

### Application

Differential pressure regulators for district heating systems and large heating systems.

For **differential pressure set points  $\Delta p$  from 0.1 to 0.3 bar** · Valves sizes **G $\frac{3}{8}$  to G $\frac{3}{4}$**  · **Nominal pressure PN 10** · For liquids up to 120 °C.

The valve closes when the differential pressure rises.

### Conversion of valve sizing coefficients:

$$C_v \text{ (in U.S.-gallons/min)} = 1.17 \cdot K_{vs} \text{ (in m}^3\text{/h)}$$

$$K_{vs} \text{ (in m}^3\text{/h)} = 0.86 \cdot C_v \text{ (in U.S.-gallons/min)}$$

The regulators control the differential pressure according to the adjusted set point.

### Special features

- Low-noise, low-maintenance P-regulators requiring no auxiliary energy
- Suitable for water and other liquids, provided these do not affect the characteristics of the operating diaphragm and do not cause corrosion
- Especially suitable for district heating systems

### Versions

Differential pressure regulators for installation in high (+) pressure pipes or low (-) pressure pipes, e.g. in flow or return pipes (see Fig. 4)

**Type 2046/2207** (Fig. 1) · with Type 2046 Globe Valve in nominal sizes G $\frac{3}{8}$  to G $\frac{3}{4}$  and Type 2207 Actuator with a fixed set point, adjusted to 0.1, 0.2 or 0.3 bar

### Special version

With adapter for the additional attachment of a Type 5853 Electric Actuator (also see Data Sheet T 5851 E)

### Ordering text

Differential Pressure Regulator Type 2046/2207

DN ...

Set point ... bar

Optional special version



Fig. 1 · Type 2046/2207 Differential Pressure Regulator

### Principle of operation (Fig. 2)

The medium flows through the valve in the direction indicated by the arrow. The position of the valve plug (3) determines the differential pressure across the free area between the seat (2) and the plug. The differential pressure to be controlled is transmitted to the operating diaphragm (12) where it is converted into a positioning force. This force is used to adjust the position plug according to the force of the positioning spring (14).

The set point is determined by the positioning spring in the actuator. The high pressure and low pressure are transmitted via the control lines.

### Installation

The regulators are delivered ready for installation. The valve is only suitable for installation in horizontal pipelines. The medium must flow through the valve in the direction indicated by the arrow on the valve body. The valve bonnet, including the actuator, must be suspended downwards.

### Technical data · All pressures in bar (gauge)

Connection size	d	G <sup>3</sup> / <sub>8</sub>	G <sup>1</sup> / <sub>2</sub>	G <sup>3</sup> / <sub>4</sub>
K <sub>V</sub> s value		1.25	1.6	2.5
Nominal pressure	PN	10		
Max. permissible differential pressure Δp	bar	2		
Max. permissible temperature	°C	120		
Fixed set point adjusted to	bar	0.1, 0.2 or 0.3		

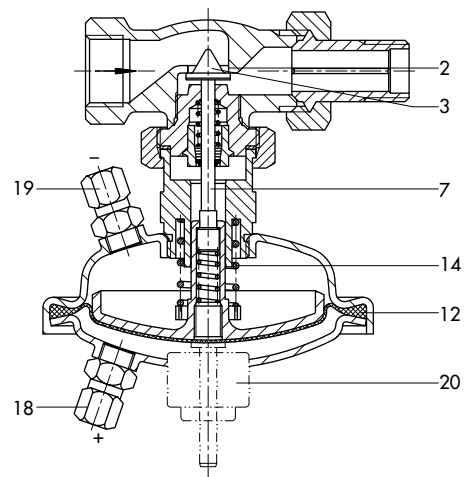
### Materials (WN = Material Number according to DIN)

Body	Red brass G-CuSn 5 ZnPb, nickel-plated
Plug	Brass CuZn40 with EPDM soft sealing
Valve spring	Stainless steel WN 1.4310
Operating diaphragm	EPDM
Sealing rings	EPDM

### Dimensions in mm and weights

Connection size	d	G <sup>3</sup> / <sub>8</sub>	G <sup>1</sup> / <sub>2</sub>	G <sup>3</sup> / <sub>4</sub>
Length	L	85	95	106
Length	L1	52	58	66
Height	H	90	90	90
Distance	a	10	13	14.5
Distance	b	10	11	12.5
Width a. flats	SW 1	22	27	32
Width a. flats	SW 2	27	30	37
Weight	approx. kg	0.7	0.75	0.95

Specifications subject to change without notice.



- 2 Seat
- 3 Plug
- 7 Plug stem
- 12 Operating diaphragm
- 14 Positioning spring
- 18 Control line connection for high pressure
- 19 Control line connection for low pressure
- 20 Adapter

Fig. 2 · Type 2046/2207

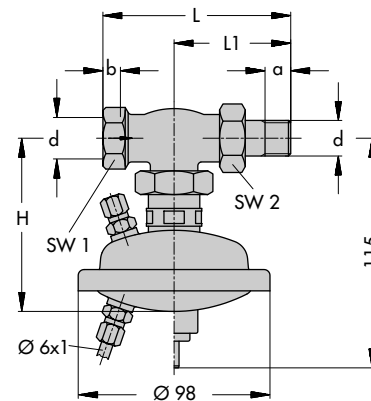
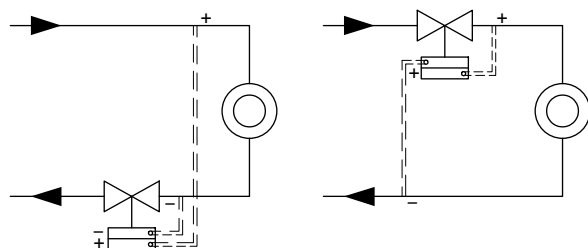


Fig. 3 · Dimensions



Installation in return pipe

Installation in flow pipe

===== Differential pressure connections to be attached on installing the regulator

Fig. 4 · Typical applications

