

# STATIC BALANCE VALVE / THREADED

## STATIC BALANCE VALVE

The balance valve is designed for heat transfer devices and units. By preventing a flow above the flow rate for heat transfer, the valve, which makes the system much more reliable, balanced and healthy operation, allows the temperatures to reach comfort conditions.

If the heat transfer device or units accepts the flow above the designed flow at the heating and cooling systems, it can increase the cost as a result of unstable operation. In order to prevent all this, you can choose balance valve which will provide the cheapest temperature for all units of heating and cooling systems.



### Specification

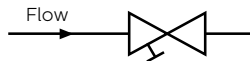
- High sealing
- Compact layout
- Environmentally friendly
- In accordance with EN-12266-1
- Flanges to EN1092-2 Standards
- These valves are equal percentage performance y type globe valves with adjustable throttle disc.
- The double regulating feature allows the valve opening to be adjusted with a 3 mm Allen outline.
- Valve operation is performed by position indicator or by hand wheel with recordable setting position.

### Application Areas

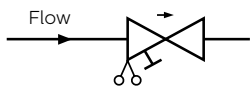
- Industrial cold and hot water plants
- Heating systems
- Industrial technologies
- Cooling and Ventilation installations

### Installation

Valve to a pipeline of the same nominal size. Where possible, it must be installed in the current direction



The valve must be mounted on a pipe of the same nominal size. The minimum requirements of the installation must also be consider.



### Installation Layout

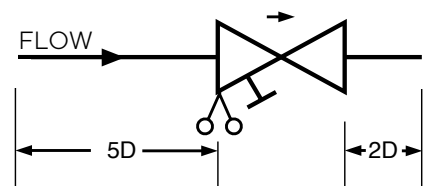
Note: To ensure flow measurement accuracy, the pipelines on the inlet and outlet side must be straight and have a diameter of 5 diameters at the inlet and 2 diameters at the outlet.

If it is located at the outlet of pipe, the pipe length between the pump outlet and the valve inlet must be at least 10 diameters.

Temp. °C	-10 ile 100	110	120
Pressure (bar)	25	23.4	21.8

Temp. °C	-10 ile 100
Pressure (bar)	16

Body	Bronze
Cover and Disc	Brass
Disc Surface	PTFE
Stem	Brass
Gasket	EPDM
Max. Pressure	25 Bar
Max. Temp.	120°



Temp. °C	-10 ile 100	120
Pressure (bar)	16	13.5

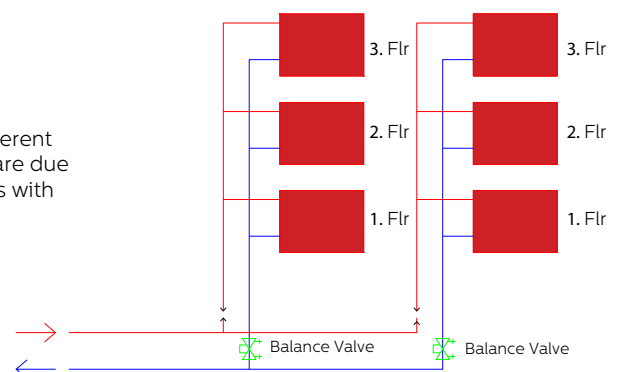
### Threaded

The pressure values are determined by the interpolation method.

### Balanced System

In a system where there is no balance valve, the various resistances between different branch lines cause the flow rate to be distributed incorrectly. These differences are due to the use of different lengths and layout, or, most simply the use of column lines with different capacity requirements.

### Column Line Static Balancing Valve Application Example >>



### End Connections

It is suitable for threaded connection in steel pipes or copper pipes according to BS EN 1057.

**Note:** When using the compression adapters, the maximum pressure according to BS EN 1254/2 should not exceed 16 bar. The compression connection should be manually tightened at the beginning and then tightened along the following recommendation. It can be applied in plastic, glass, ceramic tanks and pipes.

15 mm	22 mm	28 mm	35 mm	42 mm	54 mm
1 turn	1 turn	1 turn	¾ turn	¾ turn	¾ turn

### Flow Direction

There is an arrow on the valve body to indicate the flow direction.

### Pressure Test Valves

#### Connection

The threaded connection materials must not be allowed to liquidated surface into the hole. The tightening torque of the clamping nut for the compression connections to the copper pipe should not be large enough to cause the pipe to be crushed.

#### Pipe Fitting

When the copper pipe is cut by roller cutters, burns must be removed and brought to the size of pipe before fitting the device. If these procedures cannot be met, flow measurement may fail.

#### Valve Adjustment Indicator

Valves fully open or closed position comes with 4 full turns of the handwheel. The microset handwheel shows the valve setting with the numbers shown on the outside and inside windows. The digit in the outer window shows a turn of ten. Example: 3.15 shows a return valve setting.



#### Adjustment

The flow adjustment is done by adjusting the valve until the required flow is achieved. The microset handwheel will show the final setting of the valve.

The flow regulation is performed by adjusting the valve setting until the required flow rate derived from the measured signal along the pressure test valves is obtained. The microset handwheel will display the last valve setting. Flow diagrams are available on request for all valve sizes.

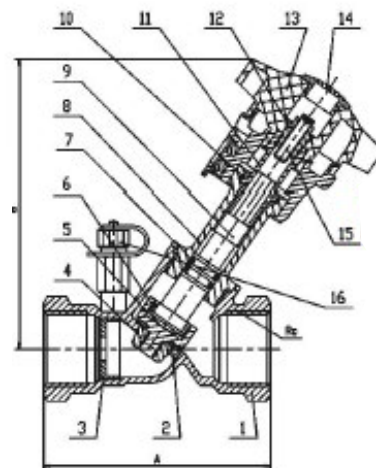
#### Protection Setting

Valve adjustment to the desired flow rate can be maintained as follows.

1. Remove the hand wheel cover.
  2. Use the Allen wrench to tighten the center screw until it stops.
  3. Reinstall the handwheel cover.
- The set and closed set value of the valve can be changed again.

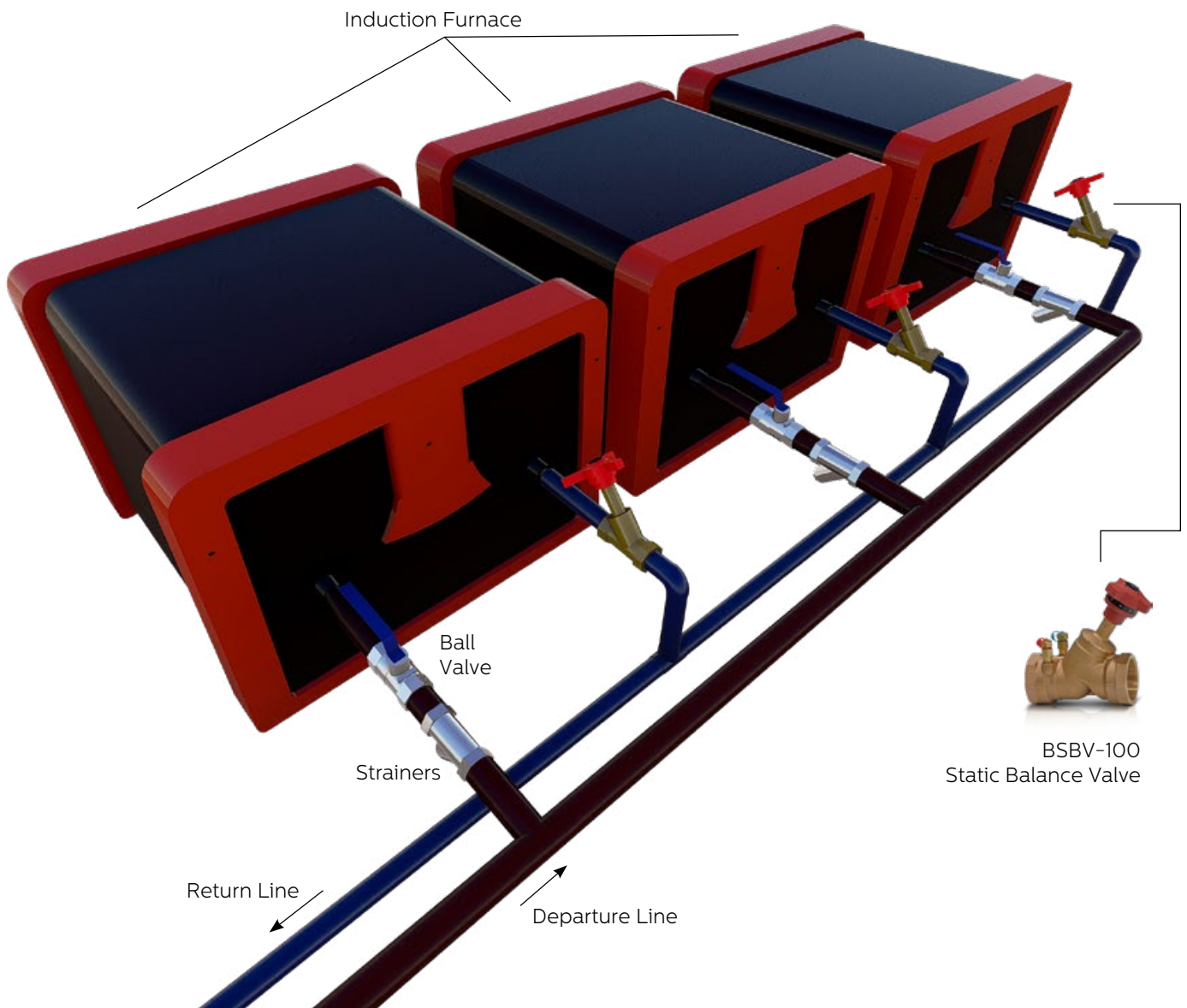
#### Material List

No	Part List	Material	Dim.
1	Body	Bronze CC491K	ALL
2	Disc Surface	P.T.F.E	1" - 2"
2	Disc Surface	DZR Brass CW602N	½" - ¾"
3	Orifice Plate	DZR Brass CW602N	ALL
4	Gasket	DZR Brass CW602N	ALL
5	Disc	DZR Brass CW602N	ALL
6	Disc Holder Ring	DZR Brass CW602N	ALL
7	O-Ring	N.B.R	ALL
8	Cover	DZR Brass CW602N	½" - 1 ¾"
8	Cover	Bronze CC491K	1 ½" - 2"
9	Stem	DZR Brass CW602N	ALL
10	Retaining Ring	Stainless Steel 304	ALL
11	Handle	Brass CW617N	ALL
12	Screw	Brass CW617N	ALL
13	Handwheel	PA	ALL
14	Cover	PA	ALL
15	Screw	Stainless Steel 304	ALL
v	Test Point	DZR Brass CW602N	ALL



#### Dimensions

DN	INCH	A	B	Flow(kv)	Kvs
15	½"	87	105	1.72	2.2
20	¾"	96	106	2.97	4.6
25	1"	100	127	4.75	8.5
32	1¼"	114	128	10.25	16.7
40	1½"	125	143	16.83	26.1
50	2"	146	144	27.26	43.2



**Note:** It prevents the flow above the required cycle for heat transfer and ensures a more reliable, balanced and healthy operation of the system. It can be adjusted manually by the manual adjustable throttle disc on it.

It is useful to put it on the return line for efficiency.

## Flow Measurement Charts

**Diameter:** 15mm

No	Adj. Indicator-Bar	Flow-m <sup>3</sup> /h	Pressure Lost-Bar
1	4.0	1.91	1.232
2		1.72	0.995
3		1.56	0.826
4	3.5	1.72	1.207
5		1.57	0.999
6		1.42	0.837
7	3.0	1.31	1.214
8		1.18	0.994
9		1.08	0.837
10	2.5	0.88	1.212
11		0.80	0.985
12		0.71	0.786
13	2.0	0.67	1.214
14		0.60	0.980
15		0.56	0.845
16	1.5	0.50	1.198
17		0.45	0.995
18		0.41	0.823
19	1.0	0.32	1.206
20		0.28	0.970
21		0.26	0.811
22	0.5	0.19	1.227
23		0.17	0.103
24		0.15	0.802

## Flow Measurement Charts

**Diameter: 20mm**

No	Adj. Indicator-Bar	Flow-m <sup>3</sup> /h	Pressure Lost-Bar
1	4.0	3.28	1.214
2		2.94	0.98
3		2.67	0.810
4	3.5	2.98	1.206
5		2.72	0.994
6		2.43	0.792
7	3.0	2.31	1.181
8		2.17	1.025
9		1.92	0.816
10	2.5	1.52	1.119
11		1.43	1.042
12		1.24	0.781
13	2.0	0.85	1.173
14		0.77	0.980
15		0.69	0.080
16	1.5	0.45	1.221
17		0.41	0.996
18		0.37	0.791
19	1.0	0.29	1.177
20		0.26	1.030
21		0.23	0.772
22	0.5	0.17	1.203
23		0.15	0.975
24		0.13	0.830

## Flow Measurement Charts

**Diameter: 25mm**

No	Adj. Indicator-Bar	Flow-m <sup>3</sup> /h	Pressure Lost-Bar
1	4.0	5.25	1.223
2		4.70	0.976
3		4.31	0.825
4	3.5	4.41	1.222
5		3.95	1.005
6		3.49	0.792
7	3.0	3.06	1.206
8		2.80	1.025
9		2.51	0.816
10	2.5	2.11	1.118
11		1.98	1.027
12		1.77	0.835
13	2.0	1.75	1.229
14		1.60	1.016
15		1.43	0.805
16	1.5	1.32	1.205
17		1.21	1.023
18		1.05	0.778
19	1.0	0.87	1.238
20		0.78	1.004
21		0.72	0.831
22	0.5	0.45	1.203
23		0.40	1.032
24		0.36	0.804

## Flow Measurement Charts

**Diameter:** 32mm

No	Adj. Indicator-Bar	Flow-m <sup>3</sup> /h	Pressure Lost-Bar
1	4.0	11.15	1.193
2		10.28	1.003
3		9.15	0.793
4	3.5	8.56	0.798
5		9.60	0.997
6		10.6	1.198
7	3.0	9.43	1.204
8		8.65	1.021
9		7.74	0.818
10	2.5	7.10	1.201
11		6.50	1.023
12		5.76	0.799
13	2.0	4.06	1.216
14		3.70	1.002
15		3.29	0.813
16	1.5	2.24	1.193
17		2.08	1.026
18		1.86	0.837
19	1.0	1.54	1.222
20		1.42	1.028
21		1.23	0.785
22	0.5	0.72	1.218
23		0.65	1.073
24		0.57	0.774

## Flow Measurement Charts

**Diameter:** 40mm

No	Adj. Indicator-Bar	Flow-m <sup>3</sup> /h	Pressure Lost-Bar
1	4.0	15.10	0.800
2		16.91	1.001
3		18.41	1.214
4	3.5	16.87	1.201
5		15.54	0.986
6		13.65	0.790
7	3.0	14.61	1.204
8		13.28	0.999
9		11.94	0.799
10	2.5	10.08	1.198
11		9.29	1.023
12		8.22	0.812
13	2.0	5.53	1.201
14		5.07	1.007
15		4.49	0.803
16	1.5	3.10	1.235
17		2.70	1.001
18		2.53	0.818
19	1.0	2.16	1.228
20		1.96	1.003
21		1.75	0.803
22	0.5	1.02	1.203
23		0.93	1.003
24		0.83	0.812



## Flow Measurement Charts

**Diameter : 50mm**

No	Adj. Indicator-Bar	Flow-m <sup>3</sup> /h	Pressure Lost-Bar
1	4.0	29.83	1.203
2		27.24	0.993
3		24.35	0.798
4	3.5	26.49	1.172
5		24.18	0.971
6		21.72	0.787
7	3.0	22.83	1.206
8		20.58	0.989
9		18.33	0.796
10	2.5	16.36	1.210
11		14.86	0.994
12		13.32	0.800
13	2.0	9.07	1.207
14		8.23	1.0018
15		7.27	0.787
16	1.5	4.88	1.222
17		4.43	1.023
18		3.97	0.815
19	1.0	3.32	1.200
20		3.06	1.021
21		2.69	0.788
22	0.5	1.87	1.204
23		1.73	1.037
24		1.63	0.791