN16-15
Standard

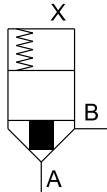
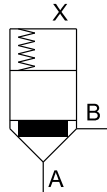
CLEN16-15
with seal
B → X

PRESSURE RELIEF

Area ratio
A:X

1:1,0


Type
Execution

CPEN16-10
Standard

Type
Execution

CDEN16-11
with damping

CDEN16-15
with damping

TYPE CODE

2/2-way slip-in cartridge valve

Seat construction

S

Seat construction with seal

L

Seat construction with damping

D

Pressure function

P

Nominal size 16, Enhanced

Area ratio

1:1

10

For pressure function only

1:1,06

11

1:1,5

15

Opening pressure A to B

0 bar (without spring)

0

Not for type CLEN

Nominal

0.5 bar

05

Not for type CLEN

1.0 bar

10

2.0 bar

20

4.0 bar

40

Not for type CLEN

Orifice in poppet spool

closed

Sealing material

NBR

FKM

D1 (Viton)

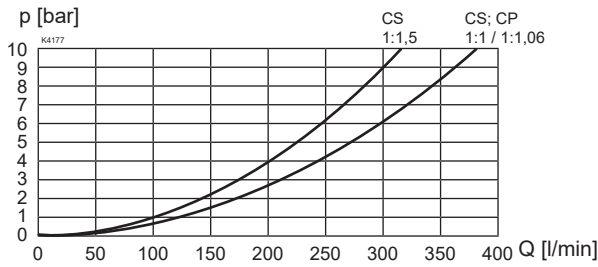
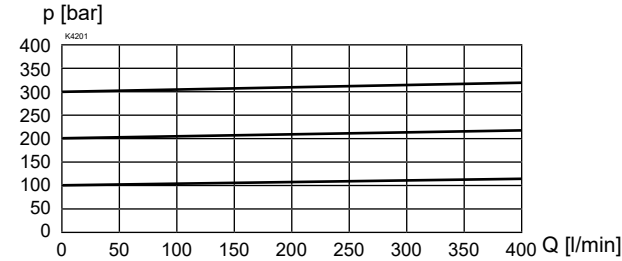
Design-Index (subject to change)

C EN16 - / / - #
GENERAL SPECIFICATIONS

Construction	2/2-way slip-in cartridge valves
Mounting position	any
Mounting dimensions	according to DIN ISO 7368
Ambient temperature	-30...+80 °C
Weight spool	m = 0,035 kg (1:1,5)
Weight total	m = 0,180 kg (1:1,5; without spring)
MTTFd	150 years

HYDRAULIC SPECIFICATIONS

Fluid	Mineral oil, other fluid on request
Contamination efficiency	ISO 4406:1999, class 18/16/13 (Required filtration grade $\beta_{6...10} \geq 75$) refer to data sheet no. 1.0-50/2
Viscosity range	12 mm ² /s...320 mm ² /s
Fluid temperature	-20...+80 °C (FKM) -30...+80 °C (NBR)
Operating pressure	$p_{max} = 630$ bar (connections A, B, X) CLEN $p_{max} = 420$ bar CPEN connection X, X-A = < 420 bar max. cover pressure to be observed
Max. volume flow	$Q_{max} = 360$ l/min at v = 30 m/s
Pilot oil volume	$Q_{st} = 2,2$ cm ³

CHARACTERISTICS Oil viscosity $\nu = 30 \text{ mm}^2/\text{s}$
 $\Delta p = f(Q)$ Pressure drop / volume flow characteristics

 $p = f(Q)$ Pressure volume flow characteristics

CHARACTERISTICS

Nominal	Opening pressure [bar]			
	0,5	1,0	2,0	4,0

Area ratio	Flow direction A to B			
	0,4	0,8	1,6	3,2
1:1	0,4	0,8	1,6	3,2
1:1,06	0,4	0,9	1,7	3,4
1:1,5	0,6	1,2	2,5	4,9

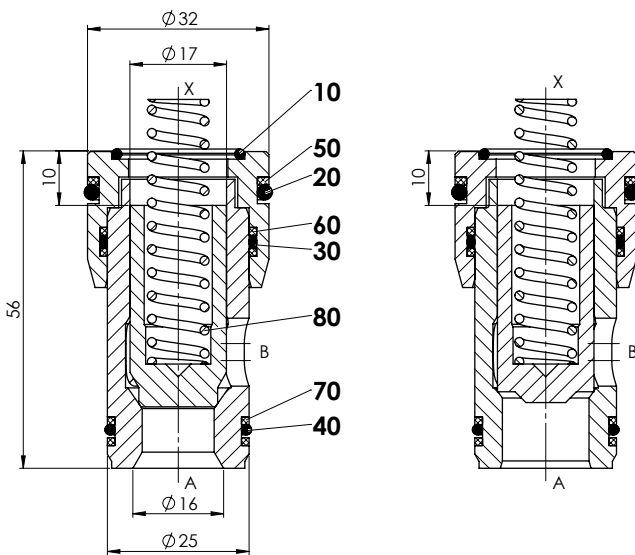
Area ratio	Flow direction B to A			
	-	-	-	-
1:1	-	-	-	-
1:1,06	6,3	12,5	25,1	50,1
1:1,5	1,1	2,2	4,4	8,8

Pressure spring	Article no.			
	CD, CP, CS	053.2201	053.2702	053.3203
CL	-	053.2118	053.2621	-

DIMENSIONS

CSEN16-15

CPEN16-10


PARTS LIST

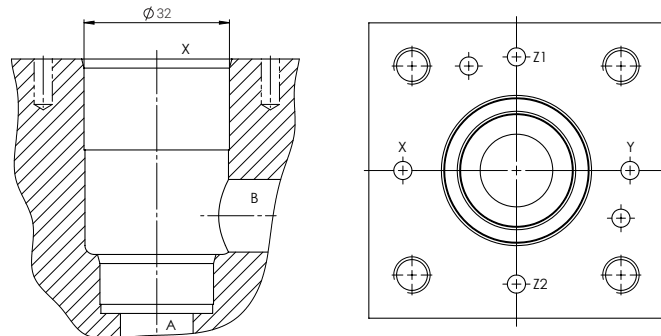
Position	Description	Seal kit
10	O-ring ID 20,35 x 1,78	•
20	O-ring ID 26,64 x 2,62	•
30	O-ring ID 25,12 x 1,78	•
40	O-ring ID 21,95 x 1,78	•
50	Backup ring rd 25,7 x 29,8 x 1,4	
60	Backup ring rd 25,0 x 27,7 x 1,4	
70	Backup ring rd 20,1 x 22,8 x 1,4	
80	Pressure spring 10,9	

SEAL KIT

251.6810	Seal kit C.E.16	NBR
251.6811	Seal kit C.E.16	VITON

HYDRAULIC CONNECTION

Cavity drawing according to ISO 7368


INSTALLATION NOTES

Mounting type	Slip-in cartridge
Mounting position	Any, preferably horizontal
Dismounting	Dismounting tool DW-C.E.16 Article no. 983.3015

Note! The length of the cover fixing screws to be used depends on the base material of the valve body and on the maximum system pressure.



Important! For detailed cavity drawing and cavity tools see data sheet 2.13-1021