

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

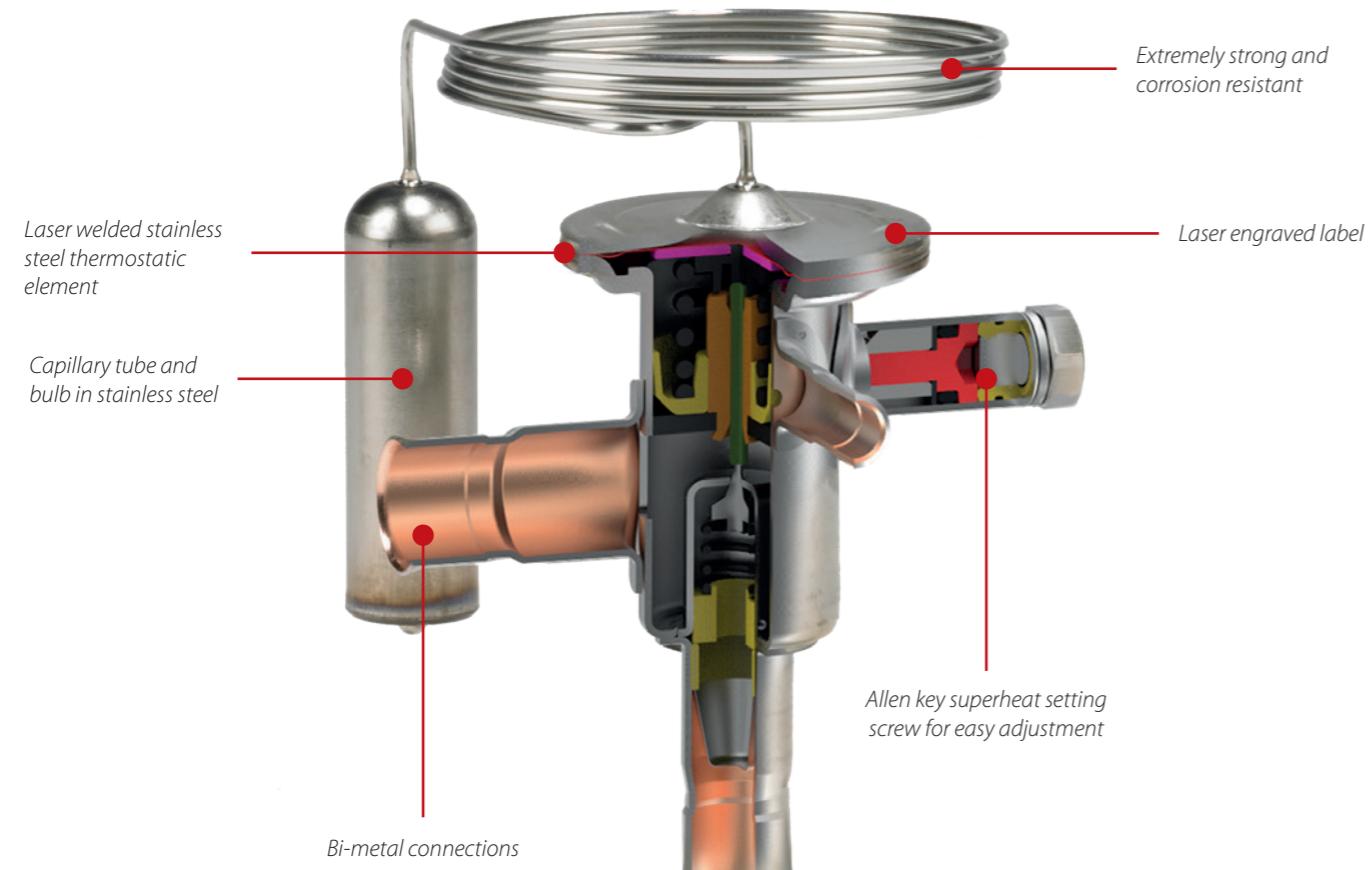
- Longer diaphragm life
- High pressure tolerance and working pressure
- High corrosion resistance

Can be supplied with **MOP** (Maximum Operating Pressure)

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

Compact **design**

- Small dimensions and low weight



TUBE Thermostatic Expansion Valve

Learn more at ra.danfoss.com



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



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Choose the optimum solution



Type	TD1 series	T2 series	TUA series	TUB series	TCAE	TCBE	TR6 ⁽⁵⁾	TGE series	TE 5 - TE 55 series	
	<ul style="list-style-type: none"> Designed for small applications Wide temperature range 	<ul style="list-style-type: none"> Standard valve for multiple applications 	<ul style="list-style-type: none"> Compact design and light weight With steel / copper bi-metal connections for fast soldering 	<ul style="list-style-type: none"> Compact design and light weight With steel / copper bi-metal connections for fast soldering 	<ul style="list-style-type: none"> Compact design and light weight With steel / copper bi-metal connections for fast soldering 	<ul style="list-style-type: none"> Compact design and light weight With steel / copper bi-metal connections for fast soldering 	<ul style="list-style-type: none"> Compact design and light weight With steel / copper bi-metal connections for fast soldering 	<ul style="list-style-type: none"> With dual diaphragm for long lifetime 	<ul style="list-style-type: none"> 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									
Main Characteristics (sub types)	Heat Pumps									
	Orifice type	Fixed	Exchangeable	Exchangeable	Fixed	Exchangeable	Fixed	Fixed	Exchangeable	
	Superheat	Fixed / Adjustable	Adjustable	Adjustable	Adjustable	Adjustable	Adjustable	Adjustable	Adjustable	
	Equalisation	Internal • TD 1 External • TDE 1	Internal • T2 External • TE2	Internal • TUA External • TUAE	Internal • TUB External • TUBE	External	External	External	External	
Technical Specifications	Max. working pressure (PS)	34 bar	34 bar	34 bar (R410A: 45.5 bar)	49 bar	46 bar	28 bar			
	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	-40 – 10 °C	-40 – 10 °C	-40 – 10 °C	-10 – 15 °C	-40 – 10 °C	-40 – 10 °C
	–	-40 – -5 °C	–	-40 – -5 °C	–	-40 – -5 °C	–	–	-40 – -5 °C	-40 – -5 °C
	–	-40 – -15 °C	-40 – -15 °C	-40 – -15 °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	-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	Straightway	Straightway	Straightway	Angleway / Straightway
Connections	Copper solder	SAE Flare / Copper solder	Bi-metal solder	Bi-metal solder	Bi-metal solder	Bi-metal solder	Copper solder / Flare / Threaded version	Copper solder / Flare / M10 / ORFS	Brass solder / Flange / Flare	
Approvals	UL (angleway only)	GOST / EAC	GOST	GOST	GOST	GOST	UL	UL · GOST	GOST	
Materials	Stainless steel	Stainless steel	Stainless steel	Stainless steel	Stainless steel	Stainless steel	Stainless steel	Stainless steel	Stainless steel	Stainless steel
Element	Brass	Brass	Stainless steel	Stainless steel	Stainless steel	Stainless steel	Brass	Brass	Brass	Brass
Valve body	Stainless steel	Stainless steel	Stainless steel	Stainless steel	Stainless steel	Stainless steel	Stainless steel	Stainless steel	Stainless steel	Stainless steel
Bulb and capillary tube										

⁽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