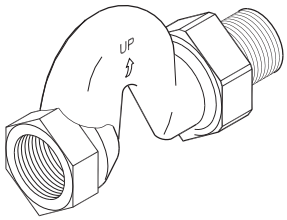
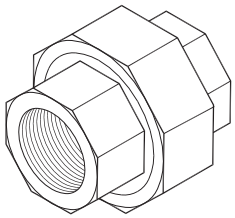
Data sheet

Flow Restrictors for one-pipe systems

Application



RTD-CB back-flow restrictor



RTD-BR bypass restrictor

The RTD-CB back-flow restrictor prevents radiator back-flow and heat transfer at the return pipe in a one-pipe system.

The back-flow restrictor is installed in the radiator return pipe with the bow pointing upwards.

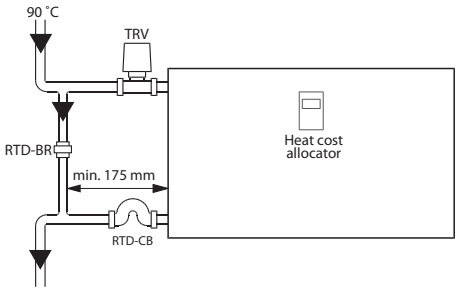
The RTD-BR bypass restrictor decreases flow through the bypass in a one-pipe system, thus forcing the correct amount of system water to pass through the radiator.

The bypass restrictor will decrease the bypass with one dimension (e.g. DN 20 > DN 15).

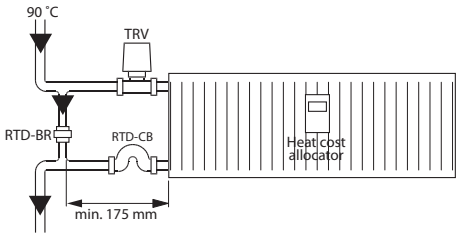
The bypass restrictor is installed in the bypass by the radiator.

Principle

Radiator



Convector



The heat cost allocator is placed according to the manufacturer's instructions.

Heat transfer

The RTD-CB back-flow restrictor reduces heat transfer from system pipes to radiator, when the TRV is closed.

With the bypass placed 175 mm from the radiator, a flow temperature of 90 °C and a room temperature of 20 °C, the max. detected temperature is:

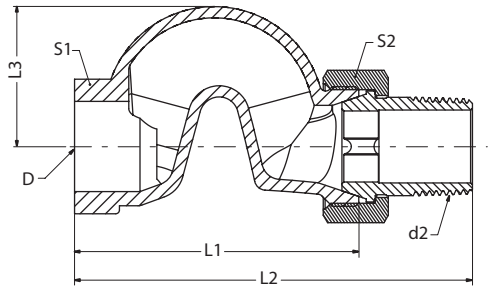
Heat cost allocators with a single sensor for radiator surface	*28 °C*
Heat cost allocators with two sensors for radiator surface / room temperature	*room temp. + 5 °C*

Ordering and data

Type	Size	Connections		K_{VS}	Max. working pressure	Test pressure	Max. working temp.	**Code no.**
		Inlet	Outlet					
RTD-CB back-flow restrictor	DN 15	R 1/2	Rp 1/2	4.54 m³/h	10 bar	16 bar	120 °C	**013L1925**
RTD-CB back-flow restrictor	DN 20	R 3/4	Rp 3/4	8.06 m³/h	10 bar	16 bar	120 °C	**013L1926**
RTD-CB back-flow restrictor	DN 25	R 1	Rp 1	17.0 m³/h	10 bar	16 bar	120 °C	**013L1927**
RTD-BR bypass restrictor	DN 15/10	G 1/2	G 1/2	6.80 m³/h	10 bar	16 bar	120 °C	**013L1915**
RTD-BR bypass restrictor	DN 20/15	G 3/4	G 3/4	15.1 m³/h	10 bar	16 bar	120 °C	**013L1916**

Dimensions

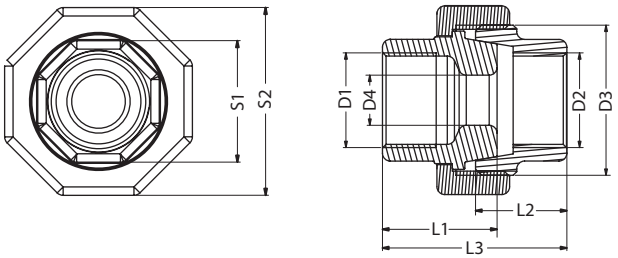
Back-flow restrictor RTD-CB



Material: Stainless steel, AISI 316

Type	Code no.	L1	L2	L3	D	d2	S1	S2
RTD-CB DN 15	013L1925	68	96	32	Rp 1/2	R 1/2	27	30
RTD-CB DN 20	013L1926	76	106	38	Rp 3/4	R 3/4	32	37
RTD-CB DN 25	013L1927	90	126	48	Rp 1	R 1	41	46

Bypass restrictor RTD-BR



Material: Black steel, ASTM A 216 WCB

Type	Code no.	L1	L2	L3	D1	D2	D3	D4	S1	S2
RTD-BR DN 15/10	013L1915	27.3	24	47.5	G 1/2	G 1/2	G 1	Ø11	26	40
RTD-BR DN 20/15	013L1916	32	25.5	51.5	G 3/4	G 3/4	G 5/4	Ø16	32	50