

## Data sheet

# 2 - way seated valve (PN 16)

## VMA - external thread

### Description



VMA is 2-way seated valve primarily for use in district heating systems.

It can be combined with:

- ABV thermohydraulic actuators and
- VMA DN 15 can additionally be combined with self-acting thermostatic actuators RAVI, RAVK and RAVV

All sizes have external thread for flat packing (DIN 7603).

#### Main data:

- DN 15
- $k_{vs}$  0,25 - 2,5 m<sup>3</sup>/h
- PN 16
- Temperature:
  - Circulation water / glycolic water up to 30%: 2 ... 130 °C
- Connections:
  - Ext. thread (weld-on and thread tailpieces)

### Ordering

Example:  
2-way seated valve, DN 15;  $k_{vs}$  1,6;  
PN 16;  $t_{max}$  130 °C; ext. thread

- 1× VMA DN 15 valve  
Code No: **065F2034**

Option:

- 1× Weld-on tailpieces  
Code No: **003H6908**

### VMA valve

Picture	DN (mm)	$k_{vs}$ (m <sup>3</sup> /h)	Connection		Code No.
	15	0,25	Cylindrical external thread acc. to ISO 228/1	G 3/4 A	<b>065F2030</b>
		0,4			<b>065F2031</b>
		0,63			<b>065F2032</b>
		1,0			<b>065F2033</b>
		1,6			<b>065F2034</b>
		2,5			<b>065F2035</b>

### Accessories

Picture	Type designations	DN	Connection		Code No.
	Weld-on tailpieces	15	-		<b>003H6908</b>
	External thread tailpieces	15	Conical ext. thread acc. to EN 10226-1	R 1/2	<b>003H6902</b>

### Service kits

Picture	Type designations	Code No.
	Valve stuffing box	<b>065F0006<sup>1)</sup></b>

<sup>1)</sup> The products can only be ordered in multiple packing containing 10 pieces each

Technical data

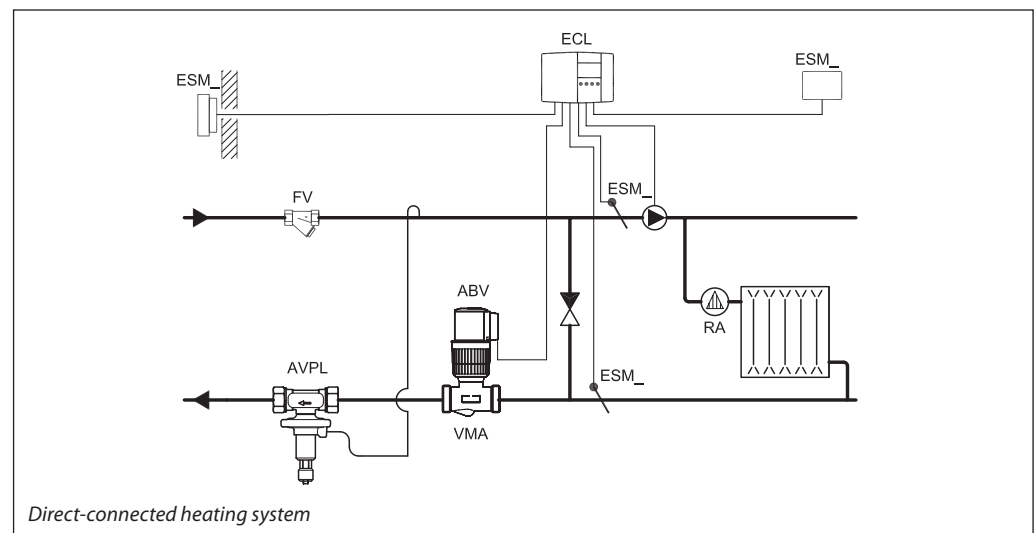
Valve

<b>Nominal diameter</b>	<b>DN</b>	<b>15</b>					
$k_{vs}$ value	m <sup>3</sup> /h	0,25	0,4	0,63	1,0	1,6	2,5
Stroke	mm	3					
Control ratio		1:50					
Control characteristic		Approximately linear					
Cavitation factor z		≥ 0.5					
Leakage acc. to standard IEC 534		0,05%					
Nominal pressure	PN	16					
Medium		Circulation water / glycolic water up to 30%					
Medium pH		Min. 7, max. 10					
Medium temperature	°C	2 ... 130					
Connections	valve	Ext. thread					
	tailpieces	Weld-on and external thread					
<b>Materials</b>							
Valve body		Dezincing free brass					
Valve seat		Stainless steel 18/8, mat. No. 1.4305, DIN 17440, SS 14.23.46					
Valve cone		EPDM					
Spindle		Dezincing free brass					
Valve insert		Dezincing free brass					
Valve stuffing box		Dezincing free brass					

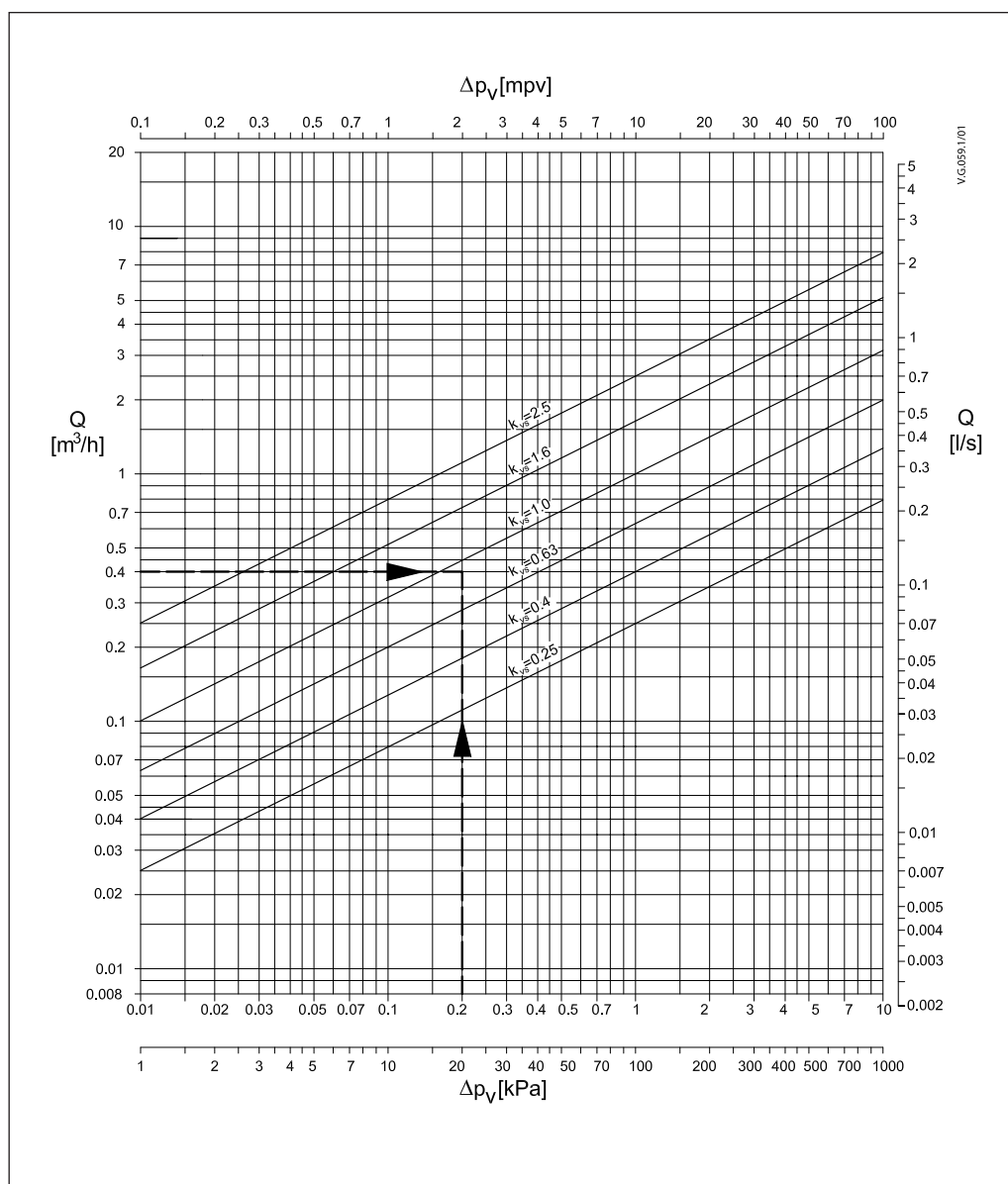
Max. differential pressure

<b>Nominal diameter</b>	<b>DN</b>	<b>15</b>					
$k_{vs}$ value	m <sup>3</sup> /h	0,25	0,4	0,63	1,0	1,6	2,5
RAVI / RAVV	bar	5,0	5,0	2,0	2,0	2,0	1,0
RAVK		3,0	3,0	1,5	1,5	1,5	0,5
ABV		7,0	7,0	7,0	7,0	7,0	4,0

Application principle



Sizing



Given data:

$$P_{max} = 9,3 \text{ kW}$$

$$\Delta t = 20 \text{ K}$$

$$\Delta p_V = 0,2 \text{ bar}$$

$P_{max}$  - heating power (kW)

$\Delta t$  - temperature difference (K)

$\Delta p_V$  - differential pressure across the valve

Maximum flow  $Q_{max}$  ( $m^3/h$ ) through the valve is calculated according to formula:

$$Q_{max} = \frac{P_{max} \times 0,86}{\Delta t} = \frac{9,3 \times 0,86}{20}$$

$$Q_{max} = 0,4 \text{ m}^3/h$$

$k_V$  value is calculated according to formula:

$$k_V = \frac{Q_{max}}{\sqrt{\Delta p_V}} = \frac{0,4}{\sqrt{0,2}}$$

$$k_V = 0,89 \text{ m}^3/h$$

Chosen  $k_{VS} = 1,0 \text{ m}^3/h$

or read from the sizing diagram by taking a line through  $Q$  scale ( $0,4 \text{ m}^3/h$ ) and  $\Delta p_V$  scale ( $0,2 \text{ bar}$ ) to intersect  $k_V$ -scale at  $0,89 \text{ m}^3/h$

Chosen  $k_{VS} = 1,0 \text{ m}^3/h$

Solution:

The example selects ext. thread seated valve VMA DN 15,  $k_{VS}$  value 1,0

Dimensions

