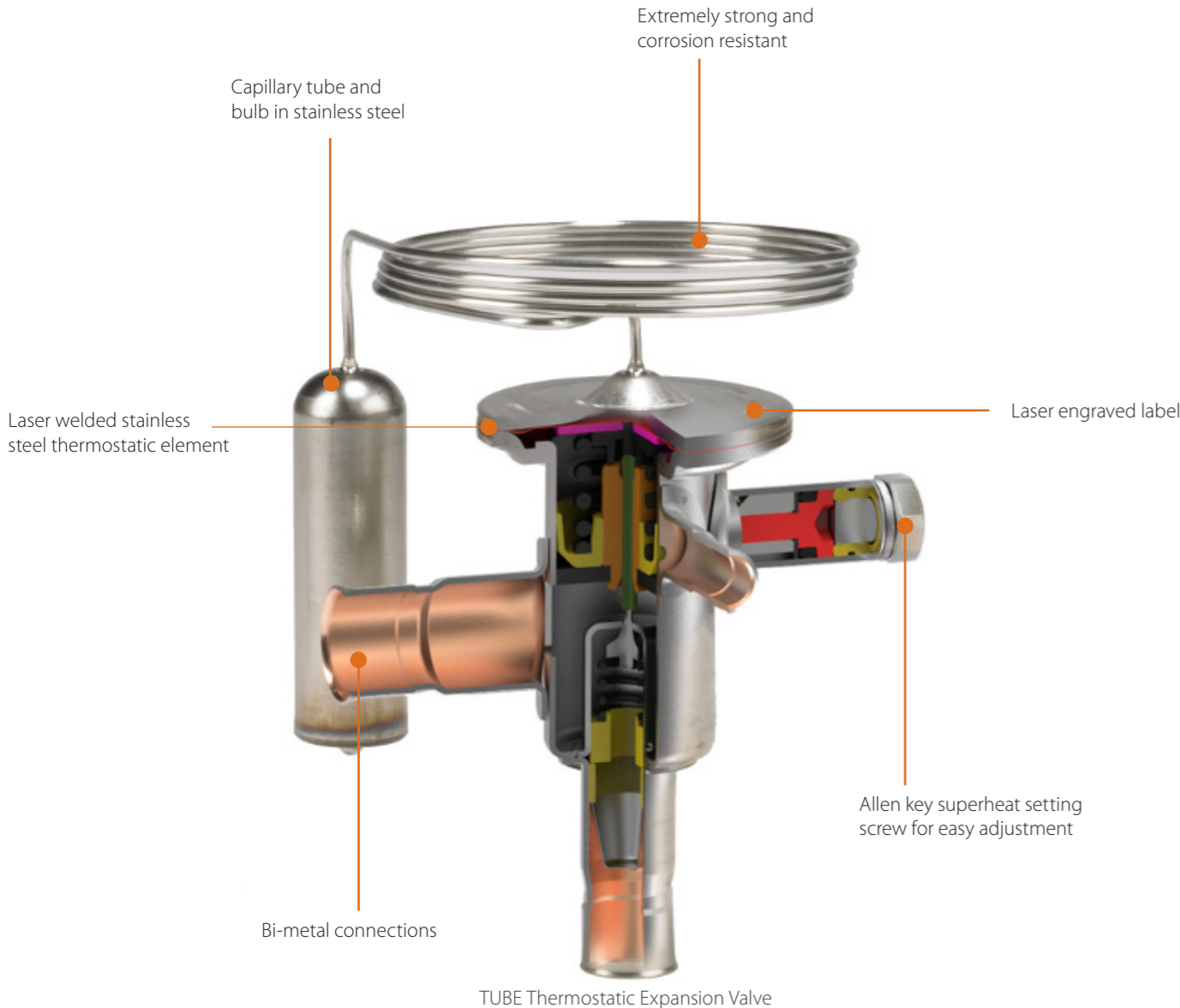




Danfoss Thermostatic Expansion Valves

Achieve the highest precision flow control  
regardless of the system conditions



## A world leader in climate and energy technology

The Danfoss Group operates globally with the primary aims of making modern living possible for our stakeholders and of being a leader in refrigeration, heating, power electronics, and mobile hydraulics.

We employ 24,000 people, and produce approximately 250,000 components each day at our 76 factories in 25 countries.

We promise leadership in our businesses through reliability, excellence, and innovation – driving true customer satisfaction and solutions within climate and energy.

### Extensive experience in all key HVAC/R segments

Danfoss plays a leading role in research, development and production in a wide spectrum of industries, and has been a key player in the HVAC/R field for more than 75 years. Our Refrigeration & Air Conditioning Division designs, produces and markets a comprehensive range of automated solutions and compressors for a wide variety of HVAC/R segments, including:

- Heat Pumps
- Commercial Air Conditioning
- Residential Air Conditioning
- Commercial Refrigeration
- Household, Light Commercial and Mobile Refrigeration
- Wholesalers & Installers
- Industrial Refrigeration
- Food Retail

### Main Features

**Stainless steel**, hermetically tight solder version

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

### Bi-metal connections

- Straightforward and fast soldering (it does not require a wet cloth or refrigera-

tion pliers).

**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

Learn more at [www.danfoss.com](http://www.danfoss.com)

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# Thermostatic Expansion Valves

Danfoss’ range of Thermostatic Expansion Valves are designed to ensure a precise control of the injection of refrigerant liquid into evaporators. They also protect the compressor motor against liquid refrigerant.

Depending on type, the Thermostatic Expansion Valves are delivered with connections in SAE flare or solder connections in either copper or stainless steel/copper bi-metal. The valves diaphragm assemblies are laser welded which ensures a long lifetime of the system.












Danfoss Thermostatic Expansion Valves are available as complete valves (fixed orifice) or parts programme, i.e. with separate valve body and orifice assemblies.

Danfoss has extensive experience as an industry leader thanks to its recognised innovation experience in the field of Air Conditioning and Refrigeration. This experience is reflected in every feature of its Thermostatic Expansion Valve range, which ensures optimal performance for every HVAC/R application.



Main Characteristics (sub types)	Orifice type		Fixed		Exchangeable		Exchangeable		Fixed		Fixed		Exchangeable							
	Superheat		Fixed Adjustable		Adjustable		Adjustable		Adjustable		Adjustable		Adjustable							
	Equalisation		Internal	External	Internal	External	Internal	External	Internal	External	External	External	External	External						
	R407C		TDZ 1	TDEZ 1	TZ 2	TEZ 2	TUA	TUAE	TUB	TUBE	TCAE	TCBE	—	TGEZ	TEZ					
	R134a		TDN 1	TDEN 1	TN 2	TEN 2							—	TGEN	TEN					
	R404A/R507		TDS 1	TDES 1	TS 2	TES 2							—	TGES	TES					
	R410A		—	—	—	—	34 bar (R410A: 42.5 bar)	34 bar (R410A: 42.5 bar)	34 bar (R410A: 45.5 bar)	34 bar (R410A: 45.5 bar)	TR 6	TGEL	—							
	Max. working pressure (PS)		34 bar		34 bar						45.5 bar		46 bar		28 bar					
Technical Specifications	Capacity for R407C		0.53 – 5.35 kW 0.15 – 1.52 TR		0.91 – 19.7 kW 0.26 – 5.61 TR		0.49 – 14.0 kW 0.14 – 3.99 TR		0.49 – 14.0 kW 0.14 – 3.99 TR		17.8 – 25.3 kW 5.07 – 7.18 TR		17.8 – 25.3 kW 5.07 – 7.18 TR		10.65 – 24.6 kW 3 – 7 TR		9.67 – 122.0 kW 2.75 – 34.7 TR		10.8 – 233.2 kW 3.1 – 66.3 TR	
	Charge (Temperature)	N	-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	
		NM	—		-40 – -5 °C		-40 – -5 °C		-40 – -5 °C		-40 – -5 °C		-40 – -5 °C		—		—		-40 – -5 °C	
		NL	—		-40 – -15 °C		-40 – -5 °C		-40 – -15 °C		-40 – -15 °C		-40 – -15 °C		—		—		-40 – -15 °C	
		B	—		-60 – -25 °C		-60 – -25 °C		-60 – -25 °C		-60 – -25 °C		-60 – -25 °C		—		—		-60 – -25 °C	
		K	-25 – 10 °C		—		—		—		—		—		—		-25 – 10 °C		—	
		MAH	—		—		—		—		—		—		—		-30 – 15 °C		—	
		AC	-25 – 15 °C		—		—		—		—		—		—		—		—	
	Valve body configuration		A S		A		S		S A		S		A S		S		S		A S	
	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 · MIO · ORFS		Brass solder · Flange · Flare	
	Approvals		UL (angleway only)		GOST		GOST		GOST		GOST		GOST		UL · GOST		UL · GOST		GOST	
Materials	Element		Stainless steel		Stainless steel		Stainless steel		Stainless steel		Stainless steel		Stainless steel		Stainless steel		Stainless steel		Stainless steel	
	Valve body	Brass	●		●				●		●		●		●		●		●	
		Stainless steel					●		●		●		●							
	Bulb and capillary tube		Copper		Stainless steel		Stainless steel		Stainless steel		Stainless steel		Stainless steel		Stainless steel		Stainless steel		Stainless steel	

\* For detailed information visit [www.danfoss.com](http://www.danfoss.com)

ICON LEGEND:						
Applications:		A/C Systems		Transport Refrigeration		Display Cabinets
		Ice Making Machine		Water Chiller		Computer Room
		Cold Room		Heat Pumps		Commercial Refrigeration
Valve Body Configuration:		Angleway		Straightway		

Reliable function • Laser Welding • Wide capacity range