ENGINEERING
TOMORROW

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

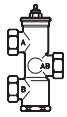
Ordering

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

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

Option:
- *1× Comp. fittings*
  *Code No: **013G4112***

KOVM valve

Picture	DN	k_{vs} [1] (m³/h)	Connection ISO 7/1	Differential pressure max. (bar)			Code No.
				with bypass	without bypass	Δp_c [2]	
	15	0.63	R_p ½	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 Δp_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 ½ 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*

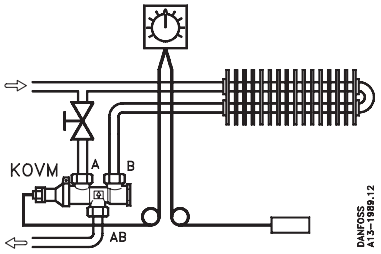
Technical data

Valve

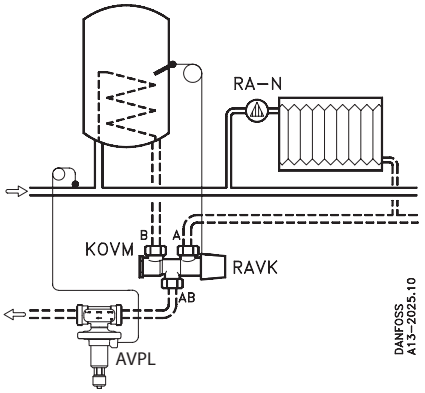
Nominal diameter	**DN**	**15**		
k_{VS} value	m^3/h	0.63	1.5	2.0
Stroke	mm	1.5		
Cavitation factor z		≥ 0.5		
Nominal pressure	PN	10		
Medium		Circulation water / glycolic water up to 30 %		
Medium pH		Min. 7, max. 10		
Medium temperature	°C	2 … 90		
Connections		Int. thread		
Materials				
Valve body[1)]		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



Two-pipe heating system with bypass



Two-pipe heating system without bypass

Sizing

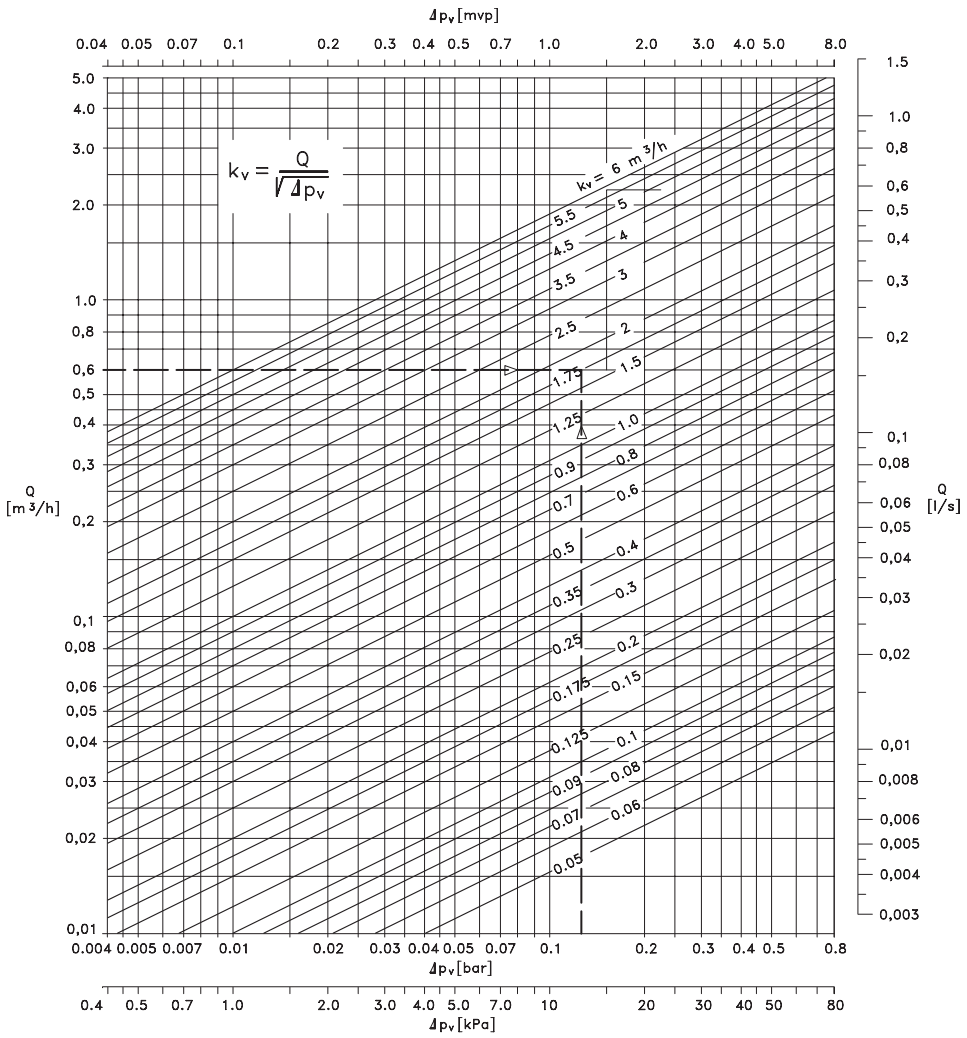


Diagram for determination of k_v value

Given data:
Water flow Q = 0.6 m³/h
Pressure drop across valve Δp = 12 kPa (0.12 bar)

The k_v value can be calculated from the formula:

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

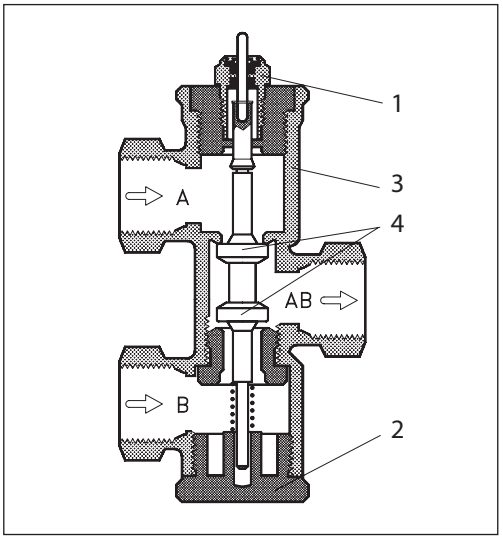
or be read from the diagram on the sloping lines for 1.75 m³/h, where the horizontal dotted line for Q = 0.6 m³/h intersects the vertical dotted line for Δp = 0.12 bar.

The selection is thus a valve with a k_{vs} value of 2.0 m³/h.

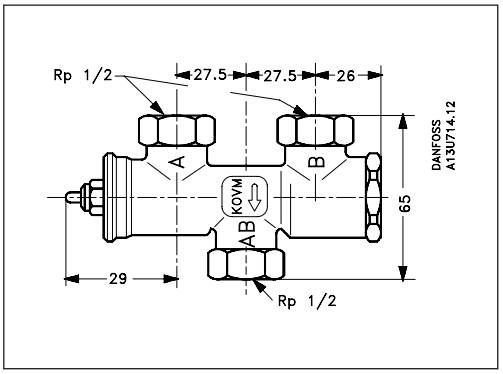
Data sheet **KOVM (PN 10)**

Design

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



Dimensions



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