

WattFlow BP/WattFlow OL Balancing Valves



Advantages

- Accurate flow balancing with the multi-turn inclined seat valve
- Continuous indication of the actual flow rate
- No need for measuring computers or charts
- MemoStop function for pre-setting and locking of the set volume flow
- Works in any position
- No correction charts required for glycol additives
- Wide range of accessories

 **WATTS**[®]
INDUSTRIES
Technology by nature



Applications of WattFlow BP

Regulation of heating, ventilation and air-conditioning systems. Balancing of drinking water circulation pipes as well as solar and heat pump systems. Excess or insufficient feed to consumer circuits in HVAC systems is not seldom the cause of malfunctions. WattFlow balancing valves take care of hydraulic balancing in no time at all; they are also easy to operate and require no special training of personnel. WattFlow balancing valves can therefore be used to regulate HVAC systems quickly and with maximum precision without the need for expensive measuring computers or special tools. The VOB/C – DIN 18380 standard requires the hydraulic balancing of pipelines, as does DIN EN 12828. The pipe systems must be designed in such a way that heating water is fed to all parts of the heating system with the necessary heating energy. The following factors (among others) must be taken into account: temperature, operating pressure, pressure loss and noise levels (due to flow speed, for example). Optimum energy distribution through pipe systems that are correctly hydraulically balanced is also a necessary and expedient measure in the context of the German energy efficiency regulations (EnEV). **Hydraulically correctly balanced systems can be regulated with greater precision and therefore save both energy and hard cash!**

Design/Mode of operation

All WattFlow BP balancing valves are equipped as standard with an integrated flowmeter which continuously measures the current flow volume and indicates it on a scale protruding from the side of the housing. The scale is graduated in l/min and can be rotated about its own axis, thereby allowing optimum positioning for

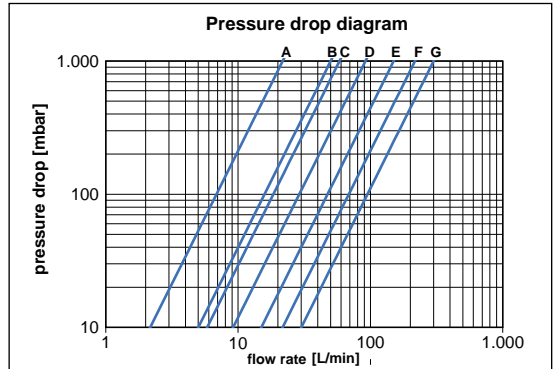
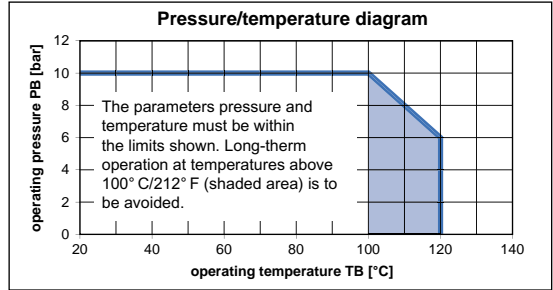
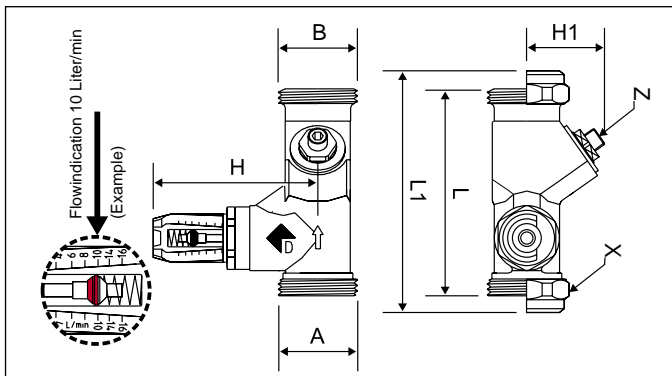
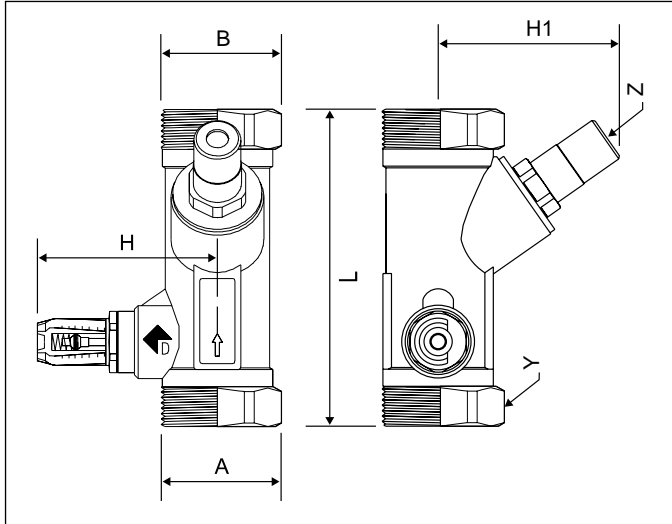
convenient and accurate read-off of values. The display is located away from the flow measurement zone to protect it against dirt and debris. In other words, the medium does not flow directly past the sight glass. The inclined seat valve with regulating cone (also integrated) regulates the flow volume. The selected valve characteristic ensures that the valve stroke is spread across several rotations of the spindle. This guarantees maximum setting accuracy. The flow-friendly valve design ensures minimum noise emissions. The WattFlow balancing valves are not affected by the flow profile at the inlet, and a straight inlet route of the same length as the housing is therefore generally adequate. The valves can be mounted in any desired orientation, and the correct direction of flow is indicated by an arrow on the housing.

Tender text for WattFlow BP

Balancing valve for rapid and exact balancing of consumer circuits in HVAC systems and drinking water circulation pipelines. Integrated flow display with rotatable indicator scale marked in l/min. Actual flow volume can be read off directly without the need for measuring computers or charts. The sight glass of the flow indicator is not installed directly in the medium flow and is therefore protected against soiling. Measuring accuracy ± 10% of measuring value. The flow volume is adjusted via several spindle rotations of an angle seat valve. Installation orientation as desired in the flow or return lines. Nominal width DN ..., housing made of brass. Sight glass made of impact- and temperature-resistant plastic. Spring made of stainless steel. Gaskets made of EPDM. Max. operating temperature TB 100° C at max. operating pressure PB 10 bar.

Product range

| Articel-no. | Type | Dimension | Connection | Flow rate | Kvs | MemoStop |
|-------------|------------|-----------|---------------|----------------|------|----------|
| 3498300 | SRV15-AG | DN 15 | 1" AG | 0,5 – 7 l/min | 1,5 | without |
| 3498305 | SRV15-AG | DN 15 | 1" AG | 2 – 16 l/min | 3,0 | without |
| 3498310 | SRV20-AG | DN 20 | 1" AG | 4 – 36 l/min | 3,5 | without |
| 3498315 | SRV15-KVSR | DN 15 | KVSR 15 mm | 0,5 – 7 l/min | 1,5 | without |
| 3498320 | SRV15-KVSR | DN 15 | KVSR 15 mm | 2 – 16 l/min | 3,0 | without |
| 3498325 | SRV15-KVSR | DN 20 | KVSR 15 mm | 4 – 36 l/min | 3,5 | without |
| 3498330 | SRV15-KVSR | DN 15 | KVSR 22 mm | 0,5 – 7 l/min | 1,5 | without |
| 3498335 | SRV15-KVSR | DN 15 | KVSR 22 mm | 2 – 16 l/min | 3,0 | without |
| 3498340 | SRV20-KVSR | DN 20 | KVSR 22 mm | 4 – 36 l/min | 3,5 | without |
| 3498285 | SRV15-KVSR | DN 15 | KVSR 15/22 mm | 0,5 – 7 l/min | 1,5 | without |
| 3498290 | SRV15-KVSR | DN 15 | KVSR 15/22 mm | 2 – 16 l/min | 3,0 | without |
| 3498295 | SRV15-KVSR | DN 20 | KVSR 15/22 mm | 4 – 36 l/min | 3,5 | without |
| 3498355 | SRV25-IG | DN 25 | 1" IG | 5 – 50 l/min | 5,5 | with |
| 3498360 | SRV32-IG | DN 32 | 1 ¼" IG | 10 – 80 l/min | 9,0 | with |
| 3498365 | SRV40-IG | DN 40 | 1 ½" IG | 15 – 120 l/min | 13,0 | with |
| 3498370 | SRV50-IG | DN 50 | 2" IG | 20 – 200 l/min | 18,0 | with |
| 3498345 | SRV25-AG | DN 25 | 1 ¼" AG | 5 – 50 l/min | 5,5 | with |
| 3498350 | SRV32-AG | DN 32 | 1 ½" AG | 10 – 80 l/min | 9,0 | with |
| on request | SRV40-AG | DN 40 | 2" AG | 15 – 120 l/min | 13,0 | with |
| on request | SRV50-AG | DN 50 | 2 ¼" AG | 20 – 200 l/min | 18,0 | with |

Dimensions


| Pressure drop curve | Flow rate | Kvs |
|---------------------|----------------|------|
| A | 0,5 – 7 l/min | 1,3 |
| B | 2 – 16 l/min | 3,0 |
| C | 4 – 36 l/min | 3,5 |
| D | 5 – 50 l/min | 5,5 |
| E | 10 – 80 l/min | 9,0 |
| F | 15 – 120 l/min | 13,0 |
| G | 20 – 200 l/min | 18,0 |

| Article no. | Type | Dimension | A | B | L | L1 | H | H1 | X | Y | Z |
|-------------|------------|-----------|-----------|-----|-----|-----|----|----|-------|-------|------|
| 3498300 | SRV15-AG | DN 15 | 1" AG | = A | 86 | --- | 68 | 37 | --- | --- | SW 4 |
| 3498305 | SRV15-AG | DN 15 | 1" AG | = A | 86 | --- | 68 | 37 | --- | --- | SW 4 |
| 3498310 | SRV20-AG | DN 20 | 1" AG | = A | 86 | --- | 68 | 37 | --- | --- | SW 4 |
| 3498315 | SRV15-KVSR | DN 15 | 15/22 mm | = A | 86 | 106 | 68 | 37 | SW 32 | --- | SW 4 |
| 3498320 | SRV15-KVSR | DN 15 | 15/22 mm | = A | 86 | 106 | 68 | 37 | SW 32 | --- | SW 4 |
| 3498325 | SRV15-KVSR | DN 20 | 15/22 mm | = A | 86 | 106 | 68 | 37 | SW 32 | --- | SW 4 |
| 3498330 | SRV15-KVSR | DN 15 | 22 mm | = A | 86 | 106 | 68 | 37 | SW 32 | --- | SW 4 |
| 3498335 | SRV15-KVSR | DN 15 | 22 mm | = A | 86 | 106 | 68 | 37 | SW 32 | --- | SW 4 |
| 3498340 | SRV20-KVSR | DN 20 | 22 mm | = A | 86 | 106 | 68 | 37 | SW 32 | --- | SW 4 |
| 3498285 | SRV15-KVSR | DN 15 | 15/22 mm | = A | 86 | 106 | 68 | 37 | SW 32 | --- | SW 4 |
| 3498290 | SRV15-KVSR | DN 15 | 15/22 mm | = A | 86 | 106 | 68 | 37 | SW 32 | --- | SW 4 |
| 3498295 | SRV15-KVSR | DN 20 | 15/22 mm | = A | 86 | 106 | 68 | 37 | SW 32 | --- | SW 4 |
| 3498355 | SRV25-IG | DN 25 | 1" IG | = A | 120 | --- | 73 | 69 | --- | SW 43 | SW 6 |
| 3498360 | SRV32-IG | DN 32 | 1 1/4" IG | = A | 135 | --- | 77 | 77 | --- | SW 49 | SW 6 |
| 3498365 | SRV40-IG | DN 40 | 1 1/2" IG | = A | 153 | --- | 80 | 78 | --- | SW 61 | SW 6 |
| 3498370 | SRV50-IG | DN 50 | 2" IG | = A | 176 | --- | 85 | 87 | --- | SW 70 | SW 6 |
| 3498345 | SRV25-AG | DN 25 | 1 1/4" AG | = A | 120 | --- | 73 | 69 | --- | --- | SW 6 |
| 3498350 | SRV32-AG | DN 32 | 1 1/2" AG | = A | 135 | --- | 77 | 77 | --- | --- | SW 6 |
| on request | SRV40-AG | DN 40 | 2" AG | = A | 153 | --- | 80 | 78 | --- | --- | SW 6 |
| on request | SRV50-AG | DN 50 | 2 1/4" AG | = A | 176 | --- | 85 | 87 | --- | --- | SW 6 |

AG = male thread, IG = female thread, KVSR = compression fitting

| Technical Specifications | |
|-----------------------------|-------------------------|
| Max. operating temperature: | 100°C ¹⁾ |
| Min. operating temperature: | -20°C ²⁾ |
| Max. operating pressure: | 10 bar ¹⁾ |
| Accuracy of flowmeter: | ±10% of measuring value |

- 1) Pay attention to the pressure/temperature diagram
- 2) When using appropriate antifreezing compounds

| Material Specifications | |
|-------------------------|-------------------------------------------|
| Housing: | brass |
| Flowmeter: | impact- and temperature resistant plastic |
| Spring: | stainless steel |
| Gaskets: | EPDM |



Applications of WattFlow OL

Regulation of consumer circuits in heating, ventilation and air-conditioning systems. Balancing of drinking water circulation pipes.

Excess or insufficient feed to consumer circuits in HVAC systems is not seldom the cause of malfunctions. WattFlow OL balancing valves were developed to provide planners and operators with an extremely simple, cost-efficient and effective means of regulating consumer circuits in heating and cooling systems. WattFlow OL balancing valves can be used to regulate HVAC systems rapidly and with maximum precision without the need for training of personnel.

Hydraulically correctly balanced systems can be regulated with greater precision and therefore save both energy and hard cash!

Design/Mode of operation

All WattFlow OL balancing valves are equipped with an integrated flow-meter which continuously displays the current flow volume in litres/min. The advantages of the flow indicator mounted outside the housing axis are as follows:

- As the flow indicator is not positioned directly in the medium flow, the display is protected against dirt and stays clearly visible for long periods.
- The scale element graduated in litres/min can be rotated about its own axis, thereby allowing convenient read-off of the indicated volume flow in any mounting orientation.
- WattFlow OL balancing valves and their flow indicators do not require any special inlet route. The length of the straight pipe may also be lower than the recommended straight pipe length (equal to the housing length).
- The valves can be mounted in any desired orientation; the correct direction of flow is indicated by an arrow on the housing.

Tender text for WattFlow OL

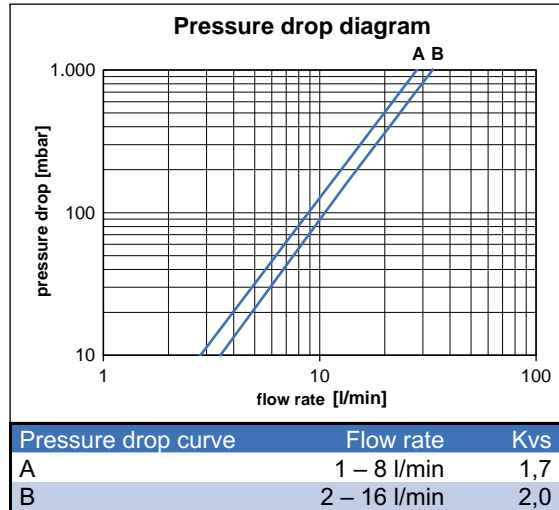
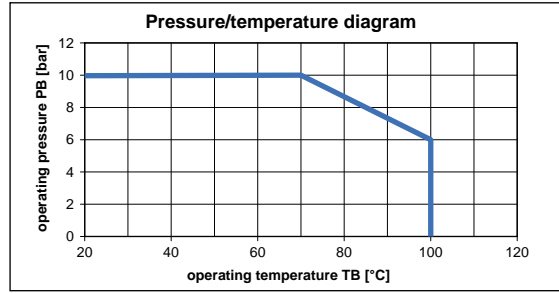
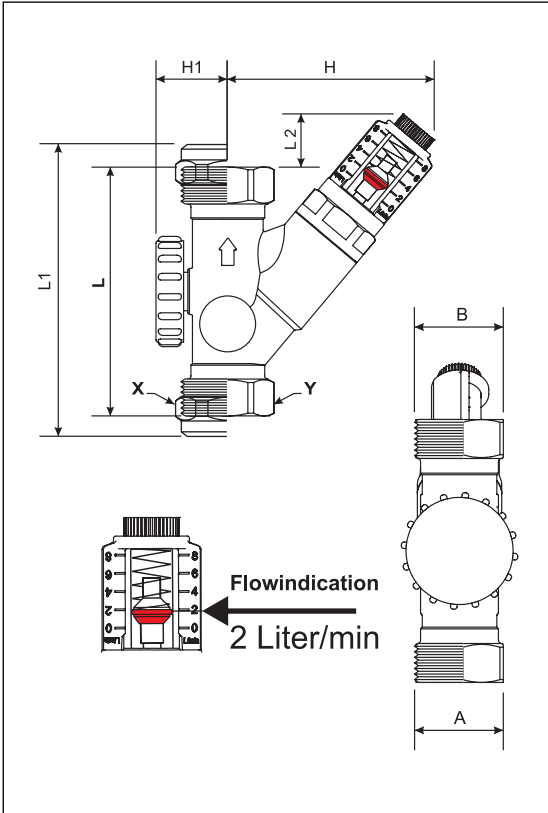
WattFlow OL balancing valve with inclined seat valve for rapid and exact hydraulic balancing of consumer circuits in HVAC systems. Balancing valve with integrated flow indicator which is not installed directly in the medium flow and is therefore protected against soiling. Flow indicator with rotatable indicator scale. Nominal width DN ..., max. operating temperature 100°C at an operating pressure of 6 bar or 70°C at 10 bar. Housing made of brass. Flow indicator made of impact- and heat-resistant plastic. Spring made of stainless steel. Gaskets made of EPDM.

Product range

| Articel no. | Type | Dimension | Connection | Flow Rate | Kvs |
|-------------|--------------|-----------|----------------|--------------|-----|
| 3498000 | SRVOL15-AG | DN 15 | ¾" AG* | 1 – 8 l/min | 1,7 |
| on request | SRVOL15-IGAG | DN 15 | ½" IG x ¾" AG* | 1 – 8 l/min | 1,7 |
| 3498010 | SRVOL15-IG | DN 15 | ½" IG | 1 – 8 l/min | 1,7 |
| 3498011 | SRVOL20-KVSR | DN 20 | 15 mm | 1 – 8 l/min | 1,7 |
| 3498012 | SRVOL20-KVSR | DN 20 | 22 mm | 1 – 8 l/min | 1,7 |
| 3498013 | SRVOL20-KVSR | DN 20 | 15/22 mm | 1 – 8 l/min | 1,7 |
| 3498015 | SRVOL20-AG | DN 20 | 1" AG | 2 – 16 l/min | 2,0 |
| 3498020 | SRVOL20-IG | DN 20 | ¾" IG | 2 – 16 l/min | 2,0 |
| 3498025 | SRVOL20-KVSR | DN 20 | 15 mm | 2 – 16 l/min | 2,0 |
| 3498030 | SRVOL20-KVSR | DN 20 | 22 mm | 2 – 16 l/min | 2,0 |
| 3498035 | SRVOL20-KVSR | DN 20 | 15/22 mm | 2 – 16 l/min | 2,0 |

* eurocone, AG = male thread, IG = female thread, KVSR = compression fitting

Dimensions



| Articel no. | Type | Dimension | A | B | L | L1 | L2 | H | H1 | X | Y |
|-------------|--------------|-----------|----------|-----------|----|-----|----|----|----|-------|-------|
| 3498000 | SRVOL15-AG | DN 15 | 3/4" AG* | = A | 81 | --- | 17 | 67 | 23 | --- | --- |
| on request | SRVOL15-IGAG | DN 15 | 1/2" IG | 3/4" AG** | 81 | --- | 17 | 67 | 23 | --- | SW 27 |
| 3498010 | SRVOL15-IG | DN 15 | 1/2" IG | = A | 81 | --- | 17 | 67 | 23 | --- | SW 27 |
| 3498011 | SRVOL20-KVSR | DN 20 | 15 mm | = A | 86 | 106 | 7 | 71 | 27 | SW 32 | --- |
| 3498012 | SRVOL20-KVSR | DN 20 | 22 mm | = A | 86 | 106 | 7 | 71 | 27 | SW 32 | --- |
| 3498013 | SRVOL20-KVSR | DN 20 | 15/22 mm | = A | 86 | 106 | 7 | 71 | 27 | SW 32 | --- |
| 3498015 | SRVOL20-AG | DN 20 | 1" AG | = A | 86 | --- | 15 | 71 | 27 | --- | --- |
| 3498020 | SRVOL20-IG | DN 20 | 3/4" IG | = A | 86 | --- | 15 | 71 | 27 | --- | SW 34 |
| 3498025 | SRVOL20-KVSR | DN 20 | 15 mm | = A | 86 | 106 | 5 | 71 | 27 | SW 32 | --- |
| 3498030 | SRVOL20-KVSR | DN 20 | 22 mm | = A | 86 | 106 | 5 | 71 | 27 | SW 32 | --- |
| 3498035 | SRVOL20-KVSR | DN 20 | 15/22 mm | = A | 86 | 106 | 5 | 71 | 27 | SW 32 | --- |

* eurocone, AG = male thread, IG = female thread, KVSR = compression fitting

| Technical Specifications | |
|-----------------------------|---------------------------------------|
| Max. operating temperature: | 100°C ¹⁾ |
| Min. operating temperature: | -10°C ²⁾ |
| Max. operating pressure: | 6 bar ¹⁾ |
| Accuracy of flowmeter: | ±10% of measuring value ³⁾ |

- 1) Pay attention to the pressure/temperature diagram
- 2) When using appropriate antifreezing compounds
- 3) Valid for Water-Glycol above 20° C!

| Material Specifications | |
|-------------------------|-------------------------------------------|
| Housing: | brass |
| Flowmeter: | impact- and temperature resistant plastic |
| Spring: | stainless steel |
| Gaskets: | EPDM |

Subject to technical modifications!

Product range Watts Industries

System Disconnectors
Backflow Protection Devices
Check Valves
Safety Units
Safety Relief Valves
Pressure Reducing Valves
Automatic Control Valves
Butterfly Valves
Measuring Gauges
Temperature Control

Expansion Vessels
Process Switches
Fuel Products
Gas Products
Electronic Controls
Installation Protection Products
Radiator Valves
Manifolds & Fittings
System Products
Shut-Off Valves



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