

# FlowCon SH 15-40mm

*Adjustable Dynamic Self Balancing Valve*



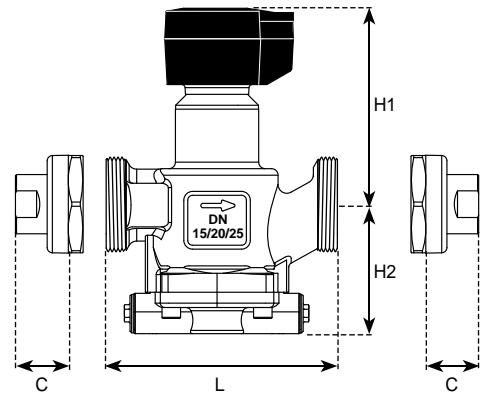
## SPECIFICATIONS

Pressure rating:	2500 kPa / 360 psi
Temperature rating, media:	-20°C to +120°C / -4°F to +248°F
Material:	
- Diaphragm:	Hydrogenated acrylonitrile-butadiene-rubber
- Body:	Forged brass ASTM CuZn40Pb2
- Union end connections:	Brass alloy ISO or NPT
- O-rings:	EPDM
- Internal components:	Polysylphone (SH1) Poly-vinyl-iden-fluoride (SH2)
Body tappings:	1/4" NPT
Maximum close off pressure:	600 kPa / 87 psi
Maximum operational $\Delta P$ :	300 kPaD / 44 psid
Flow rate range:	0.075 l/sec - 1.95 l/sec

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

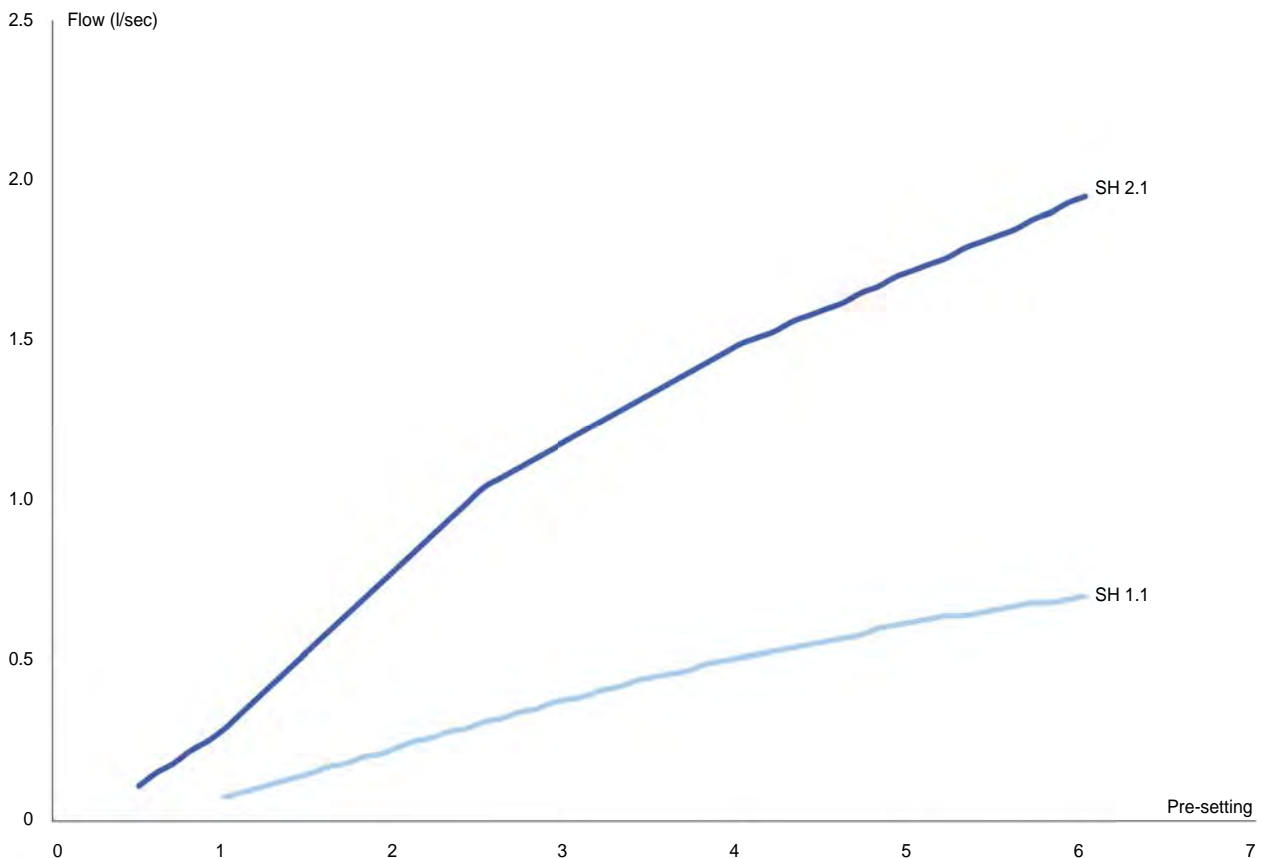
Model no.	Valve size	L	H1	H2	End connections C <sup>1</sup>			Weight (kgs.) w/o end conn.
					ISO Female	ISO Male	Sweat	
SH.1.1	15	108.0	89.9	58.9	22	25	20	1.8
	20				22	25	20	
	25				N/A	39	22	
SH.2.1	25	149.1	140.0	66.0	35	40	34	4.5
	32				33	40	37	
	40				33	42	N/A	

Note 1: Add end connection length to body length.



## FLOW RATE TABLE

Model no.	Valve size		Control range		Minimum setting			Maximum setting			Shut-off leakage
	mm	inch	kPaD	psid	l/sec	l/hr	GPM	l/sec	l/hr	GPM	
SH.1.1	15	1/2"	33-300	4.8-44	0.0750	270	1.20	0.700	2520	11.1	Leakage<0.05% of Kvs Kvs=4.2 m <sup>3</sup> /hr
	20	3/4"									
	25	1"									
SH.2.1	25	1"	33-300	4.8-44	0.110	396	1.70	1.95	7020	30.9	Leakage<0.05% of Kvs Kvs=11.6 m <sup>3</sup> /hr
	32	1 1/4"									
	40	1 1/2"									



## MODEL NUMBER SELECTION

SH . . . 1 . . . . .

Insert body size:  
1=15-25mm 2=25-40mm

Insert dP control range:  
1=standard

Insert p/t plug requirements:  
P=taps plugged (standard) B=pressure/temperature plugs

Insert inlet x outlet union end connections:

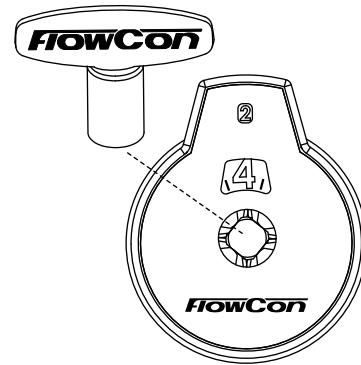
Body size	Female threaded	Male treaded	Sweat
Union end 15-25mm, 1/2"-1"	E=15mm=1/2" F=20mm=3/4"	H=15mm=1/2" I=20mm=3/4" J=25mm=1"	K=15mm L=18mm M=22mm
Union end 25-40mm, 1"-1 1/2"	G=25mm=1" P=32mm=1 1/4" Q=40mm=1 1/2"	J=25mm=1" S=32mm=1 1/4" T=40mm=1 1/2"	N=28mm W=35mm

Insert connections standard:  
I=ISO N=NPT -Leave it blank if no connection required

Example: SH.1.1.P.F.F.I=SH 15-25mm body, taps plugged and with 20mm ISO female threaded end connections.

## FLOW RATE SETTING - VALVE SIZE DN15-DN40

Flow rate						Setting
Valve size: DN15-DN25 · 1/2"-1"			Valve size: DN25-DN40 · 1"-1 1/2"			
33-300 kPaD · 4.8-44 psid			33-300 kPaD · 4.8-44 psid			
SH.1.1			SH.2.1			
l/sec	l/hr	GPM	l/sec	l/hr	GPM	
-	-	-	0.11	396	1.7	0.5
-	-	-	0.15	526	2.3	0.6
-	-	-	0.18	655	2.9	0.7
-	-	-	0.22	785	3.5	0.8
-	-	-	0.25	914	4.0	0.9
0.075	270	1.2	0.29	1044	4.6	1.0
0.090	324	1.4	0.34	1224	5.4	1.1
0.105	378	1.7	0.39	1404	6.2	1.2
0.120	432	1.9	0.44	1584	7.0	1.3
0.135	486	2.1	0.49	1764	7.8	1.4
0.15	540	2.4	0.54	1944	8.6	1.5
0.17	598	2.6	0.59	2124	9.4	1.6
0.18	655	2.9	0.64	2304	10.1	1.7
0.20	713	3.1	0.69	2484	10.9	1.8
0.21	770	3.4	0.74	2664	11.7	1.9
0.23	828	3.6	0.79	2844	12.5	2.0
0.25	886	3.9	0.84	3024	13.3	2.1
0.26	943	4.2	0.89	3204	14.1	2.2
0.28	1001	4.4	0.94	3384	14.9	2.3
0.29	1058	4.7	0.99	3564	15.7	2.4
0.31	1116	4.9	1.04	3744	16.5	2.5
0.32	1166	5.1	1.07	3852	17.0	2.6
0.34	1217	5.4	1.10	3960	17.4	2.7
0.35	1267	5.6	1.13	4068	17.9	2.8
0.37	1318	5.8	1.16	4176	18.4	2.9
0.38	1368	6.0	1.19	4284	18.9	3.0
0.39	1418	6.2	1.22	4392	19.3	3.1
0.41	1469	6.5	1.25	4500	19.8	3.2
0.42	1519	6.7	1.28	4608	20.3	3.3
0.44	1570	6.9	1.31	4716	20.8	3.4
0.45	1620	7.1	1.34	4824	21.2	3.5
0.46	1663	7.3	1.37	4932	21.7	3.6
0.47	1706	7.5	1.40	5040	22.2	3.7
0.49	1750	7.7	1.43	5148	22.7	3.8
0.50	1793	7.9	1.46	5256	23.1	3.9
0.51	1836	8.1	1.49	5364	23.6	4.0
0.52	1872	8.2	1.51	5443	24.0	4.1
0.53	1908	8.4	1.53	5522	24.3	4.2
0.54	1944	8.6	1.56	5602	24.7	4.3
0.55	1980	8.7	1.58	5681	25.0	4.4
0.56	2016	8.9	1.60	5760	25.4	4.5
0.57	2059	9.1	1.62	5846	25.7	4.6
0.58	2102	9.3	1.65	5933	26.1	4.7
0.60	2146	9.4	1.67	6019	26.5	4.8
0.61	2189	9.6	1.70	6106	26.9	4.9
0.62	2232	9.8	1.72	6192	27.3	5.0
0.63	2261	10.0	1.74	6271	27.6	5.1
0.64	2290	10.1	1.76	6350	28.0	5.2
0.64	2318	10.2	1.79	6430	28.3	5.3
0.65	2347	10.3	1.81	6509	28.7	5.4
0.66	2376	10.5	1.83	6588	29.0	5.5
0.67	2405	10.6	1.85	6674	29.4	5.6
0.68	2434	10.7	1.88	6761	29.8	5.7
0.68	2462	10.8	1.90	6847	30.1	5.8
0.69	2491	11.0	1.93	6934	30.5	5.9
0.70	2520	11.1	1.95	7020	30.9	6.0



Use the special key (FlowCon part no. ACC0001) for micrometer setting.

A micrometer setting at 2.4 as illustrated above corresponds to a flow rate of:

0.29 l/sec (for valve size DN15/20/25)  
0.99 l/sec (for valve size DN25/32/40)

Accuracy: Greatest of either  $\pm 5\%$  of controlled flow rate or  $\pm 2\%$  of maximum flow rate.

## ACCESSORIES

- Adjustment key, ACC0001
- Pressure/temperature plugs 1/4", 2 x ACC00101

## GENERAL SPECIFICATIONS

### 1. DYNAMIC BALANCING VALVES - FLOWCON SH

- 1.1. Contractor shall install dynamic balancing valves where indicated in drawings.
- 1.2. Valve shall consist of dynamic, adjustable flow limiting device.
- 1.3. Flow limiting device shall be externally adjustable with the valve in-line and the system in operation.

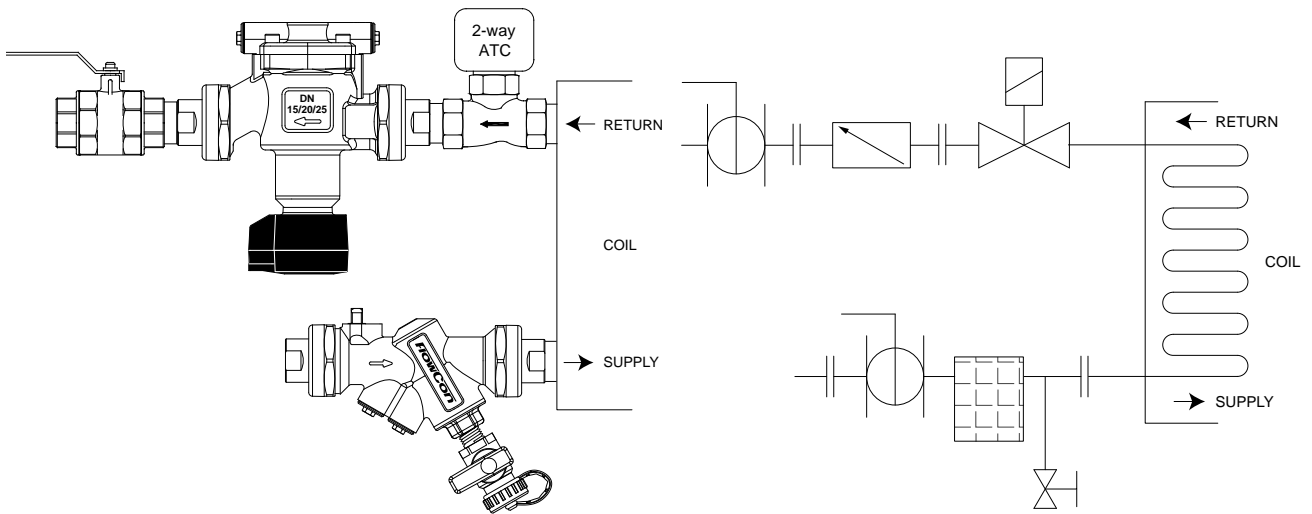
### 2. VALVE HOUSING

- 2.1. Valve housing shall consist of forged brass ASTM CuZn40Pb2, rated at no less than 2500 kPa static pressure and +120°C.
- 2.2. Valve housing shall be permanently marked to show direction of flow.
- 2.3. Valve housing shall be double union construction with a range of pipe connections available for the appropriate pipe size.
- 2.5. Optional dual pressure/temperature test plugs for verifying accuracy of flow performance shall be available for all valve sizes.

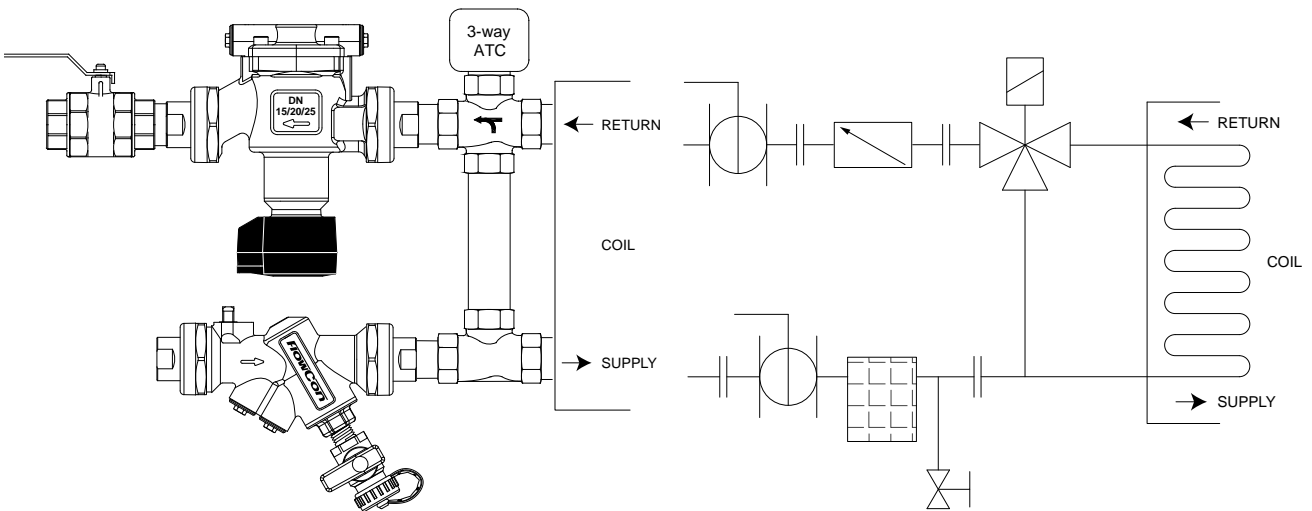
### 3. FLOW REGULATOR / AUTOMATIC BALANCING UNIT

- 3.1. Flow regulation unit shall be manufactured of polysylphone / poly-vinyl-iden-fluoride (depending on size) and hydrogenated acrylonitrile-butadiene-rubber.
- 3.2. Flow regulation unit shall be accessible for maintenance.
- 3.3. Housing shall be configured for external flow regulation unit adjustment to 56 different flow rates and shall be capable of controlling flow within greatest of either  $\pm 5\%$  of rated flow or  $\pm 2\%$  of maximum rated flow.

## 2-WAY APPLICATION AND SCHEMATIC EXAMPLE



## 3-WAY APPLICATION AND SCHEMATIC EXAMPLE



## UPDATES

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