

## Installation guide

# Electric regulating valves Type **CCMT 3 – 10 Light**

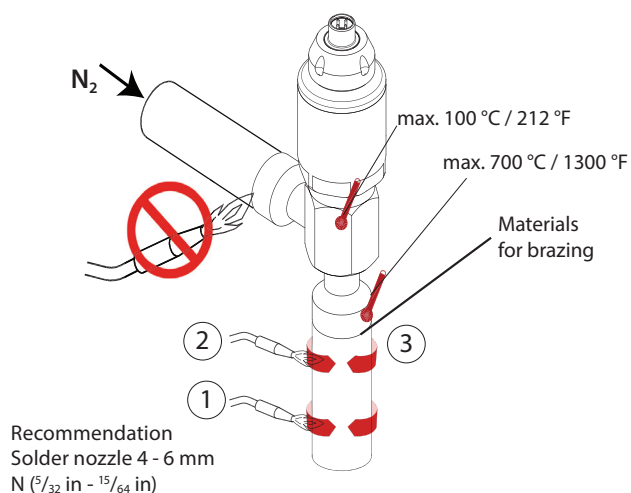
027R7256



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<p><b>Refrigerant:</b> R744 For other refrigerants, contact Danfoss.</p>	<p><b>Ambient temperature:</b> Min. -40 °C / -40 °F Max. 50 °C / 122 °F</p> <p><b>Fluid temperature:</b> Min. -20 °C / -4 °F on valve inlet Min. -40 °C / -40 °F on valve outlet Max. 55 °C / 131 °F on valve inlet / outlet</p>	<p><b>Stepper motor type:</b> Bipolar <b>Total full steps:</b> 210 <b>Step rate:</b> 100 stp/s <b>Phase current:</b> 350 mA RMS <b>Coil resistance:</b> 15 ohm</p>
<p><b>Max working pressure:</b> Steel Connections : 140 bar / 2030 psig Bi-metal Connections : 130 bar / 1885 psig <b>Note!</b> Bimetal Connections : 120 bar / 1740 psig for UL approval.</p>	<div data-bbox="837 660 1348 1064"> </div> <p><b>Note!</b></p> <ul style="list-style-type: none"> <li>CCMT valves are delivered in open position, ready for brazing.</li> <li>Filter with a maximum mesh of 100 µm is recommended to install on the inlet line that can resist particles size above 100 µm.</li> </ul>	
<p>For more language options and more information on the valve refer to the website. <a href="http://ccmt.danfoss.com">ccmt.danfoss.com</a></p>	<p><b>Flow direction</b></p> <p>Flow direction: A to B</p> <p><b>Warning!</b> 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>	
<p><b>Mounting direction</b></p>	<p><b>Warning!</b></p> <ul style="list-style-type: none"> <li>Do not disassemble the valve before brazing or welding.</li> <li>Valve must be open during brazing and welding.</li> </ul> <div data-bbox="1029 1579 1220 2094"> <p>Fully closed</p> <p>Open</p> </div>	

## Brazing



Materials used for brazing:

- Flux: Metalli tenacity No. 5 Powder or Braze Tec special h paste.
- Filler: Silver-Flo 55 (BS:AG 14/ DIN L-Ag55 Sn) or Silver-Flo 56 (AWS B Ag-7).

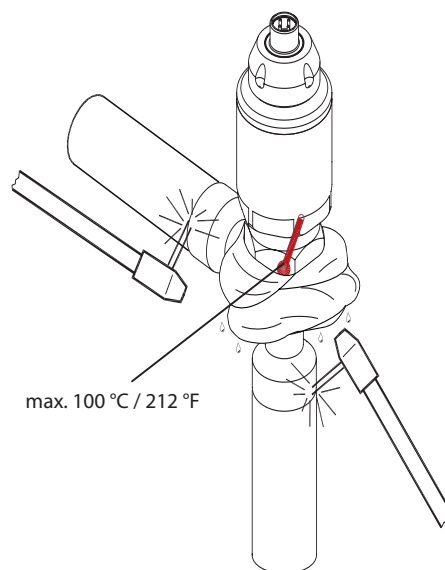


### Warning

Filler metals containing Phosphor i.e. BS: CP 1/ DIN L-Ag 15P or BS: CP 3/ DIN L-Ag P7 must not be used.

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

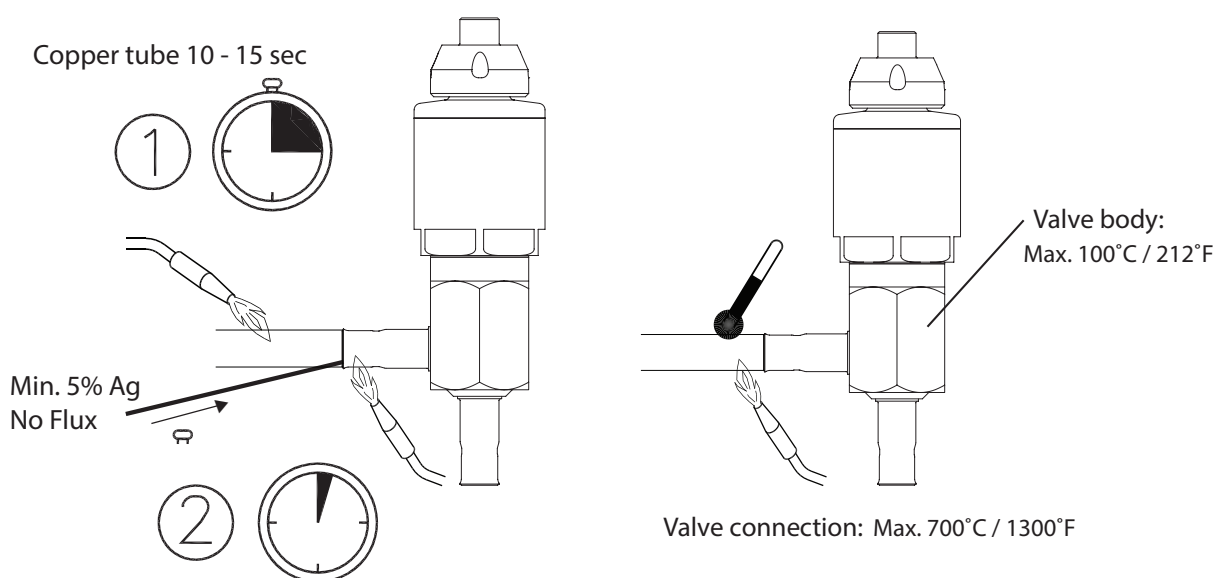
## Welding



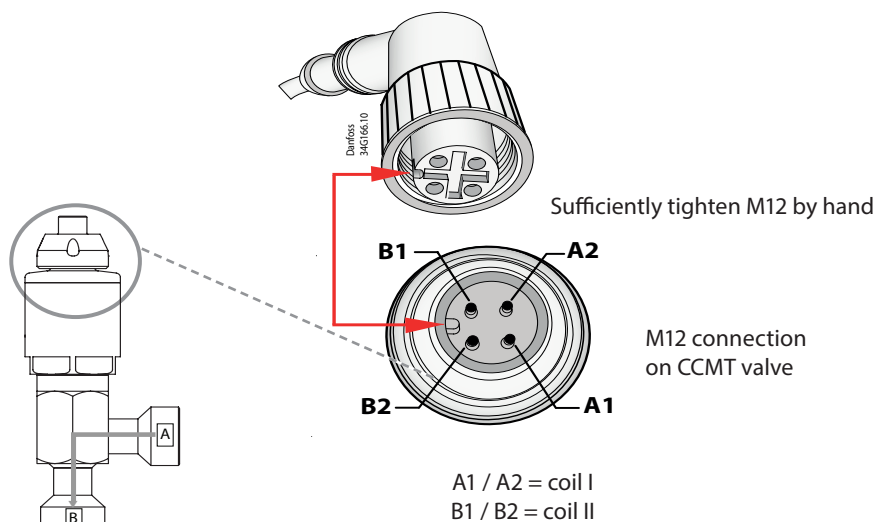
Recommendation for TIG welding

- Power approximately 60A.
- Use Shield gas charge - Argon.
- Material for welding - approximately 2 mm thick stainless steel alloy.

## Bi-Metal Brazing



## Electrical connections

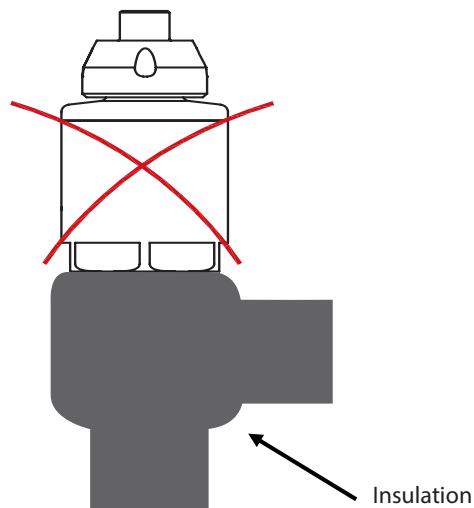


## Insulation

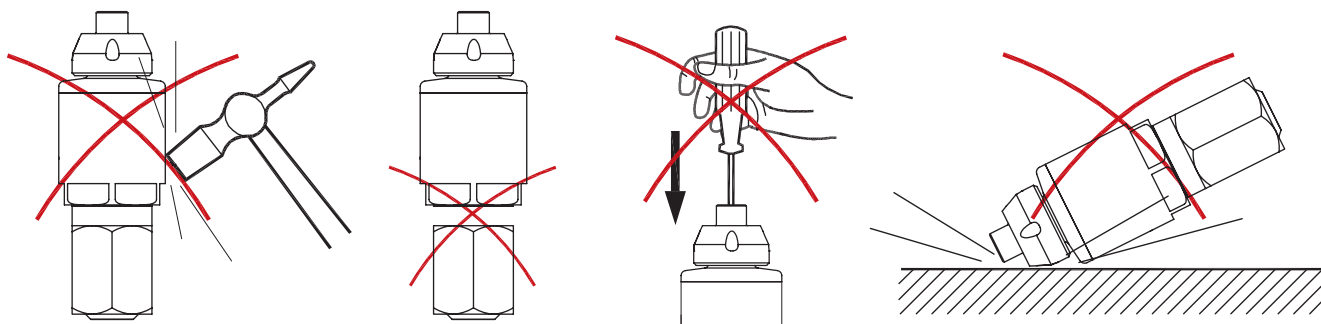
When used with duty cycle in a range from 20% to 50% or with Danfoss AK-XM 208C stepper driver:

- Insulation is not to be used on valve motor
- Insulation is acceptable on the valve body only

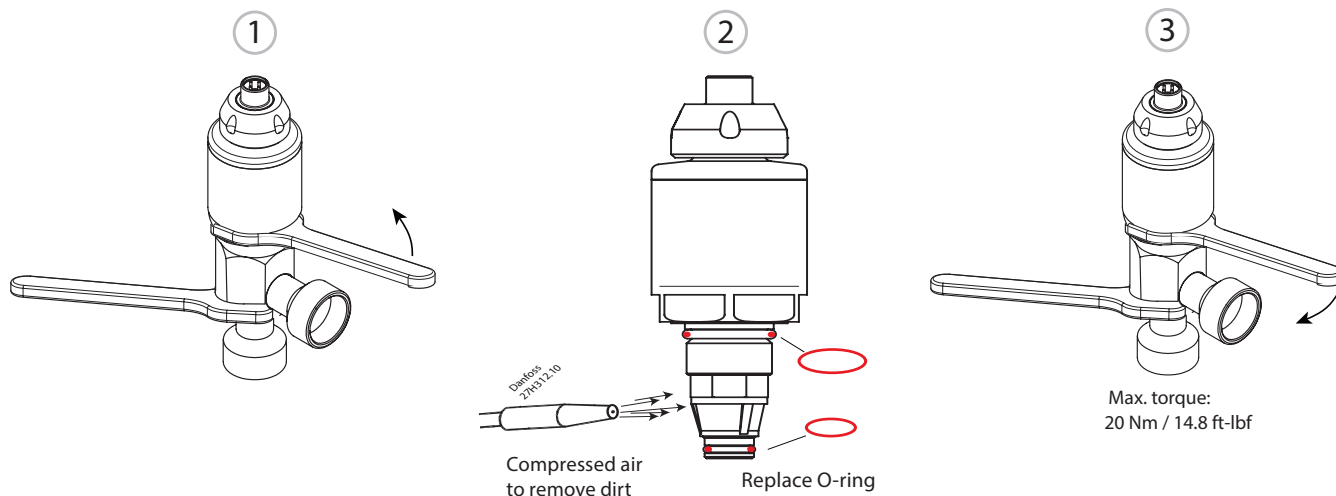
**Note:** operation with duty cycle above 50% is not possible irrespective of insulation method.



## Warning



**Service only**



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