

## Data sheet

# 2 - way valve VS 2

### Description / Application



The valves with split or linear characteristic provide a quality, cost effective solution for most LPHW and chilled water applications. These valves may be used with glycol concentrations of up to 30% .

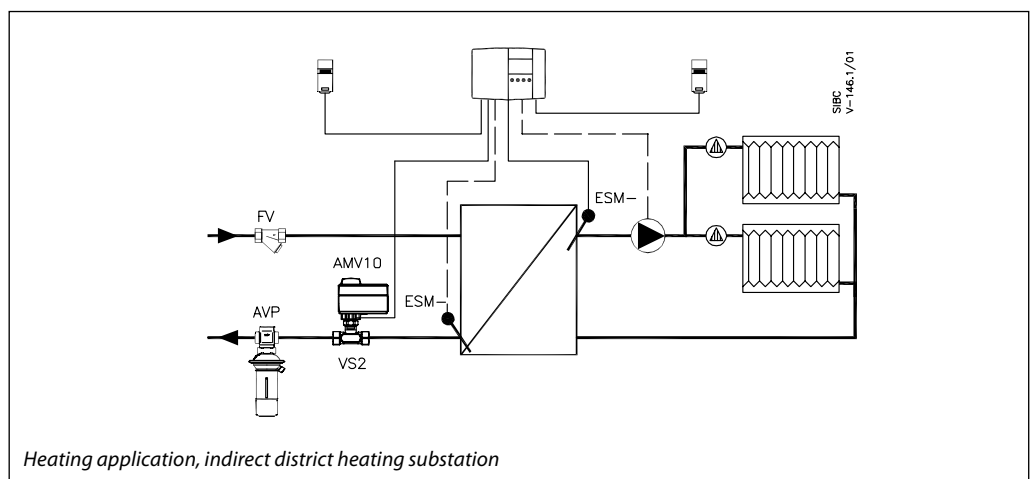
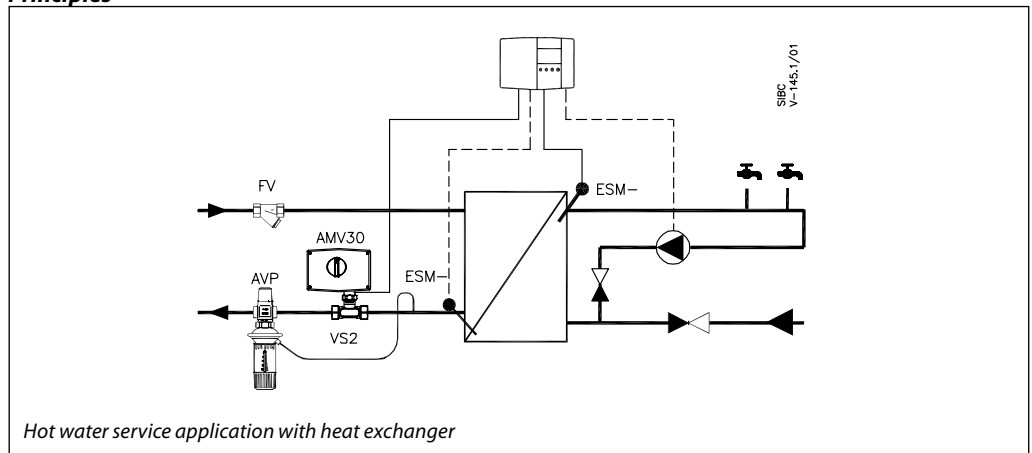
#### Main data:

- SPLIT or LIN characteristic
- Ext. thread PN 16
- Suitable for use with AMV(E) 10/20/30, AMV(E) 13/23/33 and AMV 100 (only DN 15) actuators

Type	AMV 100	AMV 10/13	AMV(E) 10/13	AMV(E) 20/23	AMV(E) 30/33
VS2 DN 15 *	•	•	-	-	-
VS2 DN 20	-	-	•	•	•
VS2 DN 25	-	-	•	•	•

\* VS2 DN 15 valve has linear characteristic and cannot be recommended to be used with modulating controlled actuators (AME actuators) for DHW production.

### Principles



**Ordering**

DN	Ext. thread ISO 228/1	$k_{vs}$ (m <sup>3</sup> /h)	Stroke (mm)	Code No.
15	G ¾ A	0.25	4	<b>065F2111</b>
		0.40	4	<b>065F2112</b>
		0.63	4	<b>065F2113</b>
		1.0	4	<b>065F2114</b>
		1.6	4	<b>065F2115</b>
20	G 1 A	2.5	5	<b>065F2120</b>
25	G 1¼ A	4.0	5	<b>065F2125</b>

**Accessories**

DN	Weld-on tailpieces	Tailpieces with external threads
15	<b>003H6908</b>	<b>003H6902</b>
20	<b>003H6909</b>	<b>003H6903</b>
25	<b>003H6910</b>	<b>003H6904</b>

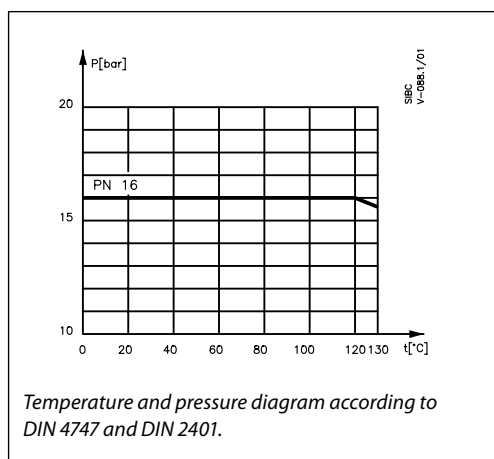
**Spare parts**

Type	Valve size	Code No.
Stuffing box	DN 15 - 25	<b>065F0006</b>

**Ordering**

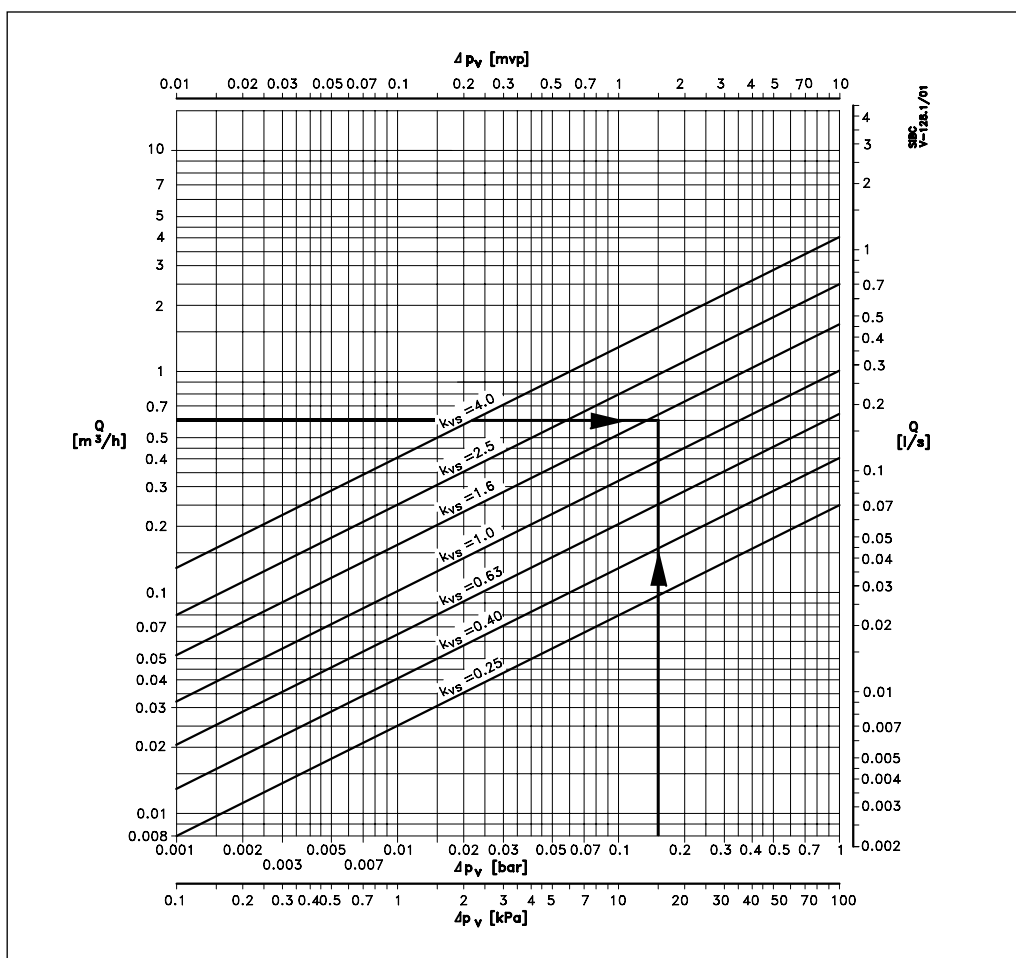
Pressure stage	PN 16
Max. water temperature	130 °C
Cavitation factor	≥ 0.5
Max. closing pressure $\Delta p$	10 bar
Max. operating pressure $\Delta p_v$	6 bar *
Control characteristic	Lin for $k_{vs}$ 0.25 - 1.6, split for $k_{vs}$ 2.5 - 4.0
Leakage acc. to standard IEC 534	Max. 0.05% of $k_{vs}$
Control range	> 50:1
Media	Water, pH 7 - 10 Glycolic water 30% down to 5 °C
Thread standard	ISO 228 - 1

\* Increased noise level when  $\Delta p_v$  is higher than 4 bar


**Materials**

Body	Dezincing free brass
Cone, seat and spindle	Stainless steel
Gasket	EPDM O-rings

Sizing



**Example:**

Given:

$P = 14 \text{ kW}$       $P =$  heating power (kW)  
 $\Delta t = 20 \text{ K}$       $\Delta t =$  temperature difference (K)  
 $\Delta P_v = 0.15 \text{ bar}$       $\Delta P_v =$  differential pressure across the valve (bar)

Current flow  $Q$  ( $\text{m}^3/\text{h}$ ) through the valve is calculated according to formula:

$$Q = \frac{P \times 0.86}{\Delta t}$$

$$Q = \frac{14 \times 0.86}{20} = 0.6 \text{ m}^3/\text{h}$$

$k_{vs}$  value - flow ( $\text{m}^3/\text{h}$ ) in fully opened valve is calculated according to formula:

$$k_{vs} = \frac{Q}{\sqrt{\Delta p_v}}$$

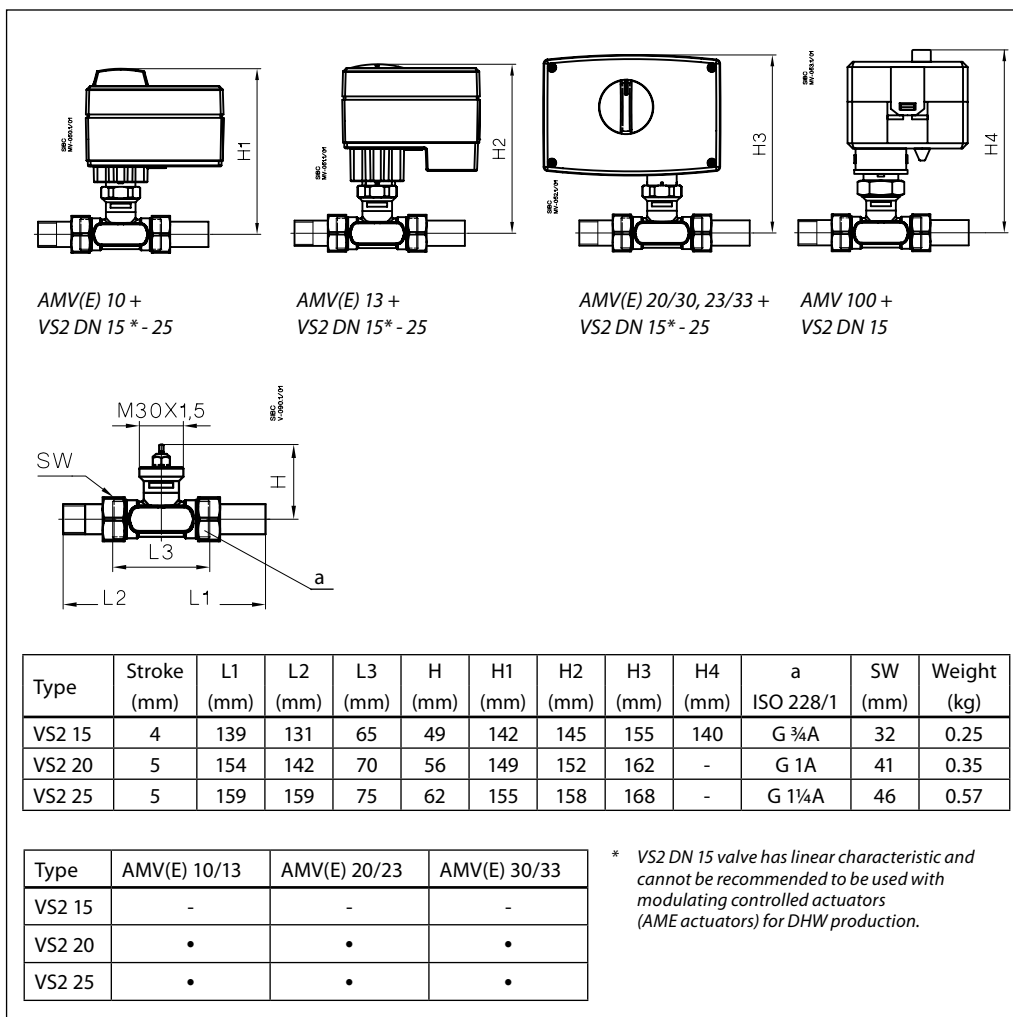
$$k_{vs} = \frac{0.6}{\sqrt{0.15}} = 1.5 \rightarrow 1.6 \text{ m}^3/\text{h}$$

or read from sizing diagram by taking a line through  $Q$  scale ( $0.6 \text{ m}^3/\text{h}$ ) and  $\Delta p$  scale ( $0.15 \text{ bar}$ ) to intersect  $k_{vs}$  axis at 1.6.

**Solution:**

VS 2 DN 15  $k_{vs} = 1.6$

Dimensions



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