

# FlowCon Grooved End 50-500mm

*Automatic Balancing Valve - Pre-Set Cartridge(s)*

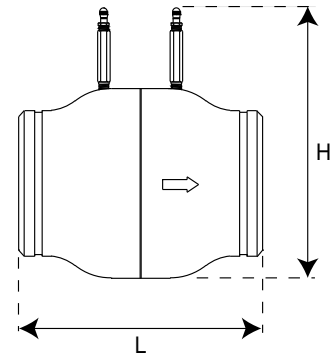


## SPECIFICATIONS

Pressure rating:	2500 kPa / 360 psi
Temperature rating:	+95°C / +203°F
Material:	
- Cartridge:	AISI Type 304 stainless steel AISI Type 17-7 PH stainless steel spring
- Body:	Steel pipe schedule 40 (with cast iron grooved end clamps on DN50-DN80)
Body tappings:	1/4" NPT
Grooved end:	Please consult FlowCon for grooved end standards compatibility.
Flow rate range:	0.88-429.08 l/sec

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

Valve size	Valve size (")	Cartridge size	L	H	Weight (kgs.)	Max no. of cartridges per Grooved End valve
50	2	80	406.4	115.8	6.6	1
65	2 1/2		406.4	115.8	6.6	1
80	3		203.2	115.8	4.0	1
100	4		431.8	218.9	17.7	3
125	5		304.8	218.9	16.1	3
150	6		304.8	218.9	16.1	3
200	8		406.4	323.9	29.3	6
250	10		406.4	323.9	41.4	8
300	12		711.2	406.4	81.8	14
350	14		1016.0	508.0	147.4	20
400	16		1016.0	609.6	204.1	26
450	18		1016.0	609.6	204.1	34
500	20		1016.0	609.6	204.1	34



## MODEL NUMBER SELECTION

Insert body size:

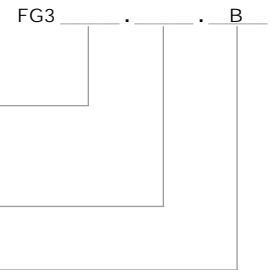
22=50mm, 2" 23=65mm, 2 1/2" 10=80mm, 3" 11=100mm, 4"  
 12=125mm, 5" 13=150mm, 6" 14=200mm, 8" 15=250mm, 10"  
 16=300mm, 12" 17=350mm, 14" 18=400mm, 16" 19=450mm, 18"  
 70=500mm, 20"

Insert a kPaD control range:

STANDARD: 1=10-135 kPaD and 28-135 kPaD 2=22-210 kPaD and 55-210 kPaD 4=40-390 kPaD 8=90-880 kPaD  
 HI-FLOW: 3=20-125 kPaD 5=35-220 kPaD

Insert p/t plug requirement:

B=Pressure/temperature plugs (standard)



Example: FG313.0.B=Grooved End 150mm with p/t plugs and no cartridge.

**Note: Please specify flow requirements as per selection chart when ordering with cartridges.**

## FLOW RATE TABLE PER TYPE OF CARTRIDGE

80mm · 3" · stainless steel cartridge, standard flow							
Pressure range, ΔP:				10-135 kPaD 1-20 psid	22-210 kPaD 2-32 psid	40-390 kPaD 4-57 psid	90-880 kPaD 8-128 psid
Valve size (mm)	Valve size (")	Max no. of cartridges	min. available l/sec l/sec increments	Type 1	Type 2	Type 4	Type 8
				<b>0.126</b>	<b>0.160</b>	<b>0.210</b>	<b>0.316</b>
50	2	1	Max. available l/sec	3.79	4.73	6.31	9.46
65	2 1/2	1		3.79	4.73	6.31	9.46
80	3	1		3.79	4.73	6.31	9.46
100	4	3		11.37	14.19	18.93	28.38
125	5	3		11.37	14.19	18.93	28.38
150	6	3		11.37	14.19	18.93	28.38
200	8	6		22.74	28.38	37.86	56.76
250	10	8		30.32	37.84	50.48	75.68
300	12	14		53.06	66.22	88.34	132.44
350	14	20		75.80	94.60	126.20	189.20
400	16	26		98.54	122.98	164.06	245.96
450	18	34		128.86	160.82	214.54	321.64
500	20	34		128.86	160.82	214.54	321.64

Accuracy: ±5% of controlled flow rate.

80mm · 3" · stainless steel cartridge, high capacity						
Pressure range, ΔP:				28-135 kPaD 4-20 psid	55-210 kPaD 8-32 psid	
Valve size (mm)	Valve size (")	Max no. of cartridges	min. available l/sec l/sec increments	Type 1	Type 2	
				<b>1.26</b>	<b>1.58</b>	
50	2	1	Max. available l/sec	8.2	10.1	
65	2 1/2	1		8.2	10.1	
80	3	1		8.2	10.1	
100	4	3		24.6	30.3	
125	5	3		24.6	30.3	
150	6	3		24.6	30.3	
200	8	6		49.2	60.6	
250	10	8		65.6	80.8	
300	12	14		114.8	141.4	
350	14	20		164.0	202.0	
400	16	26		213.2	262.6	
450	18	34		278.8	343.4	
500	20	34		278.8	343.4	

Accuracy: ±5% of controlled flow rate.

80mm · 3" · stainless steel cartridge, high flow						
Pressure range, ΔP:				20-125 kPaD 3-18 psid	35-220 kPaD 5-32 psid	
Valve size (mm)	Valve size (")	Max no. of cartridges	min. available l/sec l/sec increments	Type 3	Type 5	
				<b>N/A</b>	<b>N/A<sup>1</sup></b>	
50-80	2-3	1	Minimum l/sec	6.31	12.6	
			Maximum l/sec			
100	4	3	Max. available l/sec	18.93	37.83	
125	5	3		18.93	37.83	
150	6	3		18.93	37.83	
200	8	6		37.86	75.60	
250	10	8		50.48	100.80	
300	12	14		88.34	176.40	
350	14	20		126.20	252.20	
400	16	26		164.06	327.60	
450	18	34		214.54	428.40	
500	20	34		214.54	428.40	

Accuracy: ±5% of controlled flow rate.

Note 1: For flow rates in between min. and max. please contact FlowCon.

## GENERAL SPECIFICATIONS

### 1. AUTOMATIC BALANCING VALVES - GROOVED END

- 1.1. Contractor shall install automatic balancing valves where indicated in drawings.
- 1.2. Valve shall consist of a dynamic, flow limiting device.

### 2. VALVE HOUSING

- 2.1. Valve housing shall consist of steel pipe, schedule 40 or greater, rated at no less than 2500 kPa static pressure and +95°C.
- 2.2. Valve housing shall be permanently marked to show direction of flow.
- 2.3. Dual pressure/temperature test plugs for verifying accuracy of flow performance shall be provided for all valve sizes.
- 2.4. Valve housing shall be compatible with grooved end clamps.

### 3. FLOW REGULATOR / AUTOMATIC BALANCING UNIT

- 3.1. Flow regulation unit assembly shall be manufactured of AISI type 304 stainless steel and stainless steel 17-7 spring.
- 3.2. Flow regulation unit shall be available in 4 different kPaD operational range; minimum range shall be capable of being activated by minimum 10 kPaD. Further, the flow regulation unit shall be capable of controlling flow within  $\pm 5\%$  of rated flow.
- 3.3. Identification tags shall be available for all valves; tags shall be indelibly marked with part number and flow rate.

## UPDATES

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