

Product Description:

SmartLife-SV Series calibrated balancing valves offer a reliable, simple and cost effective way to measure and balance all flow rates. Full throttling range is achieved by 4, 8, 12, 16, 20 or 22 full turns of the handwheel, enabling a precise setting. This high degree of accurate adjustment means that the system can be balanced precisely.

The actual pressure drops in heating and cooling systems are difficult to establish by calculation because water flows vary from design flows. They can be corrected easily by regulating the desired water flow with SmartLife-SV series globe style balancing valves. By measuring the pressure drop across measuring ports at a particular handwheel setting, the water flow for the valve size can be read easily from the appropriate pressure drop graph or flow balancing wheel. If the flow does not conform with that specified, adjust the valve and repeat the measuring procedure until the correct flow has been obtained.


Material Specifications:

Body: Cast copper

Trim: (Bonnet, Stem and Restriction Cone)-Brass

Union:

Brass with EPDM o-ring

Stem seals:

EPDM

Probe seals:

EPDM

Dimensions:
Coil Kit Dimensions in Inches

Dimension	¾"	1"	1¼"	1½"	2"
L (F-NPT)	3.31	3.84	4.33	4.72	5.91
H	4.57	4.69	5.35	5.43	5.83

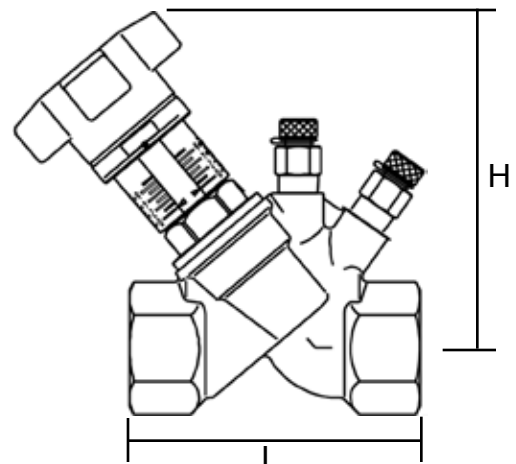
Installation Notes

When installing the hydrocontrols, it is to be observed that the direction of flow conforms with the arrow on the valve body and that the valve is installed with a minimum of 3 D (3 x nominal pipe diameter) of straight pipe at the valve inlet and of 2 D (2 x nominal pipe diameter) of straight pipe at the valve outlet.


Valve Selection Guide:

NPT Connection	DN	Size	Minimum Flow	Maximum Flow
			[GPM]	
SMARTLife-SV-20	20	¾"	1	7
SMARTLife-SV-25	25	1"	3.8	12
SMARTLife-SV-32	32	1¼"	7	25
SMARTLife-SV-40	40	1½"	10	35
SMARTLife-SV-50	50	2"	20	50

$$GPM = \frac{\sqrt{PSID}}{Cv}$$



Cv Values for Various Handwheel Settings

Presetting or Handwheel Turns	3/4"	1"	1 1/4"	1 1/2"	2"
0.5	0.58	1.08	1.20	3.09	3.13
1.0	0.84	1.77	2.40	4.80	5.88
1.5	1.08	2.42	3.37	6.67	8.31
2.0	1.33	3.00	4.67	8.53	10.66
2.5	1.57	3.59	5.91	10.12	13.55
3.0	1.86	4.29	6.98	11.65	16.55
3.5	2.37	5.14	7.97	13.02	19.01
4.0	3.00	6.00	8.88	14.37	21.51
4.5	3.63	6.92	10.06	16.05	24.07
5.0	4.24	7.81	11.27	17.74	26.66
5.5	4.97	8.51	12.44	20.17	28.49
6.0	5.69	9.20	13.60	22.62	30.04
6.5	6.33	9.78	14.88	24.36	32.27
7.0	6.64	10.34	16.17	26.10	34.20
7.5	-	-	17.47	27.47	36.16
8.0	-	-	18.73	28.86	38.06
8.5	-	-	19.97	29.59	40.35
9.0	-	-	21.14	30.34	42.65
9.5	-	-	22.01	31.16	44.13
10.0	-	-	22.62	31.99	45.09

Product Specification

We double regulating and commissioning valves "SMARTLife-SV Series" are installed in the pipework of central hot water heating and cooling systems and serve to achieve a hydronic balance between the various circuits of the system.

The balance is achieved by a presetting with memory position. The calculated flow rate or pressure loss for each individual pipe can be preset centrally and regulated precisely. The required values of presetting can be obtained from the flow charts. All intermediate values are infinitely adjustable. The selected presetting can be read off two scales. The supplier double regulating and commissioning valves have two threaded ports which are equipped with the pressure test points for measuring the differential pressure across an integrated venturi.

Pressure drop [PSI] measured at the valve for select flow rates [GPM]

Flow rate - GPM	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
0.25						
0.33						
0.5						
0.75						
1						
1.25						
1.5						
1.75	0.13					
2	0.16					
2.5	0.26					
3	0.37					
4	0.66	0.16				
5	1.03	0.25				
6	1.48	0.36				
7	2.02	0.49	0.14			
8	2.63	0.64	0.19			
9	3.33	0.81	0.24			
10	4.11	1.00	0.29	0.14		
12	5.92	1.45	0.42	0.20		
15	9.26	2.26	0.66	0.31		
20		4.02	1.18	0.54		
25		6.28	1.84	0.85	0.21	
30		9.04	2.65	1.22	0.30	
35		12.31	3.60	1.66	0.41	
40			4.70	2.17	0.54	
45			5.95	2.75	0.68	
50			7.35	3.39	0.84	

Specifications:
 Maximum working temperature: 300 °F
 Maximum working pressure: 360 psi

Bonnet, stem and disc made of bronze/dezincification resistant brass.
 Disc with PTFE seal.
 Double EPDM O-ring stem seal.