

TACOSSETTER BYPASS SOLAR 185

BALANCING VALVE



ADVANTAGES

- Accurate and fast adjustment with scale and without the aid of diagrams, tables or measurement devices
- Direct reading of the set volume flow in l/min
- Temperature-resistant up to 185 °C
- Variable installation position, maintenance-free
- Flow control with setpoint adjuster
- Regulating valve with isolating facility (rest leakage possible)
- Minimal pressure loss

Direct regulation, indication and isolation of flows in solar systems.

DESCRIPTION

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

The Version TacoSetter Bypass Solar 185 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 TacoSetter Bypass Solar 185 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 POSITION

The TacoSetter Bypass Solar 185 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.

OPERATION

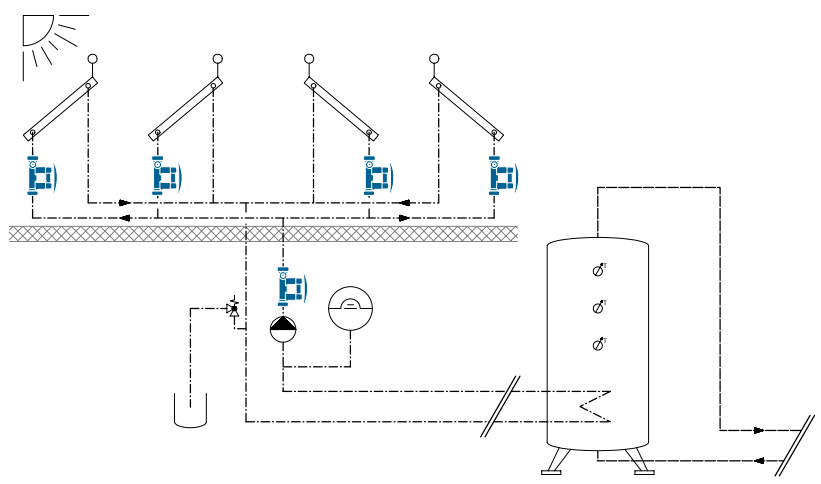
The flow measurement is based on the principle of a baffle float with return spring. The reading position is the bottom line of the baffle float. The measuring device is placed in a bypass to the main flow, isolated from system flow. By demand the bypass, with self locking valves, gets opened / closed by pressing / releasing the clamp. Reading the flow rate has no influence on the main flow rate.

BUILDING CATEGORIES

For pipe installations in heating and cooling area:

- Apartment blocks, housing estates, multiple dwelling units
- Residential care facilities and hospitals
- Administration and service buildings
- Hotels and restaurants, industrial kitchens
- School buildings and sports facilities
- Commercial and industrial buildings
- Facilities with partial use, such as barracks, camping sites

SYSTEM/BASIC DIAGRAM



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SPECIFICATION TEXT

See www.taconova.com

TECHNICAL DATA

General

- Admissible operating parameters
 $T_{0\max}$ und $P_{0\max}$: see pressure temperature curve
- Measuring accuracy:
 - Measurement range <25%:
 $\pm 20\%$ of the indicated value
 - Measurement range >25%:
 $\pm 10\%$ of the indicated value
- k_{VS} value and measurement range: see "Type Program"
- Female thread to DIN 2999 / ISO 7 or male thread G (cylindrical) to ISO 228

Material

- Housing: brass
- Inside: stainless steel, brass, plastic
- Sight glass: heat- and impact-resistant plastic
- Sealing: EPDM

Fluids

- Heating water (VDI 2035; SWKI BT 102-01; ÖNORM H 5195-1)
- Water and proprietary additives used against corrosion and freezing up to 50% (see document «Correction curves»)

ADDITIONAL MODELS

Balancing valves for solar applications, see TacoSetter Bypass 100 and TacoSetter Bypass Solar 130 data sheets.

TYPE OVERVIEW

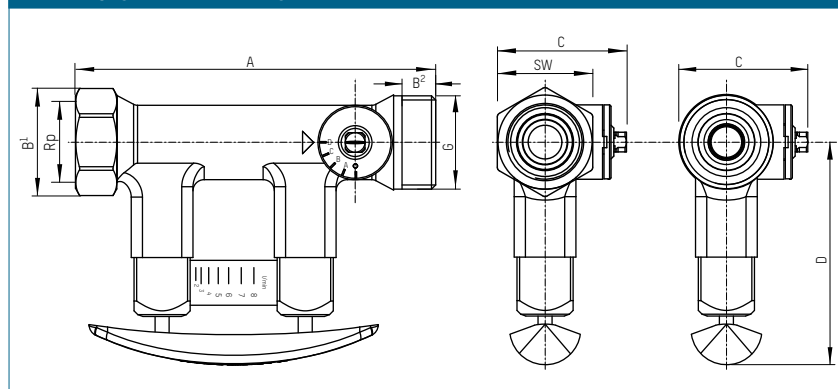
TacoSetter Bypass Solar 185 | Balancing valve with female thread (incl. sealing cap set)

| Order no. | DN | Rp × Rp | Measuring range | k_{VS} (m³/h) |
|--------------|----|---------------------------------------|-----------------|-----------------|
| 223.2382.000 | 20 | $\frac{3}{4}" \times \frac{3}{4}"$ | 2 – 12 (l/min) | 2,2 |
| 223.2383.000 | 20 | $\frac{3}{4}" \times \frac{3}{4}"$ | 8 – 30 (l/min) | 5,0 |
| 223.2480.000 | 25 | 1" × 1" | 10 – 40 (l/min) | 8,1 |
| 223.2580.000 | 32 | 1 $\frac{1}{4}" \times 1\frac{1}{4}"$ | 20 – 70 (l/min) | 17,0 |

TacoSetter Bypass Solar 185 | Balancing valve with male thread (incl. sealing cap set)

| Order no. | DN | G × G | Measuring range | k_{VS} (m³/h) |
|--------------|----|---------|-----------------|-----------------|
| 223.2382.385 | 20 | 1" × 1" | 2 – 12 (l/min) | 2,2 |
| 223.2383.385 | 20 | 1" × 1" | 8 – 30 (l/min) | 5,0 |

DIMENSIONAL DRAWING



MEASUREMENT TABLE

TacoSetter Bypass Solar 185 | Balancing valve with female thread

| Order no. | DN | A | B¹ | C | D | SW | Rp |
|--------------|----|-----|----|----|----|----|----------------|
| 223.2382.000 | 20 | 129 | 39 | 46 | 79 | 34 | $\frac{3}{4}"$ |
| 223.2383.000 | 20 | 129 | 39 | 46 | 79 | 34 | $\frac{3}{4}"$ |
| 223.2480.000 | 25 | 152 | 47 | 58 | 82 | 41 | 1" |
| 223.2580.000 | 32 | 161 | 56 | 65 | 84 | 49 | 1" |

TacoSetter Bypass Solar 185 | Balancing valve with male thread

| Order no. | DN | A | B² | C | D | G |
|--------------|----|-----|----|----|----|----|
| 223.2382.385 | 20 | 129 | 12 | 46 | 79 | 1" |
| 223.2383.385 | 20 | 129 | 12 | 46 | 79 | 1" |

GLYCOL CORRECTION CURVES

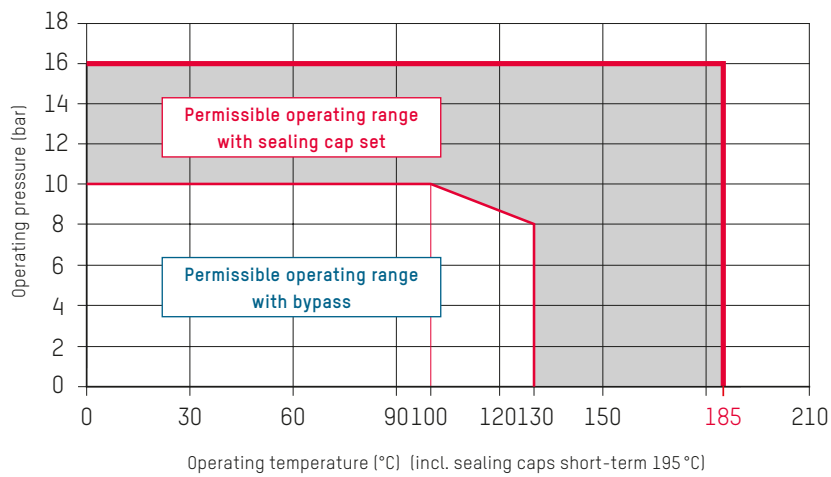
There is a separate diagram for TacoSetter up to DN25 and its flow ranges with nine correction curves for use of anti-frost and anti-corrosion agents.

Corrections are not required for larger dimensions as the deviation lies within the measuring tolerance.

See www.taconova.com

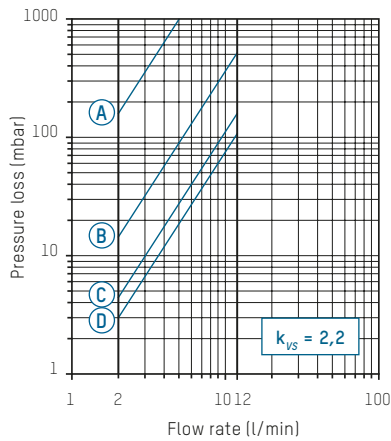
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PRESSURE – TEMPERATURE-CHARACTERISTIC



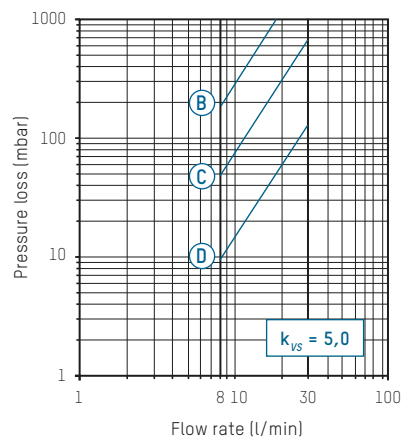
PRESSURE LOSS DIAGRAMS

223.2382.XXX (DN 20 | ½" | 2...12 l/min)



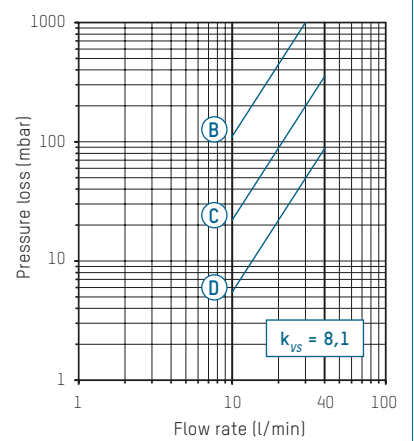
A – D Valve position

223.2383.XXX (DN 20 | ½" | 8...30 l/min)



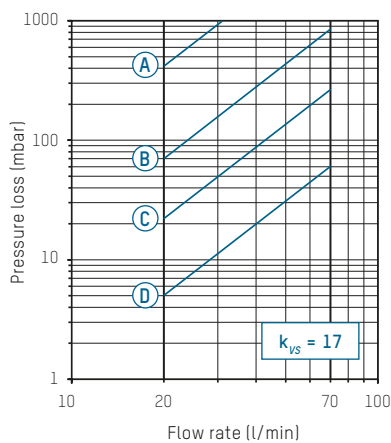
B – D Valve position

223.2480.XXX (DN 25 | 1" | 10...40 l/min)



B – D Valve position

223.2580.000 (DN 32 | 1½" | 20...70 l/min)



A – D Valve position

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ACCESSORIES



SYSTEM SCREW CONNECTION FITS TO TACOSSETTER BYPASS

Screw connection with male thread R (conical) as per DIN 2999

| Order no. | G x R | Version for | Fits to |
|--------------|-------------|-----------------------|---------|
| 210.6630.000 | 3/4" x 1/2" | Threaded pipe Rp 1/2" | DN 15 |
| 210.6631.000 | 1" x 1/2" | Threaded pipe Rp 1/2" | DN 15 |
| 210.6632.000 | 1" x 3/4" | Threaded pipe Rp 3/4" | DN 20 |
| 210.6633.000 | 1 1/4" x 1" | Threaded pipe Rp 1" | DN 25 |



Screw connection with solder connection

| Order no. | G x mm | Version for | Fits to |
|--------------|-------------|---------------------|----------|
| 210.5331.019 | 1" x 18 | Copper pipe ø 18 mm | DN 15 AG |
| 210.5332.019 | 1" x 22 | Copper pipe ø 22 mm | DN 20 AG |
| 210.5334.003 | 1 1/4" x 28 | Copper pipe ø 28 mm | DN 25 AG |

SPARE PARTS



SIGHT GLASS (COMPLETE) AND SEAL

| Order no. | Range | Fits to |
|--------------|-----------------|-----------------------------|
| 298.2336.020 | 2 – 12 (l/min) | 223.2380.000 / 223.2380.350 |
| 298.2337.020 | 8 – 20 (l/min) | 223.2381.000 / 223.2381.350 |
| 298.2338.020 | 8 – 30 (l/min) | 223.2383.000 / 223.2383.385 |
| 298.2344.020 | 10 – 40 (l/min) | 223.2482.000 / 223.2482.350 |



SEALING CAP SET FOR TACOSSETTER BYPASS 130/185

| Order no. | Fits to |
|--------------|--------------|
| 296.2340.003 | all versions |

Included with delivery for Solar 185 model