

# TOPMETER RETURN

## BALANCING VALVE (RETURN)



Direct regulation, indication and isolation of flows from heating and cooling circuits in manifold return pipe bars.

### DESCRIPTION

The TopMeter offers an easy and accurate method of adjusting flow rates. The underlying measuring principle requires that the flow has settled in order to ensure reliable indicator values.

No complicated flow adjustment is required on the return pipe TopMeter to achieve this. Rather, the medium allows ideal inflow from the upstream inlet pipe.

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 TopMeters, any qualified fitter can set the appropriate flow rate on the premises in question, thus avoiding investments in training and costly measuring devices.

### INSTALLATION POSITION

The TopMeter is installed in the return pipe bar of the manifold in a horizontal or vertical position. The adaptation of the manifold must correspond to the manufacturer's specifications in accordance with the mounting dimension drawings.

### ADVANTAGES

- Precise and quick balancing without diagrams, tables or measuring devices
- Flow rate displayed directly in l/min
- Settings can be blocked with the ½" TopMeter and adjustments prevented using a lead seal
- Regulating valve with isolating facility
- Removable sight glass available as a replacement part
- Can be installed in any position

### OPERATION

The flow measurement is based on the displacement principle of a baffle disc, which is inserted in a measuring tube. The position is conveyed to the sight glass on the indicator unit by means of a sliding bar, which fixes the baffle disc to the indicator unit. The scale printed on the sight glass allows the flow rate to be read with ease.

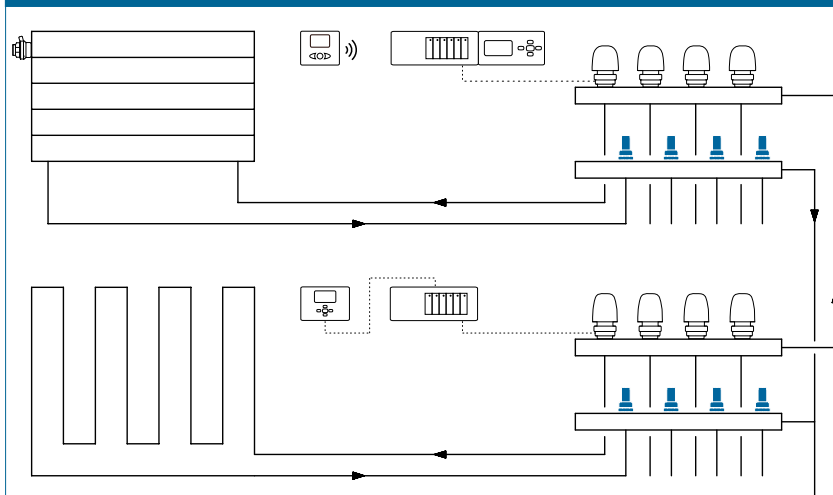
Turning the black spindle changes the opening profile of the valve and allows the desired flow rate to be set. The flow is isolated by turning the spindle fully.

### BUILDING CATEGORIES

For installations in the heating and cooling area:

- Apartment blocks, housing estates, multiple dwelling units
- Residential care facilities, 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



## TOPMETER RETURN | BALANCING VALVE (RETURN)

### SPECIFICATION TEXT

See [www.taconova.com](http://www.taconova.com)

### TECHNICAL DATA

#### General

- Medium temperature:  $-10^{\circ}\text{C}$  –  $+80^{\circ}\text{C}$
- Operating pressure  $P_{0\text{ max}}$ : 6 bar
- Measuring accuracy:  $\pm 10\%$  of the highest nominal value (the change in viscosity must be taken into account with antifreeze additives)
- $k_{VS}$  value and measuring range: see type overview
- External thread G (cylindrical) as per ISO 228

#### Material

- Brass, heat-resistant plastics and stainless steel
- Seals: 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%

### ADDITIONAL MODELS

See data sheet for TopMeter Supply

### ASSEMBLY

When assembling the TopMeter in the manifold, the starting torque must not exceed 30 nM.

### SERVICE

The sight glass can be removed if necessary for maintenance purposes and replaced. The relevant under-floor heating circuit must be separated in this case from the rest of the system. See installation instructions No. EA 1008.

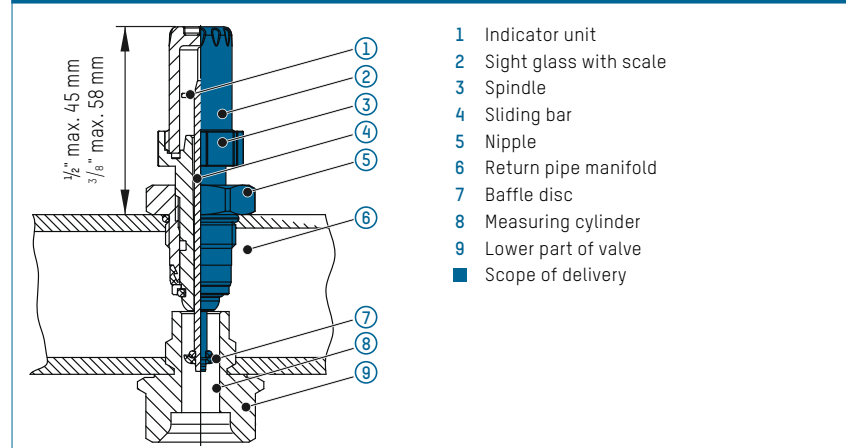
### TYPE OVERVIEW

TopMeter Return | Balancing valve - Return pipe

Order no.	DN	G	Measuring range	$k_{VS}$ (m <sup>3</sup> /h)
223.5203.XXX	15	½"	0,6 – 2,4 l/min	1,2*
223.5204.XXX	15	½"	1,0 – 4,0 l/min	1,7*
223.5208.XXX	15	½"	2,0 – 8,0 l/min	2,4*
223.5215.XXX	15	½"	1,0 – 15,0 l/min	2,0*
223.5303.XXX	10	¾"	0,5 – 2,5 l/min	0,8*
223.5304.XXX	10	¾"	1,0 – 5,0 l/min	1,0*

\* The effective  $k_{VS}$  value depends on the counterpart used and the manifold geometry. The definitive order number is assigned on the basis of the particular configuration.

### DIMENSIONAL DRAWING

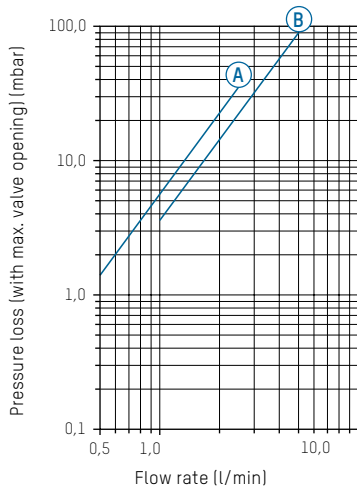


### NOTE

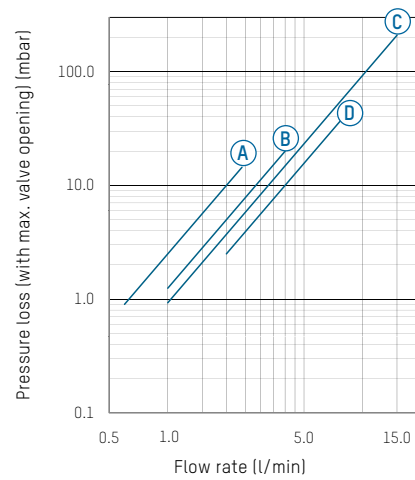
Depending on the individual design of your application, the manifold (lower part of valve) has to be adapted to the TopMeter. We can provide you with a drawing for this purpose (construction data sheet). Please request our construction data sheet if you need it. The retaining O ring as well as the counterpart in the manifold are the responsibility of the customer in all cases.

# TOPMETER RETURN | BALANCING VALVE (RETURN)

## PRESSURE LOSS DIAGRAMS



- A 223.5303.XXX (3/8" | 0,5...2,5 l/min |  $k_{VS} = 0,8$ )
- B 223.5304.XXX (3/8" | 1,0...5,0 l/min |  $k_{VS} = 1,0$ )



- A 223.5203.XXX (1/2" | 0,6...2,4 l/min |  $k_{VS} = 1,2$ )
- B 223.5204.XXX (1/2" | 1,0...4,0 l/min |  $k_{VS} = 1,7$ )
- C 223.5215.XXX (1/2" | 1,0...15,0 l/min |  $k_{VS} = 2,0$ )
- D 223.5208.XXX (1/2" | 2,0...8,0 l/min |  $k_{VS} = 2,4$ )

## SPARE PARTS

Order no.	Sight glass 1/2"	Order no.	Sight glass 3/8"
298.2303.000	0,6 – 2,4 l/min	298.2313.000	0,5 – 2,5 l/min
298.2304.000	1,0 – 4,0 l/min	298.2314.000	1,0 – 5,0 l/min
298.2308.000	2,0 – 8,0 l/min		