

AV 23 SETTER Bypass HT Solar

Balancing valves – Solar type



Direct regulation, indication and isolation of flows in systems

Application

Direct hydraulic balancing and control of flows to consumers or in a subsystem. SETTER Bypass balancing valves offer an easy and accurate method of adjusting the flow rates for heating-, ventilation-, air conditioning - and solar systems.

The HT-type is designed for higher operating temperatures.

Correct balancing of hydraulic circuits ensures optimum energy distribution, resulting in more efficient and economical operation in accordance with the energy saving regulations provided for by legislation.

With SETTER Bypass SD balancing valves, any qualified fitter can set the appropriate flow rate using the unique flow measurement device, avoiding investments in training and costly measuring devices.

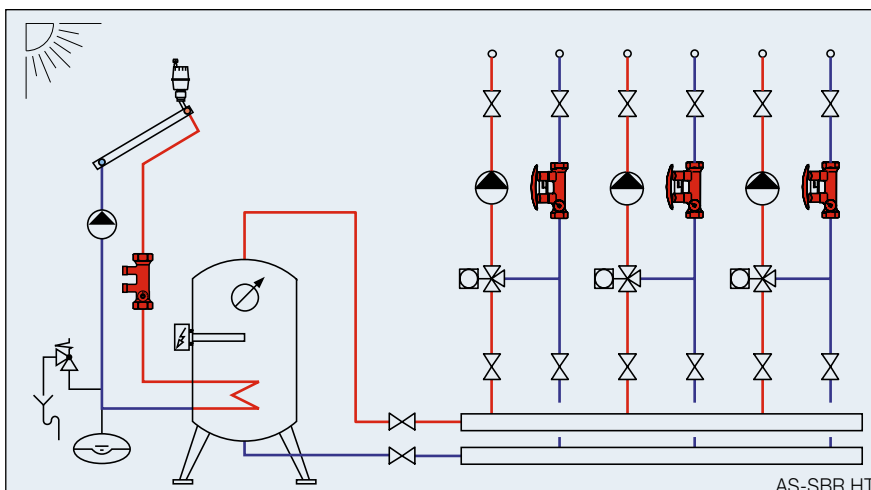
Installation

The SETTER Bypass SD requires a straight section of pipe of the same length and diameter as the system. The valve can be installed in a horizontal, vertical or inclined position. Care should be taken that the arrow is pointing in the direction of the flow.

In the case of the high-temperature type, the bypass unit is replaced by the sealing cap set after adjustment.

Advantages

- Applicable for temperatures up to 185 °C
- Accurate and fast balancing without diagrams, tables or measuring devices
- Direct reading of adjusted flow rate at the sight glass
- High accuracy of measurement in the optimal flow range
- Balancing valve with setting scale
- Shut-off control valve (minor leakage possible)
- Installation in any position
- Maintenance free
- Low pressure loss
- Replacement of bypass unit without emptying the system
- Saving of an additional shutoff device



Operation

The flow measurement is based on the principle of a baffle float with return spring. The reading position is the bottom line of the baffle float.

The measuring device is placed in a bypass to the main flow, isolated from system flow. By demand the bypass, with self locking valves, gets opened / closed by pressing / releasing the clamp. Reading the flow rate has no influence on the main flow rate.

Specification text

Regulating and stop valve with direct indication of the set flow rate in l/min.

Automatic isolating bypass with gauge and indicator running parallel to the main flow rate.

Gauge with baffle float and return spring.

Measured values can be set and read directly at the sight glass without tables, diagrams or measuring devices.

Low pressure loss.

Suitable for higher temperature ranges (with sealing caps).

Technical data

Admissible operating parameters
TB/PB: see pressure temperature curve

Measuring accuracy:

- Measurement range 0% to 25%
= ±20% of the indicated value
- Measurement range 25% to 100%
= ±10% of the indicated value

k_{VS} value and measurement range:
see "Type Program".

Material:

Housing: brass

Inside: stainless steel, brass, plastic

Sight glass: heat- and impact-resistant plastic

Sealing: EPDM

Female thread to DIN 2999/ISO 7 or
male thread G (cylindrical) to ISO 228

Fluids

- Heating water (VDI 2035)
- Cooling water
- Water and proprietary additives used
against corrosion and freezing

Additional models

Setter for further applications, see
data sheets Setter Bypass SD and
Setter Bypass SD Solar.

Type program

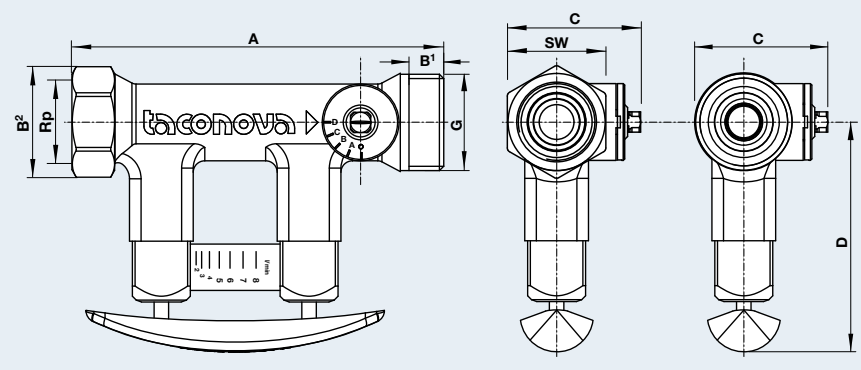
Female thread (incl. sealing cap set)

Code No.	DN	Rp x Rp	Measuring range	k_{VS} (m ³ /h)
223.2382.000	20	¾" x ¾"	2 – 12 (l/min)	2,2
223.2383.000	20	¾" x ¾"	8 – 30 (l/min)	5,0
223.2480.000	25	1" x 1"	10 – 40 (l/min)	8,1
223.2580.000	32	1¼" x 1¼"	20 – 70 (l/min)	17,0

Male thread (incl. sealing cap set)

Code No.	DN	G x G	Measuring range	k_{VS} (m ³ /h)
223.2382.385	20	¾" x ¾"	2 – 12 (l/min)	2,2
223.2383.385	20	¾" x ¾"	8 – 20 (l/min)	5,0

Dimensions



Dimensions table

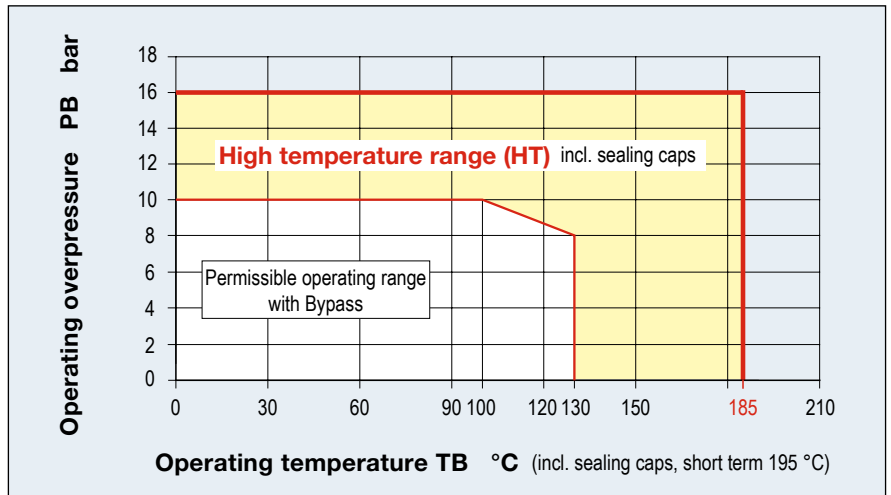
Female thread

Code No.	DN	A	B ¹	C	D	SW	Rp
223.2382.000	20	129	39	46	79	34	¾"
223.2383.000	20	129	39	46	79	34	¾"
223.2480.000	25	152	47	58	82	41	1"
223.2580.000	32	161	56	65	84	49	1¼"

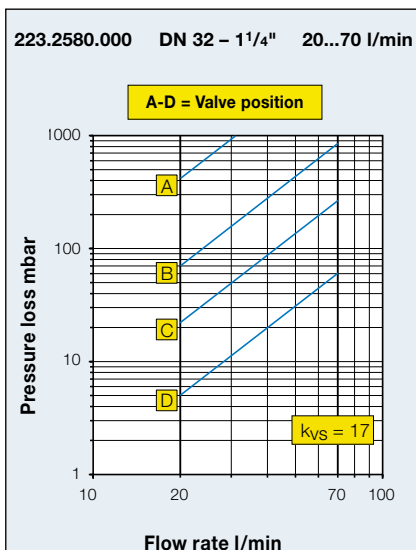
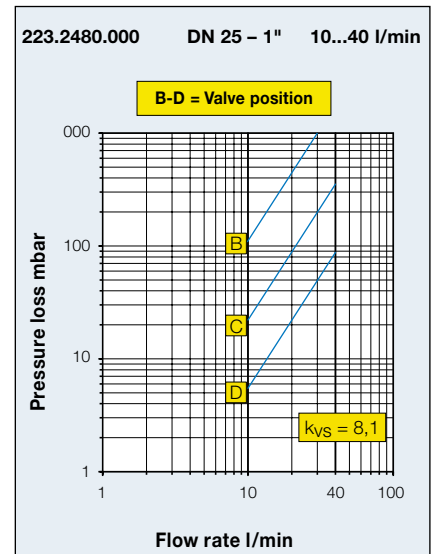
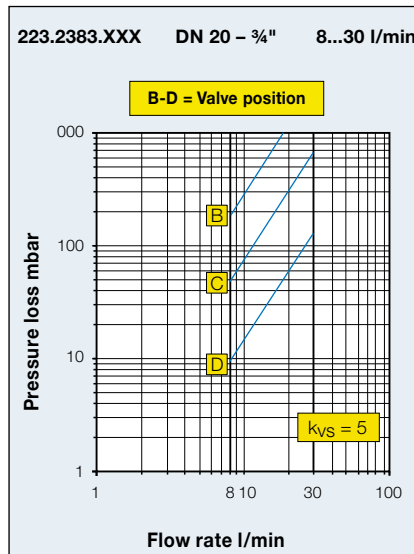
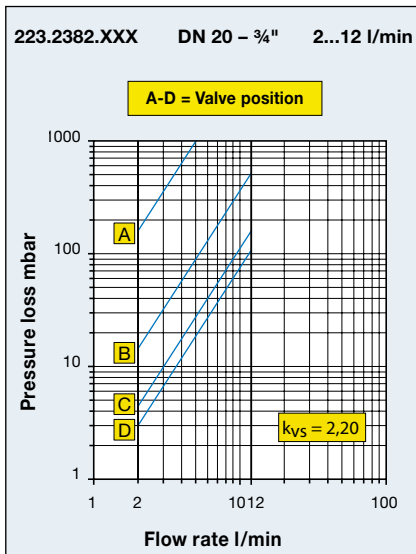
Male thread

Code No.	DN	A	B ²	C	D	G
223.2382.385	20	129	12	46	79	1"
223.2383.385	20	129	12	46	79	1"

Pressure - Temperature-characteristic



Pressure loss diagrams



AV 23 SETTER Bypass HT Solar

Accessories



AX 96 Isolation box

Made of EPP, operating temp. -30 – 130 °C, in accordance with EnEV guideline

Code no.	Fits to Setter Bypass SD
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296.2321.004	DN 20
296.2322.004	DN 25
296.2323.004	DN 32



VF 10 system screw connection fits to Setter with male thread

Screw connection with solder connection, set includes 2 x 3 parts

Code no.	G × mm	Version for	Fits to
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210.5331.019*	1" × 18	copper pipe ¾"	DN 15
210.5332.019*	1" × 22	copper pipe ¾"	DN 20

* with solar seal

Spare parts



AY 98 Bypass SD spare part kit

Code No.	Version	Fits to	P/u
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298.2336.020	2 – 12 (l/min)	223.2380.000, 223.2380.350	1
298.2337.020	8 – 20 (l/min)	223.2381.000, 223.2381.350	1
298.2344.020	10 – 40 (l/min)	223.2482.000, 223.2482.350	1