

Data sheet

3-way valve (PN 10)

KOVM - internal thread

Description



KOVM is 3-way mixing valve which can, among others, be used for the water-side regulation of terminals in the form of "fan-coils" or as induction units.

It can be combined with:

- RAVK self-acting thermostatic actuators

Main data:

- DN 15
- k_{vs} 0.63 - 2.0 m³/h
- PN 10
- Temperature:
 - Circulation water / glycolic water up to 30 %: 2 ... 90 °C
- Connections:
 - Int. thread

Ordering

Example:
3-way valve; DN 15; k_{vs} 1.5; PN 10;
 t_{max} 90 °C; int. thread.

- 1x KOVM DN 15 valve
Code No: **013U3015**

Option:

- 1x Comp. fittings
Code No: **013G4112**

KOVM valve

Picture	DN	k_{vs} ¹⁾ (m ³ /h)	Connection ISO 7/1	Differential pressure max. (bar)			Code No.
				with bypass	without bypass	Δp_c ²⁾	
	15	0.63	Rp 1/2	1.6	0.8	0.8	013U3014
		1.5			0.8	0.8	013U3015
		2.0			0.5	0.5	013U3020

¹⁾ k_{vs} gives the water flow with fully open valve and differential pressure across the valve $\Delta p_v = 1$ bar
²⁾ Δp_c gives the max. differential pressure across the heat exchanger controlled by the valve

Accessories

Picture	Type designations	Connection	Dimensions	Code No. ³⁾
	Compression fittings ^{1), 2)}	G 1/2 A	Ø 12 × 1	013G4112
			Ø 14 × 1	013G4114
			Ø 15 × 1	013G4115
			Ø 16 × 1	013G4116

¹⁾ Compression fitting consist of compression ring and nut
²⁾ For steel and copper pipe
³⁾ The products can only be ordered in multiple packing containing 10 pieces each

Service kits

Picture	Type designations	Code No.
	Valve stuffing box	065F0006 ¹⁾

¹⁾ The products can only be ordered in multiple packing containing 10 pieces each

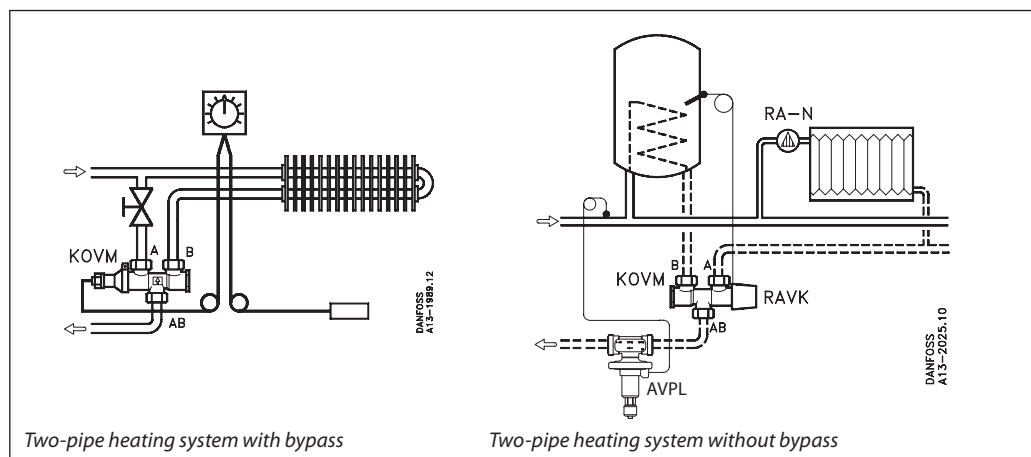
Technical data

Valve

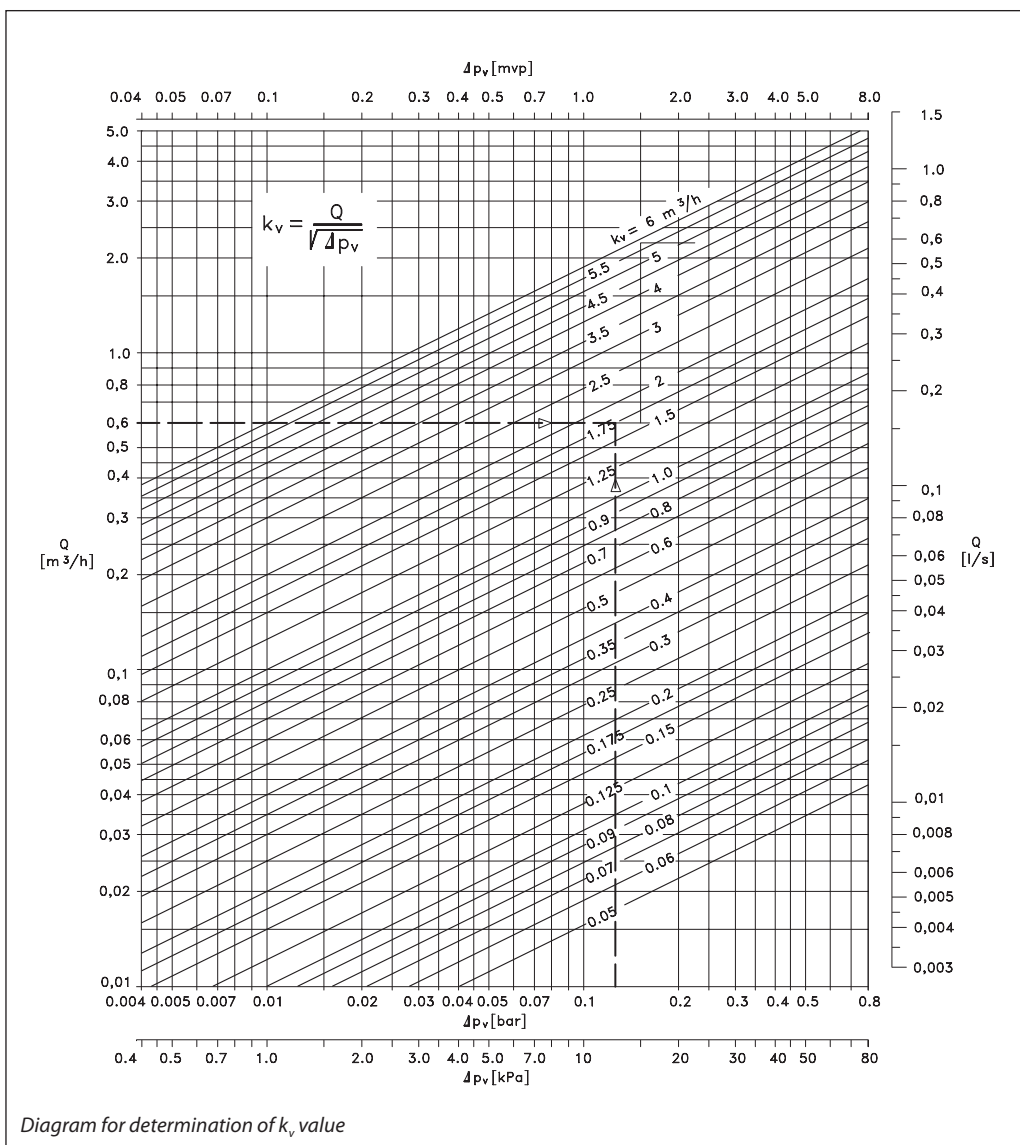
Nominal diameter	DN	15		
k_{vs} value	m ³ /h	0.63	1.5	2.0
Stroke	mm	1.5		
Cavitation factor z		≥ 0.5		
Nominal pressure	PN	10		
Medium		Circulation water / glycolic water up to 30 %		
Medium pH		Min. 7, max. 10		
Medium temperature	°C	2 ... 90		
Connections		Int. thread		
Materials				
Valve body ¹⁾		Brass		
Pressure pin and spindle		Stainless steel 18/8		
Valve cone		EPDM		
O-rings		EPDM		

¹⁾ The valve body material does not permit the valve being used for service hot water.

Application principles



Sizing



Given data:
 Water flow $Q = 0.6 \text{ m}^3/\text{h}$
 Pressure drop across valve $\Delta p = 12 \text{ kPa (0.12 bar)}$

The k_v value can be calculated from the formula:

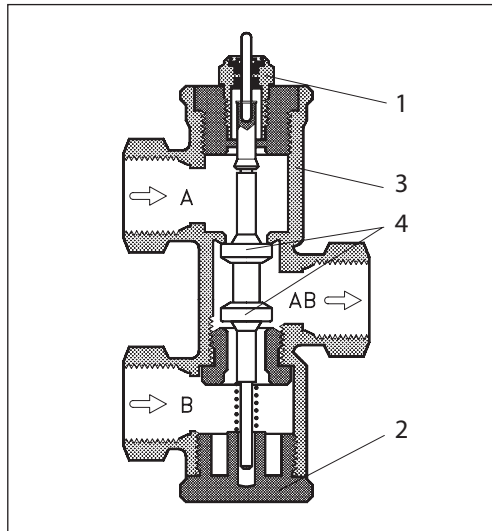
$$k_v = \frac{Q}{\sqrt{\Delta p}} = \frac{0,6}{\sqrt{0,12}} = 1,73 \text{ m}^3/\text{h}$$

or be read from the diagram on the sloping lines for $1.75 \text{ m}^3/\text{h}$, where the horizontal dotted line for $Q = 0.6 \text{ m}^3/\text{h}$ intersects the vertical dotted line for $\Delta p = 0.12 \text{ bar}$.

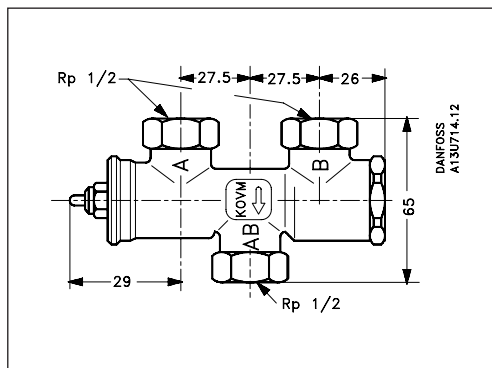
The selection is thus a valve with a k_{vs} value of $2.0 \text{ m}^3/\text{h}$.

Design

- 1. Valve stuffing box
- 2. Bottom screw
- 3. Valve body
- 4. Valve cone



Dimensions



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Heating Segment • heating.danfoss.com • +45 7488 2222 • E-Mail: heating@danfoss.com

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