

## FlowCon DPCV 15-50mm

*Differential Pressure Control Valve*

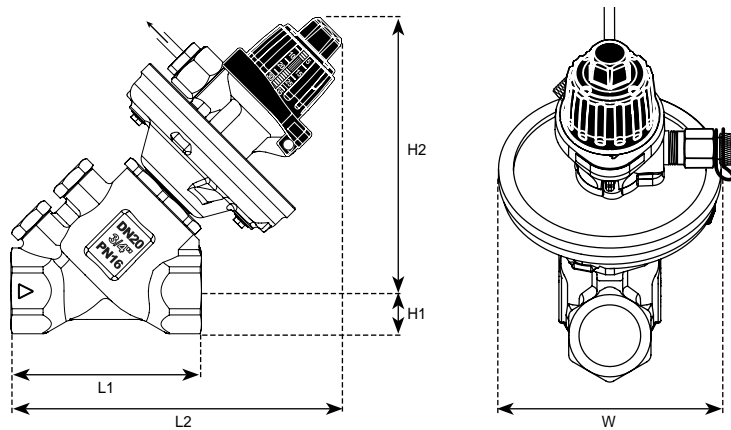


### SPECIFICATIONS

Static pressure:	1600 kPa / 232 psi
Temperature rating, media:	-20°C to +130°C / -4°F to +266°F
Material:	
- Body:	Bronze CuSn5Zn5Pb2 / CuSn5Zn5Pb5-C and Brass CuZn39Pb3
- Internal parts:	Brass CuZn39Pb3 / Stainless steel
- O-rings:	EPDM
- Seat:	EPDM
- Diaphragm:	EPDM
- Capillary tube:	Cu
- Spring:	Stainless steel
- Plastic parts:	PA
- Fasteners:	Stainless steel / Carbon steel nickel plated
Maximum operational $\Delta P$ :	210 kPaD / 30 psid
Differential pressure range:	5 kPaD to 35 kPaD / 0.7 psid to 5.1 psid
End connections:	Fixed female ISO (ISO7, DIN2999)
Capillary tube:	Ø4mm, length: 0.8m, end connection: 1/4" ISO thread

## DIMENSIONS AND WEIGHTS (NOMINAL) (measured in mm unless noted)

Model no.	Valve size	L1	L2	H1	H2	W	Weight (kgs.)	Kvs
DPCV.1.1.X.I	15mm	75	140	28	112	87	1.5	3.6
DPCV.1.2.X.I	20mm	80	140	28	112	87	1.6	5.8
DPCV.1.3.X.I	25mm	90	143	28	115	87	1.8	7.1
DPCV.1.4.X.I	32mm	110	188	35	153	117	3.6	15.4
DPCV.1.5.X.I	40mm	120	194	36	158	117	4.0	22.0
DPCV.1.6.X.I	50mm	150	206	45	161	117	4.9	35.8



## MODEL NUMBER SELECTION

DPCV . 1 . . . I

Insert controlled differential pressure range:  
1=5-35 kPaD / 0.7-5.1 psid (standard)

Insert body type:  
1=15mm (1/2") 2=20mm (3/4") 3=25mm (1") 4=32mm (1 1/4") 5=40mm (1 1/2") 6=50mm (2")

Insert p/t plug requirements:  
B=2 pressure/temperature plugs  
C=3 pressure/temperature plugs<sup>1</sup>  
P=taps plugged (standard)

Insert connections standard:  
I=ISO (standard)

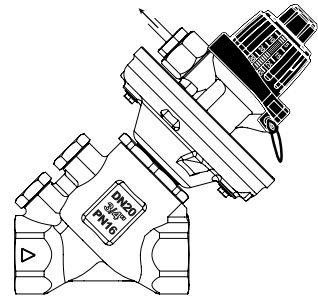
Example: DPCV.1.2.C.I=DPCV DN20 with 3 pressure/temperature plugs 20mm ISO female end connections, 5-35kPaD.

Note 1: the extra p/t plug can be used to measure the pressure in the capillary tube.

## GENERAL DESCRIPTION

The FlowCon DPCV series are differential pressure control valves. Each valve has an adjustable differential pressure setting to enable differential pressure limitation for balancing or avoiding noise from the sub system that the valve is controlling. Furthermore, the DPCV can be used as a shut-off valve.

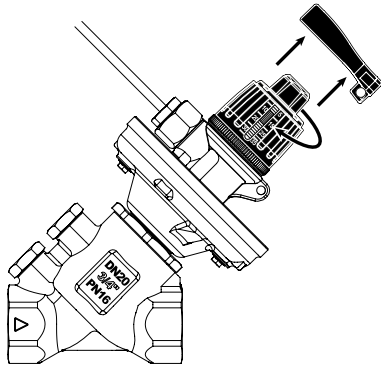
The FlowCon DPCV is easy to adjust without special equipment or conversion tables since the setting is printed directly on the valve which is adjusted by hand. The valve is tamper-proof when the supplied lock ring is fastened with a cable binder.



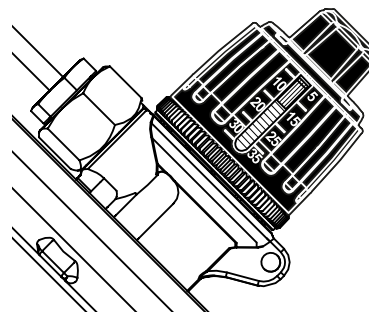
## DIFFERENTIAL PRESSURE LIMITATION SETTINGS

General settings of $\Delta P$ controlled			Operational $\Delta P$			
Setting	kPaD	psid	Min.		Max./Recommended max.	
			kPaD	psid	kPaD	psid
5	5	0.7	25	3.6	210/90	30/13
10	10	1.5	30	4.4	210/110	30/16
15	15	2.2	35	5.1	210/130	30/19
20	20	2.9	40	5.8	210/150	30/22
25	25	3.6	45	6.5	210/170	30/25
30	30	4.4	50	7.3	210/190	30/28
35	35	5.1	55	8.0	210/210	30/30

Accuracy: Greatest of either  $\pm 25\%$  of controlled differential pressure or  $\pm 10\%$  of maximum differential pressure.



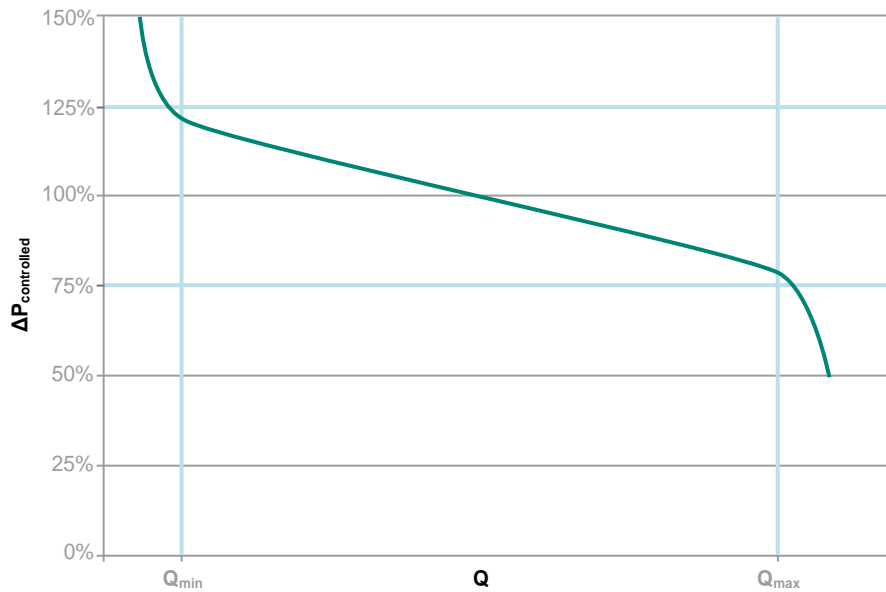
Turn the top wheel by hand until the setting is reached.



The picture shows a setting of 5 kPa (factory setting).

For a more precise setting or to reach a setting in between the settings in the table, please measure the controlled differential pressure while adjusting the setting.

## MAXIMUM FLOW RATE LIMITATION SETTINGS



		Flow range (l/h)						
Setting:		5	10	15	20	25	30	35
DN15	Qmin	50	60	70	80	90	105	120
	Qmax	1600	1600	1600	1600	1600	1650	1700
DN20	Qmin	70	80	90	105	120	135	150
	Qmax	2100	2150	2400	2450	2500	2550	2600
DN25	Qmin	110	120	130	145	160	185	200
	Qmax	2250	2400	2600	2850	2900	2950	3000
DN32	Qmin	150	150	150	150	150	150	150
	Qmax	3600	4200	4600	5000	5500	6000	6500
DN40	Qmin	200	200	200	200	200	200	200
	Qmax	6000	6600	7200	7900	8200	8600	9000
DN50	Qmin	500	500	500	500	500	500	500
	Qmax	6300	8000	10000	12000	12300	12600	13000

## ACCESSORIES

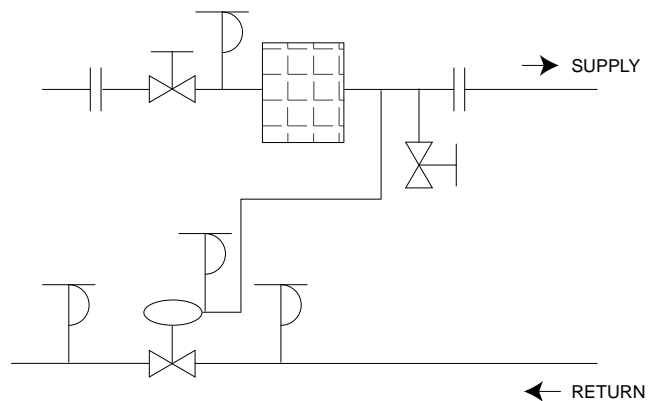
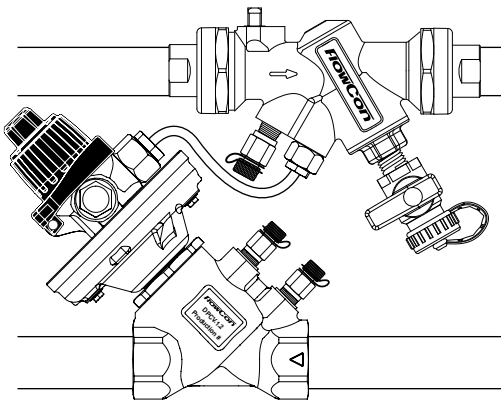
- Capillary tube with fittings, spare part: ACC00120.

## GENERAL SPECIFICATIONS

### 1. DIFFERENTIAL PRESSURE CONTROL VALVES

- 1.1. Contractor shall install the differential pressure control valves where indicated in drawings.
- 1.2. Valve shall be a differential pressure control device. Differential pressure control valve shall accurately control differential pressure over a sub system independent of system fluctuation.
- 1.3. Differential pressure shall be available in 1 range for DN15 to DN50. The differential pressure setting shall be continuously adjustable within the range 5-35 kPaD. Valve shall be externally adjustable while in-line and the system in operation.
- 1.4. The differential pressure control valve shall be capable of controlling the differential pressure within  $\pm 25\%$  of controlled differential pressure or  $\pm 10\%$  of the maximum setting.
- 1.5. Valve shall be able to function as a shut-off valve meanwhile it will not functioning as a differential pressure control valve.
- 1.6. Valve housing shall consist of bronze CuSn5Zn5Pb2 / CuSn5Zn5Pb5-C, rated at no less than 1600 kPa static pressure and  $+130^{\circ}\text{C}$ .
- 1.7. Valve housing shall be permanently marked to show direction of flow.
- 1.8. Differential pressure regulation parts shall consist of brass, copper and stainless steel with EPDM diaphragm and sealing parts.
- 1.9. Optional pressure/temperature test plugs for verifying accuracy of differential pressure performance shall be available for all valve sizes.

## APPLICATION AND SCHEMATIC EXAMPLE



## UPDATES

FlowCon International can accept no responsibility for possible errors in any printed material.  
All rights reserved.