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^3/h
- PN 16
- Temperature:
  - Circulation water / glycolic water up to 30 %: 2 … 130 °C
- Connections:
  - Ext. thread (weld-on and thread tailpieces)

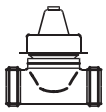
Ordering

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^3/h)	Connection		Code No.
	15	0,25	Cylindrical external thread acc. to ISO 228/1	G ¾ A	**065F2030**
		0,4			**065F2031**
		0,63			**065F2032**
		1,0			**065F2033**
		1,6			**065F2034**
		2,5			**065F2035**

Accessories

Picture	Type designations	DN	Connection		Code No.
	Weld-on tailpieces	15	-		**003H6908**
	External thread tailpieces	15	Conical ext. thread acc. to EN 10226-1	R ½	**003H6902**

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

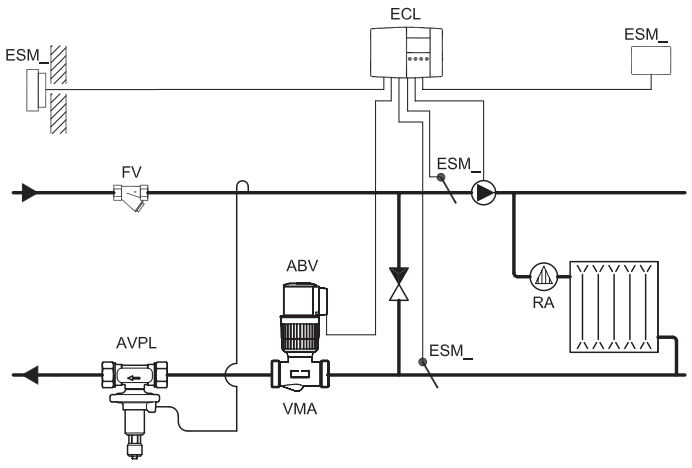
Valve

Nominal diameter	**DN**	**15**					
k_{VS} value	m^3/h	0,25	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					
Materials							
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

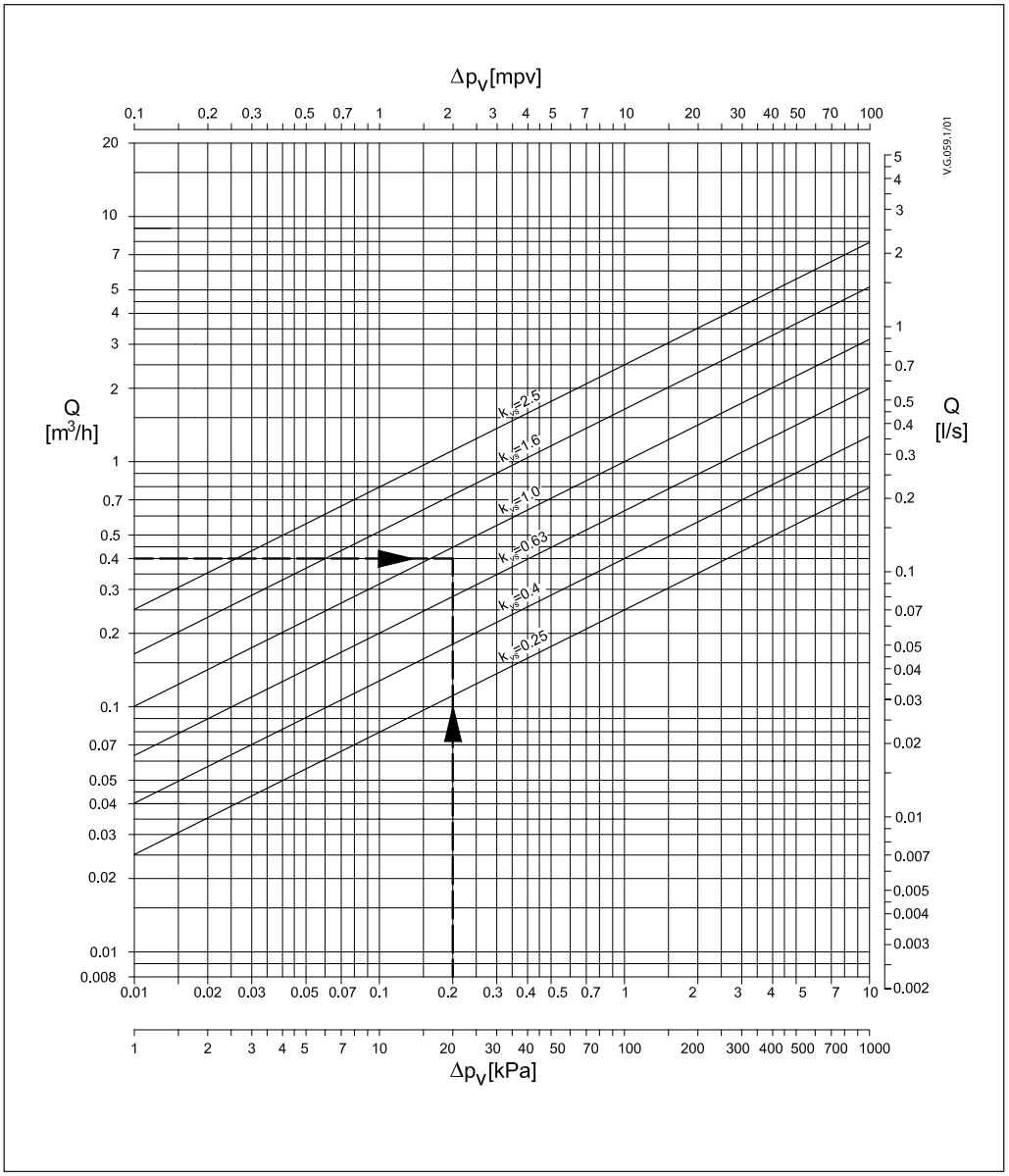
Nominal diameter	**DN**	**15**					
k_{VS} value	m^3/h	0,25	0,4	0,63	1,0	1,6	2,5
RAVI / RAVV	bar	5,0	5,0	2,0	2,0	2,0	1,0
RAVK		3,0	3,0	1,5	1,5	1,5	0,5
ABV		7,0	7,0	7,0	7,0	7,0	4,0

Application principle



Direct-connected heating system

Sizing



Given data:
P_{max} = 9,3 kW
Δt = 20 K
Δp_v = 0,2 bar

P_{max} - heating power (kW)
Δt -temperature difference (K)
Δp_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 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 m^3/h

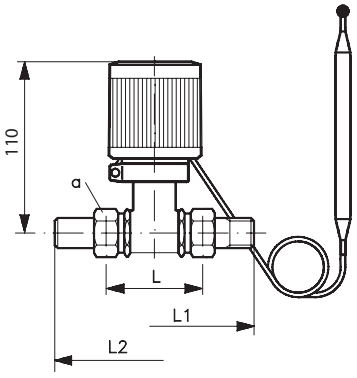
Chosen k_{VS} = 1,0 m^3/h

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

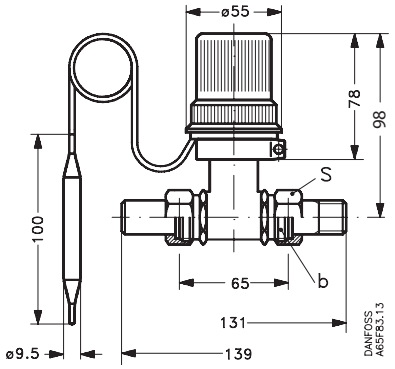
Chosen k_{VS} = 1,0 m^3/h

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

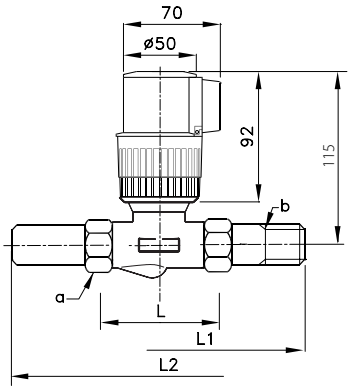
Dimensions



VMA DN 15 + RAVI-RAVK



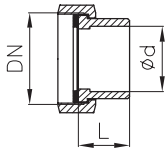
VMA DN 15 + RAVV



VMA DN 15 + ABV

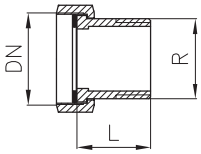
Type	L (mm)	L1 (mm)	L2 (mm)	a ISO 228/1	b ISO 7/1	Weight (kg)
VMA 15	65	131	139	G ¾ A	R ½	0.26

Weld-on tailpieces



G (mm)	Ød (mm)	L (mm)	Weight (kg)
15	15	35	0.18

External thread tailpieces



G (")	R (")	L (mm)	Weight (kg)
¾	½	25.5	0.17