

Data sheet

Thermostatic expansion valves

Type TE 5 – TE 55



The TE 5 - TE 55 series expansion valve regulate the injection of refrigerant into evaporators. It controls the refrigerant flow based on the superheat. The exchangeable power element is produced with the well known Danfoss laser welding technology for extended lifetime capability. The TE 5 - TE 55 series is available with a wide range of orifices which will cover a wide range of applications.

Applications:

- Air conditioning system
- Chiller
- Cold room
- Freezer
- Other refrigeration systems

Features

- Wide operating range:
 - 40 – 10 °C / -40 – 50 °F
 - 60 – -25 °C / -75 – -15 °F
- Refrigerants: R407F, R407A, R448A, R449A, R404A, R507, R22, R134a and R407C.
- Interchangeable orifice assembly:
 - easy storage
 - easy capacity matching
 - better service
- Laser welded stainless steel power element, capillary tube and bulb.
- Wide capacity range, rated capacity from:
 - R448A/R449A : 10.4 - 226 kW / 2.97 - 64.5 TR
 - R407F : 11.0 - 250 kW / 3.14 - 71.0 TR
 - R404A/R507 : 8.17 - 182 kW / 2.33 - 52.0 TR
- MOP function is available.
- Superior charge performance.
- PS / MWP (maximum working pressure): 28 bar / 400 psig.
- Minimized capacity gap and overlap between orifices.
- TE 55 has balanced port design.
- Patented bulb strap design.



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Technical data

Max. temperature

Bulb, when valve is assembled: 100 °C / 210 °F.
Complete valve when not assembled: 70 °C / 160 °F.
Min. temperature: -60 °C / -75 °F.

Max. test pressure: 32 bar / 465 psig.

Maximum working pressure: 28 bar / 400 psig.

MOP-points

SI units

US units

| Refrigerant | Range | Range | Range | Range | Range | Range | Range | |
|-------------|---|-------------|--------------|--------------|---|-------------|------------|--------------|
| | -40 – 10 °C | -40 – -5 °C | -40 – -15 °C | -60 – -25 °C | -40 – 50 °F | -40 – 25 °F | -40 – 5 °F | -75 – -15 °F |
| | MOP-point in evaporating temperature t_e and evaporating pressure p_e | | | | MOP-point in evaporating temperature t_e and evaporating pressure p_e | | | |
| | 15 °C | 0 °C | -10 °C | -20 °C | 60 °F | 32 °F | 15 °F | -5 °F |
| R407F/R407A | 7.5 bar | 4.2 bar | 2.6 bar | 1.5 bar | 110 psig | 60 psig | 40 psig | 20 psig |
| R404A/R507 | 8.6 bar | 5.1 bar | 3.4 bar | 2.0 bar | 120 psig | 70 psig | 45 psig | 30 psig |
| R22 | 6.9 bar | 4.0 bar | 2.6 bar | 1.5 bar | 100 psig | 60 psig | 35 psig | 20 psig |
| R134a | 3.9 bar | 2.0 bar | 1.0 bar | 0.3 bar | 55 psig | 30 psig | 15 psig | 5 psig |
| R407C | 6.6 bar | 3.6 bar | 2.2 bar | 1.1 bar | 95 psig | 50 psig | 30 psig | 15 psig |

MOP = Max. Operating Pressure

For MOP of R448A/R449A, please contact Danfoss for more information.

Superheat

SS = static superheat
OS = opening superheat
SH = SS + OS = total superheat
 Q_{nom} = rated capacity
 Q_{max} = maximum capacity

Example

Static superheat SS = 4 K / 7.2 °F
Opening superheat OS = 4 K / 7.2 °F
Total superheat SH = 4 + 4 = 8 K
SH = 7.2 + 7.2 = 14.4 °F

SS can be adjusted with setting spindle.
The standard factory SS setting is 4 K / 7.2 °F.
The OS is 4 K / 7.2 °F from when opening begins to where the valve reaches its rated capacity Q_{nom} .
OS is determined by the design and cannot be changed.

Using orifice with range B element, please check superheat under running conditions and readjust SS setting, if necessary.

Identification

The thermostatic element is fitted with a label (on top of the diaphragm). The type code refers to the refrigerant for which the valve is designed (only for refrigerants with type letter):

R22/R407C ¹⁾ = X
R134a = N
R404A/R507 = S
R407C = Z

¹⁾ For R407C plants, please select valves from the dedicated R407C program

The label holds information like valve type, evaporating temperature range, MOP point, refrigerant, max. working pressure PS / MWP and production date.

Production place and date (BE1315B) mean:

BE = Wuqing, China
13 = Week
15 = Year 2015
B = Tuesday

Orifice assembly for TE 5 – TE 55

The orifice assembly is marked on top of the spring cup, e.g. as shown in the figure.

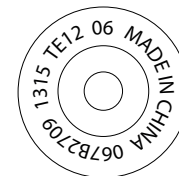
TE 12 = For valve type
06 = Orifice no.
067B2709 = Orifice code no. for sales order
1315 = week 13, year 2015

Capillary tube tag for TE 5 – TE 55

The label gives the orifice size (06). A new label always accompanies a new orifice assembly.



Element label



Orifice assembly marking for TE 5 – TE 55



Capillary tube tag TE 5 – TE 55

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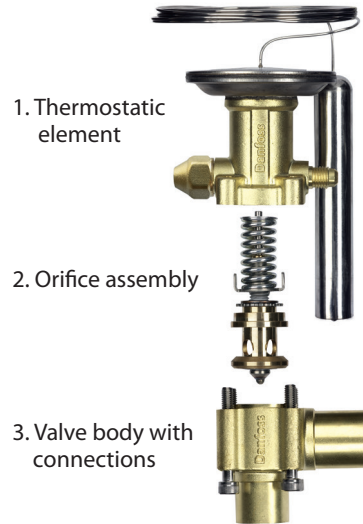
Design/Function

General

TE 5 – TE 55 valves have an interchangeable orifice assembly.

TE 5 – TE 55 valves are built up of three main components (Parts program):

1. Thermostatic element
2. Orifice assembly
3. Valve body with connections

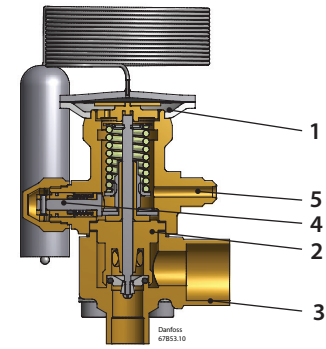


The orifice is refrigerant and range independent.

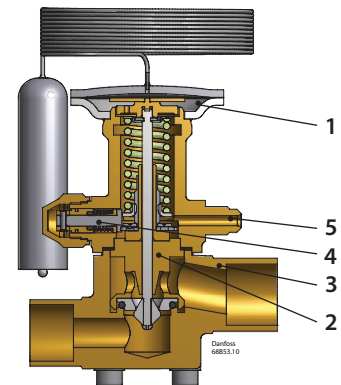
All valves are equipped with external pressure equalization.

To ensure long operating life, the valve cone and seat are made of a special alloy with particularly good wear properties.

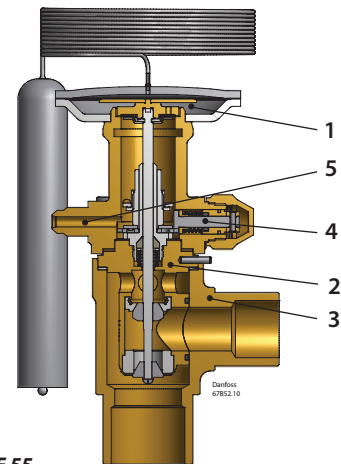
1. Thermostatic element.
2. Interchangeable orifice assembly.
3. Valve body.
4. Superheat setting spindle.
5. External pressure equalizing connection with 1/4 in / 6 mm flare nut (solder is available on TE 5).



TE 5



TE 12 / TE 20



TE 55

Select valve type

Rated capacities

| Valve type | SI units | | | | | | |
|------------|-------------|-------------|------------------|-----------------|-------------|-------------|-------------|
| | R407F [kW] | R407A [kW] | R448A/R449A [kW] | R404A/R507 [kW] | R22 [kW] | R134a [kW] | R407C [kW] |
| TE 5 | 11.0 – 49.0 | 10.3 – 45.3 | 10.4 – 46.6 | 8.17 – 35.7 | 10.4 – 46.0 | 6.68 – 29.7 | 10.7 – 47.4 |
| TE 12 | 71.0 – 115 | 56.0 – 96.0 | 55.1 – 92.2 | 50.7 – 81.3 | 57.2 – 97.8 | 37.7 – 65.7 | 55.8 – 94.3 |
| TE 20 | 141 – 161 | 126 – 148 | 125 – 143 | 87.1 – 102 | 128 – 150 | 77.8 – 92.3 | 118 – 136 |
| TE 55 | 124 – 250 | 112 – 242 | 158 – 226 | 84.8 – 182 | 113 – 245 | 77.9 – 166 | 112 – 232 |

Rated capacities

| Valve type | US units | | | | | | |
|------------|-------------|-------------|------------------|-----------------|-------------|-------------|-------------|
| | R407F [TR] | R407A [TR] | R448A/R449A [TR] | R404A/R507 [TR] | R22 [TR] | R134a [TR] | R407C [TR] |
| TE 5 | 3.14 – 13.9 | 2.92 – 12.9 | 2.97 – 13.2 | 2.33 – 10.2 | 2.97 – 13.1 | 1.91 – 8.49 | 3.06 – 13.5 |
| TE 12 | 20.3 – 32.7 | 16.1 – 27.5 | 15.7 – 26.3 | 14.5 – 23.5 | 16.3 – 27.9 | 10.8 – 18.8 | 15.9 – 26.9 |
| TE 20 | 40.0 – 45.9 | 36.0 – 42.1 | 35.6 – 40.8 | 24.9 – 29.1 | 36.6 – 42.9 | 22.2 – 26.4 | 33.7 – 38.9 |
| TE 55 | 35.3 – 71.0 | 31.8 – 69.0 | 44.9 – 64.5 | 24.1 – 52.0 | 32.2 – 70.0 | 21.9 – 47.4 | 31.7 – 66.3 |

The rated capacity is based on:

- Evaporating temperature $t_e = 4.4\text{ }^\circ\text{C} / 40\text{ }^\circ\text{F}$
- Condensing temperature $t_c = 38\text{ }^\circ\text{C} / 100\text{ }^\circ\text{F}$
- Refrigerant temperature ahead of valve $t_1 = 37\text{ }^\circ\text{C} / 98\text{ }^\circ\text{F}$

Data sheet | Thermostatic expansion valves, type TE 5 – TE 55

Ordering



Element for expansion valve - including bulb strap.

R407F/R407A ¹⁾

| Valve type | Pressure equalization | | MOP | | Range | | Capillary tube | | Code no. |
|------------|-----------------------|------------|------|------|-----------|----------|----------------|------|----------|
| | Size | Type | [°C] | [°F] | [°C] | [°F] | [m] | [in] | |
| TE 5 | 1/4 in / 6 mm | Flare | - | - | -40 - 10 | -40 - 50 | 3 | 118 | 067B3501 |
| | 1/4 in / 6 mm | Flare | 0 | 32 | -40 - -5 | -40 - 25 | 3 | 118 | 067B3502 |
| | 1/4 in / 6 mm | Flare | -10 | 15 | -40 - -15 | -40 - 5 | 3 | 118 | 067B3503 |
| | 1/4 in | Solder ODF | - | - | -40 - 10 | -40 - 50 | 3 | 118 | 067B3504 |
| TE 12 | 1/4 in / 6 mm | Flare | - | - | -40 - 10 | -40 - 50 | 3 | 118 | 067B3532 |
| | 1/4 in / 6 mm | Flare | 0 | 32 | -40 - -5 | -40 - 25 | 3 | 118 | 067B3531 |
| | 1/4 in / 6 mm | Flare | -10 | 15 | -40 - -15 | -40 - 5 | 3 | 118 | 067B3533 |
| TE 20 | 1/4 in / 6 mm | Flare | - | - | -40 - 10 | -40 - 50 | 3 | 118 | 067B3561 |
| | 1/4 in / 6 mm | Flare | 0 | 32 | -40 - -5 | -40 - 25 | 3 | 118 | 067B3560 |
| | 1/4 in / 6 mm | Flare | -10 | 15 | -40 - -15 | -40 - 5 | 3 | 118 | 067B3562 |
| TE 55 | 1/4 in / 6 mm | Flare | - | - | -40 - 10 | -40 - 50 | 3 | 118 | 067G3500 |

¹⁾ On systems charged with R407A, SS will differ from standard 4K / 7.2 °F.
 For range -40 - 10 °C / -40 - 50 °F, SS = 2.7 K / 4.9 °F.
 For range -40 - -5 °C / -40 - 25 °F and range -40 - -15 °C / -40 - 5 °F, SS = 2.8 K / 5.0 °F.

Element for expansion valve - including bulb strap.

R448A/R449A ²⁾

| Valve type | Pressure equalization | | MOP | | Range | | Capillary tube | | Code no. |
|------------|-----------------------|-------|------|------|----------|----------|----------------|------|----------|
| | Size | Type | [°C] | [°F] | [°C] | [°F] | [m] | [in] | |
| TE 5 | 1/4 in. / 6 mm | Flare | - | - | -40 - 10 | -40 - 50 | 3 | 118 | 067B3252 |
| TE 12 | 1/4 in. / 6 mm | Flare | - | - | -40 - 10 | -40 - 50 | 3 | 118 | 067B2512 |
| TE 20 | 1/4 in. / 6 mm | Flare | - | - | -40 - 10 | -40 - 50 | 3 | 118 | 067B3294 |
| TE 55 | 1/4 in. / 6 mm | Flare | - | - | -40 - 10 | -40 - 50 | 3 | 118 | 067G3219 |

²⁾ On systems charged with R449A, SS = 2.7 K / 4.9 °F.

Element for expansion valve - including bulb strap.

R404A/R507

| Valve type | Pressure equalization | | MOP | | Range | | Capillary tube | | Code no |
|------------|-----------------------|------------|------|------|-----------|-----------|----------------|------|----------|
| | Size | Type | [°C] | [°F] | [°C] | [°F] | [m] | [in] | |
| TES 5 | 1/4 in / 6 mm | Flare | - | - | -40 - 10 | -40 - 50 | 3 | 118 | 067B3342 |
| | 1/4 in | Solder ODF | - | - | -40 - 10 | -40 - 50 | 3 | 118 | 067B3380 |
| | 1/4 in / 6 mm | Flare | 15 | 60 | -40 - 10 | -40 - 50 | 3 | 118 | 067B3238 |
| | 1/4 in / 6 mm | Flare | 0 | 32 | -40 - -5 | -40 - 25 | 3 | 118 | 067B3357 |
| | 1/4 in / 6 mm | Flare | -10 | 15 | -40 - -15 | -40 - 5 | 3 | 118 | 067B3358 |
| | 1/4 in | Solder ODF | -10 | 15 | -40 - -15 | -40 - 5 | 3 | 118 | 067B3384 |
| | 1/4 in / 6 mm | Flare | - | - | -60 - -25 | -75 - -15 | 3 | 118 | 067B3344 |
| | 6 mm | Solder ODF | - | - | -60 - -25 | -75 - -15 | 3 | 118 | 067B3392 |
| TES 12 | 1/4 in / 6 mm | Flare | -20 | -5 | -60 - -25 | -75 - -15 | 3 | 118 | 067B3343 |
| | 1/4 in | Solder ODF | -20 | -5 | -60 - -25 | -75 - -15 | 3 | 118 | 067B3381 |
| | 1/4 in / 6 mm | Flare | - | - | -40 - 10 | -40 - 50 | 3 | 118 | 067B3347 |
| | 1/4 in / 6 mm | Flare | 0 | 32 | -40 - -5 | -40 - 25 | 3 | 118 | 067B3345 |
| | 1/4 in / 6 mm | Flare | -10 | 15 | -40 - -15 | -40 - 5 | 3 | 118 | 067B3348 |
| | 1/4 in / 6 mm | Flare | -20 | -5 | -60 - -25 | -75 - -15 | 3 | 118 | 067B3349 |
| | 1/4 in / 6 mm | Flare | - | - | -40 - 10 | -40 - 50 | 5 | 197 | 067B3346 |
| | 1/4 in / 6 mm | Flare | -20 | -5 | -60 - -25 | -75 - -15 | 5 | 197 | 067B3350 |
| TES 20 | 1/4 in / 6 mm | Flare | - | - | -40 - 10 | -40 - 50 | 3 | 118 | 067B3352 |
| | 1/4 in / 6 mm | Flare | 0 | 32 | -40 - -5 | -40 - 25 | 3 | 118 | 067B3351 |
| | 1/4 in / 6 mm | Flare | -10 | 15 | -40 - -15 | -40 - 5 | 3 | 118 | 067B3353 |
| | 1/4 in / 6 mm | Flare | -20 | -5 | -60 - -25 | -75 - -15 | 3 | 118 | 067B3354 |
| | 1/4 in / 6 mm | Flare | - | - | -40 - 10 | -40 - 50 | 5 | 197 | 067B3356 |
| | 1/4 in / 6 mm | Flare | -20 | -5 | -60 - -25 | -75 - -15 | 5 | 197 | 067B3355 |
| TES 55 | 1/4 in / 6 mm | Flare | - | - | -40 - 10 | -40 - 50 | 3 | 118 | 067G3302 |
| | 1/4 in / 6 mm | Flare | 0 | 32 | -40 - -5 | -40 - 25 | 3 | 118 | 067G3303 |
| | 1/4 in / 6 mm | Flare | -10 | 15 | -40 - -15 | -40 - 5 | 3 | 118 | 067G3304 |
| | 1/4 in / 6 mm | Flare | -20 | -5 | -60 - -25 | -75 - -15 | 3 | 118 | 067G3305 |
| | 1/4 in / 6 mm | Flare | - | - | -40 - 10 | -40 - 50 | 5 | 197 | 067G3301 |
| | 1/4 in / 6 mm | Flare | -20 | -5 | -60 - -25 | -75 - -15 | 5 | 197 | 067G3306 |

Data sheet | Thermostatic expansion valves, type TE 5 – TE 55

Ordering



Element for expansion valve - including bulb strap.

R22/R407C ¹⁾

| Valve type | Pressure equalization | | MOP | | Range | | Capillary tube | | Code no. |
|------------|-----------------------|------------|------|------|-----------|-----------|----------------|------|----------|
| | Size | Type | [°C] | [°F] | [°C] | [°F] | [m] | [in] | |
| TEX 5 | 1/4 in / 6 mm | Flare | - | - | -40 - 10 | -40 - 50 | 3 | 118 | 067B3250 |
| | 1/4 in | Solder ODF | - | - | -40 - 10 | -40 - 50 | 3 | 118 | 067B3420 |
| | 1/4 in / 6 mm | Flare | 15 | 60 | -40 - 10 | -40 - 50 | 3 | 118 | 067B3267 |
| | 1/4 in / 6 mm | Flare | 0 | 32 | -40 - -5 | -40 - 25 | 3 | 118 | 067B3249 |
| | 1/4 in / 6 mm | Flare | -10 | 15 | -40 - -15 | -40 - 5 | 3 | 118 | 067B3253 |
| | 1/4 in / 6 mm | Flare | - | - | -60 - -25 | -75 - -15 | 3 | 118 | 067B3263 |
| TEX 12 | 1/4 in / 6 mm | Flare | - | - | -40 - 10 | -40 - 50 | 3 | 118 | 067B3210 |
| | 1/4 in / 6 mm | Flare | - | - | -40 - 10 | -40 - 50 | 5 | 197 | 067B3209 |
| | 1/4 in / 6 mm | Flare | 15 | 60 | -40 - 10 | -40 - 50 | 3 | 118 | 067B3227 |
| | 1/4 in / 6 mm | Flare | 0 | 32 | -40 - -5 | -40 - 25 | 3 | 118 | 067B3207 |
| | 1/4 in / 6 mm | Flare | -10 | 15 | -40 - -15 | -40 - 5 | 3 | 118 | 067B3213 |
| | 1/4 in / 6 mm | Flare | -20 | -5 | -60 - -25 | -75 - -15 | 3 | 118 | 067B3211 |
| TEX 20 | 1/4 in / 6 mm | Flare | - | - | -40 - 10 | -40 - 50 | 3 | 118 | 067B3274 |
| | 1/4 in / 6 mm | Flare | - | - | -40 - 10 | -40 - 50 | 5 | 197 | 067B3290 |
| | 1/4 in / 6 mm | Flare | 15 | 60 | -40 - 10 | -40 - 50 | 3 | 118 | 067B3286 |
| | 1/4 in / 6 mm | Flare | 0 | 32 | -40 - -5 | -40 - 25 | 3 | 118 | 067B3273 |
| | 1/4 in / 6 mm | Flare | -10 | 15 | -40 - -15 | -40 - 5 | 3 | 118 | 067B3275 |
| | 1/4 in / 6 mm | Flare | -20 | -5 | -60 - -25 | -75 - -15 | 3 | 118 | 067B3276 |
| TEX 55 | 1/4 in / 6 mm | Flare | - | - | -40 - 10 | -40 - 50 | 3 | 118 | 067G3205 |
| | 1/4 in / 6 mm | Flare | - | - | -40 - 10 | -40 - 50 | 5 | 197 | 067G3209 |
| | 1/4 in / 6 mm | Flare | 15 | 60 | -40 - 10 | -40 - 50 | 3 | 118 | 067G3220 |
| | 1/4 in / 6 mm | Flare | 0 | 32 | -40 - -5 | -40 - 25 | 3 | 118 | 067G3206 |
| | 1/4 in / 6 mm | Flare | -20 | -5 | -60 - -25 | -75 - -15 | 3 | 118 | 067G3207 |
| | 1/4 in / 6 mm | Flare | -20 | -5 | -60 - -25 | -75 - -15 | 5 | 197 | 067G3217 |

¹⁾ For R407C plants, please select elements from the dedicated R407C program

Element for expansion valve - including bulb strap.

R134a

| Valve type | Pressure equalization | | MOP | | Range | | Capillary tube | | Code no. |
|------------|-----------------------|------------|------|------|----------|----------|----------------|------|----------|
| | Size | Type | [°C] | [°F] | [°C] | [°F] | [m] | [in] | |
| TEN 5 | 1/4 in / 6 mm | Flare | - | - | -40 - 10 | -40 - 50 | 3 | 118 | 067B3297 |
| | 1/4 in | Solder ODF | - | - | -40 - 10 | -40 - 50 | 3 | 118 | 067B3430 |
| | 1/4 in / 6 mm | Flare | 15 | 60 | -40 - 10 | -40 - 50 | 3 | 118 | 067B3298 |
| TEN 12 | 1/4 in / 6 mm | Flare | - | - | -40 - 10 | -40 - 50 | 3 | 118 | 067B3232 |
| | 1/4 in / 6 mm | Flare | 15 | 60 | -40 - 10 | -40 - 50 | 3 | 118 | 067B3233 |
| | 1/4 in / 6 mm | Flare | - | - | -40 - 10 | -40 - 50 | 5 | 197 | 067B3363 |
| TEN 20 | 1/4 in / 6 mm | Flare | - | - | -40 - 10 | -40 - 50 | 3 | 118 | 067B3292 |
| | 1/4 in / 6 mm | Flare | 15 | 60 | -40 - 10 | -40 - 50 | 3 | 118 | 067B3293 |
| | 1/4 in / 6 mm | Flare | - | - | -40 - 10 | -40 - 50 | 5 | 197 | 067B3370 |
| TEN 55 | 1/4 in / 6 mm | Flare | - | - | -40 - 10 | -40 - 50 | 3 | 118 | 067G3222 |
| | 1/4 in / 6 mm | Flare | 15 | 60 | -40 - 10 | -40 - 50 | 3 | 118 | 067G3223 |
| | 1/4 in / 6 mm | Flare | - | - | -40 - 10 | -40 - 50 | 5 | 197 | 067G3230 |

Element for expansion valve - including bulb strap.

R407C

| Valve type | Pressure equalization | | MOP | | Range | | Capillary tube | | Code no. |
|------------|-----------------------|-------|------|------|----------|----------|----------------|------|----------|
| | Size | Type | [°C] | [°F] | [°C] | [°F] | [m] | [in] | |
| TEZ 5 | 1/4 in / 6 mm | Flare | - | - | -40 - 10 | -40 - 50 | 3 | 118 | 067B3278 |
| | 1/4 in / 6 mm | Flare | 15 | 60 | -40 - 10 | -40 - 50 | 3 | 118 | 067B3277 |
| TEZ 12 | 1/4 in / 6 mm | Flare | - | - | -40 - 10 | -40 - 50 | 3 | 118 | 067B3366 |
| | 1/4 in / 6 mm | Flare | 15 | 60 | -40 - 10 | -40 - 50 | 3 | 118 | 067B3367 |
| TEZ 20 | 1/4 in / 6 mm | Flare | - | - | -40 - 10 | -40 - 50 | 5 | 197 | 067B3371 |
| | 1/4 in / 6 mm | Flare | 15 | 60 | -40 - 10 | -40 - 50 | 5 | 197 | 067B3372 |
| TEZ 55 | 1/4 in / 6 mm | Flare | - | - | -40 - 10 | -40 - 50 | 5 | 197 | 067G3240 |
| | 1/4 in / 6 mm | Flare | 15 | 60 | -40 - 10 | -40 - 50 | 5 | 197 | 067G3241 |

Data sheet | Thermostatic expansion valves, type TE 5 – TE 55

Ordering

Orifice for expansion valves. Rated capacity.



| Valve type | Orifice no. | R407F | R407A | R448A/ R449A | R404A /R507 | R22 | R134a | R407C | R407F | R407A | R448A/ R449A | R404A /R507 | R22 | R134a | R407C | Code no. |
|------------|-------------|-------|-------|-----------------|----------------|------|-------|-------|-------|-------|-----------------|----------------|------|-------|-------|------------------------------|
| | | [kW] | | | | | | | [TR] | | | | | | | |
| TE 5 | 0.5 | 11.0 | 10.3 | 10.4 | 8.17 | 10.4 | 6.68 | 10.7 | 3.14 | 2.92 | 2.97 | 2.33 | 2.97 | 1.91 | 3.06 | 067B2788 |
| | 01 | 20.3 | 18.8 | 19.2 | 14.9 | 19.1 | 12.2 | 19.6 | 5.76 | 5.35 | 5.45 | 4.26 | 5.46 | 3.49 | 5.60 | 067B2789 |
| | 02 | 28.1 | 25.9 | 26.6 | 20.5 | 26.3 | 17.0 | 27.2 | 8.00 | 7.37 | 7.56 | 5.86 | 7.51 | 4.86 | 7.77 | 067B2790 |
| | 03 | 35.8 | 33.3 | 34.0 | 26.3 | 33.8 | 21.8 | 34.8 | 10.2 | 9.48 | 9.67 | 7.51 | 9.66 | 6.23 | 9.94 | 067B2791 |
| | 04 | 49.0 | 45.3 | 46.6 | 35.7 | 46.0 | 29.7 | 47.4 | 13.9 | 12.9 | 13.2 | 10.2 | 13.1 | 8.49 | 13.5 | 067B2792 |
| TE 12 | 05 | 71.0 | 56.0 | 55.1 | 50.7 | 57.2 | 37.7 | 55.8 | 20.3 | 16.1 | 15.7 | 14.5 | 16.3 | 10.8 | 15.9 | 067B2708 |
| | 06 | 95.0 | 75.0 | 73.3 | 64.0 | 76.3 | 50.1 | 73.9 | 27.1 | 21.4 | 20.9 | 18.3 | 21.8 | 14.3 | 21.1 | 067B2709 |
| | 07 | 115 | 96.0 | 92.2 | 81.3 | 97.8 | 65.7 | 94.3 | 32.7 | 27.5 | 26.3 | 23.2 | 27.9 | 18.8 | 26.9 | 067B2710 |
| TE 20 | 08 | 141 | 126 | 125 | 87.1 | 128 | 77.8 | 118 | 40.0 | 36.0 | 35.6 | 24.9 | 36.6 | 22.2 | 33.7 | 067B2771¹⁾ |
| | 09 | 161 | 148 | 143 | 102 | 150 | 92.3 | 136 | 45.9 | 42.1 | 40.8 | 29.1 | 42.9 | 26.4 | 38.9 | 067B2773¹⁾ |
| TE 55 | 9B | 124 | 112 | 114 | 84.8 | 113 | 77.9 | 112 | 35.3 | 31.8 | 32.3 | 24.1 | 32.2 | 21.9 | 31.7 | 067G2705²⁾ |
| | 10 | 173 | 166 | 158 | 128 | 169 | 111 | 161 | 49.1 | 47.4 | 44.9 | 36.6 | 48.3 | 31.7 | 46.0 | 067G2701 |
| | 11 | 188 | 181 | 171 | 138 | 184 | 122 | 175 | 53.0 | 52.0 | 48.8 | 39.4 | 52.6 | 34.9 | 50.0 | 067G2704 |
| | 12 | 207 | 199 | 187 | 152 | 202 | 134 | 191 | 59.0 | 57.0 | 53.2 | 43.4 | 57.7 | 38.3 | 54.6 | 067G2707 |
| | 13 | 250 | 242 | 226 | 182 | 245 | 166 | 232 | 71.0 | 69.0 | 64.5 | 52.0 | 70.0 | 47.4 | 66.3 | 067G2710 |

The rated capacity is based on:

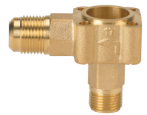
Evaporating temperature $t_e = 4.4\text{ }^\circ\text{C} / 40\text{ }^\circ\text{F}$
 Condensing temperature $t_c = 38\text{ }^\circ\text{C} / 100\text{ }^\circ\text{F}$
 Refrigerant temperature ahead of valve $t_f = 37\text{ }^\circ\text{C} / 98\text{ }^\circ\text{F}$

- ¹⁾ Recommend to use orifice no. 9B as alternative for orifice no. 08 and 09 on TE 55 when selecting the valve to work in range -60 – -25 °C / -75 – -15 °F.
 Extend capacity tables for range -60 – -25 °C / -75 – -15 °F are not provided.
- ²⁾ Alternative for orifice no. 08 and 09 in range -60 – -25 °C / -75 – -15 °F.
 Extend capacity tables for range -40 – 10 °C / -40 – 50 °F are not provided.

Data sheet | Thermostatic expansion valves, type TE 5 – TE 55

Ordering

Valve body for expansion valves



Flare angleway



Solder straightway



Solder straightway



Flanges



Solder angleway

| Type | Connection Inlet × Outlet | | Connections / Flow direction | Connection type ¹⁾ | Code no. |
|------|---------------------------|---------|------------------------------|-------------------------------|----------|
| | [in] | [mm] | | | |
| TE 5 | 1/2 × 5/8 | 12 × 16 | Flare angleway | – | 067B4013 |
| | 1/2 × 5/8 | – | Solder angleway | ODF × ODF | 067B4009 |
| | 1/2 × 7/8 | – | Solder angleway | ODF × ODF | 067B4010 |
| | 5/8 × 7/8 | – | Solder angleway | ODF × ODF | 067B4011 |
| | 7/8 × 1 1/8 | – | Solder angleway | ODF × ODM | 067B4034 |
| | 1/2 × 5/8 | – | Solder straightway | ODF × ODF | 067B4007 |
| | 1/2 × 7/8 | – | Solder straightway | ODF × ODF | 067B4008 |
| | 5/8 × 7/8 | – | Solder straightway | ODF × ODF | 067B4032 |
| | 7/8 × 1 1/8 | – | Solder straightway | ODF × ODM | 067B4033 |
| | – | 12 × 16 | Solder angleway | ODF × ODF | 067B4004 |
| | – | 12 × 22 | Solder angleway | ODF × ODF | 067B4005 |
| | – | 16 × 22 | Solder angleway | ODF × ODF | 067B4012 |
| | – | 22 × 28 | Solder angleway | ODF × ODM | 067B4037 |
| | – | 12 × 16 | Solder straightway | ODF × ODF | 067B4002 |

| | | | | | |
|-------|-------------|---------|--------------------|-----------|----------|
| TE 12 | 5/8 × 7/8 | – | Solder angleway | ODF × ODF | 067B4022 |
| | 7/8 × 1 1/8 | – | Solder angleway | ODF × ODM | 067B4023 |
| | 5/8 × 7/8 | – | Solder straightway | ODF × ODF | 067B4020 |
| | 7/8 × 1 1/8 | – | Solder straightway | ODF × ODM | 067B4021 |
| | – | 22 × 28 | Solder angleway | ODF × ODM | 067B4017 |
| | – | 16 × 22 | Solder straightway | ODF × ODF | 067B4018 |

| | | | | | |
|-------|-----------|---------|----------------|-----------|----------|
| TE 12 | 5/8 × 7/8 | – | Solder flanges | ODF × ODF | 067B4025 |
| | 7/8 × 1 | – | Solder flanges | ODF × ODF | 067B4026 |
| | – | 16 × 22 | Solder flanges | ODF × ODF | 067B4027 |
| | – | 22 × 25 | Solder flanges | ODF × ODF | 067B4015 |

| | | | | | |
|-------|-------------|---------|--------------------|-----------|----------|
| TE 20 | 7/8 × 1 1/8 | – | Solder angleway | ODF × ODM | 067B4023 |
| | – | 22 × 28 | Solder angleway | ODF × ODM | 067B4017 |
| | 7/8 × 1 1/8 | – | Solder straightway | ODF × ODM | 067B4021 |
| | – | 22 × 28 | Solder straightway | ODF × ODM | 067B4016 |

| | | | | | |
|-------|---------------|---------|--------------------|-----------|----------|
| TE 55 | 1 1/8 × 1 3/8 | – | Solder angleway | ODM × ODM | 067G4004 |
| | – | 28 × 35 | Solder angleway | ODM × ODM | 067G4002 |
| | 1 1/8 × 1 3/8 | – | Solder straightway | ODM × ODM | 067G4003 |
| | – | 28 × 35 | Solder straightway | ODM × ODM | 067G4001 |

¹⁾ ODF = Internal diameter
ODM = External diameter

Spareparts



Bulb strap for TE 5 – TE 55 delivered with the element

| Type | Length | Max. tube diameter | Code no. |
|---------------|--------|--------------------|----------|
| TE 5 / TE 12 | 225 mm | 2 1/8 in / 53 mm | 067N0557 |
| TE 20 / TE 55 | 350 mm | 3 1/8 in / 78 mm | 067N0559 |



Data sheet | Thermostatic expansion valves, type TE 5 – TE 55

How to select a valve

Example:

Q (capacity) = 45 kW
 T_{con} (condensing temperature) = 25 °C
 T_{evap} (evaporator temperature) = -30 °C
 T_{sub} (subcooling temperature) = 10 K
 D_{pd} (distributer pressure drop) = 2 bar

SI units

Q (capacity) = 45 kW
 f_{sub} (subcooling correction factor) = 1.09
 f_p (distributer correction factor) = 0.92

$$\frac{Q}{f_{sub} \times f_p} = \text{Selected capacity}$$

$$\frac{50}{1.09 \times 0.92} = 44.9 \text{ kW}$$

The selection will be:
 TE 20 orifice 9 (54.2 kW > 44.9 kW)

US units

Q (capacity) = 14 TR
 T_{con} (condensing temperature) = 75 °F
 T_{evap} (evaporator temperature) = -20 °F
 T_{sub} (subcooling temperature) = 10 °F
 D_{pd} (distributer pressure drop) = 30 psi

Q (capacity) = 14 TR
 f_{sub} (subcooling correction factor) = 1.03
 f_p (distributer correction factor) = 0.92

$$\frac{Q}{f_{sub} \times f_p} = \text{Selected capacity}$$

$$\frac{14}{1.03 \times 0.92} = 14.8 \text{ TR}$$

The selection will be:
 TE 20 orifice 9 (16.1 TR > 14.8 TR)

Capacity in kW. Range: -40 – 10 °C.
 Opening superheat sh = 4 K

**SI units
 R404A/R507**

| Valve type | Orifice no. | Cond. temp. [°C] | Evap. temp. [°C] | | |
|------------|-------------|------------------|------------------|------|------|
| | | | -40 | -30 | -20 |
| TE 20 | 8 | 25 | 35.7 | 48.4 | 62.2 |
| | 9 | 25 | 39.5 | 54.2 | 71.3 |
| | 10 | 25 | 46.5 | 64.9 | 86.1 |
| TE 55 | 11 | 25 | 51.1 | 71.2 | 94.4 |
| | 12 | 25 | 54.8 | 76.8 | 103 |
| | 13 | 25 | 66.5 | 93.7 | 126 |

Subcooling correction factor, f_{sub}

| Subcooling [K] | 2 | 4 | 10 | 15 |
|-------------------|------|------|------|------|
| Correction factor | 0,97 | 1,00 | 1,09 | 1,16 |

**SI units
 R404A/R507**

Distributer correction factor, f_p

| Pressure drop [bar] Δp | Evap. temp. [°C] | | | |
|------------------------|------------------|------|------|------|
| | -40 | -30 | -20 | -10 |
| Correction factor | | | | |
| 0 | 1 | 1 | 1 | 1 |
| 1 | 0.96 | 0.96 | 0.96 | 0.95 |
| 1.5 | 0.94 | 0.94 | 0.94 | 0.93 |
| 2 | 0.92 | 0.92 | 0.91 | 0.90 |

Calculated at 32 °C condensing temperature.

Capacity in kW. Range: -40 – 50 °F.
 Opening superheat sh = 7.2 °F.

**US units
 R404A/R507**

| Valve type | Orifice no. | Cond. temp. [°F] | Evap. temp. [°F] | | |
|------------|-------------|------------------|------------------|------|------|
| | | | -40 | -20 | 0 |
| TE 20 | 08 | 75 | 10.2 | 14.2 | 18.6 |
| | 09 | 75 | 11.3 | 16.1 | 21.5 |
| | 10 | 75 | 13.4 | 19.2 | 26.0 |
| TE 55 | 11 | 75 | 14.7 | 21.1 | 28.5 |
| | 12 | 75 | 15.8 | 22.8 | 31.1 |
| | 13 | 75 | 19.2 | 27.9 | 38.2 |

Subcooling correction factor, f_{sub}

| Subcooling [°F] | 2 | 7 | 10 | 20 |
|-------------------|------|------|------|------|
| Correction factor | 0.96 | 1.00 | 1.03 | 1.11 |

**US units
 R404A/R507**

Distributer correction factor, f_p

| Pressure drop [psi] Δp | Evap. temp. [°F] | | | |
|------------------------|------------------|------|------|------|
| | -40 | -20 | 0 | 20 |
| Correction factor | | | | |
| 0 | 1 | 1 | 1 | 1 |
| 15 | 0.96 | 0.96 | 0.96 | 0.95 |
| 25 | 0.94 | 0.93 | 0.92 | 0.91 |
| 30 | 0.92 | 0.92 | 0.91 | 0.89 |

Calculated at 90 °F condensing temperature.



Data sheet | Thermostatic expansion valves, type TE 5 – TE 55

Capacity in kW. Range: -40 – 10 °C.
Opening superheat sh = 4 K

SI units R407F

| Valve type | Orifice no. | Cond. temp. [°C] | Evap. temp. [°C] | | | | | |
|------------|-------------|------------------|------------------|------|------|------|-------|------|
| | | | -40 | -30 | -20 | -10 | 0 | 10 |
| TE 5 | 0.5 | 25 | 4.70 | 5.94 | 7.36 | 8.83 | 10.06 | 10.5 |
| | 01 | 25 | 8.60 | 10.9 | 13.5 | 16.2 | 18.4 | 19.1 |
| | 02 | 25 | 12.0 | 15.3 | 19.0 | 22.7 | 25.5 | 26.1 |
| | 03 | 25 | 15.3 | 19.4 | 24.1 | 28.8 | 32.8 | 34.1 |
| | 04 | 25 | 20.3 | 26.0 | 32.6 | 39.4 | 44.7 | 46.1 |
| TE 12 | 05 | 25 | 26.1 | 34.7 | 45.0 | 56.7 | 67.3 | 70.9 |
| | 06 | 25 | 32.8 | 44.3 | 58.4 | 74.6 | 89.4 | 94.4 |
| | 07 | 25 | 42.6 | 59.2 | 77.5 | 96.2 | 113 | 124 |
| TE 20 | 08 | 25 | 52.3 | 69.5 | 90.2 | 113 | 131 | 134 |
| | 09 | 25 | 56.6 | 76.3 | 101 | 130 | 155 | 162 |
| TE 55 | 10 | 25 | 65.7 | 86.2 | 111 | 139 | 164 | 177 |
| | 11 | 25 | 72.3 | 94.9 | 123 | 153 | 180 | 193 |
| | 12 | 25 | 77.7 | 103 | 133 | 167 | 200 | 216 |
| | 13 | 25 | 94.7 | 126 | 163 | 206 | 245 | 262 |

Capacity in TR. Range: -40 – 50 °F.
Opening superheat sh = 7.2 °F.

US units R407F

| Valve type | Orifice no. | Cond. temp. [°F] | Evap. temp. [°F] | | | | | |
|------------|-------------|------------------|------------------|------|------|------|------|------|
| | | | -40 | -20 | 0 | 20 | 40 | 50 |
| TE 5 | 0.5 | 75 | 1.33 | 1.72 | 2.17 | 2.62 | 2.91 | 2.92 |
| | 01 | 75 | 2.44 | 3.17 | 4.00 | 4.81 | 5.32 | 5.32 |
| | 02 | 75 | 3.41 | 4.44 | 5.60 | 6.70 | 7.32 | 7.26 |
| | 03 | 75 | 4.34 | 5.64 | 7.11 | 8.55 | 9.48 | 9.49 |
| | 04 | 75 | 5.76 | 7.58 | 9.66 | 11.7 | 12.9 | 12.8 |
| TE 12 | 05 | 75 | 7.42 | 10.2 | 13.5 | 17.2 | 19.7 | 19.7 |
| | 06 | 75 | 9.32 | 13.0 | 17.6 | 22.7 | 26.2 | 26.2 |
| | 07 | 75 | 12.0 | 17.4 | 23.2 | 29.0 | 33.6 | 34.7 |
| TE 20 | 08 | 75 | 14.9 | 20.4 | 27.0 | 33.8 | 37.8 | 37.3 |
| | 09 | 75 | 16.1 | 22.5 | 30.6 | 39.5 | 45.4 | 45.1 |
| TE 55 | 10 | 75 | 18.8 | 25.3 | 33.4 | 42.0 | 48.4 | 49.4 |
| | 11 | 75 | 20.7 | 27.9 | 36.8 | 46.1 | 52.9 | 53.9 |
| | 12 | 75 | 22.3 | 30.3 | 40.1 | 50.8 | 59.1 | 60.3 |
| | 13 | 75 | 27.2 | 37.1 | 49.3 | 62.6 | 72.3 | 73.2 |

Capacity in kW. Range: -40 – 10 °C.
Opening superheat sh = 4 K

SI units R407F

| Valve type | Orifice no. | Cond. temp. [°C] | Evap. temp. [°C] | | | | | |
|------------|-------------|------------------|------------------|------|-------|------|------|------|
| | | | -40 | -30 | -20 | -10 | 0 | 10 |
| TE 5 | 0.5 | 35 | 4.70 | 5.98 | 7.49 | 9.14 | 10.7 | 11.9 |
| | 01 | 35 | 8.60 | 11.0 | 13.8 | 16.8 | 19.7 | 21.7 |
| | 02 | 35 | 12.0 | 15.4 | 19.4 | 23.6 | 27.4 | 29.9 |
| | 03 | 35 | 15.2 | 19.4 | 24.4 | 29.7 | 34.8 | 38.5 |
| | 04 | 35 | 20.0 | 26.0 | 33.0 | 40.6 | 47.7 | 52.0 |
| TE 12 | 05 | 35 | 25.8 | 33.8 | 43.6 | 55.6 | 68.8 | 79.0 |
| | 06 | 35 | 31.9 | 42.6 | 56.1 | 72.8 | 91.3 | 106 |
| | 07 | 35 | 43.6 | 58.0 | 75.1 | 93.7 | 112 | 129 |
| TE 20 | 08 | 35 | 51.2 | 67.4 | 87.6 | 112 | 136 | 153 |
| | 09 | 35 | 54.3 | 71.9 | 94.9 | 123 | 156 | 181 |
| TE 55 | 10 | 35 | 61.4 | 81.6 | 107 | 137 | 167 | 191 |
| | 11 | 35 | 67.2 | 89.3 | 117 | 150 | 182 | 208 |
| | 12 | 35 | 70.7 | 94.5 | 124 | 160 | 200 | 233 |
| | 13 | 35 | 84.6 | 113 | 150.1 | 195 | 243 | 282 |

Capacity in TR. Range: -40 – 50 °F.
Opening superheat sh = 7.2 °F.

US units R407F

| Valve type | Orifice no. | Cond. temp. [°F] | Evap. temp. [°F] | | | | | |
|------------|-------------|------------------|------------------|------|------|------|------|------|
| | | | -40 | -20 | 0 | 20 | 40 | 50 |
| TE 5 | 0.5 | 95 | 1.33 | 1.74 | 2.23 | 2.75 | 3.21 | 3.37 |
| | 01 | 95 | 2.44 | 3.20 | 4.11 | 5.06 | 5.89 | 6.16 |
| | 02 | 95 | 3.41 | 4.49 | 5.77 | 7.09 | 8.17 | 8.48 |
| | 03 | 95 | 4.32 | 5.67 | 7.26 | 8.95 | 10.4 | 10.9 |
| | 04 | 95 | 5.69 | 7.57 | 9.83 | 12.2 | 14.3 | 14.9 |
| TE 12 | 05 | 95 | 7.33 | 9.87 | 13.1 | 17.0 | 21.1 | 22.6 |
| | 06 | 95 | 9.07 | 12.5 | 16.9 | 22.4 | 28.1 | 30.2 |
| | 07 | 95 | 12.4 | 17.0 | 22.5 | 28.4 | 34.2 | 36.6 |
| TE 20 | 08 | 95 | 14.6 | 19.7 | 26.3 | 34.1 | 41.3 | 43.5 |
| | 09 | 95 | 15.4 | 21.1 | 28.6 | 38.1 | 47.9 | 51.3 |
| TE 55 | 10 | 95 | 17.4 | 23.9 | 32.2 | 41.8 | 50.9 | 54.3 |
| | 11 | 95 | 19.1 | 26.2 | 35.3 | 45.7 | 55.4 | 58.9 |
| | 12 | 95 | 20.1 | 27.7 | 37.4 | 49.3 | 61.4 | 66.2 |
| | 13 | 95 | 24.0 | 33.3 | 45.3 | 59.8 | 74.5 | 80.1 |

Subcooling correction factor, f_{sub}

| Subcooling [K] | 2 | 4 | 10 | 15 | 20 | 25 | 30 |
|-------------------|------|------|------|------|------|------|------|
| Correction factor | 0.98 | 1.00 | 1.07 | 1.12 | 1.17 | 1.23 | 1.28 |

Subcooling correction factor, f_{sub}

| Subcooling [°F] | 2 | 7 | 10 | 20 | 30 | 40 | 50 |
|-------------------|------|------|------|------|------|------|------|
| Correction factor | 0.97 | 1.00 | 1.02 | 1.08 | 1.15 | 1.21 | 1.27 |

Distributer correction factor, f_p

SI units R407F

| Pressure drop [bar] Δp | Evap. temp. [°C] | | | | | |
|--------------------------------|-------------------|------|------|------|------|------|
| | -40 | -30 | -20 | -10 | 0 | 10 |
| | Correction factor | | | | | |
| 0 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 0.97 | 0.96 | 0.96 | 0.96 | 0.95 | 0.94 |
| 1.5 | 0.95 | 0.95 | 0.94 | 0.94 | 0.93 | 0.91 |
| 2 | 0.93 | 0.93 | 0.92 | 0.91 | 0.90 | 0.87 |

Calculated at 32 °C condensing temperature.

Distributer correction factor, f_p

US units R407F

| Pressure drop [psi] Δp | Evap. temp. [°C] | | | | | |
|--------------------------------|-------------------|------|------|------|------|------|
| | -40 | -20 | 0 | 20 | 40 | 50 |
| | Correction factor | | | | | |
| 0 | 1 | 1 | 1 | 1 | 1 | 1 |
| 15 | 0.96 | 0.96 | 0.96 | 0.95 | 0.95 | 0.94 |
| 25 | 0.94 | 0.94 | 0.93 | 0.92 | 0.91 | 0.89 |
| 30 | 0.93 | 0.92 | 0.92 | 0.91 | 0.89 | 0.87 |

Calculated at 90 °F condensing temperature.



Data sheet | Thermostatic expansion valves, type TE 5 – TE 55

Capacity in kW. Range: -40 – 10 °C.
Opening superheat sh = 4 K

SI units R407F

| Valve type | Orifice no. | Cond. temp. [°C] | Evap. temp. [°C] | | | | | |
|------------|-------------|------------------|------------------|------|------|------|------|------|
| | | | -40 | -30 | -20 | -10 | 0 | 10 |
| TE 5 | 0.5 | 45 | 4.58 | 5.86 | 7.39 | 9.11 | 10.9 | 12.4 |
| | 01 | 45 | 8.36 | 10.7 | 13.6 | 16.8 | 20.0 | 22.7 |
| | 02 | 45 | 11.7 | 15.1 | 19.1 | 23.6 | 28.0 | 31.5 |
| | 03 | 45 | 14.7 | 18.9 | 23.9 | 29.5 | 35.2 | 40.0 |
| | 04 | 45 | 19.2 | 25.0 | 32.2 | 40.2 | 48.3 | 54.8 |
| TE 12 | 05 | 45 | 25.2 | 32.3 | 41.2 | 52.3 | 65.6 | 79.5 |
| | 06 | 45 | 30.7 | 40.2 | 52.5 | 68.0 | 87.0 | 107 |
| | 07 | 45 | 41.9 | 54.0 | 69.3 | 87.0 | 106 | 125 |
| TE 20 | 08 | 45 | 49.5 | 64.2 | 82.8 | 106 | 132 | 157 |
| | 09 | 45 | 51.5 | 66.8 | 86.9 | 113 | 145 | 179 |
| TE 55 | 10 | 45 | 55.2 | 74.2 | 98.8 | 129 | 162 | 192 |
| | 11 | 45 | 60.0 | 80.8 | 108 | 140 | 175 | 207 |
| | 12 | 45 | 62.3 | 83.9 | 112 | 146 | 187 | 229 |
| | 13 | 45 | 73.1 | 99.0 | 132 | 175 | 224 | 274 |

Capacity in TR. Range: -40 – 50 °F.
Opening superheat sh = 7.2 °F.

US units R407F

| Valve type | Orifice no. | Cond. temp. [°F] | Evap. temp. [°F] | | | | | |
|------------|-------------|------------------|------------------|------|------|------|------|------|
| | | | -40 | -20 | 0 | 20 | 40 | 50 |
| TE 5 | 0.5 | 115 | 1.29 | 1.70 | 2.19 | 2.75 | 3.29 | 3.52 |
| | 01 | 115 | 2.36 | 3.12 | 4.04 | 5.07 | 6.05 | 6.47 |
| | 02 | 115 | 3.29 | 4.38 | 5.69 | 7.13 | 8.45 | 8.97 |
| | 03 | 115 | 4.14 | 5.48 | 7.10 | 8.90 | 10.6 | 11.4 |
| | 04 | 115 | 5.40 | 7.27 | 9.58 | 12.2 | 14.6 | 15.6 |
| TE 12 | 05 | 115 | 7.12 | 9.37 | 12.3 | 15.9 | 20.3 | 22.4 |
| | 06 | 115 | 8.66 | 11.7 | 15.6 | 20.8 | 27.1 | 30.2 |
| | 07 | 115 | 11.8 | 15.6 | 20.5 | 26.2 | 32.3 | 35.2 |
| TE 20 | 08 | 115 | 14.0 | 18.6 | 24.6 | 32.2 | 40.6 | 44.4 |
| | 09 | 115 | 14.5 | 19.4 | 25.9 | 34.6 | 45.1 | 50.4 |
| TE 55 | 10 | 115 | 15.5 | 21.5 | 29.5 | 39.3 | 49.6 | 54.2 |
| | 11 | 115 | 16.8 | 23.4 | 32.1 | 42.7 | 53.7 | 58.6 |
| | 12 | 115 | 17.4 | 24.2 | 33.2 | 44.7 | 57.9 | 64.5 |
| | 13 | 115 | 20.4 | 28.6 | 39.4 | 53.3 | 69.5 | 77.3 |

Capacity in kW. Range: -40 – 10 °C.
Opening superheat sh = 4 K

SI units R407F

| Valve type | Orifice no. | Cond. temp. [°C] | Evap. temp. [°C] | | | | | |
|------------|-------------|------------------|------------------|------|------|------|------|------|
| | | | -40 | -30 | -20 | -10 | 0 | 10 |
| TE 5 | 0.5 | 55 | 4.33 | 5.56 | 7.06 | 8.77 | 10.6 | 12.3 |
| | 01 | 55 | 7.89 | 10.2 | 13.0 | 16.2 | 19.5 | 22.6 |
| | 02 | 55 | 11.0 | 14.3 | 18.3 | 22.9 | 27.5 | 31.6 |
| | 03 | 55 | 13.7 | 17.8 | 22.7 | 28.2 | 34.1 | 39.5 |
| | 04 | 55 | 17.7 | 23.4 | 30.3 | 38.4 | 46.8 | 54.3 |
| TE 12 | 05 | 55 | 24.3 | 30.6 | 38.3 | 48.0 | 59.8 | 73.6 |
| | 06 | 55 | 29.1 | 37.5 | 48.1 | 61.8 | 79.0 | 99.2 |
| | 07 | 55 | 37.6 | 47.1 | 60.4 | 76.7 | 95.2 | 115 |
| TE 20 | 08 | 55 | 47.3 | 60.3 | 76.8 | 97.4 | 122 | 149 |
| | 09 | 55 | 48.6 | 61.6 | 78.6 | 101 | 130 | 163 |
| TE 55 | 10 | 55 | 47.2 | 64.2 | 86.7 | 115 | 148 | 180 |
| | 11 | 55 | 51.0 | 69.3 | 93.7 | 124 | 159 | 194 |
| | 12 | 55 | 53.0 | 71.9 | 96.3 | 127 | 166 | 208 |
| | 13 | 55 | 61.0 | 83.3 | 112 | 150 | 196 | 247 |

Capacity in TR. Range: -40 – 50 °F.
Opening superheat sh = 7.2 °F.

US units R407F

| Valve type | Orifice no. | Cond. temp. [°F] | Evap. temp. [°F] | | | | | |
|------------|-------------|------------------|------------------|------|------|------|------|------|
| | | | -40 | -20 | 0 | 20 | 40 | 50 |
| TE 5 | 0.5 | 135 | 1.21 | 1.60 | 2.08 | 2.63 | 3.19 | 3.45 |
| | 01 | 135 | 2.20 | 2.93 | 3.83 | 4.85 | 5.89 | 6.37 |
| | 02 | 135 | 3.06 | 4.10 | 5.40 | 6.86 | 8.29 | 8.91 |
| | 03 | 135 | 3.82 | 5.10 | 6.66 | 8.44 | 10.3 | 11.1 |
| | 04 | 135 | 4.91 | 6.69 | 8.92 | 11.5 | 14.1 | 15.3 |
| TE 12 | 05 | 135 | 6.84 | 8.78 | 11.2 | 14.3 | 18.2 | 20.4 |
| | 06 | 135 | 8.16 | 10.8 | 14.1 | 18.6 | 24.3 | 27.5 |
| | 07 | 135 | 10.3 | 13.2 | 17.4 | 22.7 | 28.6 | 31.8 |
| TE 20 | 08 | 135 | 13.3 | 17.3 | 22.6 | 29.2 | 37.3 | 41.5 |
| | 09 | 135 | 13.6 | 17.6 | 23.0 | 30.3 | 39.7 | 45.1 |
| TE 55 | 10 | 135 | 12.8 | 18.1 | 25.3 | 34.5 | 44.9 | 50.0 |
| | 11 | 135 | 13.8 | 19.5 | 27.3 | 37.2 | 48.3 | 53.7 |
| | 12 | 135 | 14.5 | 20.3 | 28.1 | 38.2 | 50.6 | 57.3 |
| | 13 | 135 | 16.5 | 23.4 | 32.6 | 44.7 | 59.8 | 67.9 |

Subcooling correction factor, f_{sub}

| Subcooling [K] | 2 | 4 | 10 | 15 | 20 | 25 | 30 |
|-------------------|------|------|------|------|------|------|------|
| Correction factor | 0.98 | 1.00 | 1.07 | 1.12 | 1.17 | 1.23 | 1.28 |

Subcooling correction factor, f_{sub}

| Subcooling [°F] | 2 | 7 | 10 | 20 | 30 | 40 | 50 |
|-------------------|------|------|------|------|------|------|------|
| Correction factor | 0.97 | 1.00 | 1.02 | 1.08 | 1.15 | 1.21 | 1.27 |

Distributer correction factor, f_p

SI units R407F

| Pressure drop [bar] Δp | Evap. temp. [°C] | | | | | |
|--------------------------------|-------------------|------|------|------|------|------|
| | -40 | -30 | -20 | -10 | 0 | 10 |
| | Correction factor | | | | | |
| 0 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 0.97 | 0.96 | 0.96 | 0.96 | 0.95 | 0.94 |
| 1.5 | 0.95 | 0.95 | 0.94 | 0.94 | 0.93 | 0.91 |
| 2 | 0.93 | 0.93 | 0.92 | 0.91 | 0.90 | 0.87 |

Calculated at 32 °C condensing temperature.

Distributer correction factor, f_p

US units R407F

| Pressure drop [psi] Δp | Evap. temp. [°F] | | | | | |
|--------------------------------|-------------------|------|------|------|------|------|
| | -40 | -20 | 0 | 20 | 40 | 50 |
| | Correction factor | | | | | |
| 0 | 1 | 1 | 1 | 1 | 1 | 1 |
| 15 | 0.96 | 0.96 | 0.96 | 0.95 | 0.95 | 0.94 |
| 25 | 0.94 | 0.94 | 0.93 | 0.92 | 0.91 | 0.89 |
| 30 | 0.93 | 0.92 | 0.92 | 0.91 | 0.89 | 0.87 |

Calculated at 90 °F condensing temperature.



Data sheet | Thermostatic expansion valves, type TE 5 – TE 55

Capacity in kW. Range: -40 – 10 °C.

Opening superheat sh = 4 K

SI units R407A

| Valve type | Orifice no. | Cond. temp. [°C] | Evap. temp. [°C] | | | | | |
|------------|-------------|------------------|------------------|------|------|------|------|------|
| | | | -40 | -30 | -20 | -10 | 0 | 10 |
| TE 5 | 0.5 | 25 | 4.36 | 5.50 | 6.80 | 8.10 | 9.14 | 9.44 |
| | 01 | 25 | 8.00 | 10.1 | 12.5 | 14.9 | 16.7 | 17.2 |
| | 02 | 25 | 11.2 | 14.2 | 17.5 | 20.7 | 23.1 | 23.5 |
| | 03 | 25 | 14.2 | 18.0 | 22.3 | 26.6 | 29.9 | 30.5 |
| | 04 | 25 | 19.0 | 24.2 | 30.2 | 36.2 | 40.6 | 41.2 |
| TE 12 | 05 | 25 | 19.7 | 26.4 | 34.3 | 42.7 | 49.9 | 52.8 |
| | 06 | 25 | 25.1 | 33.8 | 44.4 | 56.0 | 66.1 | 70.3 |
| | 07 | 25 | 32.6 | 43.9 | 58.1 | 74.1 | 88.2 | 94.2 |
| TE 20 | 08 | 25 | 46.6 | 59.8 | 75.2 | 91.3 | 104 | 107 |
| | 09 | 25 | 51.3 | 66.8 | 85.6 | 106 | 124 | 130 |
| TE 55 | 10 | 25 | 60.0 | 77.7 | 99.1 | 123 | 145 | 156 |
| | 11 | 25 | 66.1 | 85.6 | 109 | 135 | 159 | 171 |
| | 12 | 25 | 71.2 | 92.4 | 118 | 148 | 176 | 191 |
| | 13 | 25 | 86.9 | 113 | 146 | 182 | 216 | 232 |

Capacity in TR. Range: -40 – 50 °F.

Opening superheat sh = 7.2 °F.

US units R407A

| Valve type | Orifice no. | Cond. temp. [°F] | Evap. temp. [°F] | | | | | |
|------------|-------------|------------------|------------------|------|------|------|------|------|
| | | | -40 | -20 | 0 | 20 | 40 | 50 |
| TE 5 | 0.5 | 75 | 1.24 | 1.60 | 2.01 | 2.40 | 2.63 | 2.63 |
| | 01 | 75 | 2.27 | 2.94 | 3.69 | 4.39 | 4.79 | 4.77 |
| | 02 | 75 | 3.19 | 4.13 | 5.15 | 6.09 | 6.59 | 6.52 |
| | 03 | 75 | 4.03 | 5.24 | 6.60 | 7.86 | 8.56 | 8.49 |
| | 04 | 75 | 5.40 | 7.07 | 8.95 | 10.7 | 11.6 | 11.5 |
| TE 12 | 05 | 75 | 5.62 | 7.75 | 10.3 | 12.9 | 14.6 | 14.7 |
| | 06 | 75 | 7.16 | 9.96 | 13.4 | 16.9 | 19.4 | 19.6 |
| | 07 | 75 | 9.32 | 13.0 | 17.6 | 22.5 | 26.0 | 26.3 |
| TE 20 | 08 | 75 | 13.3 | 18.0 | 22.4 | 27.2 | 30.0 | 29.8 |
| | 09 | 75 | 14.7 | 20.0 | 25.7 | 32.1 | 36.2 | 36.2 |
| TE 55 | 10 | 75 | 17.2 | 22.8 | 29.7 | 37.1 | 42.8 | 43.6 |
| | 11 | 75 | 19.0 | 25.2 | 32.7 | 40.8 | 46.9 | 47.8 |
| | 12 | 75 | 20.0 | 27.2 | 35.6 | 44.8 | 52.1 | 53.4 |
| | 13 | 75 | 25.0 | 33.4 | 43.9 | 55.3 | 63.9 | 64.9 |

Capacity in kW. Range: -40 – 10 °C.

Opening superheat sh = 4 K

SI units R407A

| Valve type | Orifice no. | Cond. temp. [°C] | Evap. temp. [°C] | | | | | |
|------------|-------------|------------------|------------------|------|------|------|------|------|
| | | | -40 | -30 | -20 | -10 | 0 | 10 |
| TE 5 | 0.5 | 35 | 4.25 | 5.41 | 6.78 | 8.30 | 9.75 | 10.8 |
| | 01 | 35 | 7.79 | 9.93 | 12.5 | 15.2 | 17.9 | 20.0 |
| | 02 | 35 | 10.9 | 14.0 | 17.5 | 21.3 | 24.8 | 27.0 |
| | 03 | 35 | 13.7 | 17.5 | 22.1 | 27.1 | 31.8 | 34.8 |
| | 04 | 35 | 18.2 | 23.5 | 29.8 | 36.8 | 43.3 | 47.2 |
| TE 12 | 05 | 35 | 18.9 | 25.0 | 32.6 | 41.6 | 50.8 | 57.9 |
| | 06 | 35 | 23.7 | 31.7 | 41.9 | 54.2 | 67.1 | 77.2 |
| | 07 | 35 | 30.1 | 39.9 | 52.9 | 68.9 | 86.3 | 100 |
| TE 20 | 08 | 35 | 43.9 | 56.5 | 72.0 | 89.9 | 107 | 120 |
| | 09 | 35 | 47.2 | 61.3 | 79.3 | 101 | 124 | 142 |
| TE 55 | 10 | 35 | 54.5 | 71.5 | 92.8 | 118 | 146 | 169 |
| | 11 | 35 | 59.7 | 78.2 | 101 | 129 | 159 | 184 |
| | 12 | 35 | 63.7 | 83.7 | 109 | 139 | 173 | 203 |
| | 13 | 35 | 76.4 | 100 | 132 | 169 | 211 | 246 |

Capacity in TR. Range: -40 – 50 °F.

Opening superheat sh = 7.2 °F.

US units R407A

| Valve type | Orifice no. | Cond. temp. [°F] | Evap. temp. [°F] | | | | | |
|------------|-------------|------------------|------------------|------|------|------|------|------|
| | | | -40 | -20 | 0 | 20 | 40 | 50 |
| TE 5 | 0.5 | 95 | 1.21 | 1.58 | 2.02 | 2.50 | 2.92 | 3.06 |
| | 01 | 95 | 2.21 | 2.89 | 3.71 | 4.59 | 5.34 | 5.58 |
| | 02 | 95 | 3.10 | 4.07 | 5.20 | 6.40 | 7.38 | 7.66 |
| | 03 | 95 | 3.89 | 5.11 | 6.57 | 8.15 | 9.49 | 9.88 |
| | 04 | 95 | 5.15 | 6.84 | 8.89 | 11.1 | 12.9 | 13.4 |
| TE 12 | 05 | 95 | 5.36 | 7.31 | 9.80 | 12.7 | 15.5 | 16.4 |
| | 06 | 95 | 6.73 | 9.30 | 12.6 | 16.6 | 20.5 | 21.9 |
| | 07 | 95 | 8.55 | 11.7 | 15.9 | 21.2 | 26.5 | 28.5 |
| TE 20 | 08 | 95 | 12.5 | 16.5 | 21.5 | 27.3 | 32.4 | 34.0 |
| | 09 | 95 | 13.4 | 17.9 | 23.8 | 31.0 | 37.9 | 40.2 |
| TE 55 | 10 | 95 | 15.5 | 20.9 | 27.9 | 36.2 | 44.7 | 48.1 |
| | 11 | 95 | 16.9 | 22.9 | 30.5 | 39.6 | 48.7 | 52.3 |
| | 12 | 95 | 18.1 | 24.5 | 32.8 | 42.9 | 53.4 | 57.7 |
| | 13 | 95 | 21.7 | 29.5 | 39.7 | 52.2 | 64.9 | 69.9 |

Subcooling correction factor, f_{sub}

| Subcooling [K] | 2 | 4 | 10 | 15 | 20 | 25 | 30 |
|-------------------|------|------|------|------|------|------|------|
| Correction factor | 0.98 | 1.00 | 1.07 | 1.13 | 1.19 | 1.24 | 1.30 |

Subcooling correction factor, f_{sub}

| Subcooling [°F] | 2 | 7 | 10 | 20 | 30 | 40 | 50 |
|-------------------|------|------|------|------|------|------|------|
| Correction factor | 0.97 | 1.00 | 1.02 | 1.09 | 1.16 | 1.23 | 1.29 |

Distributer correction factor, f_p

SI units R407A

| Pressure drop [bar] Δp | Evap. temp. [°C] | | | | | |
|--------------------------------|-------------------|------|------|------|------|------|
| | -40 | -30 | -20 | -10 | 0 | 10 |
| | Correction factor | | | | | |
| 0 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 0.96 | 0.96 | 0.96 | 0.96 | 0.95 | 0.94 |
| 1.5 | 0.95 | 0.94 | 0.94 | 0.93 | 0.92 | 0.90 |
| 2 | 0.93 | 0.92 | 0.92 | 0.91 | 0.89 | 0.87 |

Calculated at 32 °C condensing temperature.

Distributer correction factor, f_p

US units R407A

| Pressure drop [psi] Δp | Evap. temp. [°F] | | | | | |
|--------------------------------|-------------------|------|------|------|------|------|
| | -40 | -20 | 0 | 20 | 40 | 50 |
| | Correction factor | | | | | |
| 0 | 1 | 1 | 1 | 1 | 1 | 1 |
| 15 | 0.96 | 0.96 | 0.96 | 0.95 | 0.94 | 0.93 |
| 25 | 0.94 | 0.93 | 0.93 | 0.92 | 0.90 | 0.89 |
| 30 | 0.92 | 0.92 | 0.91 | 0.90 | 0.88 | 0.86 |

Calculated at 90 °F condensing temperature.



Data sheet | Thermostatic expansion valves, type TE 5 – TE 55

Capacity in kW. Range: -40 – 10 °C.
Opening superheat sh = 4 K

SI units R407A

| Valve type | Orifice no. | Cond. temp. [°C] | Evap. temp. [°C] | | | | | |
|------------|-------------|------------------|------------------|------|------|------|------|------|
| | | | -40 | -30 | -20 | -10 | 0 | 10 |
| TE 5 | 0.5 | 45 | 4.00 | 5.11 | 6.47 | 8.05 | 9.73 | 11.2 |
| | 01 | 45 | 7.33 | 9.39 | 11.9 | 14.8 | 17.9 | 20.6 |
| | 02 | 45 | 10.3 | 13.2 | 16.8 | 20.8 | 25.0 | 28.5 |
| | 03 | 45 | 12.8 | 16.4 | 20.8 | 26.0 | 31.6 | 36.3 |
| | 04 | 45 | 16.8 | 21.8 | 28.0 | 35.4 | 43.2 | 49.6 |
| TE 12 | 05 | 45 | 17.5 | 22.8 | 29.6 | 38.1 | 47.8 | 57.3 |
| | 06 | 45 | 21.7 | 28.7 | 37.8 | 49.3 | 62.9 | 76.4 |
| | 07 | 45 | 27.4 | 35.3 | 46.1 | 60.1 | 77.1 | 95.0 |
| TE 20 | 08 | 45 | 40.2 | 51.4 | 65.7 | 83.4 | 103 | 121 |
| | 09 | 45 | 42.2 | 54.3 | 70.2 | 90.6 | 115 | 139 |
| TE 55 | 10 | 45 | 47.4 | 62.9 | 82.9 | 108 | 137 | 167 |
| | 11 | 45 | 51.6 | 68.4 | 90.0 | 117 | 149 | 181 |
| | 12 | 45 | 54.6 | 72.5 | 95.8 | 125 | 160 | 197 |
| | 13 | 45 | 64.3 | 85.8 | 114 | 150 | 193 | 236 |

Capacity in TR. Range: -40 – 50 °F.
Opening superheat sh = 7.2 °F.

US units R407A

| Valve type | Orifice no. | Cond. temp. [°F] | Evap. temp. [°F] | | | | | |
|------------|-------------|------------------|------------------|------|------|------|------|------|
| | | | -40 | -20 | 0 | 20 | 40 | 50 |
| TE 5 | 0.5 | 115 | 1.13 | 1.48 | 1.92 | 2.43 | 2.96 | 3.18 |
| | 01 | 115 | 2.06 | 2.72 | 3.53 | 4.48 | 5.44 | 5.85 |
| | 02 | 115 | 2.89 | 3.82 | 4.97 | 6.29 | 7.58 | 8.10 |
| | 03 | 115 | 3.60 | 4.74 | 6.17 | 7.86 | 9.58 | 10.3 |
| | 04 | 115 | 4.72 | 6.30 | 8.32 | 10.7 | 13.1 | 14.1 |
| TE 12 | 05 | 115 | 4.92 | 6.58 | 8.78 | 11.6 | 14.7 | 16.2 |
| | 06 | 115 | 6.10 | 8.28 | 11.2 | 15.0 | 19.4 | 21.5 |
| | 07 | 115 | 7.67 | 10.2 | 13.6 | 18.3 | 23.8 | 26.6 |
| TE 20 | 08 | 115 | 11.3 | 14.8 | 19.5 | 25.3 | 31.6 | 34.3 |
| | 09 | 115 | 11.8 | 15.6 | 20.8 | 27.5 | 35.5 | 39.2 |
| TE 55 | 10 | 115 | 13.2 | 18.1 | 24.6 | 32.9 | 42.5 | 47.1 |
| | 11 | 115 | 14.4 | 19.7 | 26.7 | 35.7 | 46.0 | 50.9 |
| | 12 | 115 | 15.2 | 20.9 | 28.4 | 38.2 | 49.7 | 55.4 |
| | 13 | 115 | 17.9 | 24.6 | 33.8 | 45.7 | 59.6 | 66.5 |

Capacity in kW. Range: -40 – 10 °C.
Opening superheat sh = 4 K

SI units R407A

| Valve type | Orifice no. | Cond. temp. [°C] | Evap. temp. [°C] | | | | | |
|------------|-------------|------------------|------------------|------|------|------|------|-------|
| | | | -40 | -30 | -20 | -10 | 0 | 10 |
| TE 5 | 0.5 | 55 | 3.65 | 4.66 | 5.91 | 7.42 | 9.12 | 10.83 |
| | 01 | 55 | 6.68 | 8.56 | 10.9 | 13.7 | 16.9 | 20.0 |
| | 02 | 55 | 9.34 | 12.0 | 15.4 | 19.4 | 23.8 | 27.9 |
| | 03 | 55 | 11.6 | 14.8 | 18.8 | 23.8 | 29.4 | 35.0 |
| | 04 | 55 | 15.0 | 19.5 | 25.2 | 32.3 | 40.3 | 48.2 |
| TE 12 | 05 | 55 | 15.9 | 20.2 | 25.8 | 33.1 | 42.0 | 51.9 |
| | 06 | 55 | 19.4 | 25.1 | 32.7 | 42.6 | 55.0 | 69.1 |
| | 07 | 55 | 24.5 | 30.7 | 39.0 | 50.0 | 64.3 | 81.3 |
| TE 20 | 08 | 55 | 35.6 | 45.1 | 57.4 | 73.2 | 92.5 | 113 |
| | 09 | 55 | 36.8 | 46.6 | 59.6 | 76.9 | 99.2 | 124 |
| TE 55 | 10 | 55 | 39.3 | 52.7 | 70.3 | 93.0 | 121 | 152 |
| | 11 | 55 | 42.5 | 57.0 | 75.8 | 100 | 130 | 164 |
| | 12 | 55 | 44.6 | 59.8 | 79.9 | 106 | 139 | 176 |
| | 13 | 55 | 51.4 | 69.4 | 93.4 | 125 | 164 | 209 |

Capacity in TR. Range: -40 – 50 °F.
Opening superheat sh = 7.2 °F.

US units R407A

| Valve type | Orifice no. | Cond. temp. [°F] | Evap. temp. [°F] | | | | | |
|------------|-------------|------------------|------------------|------|------|------|------|------|
| | | | -40 | -20 | 0 | 20 | 40 | 50 |
| TE 5 | 0.5 | 135 | 1.01 | 1.32 | 1.72 | 2.21 | 2.75 | 3.02 |
| | 01 | 135 | 1.85 | 2.43 | 3.17 | 4.08 | 5.09 | 5.58 |
| | 02 | 135 | 2.58 | 3.42 | 4.49 | 5.77 | 7.16 | 7.81 |
| | 03 | 135 | 3.20 | 4.19 | 5.47 | 7.06 | 8.86 | 9.73 |
| | 04 | 135 | 4.13 | 5.52 | 7.34 | 9.63 | 12.2 | 13.4 |
| TE 12 | 05 | 135 | 4.39 | 5.70 | 7.47 | 9.80 | 12.7 | 14.2 |
| | 06 | 135 | 5.34 | 7.08 | 9.46 | 12.7 | 16.7 | 19.0 |
| | 07 | 135 | 6.78 | 8.63 | 11.2 | 14.7 | 19.4 | 22.0 |
| TE 20 | 08 | 135 | 9.80 | 12.7 | 16.6 | 21.7 | 27.9 | 31.2 |
| | 09 | 135 | 10.1 | 13.1 | 17.1 | 22.8 | 30.1 | 34.1 |
| TE 55 | 10 | 135 | 10.6 | 14.7 | 20.3 | 27.8 | 37.0 | 41.9 |
| | 11 | 135 | 11.5 | 15.9 | 21.9 | 29.9 | 39.7 | 45.0 |
| | 12 | 135 | 12.0 | 16.7 | 23.0 | 31.6 | 42.3 | 48.2 |
| | 13 | 135 | 13.8 | 19.3 | 26.8 | 37.1 | 50.1 | 57.2 |

Subcooling correction factor, f_{sub}

| Subcooling [K] | 2 | 4 | 10 | 15 | 20 | 25 | 30 |
|-------------------|------|------|------|------|------|------|------|
| Correction factor | 0.98 | 1.00 | 1.07 | 1.13 | 1.19 | 1.24 | 1.30 |

Subcooling correction factor, f_{sub}

| Subcooling [°F] | 2 | 7 | 10 | 20 | 30 | 40 | 50 |
|-------------------|------|------|------|------|------|------|------|
| Correction factor | 0.97 | 1.00 | 1.02 | 1.09 | 1.16 | 1.23 | 1.29 |

Distributer correction factor, f_p

SI units R407A

| Pressure drop [bar] Δp | Evap. temp. [°C] | | | | | |
|--------------------------------|-------------------|------|------|------|------|------|
| | -40 | -30 | -20 | -10 | 0 | 10 |
| | Correction factor | | | | | |
| 0 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 0.96 | 0.96 | 0.96 | 0.96 | 0.95 | 0.94 |
| 1.5 | 0.95 | 0.94 | 0.94 | 0.93 | 0.92 | 0.90 |
| 2 | 0.93 | 0.92 | 0.92 | 0.91 | 0.89 | 0.87 |

Calculated at 32 °C condensing temperature.

Distributer correction factor, f_p

US units R407A

| Pressure drop [psi] Δp | Evap. temp. [°F] | | | | | |
|--------------------------------|-------------------|------|------|------|------|------|
| | -40 | -20 | 0 | 20 | 40 | 50 |
| | Correction factor | | | | | |
| 0 | 1 | 1 | 1 | 1 | 1 | 1 |
| 15 | 0.96 | 0.96 | 0.96 | 0.95 | 0.94 | 0.93 |
| 25 | 0.94 | 0.93 | 0.93 | 0.92 | 0.90 | 0.89 |
| 30 | 0.92 | 0.92 | 0.91 | 0.90 | 0.88 | 0.86 |

Calculated at 90 °F condensing temperature.



Data sheet | Thermostatic expansion valves, type TE 5 – TE 55

Capacity in kW. Range: -40 – 10 °C.
Opening superheat sh = 4 K

SI units R448A/R449A

| Valve type | Orifice no. | Cond. temp. [°C] | Evap. temp. [°C] | | | | | |
|------------|-------------|------------------|------------------|------|------|------|------|------|
| | | | -40 | -30 | -20 | -10 | 0 | 10 |
| TE 5 | 0.5 | 25 | 4.27 | 5.53 | 6.90 | 8.31 | 9.50 | 9.95 |
| | 01 | 25 | 7.84 | 10.2 | 12.7 | 15.3 | 17.4 | 18.1 |
| | 02 | 25 | 11.0 | 14.3 | 17.8 | 21.3 | 24.0 | 24.7 |
| | 03 | 25 | 13.9 | 18.0 | 22.6 | 27.2 | 31.1 | 32.2 |
| | 04 | 25 | 18.4 | 24.2 | 30.6 | 37.1 | 42.3 | 43.4 |
| TE 12 | 05 | 25 | 22.5 | 29.0 | 36.5 | 44.8 | 52.5 | 56.1 |
| | 06 | 25 | 28.5 | 37.2 | 47.5 | 59.0 | 69.7 | 74.6 |
| | 07 | 25 | 37.4 | 48.4 | 61.8 | 77.3 | 92.3 | 100 |
| TE 20 | 08 | 25 | 49.9 | 65.4 | 83.2 | 102 | 118 | 122 |
| | 09 | 25 | 54.0 | 71.7 | 93.3 | 118 | 140 | 147 |
| TE 55 | 10 | 25 | 56.3 | 76.7 | 101 | 128 | 153 | 166 |
| | 11 | 25 | 62.0 | 84.4 | 111 | 141 | 168 | 181 |
| | 12 | 25 | 66.5 | 90.8 | 120 | 154 | 185 | 202 |
| | 13 | 25 | 80.7 | 112 | 148 | 189 | 228 | 246 |

Capacity in TR. Range: -40 – 50 °F.
Opening superheat sh = 7.2 °F.

US units R448A/R449A

| Valve type | Orifice no. | Cond. temp. [°F] | Evap. temp. [°F] | | | | | |
|------------|-------------|------------------|------------------|------|------|------|------|------|
| | | | -40 | -20 | 0 | 20 | 40 | 50 |
| TE 5 | 0.5 | 75 | 1.21 | 1.61 | 2.04 | 2.47 | 2.75 | 2.76 |
| | 01 | 75 | 2.23 | 2.96 | 3.75 | 4.52 | 5.02 | 5.02 |
| | 02 | 75 | 3.12 | 4.15 | 5.25 | 6.29 | 6.90 | 6.84 |
| | 03 | 75 | 3.93 | 5.26 | 6.70 | 8.09 | 8.96 | 8.93 |
| | 04 | 75 | 5.24 | 7.08 | 9.09 | 11.0 | 12.2 | 12.0 |
| TE 12 | 05 | 75 | 6.40 | 8.47 | 10.9 | 13.5 | 15.4 | 15.6 |
| | 06 | 75 | 8.13 | 10.9 | 14.2 | 17.8 | 20.5 | 20.8 |
| | 07 | 75 | 10.7 | 14.2 | 18.6 | 23.5 | 27.4 | 28.0 |
| TE 20 | 08 | 75 | 14.2 | 19.2 | 24.8 | 30.6 | 34.2 | 33.9 |
| | 09 | 75 | 15.4 | 21.2 | 28.2 | 35.8 | 41.0 | 40.9 |
| TE 55 | 10 | 75 | 16.2 | 22.7 | 30.5 | 38.9 | 45.4 | 46.3 |
| | 11 | 75 | 17.8 | 24.9 | 33.6 | 42.8 | 49.7 | 50.6 |
| | 12 | 75 | 19.1 | 26.9 | 36.5 | 46.9 | 55.2 | 56.6 |
| | 13 | 75 | 23.2 | 32.9 | 44.8 | 57.8 | 67.6 | 68.6 |

Capacity in kW. Range: -40 – 10 °C.
Opening superheat sh = 4 K

SI units R448A/R449A

| Valve type | Orifice no. | Cond. temp. [°C] | Evap. temp. [°C] | | | | | |
|------------|-------------|------------------|------------------|------|------|------|------|------|
| | | | -40 | -30 | -20 | -10 | 0 | 10 |
| TE 5 | 0.5 | 35 | 4.22 | 5.50 | 6.96 | 8.54 | 10.1 | 11.4 |
| | 01 | 35 | 7.73 | 10.1 | 12.8 | 15.7 | 18.6 | 20.7 |
| | 02 | 35 | 10.8 | 14.2 | 18.0 | 22.0 | 25.9 | 28.5 |
| | 03 | 35 | 13.6 | 17.8 | 22.6 | 27.9 | 33.0 | 36.8 |
| | 04 | 35 | 17.9 | 23.8 | 30.6 | 38.0 | 45.2 | 50.1 |
| TE 12 | 05 | 35 | 21.6 | 27.8 | 35.3 | 44.0 | 53.5 | 61.4 |
| | 06 | 35 | 27.1 | 35.4 | 45.6 | 57.7 | 70.9 | 82.1 |
| | 07 | 35 | 35.0 | 44.9 | 57.4 | 72.8 | 90.1 | 105 |
| TE 20 | 08 | 35 | 47.2 | 62.2 | 80.1 | 101 | 122 | 137 |
| | 09 | 35 | 49.8 | 66.2 | 86.7 | 112 | 139 | 161 |
| TE 55 | 10 | 35 | 51.1 | 70.5 | 94.4 | 123 | 153 | 179 |
| | 11 | 35 | 55.8 | 77.0 | 103 | 134 | 167 | 195 |
| | 12 | 35 | 59.4 | 82.1 | 111 | 144 | 182 | 215 |
| | 13 | 35 | 70.7 | 98.4 | 133 | 175 | 221 | 260 |

Capacity in TR. Range: -40 – 50 °F.
Opening superheat sh = 7.2 °F.

US units R448A/R449A

| Valve type | Orifice no. | Cond. temp. [°F] | Evap. temp. [°F] | | | | | |
|------------|-------------|------------------|------------------|------|------|------|------|------|
| | | | -40 | -20 | 0 | 20 | 40 | 50 |
| TE 5 | 0.5 | 95 | 1.20 | 1.61 | 2.07 | 2.58 | 3.05 | 3.22 |
| | 01 | 95 | 2.20 | 2.95 | 3.82 | 4.75 | 5.59 | 5.89 |
| | 02 | 95 | 3.07 | 4.15 | 5.36 | 6.64 | 7.74 | 8.09 |
| | 03 | 95 | 3.85 | 5.20 | 6.74 | 8.41 | 9.94 | 10.5 |
| | 04 | 95 | 5.08 | 6.96 | 9.13 | 11.5 | 13.6 | 14.2 |
| TE 12 | 05 | 95 | 6.13 | 8.12 | 10.5 | 13.4 | 16.3 | 17.5 |
| | 06 | 95 | 7.70 | 10.3 | 13.7 | 17.6 | 21.7 | 23.3 |
| | 07 | 95 | 9.95 | 13.1 | 17.2 | 22.3 | 27.7 | 29.9 |
| TE 20 | 08 | 95 | 13.4 | 18.2 | 24.0 | 30.6 | 36.9 | 38.9 |
| | 09 | 95 | 14.1 | 19.4 | 26.1 | 34.3 | 42.7 | 45.6 |
| TE 55 | 10 | 95 | 14.5 | 20.7 | 28.5 | 37.7 | 47.0 | 50.9 |
| | 11 | 95 | 15.8 | 22.6 | 31.1 | 41.1 | 51.2 | 55.4 |
| | 12 | 95 | 16.9 | 24.1 | 33.4 | 44.5 | 56.1 | 61.0 |
| | 13 | 95 | 20.1 | 28.9 | 40.3 | 54.1 | 68.2 | 73.9 |

Subcooling correction factor, f_{sub}

| Subcooling [K] | 2 | 4 | 10 | 15 | 20 | 25 | 30 |
|-------------------|------|------|------|------|------|------|------|
| Correction factor | 0.98 | 1.00 | 1.07 | 1.13 | 1.18 | 1.24 | 1.31 |

Subcooling correction factor, f_{sub}

| Subcooling [°F] | 2 | 7 | 10 | 20 | 30 | 40 | 50 |
|-------------------|------|------|------|------|------|------|------|
| Correction factor | 0.97 | 1.00 | 1.02 | 1.08 | 1.15 | 1.21 | 1.28 |

Distributer correction factor, f_p^*

SI units R448A/R449A

| Pressure drop [bar] Δp | Evap. temp. [°C] | | | | | |
|--------------------------------|-------------------|------|------|------|------|------|
| | -40 | -30 | -20 | -10 | 0 | 10 |
| | Correction factor | | | | | |
| 0 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 0.96 | 0.96 | 0.96 | 0.96 | 0.95 | 0.94 |
| 1.5 | 0.95 | 0.94 | 0.94 | 0.93 | 0.92 | 0.90 |
| 2 | 0.93 | 0.92 | 0.92 | 0.91 | 0.90 | 0.87 |

* Calculated at 32 °C condensing temperature.

Distributer correction factor, f_p^*

US units R448A/R449A

| Pressure drop [psi] Δp | Evap. temp. [°F] | | | | | |
|--------------------------------|-------------------|------|------|------|------|------|
| | -40 | -20 | 0 | 20 | 40 | 50 |
| | Correction factor | | | | | |
| 0 | 1 | 1 | 1 | 1 | 1 | 1 |
| 15 | 0.96 | 0.96 | 0.96 | 0.95 | 0.94 | 0.94 |
| 25 | 0.94 | 0.93 | 0.93 | 0.92 | 0.90 | 0.89 |
| 30 | 0.93 | 0.92 | 0.92 | 0.90 | 0.88 | 0.87 |

* Calculated at 90 °F condensing temperature.



Data sheet | Thermostatic expansion valves, type TE 5 – TE 55

Capacity in kW. Range: -40 – 10 °C.
Opening superheat sh = 4 K

SI units R448A/R449A

| Valve type | Orifice no. | Cond. temp. [°C] | Evap. temp. [°C] | | | | | |
|------------|-------------|------------------|------------------|------|------|------|------|------|
| | | | -40 | -30 | -20 | -10 | 0 | 10 |
| TE 5 | 0.5 | 45 | 4.07 | 5.34 | 6.79 | 8.42 | 10.2 | 11.8 |
| | 01 | 45 | 7.45 | 9.80 | 12.5 | 15.5 | 18.7 | 21.7 |
| | 02 | 45 | 10.4 | 13.8 | 17.6 | 21.9 | 26.2 | 30.0 |
| | 03 | 45 | 13.0 | 17.1 | 21.9 | 27.2 | 33.0 | 38.3 |
| | 04 | 45 | 16.9 | 22.7 | 29.4 | 37.1 | 45.3 | 52.6 |
| TE 12 | 05 | 45 | 20.3 | 26.0 | 32.9 | 41.3 | 51.1 | 61.1 |
| | 06 | 45 | 25.2 | 32.8 | 42.2 | 53.7 | 67.5 | 81.9 |
| | 07 | 45 | 32.0 | 40.6 | 51.5 | 65.2 | 82.0 | 100 |
| TE 20 | 08 | 45 | 43.6 | 57.6 | 74.5 | 94.7 | 117 | 139 |
| | 09 | 45 | 44.9 | 59.4 | 77.8 | 101 | 129 | 158 |
| TE 55 | 10 | 45 | 45.1 | 62.8 | 85.0 | 112 | 142 | 174 |
| | 11 | 45 | 48.9 | 68.2 | 92.2 | 121 | 154 | 187 |
| | 12 | 45 | 51.6 | 72.1 | 97.9 | 129 | 166 | 204 |
| | 13 | 45 | 60.3 | 84.9 | 116 | 154 | 199 | 245 |

Capacity in TR. Range: -40 – 50 °F.
Opening superheat sh = 7.2 °F.

US units R448A/R449A

| Valve type | Orifice no. | Cond. temp. [°F] | Evap. temp. [°F] | | | | | |
|------------|-------------|------------------|------------------|------|------|------|------|------|
| | | | -40 | -20 | 0 | 20 | 40 | 50 |
| TE 5 | 0.5 | 115 | 1.15 | 1.55 | 2.02 | 2.54 | 3.09 | 3.35 |
| | 01 | 115 | 2.10 | 2.85 | 3.72 | 4.69 | 5.70 | 6.15 |
| | 02 | 115 | 2.94 | 4.00 | 5.23 | 6.60 | 7.96 | 8.54 |
| | 03 | 115 | 3.66 | 4.97 | 6.49 | 8.23 | 10.0 | 10.9 |
| | 04 | 115 | 4.77 | 6.59 | 8.75 | 11.2 | 13.8 | 14.9 |
| TE 12 | 05 | 115 | 5.70 | 7.50 | 9.74 | 12.5 | 15.7 | 17.3 |
| | 06 | 115 | 7.07 | 9.47 | 12.5 | 16.3 | 20.8 | 23.1 |
| | 07 | 115 | 8.99 | 11.7 | 15.2 | 19.7 | 25.2 | 28.1 |
| TE 20 | 08 | 115 | 12.3 | 16.7 | 22.1 | 28.7 | 36.0 | 39.3 |
| | 09 | 115 | 12.6 | 17.2 | 23.1 | 30.8 | 40.0 | 44.5 |
| TE 55 | 10 | 115 | 12.6 | 18.2 | 25.4 | 34.1 | 44.0 | 48.9 |
| | 11 | 115 | 13.7 | 19.8 | 27.5 | 36.9 | 47.5 | 52.8 |
| | 12 | 115 | 14.4 | 20.9 | 29.2 | 39.5 | 51.3 | 57.3 |
| | 13 | 115 | 16.8 | 24.5 | 34.6 | 47.2 | 61.6 | 68.8 |

Capacity in kW. Range: -40 – 10 °C.
Opening superheat sh = 4 K

SI units R448A/R449A

| Valve type | Orifice no. | Cond. temp. [°C] | Evap. temp. [°C] | | | | | |
|------------|-------------|------------------|------------------|------|------|------|------|------|
| | | | -40 | -30 | -20 | -10 | 0 | 10 |
| TE 5 | 0.5 | 55 | 3.84 | 5.05 | 6.43 | 7.99 | 9.69 | 11.4 |
| | 01 | 55 | 7.01 | 9.26 | 11.8 | 14.8 | 17.9 | 21.1 |
| | 02 | 55 | 9.77 | 13.0 | 16.7 | 20.9 | 25.3 | 29.5 |
| | 03 | 55 | 12.1 | 16.0 | 20.5 | 25.6 | 31.2 | 36.8 |
| | 04 | 55 | 15.6 | 21.0 | 27.4 | 34.7 | 42.9 | 50.9 |
| TE 12 | 05 | 55 | 18.6 | 23.6 | 29.7 | 37.1 | 45.9 | 55.9 |
| | 06 | 55 | 22.8 | 29.5 | 37.7 | 47.9 | 60.4 | 74.8 |
| | 07 | 55 | 28.7 | 35.8 | 44.7 | 56.0 | 70.3 | 87.3 |
| TE 20 | 08 | 55 | 39.4 | 52.0 | 67.1 | 85.3 | 107 | 129 |
| | 09 | 55 | 39.7 | 52.1 | 67.7 | 87.6 | 113 | 142 |
| TE 55 | 10 | 55 | 38.9 | 54.8 | 74.6 | 98.7 | 127 | 157 |
| | 11 | 55 | 42.0 | 59.1 | 80.3 | 106 | 136 | 169 |
| | 12 | 55 | 43.9 | 61.9 | 84.4 | 112 | 145 | 181 |
| | 13 | 55 | 50.3 | 71.5 | 98.4 | 132 | 171 | 215 |

Capacity in TR. Range: -40 – 50 °F.
Opening superheat sh = 7.2 °F.

US units R448A/R449A

| Valve type | Orifice no. | Cond. temp. [°F] | Evap. temp. [°F] | | | | | |
|------------|-------------|------------------|------------------|-------|------|------|------|------|
| | | | -40 | -20 | 0 | 20 | 40 | 50 |
| TE 5 | 0.5 | 135 | 1.07 | 1.45 | 1.89 | 2.38 | 2.92 | 3.18 |
| | 01 | 135 | 1.96 | 2.66 | 3.48 | 4.41 | 5.41 | 5.89 |
| | 02 | 135 | 2.73 | 3.74 | 4.91 | 6.23 | 7.61 | 8.25 |
| | 03 | 135 | 3.38 | 4.60 | 6.01 | 7.63 | 9.38 | 10.3 |
| | 04 | 135 | 4.34 | 6.03 | 8.04 | 10.4 | 13.0 | 14.2 |
| TE 12 | 05 | 135 | 5.16 | 6.71 | 8.62 | 11.0 | 13.8 | 15.4 |
| | 06 | 135 | 6.30 | 8.36 | 11.0 | 14.2 | 18.3 | 20.6 |
| | 07 | 135 | 7.92 | 10.08 | 12.9 | 16.5 | 21.1 | 23.8 |
| TE 20 | 08 | 135 | 10.9 | 14.79 | 19.6 | 25.4 | 32.2 | 35.8 |
| | 09 | 135 | 10.9 | 14.73 | 19.6 | 26.0 | 34.2 | 38.8 |
| TE 55 | 10 | 135 | 10.7 | 15.58 | 21.9 | 29.6 | 38.6 | 43.4 |
| | 11 | 135 | 11.5 | 16.77 | 23.5 | 31.8 | 41.4 | 46.5 |
| | 12 | 135 | 12.0 | 17.54 | 24.7 | 33.6 | 44.1 | 49.8 |
| | 13 | 135 | 13.7 | 20.20 | 28.7 | 39.4 | 52.1 | 58.9 |

Subcooling correction factor, f_{sub}

| Subcooling [K] | 2 | 4 | 10 | 15 | 20 | 25 | 30 |
|-------------------|------|------|------|------|------|------|------|
| Correction factor | 0.98 | 1.00 | 1.07 | 1.13 | 1.18 | 1.24 | 1.31 |

Subcooling correction factor, f_{sub}

| Subcooling [°F] | 2 | 7 | 10 | 20 | 30 | 40 | 50 |
|-------------------|------|------|------|------|------|------|------|
| Correction factor | 0.97 | 1.00 | 1.02 | 1.08 | 1.15 | 1.21 | 1.28 |

Distributer correction factor, f_p^*

SI units R448A/R449A

| Pressure drop [bar] Δp | Evap. temp. [°C] | | | | | |
|--------------------------------|------------------|------|------|------|------|------|
| | -40 | -30 | -20 | -10 | 0 | 10 |
| 0 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 0.96 | 0.96 | 0.96 | 0.96 | 0.95 | 0.94 |
| 1.5 | 0.95 | 0.94 | 0.94 | 0.93 | 0.92 | 0.90 |
| 2 | 0.93 | 0.92 | 0.92 | 0.91 | 0.90 | 0.87 |

* Calculated at 32 °C condensing temperature.

Distributer correction factor, f_p^*

US units R448A/R449A

| Pressure drop [psi] Δp | Evap. temp. [°F] | | | | | |
|--------------------------------|------------------|------|------|------|------|------|
| | -40 | -20 | 0 | 20 | 40 | 50 |
| 0 | 1 | 1 | 1 | 1 | 1 | 1 |
| 15 | 0.96 | 0.96 | 0.96 | 0.95 | 0.94 | 0.94 |
| 25 | 0.94 | 0.93 | 0.93 | 0.92 | 0.90 | 0.89 |
| 30 | 0.93 | 0.92 | 0.92 | 0.90 | 0.88 | 0.87 |

* Calculated at 90 °F condensing temperature.



Data sheet | Thermostatic expansion valves, type TE 5 – TE 55

Capacity in kW. Range: -40 – 10 °C.
Opening superheat sh = 4 K

SI units R404A/R507

| Valve type | Orifice no. | Cond. temp. [°C] | Evap. temp. [°C] | | | | | |
|------------|-------------|------------------|------------------|------|------|------|------|------|
| | | | -40 | -30 | -20 | -10 | 0 | 10 |
| TE 5 | 0.5 | 25 | 3.68 | 4.77 | 5.91 | 6.93 | 7.54 | 7.30 |
| | 01 | 25 | 6.76 | 8.76 | 10.8 | 12.7 | 13.7 | 13.2 |
| | 02 | 25 | 9.49 | 12.3 | 15.1 | 17.6 | 18.8 | 17.9 |
| | 03 | 25 | 12.0 | 15.6 | 19.4 | 22.6 | 24.4 | 23.3 |
| TE 12 | 04 | 25 | 16.1 | 21.1 | 26.3 | 30.8 | 33.1 | 31.2 |
| | 05 | 25 | 20.7 | 28.0 | 36.0 | 43.9 | 48.9 | 47.2 |
| | 06 | 25 | 24.9 | 34.1 | 44.5 | 55.0 | 61.7 | 59.6 |
| TE 20 | 07 | 25 | 32.5 | 43.9 | 57.6 | 71.9 | 81.4 | 78.3 |
| | 08 | 25 | 35.7 | 48.4 | 62.2 | 75.2 | 82.9 | 79.7 |
| TE 55 | 09 | 25 | 39.5 | 54.2 | 71.3 | 88.4 | 100 | 97.0 |
| | 10 | 25 | 46.5 | 64.9 | 86.1 | 108 | 124 | 125 |
| | 11 | 25 | 51.1 | 71.2 | 94.4 | 118 | 136 | 135 |
| | 12 | 25 | 54.8 | 76.8 | 103 | 130 | 151 | 152 |
| | 13 | 25 | 66.5 | 93.7 | 126 | 159 | 183 | 181 |

Capacity in TR. Range: -40 – 50 °F.
Opening superheat sh = 7.2 °F.

US units R404A/R507

| Valve type | Orifice no. | Cond. temp. [°F] | Evap. temp. [°F] | | | | | |
|------------|-------------|------------------|------------------|------|------|------|------|------|
| | | | -40 | -20 | 0 | 20 | 40 | 50 |
| TE 5 | 0.5 | 75 | 1.05 | 1.39 | 1.74 | 2.03 | 2.11 | 2.02 |
| | 01 | 75 | 1.93 | 2.56 | 3.20 | 3.70 | 3.83 | 3.65 |
| | 02 | 75 | 2.71 | 3.58 | 4.45 | 5.11 | 5.21 | 4.93 |
| | 03 | 75 | 3.42 | 4.56 | 5.71 | 6.61 | 6.78 | 6.43 |
| TE 12 | 04 | 75 | 4.59 | 6.17 | 7.76 | 8.98 | 9.15 | 8.62 |
| | 05 | 75 | 5.94 | 8.23 | 10.8 | 13.0 | 13.8 | 13.1 |
| | 06 | 75 | 7.14 | 10.1 | 13.4 | 16.4 | 17.4 | 16.5 |
| TE 20 | 07 | 75 | 9.36 | 13.1 | 17.4 | 21.6 | 22.9 | 21.7 |
| | 08 | 75 | 10.2 | 14.2 | 18.6 | 22.2 | 23.2 | 22.0 |
| TE 55 | 09 | 75 | 11.3 | 16.1 | 21.5 | 26.4 | 28.2 | 26.8 |
| | 10 | 75 | 13.4 | 19.2 | 26.0 | 32.4 | 35.6 | 34.6 |
| | 11 | 75 | 14.7 | 21.1 | 28.5 | 35.5 | 38.8 | 37.5 |
| | 12 | 75 | 15.8 | 22.8 | 31.1 | 39.2 | 43.4 | 42.2 |
| | 13 | 75 | 19.2 | 27.9 | 38.2 | 47.9 | 52.3 | 50.3 |

Capacity in kW. Range: -40 – 10 °C.
Opening superheat sh = 4 K

SI units R404A/R507

| Valve type | Orifice no. | Cond. temp. [°C] | Evap. temp. [°C] | | | | | |
|------------|-------------|------------------|------------------|------|------|------|------|------|
| | | | -40 | -30 | -20 | -10 | 0 | 10 |
| TE 5 | 0.5 | 35 | 3.45 | 4.55 | 5.78 | 7.05 | 8.12 | 8.61 |
| | 01 | 35 | 6.34 | 8.37 | 10.6 | 12.9 | 14.8 | 15.6 |
| | 02 | 35 | 8.90 | 11.8 | 14.9 | 18.0 | 20.4 | 21.3 |
| | 03 | 35 | 11.1 | 14.8 | 18.8 | 22.9 | 26.3 | 28.0 |
| TE 12 | 04 | 35 | 14.9 | 19.9 | 25.5 | 31.2 | 35.7 | 37.1 |
| | 05 | 35 | 18.7 | 25.3 | 33.3 | 42.3 | 50.5 | 54.4 |
| | 06 | 35 | 22.3 | 30.7 | 41.0 | 52.7 | 63.6 | 68.7 |
| TE 20 | 07 | 35 | 27.8 | 37.9 | 50.7 | 66.0 | 81.2 | 89.1 |
| | 08 | 35 | 32.4 | 44.3 | 58.4 | 73.6 | 86.9 | 92.6 |
| TE 55 | 09 | 35 | 34.9 | 48.2 | 64.6 | 83.5 | 101 | 110 |
| | 10 | 35 | 40.6 | 57.7 | 78.7 | 103 | 126 | 141 |
| | 11 | 35 | 44.3 | 62.9 | 85.7 | 112 | 137 | 153 |
| | 12 | 35 | 47.1 | 67.2 | 92.1 | 121 | 150 | 170 |
| | 13 | 35 | 56.0 | 80.5 | 110 | 146 | 181 | 203 |

Capacity in TR. Range: -40 – 50 °F.
Opening superheat sh = 7.2 °F.

US units R404A/R507

| Valve type | Orifice no. | Cond. temp. [°F] | Evap. temp. [°F] | | | | | |
|------------|-------------|------------------|------------------|------|------|------|------|------|
| | | | -40 | -20 | 0 | 20 | 40 | 50 |
| TE 5 | 0.5 | 95 | 0.98 | 1.33 | 1.72 | 2.11 | 2.39 | 2.44 |
| | 01 | 95 | 1.80 | 2.44 | 3.16 | 3.87 | 4.37 | 4.44 |
| | 02 | 95 | 2.53 | 3.43 | 4.42 | 5.37 | 5.98 | 6.04 |
| | 03 | 95 | 3.16 | 4.31 | 5.60 | 6.86 | 7.71 | 7.80 |
| TE 12 | 04 | 95 | 4.21 | 5.81 | 7.60 | 9.34 | 10.5 | 10.5 |
| | 05 | 95 | 5.29 | 7.42 | 10.0 | 12.9 | 15.1 | 15.4 |
| | 06 | 95 | 6.32 | 9.02 | 12.4 | 16.1 | 19.0 | 19.5 |
| TE 20 | 07 | 95 | 7.90 | 11.1 | 15.3 | 20.3 | 24.5 | 25.3 |
| | 08 | 95 | 9.18 | 13.0 | 17.5 | 22.3 | 25.8 | 26.3 |
| TE 55 | 09 | 95 | 9.89 | 14.1 | 19.5 | 25.5 | 30.4 | 31.3 |
| | 10 | 95 | 11.5 | 17.0 | 23.8 | 31.5 | 38.3 | 40.1 |
| | 11 | 95 | 12.6 | 18.5 | 25.9 | 34.2 | 41.4 | 43.4 |
| | 12 | 95 | 13.4 | 19.8 | 27.9 | 37.2 | 45.7 | 48.2 |
| | 13 | 95 | 15.9 | 23.7 | 33.6 | 45.0 | 54.9 | 57.5 |

Subcooling correction factor, f_{sub}

| Subcooling [K] | 2 | 4 | 10 | 15 | 20 | 25 | 30 |
|-------------------|------|------|------|------|------|------|------|
| Correction factor | 0.97 | 1.00 | 1.09 | 1.16 | 1.23 | 1.30 | 1.37 |

Subcooling correction factor, f_{sub}

| Subcooling [°F] | 2 | 7 | 10 | 20 | 30 | 40 | 50 |
|-------------------|------|------|------|------|------|------|------|
| Correction factor | 0.96 | 1.00 | 1.03 | 1.11 | 1.20 | 1.28 | 1.37 |

Distributer correction factor, f_p

SI units R404A/R507

| Pressure drop [bar] Δp | Evap. temp. [°C] | | | | | |
|--------------------------------|-------------------|------|------|------|------|------|
| | -40 | -30 | -20 | -10 | 0 | 10 |
| | Correction factor | | | | | |
| 0 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 0.96 | 0.96 | 0.96 | 0.95 | 0.94 | 0.92 |
| 1.5 | 0.94 | 0.94 | 0.94 | 0.93 | 0.91 | 0.88 |
| 2 | 0.92 | 0.92 | 0.91 | 0.90 | 0.88 | 0.84 |

Calculated at 32 °C condensing temperature.

Distributer correction factor, f_p

US units R404A/R507

| Pressure drop [psi] Δp | Evap. temp. [°F] | | | | | |
|--------------------------------|-------------------|------|------|------|------|------|
| | -40 | -20 | 0 | 20 | 40 | 50 |
| | Correction factor | | | | | |
| 0 | 1 | 1 | 1 | 1 | 1 | 1 |
| 15 | 0.96 | 0.96 | 0.96 | 0.95 | 0.93 | 0.92 |
| 25 | 0.94 | 0.93 | 0.92 | 0.91 | 0.89 | 0.87 |
| 30 | 0.92 | 0.92 | 0.91 | 0.89 | 0.86 | 0.84 |

Calculated at 90 °F condensing temperature.



Data sheet | Thermostatic expansion valves, type TE 5 – TE 55

Capacity in kW. Range: -40 – 10 °C.
Opening superheat sh = 4 K

SI units R404A/R507

| Valve type | Orifice no. | Cond. temp. [°C] | Evap. temp. [°C] | | | | | |
|------------|-------------|------------------|------------------|------|------|------|------|------|
| | | | -40 | -30 | -20 | -10 | 0 | 10 |
| TE 5 | 0.5 | 45 | 3.08 | 4.11 | 5.32 | 6.67 | 8.02 | 9.05 |
| | 01 | 45 | 5.65 | 7.57 | 9.81 | 12.3 | 14.7 | 16.5 |
| | 02 | 45 | 7.94 | 10.7 | 13.8 | 17.2 | 20.4 | 22.7 |
| | 03 | 45 | 9.85 | 13.2 | 17.2 | 21.6 | 25.9 | 29.0 |
| | 04 | 45 | 13.0 | 17.7 | 23.3 | 29.4 | 35.4 | 39.4 |
| TE 12 | 05 | 45 | 16.1 | 21.9 | 29.1 | 37.8 | 47.4 | 55.3 |
| | 06 | 45 | 19.1 | 26.4 | 35.6 | 46.9 | 59.6 | 70.1 |
| | 07 | 45 | 23.1 | 31.4 | 42.0 | 55.7 | 71.9 | 86.8 |
| TE 20 | 08 | 45 | 28.0 | 38.4 | 51.3 | 66.6 | 82.8 | 95.2 |
| | 09 | 45 | 29.5 | 40.7 | 55.0 | 73.0 | 93.2 | 110 |
| TE 55 | 10 | 45 | 33.5 | 48.5 | 67.4 | 90.6 | 117 | 140 |
| | 11 | 45 | 36.2 | 52.5 | 72.9 | 97.9 | 126 | 150 |
| | 12 | 45 | 38.3 | 55.5 | 77.5 | 104 | 136 | 165 |
| | 13 | 45 | 44.6 | 65.3 | 91.8 | 125 | 162 | 196 |

Capacity in TR. Range: -40 – 50 °F.
Opening superheat sh = 7.2 °F.

US units R404A/R507

| Valve type | Orifice no. | Cond. temp. [°F] | Evap. temp. [°F] | | | | | |
|------------|-------------|------------------|------------------|------|------|------|------|------|
| | | | -40 | -20 | 0 | 20 | 40 | 50 |
| TE 5 | 0.5 | 115 | 0.86 | 1.18 | 1.57 | 2.00 | 2.41 | 2.56 |
| | 01 | 115 | 1.58 | 2.18 | 2.90 | 3.69 | 4.42 | 4.69 |
| | 02 | 115 | 2.22 | 3.07 | 4.07 | 5.15 | 6.11 | 6.43 |
| | 03 | 115 | 2.75 | 3.81 | 5.07 | 6.48 | 7.77 | 8.21 |
| | 04 | 115 | 3.63 | 5.11 | 6.88 | 8.84 | 10.6 | 11.2 |
| TE 12 | 05 | 115 | 4.48 | 6.29 | 8.60 | 11.4 | 14.4 | 15.6 |
| | 06 | 115 | 5.29 | 7.59 | 10.6 | 14.3 | 18.2 | 19.8 |
| | 07 | 115 | 6.41 | 8.97 | 12.4 | 16.9 | 22.1 | 24.3 |
| TE 20 | 08 | 115 | 7.79 | 11.1 | 15.2 | 20.1 | 25.1 | 26.9 |
| | 09 | 115 | 8.19 | 11.7 | 16.3 | 22.2 | 28.5 | 31.1 |
| TE 55 | 10 | 115 | 9.25 | 14.0 | 20.1 | 27.6 | 35.9 | 39.5 |
| | 11 | 115 | 10.0 | 15.1 | 21.7 | 29.8 | 38.6 | 42.4 |
| | 12 | 115 | 10.6 | 16.0 | 23.1 | 32.0 | 41.9 | 46.3 |
| | 13 | 115 | 12.3 | 18.6 | 27.3 | 38.0 | 49.9 | 55.1 |

Capacity in kW. Range: -40 – 10 °C.
Opening superheat sh = 4 K

SI units R404A/R507

| Valve type | Orifice no. | Cond. temp. [°C] | Evap. temp. [°C] | | | | | |
|------------|-------------|------------------|------------------|------|------|------|------|------|
| | | | -40 | -30 | -20 | -10 | 0 | 10 |
| TE 5 | 0.5 | 55 | 2.60 | 3.50 | 4.57 | 5.83 | 7.20 | 8.50 |
| | 01 | 55 | 4.76 | 6.44 | 8.45 | 10.8 | 13.3 | 15.7 |
| | 02 | 55 | 6.69 | 9.10 | 11.9 | 15.2 | 18.6 | 21.7 |
| | 03 | 55 | 8.24 | 11.1 | 14.6 | 18.7 | 23.2 | 27.3 |
| | 04 | 55 | 10.8 | 14.9 | 19.8 | 25.6 | 31.9 | 37.5 |
| TE 12 | 05 | 55 | 13.3 | 16.0 | 23.8 | 31.1 | 40.0 | 49.4 |
| | 06 | 55 | 15.5 | 21.4 | 28.9 | 38.4 | 50.3 | 63.1 |
| | 07 | 55 | 18.6 | 24.9 | 33.0 | 43.4 | 56.9 | 72.4 |
| TE 20 | 08 | 55 | 23.1 | 31.5 | 42.1 | 55.4 | 71.1 | 86.8 |
| | 09 | 55 | 23.8 | 32.6 | 43.9 | 58.6 | 77.2 | 97.3 |
| TE 55 | 10 | 55 | 25.7 | 38.1 | 53.8 | 73.7 | 97.8 | 124 |
| | 11 | 55 | 27.7 | 41.0 | 57.8 | 79.0 | 105 | 132 |
| | 12 | 55 | 28.9 | 42.9 | 60.8 | 83.6 | 112 | 142 |
| | 13 | 55 | 33.1 | 49.6 | 70.7 | 97.9 | 131 | 168 |

Capacity in TR. Range: -40 – 50 °F.
Opening superheat sh = 7.2 °F.

US units R404A/R507

| Valve type | Orifice no. | Cond. temp. [°F] | Evap. temp. [°F] | | | | | |
|------------|-------------|------------------|------------------|------|------|------|------|------|
| | | | -40 | -20 | 0 | 20 | 40 | 50 |
| TE 5 | 0.5 | 135 | 0.70 | 0.98 | 1.31 | 1.71 | 2.14 | 2.34 |
| | 01 | 135 | 1.29 | 1.80 | 2.42 | 3.16 | 3.95 | 4.31 |
| | 02 | 135 | 1.81 | 2.55 | 3.43 | 4.45 | 5.52 | 5.98 |
| | 03 | 135 | 2.22 | 3.10 | 4.18 | 5.47 | 6.87 | 7.50 |
| | 04 | 135 | 2.90 | 4.14 | 5.67 | 7.50 | 9.47 | 10.3 |
| TE 12 | 05 | 135 | 3.57 | 4.98 | 6.77 | 9.07 | 11.9 | 13.4 |
| | 06 | 135 | 4.15 | 5.93 | 8.24 | 11.3 | 15.1 | 17.1 |
| | 07 | 135 | 4.99 | 6.87 | 9.33 | 12.6 | 16.9 | 19.3 |
| TE 20 | 08 | 135 | 6.21 | 8.76 | 12.0 | 16.2 | 21.2 | 23.7 |
| | 09 | 135 | 6.38 | 9.00 | 12.5 | 17.2 | 23.1 | 26.3 |
| TE 55 | 10 | 135 | 6.78 | 10.5 | 15.4 | 21.8 | 29.5 | 33.5 |
| | 11 | 135 | 7.29 | 11.3 | 16.5 | 23.3 | 31.5 | 35.7 |
| | 12 | 135 | 7.61 | 11.8 | 17.4 | 24.6 | 33.6 | 38.4 |
| | 13 | 135 | 8.67 | 13.6 | 20.2 | 28.8 | 39.5 | 45.2 |

Subcooling correction factor, f_{sub}

| Subcooling [K] | 2 | 4 | 10 | 15 | 20 | 25 | 30 |
|-------------------|------|------|------|------|------|------|------|
| Correction factor | 0.97 | 1.00 | 1.09 | 1.16 | 1.23 | 1.30 | 1.37 |

Subcooling correction factor, f_{sub}

| Subcooling [°F] | 2 | 7 | 10 | 20 | 30 | 40 | 50 |
|-------------------|------|------|------|------|------|------|------|
| Correction factor | 0.96 | 1.00 | 1.03 | 1.11 | 1.20 | 1.28 | 1.37 |

Distributer correction factor, f_p

SI units R404A/R507

| Pressure drop [bar] Δp | Evap. temp. [°C] | | | | | |
|--------------------------------|------------------|------|------|------|------|------|
| | -40 | -30 | -20 | -10 | 0 | 10 |
| 0 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 0.96 | 0.96 | 0.96 | 0.95 | 0.94 | 0.92 |
| 1.5 | 0.94 | 0.94 | 0.94 | 0.93 | 0.91 | 0.88 |
| 2 | 0.92 | 0.92 | 0.91 | 0.90 | 0.88 | 0.84 |

Calculated at 32 °C condensing temperature.

Distributer correction factor, f_p

US units R404A/R507

| Pressure drop [psi] Δp | Evap. temp. [°C] | | | | | |
|--------------------------------|------------------|------|------|------|------|------|
| | -40 | -20 | 0 | 20 | 40 | 50 |
| 0 | 1 | 1 | 1 | 1 | 1 | 1 |
| 15 | 0.96 | 0.96 | 0.96 | 0.95 | 0.93 | 0.92 |
| 25 | 0.94 | 0.93 | 0.92 | 0.91 | 0.89 | 0.87 |
| 30 | 0.92 | 0.92 | 0.91 | 0.89 | 0.86 | 0.84 |

Calculated at 90 °F condensing temperature.



Data sheet | Thermostatic expansion valves, type TE 5 – TE 55

Capacity in kW. Range: -60 – -25 °C.
Opening superheat sh = 4 K

SI units R404A/R507

| Valve type | Orifice no. | Cond. temp. [°C] | Evap. temp. [°C] | | | | |
|------------|-------------|------------------|------------------|------|------|------|------|
| | | | -60 | -50 | -40 | -30 | -25 |
| TE 5 | 0.5 | 20 | 2.01 | 2.87 | 3.92 | 5.12 | 5.73 |
| | 01 | 20 | 3.66 | 5.25 | 7.21 | 9.41 | 10.5 |
| | 02 | 20 | 5.09 | 7.33 | 10.1 | 13.2 | 14.7 |
| | 03 | 20 | 6.38 | 9.22 | 12.8 | 16.8 | 18.8 |
| | 04 | 20 | 8.32 | 12.2 | 17.1 | 22.8 | 25.6 |
| TE 12 | 05 | 20 | 10.3 | 14.7 | 20.5 | 27.3 | 30.8 |
| | 06 | 20 | 12.8 | 18.6 | 26.2 | 35.5 | 40.5 |
| | 07 | 20 | 16.5 | 24.0 | 33.9 | 46.1 | 52.6 |
| TE 55 | 9B | 20 | 20.6 | 29.2 | 40.1 | 52.4 | 58.5 |
| | 10 | 20 | 24.1 | 34.7 | 49.0 | 66.8 | 76.6 |
| | 11 | 20 | 26.6 | 38.4 | 54.1 | 73.8 | 84.6 |
| | 12 | 20 | 28.6 | 41.3 | 58.5 | 80.2 | 92.3 |
| | 13 | 20 | 34.7 | 50.5 | 71.9 | 99.2 | 114 |

Capacity in TR. Range: -75 – -15 °F.
Opening superheat sh = 7.2 °F.

US units R404A/R507

| Valve type | Orifice no. | Cond. temp. [°F] | Evap. temp. [°F] | | | | |
|------------|-------------|------------------|------------------|------|------|------|------|
| | | | -75 | -60 | -45 | -30 | -15 |
| TE 5 | 0.5 | 65 | 0.59 | 0.79 | 1.03 | 1.30 | 1.58 |
| | 01 | 65 | 1.07 | 1.44 | 1.89 | 2.39 | 2.91 |
| | 02 | 65 | 1.49 | 2.01 | 2.64 | 3.35 | 4.06 |
| | 03 | 65 | 1.87 | 2.53 | 3.34 | 4.25 | 5.19 |
| | 04 | 65 | 2.44 | 3.35 | 4.46 | 5.74 | 7.07 |
| TE 12 | 05 | 65 | 3.01 | 4.06 | 5.36 | 6.87 | 8.52 |
| | 06 | 65 | 3.77 | 5.13 | 6.85 | 8.90 | 11.2 |
| | 07 | 65 | 4.87 | 6.63 | 8.87 | 11.6 | 14.6 |
| TE 55 | 9B | 65 | 6.04 | 8.08 | 10.6 | 13.4 | 16.3 |
| | 10 | 65 | 7.10 | 9.62 | 12.8 | 16.8 | 21.3 |
| | 11 | 65 | 7.84 | 10.6 | 14.2 | 18.5 | 23.5 |
| | 12 | 65 | 8.45 | 11.5 | 15.4 | 20.1 | 25.6 |
| | 13 | 65 | 10.3 | 14.1 | 18.9 | 24.9 | 31.9 |

Capacity in kW. Range: -60 – -25 °C.
Opening superheat sh = 4 K

SI units R404A/R507

| Valve type | Orifice no. | Cond. temp. [°C] | Evap. temp. [°C] | | | | |
|------------|-------------|------------------|------------------|------|------|------|------|
| | | | -60 | -50 | -40 | -30 | -25 |
| TE 5 | 0.5 | 30 | 1.88 | 2.72 | 3.79 | 5.04 | 5.72 |
| | 01 | 30 | 3.42 | 4.97 | 6.96 | 9.29 | 10.5 |
| | 02 | 30 | 4.72 | 6.93 | 9.76 | 13.1 | 14.8 |
| | 03 | 30 | 5.87 | 8.63 | 12.2 | 16.5 | 18.7 |
| | 04 | 30 | 7.54 | 11.3 | 16.2 | 22.3 | 25.5 |
| TE 12 | 05 | 30 | 9.33 | 13.6 | 19.3 | 26.3 | 30.2 |
| | 06 | 30 | 11.4 | 16.9 | 24.4 | 33.9 | 39.3 |
| | 07 | 30 | 14.4 | 21.3 | 30.8 | 43.0 | 49.9 |
| TE 55 | 9B | 30 | 18.5 | 26.6 | 37.3 | 50.0 | 56.6 |
| | 10 | 30 | 21.2 | 31.0 | 44.3 | 61.7 | 71.7 |
| | 11 | 30 | 23.2 | 34.0 | 48.7 | 67.7 | 78.6 |
| | 12 | 30 | 24.8 | 36.3 | 52.1 | 72.8 | 84.8 |
| | 13 | 30 | 29.5 | 43.6 | 61.0 | 88.6 | 104 |

Capacity in TR. Range: -75 – -15 °F.
Opening superheat sh = 7.2 °F.

US units R404A/R507

| Valve type | Orifice no. | Cond. temp. [°F] | Evap. temp. [°F] | | | | |
|------------|-------------|------------------|------------------|------|------|------|------|
| | | | -75 | -60 | -45 | -30 | -15 |
| TE 5 | 0.5 | 85 | 0.55 | 0.75 | 0.99 | 1.27 | 1.58 |
| | 01 | 85 | 1.00 | 1.36 | 1.81 | 2.34 | 2.91 |
| | 02 | 85 | 1.38 | 1.90 | 2.54 | 3.29 | 4.09 |
| | 03 | 85 | 1.71 | 2.36 | 3.18 | 4.13 | 5.18 |
| | 04 | 85 | 2.20 | 3.08 | 4.20 | 5.55 | 7.06 |
| TE 12 | 05 | 85 | 2.72 | 3.73 | 5.02 | 6.57 | 8.35 |
| | 06 | 85 | 3.34 | 4.63 | 6.30 | 8.39 | 10.9 |
| | 07 | 85 | 4.22 | 5.85 | 7.97 | 10.6 | 13.8 |
| TE 55 | 9B | 85 | 5.39 | 7.32 | 9.73 | 12.6 | 15.7 |
| | 10 | 85 | 6.18 | 8.49 | 11.5 | 15.3 | 19.8 |
| | 11 | 85 | 6.79 | 9.32 | 12.6 | 16.8 | 21.7 |
| | 12 | 85 | 7.25 | 9.97 | 13.5 | 18.0 | 23.5 |
| | 13 | 85 | 8.66 | 12.0 | 16.3 | 21.9 | 28.6 |

Subcooling correction factor, f_{sub}

| Subcooling [K] | 2 | 4 | 10 | 15 | 20 | 25 | 30 |
|-------------------|------|------|------|------|------|------|------|
| Correction factor | 0.97 | 1.00 | 1.09 | 1.16 | 1.23 | 1.30 | 1.37 |

Subcooling correction factor, f_{sub}

| Subcooling [°F] | 2 | 7 | 10 | 20 | 30 | 40 | 50 |
|-------------------|------|------|------|------|------|------|------|
| Correction factor | 0.96 | 1.00 | 1.03 | 1.11 | 1.20 | 1.28 | 1.37 |

Distributer correction factor, f_p

SI units R404A/R507

| Pressure drop [bar] Δp | Evap. temp. [°C] | | | | |
|--------------------------------|-------------------|------|------|------|------|
| | -60 | -50 | -40 | -30 | -25 |
| | Correction factor | | | | |
| 0 | 1 | 1 | 1 | 1 | 1 |
| 1 | 0.97 | 0.96 | 0.96 | 0.96 | 0.96 |
| 1.5 | 0.95 | 0.95 | 0.94 | 0.94 | 0.94 |
| 2 | 0.93 | 0.93 | 0.92 | 0.92 | 0.92 |

Calculated at 32 °C condensing temperature.

Distributer correction factor, f_p

US units R404A/R507

| Pressure drop [psi] Δp | Evap. temp. [°F] | | | | |
|--------------------------------|-------------------|------|------|------|------|
| | -75 | -60 | -45 | -30 | -15 |
| | Correction factor | | | | |
| 0 | 1 | 1 | 1 | 1 | 1 |
| 15 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| 25 | 0.94 | 0.94 | 0.94 | 0.93 | 0.93 |
| 30 | 0.93 | 0.93 | 0.92 | 0.92 | 0.92 |

Calculated at 90 °F condensing temperature.



Data sheet | Thermostatic expansion valves, type TE 5 – TE 55

Capacity in kW. Range: -60 – -25 °C.
Opening superheat sh = 4 K

SI units R404A/R507

| Valve type | Orifice no. | Cond. temp. [°C] | Evap. temp. [°C] | | | | |
|------------|-------------|------------------|------------------|------|------|------|------|
| | | | -60 | -50 | -40 | -30 | -25 |
| TE 5 | 0.5 | 40 | 1.69 | 2.48 | 3.51 | 4.75 | 5.43 |
| | 01 | 40 | 3.06 | 4.53 | 6.44 | 8.76 | 10.0 |
| | 02 | 40 | 4.21 | 6.29 | 9.03 | 12.4 | 14.2 |
| | 03 | 40 | 5.17 | 7.75 | 11.2 | 15.4 | 17.7 |
| | 04 | 40 | 6.52 | 9.96 | 14.7 | 20.8 | 24.1 |
| TE 12 | 05 | 40 | 8.10 | 12.0 | 17.4 | 24.2 | 28.0 |
| | 06 | 40 | 9.70 | 14.6 | 21.5 | 30.7 | 36.0 |
| | 07 | 40 | 12.0 | 18.1 | 26.6 | 37.9 | 44.6 |
| TE 55 | 9B | 40 | 15.8 | 23.1 | 33.0 | 45.1 | 51.8 |
| | 10 | 40 | 17.7 | 26.2 | 38.2 | 54.0 | 63.3 |
| | 11 | 40 | 19.2 | 28.6 | 41.6 | 58.8 | 68.9 |
| | 12 | 40 | 20.4 | 30.3 | 44.2 | 62.7 | 73.6 |
| | 13 | 40 | 23.8 | 35.7 | 52.3 | 74.8 | 88.3 |

Capacity in TR. Range: -75 – -15 °F.
Opening superheat sh = 7.2 °F.

US units R404A/R507

| Valve type | Orifice no. | Cond. temp. [°F] | Evap. temp. [°F] | | | | |
|------------|-------------|------------------|------------------|------|------|------|------|
| | | | -75 | -60 | -45 | -30 | -15 |
| TE 5 | 0.5 | 105 | 0.49 | 0.67 | 0.90 | 1.18 | 1.49 |
| | 01 | 105 | 0.88 | 1.22 | 1.65 | 2.17 | 2.75 |
| | 02 | 105 | 1.21 | 1.70 | 2.31 | 3.05 | 3.88 |
| | 03 | 105 | 1.49 | 2.09 | 2.86 | 3.80 | 4.86 |
| | 04 | 105 | 1.88 | 2.68 | 3.73 | 5.06 | 6.60 |
| TE 12 | 05 | 105 | 2.33 | 3.25 | 4.43 | 5.91 | 7.66 |
| | 06 | 105 | 2.79 | 3.93 | 5.46 | 7.41 | 9.80 |
| | 07 | 105 | 3.44 | 4.84 | 6.72 | 9.13 | 12.1 |
| TE 55 | 9B | 105 | 4.52 | 6.23 | 8.43 | 11.1 | 14.2 |
| | 10 | 105 | 5.06 | 7.05 | 9.68 | 13.1 | 17.2 |
| | 11 | 105 | 5.51 | 7.68 | 10.6 | 14.2 | 18.7 |
| | 12 | 105 | 5.83 | 8.14 | 11.2 | 15.1 | 20.0 |
| | 13 | 105 | 6.81 | 9.56 | 13.2 | 18.0 | 23.9 |

Capacity in kW. Range: -60 – -25 °C.
Opening superheat sh = 4 K

SI units R404A/R507

| Valve type | Orifice no. | Cond. temp. [°C] | Evap. temp. [°C] | | | | |
|------------|-------------|------------------|------------------|------|------|------|------|
| | | | -60 | -50 | -40 | -30 | -25 |
| TE 5 | 0.5 | 50 | 1.47 | 2.18 | 3.13 | 4.29 | 4.95 |
| | 01 | 50 | 2.64 | 3.97 | 5.73 | 7.92 | 9.15 |
| | 02 | 50 | 3.61 | 5.50 | 8.04 | 11.2 | 13.0 |
| | 03 | 50 | 4.36 | 6.66 | 9.81 | 13.8 | 16.1 |
| | 04 | 50 | 5.35 | 8.39 | 12.7 | 18.4 | 21.7 |
| TE 12 | 05 | 50 | 6.68 | 10.1 | 14.9 | 21.1 | 24.8 |
| | 06 | 50 | 7.75 | 12.0 | 18.1 | 26.3 | 31.2 |
| | 07 | 50 | 9.28 | 14.4 | 21.6 | 31.5 | 37.4 |
| TE 55 | 9B | 50 | 12.7 | 18.9 | 27.5 | 38.5 | 44.6 |
| | 10 | 50 | 13.8 | 21.0 | 31.1 | 44.7 | 52.8 |
| | 11 | 50 | 14.9 | 22.7 | 33.6 | 48.3 | 57.0 |
| | 12 | 50 | 15.6 | 23.8 | 35.4 | 51.0 | 60.3 |
| | 13 | 50 | 17.8 | 27.4 | 41.0 | 59.5 | 70.8 |

Capacity in TR. Range: -75 – -15 °F.
Opening superheat sh = 7.2 °F.

US units R404A/R507

| Valve type | Orifice no. | Cond. temp. [°F] | Evap. temp. [°F] | | | | |
|------------|-------------|------------------|------------------|------|------|------|------|
| | | | -75 | -60 | -45 | -30 | -15 |
| TE 5 | 0.5 | 125 | 0.41 | 0.58 | 0.79 | 1.04 | 1.33 |
| | 01 | 125 | 0.74 | 1.05 | 1.44 | 1.92 | 2.47 |
| | 02 | 125 | 1.02 | 1.45 | 2.01 | 2.70 | 3.50 |
| | 03 | 125 | 1.23 | 1.75 | 2.44 | 3.30 | 4.31 |
| | 04 | 125 | 1.50 | 2.19 | 3.13 | 4.34 | 5.81 |
| TE 12 | 05 | 125 | 1.87 | 2.65 | 3.70 | 5.02 | 6.61 |
| | 06 | 125 | 2.15 | 3.12 | 4.42 | 6.13 | 8.27 |
| | 07 | 125 | 2.56 | 3.71 | 5.25 | 7.29 | 9.85 |
| TE 55 | 9B | 125 | 3.51 | 4.93 | 6.80 | 9.14 | 11.9 |
| | 10 | 125 | 3.81 | 5.43 | 7.60 | 10.4 | 13.9 |
| | 11 | 125 | 4.11 | 5.87 | 8.21 | 11.2 | 15.0 |
| | 12 | 125 | 4.30 | 6.15 | 8.61 | 11.8 | 15.9 |
| | 13 | 125 | 4.89 | 7.04 | 9.92 | 13.7 | 18.5 |

Subcooling correction factor, f_{sub}

| Subcooling [K] | 2 | 4 | 10 | 15 | 20 | 25 | 30 |
|-------------------|------|------|------|------|------|------|------|
| Correction factor | 0.97 | 1.00 | 1.09 | 1.16 | 1.23 | 1.30 | 1.37 |

Subcooling correction factor, f_{sub}

| Subcooling [°F] | 2 | 7 | 10 | 20 | 30 | 40 | 50 |
|-------------------|------|------|------|------|------|------|------|
| Correction factor | 0.96 | 1.00 | 1.03 | 1.11 | 1.20 | 1.28 | 1.37 |

Distributer correction factor, f_p

SI units R404A/R507

| Pressure drop [bar] Δp | Evap. temp. [°C] | | | | |
|--------------------------------|------------------|------|------|------|------|
| | -60 | -50 | -40 | -30 | -25 |
| 0 | 1 | 1 | 1 | 1 | 1 |
| 1 | 0.97 | 0.96 | 0.96 | 0.96 | 0.96 |
| 1.5 | 0.95 | 0.95 | 0.94 | 0.94 | 0.94 |
| 2 | 0.93 | 0.93 | 0.92 | 0.92 | 0.92 |

Calculated at 32 °C condensing temperature.

Distributer correction factor, f_p

US units R404A/R507

| Pressure drop [psi] Δp | Evap. temp. [°F] | | | | |
|--------------------------------|------------------|------|------|------|------|
| | -75 | -60 | -45 | -30 | -15 |
| 0 | 1 | 1 | 1 | 1 | 1 |
| 15 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| 25 | 0.94 | 0.94 | 0.94 | 0.93 | 0.93 |
| 30 | 0.93 | 0.93 | 0.92 | 0.92 | 0.92 |

Calculated at 90 °F condensing temperature.



Data sheet | Thermostatic expansion valves, type TE 5 – TE 55

Capacity in kW. Range: -40 – 10 °C.
Opening superheat sh = 4 K

SI units R22

| Valve type | Orifice no. | Cond. temp. [°C] | Evap. temp. [°C] | | | | | |
|------------|-------------|------------------|------------------|------|------|------|------|------|
| | | | -40 | -30 | -20 | -10 | 0 | 10 |
| TE 5 | 0.5 | 25 | 4.53 | 5.73 | 7.00 | 8.17 | 8.87 | 8.56 |
| | 01 | 25 | 8.33 | 10.5 | 12.9 | 15.0 | 16.2 | 15.5 |
| | 02 | 25 | 11.7 | 14.8 | 18.0 | 20.8 | 22.3 | 21.2 |
| | 03 | 25 | 14.9 | 18.8 | 23.1 | 26.8 | 28.9 | 27.5 |
| | 04 | 25 | 19.9 | 25.5 | 31.4 | 36.6 | 39.3 | 37.0 |
| TE 12 | 05 | 25 | 24.4 | 31.2 | 38.8 | 46.0 | 50.7 | 49.4 |
| | 06 | 25 | 31.4 | 40.5 | 50.8 | 60.9 | 67.5 | 65.7 |
| | 07 | 25 | 41.2 | 53.1 | 67.0 | 80.9 | 90.4 | 88.3 |
| TE 20 | 08 | 25 | 54.5 | 70.9 | 88.6 | 104 | 113 | 105 |
| | 09 | 25 | 60.1 | 79.7 | 102 | 123 | 136 | 127 |
| TE 55 | 10 | 25 | 65.5 | 86.3 | 110 | 133 | 150 | 149 |
| | 11 | 25 | 72.3 | 95.2 | 121 | 147 | 165 | 163 |
| | 12 | 25 | 78.1 | 103 | 132 | 161 | 183 | 183 |
| | 13 | 25 | 95.8 | 127 | 163 | 199 | 225 | 221 |

Capacity in TR. Range: -40 – 50 °F.
Opening superheat sh = 7.2 °F.

US units R22

| Valve type | Orifice no. | Cond. temp. [°F] | Evap. temp. [°F] | | | | | |
|------------|-------------|------------------|------------------|------|------|------|------|------|
| | | | -40 | -20 | 0 | 20 | 40 | 50 |
| TE 5 | 0.5 | 75 | 1.28 | 1.66 | 2.05 | 2.38 | 2.47 | 2.35 |
| | 01 | 75 | 2.35 | 3.05 | 3.77 | 4.35 | 4.49 | 4.26 |
| | 02 | 75 | 3.30 | 4.28 | 5.26 | 6.02 | 6.16 | 5.80 |
| | 03 | 75 | 4.20 | 5.45 | 6.76 | 7.80 | 8.01 | 7.56 |
| | 04 | 75 | 5.64 | 7.39 | 9.20 | 10.6 | 10.8 | 10.2 |
| TE 12 | 05 | 75 | 6.93 | 9.08 | 11.4 | 13.5 | 14.2 | 13.6 |
| | 06 | 75 | 8.91 | 11.8 | 15.1 | 17.9 | 18.9 | 18.1 |
| | 07 | 75 | 11.7 | 15.5 | 19.9 | 24.0 | 25.5 | 24.4 |
| TE 20 | 08 | 75 | 15.5 | 20.7 | 26.2 | 30.5 | 31.1 | 29.1 |
| | 09 | 75 | 17.1 | 23.4 | 30.4 | 36.4 | 37.6 | 35.1 |
| TE 55 | 10 | 75 | 18.7 | 25.2 | 32.6 | 39.4 | 42.5 | 41.0 |
| | 11 | 75 | 20.6 | 27.9 | 36.0 | 43.4 | 46.6 | 44.8 |
| | 12 | 75 | 22.3 | 30.3 | 39.4 | 48.0 | 52.1 | 50.4 |
| | 13 | 75 | 27.4 | 37.4 | 48.8 | 59.3 | 63.6 | 60.8 |

Capacity in kW. Range: -40 – 10 °C.
Opening superheat sh = 4 K

SI units R22

| Valve type | Orifice no. | Cond. temp. [°C] | Evap. temp. [°C] | | | | | |
|------------|-------------|------------------|------------------|------|------|------|------|------|
| | | | -40 | -30 | -20 | -10 | 0 | 10 |
| TE 5 | 0.5 | 35 | 4.67 | 5.93 | 7.34 | 8.80 | 10.0 | 10.6 |
| | 01 | 35 | 8.56 | 10.9 | 13.5 | 16.2 | 18.4 | 19.3 |
| | 02 | 35 | 12.0 | 15.3 | 18.9 | 22.6 | 25.4 | 26.5 |
| | 03 | 35 | 15.2 | 19.3 | 24.0 | 28.8 | 32.7 | 34.2 |
| | 04 | 35 | 20.1 | 26.0 | 32.5 | 39.2 | 44.5 | 46.2 |
| TE 12 | 05 | 35 | 24.6 | 31.2 | 39.0 | 47.6 | 55.3 | 59.5 |
| | 06 | 35 | 31.2 | 40.1 | 50.8 | 62.7 | 73.6 | 79.5 |
| | 07 | 35 | 40.3 | 51.3 | 64.7 | 80.1 | 95.0 | 103 |
| TE 20 | 08 | 35 | 54.1 | 70.2 | 88.9 | 109 | 125 | 130 |
| | 09 | 35 | 58.0 | 76.4 | 98.7 | 124 | 146 | 155 |
| TE 55 | 10 | 35 | 62.5 | 83.4 | 108 | 136 | 162 | 178 |
| | 11 | 35 | 68.6 | 91.4 | 118 | 149 | 177 | 194 |
| | 12 | 35 | 73.3 | 98.2 | 128 | 162 | 194 | 215 |
| | 13 | 35 | 88.3 | 119 | 156 | 197 | 237 | 260 |

Capacity in TR. Range: -40 – 50 °F.
Opening superheat sh = 7.2 °F.

US units R22

| Valve type | Orifice no. | Cond. temp. [°F] | Evap. temp. [°F] | | | | | |
|------------|-------------|------------------|------------------|------|------|------|------|------|
| | | | -40 | -20 | 0 | 20 | 40 | 50 |
| TE 5 | 0.5 | 95 | 1.33 | 1.73 | 2.18 | 2.63 | 2.96 | 3.02 |
| | 01 | 95 | 2.43 | 3.17 | 4.01 | 4.82 | 5.40 | 5.49 |
| | 02 | 95 | 3.41 | 4.46 | 5.61 | 6.71 | 7.44 | 7.51 |
| | 03 | 95 | 4.30 | 5.62 | 7.12 | 8.58 | 9.59 | 9.72 |
| | 04 | 95 | 5.72 | 7.57 | 9.67 | 11.7 | 13.0 | 13.1 |
| TE 12 | 05 | 95 | 6.98 | 9.08 | 11.6 | 14.3 | 16.4 | 16.9 |
| | 06 | 95 | 8.85 | 11.7 | 15.1 | 18.9 | 21.9 | 22.6 |
| | 07 | 95 | 11.5 | 15.0 | 19.3 | 24.3 | 28.4 | 29.5 |
| TE 20 | 08 | 95 | 15.4 | 20.5 | 26.5 | 32.6 | 36.6 | 36.9 |
| | 09 | 95 | 16.5 | 22.3 | 29.6 | 37.4 | 43.2 | 44.0 |
| TE 55 | 10 | 95 | 17.8 | 24.4 | 32.5 | 41.2 | 48.5 | 50.6 |
| | 11 | 95 | 19.5 | 26.8 | 35.5 | 45.0 | 52.9 | 55.0 |
| | 12 | 95 | 20.8 | 28.8 | 38.4 | 49.1 | 58.5 | 61.2 |
| | 13 | 95 | 25.1 | 34.9 | 46.8 | 60.0 | 71.0 | 73.8 |

Subcooling correction factor, f_{sub}

| Subcooling [K] | 2 | 4 | 10 | 15 | 20 | 25 | 30 |
|-------------------|------|------|------|------|------|------|------|
| Correction factor | 0.98 | 1.00 | 1.05 | 1.10 | 1.14 | 1.19 | 1.23 |

Subcooling correction factor, f_{sub}

| Subcooling [°F] | 2 | 7 | 10 | 20 | 30 | 40 | 50 |
|-------------------|------|------|------|------|------|------|------|
| Correction factor | 0.97 | 1.00 | 1.02 | 1.07 | 1.12 | 1.17 | 1.22 |

Distributer correction factor, f_p

SI units R22

| Pressure drop [bar] Δp | Evap. temp. [°C] | | | | | |
|--------------------------------|------------------|------|------|------|------|------|
| | -40 | -30 | -20 | -10 | 0 | 10 |
| 0 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 0.96 | 0.95 | 0.95 | 0.94 | 0.93 | 0.91 |
| 1.5 | 0.93 | 0.93 | 0.92 | 0.91 | 0.90 | 0.86 |
| 2 | 0.91 | 0.90 | 0.90 | 0.88 | 0.86 | 0.81 |

Calculated at 32 °C condensing temperature.

Distributer correction factor, f_p

US units R22

| Pressure drop [psi] Δp | Evap. temp. [°F] | | | | | |
|--------------------------------|------------------|------|------|------|------|------|
| | -40 | -20 | 0 | 20 | 40 | 50 |
| 0 | 1 | 1 | 1 | 1 | 1 | 1 |
| 15 | 0.95 | 0.95 | 0.95 | 0.94 | 0.92 | 0.91 |
| 25 | 0.92 | 0.92 | 0.91 | 0.89 | 0.87 | 0.84 |
| 30 | 0.91 | 0.90 | 0.89 | 0.87 | 0.84 | 0.80 |

Calculated at 90 °F condensing temperature.



Data sheet | Thermostatic expansion valves, type TE 5 – TE 55

Capacity in kW. Range: -40 – 10 °C.
Opening superheat sh = 4 K

SI units R22

| Valve type | Orifice no. | Cond. temp. [°C] | Evap. temp. [°C] | | | | | |
|------------|-------------|------------------|------------------|------|------|-------|------|------|
| | | | -40 | -30 | -20 | -10 | 0 | 10 |
| TE 5 | 0.5 | 45 | 4.71 | 5.98 | 7.45 | 9.06 | 10.6 | 11.8 |
| | 01 | 45 | 8.62 | 11.0 | 13.7 | 16.67 | 19.5 | 21.6 |
| | 02 | 45 | 12.1 | 15.4 | 19.3 | 23.4 | 27.2 | 29.8 |
| | 03 | 45 | 15.2 | 19.3 | 24.1 | 29.4 | 34.5 | 38.1 |
| | 04 | 45 | 20.0 | 25.7 | 32.6 | 40.1 | 47.1 | 51.9 |
| TE 12 | 05 | 45 | 24.2 | 30.3 | 37.8 | 46.6 | 55.8 | 63.7 |
| | 06 | 45 | 30.3 | 38.6 | 48.9 | 61.1 | 74.2 | 85.3 |
| | 07 | 45 | 38.8 | 48.4 | 60.4 | 75.1 | 91.7 | 107 |
| TE 20 | 08 | 45 | 52.6 | 67.8 | 86.0 | 107 | 127 | 142 |
| | 09 | 45 | 55.0 | 71.5 | 92.1 | 117 | 144 | 165 |
| TE 55 | 10 | 45 | 58.0 | 78.1 | 102 | 132 | 163 | 190 |
| | 11 | 45 | 63.2 | 85.0 | 112 | 143 | 176 | 205 |
| | 12 | 45 | 67.0 | 90.4 | 119 | 154 | 191 | 225 |
| | 13 | 45 | 79.1 | 107 | 143 | 185. | 231 | 271 |

Capacity in TR. Range: -40 – 50 °F.
Opening superheat sh = 7.2 °F.

US units R22

| Valve type | Orifice no. | Cond. temp. [°F] | Evap. temp. [°F] | | | | | |
|------------|-------------|------------------|------------------|------|------|------|------|------|
| | | | -40 | -20 | 0 | 20 | 40 | 50 |
| TE 5 | 0.5 | 115 | 1.34 | 1.74 | 2.22 | 2.73 | 3.21 | 3.39 |
| | 01 | 115 | 2.45 | 3.20 | 4.08 | 5.03 | 5.88 | 6.19 |
| | 02 | 115 | 3.42 | 4.50 | 5.74 | 7.04 | 8.16 | 8.53 |
| | 03 | 115 | 4.30 | 5.61 | 7.17 | 8.85 | 10.4 | 10.9 |
| | 04 | 115 | 5.65 | 7.50 | 9.70 | 12.1 | 14.2 | 14.8 |
| TE 12 | 05 | 115 | 6.85 | 8.79 | 11.2 | 14.0 | 16.9 | 18.1 |
| | 06 | 115 | 8.58 | 11.2 | 14.5 | 18.5 | 22.6 | 24.3 |
| | 07 | 115 | 11.0 | 14.0 | 17.8 | 22.7 | 27.9 | 30.3 |
| TE 20 | 08 | 115 | 14.9 | 19.7 | 25.5 | 32.2 | 38.4 | 40.6 |
| | 09 | 115 | 15.5 | 20.7 | 27.4 | 35.5 | 43.8 | 47.0 |
| TE 55 | 10 | 115 | 16.3 | 22.7 | 30.7 | 40.1 | 49.8 | 53.9 |
| | 11 | 115 | 17.8 | 24.7 | 33.3 | 43.5 | 53.9 | 58.3 |
| | 12 | 115 | 18.8 | 26.2 | 35.6 | 46.9 | 58.7 | 63.9 |
| | 13 | 115 | 22.2 | 31.2 | 42.6 | 56.4 | 70.7 | 76.8 |

Capacity in kW. Range: -40 – 10 °C.
Opening superheat sh = 4 K

SI units R22

| Valve type | Orifice no. | Cond. temp. [°C] | Evap. temp. [°C] | | | | | |
|------------|-------------|------------------|------------------|------|------|------|-------|------|
| | | | -40 | -30 | -20 | -10 | 0 | 10 |
| TE 5 | 0.5 | 55 | 4.68 | 5.92 | 7.38 | 9.02 | 10.74 | 12.3 |
| | 01 | 55 | 8.55 | 10.9 | 13.6 | 16.7 | 19.8 | 22.6 |
| | 02 | 55 | 11.9 | 15.3 | 19.2 | 23.4 | 27.8 | 31.4 |
| | 03 | 55 | 14.9 | 18.9 | 23.6 | 29.0 | 34.6 | 39.6 |
| | 04 | 55 | 19.4 | 25.0 | 31.8 | 40.0 | 47.5 | 54.2 |
| TE 12 | 05 | 55 | 23.5 | 29.0 | 35.8 | 44.0 | 53.3 | 62.7 |
| | 06 | 55 | 29.1 | 36.5 | 45.9 | 57.4 | 70.7 | 84.2 |
| | 07 | 55 | 37.0 | 45.0 | 55.1 | 68.0 | 83.5 | 101 |
| TE 20 | 08 | 55 | 50.5 | 64.3 | 81.1 | 101 | 123 | 143 |
| | 09 | 55 | 51.7 | 66.0 | 84.1 | 107 | 134 | 161 |
| TE 55 | 10 | 55 | 52.5 | 71.1 | 94.3 | 123 | 155 | 187 |
| | 11 | 55 | 56.8 | 76.9 | 102 | 132 | 167 | 201 |
| | 12 | 55 | 59.7 | 81.0 | 108 | 141 | 179 | 218 |
| | 13 | 55 | 69.1 | 94.6 | 127 | 167 | 213 | 260 |

Capacity in TR. Range: -40 – 50 °F.
Opening superheat sh = 7.2 °F.

US units R22

| Valve type | Orifice no. | Cond. temp. [°F] | Evap. temp. [°F] | | | | | |
|------------|-------------|------------------|------------------|------|------|------|------|------|
| | | | -40 | -20 | 0 | 20 | 40 | 50 |
| TE 5 | 0.5 | 135 | 1.32 | 1.72 | 2.18 | 2.71 | 3.25 | 3.50 |
| | 01 | 135 | 2.42 | 3.15 | 4.03 | 5.01 | 6.00 | 6.44 |
| | 02 | 135 | 3.38 | 4.43 | 5.68 | 7.05 | 8.39 | 8.94 |
| | 03 | 135 | 4.22 | 5.47 | 6.98 | 8.71 | 10.5 | 11.2 |
| | 04 | 135 | 5.48 | 7.24 | 9.40 | 11.9 | 14.4 | 15.4 |
| TE 12 | 05 | 135 | 6.61 | 8.32 | 10.5 | 13.1 | 16.1 | 17.6 |
| | 06 | 135 | 8.17 | 10.5 | 13.5 | 17.2 | 21.5 | 23.6 |
| | 07 | 135 | 10.4 | 12.8 | 16.0 | 20.2 | 25.2 | 27.9 |
| TE 20 | 08 | 135 | 14.2 | 18.5 | 23.8 | 30.3 | 37.2 | 40.4 |
| | 09 | 135 | 14.5 | 18.9 | 24.6 | 32.0 | 40.7 | 45.0 |
| TE 55 | 10 | 135 | 14.5 | 20.4 | 27.8 | 37.0 | 47.4 | 52.5 |
| | 11 | 135 | 15.7 | 22.0 | 30.0 | 39.9 | 50.9 | 56.4 |
| | 12 | 135 | 16.5 | 23.1 | 31.7 | 42.4 | 54.7 | 60.9 |
| | 13 | 135 | 19.0 | 26.9 | 37.2 | 50.2 | 65.1 | 72.6 |

Subcooling correction factor, f_{sub}

| Subcooling [K] | 2 | 4 | 10 | 15 | 20 | 25 | 30 |
|-------------------|------|------|------|------|------|------|------|
| Correction factor | 0.98 | 1.00 | 1.05 | 1.10 | 1.14 | 1.19 | 1.23 |

Subcooling correction factor, f_{sub}

| Subcooling [°F] | 2 | 7 | 10 | 20 | 30 | 40 | 50 |
|-------------------|------|------|------|------|------|------|------|
| Correction factor | 0.97 | 1.00 | 1.02 | 1.07 | 1.12 | 1.17 | 1.22 |

Distributer correction factor, f_p

SI units R22

| Pressure drop [bar] Δp | Evap. temp. [°C] | | | | | |
|--------------------------------|------------------|------|------|------|------|------|
| | -40 | -30 | -20 | -10 | 0 | 10 |
| 0 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 0.96 | 0.95 | 0.95 | 0.94 | 0.93 | 0.91 |
| 1.5 | 0.93 | 0.93 | 0.92 | 0.91 | 0.90 | 0.86 |
| 2 | 0.91 | 0.90 | 0.90 | 0.88 | 0.86 | 0.81 |

Calculated at 32 °C condensing temperature.

Distributer correction factor, f_p

US units R22

| Pressure drop [psi] Δp | Evap. temp. [°F] | | | | | |
|--------------------------------|------------------|------|------|------|------|------|
| | -40 | -20 | 0 | 20 | 40 | 50 |
| 0 | 1 | 1 | 1 | 1 | 1 | 1 |
| 15 | 0.95 | 0.95 | 0.95 | 0.94 | 0.92 | 0.91 |
| 25 | 0.92 | 0.92 | 0.91 | 0.89 | 0.87 | 0.84 |
| 30 | 0.91 | 0.90 | 0.89 | 0.87 | 0.84 | 0.80 |

Calculated at 90 °F condensing temperature.



Data sheet | Thermostatic expansion valves, type TE 5 – TE 55

Capacity in kW. Range: -60°C – -25°C.

Opening superheat $sh = 4\text{ K}$

SI units R22

| Valve type | Orifice no. | Cond. temp. [°C] | Evap. temp. [°C] | | | | |
|------------|-------------|------------------|------------------|------|------|------|------|
| | | | -60 | -50 | -40 | -30 | -25 |
| TE 5 | 0.5 | 20 | 2.63 | 3.66 | 4.87 | 6.18 | 6.84 |
| | 01 | 20 | 4.80 | 6.71 | 8.95 | 11.4 | 12.6 |
| | 02 | 20 | 6.68 | 9.38 | 12.6 | 15.9 | 17.6 |
| | 03 | 20 | 8.39 | 11.9 | 15.9 | 20.3 | 22.5 |
| | 04 | 20 | 11.0 | 15.7 | 21.4 | 27.6 | 30.6 |
| TE 12 | 05 | 20 | 12.2 | 16.9 | 22.5 | 28.8 | 32.0 |
| | 06 | 20 | 15.9 | 22.1 | 29.9 | 38.7 | 43.3 |
| | 07 | 20 | 20.8 | 29.0 | 39.2 | 51.1 | 57.3 |
| TE 55 | 9B | 20 | 30.7 | 41.9 | 54.5 | 67.2 | 72.9 |
| | 10 | 20 | 36.3 | 50.4 | 67.5 | 86.3 | 95.7 |
| | 11 | 20 | 40.6 | 55.9 | 74.9 | 95.9 | 106 |
| | 12 | 20 | 43.3 | 60.4 | 81.4 | 104 | 117 |
| | 13 | 20 | 53.1 | 74.6 | 101 | 131 | 147 |

Capacity in TR. Range: -75°F – -15°F.

Opening superheat $sh = 7.2\text{ °F}$.

US units R22

| Valve type | Orifice no. | Cond. temp. [°F] | Evap. temp. [°F] | | | | |
|------------|-------------|------------------|------------------|------|------|------|------|
| | | | -75 | -60 | -45 | -30 | -15 |
| TE 5 | 0.5 | 65 | 0.76 | 1.00 | 1.27 | 1.57 | 1.88 |
| | 01 | 65 | 1.38 | 1.83 | 2.34 | 2.89 | 3.45 |
| | 02 | 65 | 1.93 | 2.56 | 3.28 | 4.06 | 4.82 |
| | 03 | 65 | 2.43 | 3.23 | 4.16 | 5.17 | 6.18 |
| | 04 | 65 | 3.19 | 4.29 | 5.58 | 7.00 | 8.41 |
| TE 12 | 05 | 65 | 3.53 | 4.61 | 5.89 | 7.31 | 8.80 |
| | 06 | 65 | 4.60 | 6.06 | 7.81 | 9.80 | 11.9 |
| | 07 | 65 | 6.04 | 7.96 | 10.3 | 12.9 | 15.8 |
| TE 55 | 9B | 65 | 8.89 | 11.5 | 14.4 | 17.4 | 20.2 |
| | 10 | 65 | 10.6 | 13.9 | 17.8 | 22.1 | 26.5 |
| | 11 | 65 | 11.7 | 15.4 | 19.7 | 24.6 | 29.5 |
| | 12 | 65 | 12.6 | 16.7 | 21.4 | 26.8 | 32.3 |
| | 13 | 65 | 15.5 | 20.6 | 26.7 | 33.6 | 40.7 |

Capacity in kW. Range: -60°C – -25°C.

Opening superheat $sh = 4\text{ K}$

SI units R22

| Valve type | Orifice no. | Cond. temp. [°C] | Evap. temp. [°C] | | | | |
|------------|-------------|------------------|------------------|------|------|------|------|
| | | | -60 | -50 | -40 | -30 | -25 |
| TE 5 | 0.5 | 30 | 2.70 | 3.78 | 5.07 | 6.52 | 7.28 |
| | 01 | 30 | 4.90 | 6.90 | 9.30 | 12.0 | 13.4 |
| | 02 | 30 | 6.78 | 9.61 | 13.0 | 16.8 | 18.8 |
| | 03 | 30 | 8.43 | 12.0 | 16.4 | 21.3 | 23.8 |
| | 04 | 30 | 10.8 | 15.7 | 21.8 | 28.8 | 32.4 |
| TE 12 | 05 | 30 | 12.1 | 16.9 | 22.8 | 29.7 | 33.4 |
| | 06 | 30 | 15.6 | 21.8 | 29.9 | 39.5 | 44.8 |
| | 07 | 30 | 19.9 | 28.0 | 38.6 | 51.2 | 58.1 |
| TE 55 | 9B | 30 | 30.0 | 41.3 | 54.6 | 68.7 | 75.5 |
| | 10 | 30 | 34.7 | 48.7 | 66.0 | 86.0 | 96.4 |
| | 11 | 30 | 38.1 | 53.6 | 72.8 | 95.0 | 107 |
| | 12 | 30 | 40.8 | 57.5 | 78.5 | 103 | 116 |
| | 13 | 30 | 49.1 | 69.7 | 95.9 | 127 | 143 |

Capacity in TR. Range: -75°F – -15°F.

Opening superheat $sh = 7.2\text{ °F}$.

US units R22

| Valve type | Orifice no. | Cond. temp. [°F] | Evap. temp. [°F] | | | | |
|------------|-------------|------------------|------------------|------|------|------|------|
| | | | -75 | -60 | -45 | -30 | -15 |
| TE 5 | 0.5 | 85 | 0.78 | 1.03 | 1.33 | 1.66 | 2.01 |
| | 01 | 85 | 1.42 | 1.89 | 2.44 | 3.05 | 3.71 |
| | 02 | 85 | 1.96 | 2.63 | 3.41 | 4.29 | 5.20 |
| | 03 | 85 | 2.44 | 3.29 | 4.29 | 5.41 | 6.60 |
| | 04 | 85 | 3.15 | 4.29 | 5.68 | 7.27 | 8.95 |
| TE 12 | 05 | 85 | 3.51 | 4.63 | 5.98 | 7.53 | 9.23 |
| | 06 | 85 | 4.49 | 5.98 | 7.82 | 9.97 | 12.4 |
| | 07 | 85 | 5.77 | 7.69 | 10.1 | 12.9 | 16.1 |
| TE 55 | 9B | 85 | 8.69 | 11.4 | 14.4 | 17.7 | 21.0 |
| | 10 | 85 | 10.1 | 13.4 | 17.3 | 21.9 | 26.8 |
| | 11 | 85 | 11.1 | 14.7 | 19.1 | 24.2 | 29.6 |
| | 12 | 85 | 11.9 | 15.8 | 20.6 | 26.1 | 32.1 |
| | 13 | 85 | 14.3 | 19.2 | 25.1 | 32.1 | 39.8 |

Subcooling correction factor, f_{sub}

| Subcooling [K] | 2 | 4 | 10 | 15 | 20 | 25 | 30 |
|-------------------|------|------|------|------|------|------|------|
| Correction factor | 0.98 | 1.00 | 1.05 | 1.10 | 1.14 | 1.19 | 1.23 |

Subcooling correction factor, f_{sub}

| Subcooling [°F] | 2 | 7 | 10 | 20 | 30 | 40 | 50 |
|-------------------|------|------|------|------|------|------|------|
| Correction factor | 0.97 | 1.00 | 1.02 | 1.07 | 1.12 | 1.17 | 1.22 |

Distributer correction factor, f_p

SI units R22

| Pressure drop [bar] Δp | Evap. temp. [°C] | | | | |
|--------------------------------|-------------------|------|------|------|------|
| | -60 | -50 | -40 | -30 | -25 |
| | Correction factor | | | | |
| 0 | 1 | 1 | 1 | 1 | 1 |
| 1 | 0.96 | 0.96 | 0.96 | 0.95 | 0.95 |
| 1.5 | 0.94 | 0.93 | 0.93 | 0.93 | 0.93 |
| 2 | 0.91 | 0.91 | 0.91 | 0.90 | 0.90 |

Calculated at 32 °C condensing temperature.

Distributer correction factor, f_p

US units R22

| Pressure drop [psi] Δp | Evap. temp. [°F] | | | | |
|--------------------------------|-------------------|------|------|------|------|
| | -75 | -60 | -45 | -30 | -15 |
| | Correction factor | | | | |
| 0 | 1 | 1 | 1 | 1 | 1 |
| 15 | 0.96 | 0.96 | 0.95 | 0.95 | 0.95 |
| 25 | 0.93 | 0.93 | 0.92 | 0.92 | 0.92 |
| 30 | 0.91 | 0.91 | 0.91 | 0.90 | 0.90 |

Calculated at 90 °F condensing temperature.



Data sheet | Thermostatic expansion valves, type TE 5 – TE 55

Capacity in kW. Range: -60°C – -25°C.
Opening superheat sh = 4 K

SI units R22

| Valve type | Orifice no. | Cond. temp. [°C] | Evap. temp. [°C] | | | | |
|------------|-------------|------------------|------------------|------|------|------|------|
| | | | -60 | -50 | -40 | -30 | -25 |
| TE 5 | 0.5 | 40 | 2.72 | 3.82 | 5.16 | 6.70 | 7.53 |
| | 01 | 40 | 4.92 | 6.96 | 9.45 | 12.3 | 13.9 |
| | 02 | 40 | 6.76 | 9.66 | 13.2 | 17.3 | 19.5 |
| | 03 | 40 | 8.31 | 11.9 | 16.5 | 21.7 | 24.5 |
| | 04 | 40 | 10.5 | 15.3 | 21.6 | 29.1 | 33.1 |
| TE 12 | 05 | 40 | 11.8 | 16.5 | 22.5 | 29.7 | 33.6 |
| | 06 | 40 | 14.8 | 21.0 | 29.1 | 39.1 | 44.6 |
| | 07 | 40 | 18.6 | 26.4 | 36.8 | 49.6 | 56.8 |
| TE 55 | 9B | 40 | 28.6 | 39.8 | 53.2 | 68.0 | 75.3 |
| | 10 | 40 | 32.3 | 45.8 | 62.7 | 82.7 | 93.5 |
| | 11 | 40 | 35.3 | 50.1 | 68.7 | 90.8 | 103 |
| | 12 | 40 | 37.5 | 53.3 | 73.4 | 97.5 | 111 |
| | 13 | 40 | 44.2 | 63.3 | 88.0 | 118 | 135 |

Capacity in TR. Range: -75°F – -15°F.
Opening superheat sh = 7.2 °F.

US units R22

| Valve type | Orifice no. | Cond. temp. [°F] | Evap. temp. [°F] | | | | |
|------------|-------------|------------------|------------------|------|------|------|------|
| | | | -75 | -60 | -45 | -30 | -15 |
| TE 5 | 0.5 | 105 | 0.79 | 1.05 | 1.35 | 1.70 | 2.09 |
| | 01 | 105 | 1.43 | 1.90 | 2.48 | 3.13 | 3.84 |
| | 02 | 105 | 1.96 | 2.64 | 3.46 | 4.39 | 5.41 |
| | 03 | 105 | 2.41 | 3.26 | 4.29 | 5.48 | 6.79 |
| | 04 | 105 | 3.03 | 4.17 | 5.60 | 7.29 | 9.16 |
| TE 12 | 05 | 105 | 3.40 | 4.51 | 5.87 | 7.48 | 9.29 |
| | 06 | 105 | 4.26 | 5.73 | 7.56 | 9.76 | 12.3 |
| | 07 | 105 | 5.35 | 7.19 | 9.51 | 12.3 | 15.6 |
| TE 55 | 9B | 105 | 8.26 | 10.9 | 14.0 | 17.4 | 20.9 |
| | 10 | 105 | 9.33 | 12.5 | 16.3 | 20.8 | 25.8 |
| | 11 | 105 | 10.2 | 13.6 | 17.9 | 22.8 | 28.3 |
| | 12 | 105 | 10.8 | 14.5 | 19.0 | 24.4 | 30.5 |
| | 13 | 105 | 12.7 | 17.2 | 22.8 | 29.4 | 37.0 |

Capacity in kW. Range: -60°C – -25°C.
Opening superheat sh = 4 K

SI units R22

| Valve type | Orifice no. | Cond. temp. [°C] | Evap. temp. [°C] | | | | |
|------------|-------------|------------------|------------------|------|------|------|------|
| | | | -60 | -50 | -40 | -30 | -25 |
| TE 5 | 0.5 | 50 | 2.71 | 3.81 | 5.17 | 6.75 | 7.62 |
| | 01 | 50 | 4.87 | 6.91 | 9.44 | 12.4 | 14.0 |
| | 02 | 50 | 6.65 | 9.55 | 13.2 | 17.5 | 19.8 |
| | 03 | 50 | 8.08 | 11.7 | 16.2 | 21.6 | 24.6 |
| | 04 | 50 | 9.94 | 14.7 | 21.0 | 28.8 | 33.0 |
| TE 12 | 05 | 50 | 11.2 | 15.8 | 21.7 | 29.0 | 33.0 |
| | 06 | 50 | 13.8 | 19.8 | 27.7 | 37.6 | 43.3 |
| | 07 | 50 | 17.0 | 24.3 | 34.2 | 46.6 | 53.7 |
| TE 55 | 9B | 50 | 26.9 | 37.6 | 50.6 | 65.4 | 73.0 |
| | 10 | 50 | 29.6 | 42.1 | 58.1 | 77.4 | 88.0 |
| | 11 | 50 | 32.0 | 45.7 | 63.2 | 84.3 | 95.9 |
| | 12 | 50 | 33.7 | 48.2 | 66.9 | 89.7 | 102 |
| | 13 | 50 | 38.8 | 56.1 | 78.6 | 107 | 122 |

Capacity in TR. Range: -75°F – -15°F.
Opening superheat sh = 7.2 °F.

US units R22

| Valve type | Orifice no. | Cond. temp. [°F] | Evap. temp. [°F] | | | | |
|------------|-------------|------------------|------------------|------|------|------|------|
| | | | -75 | -60 | -45 | -30 | -15 |
| TE 5 | 0.5 | 125 | 0.78 | 1.04 | 1.35 | 1.71 | 2.11 |
| | 01 | 125 | 1.41 | 1.89 | 2.46 | 3.13 | 3.88 |
| | 02 | 125 | 1.92 | 2.60 | 3.43 | 4.40 | 5.47 |
| | 03 | 125 | 2.33 | 3.17 | 4.20 | 5.42 | 6.79 |
| | 04 | 125 | 2.86 | 3.97 | 5.39 | 7.11 | 9.08 |
| TE 12 | 05 | 125 | 3.21 | 4.29 | 5.62 | 7.22 | 9.05 |
| | 06 | 125 | 3.96 | 5.35 | 7.12 | 9.28 | 11.8 |
| | 07 | 125 | 4.83 | 6.54 | 8.72 | 11.4 | 14.6 |
| TE 55 | 9B | 125 | 7.68 | 10.2 | 13.2 | 16.5 | 20.1 |
| | 10 | 125 | 8.42 | 11.3 | 14.9 | 19.2 | 24.0 |
| | 11 | 125 | 9.12 | 12.3 | 16.2 | 20.8 | 26.1 |
| | 12 | 125 | 9.57 | 12.9 | 17.1 | 22.1 | 27.8 |
| | 13 | 125 | 11.0 | 15.0 | 20.0 | 26.0 | 33.1 |

Subcooling correction factor, f_{sub}

| Subcooling [K] | 2 | 4 | 10 | 15 | 20 | 25 | 30 |
|-------------------|------|------|------|------|------|------|------|
| Correction factor | 0.98 | 1.00 | 1.05 | 1.10 | 1.14 | 1.19 | 1.23 |

Subcooling correction factor, f_{sub}

| Subcooling [°F] | 2 | 7 | 10 | 20 | 30 | 40 | 50 |
|-------------------|------|------|------|------|------|------|------|
| Correction factor | 0.97 | 1.00 | 1.02 | 1.07 | 1.12 | 1.17 | 1.22 |

Distributer correction factor, f_p

SI units R22

| Pressure drop [bar] Δp | Evap. temp. [°C] | | | | |
|--------------------------------|-------------------|------|------|------|------|
| | -60 | -50 | -40 | -30 | -25 |
| | Correction factor | | | | |
| 0 | 1 | 1 | 1 | 1 | 1 |
| 1 | 0.96 | 0.96 | 0.96 | 0.95 | 0.95 |
| 1.5 | 0.94 | 0.93 | 0.93 | 0.93 | 0.93 |
| 2 | 0.91 | 0.91 | 0.91 | 0.90 | 0.90 |

Calculated at 32 °C condensing temperature.

Distributer correction factor, f_p

US units R22

| Pressure drop [psi] Δp | Evap. temp. [°F] | | | | |
|--------------------------------|-------------------|------|------|------|------|
| | -75 | -60 | -45 | -30 | -15 |
| | Correction factor | | | | |
| 0 | 1 | 1 | 1 | 1 | 1 |
| 15 | 0.96 | 0.96 | 0.95 | 0.95 | 0.95 |
| 25 | 0.93 | 0.93 | 0.92 | 0.92 | 0.92 |
| 30 | 0.91 | 0.91 | 0.91 | 0.90 | 0.90 |

Calculated at 90 °F condensing temperature.



Data sheet | Thermostatic expansion valves, type TE 5 – TE 55

Capacity in kW. Range: -40 – 10 °C.
Opening superheat sh = 4 K

SI units R134a

| Valve type | Orifice no. | Cond. temp. [°C] | Evap. temp. [°C] | | | | | |
|------------|-------------|------------------|------------------|------|------|------|------|------|
| | | | -40 | -30 | -20 | -10 | 0 | 10 |
| TE 5 | 0.5 | 25 | 2.59 | 3.33 | 4.16 | 5.00 | 5.65 | 5.72 |
| | 01 | 25 | 4.76 | 6.12 | 7.65 | 9.18 | 10.3 | 10.4 |
| | 02 | 25 | 6.69 | 8.60 | 10.7 | 12.8 | 14.4 | 14.4 |
| | 03 | 25 | 8.55 | 11.0 | 13.8 | 16.5 | 18.6 | 18.7 |
| | 04 | 25 | 11.5 | 14.9 | 18.7 | 22.5 | 25.4 | 25.4 |
| TE 12 | 05 | 25 | 15.2 | 19.3 | 24.1 | 29.0 | 33.0 | 33.6 |
| | 06 | 25 | 19.7 | 25.2 | 31.6 | 38.4 | 43.9 | 44.8 |
| | 07 | 25 | 26.3 | 33.8 | 42.6 | 51.9 | 59.5 | 60.8 |
| TE 20 | 08 | 25 | 30.2 | 39.1 | 49.3 | 59.8 | 67.8 | 68.3 |
| | 09 | 25 | 34.8 | 45.4 | 58.0 | 71.5 | 82.4 | 84.0 |
| TE 55 | 10 | 25 | 40.0 | 52.7 | 67.7 | 84.0 | 98.1 | 102 |
| | 11 | 25 | 44.6 | 58.7 | 75.4 | 93.4 | 109 | 113 |
| | 12 | 25 | 48.5 | 64.0 | 82.6 | 103 | 121 | 127 |
| | 13 | 25 | 60.6 | 80.4 | 104 | 130 | 152 | 156 |

Capacity in TR. Range: -40 – 50 °F.
Opening superheat sh = 7.2 °F.

US units R134a

| Valve type | Orifice no. | Cond. temp. [°F] | Evap. temp. [°F] | | | | | |
|------------|-------------|------------------|------------------|------|------|------|------|------|
| | | | -40 | -20 | 0 | 20 | 40 | 50 |
| TE 5 | 0.5 | 75 | 0.73 | 0.96 | 1.22 | 1.47 | 1.61 | 1.57 |
| | 01 | 75 | 1.35 | 1.78 | 2.25 | 2.70 | 2.94 | 2.87 |
| | 02 | 75 | 1.89 | 2.49 | 3.15 | 3.76 | 4.06 | 3.95 |
| | 03 | 75 | 2.42 | 3.19 | 4.06 | 4.87 | 5.27 | 5.14 |
| | 04 | 75 | 3.27 | 4.33 | 5.53 | 6.64 | 7.18 | 6.97 |
| TE 12 | 05 | 75 | 4.29 | 5.61 | 7.12 | 8.59 | 9.42 | 9.26 |
| | 06 | 75 | 5.57 | 7.32 | 9.36 | 11.4 | 12.6 | 12.4 |
| | 07 | 75 | 7.47 | 9.85 | 12.7 | 15.5 | 17.1 | 16.8 |
| TE 20 | 08 | 75 | 8.57 | 11.4 | 14.6 | 17.7 | 19.3 | 18.8 |
| | 09 | 75 | 9.88 | 13.3 | 17.3 | 21.3 | 23.6 | 23.1 |
| TE 55 | 10 | 75 | 11.4 | 15.4 | 20.2 | 25.2 | 28.4 | 28.1 |
| | 11 | 75 | 12.7 | 17.2 | 22.5 | 28.0 | 31.5 | 31.1 |
| | 12 | 75 | 13.8 | 18.8 | 24.7 | 31.0 | 35.2 | 34.9 |
| | 13 | 75 | 17.3 | 23.6 | 31.2 | 39.0 | 43.9 | 43.2 |

Capacity in kW. Range: -40 – 10 °C.
Opening superheat sh = 4 K

SI units R134a

| Valve type | Orifice no. | Cond. temp. [°C] | Evap. temp. [°C] | | | | | |
|------------|-------------|------------------|------------------|------|------|------|------|------|
| | | | -40 | -30 | -20 | -10 | 0 | 10 |
| TE 5 | 0.5 | 35 | 2.65 | 3.42 | 4.34 | 5.36 | 6.35 | 7.03 |
| | 01 | 35 | 4.86 | 6.29 | 7.98 | 9.85 | 11.6 | 12.8 |
| | 02 | 35 | 6.81 | 8.83 | 11.2 | 13.8 | 16.2 | 17.7 |
| | 03 | 35 | 8.70 | 11.3 | 14.3 | 17.6 | 20.8 | 22.9 |
| | 04 | 35 | 11.6 | 15.2 | 19.3 | 24.0 | 28.4 | 31.1 |
| TE 12 | 05 | 35 | 15.3 | 19.5 | 24.5 | 30.3 | 36.1 | 40.2 |
| | 06 | 35 | 19.6 | 25.1 | 31.9 | 39.8 | 47.8 | 53.6 |
| | 07 | 35 | 26.1 | 33.3 | 42.1 | 52.5 | 63.2 | 71.1 |
| TE 20 | 08 | 35 | 30.3 | 39.2 | 50.0 | 62.3 | 74.4 | 82.4 |
| | 09 | 35 | 34.1 | 44.4 | 57.3 | 72.6 | 88.3 | 99.3 |
| TE 55 | 10 | 35 | 38.2 | 51.0 | 66.8 | 85.5 | 105 | 121 |
| | 11 | 35 | 42.3 | 56.4 | 73.9 | 94.4 | 116 | 133 |
| | 12 | 35 | 45.6 | 61.0 | 80.3 | 103 | 128 | 148 |
| | 13 | 35 | 56.0 | 75.3 | 99.4 | 128 | 159 | 182 |

Capacity in TR. Range: -40 – 50 °F.
Opening superheat sh = 7.2 °F.

US units R134a

| Valve type | Orifice no. | Cond. temp. [°F] | Evap. temp. [°F] | | | | | |
|------------|-------------|------------------|------------------|------|------|------|------|------|
| | | | -40 | -20 | 0 | 20 | 40 | 50 |
| TE 5 | 0.5 | 95 | 0.75 | 1.00 | 1.30 | 1.62 | 1.91 | 2.00 |
| | 01 | 95 | 1.38 | 1.84 | 2.38 | 2.97 | 3.49 | 3.65 |
| | 02 | 95 | 1.93 | 2.58 | 3.34 | 4.15 | 4.84 | 5.03 |
| | 03 | 95 | 2.47 | 3.29 | 4.26 | 5.33 | 6.24 | 6.51 |
| | 04 | 95 | 3.30 | 4.43 | 5.78 | 7.25 | 8.50 | 8.84 |
| TE 12 | 05 | 95 | 4.35 | 5.67 | 7.31 | 9.17 | 10.9 | 11.4 |
| | 06 | 95 | 5.57 | 7.34 | 9.54 | 12.1 | 14.5 | 15.2 |
| | 07 | 95 | 7.42 | 9.70 | 12.6 | 15.9 | 19.1 | 20.2 |
| TE 20 | 08 | 95 | 8.60 | 11.4 | 14.9 | 18.9 | 22.4 | 23.4 |
| | 09 | 95 | 9.69 | 13.0 | 17.2 | 22.1 | 26.8 | 28.2 |
| TE 55 | 10 | 95 | 10.8 | 14.9 | 20.1 | 26.6 | 32.1 | 34.3 |
| | 11 | 95 | 12.0 | 16.5 | 22.2 | 28.9 | 35.4 | 37.7 |
| | 12 | 95 | 13.0 | 17.9 | 24.2 | 31.6 | 39.1 | 41.9 |
| | 13 | 95 | 15.9 | 22.1 | 29.9 | 39.3 | 48.5 | 51.7 |

Subcooling correction factor, f_{sub}

| Subcooling [K] | 2 | 4 | 10 | 15 | 20 | 25 | 30 |
|-------------------|------|------|------|------|------|------|------|
| Correction factor | 0.98 | 1.00 | 1.06 | 1.12 | 1.17 | 1.22 | 1.28 |

Subcooling correction factor, f_{sub}

| Subcooling [°F] | 2 | 7 | 10 | 20 | 30 | 40 | 50 |
|-------------------|------|------|------|------|------|------|------|
| Correction factor | 0.97 | 1.00 | 1.02 | 1.08 | 1.15 | 1.21 | 1.27 |

Distributer correction factor, f_p

SI units R134a

| Pressure drop [bar] Δp | Evap. temp. [°C] | | | | | |
|--------------------------------|------------------|------|------|------|------|------|
| | -40 | -30 | -20 | -10 | 0 | 10 |
| 0 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 0.93 | 0.93 | 0.92 | 0.92 | 0.90 | 0.87 |
| 1.5 | 0.90 | 0.89 | 0.88 | 0.87 | 0.84 | 0.79 |
| 2 | 0.86 | 0.85 | 0.84 | 0.82 | 0.79 | 0.71 |

Calculated at 32 °C condensing temperature.

Distributer correction factor, f_p

US units R134a

| Pressure drop [psi] Δp | Evap. temp. [°F] | | | | | |
|--------------------------------|------------------|------|------|------|------|------|
| | -40 | -20 | 0 | 20 | 40 | 50 |
| 0 | 1 | 1 | 1 | 1 | 1 | 1 |
| 15 | 0.93 | 0.93 | 0.92 | 0.91 | 0.89 | 0.86 |
| 25 | 0.88 | 0.87 | 0.86 | 0.84 | 0.80 | 0.76 |
| 30 | 0.86 | 0.85 | 0.83 | 0.81 | 0.75 | 0.70 |

Calculated at 90 °F condensing temperature.



Data sheet | Thermostatic expansion valves, type TE 5 – TE 55

Capacity in kW. Range: -40 – 10 °C.
Opening superheat sh = 4 K

SI units R134a

| Valve type | Orifice no. | Cond. temp. [°C] | Evap. temp. [°C] | | | | | |
|------------|-------------|------------------|------------------|------|------|------|------|------|
| | | | -40 | -30 | -20 | -10 | 0 | 10 |
| TE 5 | 0.5 | 45 | 2.64 | 3.42 | 4.37 | 5.49 | 6.70 | 7.80 |
| | 01 | 45 | 4.83 | 6.28 | 8.04 | 10.1 | 12.3 | 14.3 |
| | 02 | 45 | 6.75 | 8.80 | 11.3 | 14.1 | 17.2 | 19.8 |
| | 03 | 45 | 8.62 | 11.2 | 14.3 | 17.9 | 21.9 | 25.4 |
| | 04 | 45 | 11.4 | 14.9 | 19.2 | 24.3 | 29.8 | 34.5 |
| TE 12 | 05 | 45 | 15.0 | 19.0 | 24.0 | 30.0 | 36.7 | 43.2 |
| | 06 | 45 | 19.0 | 24.3 | 31.0 | 39.1 | 48.5 | 57.5 |
| | 07 | 45 | 25.2 | 31.7 | 39.9 | 50.1 | 62.1 | 73.9 |
| TE 20 | 08 | 45 | 29.5 | 38.0 | 48.7 | 61.6 | 76.1 | 89.3 |
| | 09 | 45 | 32.6 | 42.1 | 54.4 | 69.9 | 87.7 | 105 |
| TE 55 | 10 | 45 | 35.1 | 47.5 | 63.1 | 82.6 | 105 | 128 |
| | 11 | 45 | 38.6 | 52.1 | 69.4 | 90.6 | 115 | 140 |
| | 12 | 45 | 41.4 | 56.0 | 74.7 | 98.1 | 126 | 153 |
| | 13 | 45 | 49.8 | 67.8 | 90.9 | 120 | 154 | 189 |

Capacity in TR. Range: -40 – 50 °F.
Opening superheat sh = 7.2 °F.

US units R134a

| Valve type | Orifice no. | Cond. temp. [°F] | Evap. temp. [°F] | | | | | |
|------------|-------------|------------------|------------------|------|------|------|------|------|
| | | | -40 | -20 | 0 | 20 | 40 | 50 |
| TE 5 | 0.5 | 115 | 0.75 | 1.00 | 1.31 | 1.67 | 2.06 | 2.23 |
| | 01 | 115 | 1.37 | 1.83 | 2.40 | 3.08 | 3.78 | 4.08 |
| | 02 | 115 | 1.91 | 2.57 | 3.37 | 4.31 | 5.26 | 5.66 |
| | 03 | 115 | 2.44 | 3.25 | 4.27 | 5.47 | 6.71 | 7.25 |
| | 04 | 115 | 3.23 | 4.34 | 5.75 | 7.42 | 9.14 | 9.87 |
| TE 12 | 05 | 115 | 4.25 | 5.51 | 7.12 | 9.10 | 11.3 | 12.3 |
| | 06 | 115 | 5.38 | 7.04 | 9.21 | 11.9 | 15.0 | 16.4 |
| | 07 | 115 | 7.12 | 9.15 | 11.8 | 15.2 | 19.1 | 20.9 |
| TE 20 | 08 | 115 | 8.34 | 11.1 | 14.5 | 18.8 | 23.4 | 25.4 |
| | 09 | 115 | 9.19 | 12.2 | 16.2 | 21.3 | 27.1 | 29.8 |
| TE 55 | 10 | 115 | 9.86 | 13.8 | 18.9 | 25.4 | 32.7 | 36.2 |
| | 11 | 115 | 10.8 | 15.1 | 20.8 | 27.8 | 35.8 | 39.6 |
| | 12 | 115 | 11.6 | 16.2 | 22.3 | 30.1 | 39.1 | 43.5 |
| | 13 | 115 | 13.9 | 19.6 | 27.2 | 36.8 | 47.9 | 53.2 |

Capacity in kW. Range: -40 – 10 °C.
Opening superheat sh = 4 K

SI units R134a

| Valve type | Orifice no. | Cond. temp. [°C] | Evap. temp. [°C] | | | | | |
|------------|-------------|------------------|------------------|------|------|------|------|------|
| | | | -40 | -30 | -20 | -10 | 0 | 10 |
| TE 5 | 0.5 | 55 | 2.56 | 3.32 | 4.27 | 5.41 | 6.72 | 8.06 |
| | 01 | 55 | 4.68 | 6.09 | 7.84 | 9.95 | 12.4 | 14.8 |
| | 02 | 55 | 6.52 | 8.54 | 11.0 | 14.0 | 17.3 | 20.6 |
| | 03 | 55 | 8.34 | 10.8 | 13.8 | 17.5 | 21.8 | 26.1 |
| | 04 | 55 | 10.9 | 14.3 | 18.5 | 23.7 | 29.6 | 35.7 |
| TE 12 | 05 | 55 | 14.4 | 18.0 | 22.6 | 28.3 | 35.2 | 42.8 |
| | 06 | 55 | 18.0 | 22.8 | 29.0 | 36.8 | 46.4 | 56.9 |
| | 07 | 55 | 23.8 | 29.4 | 36.6 | 45.8 | 57.3 | 70.4 |
| TE 20 | 08 | 55 | 28.1 | 35.9 | 45.9 | 58.4 | 73.4 | 89.4 |
| | 09 | 55 | 30.5 | 38.9 | 49.9 | 64.2 | 82.0 | 102 |
| TE 55 | 10 | 55 | 31.2 | 42.6 | 57.3 | 76.2 | 99.2 | 125 |
| | 11 | 55 | 34.0 | 46.5 | 62.6 | 83.1 | 108 | 136 |
| | 12 | 55 | 36.1 | 49.4 | 66.7 | 89.0 | 117 | 148 |
| | 13 | 55 | 42.7 | 58.7 | 79.8 | 107 | 141 | 179 |

Capacity in TR. Range: -40 – 50 °F.
Opening superheat sh = 7.2 °F.

US units R134a

| Valve type | Orifice no. | Cond. temp. [°F] | Evap. temp. [°F] | | | | | |
|------------|-------------|------------------|------------------|------|------|------|------|------|
| | | | -40 | -20 | 0 | 20 | 40 | 50 |
| TE 5 | 0.5 | 135 | 0.72 | 0.96 | 1.27 | 1.64 | 2.07 | 2.29 |
| | 01 | 135 | 1.32 | 1.76 | 2.33 | 3.02 | 3.81 | 4.20 |
| | 02 | 135 | 1.83 | 2.47 | 3.27 | 4.24 | 5.33 | 5.86 |
| | 03 | 135 | 2.34 | 3.11 | 4.09 | 5.31 | 6.71 | 7.40 |
| | 04 | 135 | 3.06 | 4.11 | 5.48 | 7.19 | 9.15 | 10.1 |
| TE 12 | 05 | 135 | 4.05 | 5.16 | 6.63 | 8.51 | 10.8 | 12.0 |
| | 06 | 135 | 5.04 | 6.53 | 8.50 | 11.1 | 14.3 | 16.0 |
| | 07 | 135 | 6.67 | 8.37 | 10.6 | 13.7 | 17.5 | 19.6 |
| TE 20 | 08 | 135 | 7.87 | 10.3 | 13.5 | 17.6 | 22.6 | 25.2 |
| | 09 | 135 | 8.49 | 11.1 | 14.6 | 19.3 | 25.3 | 28.5 |
| TE 55 | 10 | 135 | 8.57 | 12.1 | 16.9 | 23.2 | 30.8 | 35.0 |
| | 11 | 135 | 9.34 | 13.2 | 18.4 | 25.2 | 33.5 | 38.0 |
| | 12 | 135 | 9.89 | 14.0 | 19.6 | 27.0 | 36.2 | 41.2 |
| | 13 | 135 | 11.6 | 16.6 | 23.4 | 32.4 | 43.6 | 49.8 |

Subcooling correction factor, f_{sub}

| Subcooling [K] | 2 | 4 | 10 | 15 | 20 | 25 | 30 |
|-------------------|------|------|------|------|------|------|------|
| Correction factor | 0.98 | 1.00 | 1.06 | 1.12 | 1.17 | 1.22 | 1.28 |

Subcooling correction factor, f_{sub}

| Subcooling [°F] | 2 | 7 | 10 | 20 | 30 | 40 | 50 |
|-------------------|------|------|------|------|------|------|------|
| Correction factor | 0.97 | 1.00 | 1.02 | 1.08 | 1.15 | 1.21 | 1.27 |

Distributer correction factor, f_p

SI units R134a

| Pressure drop [bar] Δp | Evap. temp. [°C] | | | | | |
|--------------------------------|------------------|------|------|------|------|------|
| | -40 | -30 | -20 | -10 | 0 | 10 |
| 0 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 0.93 | 0.93 | 0.92 | 0.92 | 0.90 | 0.87 |
| 1.5 | 0.90 | 0.89 | 0.88 | 0.87 | 0.84 | 0.79 |
| 2 | 0.86 | 0.85 | 0.84 | 0.82 | 0.79 | 0.71 |

Calculated at 32 °C condensing temperature.

Distributer correction factor, f_p

US units R134a

| Pressure drop [psi] Δp | Evap. temp. [°F] | | | | | |
|--------------------------------|------------------|------|------|------|------|------|
| | -40 | -20 | 0 | 20 | 40 | 50 |
| 0 | 1 | 1 | 1 | 1 | 1 | 1 |
| 15 | 0.93 | 0.93 | 0.92 | 0.91 | 0.89 | 0.86 |
| 25 | 0.88 | 0.87 | 0.86 | 0.84 | 0.80 | 0.76 |
| 30 | 0.86 | 0.85 | 0.83 | 0.81 | 0.75 | 0.70 |

Calculated at 90 °F condensing temperature.



Data sheet | Thermostatic expansion valves, type TE 5 – TE 55

Capacity in kW. Range: -40 – 10 °C.
Opening superheat sh = 4 K

SI units R407C

| Valve type | Orifice no. | Cond. temp. [°C] | Evap. temp. [°C] | | | | | |
|------------|-------------|------------------|------------------|------|------|------|------|------|
| | | | -40 | -30 | -20 | -10 | 0 | 10 |
| TE 5 | 0.5 | 25 | 4.62 | 5.82 | 7.18 | 8.56 | 9.66 | 10.0 |
| | 01 | 25 | 8.48 | 10.7 | 13.2 | 15.7 | 17.7 | 18.2 |
| | 02 | 25 | 11.9 | 15.0 | 18.4 | 21.8 | 24.4 | 24.9 |
| | 03 | 25 | 15.0 | 19.0 | 23.6 | 28.1 | 31.6 | 32.4 |
| | 04 | 25 | 20.1 | 25.6 | 31.9 | 38.2 | 42.9 | 43.7 |
| TE 12 | 05 | 25 | 20.9 | 27.9 | 36.2 | 45.1 | 52.7 | 55.9 |
| | 06 | 25 | 26.6 | 35.8 | 46.9 | 59.1 | 69.8 | 74.5 |
| | 07 | 25 | 34.5 | 46.5 | 61.4 | 78.2 | 93.2 | 99.8 |
| TE 20 | 08 | 25 | 49.3 | 63.2 | 79.4 | 96.4 | 110 | 114 |
| | 09 | 25 | 54.3 | 70.6 | 90.4 | 112 | 131 | 138 |
| TE 55 | 10 | 25 | 63.6 | 82.2 | 105 | 130 | 153 | 166 |
| | 11 | 25 | 70.1 | 90.5 | 115 | 143 | 168 | 181 |
| | 12 | 25 | 75.5 | 97.8 | 125 | 156 | 186 | 202 |
| | 13 | 25 | 92.1 | 120 | 154 | 192 | 228 | 246 |

Capacity in TR. Range: -40 – 50 °F.
Opening superheat sh = 7.2 °F.

US units R407C

| Valve type | Orifice no. | Cond. temp. [°F] | Evap. temp. [°F] | | | | | |
|------------|-------------|------------------|------------------|------|------|------|------|------|
| | | | -40 | -20 | 0 | 20 | 40 | 50 |
| TE 5 | 0.5 | 75 | 1.31 | 1.69 | 2.12 | 2.53 | 2.78 | 2.78 |
| | 01 | 75 | 2.41 | 3.11 | 3.89 | 4.63 | 5.07 | 5.06 |
| | 02 | 75 | 3.38 | 4.36 | 5.44 | 6.42 | 6.96 | 6.91 |
| | 03 | 75 | 4.27 | 5.54 | 6.96 | 8.29 | 9.05 | 9.00 |
| | 04 | 75 | 5.71 | 7.47 | 9.45 | 11.3 | 12.3 | 12.2 |
| TE 12 | 05 | 75 | 5.95 | 8.19 | 10.9 | 13.6 | 15.4 | 15.6 |
| | 06 | 75 | 7.58 | 10.5 | 14.1 | 17.9 | 20.5 | 20.8 |
| | 07 | 75 | 9.87 | 13.7 | 18.6 | 23.8 | 27.5 | 27.9 |
| TE 20 | 08 | 75 | 14.1 | 18.5 | 23.6 | 28.7 | 31.7 | 31.6 |
| | 09 | 75 | 15.5 | 20.8 | 27.2 | 33.9 | 38.3 | 38.4 |
| TE 55 | 10 | 75 | 18.2 | 24.1 | 31.3 | 39.1 | 45.2 | 46.3 |
| | 11 | 75 | 20.1 | 26.6 | 34.5 | 43.0 | 49.6 | 50.6 |
| | 12 | 75 | 21.6 | 28.8 | 37.6 | 47.3 | 55.1 | 56.6 |
| | 13 | 75 | 26.5 | 35.3 | 46.3 | 58.3 | 67.5 | 68.8 |

Capacity in kW. Range: -40 – 10 °C.
Opening superheat sh = 4 K

SI units R407C

| Valve type | Orifice no. | Cond. temp. [°C] | Evap. temp. [°C] | | | | | |
|------------|-------------|------------------|------------------|------|------|------|------|------|
| | | | -40 | -30 | -20 | -10 | 0 | 10 |
| TE 5 | 0.5 | 35 | 4.54 | 5.77 | 7.22 | 8.82 | 10.4 | 11.5 |
| | 01 | 35 | 8.34 | 10.6 | 13.3 | 16.2 | 19.0 | 20.9 |
| | 02 | 35 | 11.7 | 14.9 | 18.6 | 22.7 | 26.4 | 28.7 |
| | 03 | 35 | 14.7 | 18.7 | 23.5 | 28.8 | 33.8 | 37.0 |
| | 04 | 35 | 19.4 | 25.0 | 31.7 | 39.1 | 46.0 | 50.2 |
| TE 12 | 05 | 35 | 20.2 | 26.7 | 34.7 | 44.2 | 54.0 | 61.6 |
| | 06 | 35 | 25.4 | 33.9 | 44.7 | 57.6 | 71.3 | 82.1 |
| | 07 | 35 | 32.2 | 42.6 | 56.3 | 73.2 | 91.7 | 107 |
| TE 20 | 08 | 35 | 47.0 | 60.3 | 76.7 | 95.6 | 114 | 127 |
| | 09 | 35 | 50.5 | 65.4 | 84.4 | 108 | 132 | 151 |
| TE 55 | 10 | 35 | 58.3 | 76.3 | 98.9 | 126 | 155 | 180 |
| | 11 | 35 | 63.9 | 83.5 | 108 | 138 | 169 | 196 |
| | 12 | 35 | 68.2 | 89.4 | 116 | 149 | 185 | 216 |
| | 13 | 35 | 81.8 | 108 | 141 | 181 | 225 | 262 |

Capacity in TR. Range: -40 – 50 °F.
Opening superheat sh = 7.2 °F.

US units R407C

| Valve type | Orifice no. | Cond. temp. [°F] | Evap. temp. [°F] | | | | | |
|------------|-------------|------------------|------------------|------|------|------|------|------|
| | | | -40 | -20 | 0 | 20 | 40 | 50 |
| TE 5 | 0.5 | 95 | 1.29 | 1.68 | 2.15 | 2.66 | 3.10 | 3.25 |
| | 01 | 95 | 2.37 | 3.09 | 3.95 | 4.88 | 5.68 | 5.93 |
| | 02 | 95 | 3.32 | 4.34 | 5.54 | 6.81 | 7.85 | 8.15 |
| | 03 | 95 | 4.16 | 5.45 | 7.00 | 8.67 | 10.1 | 10.5 |
| | 04 | 95 | 5.52 | 7.30 | 9.46 | 11.8 | 13.7 | 14.3 |
| TE 12 | 05 | 95 | 5.74 | 7.80 | 10.4 | 13.5 | 16.4 | 17.5 |
| | 06 | 95 | 7.21 | 9.92 | 13.5 | 17.7 | 21.8 | 23.3 |
| | 07 | 95 | 9.15 | 12.5 | 17.0 | 22.5 | 28.2 | 30.3 |
| TE 20 | 08 | 95 | 13.4 | 17.6 | 22.9 | 29.0 | 34.4 | 36.1 |
| | 09 | 95 | 14.4 | 19.1 | 25.4 | 32.9 | 40.2 | 42.9 |
| TE 55 | 10 | 95 | 16.6 | 22.3 | 29.7 | 38.5 | 47.6 | 51.2 |
| | 11 | 95 | 18.1 | 24.4 | 32.4 | 42.1 | 51.8 | 55.7 |
| | 12 | 95 | 19.4 | 26.1 | 34.9 | 45.6 | 56.8 | 61.4 |
| | 13 | 95 | 23.2 | 31.5 | 42.3 | 55.5 | 69.0 | 74.4 |

Subcooling correction factor, f_{sub}

| Subcooling [K] | 2 | 4 | 10 | 15 | 20 | 25 | 30 |
|-------------------|------|------|------|------|------|------|------|
| Correction factor | 0.98 | 1.00 | 1.07 | 1.12 | 1.18 | 1.23 | 1.28 |

Subcooling correction factor, f_{sub}

| Subcooling [°F] | 2 | 7 | 10 | 20 | 30 | 40 | 50 |
|-------------------|------|------|------|------|------|------|------|
| Correction factor | 0.97 | 1.00 | 1.02 | 1.08 | 1.15 | 1.21 | 1.27 |

Distributer correction factor, f_p

SI units R407C

| Pressure drop [bar] Δp | Evap. temp. [°C] | | | | | |
|--------------------------------|------------------|------|------|------|------|------|
| | -40 | -30 | -20 | -10 | 0 | 10 |
| 0 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 0.96 | 0.96 | 0.96 | 0.95 | 0.95 | 0.93 |
| 1.5 | 0.94 | 0.94 | 0.94 | 0.93 | 0.92 | 0.90 |
| 2 | 0.92 | 0.92 | 0.91 | 0.91 | 0.89 | 0.86 |

Calculated at 32 °C condensing temperature.

Distributer correction factor, f_p

US units R407C

| Pressure drop [psi] Δp | Evap. temp. [°F] | | | | | |
|--------------------------------|------------------|------|------|------|------|------|
| | -40 | -20 | 0 | 20 | 40 | 50 |
| 0 | 1 | 1 | 1 | 1 | 1 | 1 |
| 15 | 0.96 | 0.96 | 0.96 | 0.95 | 0.94 | 0.93 |
| 25 | 0.93 | 0.93 | 0.93 | 0.92 | 0.90 | 0.88 |
| 30 | 0.92 | 0.92 | 0.91 | 0.90 | 0.88 | 0.86 |

Calculated at 90 °F condensing temperature.



Data sheet | Thermostatic expansion valves, type TE 5 – TE 55

Capacity in kW. Range: -40 – 10 °C.
Opening superheat sh = 4 K

SI units R407C

| Valve type | Orifice no. | Cond. temp. [°C] | Evap. temp. [°C] | | | | | |
|------------|-------------|------------------|------------------|------|------|------|------|------|
| | | | -40 | -30 | -20 | -10 | 0 | 10 |
| TE 5 | 0.5 | 45 | 4.34 | 5.52 | 6.96 | 8.65 | 10.4 | 12.0 |
| | 01 | 45 | 7.96 | 10.2 | 12.8 | 15.9 | 19.2 | 22.1 |
| | 02 | 45 | 11.1 | 14.3 | 18.1 | 22.4 | 26.8 | 30.5 |
| | 03 | 45 | 13.9 | 17.7 | 22.4 | 28.0 | 33.9 | 38.9 |
| | 04 | 45 | 18.2 | 23.6 | 30.2 | 38.0 | 46.3 | 53.1 |
| TE 12 | 05 | 45 | 19.0 | 24.6 | 31.9 | 40.9 | 51.3 | 61.4 |
| | 06 | 45 | 23.6 | 31.0 | 40.7 | 53.0 | 67.4 | 81.9 |
| | 07 | 45 | 29.7 | 38.2 | 49.6 | 64.5 | 82.7 | 102 |
| TE 20 | 08 | 45 | 43.6 | 55.5 | 70.8 | 89.6 | 111 | 130 |
| | 09 | 45 | 45.8 | 58.7 | 75.6 | 97.4 | 123 | 149 |
| TE 55 | 10 | 45 | 51.5 | 68.0 | 89.2 | 116 | 147 | 179 |
| | 11 | 45 | 56.0 | 73.9 | 97.0 | 126 | 160 | 194 |
| | 12 | 45 | 59.3 | 78.4 | 103 | 135 | 172 | 211 |
| | 13 | 45 | 69.8 | 92.7 | 123 | 161 | 207 | 253 |

Capacity in TR. Range: -40 – 50 °F.
Opening superheat sh = 7.2 °F.

US units R407C

| Valve type | Orifice no. | Cond. temp. [°F] | Evap. temp. [°F] | | | | | |
|------------|-------------|------------------|------------------|------|------|------|------|------|
| | | | -40 | -20 | 0 | 20 | 40 | 50 |
| TE 5 | 0.5 | 115 | 1.22 | 1.60 | 2.07 | 2.61 | 3.17 | 3.42 |
| | 01 | 115 | 2.24 | 2.94 | 3.80 | 4.81 | 5.84 | 6.27 |
| | 02 | 115 | 3.14 | 4.13 | 5.36 | 6.76 | 8.13 | 8.69 |
| | 03 | 115 | 3.91 | 5.12 | 6.65 | 8.45 | 10.3 | 11.1 |
| | 04 | 115 | 5.13 | 6.82 | 8.97 | 11.5 | 14.1 | 15.1 |
| TE 12 | 05 | 115 | 5.35 | 7.12 | 9.46 | 12.4 | 15.8 | 17.3 |
| | 06 | 115 | 6.63 | 8.96 | 12.1 | 16.2 | 20.9 | 23.1 |
| | 07 | 115 | 8.34 | 11.0 | 14.7 | 19.6 | 25.6 | 28.6 |
| TE 20 | 08 | 115 | 12.2 | 16.0 | 21.0 | 27.2 | 33.9 | 36.8 |
| | 09 | 115 | 12.8 | 16.9 | 22.4 | 29.6 | 38.1 | 42.1 |
| TE 55 | 10 | 115 | 14.4 | 19.6 | 26.5 | 35.4 | 45.6 | 50.6 |
| | 11 | 115 | 15.6 | 21.3 | 28.8 | 38.3 | 49.3 | 54.7 |
| | 12 | 115 | 16.5 | 22.6 | 30.6 | 41.0 | 53.3 | 59.4 |
| | 13 | 115 | 19.4 | 26.7 | 36.4 | 49.1 | 64.0 | 71.3 |

Capacity in kW. Range: -40 – 10 °C.
Opening superheat sh = 4 K

SI units R407C

| Valve type | Orifice no. | Cond. temp. [°C] | Evap. temp. [°C] | | | | | |
|------------|-------------|------------------|------------------|------|------|------|------|------|
| | | | -40 | -30 | -20 | -10 | 0 | 10 |
| TE 5 | 0.5 | 55 | 4.04 | 5.12 | 6.46 | 8.08 | 9.91 | 11.7 |
| | 01 | 55 | 7.38 | 9.40 | 11.9 | 15.0 | 18.3 | 21.7 |
| | 02 | 55 | 10.3 | 13.2 | 16.8 | 21.1 | 25.8 | 30.3 |
| | 03 | 55 | 12.8 | 16.3 | 20.6 | 25.9 | 31.9 | 37.9 |
| | 04 | 55 | 16.6 | 21.4 | 27.6 | 35.2 | 43.8 | 52.2 |
| TE 12 | 05 | 55 | 17.5 | 22.2 | 28.2 | 36.0 | 45.6 | 56.2 |
| | 06 | 55 | 21.4 | 27.6 | 35.7 | 46.4 | 59.8 | 74.9 |
| | 07 | 55 | 27.1 | 33.7 | 42.6 | 54.5 | 69.9 | 88.1 |
| TE 20 | 08 | 55 | 39.4 | 49.6 | 62.8 | 79.8 | 100 | 122 |
| | 09 | 55 | 40.6 | 51.2 | 65.2 | 83.8 | 109 | 135 |
| TE 55 | 10 | 55 | 43.5 | 57.9 | 76.9 | 101 | 132 | 165 |
| | 11 | 55 | 47.0 | 62.6 | 82.9 | 109 | 142 | 178 |
| | 12 | 55 | 49.3 | 65.7 | 87.4 | 116 | 151 | 191 |
| | 13 | 55 | 56.8 | 76.3 | 102 | 136 | 179 | 227 |

Capacity in TR. Range: -40 – 50 °F.
Opening superheat sh = 7.2 °F.

US units R407C

| Valve type | Orifice no. | Cond. temp. [°F] | Evap. temp. [°F] | | | | | |
|------------|-------------|------------------|------------------|------|------|------|------|-------|
| | | | -40 | -20 | 0 | 20 | 40 | 50 |
| TE 5 | 0.5 | 135 | 1.12 | 1.46 | 1.89 | 2.41 | 3.00 | 3.28 |
| | 01 | 135 | 2.05 | 2.68 | 3.48 | 4.46 | 5.54 | 6.07 |
| | 02 | 135 | 2.87 | 3.78 | 4.92 | 6.31 | 7.80 | 8.50 |
| | 03 | 135 | 3.55 | 4.63 | 6.01 | 7.72 | 9.65 | 10.59 |
| | 04 | 135 | 4.59 | 6.10 | 8.06 | 10.5 | 13.3 | 14.6 |
| TE 12 | 05 | 135 | 4.88 | 6.29 | 8.20 | 10.7 | 13.8 | 15.5 |
| | 06 | 135 | 5.94 | 7.82 | 10.4 | 13.8 | 18.2 | 20.6 |
| | 07 | 135 | 7.54 | 9.53 | 12.3 | 16.1 | 21.1 | 24.0 |
| TE 20 | 08 | 135 | 10.9 | 14.0 | 18.2 | 23.7 | 30.4 | 33.9 |
| | 09 | 135 | 11.2 | 14.4 | 18.8 | 24.9 | 32.7 | 37.1 |
| TE 55 | 10 | 135 | 11.8 | 16.3 | 22.3 | 30.3 | 40.3 | 45.6 |
| | 11 | 135 | 12.7 | 17.5 | 24.0 | 32.6 | 43.2 | 49.0 |
| | 12 | 135 | 13.3 | 18.4 | 25.3 | 34.5 | 46.1 | 52.5 |
| | 13 | 135 | 15.3 | 21.3 | 29.5 | 40.5 | 54.5 | 62.2 |

Subcooling correction factor, f_{sub}

| Subcooling [K] | 2 | 4 | 10 | 15 | 20 | 25 | 30 |
|-------------------|------|------|------|------|------|------|------|
| Correction factor | 0.98 | 1.00 | 1.07 | 1.12 | 1.18 | 1.23 | 1.28 |

Subcooling correction factor, f_{sub}

| Subcooling [°F] | 2 | 7 | 10 | 20 | 30 | 40 | 50 |
|-------------------|------|------|------|------|------|------|------|
| Correction factor | 0.97 | 1.00 | 1.02 | 1.08 | 1.15 | 1.21 | 1.27 |

Distributer correction factor, f_p

SI units R407C

| Pressure drop [bar] Δp | Evap. temp. [°C] | | | | | |
|--------------------------------|------------------|------|------|------|------|------|
| | -40 | -30 | -20 | -10 | 0 | 10 |
| 0 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 0.96 | 0.96 | 0.96 | 0.95 | 0.95 | 0.93 |
| 1.5 | 0.94 | 0.94 | 0.94 | 0.93 | 0.92 | 0.90 |
| 2 | 0.92 | 0.92 | 0.91 | 0.91 | 0.89 | 0.86 |

Calculated at 32 °C condensing temperature.

Distributer correction factor, f_p

US units R407C

| Pressure drop [psi] Δp | Evap. temp. [°F] | | | | | |
|--------------------------------|------------------|------|------|------|------|------|
| | -40 | -20 | 0 | 20 | 40 | 50 |
| 0 | 1 | 1 | 1 | 1 | 1 | 1 |
| 15 | 0.96 | 0.96 | 0.96 | 0.95 | 0.94 | 0.93 |
| 25 | 0.93 | 0.93 | 0.93 | 0.92 | 0.90 | 0.88 |
| 30 | 0.92 | 0.92 | 0.91 | 0.90 | 0.88 | 0.86 |

Calculated at 90 °F condensing temperature.

Data sheet | Thermostatic expansion valves, type TE 5 – TE 55

Dimensions and weights

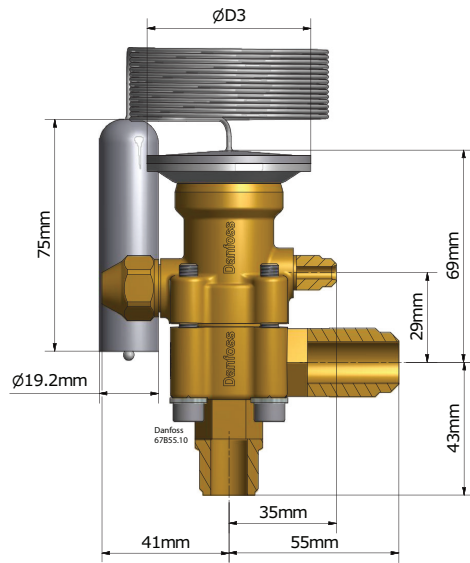
| Element | ØD ₃ [mm] | ØD ₃ [in] |
|-----------------------------------|----------------------|----------------------|
| Standard | 53 | 2.09 |
| Range -60 – -25 °C (-75 – -15 °F) | 60 | 2.36 |

| Inlet side ØD ₁ | L ₁ [mm] | L ₁ [in] |
|----------------------------|---------------------|---------------------|
| ½ In. / 12 mm ODF | 10 | 0.39 |
| 5/8 In. / 16 mm ODF | 12 | 0.47 |
| 7/8 In. / 22 mm ODF | 17 | 0.67 |

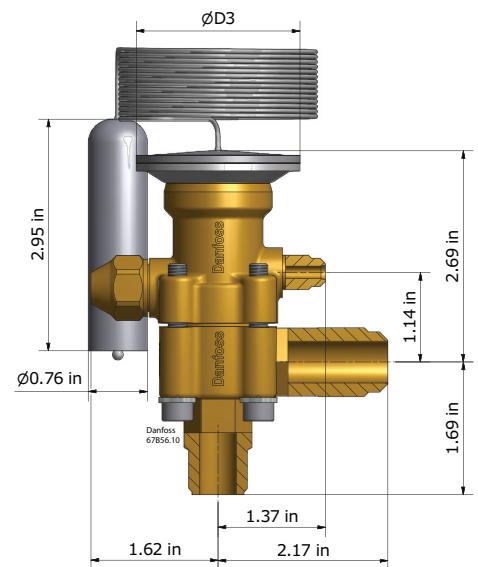
| Outlet side ØD ₂ | L ₁ [mm] | L ₁ [in] |
|-----------------------------|---------------------|---------------------|
| 5/8 In. / 16 mm ODF | 12 | 0.47 |
| 7/8 In. / 22 mm ODF | 17 | 0.67 |
| 1 1/8 In. / 28 mm ODM | 25 | 0.98 |

| Valve body | L ₃ [mm] | L ₃ [in] | |
|--------------|---------------------|---------------------|------|
| Straight way | 7/8 x 1 1/8 | 28 | 1.10 |
| | 22 X 28 mm | 28 | 1.10 |
| | 5/8 x 7/8 | 28 | 1.10 |
| | 16 X 22 mm | 28 | 1.10 |
| Others | 25 | 0.98 | |
| Angle way | 7/8 x 1 1/8 | 39 | 1.54 |
| | 22 x 28 mm | 39 | 1.54 |
| | Others | 28 | 1.10 |

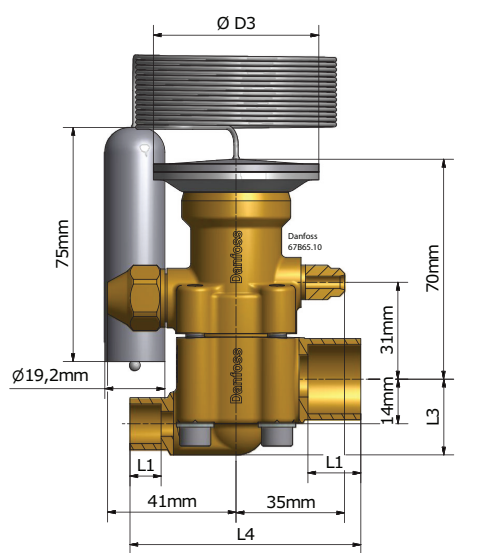
| Valve body | L ₄ [mm] | L ₄ [in] | |
|--------------|---------------------|---------------------|------|
| Straight way | 7/8 x 1 1/8 | 97 | 3.82 |
| | 22 X 28 mm | 97 | 3.82 |
| | 5/8 x 7/8 | 97 | 3.82 |
| | 16 X 22 mm | 97 | 3.82 |
| Others | 74 | 2.91 | |
| Angle way | 7/8 x 1 1/8 | 52 | 2.05 |
| | 22 x 28 mm | 52 | 2.05 |
| | Others | 40 | 1.57 |



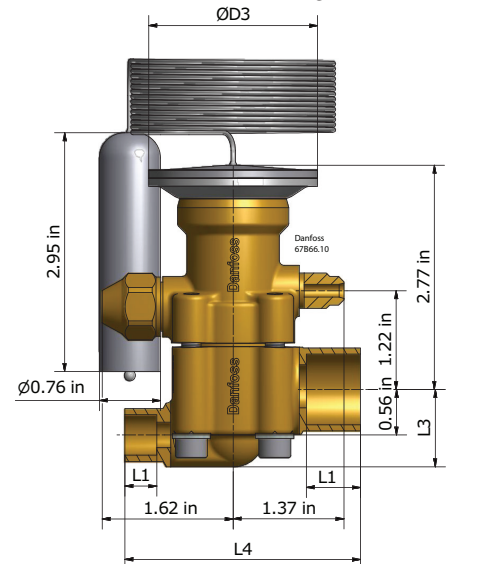
TE 5 - Flare, angleway
Weight: 1.1 kg



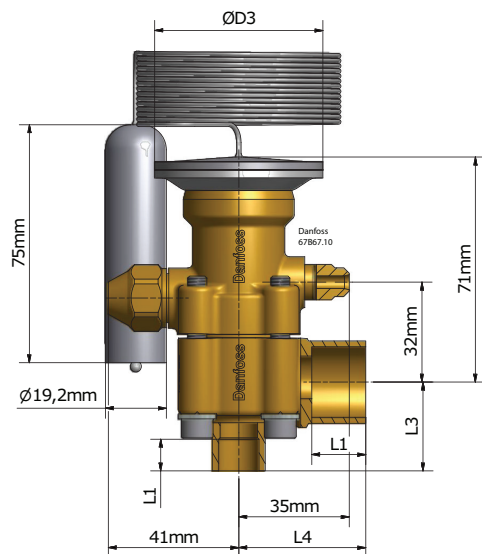
TE 5 - Flare, angleway
Weight: 2.43 lbs



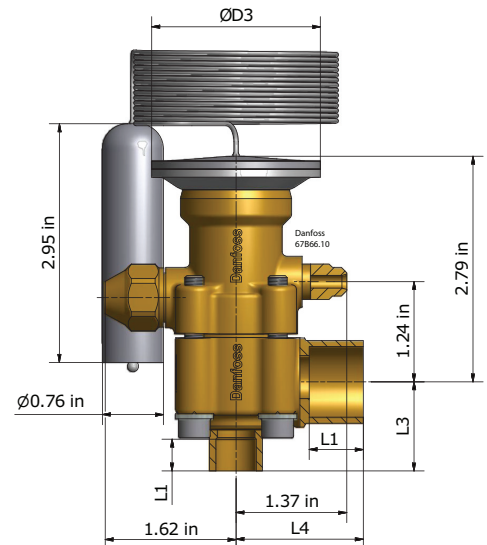
TE 5 - Solder, straightway
Weight: 1 kg



TE 5 - Solder, straightway
Weight: 2.02 lbs



TE 5 - Solder, angleway
Weight: 1 kg



TE 5 - Solder, angleway
Weight: 2.02 lbs

Data sheet | Thermostatic expansion valves, type TE 5 – TE 55

Dimensions and weights

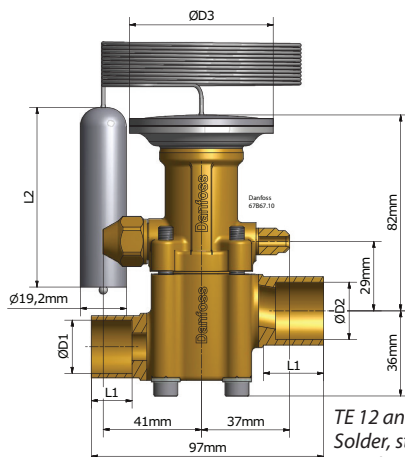
| Element | ØD ₃ [mm] | ØD ₃ [in] |
|---|----------------------|----------------------|
| TE 12 Standard | 60 | 2.36 |
| TE 12 Range -60 -- -25 °C (-75 -- -15 °F) | 72 | 2.83 |
| TE 20 | 72 | 2.83 |

| Bulb | L ₂ [mm] | L ₂ [in] |
|---|---------------------|---------------------|
| TE 12 Standard | 75 | 2.95 |
| TE 12 Range -60 -- -25 °C (-75 -- -15 °F) | 120 | 4.72 |
| TE 20 | 120 | 4.72 |

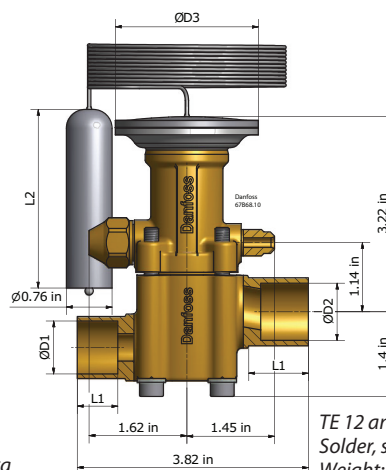
TE12 / TE20

| Inlet side ØD ₁ | L ₁ [mm] | L ₁ [in] |
|----------------------------|---------------------|---------------------|
| 7/8 in. / 22 mm ODF | 17 | 0.67 |

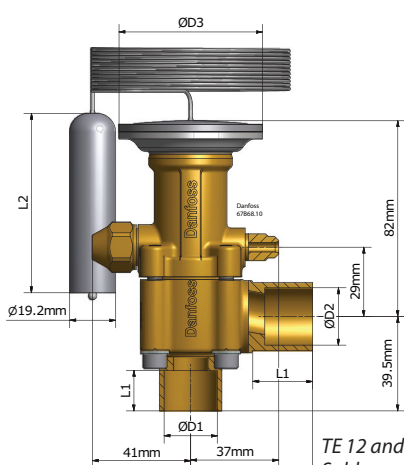
| Outlet side ØD ₂ | L ₁ [mm] | L ₁ [in] |
|-----------------------------|---------------------|---------------------|
| 1 1/8 in. / 28 mm ODM | 25 | 0.98 |



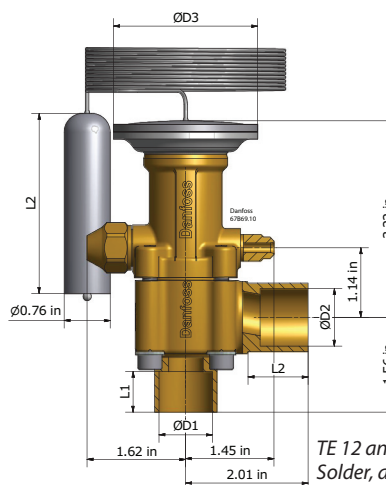
TE 12 and TE 20
Solder, straightway
Weight: TE 12: 1.5 kg
TE 20: 1.7 kg



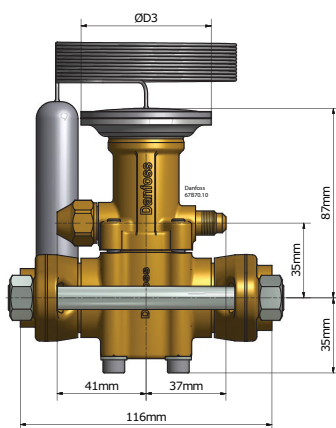
TE 12 and TE 20
Solder, straightway
Weight: TE 12: 3.31 lbs
TE 20: 3.75 lbs



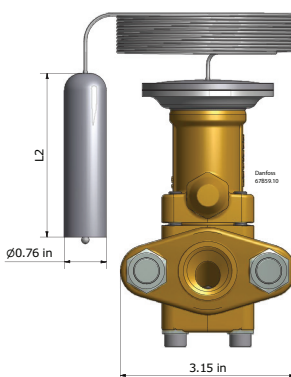
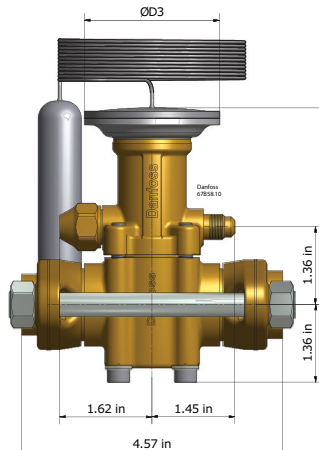
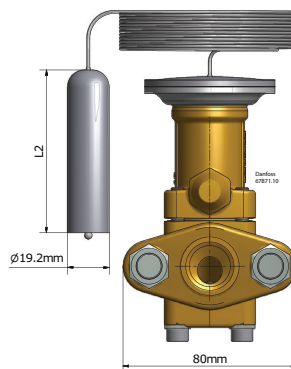
TE 12 and TE 20
Solder, angleway
Weight: TE 12: 1.5 kg
TE 20: 1.6 kg

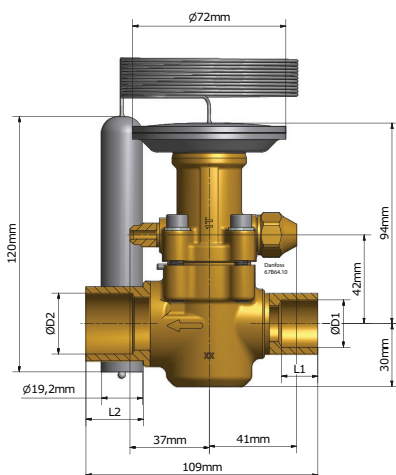


TE 12 and TE 20
Solder, angleway
Weight: TE12: 3.31 lbs
TE20: 3.53 lbs

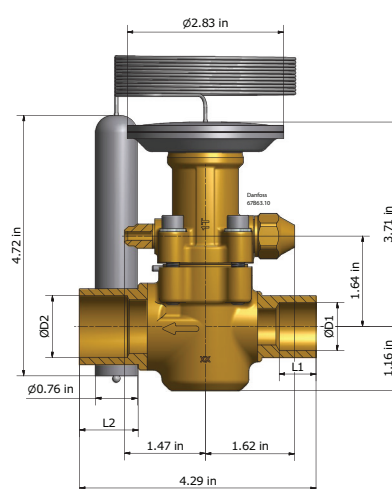


TE 12 - Solder flanges, straightway
Weight: Without filter: 2.3 kg
Weight: Without filter: 7.72 lbs





TE 55 - Solder, straightway
Weight: 1.7 kg

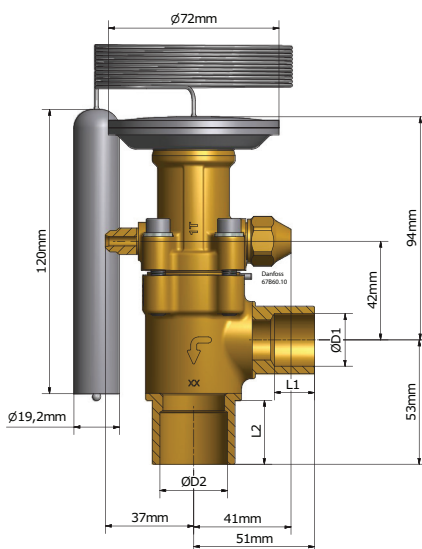


TE 55 - Solder, straightway
Weight: 3.75 lbs

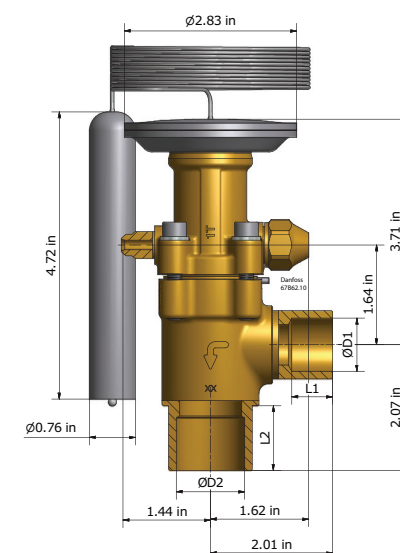
TE 55

| Inlet side $\varnothing D_1$ | L ₁ [mm] | L ₁ [in] |
|---------------------------------|------------------------|------------------------|
| 7/8 in. / 22 mm ODF | 17 | 0.67 |
| 1 1/8 in. / 28 mm ODM | 25 | 0.98 |

| Outlet side $\varnothing D_2$ | L ₂ [mm] | L ₂ [in] |
|----------------------------------|------------------------|------------------------|
| 1 1/8 in. / 28 mm ODF | 22 | 0.87 |
| 1 3/8 in. / 35 mm ODM | 27 | 1.06 |



TE 55 - Solder, angleway
Weight: 1.6 kg



TE 55 - Solder, angleway
Weight: 3.53 lbs