

Rotor 3- and 4-ways mixing valves art. MIX xxx



Rotor mixing valves are used in heating and cooling systems to the typical purpose of mixing and distributing fluid. The overall stroke is realised by a 90° rotation of the rotor. The valves can be controlled manually or automatically, by installing a servomotor controlled in its turn by a thermostat or by a climatic controller. 4-way mixing valves allow to mix not just water delivered to the users, but also water returning from the users. This rises the temperature of the water coming back to the boiler, thus reducing corrosion risks and making the boiler life longer. On the other hand, 3-way valves can be used either as mixing or diverter devices (e.g as priority valves in systems for the production of domestic hot water). These rotor mixing valves are constructed entirely in brass (body and rotor). With respect to classic cast iron valves, they offer many advantages, such as low risk of jamming between rotor and body when the rotor is not used for a long period, smaller dimensions and lower weight at the same sturdiness. The seal on the rotor stem is ensured by 2 wide-section peroxide EPDM o-rings; the one on the outside is easy

to replace, by disassembling the stainless steel plate held in place by a flexible ring. For both the 3- and 4-way versions, different Kv values are available for the same size, so that each of them can be used in a specific situation according to the system requirements.

■ TECHNICAL FEATURES

Max operating temperature: 120 °C

Max operating pressure: 10 bar

Min operating torque: 1 N·m

Leakage percentage: 0.5 % of Kvs

■ MATERIALS

Valve body: CW617N (up to G 1 1/4" size); CB753S (for G 1 1/2" and 2" sizes)

Rotor and other brass parts: CW617N

Graduated adjustment plate: AISI 304

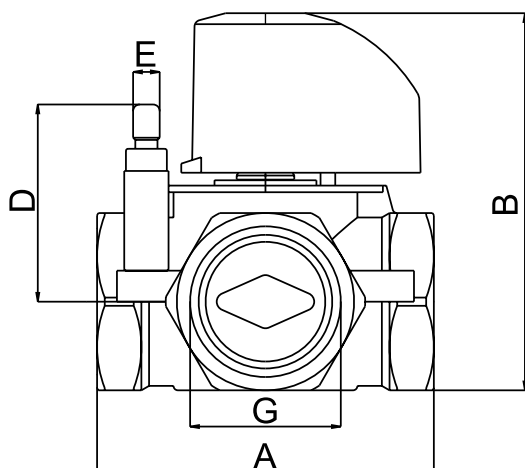
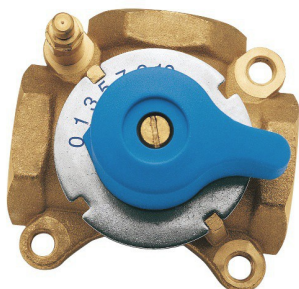
Rubber parts: peroxide EPDM

Knob: PA + 30% glass fibers

DIMENSIONS

MIX 0xx. Rotor 3-way valve

MIX 1xx. Rotor 4-way valve



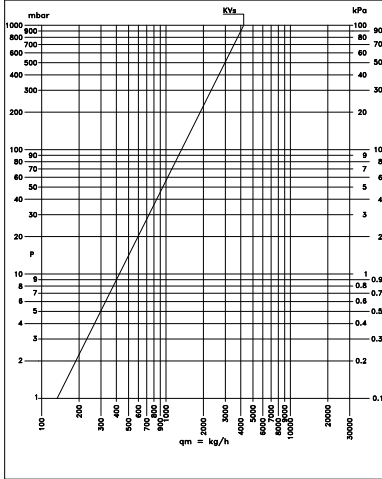
MIX 0xx/MIX 1xx - Dimensions and codes

ART.	COD.	WAYS	SIZE	Kv	A	B	D	E	G
MIX 011	501547	3	3/4"	4	76	85	44	6	3/4"
MIX 012	501548		3/4"	6	76	85			3/4"
MIX 013	501549		3/4"	8	76	85			3/4"
MIX 021	501550		1"	8	76	85			1"
MIX 022	501551		1"	12	76	85			1"
MIX 031	501552		1 1/4"	12	82	90			1 1/4"
MIX 032	501553		1 1/4"	18	82	90			1 1/4"
MIX 041	501564		1 1/2"	28	112	119			1 1/2"
MIX 051	501565		2"	44	119	119			2"
MIX 111	501554	4	3/4"	4	76	85	44	6	3/4"
MIX 112	501555		3/4"	6	76	85			3/4"
MIX 113	501556		3/4"	8	76	85			3/4"
MIX 121	501557		1"	8	76	85			1"
MIX 122	501558		1"	12	76	85			1"
MIX 131	501559		1 1/4"	12	82	90			1 1/4"
MIX 132	501560		1 1/4"	18	82	90			1 1/4"
MIX 141	501562		1 1/2"	28	112	119			1 1/2"
MIX 151	501563		2"	44	119	119			2"

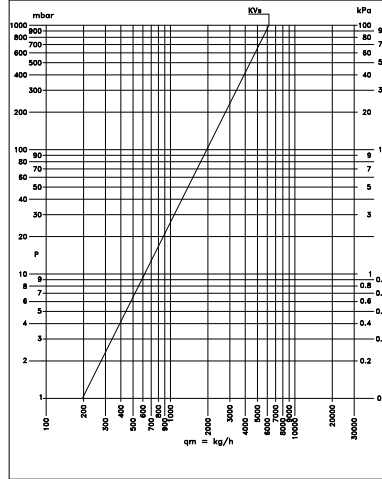
HYDRAULIC FEATURES

3-way valves

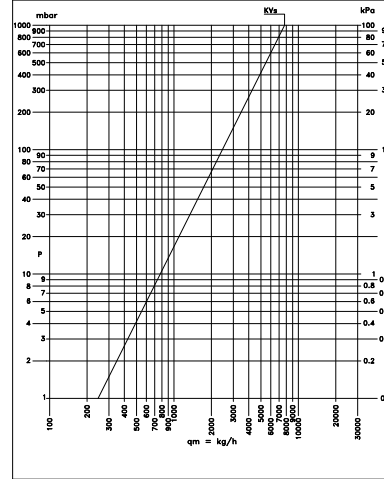
MIX 011 - Kvs = 4.24



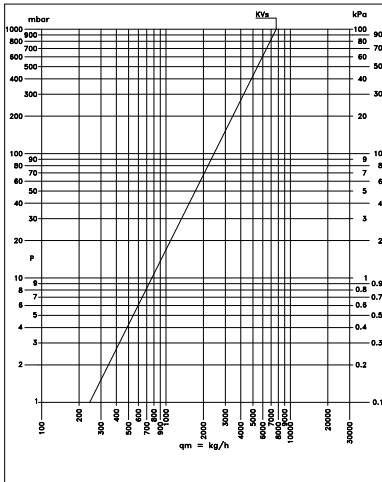
MIX 012 - Kvs = 6.20



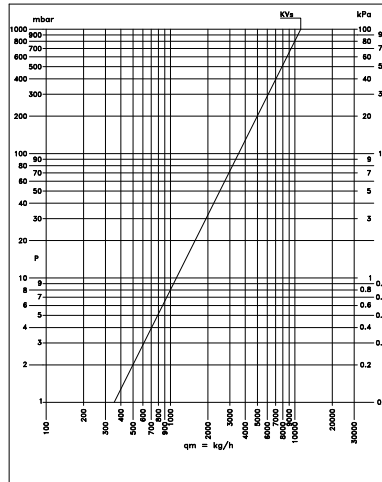
MIX 013 - Kvs = 7.76



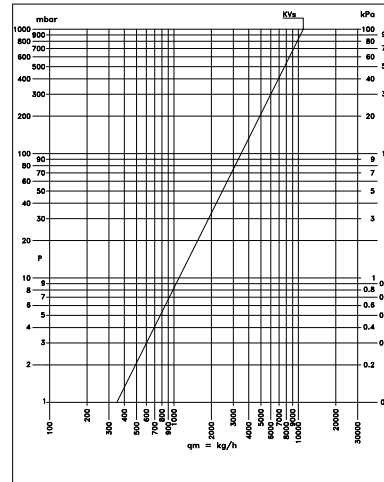
MIX 021 - Kvs = 7.71



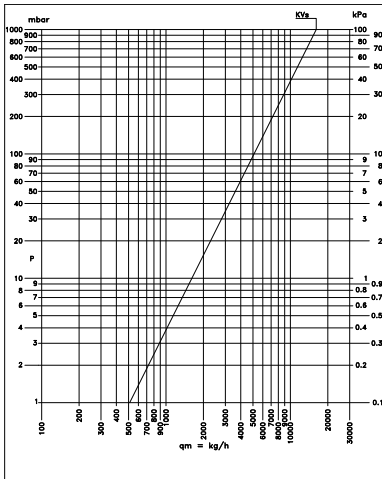
MIX 022 - Kvs = 11.57



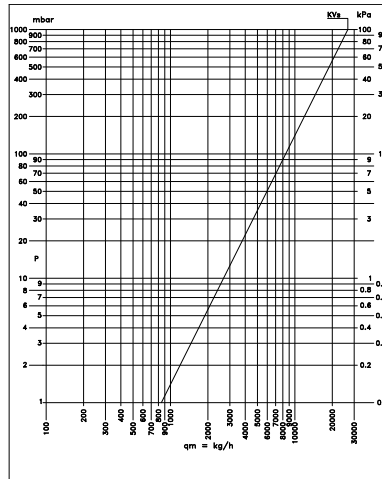
MIX 031 - Kvs = 11.33



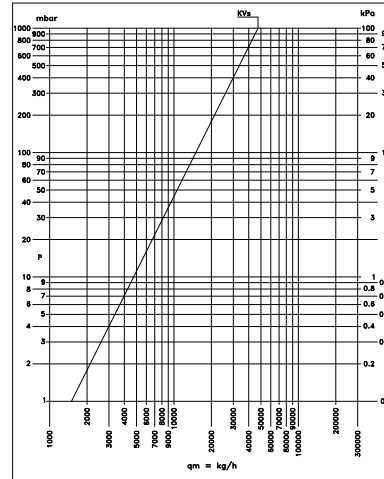
MIX 032 - Kvs = 16.91



MIX 041 - Kvs = 27.12



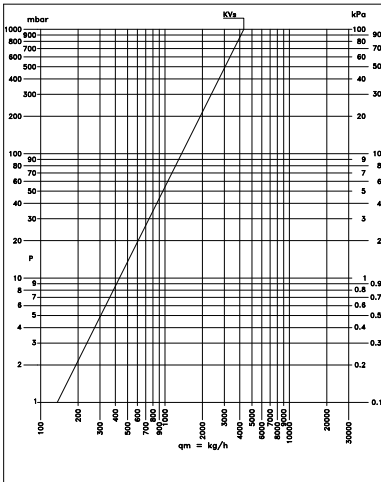
MIX 051 - Kvs = 47.62



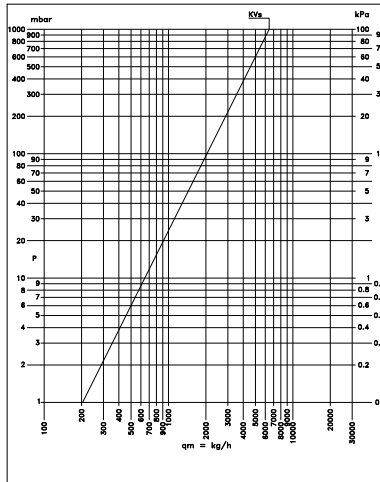
Permitted Kv tolerance: $\pm 10\%$

4-way valves

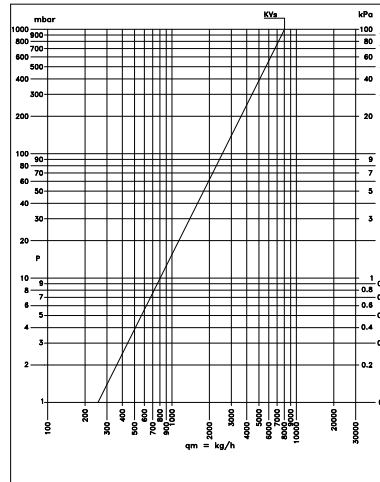
MIX 111 - Kvs = 4.33



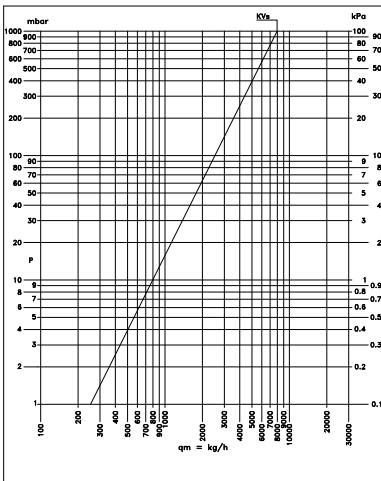
MIX 112 - Kvs = 6.47



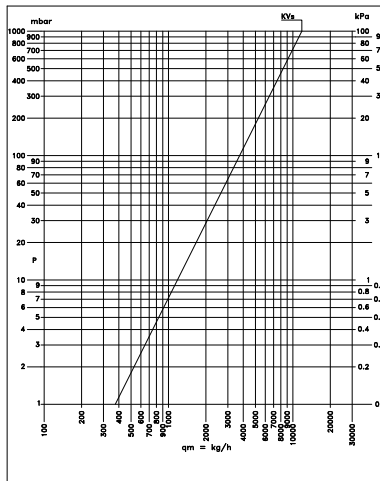
MIX 113 - Kvs = 8.04



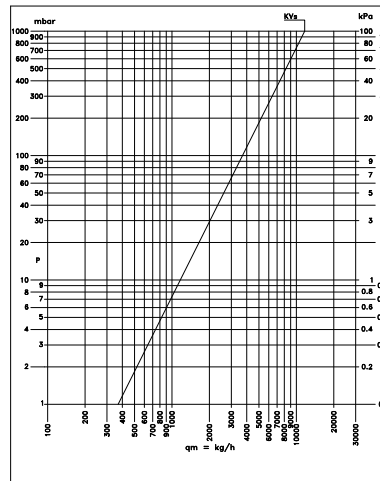
MIX 121 - Kvs = 7.97



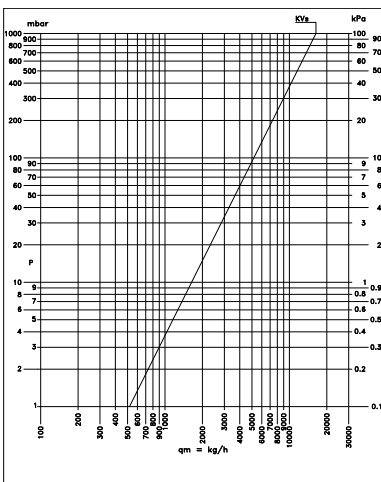
MIX 122 - Kvs = 12.40



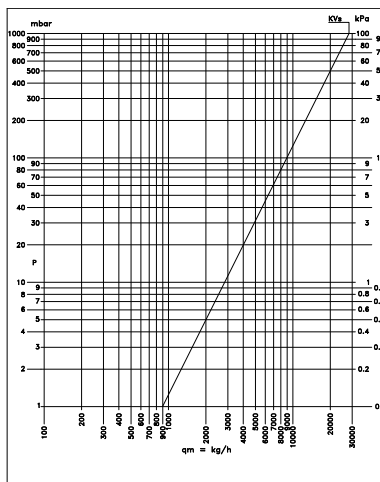
MIX 131 - Kvs = 12.23



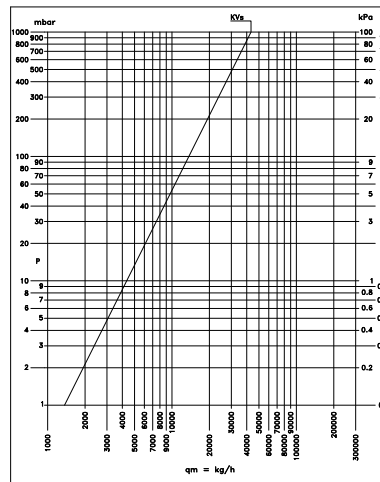
MIX 132 - Kvs = 17.11



MIX 141 - Kvs = 28.57



MIX 151 - Kvs = 43.54

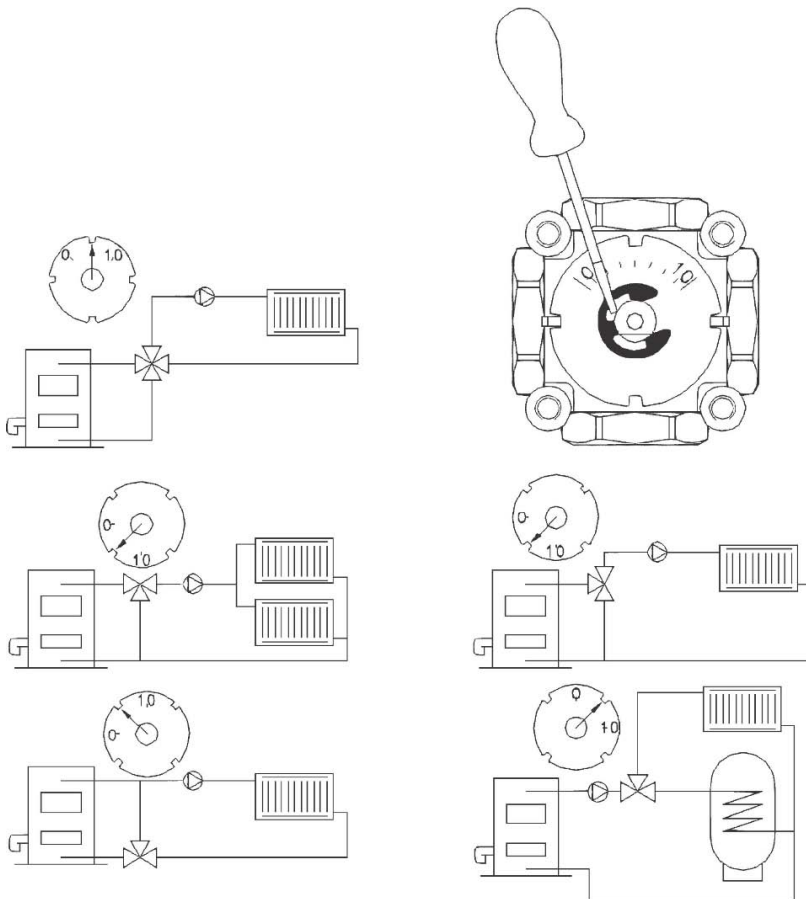


Permitted Kv tolerance: $\pm 10\%$

■ OPERATING INSTRUCTIONS

Installation

The mixing valves can be assembled and sealed with PTFE tape, hemp and paste or anaerobic resins. If positioning is needed after tightening, PTFE-based products (tape or resins) are not recommended. As concerns anaerobic resins, check that parts to be assembled are well degreased. Depending on the assembling and on the flow direction, change the position of the graduated plate, or rotate it, in order to have a counterclockwise graduation. N.B.: The plate can be moved after removing the seeger ring on it, beneath the adjustment knob.



■ NOTES

Operation torque is low (about 1 N·m). However, the use of servomotors with at least 5 N·m torque is recommended in order to avoid problems induced by scaling, that may occur over time.

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