

# Tri CTR

## Three-way valve PN 16, DN 15...50



The Tri CTR is a three-way valve which can be used as diverting or mixing valve. When used as diverting valve the Tri CTR has one inlet (AB) and two outlets (A and B). Depending on the stem position, the flow is diverted to either outlet A or outlet B.

When used as mixing valve the Tri CTR has two inlets (A and B) and one outlet (AB). Depending on the stem position the flow is mixed between inlet A and B.

The Tri CTR can be used with on/off, floating or modulating actuators. Or with Oventrop temperature controllers in which case no auxiliary energy is needed for actuation.

The Tri CTR is supplied with union nuts for use with flat sealing threaded tailpipes.

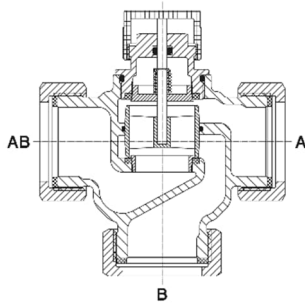
### Features

- + Usable as diverting or mixing valve
- + Control with on/off, floating or modulating actuator
- + Body made of bronze

### Specifications

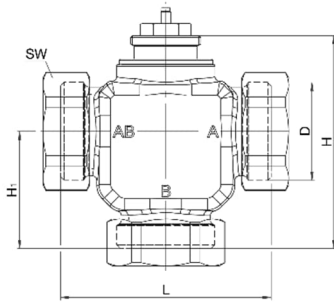
Sizes	DN 15...50		
Versions	External threads to ISO 228, flat sealing		
Operating temperature	-10...+120 °C		
Operating pressure	Max. 16 bar / PN 16		
Medium	Heating and cooling water, for example according to VDI 2035 Water glycol mixtures with max. 50% glycol content		
Kvs values and maximum differential pressure	DN 15:	2.5	3
	DN 20:	4.4	2
	DN 25:	5.7	1
	DN 32:	7.2	1
	DN 40:	8.5	1
	DN 50:	10.0	0.75
Actuator connection	M 30 x 1.5		
Stroke	2.8 mm		
Closing force	90...150 N		

## Design and Materials



Item	Material
Body	Bronze
Insert	Brass
Stem	Stainless steel
Regulating sleeve	Fibre reinforced plastics
Seals	EPDM
O-rings	EPDM
Union nuts	Brass or cast iron
Connection seals	Fibre seal
Protection cap	Plastic

## Dimensions



DN	D	L [mm]	H [mm]	H1 [mm]	SW [mm]	Weight [kg]
<b>15</b>	G ¾	70	76	38	30	0.6
<b>20</b>	G 1	80	88	47	37	0.8
<b>25</b>	G 1 ¼	90	91	50	46	1.2
<b>32</b>	G 1 ½	110	96	55	52	1.5
<b>40</b>	G 2	115	106	64	68	2.2
<b>50</b>	G 2 ¾	130	112	65	75	2.9

## Item Numbers



Size	Connection size	Kv	Item no.
DN <b>15</b>	G ¾	2,5	1131204
DN <b>20</b>	G 1	4,4	1131206
DN <b>25</b>	G 1 ¼	5,7	1131208
DN <b>32</b>	G 1 ½	7,2	1131210
DN <b>40</b>	G 2	8,5	1131212
DN <b>50</b>	G 2 ¾	10	1131216

## Accessories

### Threaded tailpipes



Suitable for	Item no.
DN 15, R ½	1130291
DN 20, R ½	1130292
DN 20, R ¾	1130293
DN 25, R 1	1130294

Suitable for	Item no.
DN 32, R 1 ¼	1130299
DN 40, R 1 ¼	1130295
DN 40, R 1 ½	1130296
DN 50, R 2	1130298

## Suitable actuators and controllers

All listed actuators and controllers are suitable for all nominal sizes of the Tri CTR. Detailed specifications are listed in the product data of the products.

### Actuators

#### Aktor T electrothermal actuators, on/off

Version	Item No.
<b>230 V AC</b>	
NC, 1 m cable	1012415
NC, 2 m cable	1012452
NC, 5 m cable	1012455
NC, 10 m cable	1012459
NC, aux switch	1012435
NO, 1 m cable	1012425
<b>24 V AC</b>	
NC, 1 m cable	1012416
NC, 2 m cable	1012442
NO, 1 m cable	1012426
<b>120 V AC</b>	
NC, 1 m cable	1012420



### Temperature controllers

#### Temperature controllers with immersion sensor and immersion sleeve G 1/2

Control range	Item No.
Capillary tube length: 2 m	
20...50°C	1140561
40...70°C	1140562
50...80°C	1140563
70...100°C	1140564
Capillary tube length: 5 m	
20...50°C	1140571
40...70°C	1140572
70...100°C	1140574



#### Temperature controllers with contact sensor and heat conducting base

Control range	Item No.
Capillary tube length: 2 m	
20...50°C	1142861
30...60°C	1142862
40...70°C	1142863
50...80°C	1142864



#### Aktor T electrothermal actuator, modulating 0...10 V

Version	Item No.
<b>24 V AC</b>	
NC, 1 m cable	1012953

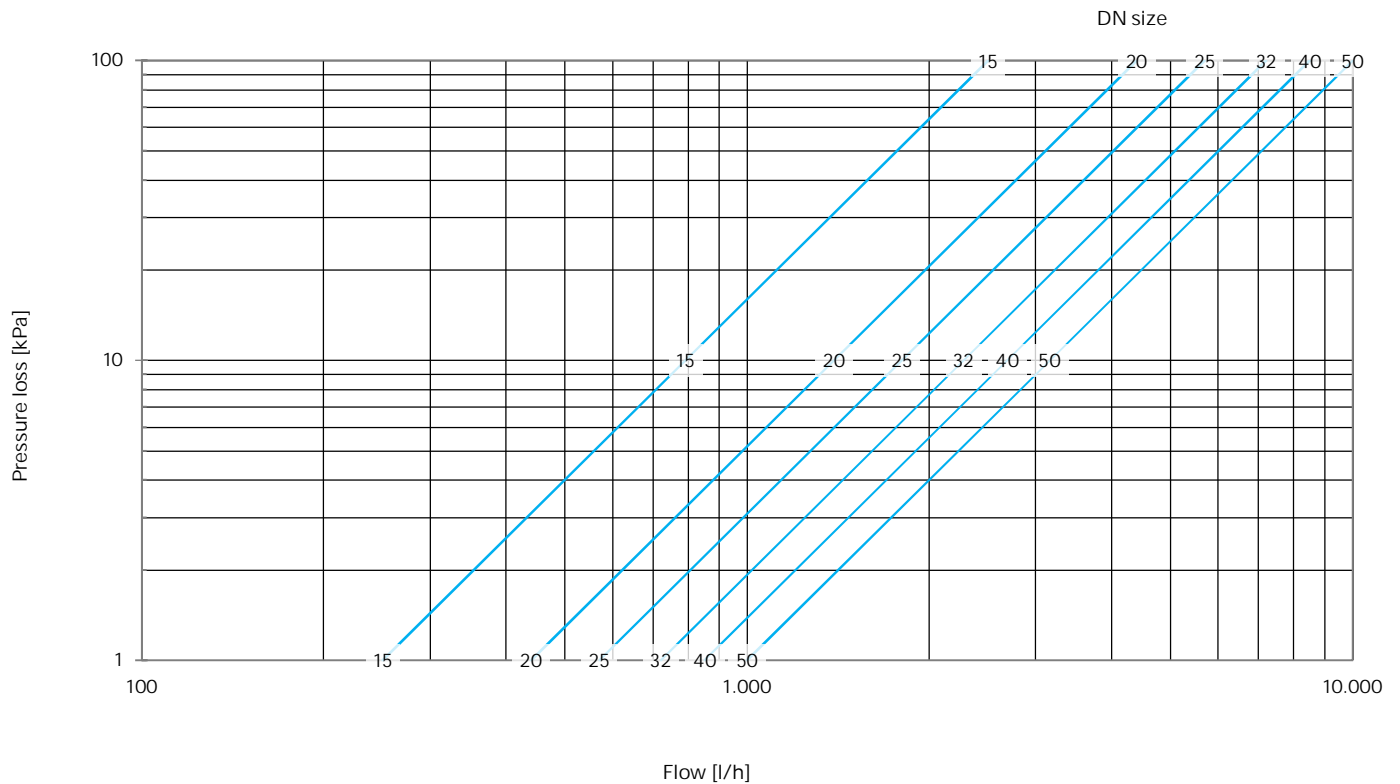


### Aktor M electromotive actuators

Version	Item No.
<b>230 V AC</b>	
floating	1012729
on/off, high speed	1012710
<b>24 V AC</b>	
on/off, floating, modulating 0...10V	1012725
modulating 0...10V	1012726
modulating 0...10V	1012717
on/off, high speed	1012711
Modbus RTU	1012745



## Pressure loss chart



### Kvs values and maximum differential pressure

	DN 15	DN 20	DN 25	DN 32	DN 40	DN 50
Kvs	2.5	4.4	5.7	7.2	8.5	10.0
max. $\Delta P$	3 bar	2 bar	1 bar	1 bar	1 bar	0.75 bar

- Kvs values are valid for diverting and mixing valve
- Maximum differential pressure for leakage free shutoff at end positions