



## Installation guide

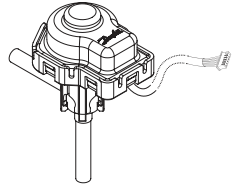
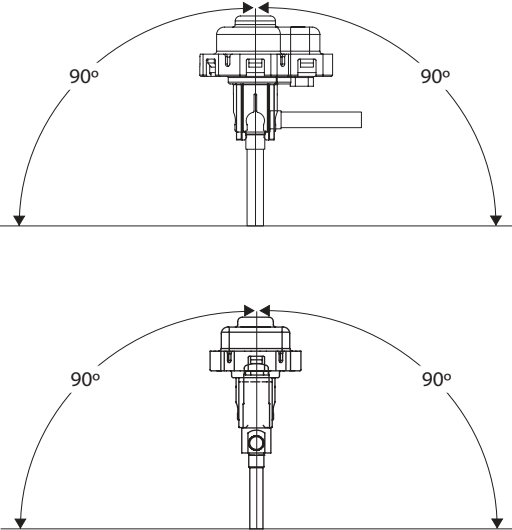
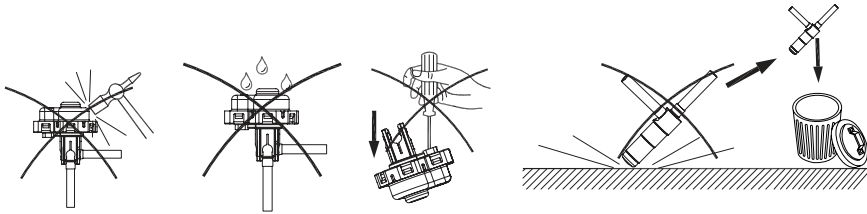
# Electric expansion valve Type ETS 5M Vaillant Version

034R9839



034R9839



<p><b>Refrigerants</b> For a complete list of approved refrigerants, please visit <a href="http://store.danfoss.com/">http://store.danfoss.com/</a> and search for individual code numbers, where refrigerants are listed as part of product specifications.</p>	<p><b>Max. working pressure</b> PS / MWP: 4.9 MPa / 49 barg / 710 psig</p>		
	<p><b>Refrigerant temperature</b> <math>t_{Min.} : -30\text{ °C} / -22\text{ °F}</math>, <math>t_{Max.} : 70\text{ °C} / 158\text{ °F}</math></p>		
<p><b>⚠ Safety notes for flammable refrigerants (R454C, R454A, R1234ze, R290, R32, R452B, R454B, R455A, R1234yf)</b></p> <ul style="list-style-type: none"> <li>- This product is validated in accordance to ATEX, EN 378, ISO 5149, ASHRAE 15, IEC 60335-2-x or equivalent standards.</li> <li>- Ignition risk is evaluated in accordance to ISO 5149 and IEC 60335.</li> <li>- See safety note below.</li> </ul>	<p><b>Allowable ambient temperature</b> <math>-30\text{ °C} / -22\text{ °F} - 70\text{ °C} / 158\text{ °F}</math></p>		<p><b>Phase current</b> 113 mA</p> <p><b>Resistance</b> 187 Ω</p>
	<p><b>Stepper motor type</b> Unipolar</p>		
	<p><b>Nominal voltage</b> 21.1 V DC</p>		
<p><b>⚠ Safety notes:</b></p> <ul style="list-style-type: none"> <li>- The product can be applied on systems with R454C, R454A, R1234ze, R290, R32, R452B, R454B, R455A, R1234yf as the working fluid.</li> <li>- For countries where safety standards are not an indispensable part of the safety system Danfoss recommend the installer to get a third party approval of the system containing flammable refrigerant.</li> <li>- Note, please follow specific selection criteria stated in the datasheet for these particular refrigerants.</li> <li>- The valve must only be used in closed circuit refrigeration system, where no oxygen is present acc. EN 378, ISO 5149 ASHRAE 15 or IEC 60335-2-x or equivalent standards.</li> </ul>	<p><b>1 Mounting Angle</b></p> 		
	<p><b>⚠ Warning!</b></p>  <p>Do not connect directly to AC / DC power source. Connect valve to appropriate controller / driver only. Do not operate valve while assembling or disassembling.</p>		

**2 Open position**

Always open valve to overdrive before brazing using manual coil.

ETS 5M manual coil:  
Code no. 034G3803

**3 Brazing option 1**

N<sub>2</sub> gas from opposite side of soldering point.

Max. 30sec

**Brazing option 2**

Max. 15sec

**4 Assembling**

**5 Connection**

05R-JWPF-HHLE-D

Table:1 Stepper motor open and close sequence

	Orange (A1)	Brown (A3)	Red (B1)	Black (B3)	White (Com)	
Valve Opening ↓ ↓	ON	OFF	OFF	OFF	0	Valve Closing ↑ ↑
	ON	OFF	ON	OFF	0	
	OFF	OFF	ON	OFF	0	
	OFF	ON	ON	OFF	0	
	OFF	ON	OFF	OFF	0	
	OFF	ON	OFF	ON	0	
	OFF	OFF	OFF	ON	0	
	ON	OFF	OFF	ON	0	

