

## Data sheet

### 3-way seated valve VMV (PN 16)

- version with RAV neck, internal thread
- version with M30 neck, external thread

#### Description



VMV is 3-way seated mixing valve primarily use for flow temperature control.

It can be combined with:

- AMV(E) 10, 13 electrical actuator
- AMV 150 + AMV(E) 130/140 electrical actuator
- ABV thermohydraulic actuator
- VMV DN 15 and DN 20 can additionally be combined with self-acting thermostatic actuators RAVK

#### Main data:

- DN 15-40
- $k_{vs}$  2,5-12 m<sup>3</sup>/h
- PN 16
- Temperature:
  - Circulation water / glycolic water up to 30 %: 2 ... 120 °C
- Connections:
  - Internal and external thread

#### Ordering

Example:  
3-way seated valve, DN 15,  $k_{vs}$  2,5;  
PN 16,  $T_{max}$  120 °C, ext. thread

- 1x VMV DN 15 valve  
Code No: **065F6015**

Option:

- 1x Ext. thread tailpieces  
Code No: **065Z7010**

#### VMV valve

Picture	DN	$k_{vs}$ (m <sup>3</sup> /h)	Connection	Actuator connection	Code No.
	15	2,5	Internal thread acc. to ISO 7/1	R <sub>p</sub> 1/2	<b>065F0015</b>
	20	4,0		R <sub>p</sub> 3/4	<b>065F0020</b>
	25	6,3		R <sub>p</sub> 1	<b>065F0025</b>
	32	10		R <sub>p</sub> 1 1/4	<b>065F0032</b>
	40	12		R <sub>p</sub> 1 1/2	<b>065F0040</b>
	15	2,5	Cylindrical external thread acc. to ISO 228/1	G 3/4 A	<b>065F6015</b>
	20	4,0		G 1 A	<b>065F6020</b>
	25	6,3		G 1 1/4 A	<b>065F6025</b>
	32	10		G 1 1/2 A	<b>065F6032</b>
	40	12		G 2 A	<b>065F6040</b>

#### Accessories

Picture	Type	Type designations	DN	Code No.
	VMVH <sup>1)</sup>	Manual operation unit		<b>065F0005</b>
	External thread tailpieces <sup>2)</sup>		15	<b>065Z7010</b>
			20	<b>065Z7011</b>
			25	<b>065Z7012</b>
			32	<b>065Z7013</b>
	Adapter RAV / M30 neck		15 - 20	<b>065Z7018</b>

<sup>1)</sup> Only for valves with RAV neck

<sup>2)</sup> Only for valves with external thread (M30 neck); incl. 3 tailpieces per code number

#### Service kits

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

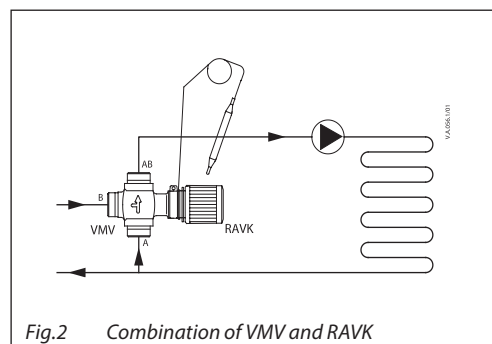
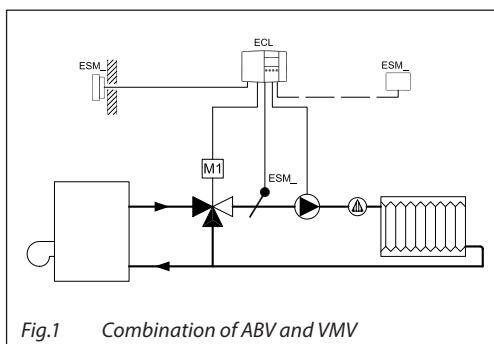
<sup>1)</sup> The products can only be ordered in multiple packing containing 10 pieces each

Technical data

VMV valve

Nominal diameter	DN	15	20	25	32	40
$k_{VS}$ value	m <sup>3</sup> /h	2,5	4,0	6,3	10	12
Stroke	mm	2,0	2,1	2,6	3,1	3,3
Control ratio		1:50				
Control characteristic		Approximately linear				
Cavitation factor z		$\geq 0,5$				
Leakage acc. to standard IEC 534		$A-AB \leq 0,05 \% \text{ of } k_{VS}$				
		$B-AB \leq 0,1 \% \text{ of } k_{VS}$				
Nominal pressure	PN	16				
Medium		Circulation water / glycolic water up to 30 %				
Medium pH		Min. 7, max. 10				
Medium temperature	°C	2 ... 120				
Connections		Int. and ext. thread				
<b>Materials</b>						
Valve body		Red bronze CuSn5ZnPb (Rg5)				
Valve seat		Red bronze CuSn5ZnPb (Rg5)				
Valve cone		EPDM				
Spindle		Stainless steel				

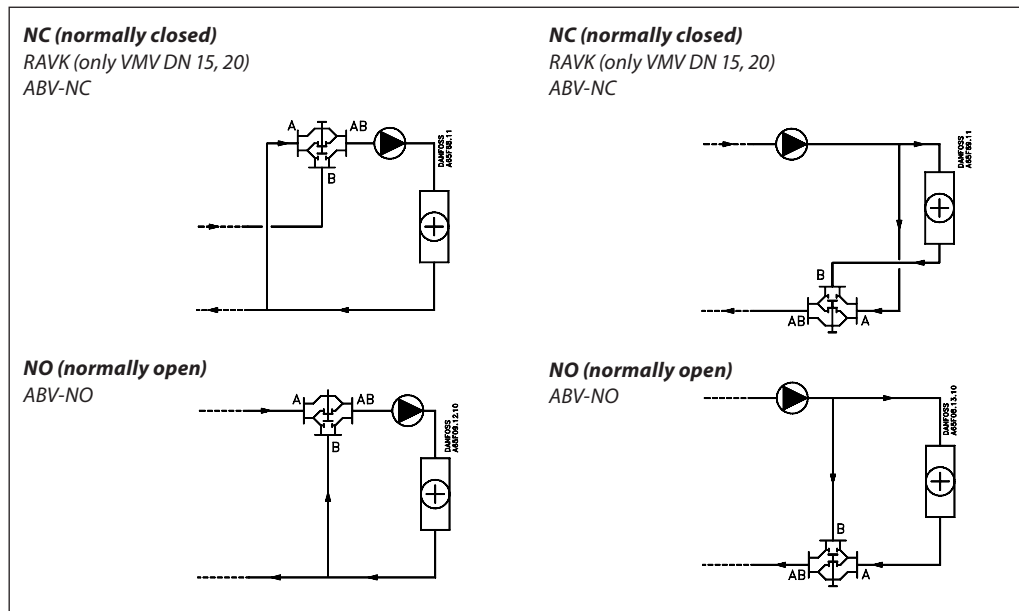
Application principles



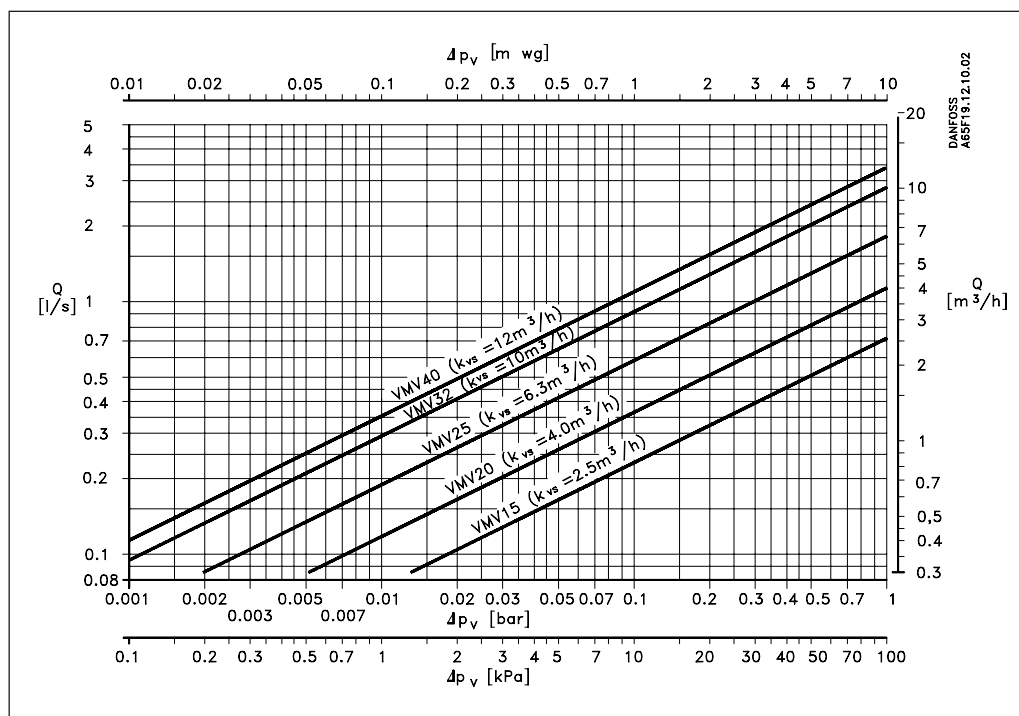
Installation

VMV must always be installed as a mixing valve (two inlet ports-one outlet port), according to flow direction arrows cast into the valve body. VMV closes across main ports A-AB on rising spindle travel.

Combination of VMV and RAVK (see "Application principles", Fig.2): Inlet must be on port B and return on port A.



Sizing

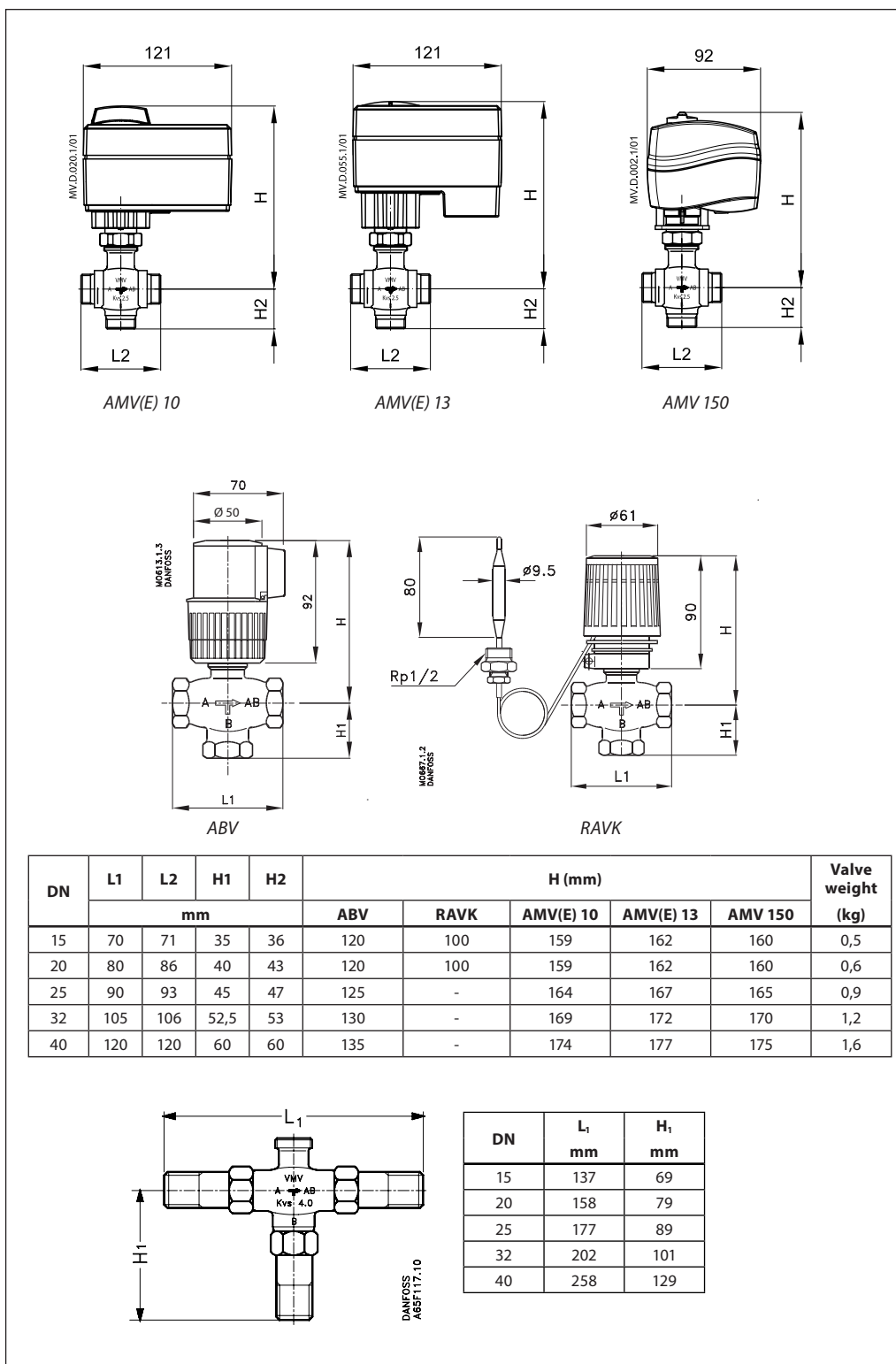


$$Q = k_{VS} \sqrt{\Delta p_v}$$

$Q$  - actual flow in valve in m<sup>3</sup>/h  
 $k_{VS}$  - flow in valve in m<sup>3</sup>/h with  $\Delta p_v = 1$  bar  
 $\Delta p_v$  - differential pressure across valve (bar)

Type	Max $\Delta p_v$
VMV 15	0,6 bar
VMV 20	0,5 bar
VMV 25	0,3 bar
VMV 32	0,2 bar
VMV 40	0,2 bar

Dimensions



Danfoss can accept no responsibility for possible errors in catalogues, brochures and other printed material. Danfoss reserves the right to alter its products without notice. This also applies to products already on order provided that such alterations can be made without consequential changes being necessary in specifications already agreed. All trademarks in this material are property of the respective companies. Danfoss and the Danfoss logotype are trademarks of Danfoss A/S. All rights reserved.