

Main Features

Stainless steel, hermetically tight solder version

- High connection strength
- High corrosion resistance
- Capillary tube joints of high strength and vibration resistance

Bimetal connections

- Straightforward and fast soldering (no wet cloth or refrigeration pliers required).

Laser-welded **power element** in stainless steel

- Longer diaphragm life
- High pressure tolerance and working pressure
- High corrosion resistance

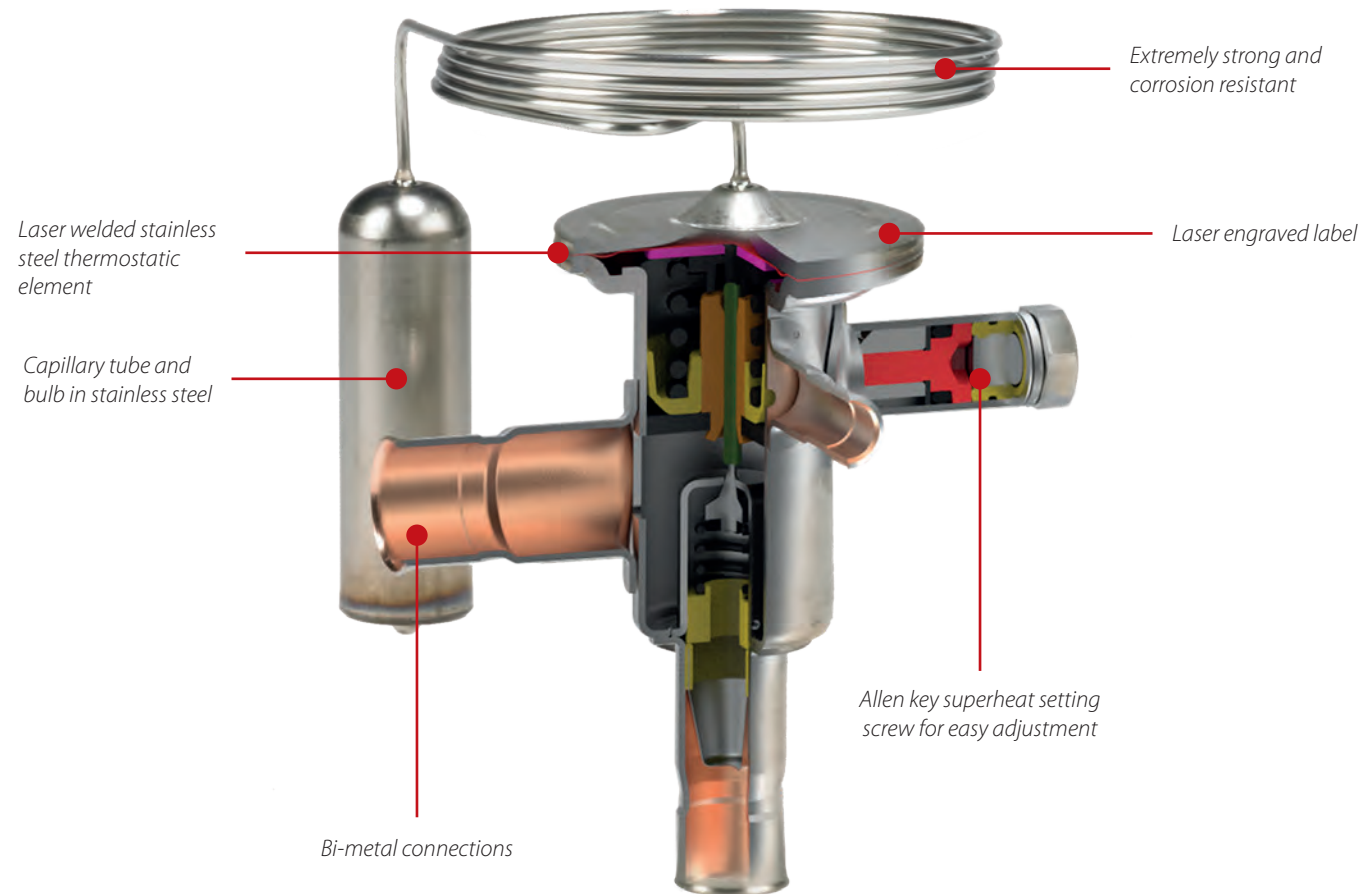
Compact design

- Small dimensions and low weight

Can be supplied with **MOP**

(Maximum Operating Pressure)

- Protects the compressor motor against excessive evaporating pressure during normal operation



TUBE Thermostatic Expansion Valve



For more information, please check
Coolselector.danfoss.com

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Achieve the highest precision flow control - regardless of the system conditions

Wide range of thermostatic expansion valves

Future proof

Qualified for
A2L and natural
refrigerants



Choose the optimum solution



	Type		TD1 series	T2 series	TUA series	TUB series	TCAE	TCBE	TR6 ⁽⁵⁾	TGE series	TE 5 - TE 55 series			
			• Designed for small applications • Wide temperature range	• Standard valve for multiple applications	• Compact design and light weight • With steel / copper bi-metal connections for fast soldering		• Compact design and light weight • With steel / copper bi-metal connections for fast soldering		• Compact design and light weight • With steel / copper bi-metal connections for fast soldering	• With dual diaphragm for long lifetime	• Supplied as Parts programme - element, orifice and valve body			
Main applications	A/C Systems													
	Transport Refrigeration													
	Display Cabinets													
	Ice Making Machine													
	Water Chiller													
	Cold Room													
	Heat Pumps													
Main Charac- teristics (sub types)	Orifice type		Fixed		Exchangeable		Exchangeable		Fixed		Exchangeable			
	Superheat		Fixed / Adjustable		Adjustable		Adjustable		Adjustable		Adjustable			
	Equalisation		Internal • TD 1	External • TDE 1	Internal • T2	External • TE2	Internal • TUA External • TUAЕ	Internal • TUB External • TUBE	External		External			
	Max. working pressure (PS)		34 bar		34 bar		34 bar (R410A: 45.5 bar)		34 bar (R410A: 45.5 bar)		49 bar	46 bar		
Technical Specifications	Capacity for:	R134a/ R513A	0.4 – 3.8 kW • 0.1 – 1.1 TR		0.5 – 8.6 kW • 0.1 – 2.5 TR ⁽²⁾		0.2 – 7.7 kW • 0.1 – 2.2 TR ⁽²⁾		7.7 – 16.5 kW • 2.2 – 4.7 TR ⁽²⁾		–	6 – 102 kW • 1.5 – 29 TR	5 – 165 kW • 1.5 – 47 TR	
		R448A/ R449A	0.9 – 6.7 kW 0.2 – 1.9 TR		0.9 – 19.8 kW • 0.2 – 5.7 TR ⁽³⁾ 0.8 – 19.1 kW • 0.2 – 5.5 TR ⁽⁴⁾		0.4 – 13.9 kW • 0.1 – 4.1 TR ⁽³⁾ 0.4 – 13.6 kW • 0.1 – 4.2 TR ⁽⁴⁾		17.6 – 25.1 kW • 5.1 – 7.4 TR ⁽³⁾ 16.9 – 23.9 kW • 4.9 – 7 TR ⁽⁴⁾		–	–	9 – 225 kW 2.5 – 64 TR	
		R452A	0.7 – 5.6 kW • 0.2 – 1.6 TR		0.6 – 15.8 kW • 0.2 – 4.4 TR		0.2 – 7.2 kW • 0.1 – 2.1 TR		12.6 – 18.1 kW • 3.6 – 5.2 TR		–	–	7 – 172 kW • 2 – 49 TR	
		R407C	0.5 – 5.3 kW • 0.1 – 1.5 TR		0.9 – 19.7 kW • 0.2 – 5.6 TR		0.4 – 14 kW • 0.1 – 3.9 TR	0.4 – 13.9 kW • 0.1 – 3.9 TR	17.8 – 25.3 kW • 5.0 – 7.1 TR	17.8 – 25.3 kW • 5.07 – 7.1 TR	9.8 – 21.1 kW • 2.8 – 6 TR	9 – 148 kW • 2.5 – 42 TR	11 – 232 kW • 3 – 66 TR	
		R404A	0.4 – 4.2 kW • 0.1 – 1.2 TR		–		–	–	–	–	–	7 – 105 kW • 2 – 30 TR	7 – 183 kW • 2 – 52 TR	
		R1234yf	Not Approved		0.5 – 7.3 kW • 0.1 – 2.1 TR		0.3 – 6.6 kW • 0.1 – 1.9 TR		–		–	Not Approved	5.6 – 24.8 kW • 1.6 – 7.1 TR ⁽¹⁾	
		R454C	Not Approved		0.8 – 14.8 kW • 0.2 – 4.2 TR		0.5 – 11.2 kW • 0.1 – 3.2 TR		–		–	Not Approved	9.1 – 40.7 kW • 2.6 – 11.6 TR ⁽¹⁾	
		R455A	⁽⁶⁾		0.9 – 18.3 kW • 0.2 – 5.2 TR		0.5 – 12.9 kW • 0.1 – 3.7 TR		–		–	Not Approved	10.3 – 46.1 kW • 2.9 – 13.1 TR ⁽¹⁾	
		R410A	–		–		–	–	–	–	11.2 – 24.6 kW • 3.2 – 7 TR	12 – 182 kW • 3.5 – 52 TR	–	
		R452B	–		–		–	–	–	–	–	12 – 208 kW • 3.5 – 59 TR	–	
		R454B	–		–		–	–	–	–	12.6 – 26.7 kW • 3.6 – 7.6 TR	14 – 229 kW • 4 – 65 TR	–	
		R32	–		–		–	–	–	–	17.6 – 36.2 kW • 5 – 10.3 TR	–	–	
		R290	0.6 – 5.6 kW • 0.16 – 1.6 TR		Not Approved		0.49 – 27.9 kW • 0.14 – 7.9 TR		–		–	10 – 152 kW • 3 – 43 TR	Not Approved	
	Standard temperature ranges available		-40 – 10 °C		-40 – 10 °C		-40 – 10 °C		-40 – 10 °C		-10 – 15 °C		-40 – 10 °C	
			–		-40 – -5 °C		-		-40 – -5 °C		–		-40 – -5 °C	
			–		-40 – -15 °C		-40 – -15 °C		-40 – -15 °C		–		-40 – -15 °C	
			–		-60 – -25 °C		-60 – -25 °C		-60 – -25 °C		–		-60 – -25 °C	
			-25 – 10 °C		–		–		–		–		-25 – 10 °C	
			–		–		–		–		–		-30 – 15 °C	
			-25 – 15 °C		–		–		–		–		–	
	Valve body configuration		Angleway / Straightway		Angleway		Straightway		Angleway / Straightway		Straightway		Straightway	
	Connections		Copper solder		SAE Flare / Copper solder		Bi-metal solder		Bi-metal solder		Copper solder / Flare / Threaded version		Copper solder / Flare / MIO / ORFS	
	Approvals		UL (angleway only)		GOST / EAC		GOST		GOST		UL		UL · GOST	
Materials	Element		Stainless steel		Stainless steel		Stainless steel		Stainless steel		Stainless steel		Stainless steel	
	Valve body		Brass		Brass		Stainless steel		Stainless steel		Brass		Brass	
	Bulb and capillary tube		Stainless steel		Stainless steel		Stainless steel		Stainless steel		Stainless steel		Stainless steel	

⁽¹⁾ Capacity data is only for TE 5 ⁽²⁾ Capacities are for R513A only ⁽³⁾ Capacities are for R448A only ⁽⁴⁾ Capacities are for R449A only

⁽⁵⁾ TR6 is for North America only ⁽⁶⁾ Approved but capacity data not available yet