Tri CTB

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

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

When used a mixing valve, the Tri CTB has two inlets (A and B) and one outlet (AB). Depending in the spindle position, the flow is mixed between inlet A and B.

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

Functions

- Shutting off A to AB or B to AB
- Diverting from AB to A or B
- Mixing from A and B to AB

Features

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

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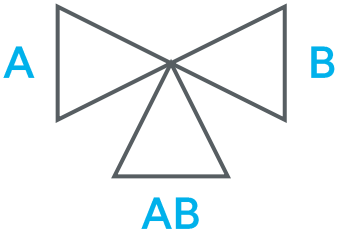
Product Details

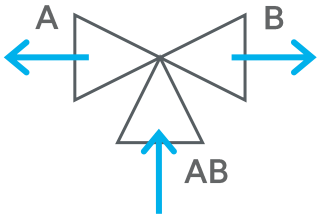
Technical Data

Nominal sizes	DN 15...50
Variants	External thread according to ISO 228, flat sealing
Operating temperature	-10...120 °C
Operating pressure	max. 16 bar / PN 16
Medium	Heating or cooling water according to VDI 2035 or ÖNORM 5195 Water-glycol mixture with max. 50% glycol content
Kvs values and max. differential pressure in bar	DN 15: 2.4 3 DN 20: 4.3 2 DN 25: 5.3 1 DN 32: 7.8 1 DN 40: 8,4 1 DN 50: 10.6 0.75
Actuator connection	M 30 x 1.5
Stroke	2.8 mm
Closing force	90...150 N

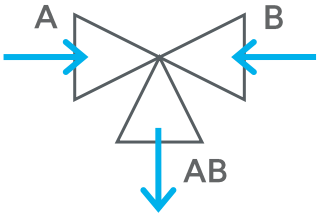
Construction



Connection configuration

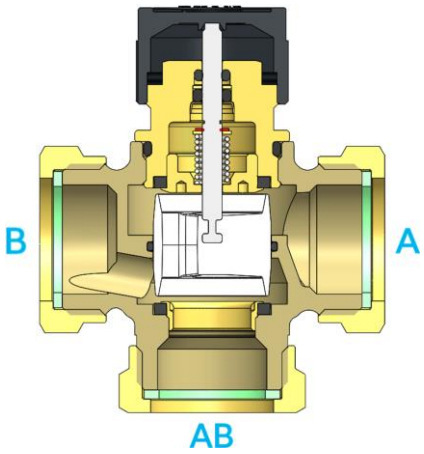


Use as diverting valve: The volume flow AB is diverted to A and B depending on the stroke



Use as mixing valve: The volume flows A and B are mixed to AB depending on the stroke

Materials



Component	Material
Body	Brass
Valve insert	Brass
Spindle	Stainless steel
Regulating sleeve	Glass fibre reinforced plastic (DN 15...25) Brass (DN 32...50)
Valve seals	EPDM
O-rings	EPDM
Union nuts	Brass (DN 15...32) Cast iron DN 40...50)
Connection seals	Fibre seal
Protection cap	Plastic

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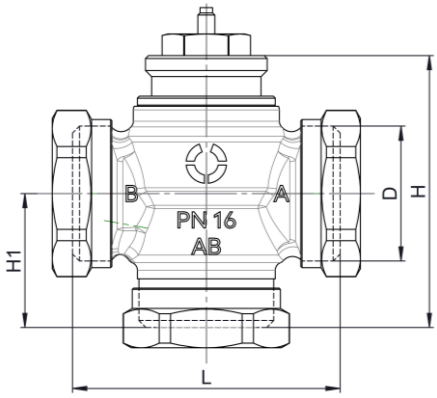
Dimensions and Item Numbers



DN	Connection	L [mm]	H [mm]	H1 [mm]	SW [mm]	Weight [kg]	Item no.
15	G ¾	58	62	31	30	0,4	1131304
20	G 1	66	67	33	37	0,6	1131306
25	G 1 ¼	74	73,5	40	46	1	1131308
32	G 1 ½	82	81,5	43	52	1.4	1131310
40	G 2	98	91	50	68	2.2	1131312
50	G 2 ⅜	117.5	105	59	75	2.9	1131316

Accessories

Threaded tailpipes

	Size	Suitable for	Item no.
Connection set Consisting of three brass threaded tailpipes	R ½	DN 15	1130291
	R ½	DN 20	1130292
	R ¾	DN 20	1130293
	R 1	DN 25	1130294
	R 1 ¼	DN 32	1130299
	R 1 ¼	DN 40	1130295
	R 1 ½	DN 40	1130296
	R 2	DN 50	1130298

Aktor T thermal actuators

	Version	Length of cable	Item no.
Aktor T 2 on/off Normally closed	230 V AC	1 m	1012415
		2 m	1012452
		5 m	1012455
		10 m	1012459
	24 V AC/DC	1 m	1012416
		2 m	1012442
	120 V AC	1 m	1012420
Aktor T 2 on/off Normally open	230 V AC	1 m	1012425
	24 V AC/DC	1 m	1012426
Aktor T modulating 0...10 V Normally closed	24 V AC	1 m	1012953

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Aktor M motorised actuators

		Version	Control signal	Item no.
	With emergency control function and position feedback	24 V AC/DC	Modulating	1012717
			On/off, floating, modulating	1012725
	With position feedback		Modulating	1012726
			Modulating	1012745
		230 V AC	On/off, floating	1012729
	With binary input	21...32 V DC	KNX	1012746
	With short running time	230 V AC	On/off	1012710
		24 V AC/DC	On/off	1012711

Temperature controllers

		Setting range	Length of capillary tube	Item no.
	With immersion sensor and immersion sleeve G ½	20...50 °C	2 m	1140561
			5 m	1140571
		40...70 °C	2 m	1140562
			5 m	1140572
		50...80 °C	2 m	1140563
		70...100 °C	2 m	1140564
			5 m	1140574
	With contact sensor and heat-conducting base	20...50 °C	2 Meter	1142861
		30...60 °C	2 Meter	1142862
		40...70 °C	2 Meter	1142863
		50...80 °C	2 Meter	1142864

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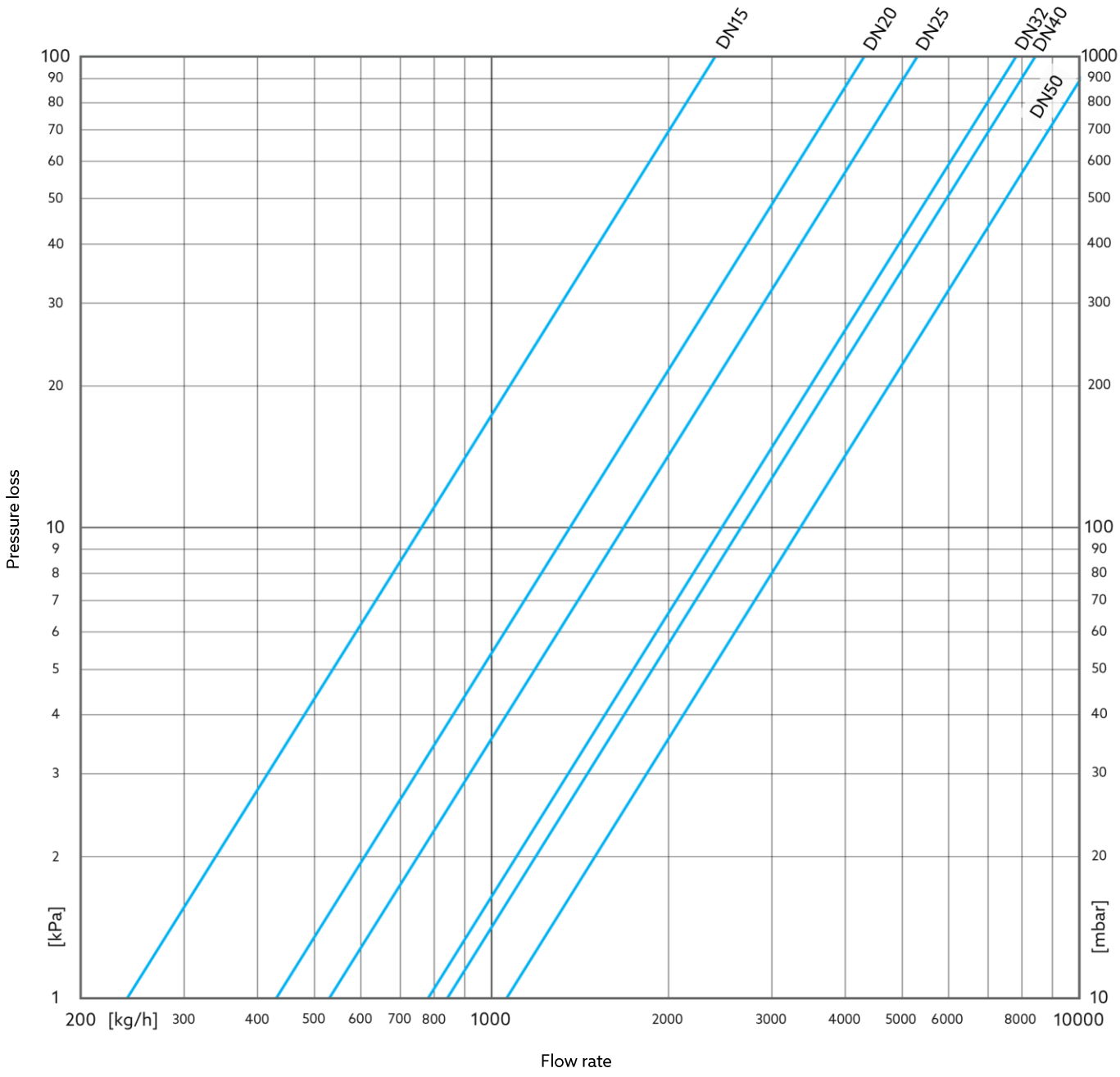
Flow chart



Kvs values

Nominal size	DN 15	DN 20	DN 25	DN 32	DN 40	DN 50
Kvs value	2.4	4.3	5.3	7.8	8.4	10.6
Max. ΔP	300 kPa	200 kPa	100 kPa	100 kPa	100 kPa	75 kPa

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