

Data sheet

Thermostatic expansion valves

Type TGE 10, TGE 20 and TGE 40



TGE is a dedicated designed series of thermostatic expansion valves for all standard refrigerants.

The tight design meets the environmental demands for today and future.

Versions for non standard refrigerants can be produced to order.

Applications

- Water chillers
- Bus A/C
- Rooftop units
- Heat pumps
- Refrigerated containers
- Others A/C and refrigeration system

Features

- Refrigerants: R410A, R32, R452B, R454B, R22, R134a, R1234ze, R407F, R407A, R404A, R507, R407C and R290
- Capacity range: 3.5 – 52 TR / 12 – 182 kW for R410A
- Balance port design
- Biflow with expansion in both directions
- Low hysteresis
- Long lifetime for heat pump applications
- Mechanical connections types solder ODF, flare, MIO, ORFS are available
- Laser welded, stainless steel power element, capillary tube, and bulb
- MOP (Max. Operating Pressure) function is available
- Optional bleed function
- PS / MWP (maximum working pressure): 46 bar/ 667 psig
- Straightway flow
- Adjustable superheat setting
- Cylindrical bulb and patented bulb strap design
- Compliance with ATEX hazard zone 2
- UL certified

Refrigerants: Refrigerants: R410A, R32, R452B, R454B, R22, R134a, R1234ze, R407F, R407A, R404A, R507, R407C and R290.
 For other refrigerants, please contact Danfoss.
 Note: this product is approved for R290 by ignition source assessment in accordance to standard EN13463-1.

Approvals

Technical data

Max. temperature on thermostatic element: MAH : 150 °C / 302 °F
 K : 150 °C / 302 °F
 N : 100 °C / 210 °F

Max. temperature on valve body: 110 °C / 230 °F

Max. working pressure: 46 bar / 667 psig.

Max. test pressure: 51 bar / 740 psig.

Standard evaporating temperature ranges

| Charge | Temperature range |
|--------|---|
| MAH | -30 – 15 °C / -22 – 60 °F |
| N | -40 – 10 °C / -40 – 50 °F without MOP |
| K | -25 – 10 °C, MOP 15 °C / -15 – 50 °F, MOP 60 °F |

Max. operating pressure ¹⁾

| Refrigerant | Range K: -25 – 10 °C / -15 – 50 °F, MOP +15 °C / +60 °F |
|-------------|---|
| | MOP point in evaporating pressure p _e |
| R410A | 11.4 bar / 165 psig |
| R22 | 6.9 bar / 100 psig |
| R134a | 3.8 bar / 55 psig |
| R407C | 6.6 bar / 95 psig |
| R404A/ R507 | 8.3 bar / 120 psig |

¹⁾ MOP for R32, R452B, R454B, R1234ze, R407F, R407A and R290 please contact Danfoss for more info.

Connections

| Type | Inlet solder ODF [inch] | Inlet solder ODF [mm] | Outlet solder ODF [inch] | Outlet solder ODF [mm] |
|--------|-------------------------|-----------------------|--------------------------|------------------------|
| TGE 10 | 3/8, 1/2, 5/8, 7/8 | 10, 12, 16, 22 | 5/8, 7/8, 1 1/8 | 16, 22, 28 |
| TGE 20 | 5/8, 7/8, 1 1/8 | 16, 22, 28 | 5/8, 7/8, 1 1/8, 1 3/8 | 16, 22, 28, 35 |
| TGE 40 | 7/8, 1 1/8 | 22, 28 | 7/8, 1 1/8, 1 3/8 | 22, 28, 35 |

Capillary tube length

| Type | Capillary tube length | |
|-----------------|-----------------------|----------|
| TGE 10 / TGE 20 | 1.5 m | 59 inch |
| TGE 40 | 3 m | 118 inch |

Valve options

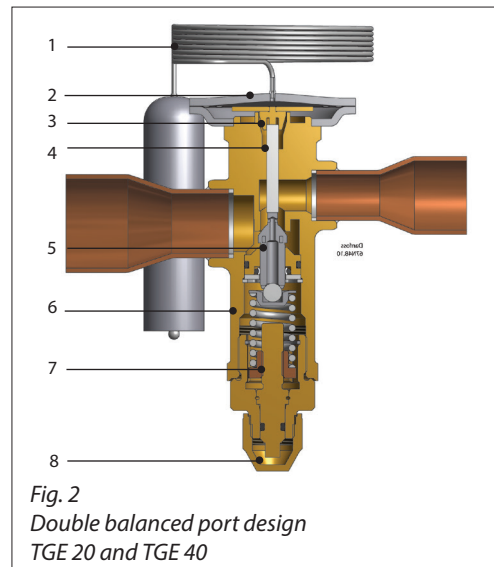
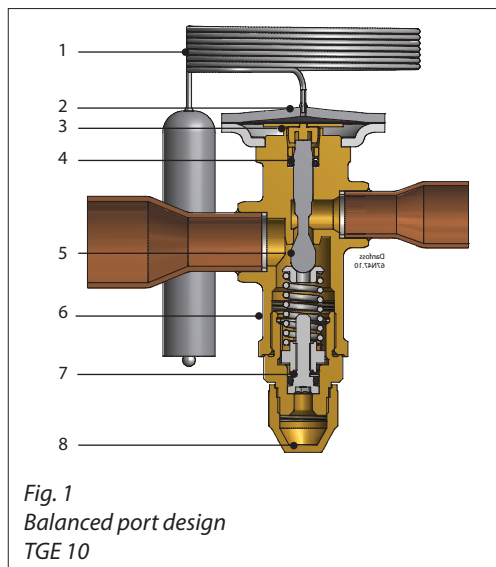
In addition to the standard programme, variants of following options may be available:

- Refrigerants
- Evaporating temperature range
- MOP point
- Static superheat setting (0K – 8K / 0 – 14.4 °F)
- Mechanical connections
- Bleed function (15% or 30%)

Please contact your nearest Danfoss sales office to discuss valve options.

Design and function

- 1. Bulb with capillary tube
- 2. Thermostatic element
- 3. Thrust pad
- 4. Push pin seal
- 5. Cone
- 6. Valve body
- 7. Static SH adjustment spindle
- 8. Protective cap



Balanced port design and advantage

The TGE series of thermostatic expansion valves have balanced port design. Balanced port design prevents changes in pressure drop across the valve from influencing operation and provides excellent control on applications having widely varying operating conditions. Balanced port TXV's are recommended in refrigeration and air conditioning systems with any combinations of these conditions:

- 1) Widely varying head pressures
- 2) Widely varying evaporator loads
- 3) Widely varying pressure drop across the TXV
- 4) Fluctuating or extremely low liquid temperatures
- 5) Intermittent liquid line flash gas

TGE valves are designed for biflow operations. TGE 10 has minor capacity reduction in reverse flow.

The central push pin is fitted with a robust seal (Pos 4) that ensures maximum tightness for the life of the valve.

Static superheat (SS) can be adjusted by the setting spindle (Pos 6), see fig. 1.

The standard superheat setting (SS) is 4K / 7.2 °F and adjustable for 0 – 8K / 0 – 14.4 °F.

SS = Static Superheat
 OS = Opening Superheat
 SH = SS + OS = total superheat

Example:

Static superheat SS = 4K / 7.2 °F
 Opening superheat OS = 4K / 7.2 °F
 The opening superheat is 4K / 7.2 °F, i.e. from the point the valve begins to open up to rated capacity. Opening superheat is determined by the design and cannot be changed.

Total superheat SH = SS + OS
 $SH = 4 + 4 = 8K / 14.4 °F$

Total superheat SH can be altered by changing SS (by using the setting spindle).

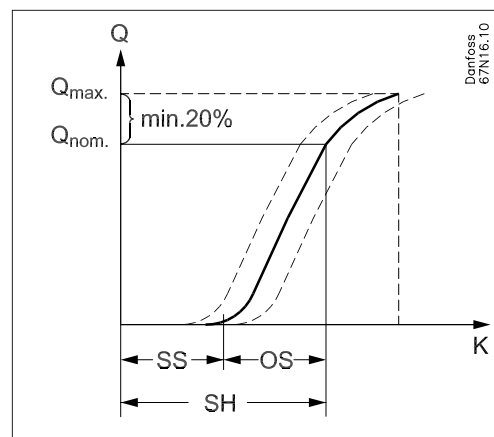


Fig. 3

Application

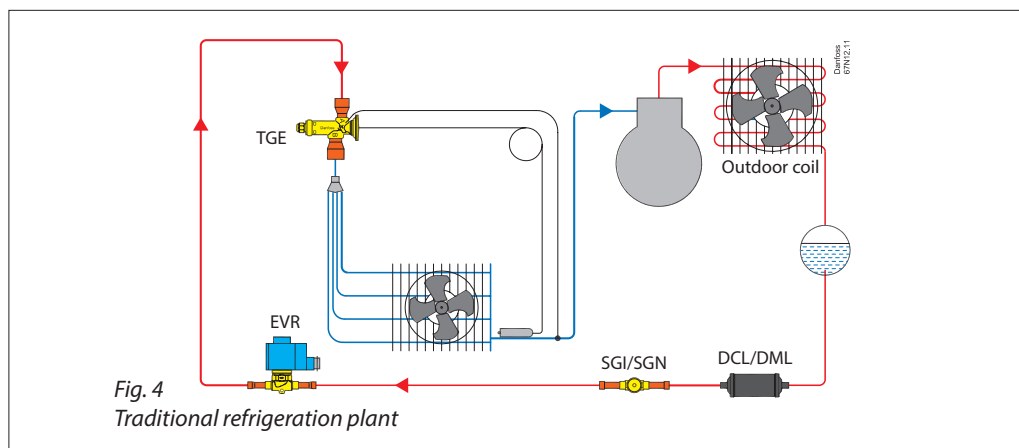


Fig. 4
Traditional refrigeration plant

Fig. 4 A diagram of a traditional refrigeration plant where TGE is used for flow in one direction only.

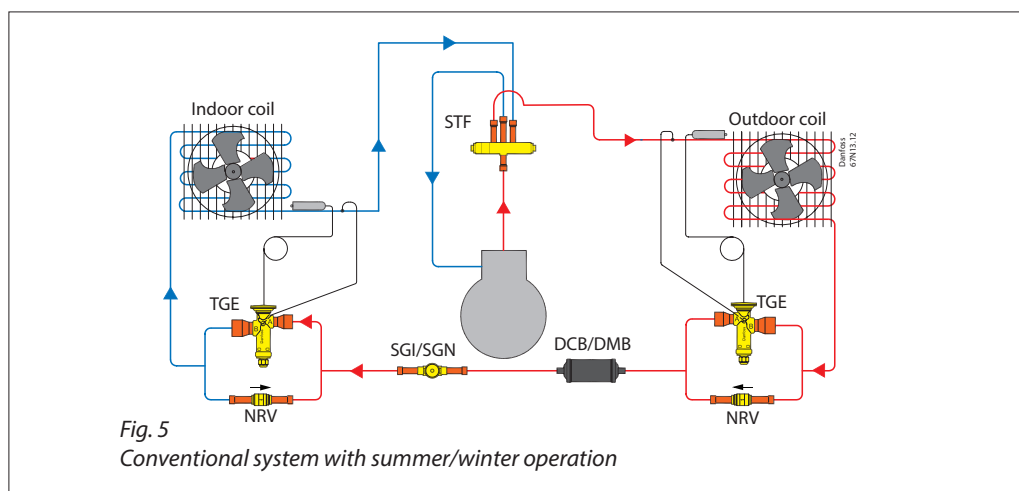


Fig. 5
Conventional system with summer/winter operation

Fig. 5 A conventional split heat pump system shown in cooling mode. This system has two TGE thermostatic expansion valves with fixed direction flow. An NRV check valve is placed in series with each TGE to allow liquid refrigerant to bypass when flow is opposite the TXV fixed direction.

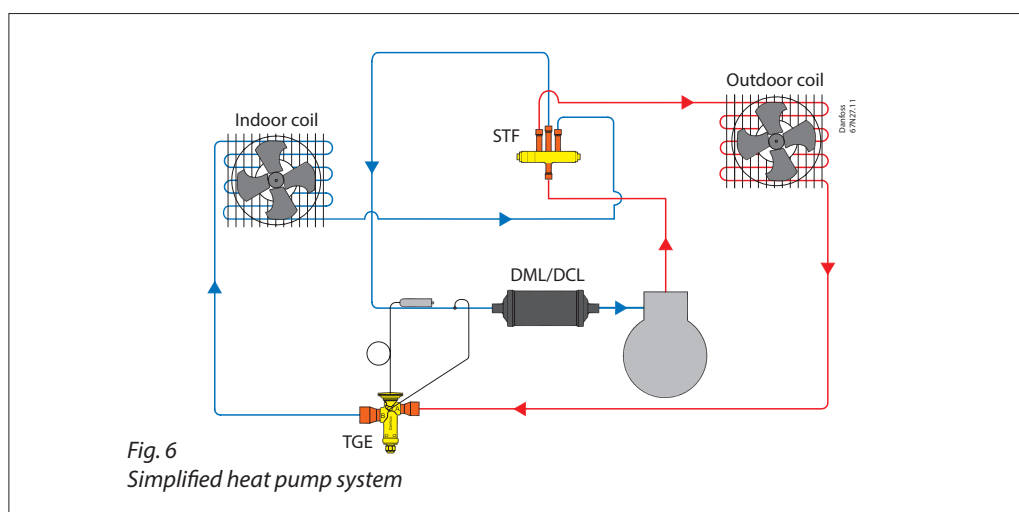


Fig. 6
Simplified heat pump system

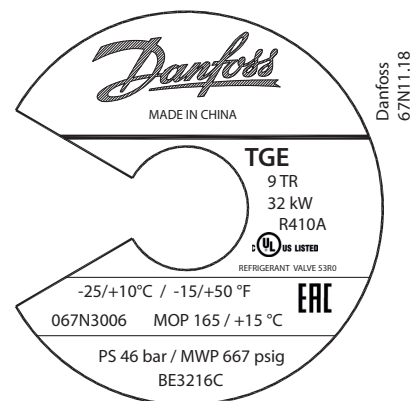
Fig. 6 A heat pump system similar to that in fig. 5 but with a more compact design, where the distance between evaporator and condenser is very short. This system has only one bi-flow TGE valve metering liquid refrigerant effectively in both directions. Changeover is by means of a 4-way valve. A suction filter drier is often placed in suction lines just before the compressor. The normal flow direction of TGE is determined by the primary function, i.e. cooling or heating.

Identification

The valve is fitted with a product label (on top of the diaphragm) which holds information as follows:

- TGE = Valve type
- 9 TR = Rated capacity Q in TR
- 32 kW = Rated capacity Q in kW
- R410A = Refrigerant
- 25 – 10 °C / -15 – 50 °F = Evaporating temperature range
- 067N3006 = Code number
- MOP 165 = Max. operating pressure 165 psig
- PS 46 bar / MWP 667 psig = Max. working pressure in bar and psig

- BE3216C: BE = China
- 32 = week
- 16 = 2016
- C = wednesday

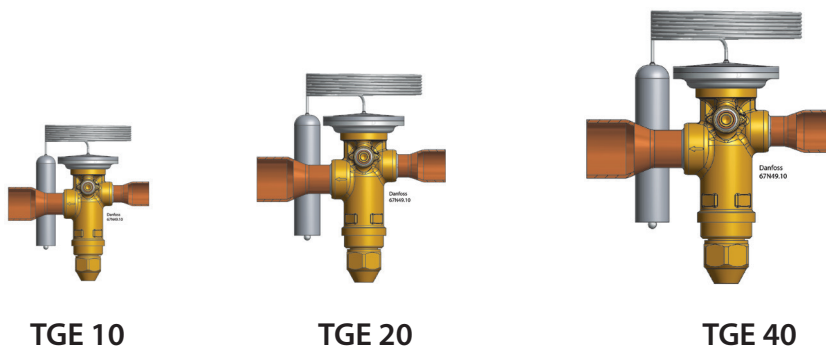


Rated capacity ²⁾

| Valve type | Orifice no. | Range N, K, MAH | | | | | | | | | | | | | | | | | | | | | | | |
|------------|------------------|-----------------|-----|-----|----|---------------------|-----|---------------------|-----|-----|-----|-------|-----|---------|-----|-------|-----|-------|-----|--------------|-----|-------|-----|------|----|
| | | R410A | | R32 | | R452B ⁴⁾ | | R454B ⁴⁾ | | R22 | | R134a | | R1234ze | | R407F | | R407A | | R404A / R507 | | R407C | | R290 | |
| | | KW | TR | KW | TR | KW | TR | KW | TR | KW | TR | KW | TR | KW | TR | KW | TR | KW | TR | KW | TR | KW | TR | KW | TR |
| TGE 10 | 3 | 12 | 3.5 | 18 | 5 | 12 | 3.5 | 14 | 4 | 10 | 3 | 6 | 1.5 | 5 | 1.5 | 10 | 3 | 9 | 2.5 | 7 | 2 | 9 | 2.5 | 10 | 3 |
| | 4 | 16 | 4.5 | 24 | 7 | 16 | 4.5 | 19 | 5.5 | 14 | 4 | 8 | 2.5 | 7 | 2 | 14 | 4 | 12 | 3.5 | 9 | 2.5 | 13 | 3.5 | 14 | 4 |
| | 6 | 24 | 6.5 | 35 | 10 | 24 | 6.5 | 28 | 8 | 20 | 6 | 12 | 3.5 | 10 | 3 | 20 | 6 | 17 | 5 | 14 | 4 | 19 | 5 | 19 | 5 |
| | 8 | 32 | 9 | 47 | 13 | 32 | 9 | 39 | 11 | 27 | 7.5 | 17 | 4.5 | 14 | 4 | 27 | 7.5 | 23 | 6.5 | 18 | 5 | 25 | 7 | 25 | 7 |
| | 9 | 37 | 11 | 54 | 15 | 38 | 11 | 46 | 13 | 32 | 9 | 20 | 5.5 | 16 | 4.5 | 32 | 9 | 28 | 8 | 21 | 6 | 30 | 8.5 | 32 | 9 |
| | 11 | 45 | 13 | 68 | 19 | 46 | 13 | 56 | 16 | 38 | 11 | 24 | 7 | 20 | 5.5 | 40 | 11 | 34 | 10 | 26 | 7.5 | 36 | 10 | 36 | 10 |
| | 12.5 | 50 | 14 | 74 | 21 | 50 | 14 | 60 | 17 | 43 | 12 | 29 | 8 | 22 | 6 | 43 | 12 | 39 | 11 | 31 | 9 | 39 | 11 | 44 | 12 |
| TGE 20 | 16 | 60 | 17 | 87 | 25 | 60 | 17 | 70 | 20 | 50 | 14 | 35 | 9.5 | 27 | 7.5 | 50 | 14 | 46 | 13 | 35 | 10 | 49 | 14 | 50 | 14 |
| | 12.5 | 54 | 15 | 81 | 23 | 55 | 15 | 67 | 19 | 43 | 12 | 29 | 8 | 22 | 6 | 46 | 13 | 39 | 11 | 31 | 9 | 42 | 12 | 44 | 12 |
| | 16 | 68 | 19 | 102 | 29 | 68 | 19 | 81 | 23 | 54 | 15 | 37 | 10 | 27 | 7.5 | 57 | 16 | 50 | 14 | 39 | 11 | 53 | 15 | 54 | 15 |
| | 20 | 79 | 23 | 120 | 34 | 81 | 23 | 98 | 28 | 63 | 18 | 44 | 12 | 31 | 8.5 | 67 | 19 | 59 | 17 | 45 | 13 | 62 | 18 | 63 | 18 |
| TGE 40 | 21 ³⁾ | 91 | 26 | 135 | 38 | 98 | 28 | 116 | 33 | 75 | 21 | 51 | 15 | 39 | 11 | 82 | 23 | 72 | 21 | 53 | 15 | 77 | 22 | 75 | 21 |
| | 26 | 110 | 31 | 165 | 47 | 117 | 33 | 133 | 38 | 92 | 26 | 61 | 17 | 49 | 14 | 95 | 27 | 80 | 23 | 64 | 18 | 84 | 24 | 92 | 26 |
| | 30 | 125 | 35 | 187 | 53 | 134 | 38 | 151 | 43 | 104 | 30 | 70 | 20 | 57 | 16 | 108 | 31 | 91 | 26 | 72 | 21 | 95 | 27 | 106 | 30 |
| | 40 | 161 | 46 | 236 | 67 | 172 | 49 | 193 | 55 | 134 | 38 | 87 | 25 | 72 | 20 | 138 | 39 | 116 | 33 | 92 | 26 | 121 | 34 | 133 | 38 |
| TGE 40 | 42 | 182 | 52 | 273 | 78 | 208 | 59 | 229 | 65 | 148 | 42 | 102 | 29 | 81 | 23 | 165 | 47 | 140 | 40 | 105 | 30 | 148 | 42 | 152 | 43 |

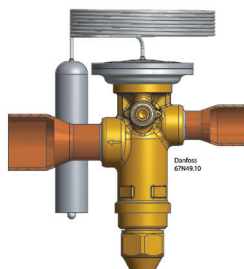
²⁾ The rated capacity is based on:
 Evaporating temperature t_e : 4.4 °C / 40 °F
 Condensing temperature t_c : 38 °C / 100 °F
 Refrigerant temperature ahead of valve t_1 : 37 °C / 98 °F

³⁾ Contact Danfoss for more information
⁴⁾ New sales code numbers are on request.



Ordering

Only solder versions, connection size 28 mm / 1 1/8 in. or below are approved for flammable refrigerants.

Range N -40 – 10 °C / -40 –50 °F, OS = 4 K / 7.2 °F
R410A/R32


| Valve type | Orifice no. | Rated capacity R410A | | Rated capacity R32 | | Connections solder ODF | | Code no. Multi pack |
|------------|-------------|----------------------|------|--------------------|------|------------------------|------------------------------|---------------------|
| | | [KW] | [TR] | [KW] | [TR] | Inlet x Outlet [inch] | Pressure equalization [inch] | |
| TGE 10 | 3 | 12 | 3.5 | 18 | 5 | 3/8 x 3/8 | 1/4 | 067N3150 |
| TGE 10 | 3 | 12 | 3.5 | 18 | 5 | 1/2 x 3/8 | 1/4 | 067N3151 |
| TGE 10 | 4 | 16 | 4.5 | 24 | 7 | 1/2 x 7/8 | 1/4 | 067N3152 |
| TGE 10 | 6 | 24 | 6.5 | 35 | 10 | 1/2 x 3/8 | 1/4 | 067N3153 |
| TGE 10 | 6 | 24 | 6.5 | 35 | 10 | 1/2 x 7/8 | 1/4 | 067N3154 |
| TGE 10 | 6 | 24 | 6.5 | 35 | 10 | 5/8 x 7/8 | 1/4 | 067N3155 |
| TGE 10 | 8 | 32 | 9 | 47 | 13 | 1/2 x 3/8 | 1/4 | 067N3293 |
| TGE 10 | 8 | 32 | 9 | 47 | 13 | 5/8 x 7/8 | 1/4 | 067N3156 |
| TGE 10 | 9 | 37 | 11 | 54 | 15 | 5/8 x 7/8 | 1/4 | 067N3296 |
| TGE 10 | 11 | 45 | 13 | 68 | 19 | 5/8 x 7/8 | 1/4 | 067N3157 |
| TGE 10 | 12.5 | 50 | 14 | 74 | 21 | 5/8 x 7/8 | 1/4 | 067N3410 |
| TGE 20 | 12.5 | 54 | 15 | 81 | 23 | 5/8 x 7/8 | 1/4 | 067N3159 |
| TGE 40 | 26 | 110 | 31 | 165 | 47 | 1 1/8 x 1 1/8 | 1/4 | 067N3234 |

The rated capacity is based on:

 Evaporating temperature t_e : 4.4 °C / 40 °F

 Condensing temperature t_c : 38 °C / 100 °F

 Refrigerant temperature ahead of valve t_1 : 37 °C / 98 °F

Range N -40 – 10 °C / -40 –50 °F, OS = 4 K / 7.2 °F
R410A

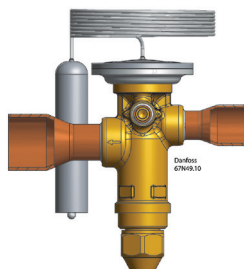
| Valve type | Orifice no. | Rated capacity | | Connections solder ODF | | Code no. Multi pack |
|------------|-------------|----------------|------|------------------------|------------------------------|---------------------|
| | | [KW] | [TR] | Inlet x Outlet [inch] | Pressure equalization [inch] | |
| TGE 10 | 11 | 45 | 13 | 5/8 x 1 1/8 | 1/4 | 067N3158 |
| TGE 10 | 16 | 60 | 17 | 7/8 x 1 1/8 | 1/4 | 067N3411 |
| TGE 20 | 12.5 | 54 | 15 | 5/8 x 1 1/8 | 1/4 | 067N3160 |
| TGE 20 | 12.5 | 54 | 15 | 7/8 x 7/8 | 1/4 | 067N3231 |
| TGE 20 | 12.5 | 54 | 15 | 7/8 x 1 1/8 | 1/4 | 067N3232 |
| TGE 20 | 16 | 68 | 19 | 5/8 x 1 1/8 | 1/4 | 067N3161 |
| TGE 20 | 16 | 68 | 19 | 7/8 x 1 1/8 | 1/4 | 067N3162 |
| TGE 20 | 20 | 79 | 23 | 7/8 x 1 1/8 | 1/4 | 067N3163 |
| TGE 20 | 20 | 79 | 23 | 7/8 x 1 3/8 | 1/4 | 067N3164 |
| TGE 40 | 26 | 110 | 31 | 7/8 x 1 3/8 | 1/4 | 067N3165 |
| TGE 40 | 26 | 110 | 31 | 1 1/8 x 1 3/8 | 1/4 | 067N3166 |
| TGE 40 | 30 | 125 | 35 | 1 1/8 x 1 3/8 | 1/4 | 067N3168 |
| TGE 40 | 40 | 161 | 46 | 1 1/8 x 1 3/8 | 1/4 | 067N3169 |
| TGE 40 | 42 | 182 | 52 | 1 1/8 x 1 3/8 | 1/4 | 067N3400 |

The rated capacity is based on:

 Evaporating temperature t_e : 4.4 °C / 40 °F

 Condensing temperature t_c : 38 °C / 100 °F

 Refrigerant temperature ahead of valve t_1 : 37 °C / 98 °F

Ordering

Range K -25 – 10 °C / -15 – 50 °F with MOP 15 °C / 60 °F, OS = 4 K / 7.2 °F
R410A

| Valve type | Orifice no. | Rated capacity | | Connections solder ODF | | Code no. Multi pack |
|------------|-------------|----------------|------|------------------------|------------------------------|------------------------|
| | | [KW] | [TR] | Inlet x Outlet [inch] | Pressure equalization [inch] | |
| TGE 10 | 3 | 12 | 3.5 | 3/8 x 5/8 | 1/4 | 067N3000 |
| TGE 10 | 3 | 12 | 3.5 | 1/2 x 5/8 | 1/4 | 067N3001 |
| TGE 10 | 4 | 16 | 4.5 | 1/2 x 7/8 | 1/4 | 067N3002 |
| TGE 10 | 6 | 24 | 6.5 | 1/2 x 5/8 | 1/4 | 067N3003 |
| TGE 10 | 6 | 24 | 6.5 | 5/8 x 7/8 | 1/4 | 067N3005 |
| TGE 10 | 8 | 32 | 9.0 | 5/8 x 7/8 | 1/4 | 067N3006 |
| TGE 10 | 9 | 37 | 11 | 5/8 x 7/8 | 1/4 | 067N3340 |
| TGE 10 | 11 | 45 | 13 | 5/8 x 7/8 | 1/4 | 067N3007 |
| TGE 10 | 11 | 45 | 13 | 5/8 x 1 1/8 | 1/4 | 067N3008 |
| TGE 10 | 12.5 | 50 | 14 | 5/8 x 1 1/8 | 1/4 | 067N3402 |
| TGE 10 | 16 | 60 | 17 | 5/8 x 1 1/8 | 1/4 | 067N3401 |
| TGE 20 | 12.5 | 54 | 15 | 5/8 x 7/8 | 1/4 | 067N3009 |
| TGE 20 | 12.5 | 54 | 15 | 5/8 x 1 1/8 | 1/4 | 067N3010 |
| TGE 20 | 16 | 68 | 19 | 5/8 x 1 1/8 | 1/4 | 067N3011 |
| TGE 20 | 16 | 68 | 19 | 7/8 x 1 1/8 | 1/4 | 067N3012 |
| TGE 20 | 20 | 79 | 23 | 7/8 x 1 1/8 | 1/4 | 067N3013 |
| TGE 40 | 26 | 110 | 31 | 7/8 x 1 1/8 | 1/4 | 067N3135 |
| TGE 40 | 26 | 110 | 31 | 7/8 x 1 3/8 | 1/4 | 067N3015 |
| TGE 40 | 30 | 125 | 35 | 1 1/8 x 1 3/8 | 1/4 | 067N3018 |
| TGE 40 | 40 | 161 | 46 | 1 1/8 x 1 3/8 | 1/4 | 067N3019 |
| TGE 40 | 42 | 182 | 52 | 1 1/8 x 1 3/8 | 1/4 | 067N3341 |

The rated capacity is based on:

Evaporating temperature t_e :

4.4 °C / 40 °F

Condensing temperature t_c :

38 °C / 100 °F

Refrigerant temperature ahead of valve t_1 :

37 °C / 98 °F

Range MAH -30 – 15 °C / -22 – 60 °F with anti hunting charge, OS = 4 K / 7.2 °F
R410A

| Valve type | Orifice no. | Rated capacity | | Connections solder ODF | | Code no. Multi pack |
|------------|-------------|----------------|------|------------------------|------------------------------|------------------------|
| | | [KW] | [TR] | Inlet x Outlet [inch] | Pressure equalization [inch] | |
| TGE 10 | 3 | 12 | 3.5 | 1/2 x 5/8 | 1/4 | 067N9201 |
| TGE 10 | 4 | 16 | 4.5 | 1/2 x 7/8 | 1/4 | 067N9202 |
| TGE 10 | 6 | 24 | 6.5 | 1/2 x 5/8 | 1/4 | 067N9203 |
| TGE 10 | 6 | 24 | 6.5 | 5/8 x 7/8 | 1/4 | 067N9200 |
| TGE 10 | 8 | 32 | 9 | 5/8 x 7/8 | 1/4 | 067N9206 |
| TGE 10 | 9 | 37 | 11 | 5/8 x 7/8 | 1/4 | 067N9287 |
| TGE 10 | 11 | 45 | 13 | 5/8 x 7/8 | 1/4 | 067N9207 |
| TGE 10 | 12.5 | 50 | 14 | 5/8 x 7/8 | 1/4 | 067N9509 |
| TGE 10 | 16 | 60 | 17 | 7/8 x 1 1/8 | 1/4 | 067N9512 |
| TGE 20 | 12.5 | 54 | 15 | 5/8 x 7/8 | 1/4 | 067N9209 |
| TGE 20 | 12.5 | 54 | 15 | 5/8 x 1 1/8 | 1/4 | 067N9210 |
| TGE 20 | 16 | 68 | 19 | 7/8 x 1 1/8 | 1/4 | 067N9212 |
| TGE 20 | 20 | 79 | 23 | 7/8 x 1 1/8 | 1/4 | 067N9213 |
| TGE 40 | 26 | 110 | 31 | 7/8 x 1 3/8 | 1/4 | 067N9215 |
| TGE 40 | 26 | 110 | 31 | 1 1/8 x 1 3/8 | 1/4 | 067N9216 |
| TGE 40 | 30 | 125 | 35 | 1 1/8 x 1 3/8 | 1/4 | 067N9218 |
| TGE 40 | 40 | 161 | 46 | 1 1/8 x 1 3/8 | 1/4 | 067N9219 |
| TGE 40 | 42 | 182 | 52 | 1 1/8 x 1 3/8 | 1/4 | 067N9289 |

The rated capacity is based on:

Evaporating temperature t_e :

4.4 °C / 40 °F

Condensing temperature t_c :

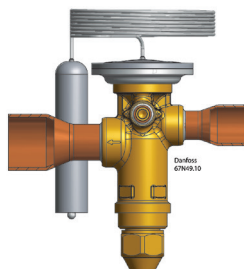
38 °C / 100 °F

Refrigerant temperature ahead of valve t_1 :

37 °C / 98 °F

Ordering

Range N -40 – 10 °C / -40 –50 °F, OS = 4 K / 7.2 °F

R22/R407C ¹⁾


| Valve type | Orifice no. | Rated capacity | | Connections solder ODF Inlet x Outlet | | Pressure equalization | | Code no. Multi pack |
|------------|-------------|----------------|------|--|---------|-----------------------|------|------------------------|
| | | [KW] | [TR] | [inch] | [mm] | [inch] | [mm] | |
| | | | | | | | | |
| TGE 10 | 3 | 10 | 3 | 3/8 x 3/8 | – | 1/4 | – | 067N2150 |
| TGE 10 | 3 | 10 | 3 | 1/2 x 5/8 | – | 1/4 | – | 067N2151 |
| TGE 10 | 4 | 14 | 4 | 1/2 x 7/8 | – | 1/4 | – | 067N2152 |
| TGE 10 | 6 | 20 | 6 | 1/2 x 5/8 | – | 1/4 | – | 067N2153 |
| TGE 10 | 6 | 20 | 6 | 1/2 x 7/8 | – | 1/4 | – | 067N2154 |
| TGE 10 | 6 | 20 | 6 | – | 12 x 22 | – | 6 | 067N2194 |
| TGE 10 | 6 | 20 | 6 | – | 16 x 16 | – | 6 | 067N2263 |
| TGE 10 | 6 | 20 | 6 | 5/8 x 7/8 | – | 1/4 | – | 067N2155 |
| TGE 10 | 8 | 27 | 7.5 | 5/8 x 7/8 | – | 1/4 | – | 067N2156 |
| TGE 10 | 8 | 27 | 7.5 | – | 16 x 22 | – | 6 | 067N2196 |
| TGE 10 | 9 | 32 | 9 | 5/8 x 7/8 | – | 1/4 | – | 067N2460 |
| TGE 10 | 9 | 32 | 9 | – | 16 x 22 | – | 6 | 067N2281 |
| TGE 10 | 11 | 38 | 11 | 5/8 x 7/8 | – | 1/4 | – | 067N2157 |
| TGE 10 | 11 | 38 | 11 | – | 16 x 22 | – | 6 | 067N2197 |
| TGE 10 | 11 | 38 | 11 | 5/8 x 1 1/8 | – | 1/4 | – | 067N2158 |
| TGE 10 | 11 | 38 | 11 | – | 16 x 28 | – | 6 | 067N2198 |
| TGE 10 | 12.5 | 43 | 12 | 5/8 x 7/8 | – | 1/4 | – | 067N2720 |
| TGE 10 | 16 | 50 | 14 | 5/8 x 1 1/8 | – | 1/4 | – | 067N2721 |
| TGE 10 | 16 | 50 | 14 | 7/8 x 1 1/8 | – | 1/4 | – | 067N2722 |
| TGE 20 | 12.5 | 43 | 12 | 5/8 x 7/8 | – | 1/4 | – | 067N2159 |
| TGE 20 | 12.5 | 43 | 12 | 5/8 x 1 1/8 | – | 1/4 | – | 067N2160 |
| TGE 20 | 12.5 | 43 | 12 | – | 16 x 28 | – | 6 | 067N2200 |
| TGE 20 | 16 | 54 | 15 | 5/8 x 7/8 | – | 1/4 | – | 067N2255 |
| TGE 20 | 16 | 54 | 15 | 5/8 x 1 1/8 | – | 1/4 | – | 067N2161 |
| TGE 20 | 16 | 54 | 15 | 7/8 x 1 1/8 | – | 1/4 | – | 067N2162 |
| TGE 20 | 20 | 63 | 18 | 7/8 x 1 1/8 | – | 1/4 | – | 067N2163 |
| TGE 20 | 20 | 63 | 18 | 7/8 x 1 3/8 | – | 1/4 | – | 067N2164 |
| TGE 40 | 26 | 92 | 26 | 7/8 x 1 1/8 | – | 1/4 | – | 067N2251 |
| TGE 40 | 26 | 92 | 26 | 7/8 x 1 3/8 | – | 1/4 | – | 067N2165 |
| TGE 40 | 30 | 104 | 30 | 7/8 x 1 3/8 | – | 1/4 | – | 067N2167 |
| TGE 40 | 30 | 104 | 30 | 1 1/8 x 1 3/8 | – | 1/4 | – | 067N2168 |
| TGE 40 | 40 | 134 | 38 | 1 1/8 x 1 3/8 | – | 1/4 | – | 067N2169 |
| TGE 40 | 42 | 148 | 42 | 1 1/8 x 1 3/8 | – | 1/4 | – | 067N2283 |

The rated capacity is based on:

 Evaporating temperature t_e :

4.4 °C / 40 °F

 Condensing temperature t_c :

38 °C / 100 °F

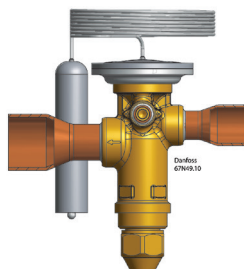
 Refrigerant temperature ahead of valve t_i :

37 °C / 98 °F

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

Ordering

 Range K -25 – 10 °C / -15 – 50 °F with MOP 15 °C / 60 °F,
 OS = 4 K / 7.2 °F

R22/R407C ¹⁾


| Valve type | Orifice no. | Rated capacity | | Connections solder ODF | | Code no. Multi pack |
|------------|-------------|----------------|------|------------------------|------------------------------|------------------------|
| | | [KW] | [TR] | Inlet x Outlet [inch] | Pressure equalization [inch] | |
| TGE 10 | 3 | 10 | 3 | 3/8 x 5/8 | 1/4 | 067N2000 |
| TGE 10 | 3 | 10 | 3 | 1/2 x 5/8 | 1/4 | 067N2001 |
| TGE 10 | 4 | 14 | 4 | 1/2 x 7/8 | 1/4 | 067N2002 |
| TGE 10 | 6 | 20 | 6 | 1/2 x 3/4 | 1/4 | 067N2003 |
| TGE 10 | 6 | 20 | 6 | 5/8 x 7/8 | 1/4 | 067N2005 |
| TGE 10 | 8 | 27 | 7.5 | 5/8 x 7/8 | 1/4 | 067N2006 |
| TGE 10 | 9 | 32 | 9 | 5/8 x 7/8 | 1/4 | 067N2415 |
| TGE 10 | 11 | 38 | 11 | 5/8 x 7/8 | 1/4 | 067N2007 |
| TGE 10 | 11 | 38 | 11 | 5/8 x 1 1/8 | 1/4 | 067N2008 |
| TGE 10 | 12.5 | 43 | 12 | 5/8 x 7/8 | 1/4 | 067N2700 |
| TGE 10 | 16 | 50 | 14 | 7/8 x 1 1/8 | 1/4 | 067N2701 |
| TGE 20 | 12.5 | 43 | 12 | 5/8 x 7/8 | 1/4 | 067N2009 |
| TGE 20 | 12.5 | 43 | 12 | 5/8 x 1 1/8 | 1/4 | 067N2010 |
| TGE 20 | 16 | 54 | 15 | 5/8 x 1 1/8 | 1/4 | 067N2011 |
| TGE 20 | 16 | 54 | 15 | 7/8 x 1 1/8 | 1/4 | 067N2012 |
| TGE 20 | 20 | 63 | 18 | 7/8 x 1 1/8 | 1/4 | 067N2013 |
| TGE 20 | 20 | 63 | 18 | 7/8 x 1 3/8 | 1/4 | 067N2014 |
| TGE 20 | 26 | 92 | 26 | 7/8 x 1 3/8 | 1/4 | 067N2015 |
| TGE 40 | 26 | 92 | 26 | 1 1/8 x 1 3/8 | 1/4 | 067N2016 |
| TGE 40 | 30 | 104 | 30 | 7/8 x 1 3/8 | 1/4 | 067N2017 |
| TGE 40 | 30 | 104 | 30 | 1 1/8 x 1 3/8 | 1/4 | 067N2018 |
| TGE 40 | 40 | 134 | 38 | 1 1/8 x 1 3/8 | 1/4 | 067N2019 |

The rated capacity is based on:

 Evaporating temperature t_e : 4.4 °C / 40 °F
 Condensing temperature t_c : 38 °C / 100 °F
 Refrigerant temperature ahead of valve t_1 : 37 °C / 98 °F

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

 Range MAH -30 – 15 °C / -22 – 60 °F with anti hunting charge,
 OS = 4 K / 7.2 °F

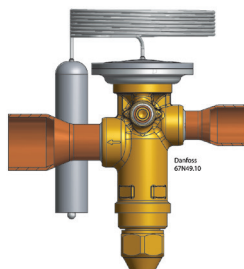
R22/R407C ¹⁾

| Valve type | Orifice no. | Rated capacity | | Connections solder ODF | | Code no. Multi pack |
|------------|-------------|----------------|------|------------------------|------------------------------|------------------------|
| | | [KW] | [TR] | Inlet x Outlet [inch] | Pressure equalization [inch] | |
| TGE 10 | 6 | 20 | 6 | 1/2 x 7/8 | 1/4 | 067N9404 |
| TGE 10 | 8 | 27 | 7.5 | 5/8 x 7/8 | 1/4 | 067N9406 |
| TGE 10 | 11 | 38 | 11 | 5/8 x 7/8 | 1/4 | 067N9407 |
| TGE 20 | 12.5 | 43 | 12 | 5/8 x 7/8 | 1/4 | 067N9409 |
| TGE 20 | 16 | 54 | 15 | 7/8 x 1 1/8 | 1/4 | 067N9412 |
| TGE 20 | 20 | 63 | 18 | 7/8 x 1 3/8 | 1/4 | 067N9413 |
| TGE 40 | 26 | 92 | 26 | 7/8 x 1 3/8 | 1/4 | 067N9415 |
| TGE 40 | 30 | 104 | 30 | 1 1/8 x 1 3/8 | 1/4 | 067N9418 |
| TGE 40 | 40 | 134 | 38 | 1 1/8 x 1 3/8 | 1/4 | 067N9419 |

The rated capacity is based on:

 Evaporating temperature t_e : 4.4 °C / 40 °F
 Condensing temperature t_c : 38 °C / 100 °F
 Refrigerant temperature ahead of valve t_1 : 37 °C / 98 °F

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

Ordering

Range N -40 – 10 °C / -40 –50 °F, OS = 4 K / 7.2 °F
R134a

| Valve type | Orifice no. | Rated capacity | | Connections solder ODF | | | | Code no. Multi pack |
|------------|-------------|----------------|------|------------------------|---------|-----------------------|------|---------------------|
| | | [KW] | [TR] | Inlet x Outlet | | Pressure equalization | | |
| | | | | [inch] | [mm] | [inch] | [mm] | |
| TGE 10 | 3 | 6 | 1.5 | 3/8 x 3/8 | – | 1/4 | – | 067N5150 |
| TGE 10 | 3 | 6 | 1.5 | – | 12 x 16 | – | 6 | 067N5191 |
| TGE 10 | 4 | 8 | 2.5 | 1/2 x 7/8 | – | 1/4 | – | 067N5152 |
| TGE 10 | 4 | 8 | 2.5 | – | 12 x 22 | – | 6 | 067N5192 |
| TGE 10 | 6 | 12 | 3.5 | 1/2 x 5/8 | – | 1/4 | – | 067N5153 |
| TGE 10 | 6 | 12 | 3.5 | 1/2 x 7/8 | – | 1/4 | – | 067N5154 |
| TGE 10 | 6 | 12 | 3.5 | – | 16 x 22 | – | 6 | 067N5195 |
| TGE 10 | 8 | 17 | 4.5 | 5/8 x 7/8 | – | 1/4 | – | 067N5156 |
| TGE 10 | 8 | 17 | 4.5 | – | 16 x 22 | – | 6 | 067N5196 |
| TGE 10 | 9 | 20 | 5.5 | 5/8 x 7/8 | – | 1/4 | – | 067N5260 |
| TGE 10 | 11 | 24 | 7 | 5/8 x 7/8 | – | 1/4 | – | 067N5157 |
| TGE 10 | 12.5 | 29 | 8 | 5/8 x 7/8 | – | 1/4 | – | 067N5720 |
| TGE 10 | 16 | 35 | 9.5 | 7/8 x 1 1/8 | – | 1/4 | – | 067N5721 |
| TGE 20 | 12.5 | 29 | 8 | 5/8 x 7/8 | – | 1/4 | – | 067N5159 |
| TGE 20 | 16 | 37 | 10 | 5/8 x 1 1/8 | – | 1/4 | – | 067N5161 |
| TGE 20 | 16 | 37 | 10 | 7/8 x 1 1/8 | – | 1/4 | – | 067N5162 |
| TGE 20 | 20 | 44 | 12 | 7/8 x 1 1/8 | – | 1/4 | – | 067N5163 |
| TGE 40 | 26 | 61 | 17 | 7/8 x 1 3/8 | – | 1/4 | – | 067N5165 |
| TGE 40 | 26 | 61 | 17 | 1 1/8 x 1 3/8 | – | 1/4 | – | 067N5166 |
| TGE 40 | 30 | 70 | 20 | 7/8 x 1 3/8 | – | 1/4 | – | 067N5167 |
| TGE 40 | 30 | 70 | 20 | 1 1/8 x 1 3/8 | – | 1/4 | – | 067N5168 |
| TGE 40 | 40 | 87 | 25 | 1 1/8 x 1 3/8 | – | 1/4 | – | 067N5169 |

The rated capacity is based on:

Evaporating temperature t_e :

4.4 °C / 40 °F

Condensing temperature t_c :

38 °C / 100 °F

Refrigerant temperature ahead of valve t_1 :

37 °C / 98 °F

Range N -40 – 10 °C / -40 –50 °F, OS = 4 K / 7.2 °F
R134a

| Valve type | Orifice no. | Rated capacity | | Connections flare / MIO | | | | Code no. Multi pack |
|------------|-------------|----------------|------|-------------------------|-----------|------------------------------|-----|---------------------|
| | | [KW] | [TR] | Inlet x Outlet [inch] | | Pressure equalization [inch] | | |
| | | | | Flare | MIO | Flare | MIO | |
| TGE 10 | 3 | 6 | 1.5 | – | 1/2 x 5/8 | – | 1/4 | 067N7150 |
| TGE 10 | 4 | 8 | 2.5 | – | 3/8 x 1/2 | 1/4 | – | 067N7153 |
| TGE 10 | 4 | 8 | 2.5 | 3/8 x 1/2 | – | 1/4 | – | 067N7154 |
| TGE 10 | 6 | 12 | 3.5 | – | 1/2 x 5/8 | – | 1/4 | 067N7171 |
| TGE 10 | 6 | 12 | 3.5 | 1/2 x 5/8 | – | 1/4 | – | 067N7157 |
| TGE 10 | 6 | 12 | 3.5 | – | 3/8 x 1/2 | 1/4 | – | 067N7158 |
| TGE 10 | 6 | 12 | 3.5 | 3/8 x 1/2 | – | 1/4 | – | 067N7160 |
| TGE 10 | 6 | 12 | 3.5 | – | 3/8 x 1/2 | – | 1/4 | 067N7177 |
| TGE 10 | 8 | 17 | 4.5 | – | 3/8 x 1/2 | – | 1/4 | 067N7176 |
| TGE 10 | 8 | 17 | 4.5 | – | 1/2 x 5/8 | – | 1/4 | 067N7161 |
| TGE 10 | 8 | 17 | 4.5 | 1/2 x 5/8 | – | 1/4 | – | 067N7163 |
| TGE 10 | 8 | 17 | 4.5 | – | 3/8 x 1/2 | 1/4 | – | 067N7164 |
| TGE 10 | 8 | 17 | 4.5 | – | 5/8 x 3/4 | – | 1/4 | 067N7165 |
| TGE 10 | 9 | 20 | 5.5 | – | 5/8 x 3/4 | – | 1/4 | 067N7181 |
| TGE 10 | 11 | 24 | 7 | – | 5/8 x 3/4 | – | 1/4 | 067N7166 |
| TGE 10 | 12.5 | 29 | 8 | – | 5/8 x 3/4 | – | 1/4 | 067N7200 |
| TGE 10 | 16 | 35 | 9.5 | – | 5/8 x 3/4 | – | 1/4 | 067N7201 |
| TGE 10 | 16 | 35 | 9.5 | 5/8 x 3/4 | – | 1/4 | – | 067N7203 |
| TGE 20 | 12.5 | 29 | 8 | – | 5/8 x 3/4 | – | 1/4 | 067N7167 |
| TGE 20 | 16 | 37 | 10 | – | 5/8 x 3/4 | – | 1/4 | 067N7169 |
| TGE 20 | 16 | 37 | 10 | 5/8 x 3/4 | – | 1/4 | – | 067N7168 |
| TGE 20 | 20 | 44 | 12 | – | 5/8 x 3/4 | – | 1/4 | 067N7174 |

The rated capacity is based on:

Evaporating temperature t_e :

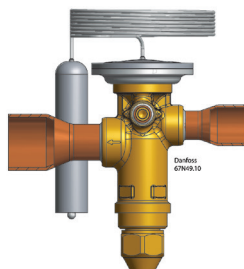
4.4 °C / 40 °F

Condensing temperature t_c :

38 °C / 100 °F

Refrigerant temperature ahead of valve t_1 :

37 °C / 98 °F

Ordering

Range K -25 – 10 °C / -15 – 50 °F with MOP 15 °C / 60 °F, OS = 4 K / 7.2 °F
R134a

| Valve type | Orifice no. | Rated capacity | | Connections solder ODF | | | | Code no. Multi pack |
|------------|-------------|----------------|-----|------------------------|---------|-----------------------|------|------------------------|
| | | | | Inlet x Outlet | | Pressure equalization | | |
| | | | | [inch] | [mm] | [inch] | [mm] | |
| TGE 10 | 3 | 6 | 1.5 | 3/8 x 5/8 | – | 1/4 | – | 067N5000 |
| TGE 10 | 4 | 8 | 2.5 | 1/2 x 7/8 | – | 1/4 | – | 067N5002 |
| TGE 10 | 6 | 12 | 3.5 | 1/2 x 5/8 | – | 1/4 | – | 067N5003 |
| TGE 10 | 6 | 12 | 3.5 | – | 12 x 16 | – | 6 | 067N5043 |
| TGE 10 | 6 | 12 | 3.5 | 5/8 x 7/8 | – | 1/4 | – | 067N5005 |
| TGE 10 | 8 | 17 | 4.5 | 5/8 x 7/8 | – | 1/4 | – | 067N5006 |
| TGE 10 | 11 | 24 | 7 | 5/8 x 7/8 | – | 1/4 | – | 067N5007 |
| TGE 10 | 11 | 24 | 7 | – | 16 x 22 | – | 6 | 067N5047 |
| TGE 10 | 11 | 24 | 7 | 5/8 x 1 1/8 | – | 1/4 | – | 067N5008 |
| TGE 10 | 12.5 | 29 | 8 | 5/8 x 7/8 | – | 1/4 | – | 067N5700 |
| TGE 20 | 12.5 | 29 | 8 | 5/8 x 7/8 | – | 1/4 | – | 067N5009 |
| TGE 20 | 16 | 37 | 10 | 5/8 x 1 1/8 | – | 1/4 | – | 067N5011 |
| TGE 20 | 20 | 44 | 12 | 7/8 x 1 1/8 | – | 1/4 | – | 067N5013 |
| TGE 40 | 26 | 61 | 17 | 7/8 x 1 3/8 | – | 1/4 | – | 067N5015 |
| TGE 40 | 30 | 70 | 20 | 1 1/8 x 1 3/8 | – | 1/4 | – | 067N5018 |
| TGE 40 | 40 | 87 | 25 | 1 1/8 x 1 3/8 | – | 1/4 | – | 067N5019 |

The rated capacity is based on:

Evaporating temperature t_e :

4.4 °C / 40 °F

Condensing temperature t_c :

38 °C / 100 °F

Refrigerant temperature ahead of valve t_i :

37 °C / 98 °F

Range K -25 – 10 °C / -15 – 50 °F with MOP 15 °C / 60 °F, OS = 4 K / 7.2 °F
R134a

| Valve type | Orifice no. | Rated capacity | | Connections flare / MIO | | | | Code no. Multi pack |
|------------|-------------|----------------|-----|-------------------------|-----------|-----------------------|-----|------------------------|
| | | | | Inlet x Outlet | | Pressure equalization | | |
| | | | | [inch] | | [inch] | | |
| TGE 10 | 4 | 8 | 2.5 | – | 1/2 x 5/8 | – | 1/4 | 067N7002 |
| TGE 10 | 6 | 12 | 3.5 | 3/8 x 1/2 | – | 1/4 | – | 067N7003 |
| TGE 10 | 6 | 12 | 3.5 | 1/2 x 5/8 | – | 1/4 | – | 067N7004 |
| TGE 10 | 8 | 17 | 4.5 | – | 1/2 x 5/8 | – | 1/4 | 067N7010 |
| TGE 10 | 8 | 17 | 4.5 | 1/2 x 5/8 | – | 1/4 | – | 067N7008 |
| TGE 10 | 8 | 17 | 4.5 | – | 5/8 x 3/4 | – | 1/4 | 067N7012 |
| TGE 10 | 8 | 17 | 4.5 | 5/8 x 3/4 | – | 1/4 | – | 067N7013 |
| TGE 10 | 9 | 20 | 5.5 | – | 5/8 x 3/4 | – | 1/4 | 067N7046 |
| TGE 10 | 11 | 24 | 7 | – | 5/8 x 3/4 | – | 1/4 | 067N7015 |
| TGE 10 | 11 | 24 | 7 | 5/8 x 3/4 | – | 1/4 | – | 067N7016 |
| TGE 10 | 12.5 | 29 | 8 | – | 5/8 x 3/4 | – | 1/4 | 067N7210 |
| TGE 10 | 12.5 | 29 | 8 | 5/8 x 3/4 | – | 1/4 | – | 067N7212 |
| TGE 10 | 16 | 35 | 9.5 | – | 5/8 x 3/4 | – | 1/4 | 067N7211 |
| TGE 20 | 12.5 | 29 | 8 | – | 5/8 x 3/4 | – | 1/4 | 067N7017 |
| TGE 20 | 12.5 | 29 | 8 | 5/8 x 3/4 | – | 1/4 | – | 067N7018 |
| TGE 20 | 16 | 37 | 10 | – | 5/8 x 3/4 | – | 1/4 | 067N7019 |
| TGE 20 | 16 | 37 | 10 | 5/8 x 3/4 | – | 1/4 | – | 067N7020 |
| TGE 20 | 20 | 44 | 12 | 5/8 x 3/4 | – | 1/4 | – | 067N7021 |

The rated capacity is based on:

Evaporating temperature t_e :

4.4 °C / 40 °F

Condensing temperature t_c :

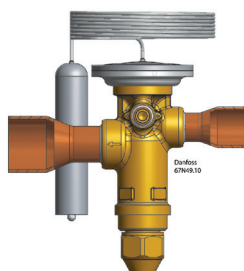
38 °C / 100 °F

Refrigerant temperature ahead of valve t_i :

37 °C / 98 °F

Ordering

Only solder versions, connection size 28 mm / 1 1/8 in. or below are approved for flammable refrigerants.

Range -30 – 10 °C / -22 – 50 °F, OS = 4 K / 7.2 °F
R1234ze


| Valve type | Orifice no. | Rated capacity | | Connections solder ODF | | Code no. Multi pack |
|------------|-------------|----------------|------|------------------------|-----------------------|------------------------|
| | | [KW] | [TR] | Inlet x Outlet | Pressure equalization | |
| | | | | [inch] | [inch] | |
| TGE 10 | 8 | 14 | 4 | 3/8 x 3/8 | 1/4 | 067N8001 |
| TGE 10 | 11 | 20 | 5.5 | 3/8 x 3/8 | 1/4 | 067N8002 |
| TGE 10 | 12.5 | 22 | 6 | 3/8 x 3/8 | 1/4 | 067N8003 |
| TGE 20 | 20 | 31 | 8.5 | 7/8 x 1 1/8 | 1/4 | 067N8004 |
| TGE 40 | 26 | 49 | 14 | 7/8 x 1 1/8 | 1/4 | 067N8005 |

The rated capacity is based on:

 Evaporating temperature t_e : 4.4 °C / 40 °F

 Condensing temperature t_c : 38 °C / 100 °F

 Refrigerant temperature ahead of valve t_1 : 37 °C / 98 °F

Range N -40 – 10 °C / -40 – 50 °F, OS = 4 K / 7.2 °F
R407F/R407A¹⁾

| Valve type | Orifice no. | Rated capacity R407F | | Rated capacity R407A | | Connections solder ODF | | Code no. Multi pack |
|------------|-------------|----------------------|------|----------------------|------|------------------------|-----------------------|------------------------|
| | | [KW] | [TR] | [KW] | [TR] | Inlet x Outlet | Pressure equalization | |
| | | | | | | [inch] | [inch] | |
| TGE 10 | 4 | 14 | 4 | 12 | 3.5 | 1/2 x 7/8 | 1/4 | 067N4700 |
| TGE 10 | 6 | 20 | 6 | 17 | 5 | 5/8 x 7/8 | 1/4 | 067N4701 |
| TGE 10 | 8 | 27 | 7.5 | 23 | 6.5 | 5/8 x 7/8 | 1/4 | 067N4702 |
| TGE 10 | 9 | 32 | 9 | 28 | 8 | 5/8 x 7/8 | 1/4 | 067N4703 |
| TGE 10 | 11 | 40 | 11 | 34 | 10 | 5/8 x 1 1/8 | 1/4 | 067N4704 |

The rated capacity is based on:

 Evaporating temperature t_e : 4.4 °C / 40 °F

 Condensing temperature t_c : 38 °C / 100 °F

 Refrigerant temperature ahead of valve t_1 : 37 °C / 98 °F

¹⁾ On systems charged with R407F, SS = 4.0 °C / 7.2 °F, on systems charged with R407A, SS = 2.7 °C / 4.9 °F.

Range N -40 – 10 °C / -40 – 50 °F, OS = 4 K / 7.2 °F
R404A/R507

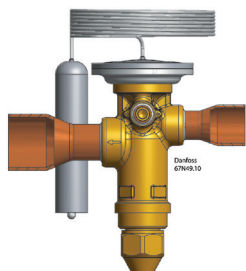
| Valve type | Orifice no. | Rated capacity | | Connections solder ODF | | Code no. Multi pack |
|------------|-------------|----------------|------|--------------------------|---------------------------------|------------------------|
| | | [KW] | [TR] | Inlet x Outlet [inch] | Pressure equalization [inch] | |
| TGE 10 | 3 | 7 | 2 | 3/8 x 5/8 | 1/4 | 067N6170 |
| TGE 10 | 4 | 9 | 2.5 | 1/2 x 7/8 | 1/4 | 067N6172 |
| TGE 10 | 6 | 14 | 4 | 1/2 x 5/8 | 1/4 | 067N6173 |
| TGE 10 | 6 | 14 | 4 | 1/2 x 7/8 | 1/4 | 067N6151 |
| TGE 10 | 8 | 18 | 5 | 1/2 x 5/8 | 1/4 | 067N6175 |
| TGE 10 | 8 | 18 | 5 | 5/8 x 7/8 | 1/4 | 067N6150 |
| TGE 10 | 9 | 21 | 6 | 5/8 x 7/8 | 1/4 | 067N6167 |
| TGE 10 | 11 | 26 | 7.5 | 5/8 x 7/8 | 1/4 | 067N6154 |
| TGE 10 | 12.5 | 31 | 9 | 5/8 x 7/8 | 1/4 | 067N6300 |
| TGE 10 | 16 | 35 | 10 | 5/8 x 1 1/8 | 1/4 | 067N6301 |
| TGE 20 | 12.5 | 31 | 9 | 5/8 x 7/8 | 1/4 | 067N6158 |
| TGE 20 | 16 | 39 | 11 | 5/8 x 1 1/8 | 1/4 | 067N6155 |
| TGE 20 | 16 | 39 | 11 | 1 1/8 x 1 3/8 | 1/4 | 067N6188 |
| TGE 20 | 16 | 39 | 11 | 7/8 x 1 1/8 | 1/4 | 067N6181 |
| TGE 20 | 20 | 45 | 13 | 7/8 x 1 1/8 | 1/4 | 067N6162 |
| TGE 40 | 26 | 64 | 18 | 7/8 x 1 3/8 | 1/4 | 067N6161 |
| TGE 40 | 30 | 72 | 21 | 1 1/8 x 1 3/8 | 1/4 | 067N6186 |
| TGE 40 | 40 | 92 | 26 | 1 1/8 x 1 3/8 | 1/4 | 067N6187 |

The rated capacity is based on:

 Evaporating temperature t_e : 4.4 °C / 40 °F

 Condensing temperature t_c : 38 °C / 100 °F

 Refrigerant temperature ahead of valve t_1 : 37 °C / 98 °F

Ordering

Range N -40 – 10 °C / -40 –50 °F, OS = 4 K / 7.2 °F
R407C

| Valve type | Orifice no. | Rated capacity | | Connections solder ODF | | | | Code no. Multi pack |
|------------|-------------|----------------|------|------------------------|---------|-----------------------|------|------------------------|
| | | [KW] | [TR] | Inlet x Outlet | | Pressure equalization | | |
| | | | | [inch] | [mm] | [inch] | [mm] | |
| TGE 10 | 3 | 9 | 2.5 | ½ x ⅝ | – | ¼ | – | 067N4151 |
| TGE 10 | 3 | 9 | 2.5 | – | 12 x 16 | – | 6 | 067N4191 |
| TGE 10 | 4 | 13 | 3.5 | ½ x ⅝ | – | ¼ | – | 067N4152 |
| TGE 10 | 4 | 13 | 3.5 | – | 12 x 22 | – | 6 | 067N4192 |
| TGE 10 | 6 | 19 | 5 | ½ x ⅝ | – | ¼ | – | 067N4153 |
| TGE 10 | 6 | 19 | 5 | – | 12 x 16 | – | 6 | 067N4193 |
| TGE 10 | 8 | 25 | 7 | ½ x ⅝ | – | ¼ | – | 067N4236 |
| TGE 10 | 8 | 25 | 7 | ⅝ x ⅞ | – | ¼ | – | 067N4156 |
| TGE 10 | 8 | 25 | 7 | – | 16 x 22 | – | 6 | 067N4196 |
| TGE 10 | 11 | 36 | 10 | ⅝ x ⅞ | – | ¼ | – | 067N4157 |
| TGE 10 | 11 | 36 | 10 | – | 16 x 22 | – | 6 | 067N4197 |
| TGE 10 | 12.5 | 39 | 11 | ⅝ x ⅞ | – | ¼ | – | 067N4410 |
| TGE 10 | 16 | 49 | 14 | ⅞ x 1 ⅛ | – | ¼ | – | 067N4411 |
| TGE 20 | 12.5 | 42 | 12 | ⅝ x ⅞ | – | ¼ | – | 067N4159 |
| TGE 20 | 16 | 53 | 15 | ⅝ x 1 ⅛ | – | ¼ | – | 067N4161 |
| TGE 20 | 16 | 53 | 15 | ⅞ x 1 ⅛ | – | ¼ | – | 067N4162 |
| TGE 20 | 20 | 62 | 18 | ⅞ x 1 ⅛ | – | ¼ | – | 067N4163 |
| TGE 40 | 26 | 84 | 24 | ⅞ x 1 ⅜ | – | ¼ | – | 067N4165 |
| TGE 40 | 30 | 95 | 27 | ⅞ x 1 ⅜ | – | ¼ | – | 067N4167 |
| TGE 40 | 40 | 121 | 34 | 1 ⅛ x 1 ⅜ | – | ¼ | – | 067N4169 |

The rated capacity is based on:

Evaporating temperature t_e :

4.4 °C / 40 °F

Condensing temperature t_c :

38 °C / 100 °F

Refrigerant temperature ahead of valve t_1 :

37 °C / 98 °F

Range N -40 – 10 °C / -40 –50 °F, OS = 4 K / 7.2 °F
R407C

| Valve type | Orifice no. | Rated capacity | | Connections MIO | | Code no. Multi pack |
|------------|-------------|----------------|------|---------------------|----------------------------|------------------------|
| | | [KW] | [TR] | Inlet x Outlet inch | Pressure equalization inch | |
| TGE 10 | 4 | 13 | 3.5 | ½ x ⅝ MIO | ¼ MIO | 067N7400 |
| TGE 10 | 6 | 19 | 5 | ½ x ⅝ MIO | ¼ MIO | 067N7401 |
| TGE 10 | 8 | 25 | 7 | ⅝ x ¾ MIO | ¼ MIO | 067N7402 |
| TGE 10 | 11 | 36 | 10 | ⅝ x ¾ MIO | ¼ MIO | 067N7403 |

The rated capacity is based on:

Evaporating temperature t_e :

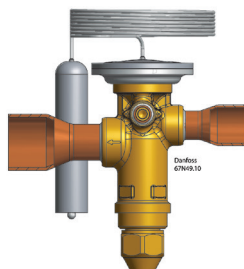
4.4 °C / 40 °F

Condensing temperature t_c :

38 °C / 100 °F

Refrigerant temperature ahead of valve t_1 :

37 °C / 98 °F

Ordering

Range K -25 – 10 °C / -15 – 50 °F with MOP 15 °C / 60 °F, OS = 4 K / 7.2 °F
R407C

| Valve type | Orifice no. | Rated capacity | | Connections solder ODF | | | | Code no. Multi pack |
|------------|-------------|----------------|------|------------------------|---------|-----------------------|------|---------------------|
| | | [KW] | [TR] | Inlet x Outlet | | Pressure equalization | | |
| | | | | [inch] | [mm] | [inch] | [mm] | |
| TGE 10 | 3 | 9 | 2.5 | 3/8 x 3/8 | – | 1/4 | – | 067N4000 |
| TGE 10 | 3 | 9 | 2.5 | – | 12 x 16 | – | 6 | 067N4041 |
| TGE 10 | 4 | 13 | 3.5 | 1/2 x 7/8 | – | 1/4 | – | 067N4002 |
| TGE 10 | 6 | 19 | 5 | 1/2 x 3/4 | – | 1/4 | – | 067N4003 |
| TGE 10 | 6 | 19 | 5 | 1/2 x 7/8 | – | 1/4 | – | 067N4004 |
| TGE 10 | 8 | 25 | 7 | 5/8 x 7/8 | – | 1/4 | – | 067N4006 |
| TGE 10 | 8 | 25 | 7 | – | 16 x 22 | – | 6 | 067N4046 |
| TGE 10 | 11 | 36 | 10 | 5/8 x 7/8 | – | 1/4 | – | 067N4007 |
| TGE 10 | 11 | 36 | 10 | – | 16 x 22 | – | 6 | 067N4047 |
| TGE 10 | 12.5 | 39 | 11 | 3/4 x 1 1/8 | – | 1/4 | – | 067N4400 |
| TGE 10 | 16 | 49 | 14 | 3/4 x 1 1/8 | – | 1/4 | – | 067N4401 |
| TGE 20 | 12.5 | 42 | 12 | 5/8 x 7/8 | – | 1/4 | – | 067N4009 |
| TGE 20 | 12.5 | 42 | 12 | 3/4 x 1 1/8 | – | 1/4 | – | 067N4010 |
| TGE 20 | 16 | 53 | 15 | 3/4 x 1 1/8 | – | 1/4 | – | 067N4011 |
| TGE 20 | 20 | 62 | 18 | 7/8 x 1 1/8 | – | 1/4 | – | 067N4013 |
| TGE 40 | 26 | 84 | 24 | 7/8 x 1 3/8 | – | 1/4 | – | 067N4015 |
| TGE 40 | 30 | 95 | 27 | 7/8 x 1 3/8 | – | 1/4 | – | 067N4017 |
| TGE 40 | 40 | 121 | 34 | 1 1/8 x 1 3/8 | – | 1/4 | – | 067N4019 |

The rated capacity is based on:

Evaporating temperature t_e : 4.4 °C / 40 °F
 Condensing temperature t_c : 38 °C / 100 °F
 Refrigerant temperature ahead of valve t_1 : 37 °C / 98 °F

Only solder versions, connection size 28mm / 1 1/8 in. or below are approved for flammable refrigerants.

Range N -40 – 10 °C / -40 – 50 °F, OS = 4 K / 7.2 °F
R290¹⁾

| Valve type | Orifice no. | Rated capacity | | Connections solder ODF | | Code no. Multi pack |
|------------|-------------|----------------|------|------------------------|--------|---------------------|
| | | [KW] | [TR] | Inlet x Outlet | | |
| | | | | [inch] | [inch] | |
| TGE 10 | 6 | 19 | 5 | 5/8 x 7/8 | 1/4 | 067N9100 |
| TGE 10 | 11 | 36 | 10 | 5/8 x 7/8 | 1/4 | 067N9103 |
| TGE 20 | 12.5 | 44 | 12 | 5/8 x 7/8 | 1/4 | 067N9104 |
| TGE 20 | 16 | 54 | 15 | 7/8 x 7/8 | 1/4 | 067N9105 |
| TGE 20 | 20 | 63 | 18 | 7/8 x 7/8 | 1/4 | 067N9106 |

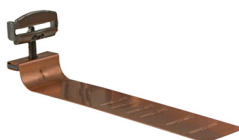
Range K -25 – 10 °C / -15 – 50 °F without MOP, OS = 4 K / 7.2 °F
R290¹⁾

| Valve type | Orifice no. | Rated capacity | | Connections solder ODF | | Code no. Multi pack |
|------------|-------------|----------------|------|------------------------|--------|---------------------|
| | | [KW] | [TR] | Inlet x Outlet | | |
| | | | | [inch] | [inch] | |
| TGE 40 | 26 | 92 | 26 | 7/8 x 7/8 | 1/4 | 067N9107 |
| TGE 40 | 40 | 133 | 38 | 7/8 x 7/8 | 1/4 | 067N9109 |

The rated capacity is based on:

Evaporating temperature t_e : 4.4 °C / 40 °F
 Condensing temperature t_c : 38 °C / 100 °F
 Refrigerant temperature ahead of valve t_1 : 37 °C / 98 °F

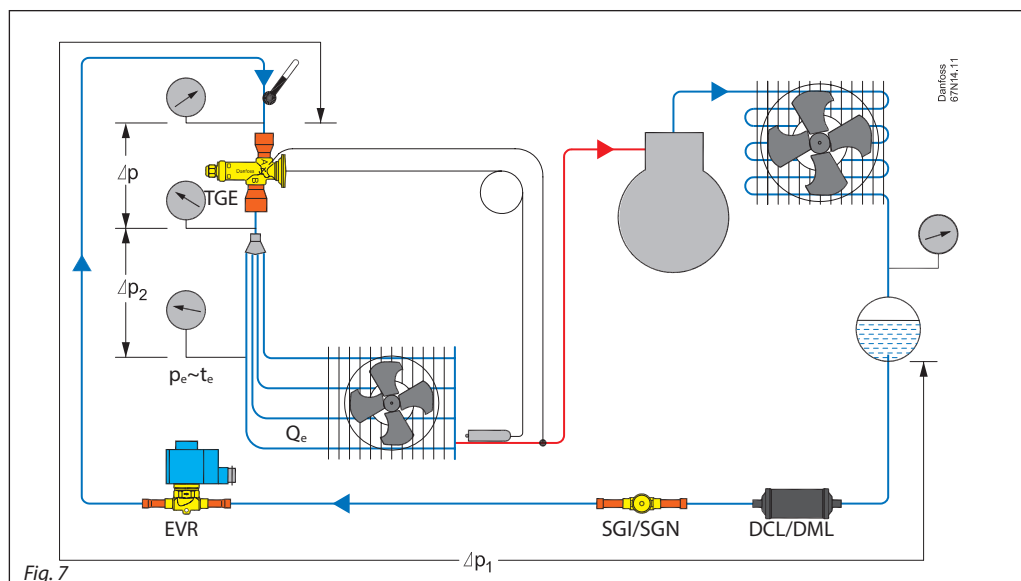
¹⁾ SS = 5K / 9°F (except 067N9100, 067N9103)

Ordering (Spare parts)


Bulb straps (delivered separately) in Industrial pack

| Code no. | Max. tube diameter | Quantity / pack |
|----------|--------------------|-----------------|
| 067N0551 | 7/8 | 40 |
| 067N0557 | 2 1/8 | 40 |
| 067N0559 | 3 1/8 | 40 |

Sizing



Sizing examples (SI units)

Refrigerant: R410A
 Evaporator capacity : $Q_e = 30 \text{ kW}$
 Evaporator with several circuits, i.e. a valve with distributor is required
 Evaporating temperature: $t_e = 0^\circ\text{C}$
 Condensing temperature: $p_c = 7 \text{ bar}$
 $t_c = 35^\circ\text{C}$
 $p_e = 21 \text{ bar}$
 Refrigerant liquid temperature: $t_l = 25^\circ\text{C}$
 Subcooling: $\Delta t_{\text{sub}} = 35^\circ\text{C} - 25^\circ\text{C} = 10 \text{ K}$

Pressure drop Δp_2 in the liquid distributor can also be assumed as 1.0 bar.

The correction factor at $\Delta t_{\text{sub}} (f_{\text{sub}}) = 10 \text{ K}$ is 1.07.

The correction factor at distributor (f_p) = 0.96.

The corrected evaporator capacity thus 30 kW divided by 1.07 and 0.96 = 29.2 kW.

Since the capacity of the expansion valve must be equal to or slightly higher than the corrected evaporator capacity of 29.2 kW, a TGE 10 orifice 08 giving 32 kW would be a suitable choice (See tables below).

Sizing examples (US units)

Refrigerant: R410A
 Evaporator capacity : $Q_e = 8.6 \text{ TR}$
 Evaporator with several circuits, i.e. a valve with distributor is required
 Evaporating temperature: $t_e = 40^\circ\text{F}$
 Condensing temperature: $p_c = 118 \text{ psig}$
 $t_c = 95^\circ\text{F}$
 $p_e = 296 \text{ psig}$
 Refrigerant liquid temperature: $t_l = 75^\circ\text{F}$
 Subcooling: $\Delta t_{\text{sub}} = 95^\circ\text{F} - 75^\circ\text{F} = 20^\circ\text{F}$

Pressure drop Δp_2 in the liquid distributor can also be assumed as 15 psi.

The correction factor at $\Delta t_{\text{sub}} (f_{\text{sub}}) = 20^\circ\text{F}$ is 1.08.

The correction factor at distributor (f_p) = 0.95.

The corrected evaporator capacity thus 8.6 TR divided by 1.08 and 0.95 = 8.38 TR.

Since the capacity of the expansion valve must be equal to or slightly higher than the corrected evaporator capacity of 8.38 TR, a TGE 10 orifice 08 giving 9.4 TR would be a suitable choice (See tables below).

Capacity in kW. -40 – 15 °C
Opening superheat sh = 4 K

SI units R410A

| Valve type | Orifice no. | Cond. temp. [°C] | Evaporating temperature [°C] | | | | | | |
|------------|-------------|------------------|------------------------------|------|------|------|------|------|------|
| | | | -40 | -30 | -20 | -10 | 0 | 10 | 15 |
| TGE 10 | 3 | 35 | 5.47 | 7.09 | 8.84 | 10.6 | 12.1 | 12.8 | 12.7 |
| | 4 | 35 | 7.33 | 9.52 | 11.9 | 14.4 | 16.4 | 17.4 | 17.2 |
| | 6 | 35 | 10.7 | 13.9 | 17.4 | 21.0 | 24.1 | 25.5 | 25.2 |
| | 8 | 35 | 14.4 | 18.7 | 23.4 | 28.1 | 32.0 | 33.6 | 33.0 |
| | 9 | 35 | 16.5 | 21.5 | 27.2 | 32.8 | 37.2 | 39.3 | 39.0 |

Subcooling correction factor 'fsub'

| Subcooling [K] | 2 | 4 | 10 | 15 | 20 | 25 | 30 |
|-------------------|------|------|------|------|------|------|------|
| Correction factor | 0.98 | 1.00 | 1.07 | 1.13 | 1.18 | 1.24 | 1.30 |

Distributor correction factor 'fp'*

| Pressure drop [bar] | Evaporating temperature [°C] | | | | | | |
|---------------------|------------------------------|------|------|------|------|------|------|
| | -40 | -30 | -20 | -10 | 0 | 10 | 15 |
| Δp | Correction factor | | | | | | |
| 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 0.97 | 0.97 | 0.97 | 0.96 | 0.96 | 0.94 | 0.93 |
| 1.5 | 0.96 | 0.96 | 0.95 | 0.95 | 0.93 | 0.91 | 0.89 |
| 2 | 0.94 | 0.94 | 0.93 | 0.93 | 0.91 | 0.88 | 0.85 |

*Calculated at 32 °C condensing temperature.

Capacity in TR. -40 – 60 °F
Opening superheat sh = 7.2 °F

US units R410A

| Valve type | Orifice no. | Cond. temp. [°F] | Evaporating temperature [°F] | | | | | | |
|------------|-------------|------------------|------------------------------|------|------|------|------|------|------|
| | | | -40 | -20 | 0 | 20 | 40 | 50 | 60 |
| TGE 10 | 3 | 95 | 1.55 | 2.07 | 2.62 | 3.17 | 3.57 | 3.64 | 3.58 |
| | 4 | 95 | 2.08 | 2.78 | 3.54 | 4.29 | 4.84 | 4.95 | 4.87 |
| | 6 | 95 | 3.03 | 4.06 | 5.18 | 6.28 | 7.09 | 7.24 | 7.12 |
| | 8 | 95 | 4.08 | 5.45 | 6.93 | 8.38 | 9.40 | 9.55 | 9.33 |
| | 9 | 95 | 4.70 | 6.29 | 8.08 | 9.78 | 11.0 | 11.2 | 11.1 |

Subcooling correction factor 'fsub'

| 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 |

Distributor correction factor 'fp'*

| Pressure drop [psi] | Evaporating temperature [°F] | | | | | | |
|---------------------|------------------------------|------|------|------|------|------|------|
| | -40 | -20 | 0 | 20 | 40 | 50 | 60 |
| Δp | Correction factor | | | | | | |
| 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 15 | 0.97 | 0.97 | 0.97 | 0.96 | 0.95 | 0.94 | 0.93 |
| 25 | 0.95 | 0.95 | 0.94 | 0.93 | 0.92 | 0.90 | 0.87 |
| 30 | 0.94 | 0.94 | 0.93 | 0.92 | 0.90 | 0.88 | 0.84 |

*Calculated at 90 °F condensing temperature.

Capacity in kW. -40 – 15 °C
Opening superheat sh = 4 K

SI units R410A

| Valve type | Orifice no. | Cond. temp. [°C] | Evaporating temperature [°C] | | | | | | |
|------------|-------------|------------------|------------------------------|------|------|------|-------|------|------|
| | | | -40 | -30 | -20 | -10 | 0 | 10 | 15 |
| TGE 10 | 3 | 25 | 5.63 | 7.19 | 8.80 | 10.2 | 11.1 | 10.7 | 9.68 |
| | 4 | 25 | 7.60 | 9.73 | 12.0 | 14.0 | 15.2 | 14.6 | 13.2 |
| | 6 | 25 | 11.2 | 14.4 | 17.7 | 20.6 | 22.4 | 21.6 | 19.5 |
| | 8 | 25 | 15.2 | 19.5 | 23.8 | 27.7 | 29.9 | 28.6 | 25.7 |
| | 9 | 25 | 17.4 | 22.3 | 27.6 | 32.4 | 35.3 | 34.1 | 30.7 |
| | 11 | 25 | 22.6 | 29.1 | 35.4 | 40.3 | 42.1 | 38.4 | 33.8 |
| | 12.5 | 25 | 23.2 | 30.0 | 37.2 | 43.8 | 47.7 | 46.3 | 41.7 |
| TGE 20 | 12.5 | 25 | 22.7 | 30.1 | 38.3 | 46.4 | 52.1 | 51.6 | 47.3 |
| | 16 | 25 | 28.3 | 37.7 | 48.1 | 58.5 | 66.2 | 66.0 | 60.7 |
| | 20 | 25 | 34.8 | 45.9 | 57.8 | 69.3 | 77.0 | 75.1 | 67.9 |
| | 21 | 25 | 45.7 | 59.0 | 72.0 | 81.9 | 85.2 | 78.2 | 68.4 |
| TGE 40 | 26 | 25 | 45.1 | 59.7 | 76.7 | 94.5 | 108.7 | 110 | 101 |
| | 30 | 25 | 51.3 | 68.0 | 87.3 | 108 | 123 | 124 | 114 |
| | 40 | 25 | 61.9 | 82.1 | 106 | 132 | 152 | 154 | 140 |
| | 42 | 25 | 90.8 | 115 | 140 | 161 | 170 | 158 | 139 |

Capacity in TR. -40 – 60 °F
Opening superheat sh = 7.2 °F

US units R410A

| Valve type | Orifice no. | Cond. temp. [°F] | Evaporating temperature [°F] | | | | | | |
|------------|-------------|------------------|------------------------------|------|------|------|------|------|------|
| | | | -40 | -20 | 0 | 20 | 40 | 50 | 60 |
| TGE 10 | 3 | 75 | 1.60 | 2.09 | 2.59 | 2.99 | 3.10 | 2.95 | 2.57 |
| | 4 | 75 | 2.16 | 2.83 | 3.52 | 4.07 | 4.24 | 4.03 | 3.52 |
| | 6 | 75 | 3.19 | 4.19 | 5.20 | 6.03 | 6.26 | 5.95 | 5.17 |
| | 8 | 75 | 4.33 | 5.67 | 7.02 | 8.09 | 8.33 | 7.88 | 6.81 |
| | 9 | 75 | 4.96 | 6.51 | 8.16 | 9.50 | 9.89 | 9.41 | 8.10 |
| | 11 | 75 | 6.44 | 8.48 | 10.4 | 11.6 | 11.5 | 10.6 | 8.93 |
| | 12.5 | 75 | 6.62 | 8.76 | 11.0 | 12.9 | 13.4 | 12.8 | 11.0 |
| TGE 20 | 12.5 | 75 | 6.47 | 8.83 | 11.4 | 13.8 | 14.8 | 14.3 | 12.6 |
| | 16 | 75 | 8.08 | 11.1 | 14.4 | 17.4 | 18.9 | 18.3 | 16.2 |
| | 20 | 75 | 9.94 | 13.5 | 17.2 | 20.5 | 21.7 | 20.7 | 18.1 |
| | 21 | 75 | 13.0 | 17.2 | 21.1 | 23.6 | 23.3 | 21.5 | 17.9 |
| TGE 40 | 26 | 75 | 12.9 | 17.6 | 23.0 | 28.3 | 31.2 | 30.4 | 26.9 |
| | 30 | 75 | 14.7 | 20.0 | 26.2 | 32.2 | 35.4 | 34.4 | 30.4 |
| | 40 | 75 | 17.7 | 24.1 | 31.9 | 39.6 | 43.7 | 42.5 | 37.0 |
| | 42 | 75 | 25.7 | 33.4 | 41.0 | 46.5 | 46.8 | 43.5 | 36.3 |

Capacity in kW. -40 – 15 °C
Opening superheat sh = 4 K

SI units R410A

| Valve type | Orifice no. | Cond. temp. [°C] | Evaporating temperature [°C] | | | | | | |
|------------|-------------|------------------|------------------------------|------|------|------|------|------|------|
| | | | -40 | -30 | -20 | -10 | 0 | 10 | 15 |
| TGE 10 | 3 | 35 | 5.47 | 7.09 | 8.84 | 10.6 | 12.1 | 12.8 | 12.7 |
| | 4 | 35 | 7.33 | 9.52 | 11.9 | 14.4 | 16.4 | 17.4 | 17.2 |
| | 6 | 35 | 10.7 | 13.9 | 17.4 | 21.0 | 24.1 | 25.5 | 25.2 |
| | 8 | 35 | 14.4 | 18.7 | 23.4 | 28.1 | 32.0 | 33.6 | 33.0 |
| | 9 | 35 | 16.5 | 21.5 | 27.2 | 32.8 | 37.2 | 39.3 | 39.0 |
| | 11 | 35 | 21.4 | 28.2 | 35.3 | 41.8 | 46.1 | 46.4 | 44.4 |
| | 12.5 | 35 | 21.9 | 28.7 | 36.3 | 43.9 | 50.0 | 53.1 | 52.8 |
| TGE 20 | 12.5 | 35 | 25.7 | 33.5 | 42.3 | 51.0 | 58.2 | 62.0 | 61.7 |
| | 16 | 35 | 21.3 | 28.5 | 36.8 | 45.9 | 54.3 | 59.4 | 59.5 |
| | 20 | 35 | 26.4 | 35.3 | 45.8 | 57.4 | 68.4 | 75.4 | 75.7 |
| | 21 | 35 | 32.4 | 43.1 | 55.2 | 68.3 | 80.4 | 87.2 | 86.6 |
| TGE 40 | 26 | 35 | 44.8 | 58.7 | 73.0 | 85.2 | 92.6 | 92.9 | 89.9 |
| | 26 | 35 | 41.5 | 55.4 | 72.1 | 91.3 | 111 | 124 | 126 |
| | 30 | 35 | 47.0 | 62.8 | 81.8 | 104 | 125 | 140 | 142 |
| | 40 | 35 | 57.4 | 77.2 | 102 | 130 | 157 | 175 | 177 |
| | 42 | 35 | 90.3 | 116 | 143 | 169 | 186 | 189 | 184 |

Capacity in TR. -40 – 60 °F
Opening superheat sh = 7.2 °F

US units R410A

| Valve type | Orifice no. | Cond. temp. [°F] | Evaporating temperature [°F] | | | | | | |
|------------|-------------|------------------|------------------------------|------|------|------|------|------|------|
| | | | -40 | -20 | 0 | 20 | 40 | 50 | 60 |
| TGE 10 | 3 | 95 | 1.55 | 2.07 | 2.62 | 3.17 | 3.57 | 3.64 | 3.58 |
| | 4 | 95 | 2.08 | 2.78 | 3.54 | 4.29 | 4.84 | 4.95 | 4.87 |
| | 6 | 95 | 3.03 | 4.06 | 5.18 | 6.28 | 7.09 | 7.24 | 7.12 |
| | 8 | 95 | 4.08 | 5.45 | 6.93 | 8.38 | 9.40 | 9.55 | 9.33 |
| | 9 | 95 | 4.70 | 6.29 | 8.08 | 9.78 | 11.0 | 11.2 | 11.1 |
| | 11 | 95 | 6.07 | 8.23 | 10.5 | 12.4 | 13.3 | 13.2 | 12.5 |
| | 12.5 | 95 | 6.20 | 8.37 | 10.8 | 13.1 | 14.7 | 15.1 | 15.0 |
| TGE 20 | 12.5 | 95 | 7.29 | 9.79 | 12.6 | 15.2 | 17.2 | 17.6 | 17.5 |
| | 16 | 95 | 6.06 | 8.34 | 11.0 | 13.9 | 16.3 | 16.9 | 16.9 |
| | 20 | 95 | 7.48 | 10.3 | 13.7 | 17.4 | 20.5 | 21.4 | 21.5 |
| | 21 | 95 | 9.19 | 12.6 | 16.5 | 20.6 | 24.0 | 24.8 | 24.5 |
| TGE 40 | 26 | 95 | 12.7 | 17.1 | 21.6 | 25.1 | 26.6 | 26.4 | 25.4 |
| | 26 | 95 | 11.8 | 16.2 | 21.6 | 27.8 | 33.4 | 35.2 | 35.7 |
| | 30 | 95 | 13.3 | 18.4 | 24.5 | 31.5 | 37.9 | 39.9 | 40.3 |
| | 40 | 95 | 16.3 | 22.6 | 30.7 | 39.7 | 47.3 | 49.6 | 50.1 |
| | 42 | 95 | 25.7 | 33.7 | 42.4 | 49.8 | 53.8 | 53.8 | 51.8 |

Subcooling correction factor 'fsub'

| Subcooling [K] | 2 | 4 | 10 | 15 | 20 | 25 | 30 |
|-------------------|------|------|------|------|------|------|------|
| Correction factor | 0.98 | 1.00 | 1.07 | 1.13 | 1.18 | 1.24 | 1.30 |

Subcooling correction factor 'fsub'

| 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 'fp' *

| Pressure drop [bar] Δp | Evaporating temperature [°C] | | | | | | |
|------------------------|------------------------------|------|------|------|------|------|------|
| | -40 | -30 | -20 | -10 | 0 | 10 | 15 |
| | Correction factor | | | | | | |
| 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 0.97 | 0.97 | 0.97 | 0.96 | 0.96 | 0.94 | 0.93 |
| 1.5 | 0.96 | 0.96 | 0.95 | 0.95 | 0.93 | 0.91 | 0.89 |
| 2 | 0.94 | 0.94 | 0.93 | 0.93 | 0.91 | 0.88 | 0.85 |

*Calculated at 32 °C condensing temperature.

Distributer correction factor 'fp' *

| Pressure drop [psi] Δp | Evaporating temperature [°F] | | | | | | |
|------------------------|------------------------------|------|------|------|------|------|------|
| | -40 | -20 | 0 | 20 | 40 | 50 | 60 |
| | Correction factor | | | | | | |
| 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 15 | 0.97 | 0.97 | 0.97 | 0.96 | 0.95 | 0.94 | 0.93 |
| 25 | 0.95 | 0.95 | 0.94 | 0.93 | 0.92 | 0.90 | 0.87 |
| 30 | 0.94 | 0.94 | 0.93 | 0.92 | 0.90 | 0.88 | 0.84 |

*Calculated at 90 °F condensing temperature.

Capacity in kW. -40 – 15 °C
 Opening superheat sh = 4 K

SI units R410A

| Valve type | Orifice no. | Cond. temp. [°C] | Evaporating temperature [°C] | | | | | | |
|------------|-------------|------------------|------------------------------|------|------|------|------|------|------|
| | | | -40 | -30 | -20 | -10 | 0 | 10 | 15 |
| TGE 10 | 3 | 45 | 5.14 | 6.72 | 8.47 | 10.3 | 12.2 | 13.6 | 13.9 |
| | 4 | 45 | 6.83 | 8.95 | 11.3 | 13.9 | 16.4 | 18.3 | 18.8 |
| | 6 | 45 | 9.83 | 12.9 | 16.4 | 20.1 | 23.8 | 26.6 | 27.3 |
| | 8 | 45 | 13.1 | 17.2 | 21.8 | 26.7 | 31.5 | 35.0 | 35.7 |
| | 9 | 45 | 15.1 | 19.9 | 25.5 | 31.4 | 36.7 | 40.5 | 41.6 |
| | 11 | 45 | 19.4 | 26.1 | 33.4 | 40.7 | 46.7 | 49.7 | 49.4 |
| | 12.5 | 45 | 19.6 | 26.2 | 33.7 | 41.6 | 48.8 | 54.2 | 56.0 |
| TGE 20 | 16 | 45 | 23.1 | 30.7 | 39.4 | 48.6 | 57.2 | 63.9 | 66.1 |
| | 12.5 | 45 | 19.4 | 25.9 | 33.7 | 42.6 | 51.9 | 60.0 | 62.6 |
| | 16 | 45 | 23.8 | 31.9 | 41.6 | 52.8 | 64.8 | 75.3 | 78.9 |
| | 20 | 45 | 29.1 | 38.9 | 50.3 | 63.1 | 76.7 | 88.5 | 92.2 |
| TGE 40 | 21 | 45 | 42.4 | 56.3 | 71.1 | 84.7 | 94.3 | 98.7 | 98.8 |
| | 26 | 45 | 37.0 | 49.5 | 64.7 | 82.9 | 103 | 122 | 129 |
| | 30 | 45 | 41.7 | 55.9 | 73.2 | 93.8 | 117 | 138 | 145 |
| | 40 | 45 | 50.9 | 69.2 | 92.9 | 121 | 151 | 176 | 185 |
| | 42 | 45 | 87.1 | 113 | 141 | 169 | 191 | 202 | 203 |

Capacity in TR. -40 – 60 °F
 Opening superheat sh = 7.2 °F

US units R410A

| Valve type | Orifice no. | Cond. temp. [°F] | Evaporating temperature [°F] | | | | | | |
|------------|-------------|------------------|------------------------------|------|------|------|------|------|------|
| | | | -40 | -20 | 0 | 20 | 40 | 50 | 60 |
| TGE 10 | 3 | 115 | 1.45 | 1.94 | 2.50 | 3.10 | 3.64 | 3.85 | 3.97 |
| | 4 | 115 | 1.92 | 2.59 | 3.35 | 4.16 | 4.91 | 5.20 | 5.37 |
| | 6 | 115 | 2.76 | 3.73 | 4.84 | 6.02 | 7.12 | 7.54 | 7.78 |
| | 8 | 115 | 3.66 | 4.97 | 6.43 | 7.98 | 9.39 | 9.90 | 10.2 |
| | 9 | 115 | 4.22 | 5.75 | 7.54 | 9.38 | 10.9 | 11.5 | 11.9 |
| | 11 | 115 | 5.43 | 7.56 | 9.87 | 12.1 | 13.8 | 14.1 | 14.1 |
| | 12.5 | 115 | 5.49 | 7.55 | 9.96 | 12.4 | 14.6 | 15.4 | 16.0 |
| TGE 20 | 16 | 115 | 6.45 | 8.85 | 11.6 | 14.5 | 17.1 | 18.1 | 18.9 |
| | 12.5 | 115 | 5.44 | 7.49 | 9.97 | 12.8 | 15.7 | 16.9 | 17.8 |
| | 16 | 115 | 6.65 | 9.21 | 12.3 | 15.9 | 19.6 | 21.2 | 22.4 |
| | 20 | 115 | 8.15 | 11.2 | 14.9 | 19.0 | 23.2 | 25.0 | 26.2 |
| TGE 40 | 21 | 115 | 11.9 | 16.3 | 21.0 | 25.0 | 27.5 | 28.1 | 28.2 |
| | 26 | 115 | 10.3 | 14.3 | 19.2 | 25.1 | 31.4 | 34.3 | 36.6 |
| | 30 | 115 | 11.7 | 16.1 | 21.7 | 28.3 | 35.5 | 38.7 | 41.3 |
| | 40 | 115 | 14.2 | 20.0 | 27.7 | 36.8 | 46.0 | 49.8 | 52.8 |
| | 42 | 115 | 24.6 | 32.7 | 41.7 | 50.2 | 56.1 | 57.6 | 57.9 |

Capacity in kW. -40 – 15 °C
 Opening superheat sh = 4 K

SI units R410A

| Valve type | Orifice no. | Cond. temp. [°C] | Evaporating temperature [°C] | | | | | | |
|------------|-------------|------------------|------------------------------|------|------|------|------|------|------|
| | | | -40 | -30 | -20 | -10 | 0 | 10 | 15 |
| TGE 10 | 3 | 55 | 4.67 | 6.13 | 7.76 | 9.53 | 11.4 | 13.0 | 13.6 |
| | 4 | 55 | 6.14 | 8.09 | 10.3 | 12.7 | 15.2 | 17.4 | 18.3 |
| | 6 | 55 | 8.70 | 11.5 | 14.7 | 18.2 | 21.8 | 25.1 | 26.3 |
| | 8 | 55 | 11.4 | 15.2 | 19.4 | 24.0 | 28.7 | 32.8 | 34.2 |
| | 9 | 55 | 13.0 | 17.4 | 22.7 | 28.4 | 33.9 | 38.5 | 40.4 |
| | 11 | 55 | 16.8 | 23.1 | 30.1 | 37.3 | 43.9 | 48.3 | 49.1 |
| | 12.5 | 55 | 16.6 | 22.5 | 29.5 | 37.2 | 44.6 | 51.0 | 53.7 |
| TGE 20 | 16 | 55 | 19.5 | 26.5 | 34.6 | 43.5 | 52.4 | 60.4 | 63.9 |
| | 12.5 | 55 | 17.1 | 22.8 | 29.5 | 37.3 | 45.9 | 54.4 | 58.0 |
| | 16 | 55 | 20.7 | 27.7 | 36.1 | 45.9 | 56.8 | 67.7 | 72.5 |
| | 20 | 55 | 25.3 | 33.9 | 43.7 | 55.0 | 67.5 | 80.2 | 85.7 |
| TGE 40 | 21 | 55 | 38.3 | 51.7 | 66.4 | 80.3 | 91.1 | 97.7 | 99.4 |
| | 26 | 55 | 32.0 | 42.8 | 55.9 | 71.6 | 89.6 | 108 | 117 |
| | 30 | 55 | 35.9 | 48.1 | 63.0 | 80.8 | 101 | 122 | 132 |
| | 40 | 55 | 42.4 | 58.3 | 79.4 | 106 | 135 | 163 | 175 |
| | 42 | 55 | 81.1 | 106 | 134 | 163 | 187 | 202 | 206 |

Capacity in TR. -40 – 60 °F
 Opening superheat sh = 7.2 °F

US units R410A

| Valve type | Orifice no. | Cond. temp. [°F] | Evaporating temperature [°F] | | | | | | |
|------------|-------------|------------------|------------------------------|------|------|------|------|------|------|
| | | | -40 | -20 | 0 | 20 | 40 | 50 | 60 |
| TGE 10 | 3 | 135 | 1.29 | 1.74 | 2.25 | 2.81 | 3.36 | 3.60 | 3.80 |
| | 4 | 135 | 1.69 | 2.30 | 2.98 | 3.73 | 4.49 | 4.82 | 5.09 |
| | 6 | 135 | 2.39 | 3.26 | 4.25 | 5.34 | 6.43 | 6.92 | 7.30 |
| | 8 | 135 | 3.13 | 4.29 | 5.60 | 7.02 | 8.43 | 9.04 | 9.50 |
| | 9 | 135 | 3.53 | 4.90 | 6.56 | 8.35 | 9.99 | 10.7 | 11.3 |
| | 11 | 135 | 4.59 | 6.55 | 8.72 | 10.9 | 12.8 | 13.4 | 13.7 |
| | 12.5 | 135 | 4.50 | 6.32 | 8.52 | 10.9 | 13.1 | 14.1 | 15.0 |
| TGE 20 | 16 | 135 | 5.28 | 7.42 | 9.98 | 12.8 | 15.5 | 16.7 | 17.9 |
| | 12.5 | 135 | 4.70 | 6.44 | 8.52 | 11.0 | 13.6 | 14.9 | 16.1 |
| | 16 | 135 | 5.68 | 7.82 | 10.4 | 13.5 | 16.9 | 18.5 | 20.0 |
| | 20 | 135 | 6.93 | 9.55 | 12.6 | 16.1 | 20.0 | 21.9 | 23.7 |
| TGE 40 | 21 | 135 | 10.6 | 14.8 | 19.4 | 23.5 | 26.5 | 27.4 | 28.0 |
| | 26 | 135 | 8.74 | 12.1 | 16.2 | 21.1 | 26.7 | 29.6 | 32.2 |
| | 30 | 135 | 9.80 | 13.6 | 18.2 | 23.8 | 30.2 | 33.4 | 36.4 |
| | 40 | 135 | 11.4 | 16.3 | 23.0 | 31.3 | 40.3 | 44.7 | 48.6 |
| | 42 | 135 | 22.5 | 30.4 | 39.3 | 48.0 | 54.8 | 57.0 | 58.4 |

Subcooling correction factor 'fsub'

| Subcooling [K] | 2 | 4 | 10 | 15 | 20 | 25 | 30 |
|-------------------|------|------|------|------|------|------|------|
| Correction factor | 0.98 | 1.00 | 1.07 | 1.13 | 1.18 | 1.24 | 1.30 |

Distributer correction factor 'fp'*

| Pressure drop [bar] Δp | Evaporating temperature [°C] | | | | | | |
|---------------------------|------------------------------|------|------|------|------|------|------|
| | -40 | -30 | -20 | -10 | 0 | 10 | 15 |
| | Correction factor | | | | | | |
| 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 0.97 | 0.97 | 0.97 | 0.96 | 0.96 | 0.94 | 0.93 |
| 1.5 | 0.96 | 0.96 | 0.95 | 0.95 | 0.93 | 0.91 | 0.89 |
| 2 | 0.94 | 0.94 | 0.93 | 0.93 | 0.91 | 0.88 | 0.85 |

*Calculated at 32 °C condensing temperature.

Subcooling correction factor 'fsub'

| 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 'fp'*

| Pressure drop [psi] Δp | Evaporating temperature [°F] | | | | | | |
|---------------------------|------------------------------|------|------|------|------|------|------|
| | -40 | -20 | 0 | 20 | 40 | 50 | 60 |
| | Correction factor | | | | | | |
| 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 15 | 0.97 | 0.97 | 0.97 | 0.96 | 0.95 | 0.94 | 0.93 |
| 25 | 0.95 | 0.95 | 0.94 | 0.93 | 0.92 | 0.90 | 0.87 |
| 30 | 0.94 | 0.94 | 0.93 | 0.92 | 0.90 | 0.88 | 0.84 |

*Calculated at 90 °F condensing temperature.

Capacity in kW. -40 – 15 °C
Opening superheat sh = 4 K

SI units R22

| Valve type | Orifice no. | Cond. temp. [°C] | Evaporating temperature [°C] | | | | | | |
|------------|-------------|------------------|------------------------------|------|------|------|------|------|------|
| | | | -40 | -30 | -20 | -10 | 0 | 10 | 15 |
| TGE 10 | 3 | 45 | 4.39 | 5.79 | 7.35 | 9.00 | 10.6 | 11.8 | 12.1 |
| | 4 | 45 | 5.84 | 7.73 | 9.85 | 12.1 | 14.3 | 15.9 | 16.4 |
| | 6 | 45 | 8.40 | 11.2 | 14.3 | 17.6 | 20.8 | 23.2 | 23.8 |
| | 8 | 45 | 11.2 | 14.9 | 19.0 | 23.4 | 27.5 | 30.5 | 31.2 |
| | 9 | 45 | 12.9 | 17.3 | 22.2 | 27.4 | 32.5 | 36.4 | 37.4 |
| | 11 | 45 | 16.5 | 22.5 | 29.1 | 35.5 | 40.6 | 42.9 | 42.7 |
| | 12.5 | 45 | 16.3 | 21.9 | 28.3 | 35.1 | 41.4 | 46.2 | 47.8 |
| TGE 20 | 12.5 | 45 | 15.7 | 20.9 | 27.2 | 34.5 | 42.1 | 48.8 | 51.2 |
| | 16 | 45 | 19.4 | 25.8 | 33.7 | 42.9 | 52.8 | 61.6 | 64.8 |
| | 20 | 45 | 23.8 | 31.6 | 40.9 | 51.5 | 62.7 | 72.4 | 75.5 |
| | 21 | 45 | 33.8 | 44.7 | 56.3 | 67.9 | 77.8 | 83.6 | 84.2 |
| TGE 40 | 26 | 45 | 30.8 | 41.7 | 55.1 | 71.0 | 88.5 | 105 | 111 |
| | 30 | 45 | 34.7 | 47.1 | 62.3 | 80.4 | 100 | 119 | 126 |
| | 40 | 45 | 41.7 | 56.7 | 76.1 | 101 | 129 | 155 | 164 |
| | 42 | 45 | 70.1 | 91.9 | 116 | 140 | 161 | 175 | 176 |

Capacity in TR. -40 – 60 °F
Opening superheat sh = 7.2 °F

US units R22

| Valve type | Orifice no. | Cond. temp. [°F] | Evaporating temperature [°F] | | | | | | |
|------------|-------------|------------------|------------------------------|------|------|------|------|------|------|
| | | | -40 | -20 | 0 | 20 | 40 | 50 | 60 |
| TGE 10 | 3 | 115 | 1.24 | 1.69 | 2.19 | 2.71 | 3.19 | 3.37 | 3.48 |
| | 4 | 115 | 1.65 | 2.25 | 2.93 | 3.65 | 4.30 | 4.55 | 4.70 |
| | 6 | 115 | 2.37 | 3.25 | 4.25 | 5.30 | 6.26 | 6.61 | 6.83 |
| | 8 | 115 | 3.15 | 4.33 | 5.65 | 7.04 | 8.26 | 8.70 | 8.93 |
| | 9 | 115 | 3.63 | 5.02 | 6.60 | 8.26 | 9.79 | 10.4 | 10.7 |
| | 11 | 115 | 4.65 | 6.56 | 8.66 | 10.6 | 12.0 | 12.3 | 12.3 |
| | 12.5 | 115 | 4.59 | 6.36 | 8.42 | 10.6 | 12.4 | 13.2 | 13.7 |
| TGE 20 | 12.5 | 115 | 4.45 | 6.08 | 8.11 | 10.5 | 12.9 | 13.9 | 14.7 |
| | 16 | 115 | 5.46 | 7.50 | 10.1 | 13.1 | 16.2 | 17.5 | 18.6 |
| | 20 | 115 | 6.72 | 9.17 | 12.2 | 15.6 | 19.1 | 20.6 | 21.6 |
| | 21 | 115 | 9.57 | 13.0 | 16.7 | 20.3 | 23.1 | 23.9 | 24.2 |
| TGE 40 | 26 | 115 | 8.66 | 12.1 | 16.4 | 21.6 | 27.2 | 29.7 | 31.8 |
| | 30 | 115 | 9.76 | 13.7 | 18.6 | 24.5 | 30.8 | 33.6 | 35.9 |
| | 40 | 115 | 11.7 | 16.5 | 22.8 | 30.9 | 40.0 | 44.1 | 46.9 |
| | 42 | 115 | 19.9 | 26.9 | 34.5 | 42.1 | 48.1 | 50.0 | 50.6 |

Capacity in kW. -40 – 15 °C
Opening superheat sh = 4 K

SI units R22

| Valve type | Orifice no. | Cond. temp. [°C] | Evaporating temperature [°C] | | | | | | |
|------------|-------------|------------------|------------------------------|------|------|------|------|------|------|
| | | | -40 | -30 | -20 | -10 | 0 | 10 | 15 |
| TGE 10 | 3 | 55 | 4.26 | 5.64 | 7.21 | 8.91 | 10.6 | 12.2 | 12.7 |
| | 4 | 55 | 5.61 | 7.46 | 9.57 | 11.9 | 14.2 | 16.3 | 17.1 |
| | 6 | 55 | 7.95 | 10.6 | 13.7 | 17.1 | 20.5 | 23.6 | 24.7 |
| | 8 | 55 | 10.4 | 14.0 | 18.1 | 22.5 | 27.0 | 30.9 | 32.2 |
| | 9 | 55 | 11.9 | 16.2 | 21.0 | 26.3 | 31.7 | 36.6 | 38.5 |
| | 11 | 55 | 15.3 | 21.2 | 27.9 | 34.8 | 40.9 | 44.9 | 45.7 |
| | 12.5 | 55 | 14.8 | 20.2 | 26.5 | 33.4 | 40.3 | 46.4 | 49.0 |
| TGE 20 | 12.5 | 55 | 14.9 | 19.7 | 25.6 | 32.7 | 40.5 | 48.2 | 51.5 |
| | 16 | 55 | 18.2 | 24.1 | 31.5 | 40.3 | 50.3 | 60.2 | 64.6 |
| | 20 | 55 | 22.3 | 29.5 | 38.2 | 48.4 | 59.9 | 71.2 | 76.0 |
| | 21 | 55 | 32.9 | 43.7 | 55.6 | 67.7 | 78.9 | 87.3 | 89.6 |
| TGE 40 | 26 | 55 | 28.2 | 38.1 | 50.4 | 65.3 | 82.4 | 100 | 109 |
| | 30 | 55 | 31.6 | 42.9 | 56.8 | 73.7 | 93.1 | 113 | 123 |
| | 40 | 55 | 37.8 | 51.4 | 69.1 | 92.1 | 120 | 151 | 165 |
| | 42 | 55 | 69.9 | 91.8 | 116 | 142 | 165 | 183 | 189 |

Capacity in TR. -40 – 60 °F
Opening superheat sh = 7.2 °F

US units R22

| Valve type | Orifice no. | Cond. temp. [°F] | Evaporating temperature [°F] | | | | | | |
|------------|-------------|------------------|------------------------------|------|------|------|------|------|------|
| | | | -40 | -20 | 0 | 20 | 40 | 50 | 60 |
| TGE 10 | 3 | 135 | 1.20 | 1.64 | 2.14 | 2.68 | 3.22 | 3.45 | 3.64 |
| | 4 | 135 | 1.57 | 2.16 | 2.83 | 3.57 | 4.30 | 4.63 | 4.90 |
| | 6 | 135 | 2.22 | 3.07 | 4.05 | 5.13 | 6.19 | 6.66 | 7.05 |
| | 8 | 135 | 2.91 | 4.04 | 5.33 | 6.75 | 8.13 | 8.72 | 9.18 |
| | 9 | 135 | 3.32 | 4.65 | 6.19 | 7.87 | 9.57 | 10.3 | 11.0 |
| | 11 | 135 | 4.26 | 6.13 | 8.26 | 10.4 | 12.2 | 12.8 | 13.1 |
| | 12.5 | 135 | 4.09 | 5.78 | 7.80 | 10.0 | 12.1 | 13.1 | 14.0 |
| TGE 20 | 12.5 | 135 | 4.19 | 5.68 | 7.57 | 9.84 | 12.3 | 13.5 | 14.6 |
| | 16 | 135 | 5.08 | 6.93 | 9.30 | 12.2 | 15.3 | 16.9 | 18.3 |
| | 20 | 135 | 6.22 | 8.46 | 11.2 | 14.6 | 18.2 | 20.0 | 21.6 |
| | 21 | 135 | 9.26 | 12.7 | 16.5 | 20.3 | 23.6 | 24.8 | 25.6 |
| TGE 40 | 26 | 135 | 7.83 | 10.9 | 14.8 | 19.7 | 25.2 | 28.0 | 30.6 |
| | 30 | 135 | 8.77 | 12.3 | 16.7 | 22.2 | 28.4 | 31.6 | 34.6 |
| | 40 | 135 | 10.5 | 14.7 | 20.4 | 28.0 | 37.4 | 42.3 | 46.8 |
| | 42 | 135 | 19.8 | 26.7 | 34.5 | 42.5 | 49.6 | 52.3 | 54.1 |

Subcooling correction factor 'fsub'

| Subcooling [K] | 2 | 4 | 10 | 15 | 20 | 25 | 30 |
|-------------------|------|------|------|------|------|------|------|
| Correction factor | 0.98 | 1.00 | 1.05 | 1.10 | 1.14 | 1.18 | 1.23 |

Subcooling correction factor 'fsub'

| Subcooling [°F] | 2 | 7 | 10 | 20 | 30 | 40 | 50 |
|-------------------|------|------|------|------|------|------|------|
| Correction factor | 0.98 | 1.00 | 1.01 | 1.06 | 1.11 | 1.16 | 1.21 |

Distributer correction factor 'fp' *

| Pressure drop [bar] Δp | Evaporating temperature [°C] | | | | | | |
|------------------------|------------------------------|------|------|------|------|------|------|
| | -40 | -30 | -20 | -10 | 0 | 10 | 15 |
| 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 0.96 | 0.95 | 0.95 | 0.94 | 0.93 | 0.91 | 0.89 |
| 1.5 | 0.93 | 0.93 | 0.92 | 0.91 | 0.90 | 0.86 | 0.82 |
| 2 | 0.91 | 0.90 | 0.90 | 0.88 | 0.86 | 0.81 | 0.76 |

*Calculated at 32 °C condensing temperature.

Distributer correction factor 'fp' *

| Pressure drop [psi] Δp | Evaporating temperature [°F] | | | | | | |
|------------------------|------------------------------|------|------|------|------|------|------|
| | -40 | -20 | 0 | 20 | 40 | 50 | 60 |
| 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 15 | 0.95 | 0.95 | 0.95 | 0.94 | 0.92 | 0.91 | 0.88 |
| 25 | 0.92 | 0.92 | 0.91 | 0.89 | 0.87 | 0.84 | 0.79 |
| 30 | 0.91 | 0.90 | 0.89 | 0.87 | 0.84 | 0.80 | 0.74 |

*Calculated at 90 °F condensing temperature.

Capacity in kW. -40 – 15 °C.

Opening superheat sh = 4 K

SI units R134a

| Valve type | Orifice no. | Cond. temp. [°C] | Evaporating temperature [°C] | | | | | | |
|------------|-------------|------------------|------------------------------|------|------|------|------|------|------|
| | | | -40 | -30 | -20 | -10 | 0 | 10 | 15 |
| TGE 10 | 3 | 25 | 2.44 | 3.10 | 3.85 | 4.62 | 5.23 | 5.31 | 4.92 |
| | 4 | 25 | 3.33 | 4.24 | 5.27 | 6.33 | 7.18 | 7.30 | 6.77 |
| | 6 | 25 | 5.00 | 6.37 | 7.92 | 9.52 | 10.8 | 11.0 | 10.2 |
| | 8 | 25 | 6.90 | 8.78 | 10.9 | 13.1 | 14.7 | 14.9 | 13.7 |
| | 9 | 25 | 8.11 | 10.3 | 12.8 | 15.4 | 17.5 | 17.8 | 16.4 |
| | 11 | 25 | 10.5 | 13.0 | 16.1 | 19.1 | 21.2 | 20.8 | 18.9 |
| | 12.5 | 25 | 11.2 | 14.1 | 17.5 | 21.0 | 23.8 | 24.2 | 22.3 |
| TGE 20 | 12.5 | 25 | 10.6 | 14.0 | 17.9 | 22.3 | 26.1 | 27.3 | 25.6 |
| | 16 | 25 | 13.4 | 17.6 | 22.7 | 28.4 | 33.4 | 35.0 | 32.9 |
| | 20 | 25 | 16.6 | 21.8 | 27.8 | 34.2 | 39.6 | 40.8 | 37.9 |
| | 21 | 25 | 21.0 | 27.1 | 33.9 | 40.5 | 45.0 | 44.0 | 39.8 |
| TGE 40 | 26 | 25 | 22.1 | 29.1 | 37.6 | 47.2 | 55.9 | 59.2 | 56.0 |
| | 30 | 25 | 25.3 | 33.3 | 43.0 | 53.9 | 63.8 | 67.5 | 63.8 |
| | 40 | 25 | 30.5 | 40.0 | 51.7 | 65.0 | 77.5 | 81.9 | 76.6 |
| | 42 | 25 | 39.7 | 50.8 | 63.7 | 76.7 | 86.1 | 85.7 | 78.2 |

Capacity in TR. -40 – 60 °F

Opening superheat sh = 7.2 °F

US units R134a

| Valve type | Orifice no. | Cond. temp. [°F] | Evaporating temperature [°F] | | | | | | |
|------------|-------------|------------------|------------------------------|------|------|------|------|------|------|
| | | | -40 | -20 | 0 | 20 | 40 | 50 | 60 |
| TGE 10 | 3 | 75 | 0.69 | 0.90 | 1.14 | 1.36 | 1.49 | 1.46 | 1.30 |
| | 4 | 75 | 0.94 | 1.23 | 1.56 | 1.87 | 2.05 | 2.01 | 1.79 |
| | 6 | 75 | 1.42 | 1.85 | 2.34 | 2.81 | 3.08 | 3.01 | 2.69 |
| | 8 | 75 | 1.96 | 2.55 | 3.22 | 3.85 | 4.20 | 4.09 | 3.64 |
| | 9 | 75 | 2.30 | 2.99 | 3.79 | 4.56 | 5.00 | 4.90 | 4.33 |
| | 11 | 75 | 2.89 | 3.77 | 4.74 | 5.61 | 5.95 | 5.70 | 4.98 |
| | 12.5 | 75 | 3.19 | 4.10 | 5.16 | 6.20 | 6.80 | 6.66 | 5.89 |
| TGE 20 | 12.5 | 75 | 3.02 | 4.07 | 5.35 | 6.68 | 7.56 | 7.51 | 6.81 |
| | 16 | 75 | 3.81 | 5.16 | 6.79 | 8.51 | 9.68 | 9.65 | 8.77 |
| | 20 | 75 | 4.71 | 6.36 | 8.27 | 10.2 | 11.4 | 11.2 | 10.1 |
| | 21 | 75 | 5.94 | 7.86 | 10.0 | 11.9 | 12.6 | 12.1 | 10.5 |
| TGE 40 | 26 | 75 | 6.30 | 8.53 | 11.3 | 14.2 | 16.3 | 16.4 | 15.0 |
| | 30 | 75 | 7.20 | 9.76 | 12.9 | 16.2 | 18.6 | 18.7 | 17.0 |
| | 40 | 75 | 8.70 | 11.7 | 15.5 | 19.6 | 22.6 | 22.6 | 20.3 |
| | 42 | 75 | 11.2 | 14.7 | 18.8 | 22.6 | 24.3 | 23.5 | 20.6 |

Capacity in kW. -40 – 15 °C.

Opening superheat sh = 4 K

SI units R134a

| Valve type | Orifice no. | Cond. temp. [°C] | Evaporating temperature [°C] | | | | | | |
|------------|-------------|------------------|------------------------------|------|------|------|------|------|------|
| | | | -40 | -30 | -20 | -10 | 0 | 10 | 15 |
| TGE 10 | 3 | 35 | 2.46 | 3.16 | 3.99 | 4.92 | 5.84 | 6.49 | 6.59 |
| | 4 | 35 | 3.34 | 4.29 | 5.43 | 6.70 | 7.97 | 8.89 | 9.02 |
| | 6 | 35 | 4.96 | 6.39 | 8.09 | 10.0 | 11.9 | 13.3 | 13.5 |
| | 8 | 35 | 6.79 | 8.75 | 11.1 | 13.6 | 16.5 | 17.9 | 18.1 |
| | 9 | 35 | 7.99 | 10.3 | 13.0 | 16.1 | 19.1 | 21.2 | 21.5 |
| | 11 | 35 | 9.95 | 12.9 | 16.4 | 20.2 | 23.6 | 25.4 | 25.3 |
| | 12.5 | 35 | 11.0 | 13.9 | 17.6 | 21.6 | 25.7 | 28.6 | 29.0 |
| TGE 20 | 12.5 | 35 | 10.5 | 13.8 | 18.0 | 22.9 | 28.2 | 32.4 | 33.3 |
| | 16 | 35 | 13.1 | 17.3 | 22.6 | 29.0 | 35.7 | 41.3 | 42.6 |
| | 20 | 35 | 16.1 | 21.4 | 27.7 | 35.0 | 42.6 | 48.4 | 49.5 |
| | 21 | 35 | 21.2 | 27.7 | 35.3 | 43.3 | 50.2 | 53.8 | 53.4 |
| TGE 40 | 26 | 35 | 21.2 | 28.1 | 36.9 | 47.4 | 59.0 | 68.7 | 71.3 |
| | 30 | 35 | 24.1 | 32.1 | 42.0 | 54.1 | 67.2 | 78.3 | 81.1 |
| | 40 | 35 | 29.2 | 38.6 | 50.6 | 65.5 | 82.3 | 96.6 | 99.9 |
| | 42 | 35 | 40.7 | 52.7 | 67.0 | 82.6 | 96.8 | 105 | 106 |

Capacity in TR. -40 – 60 °F

Opening superheat sh = 7.2 °F

US units R134a

| Valve type | Orifice no. | Cond. temp. [°F] | Evaporating temperature [°F] | | | | | | |
|------------|-------------|------------------|------------------------------|------|------|------|------|-------|------|
| | | | -40 | -20 | 0 | 20 | 40 | 50 | 60 |
| TGE 10 | 3 | 95 | 0.70 | 0.92 | 1.19 | 1.49 | 1.76 | 1.84 | 1.87 |
| | 4 | 95 | 0.95 | 1.25 | 1.62 | 2.03 | 2.40 | 2.52 | 2.56 |
| | 6 | 95 | 1.41 | 1.87 | 2.41 | 3.03 | 3.58 | 3.77 | 3.82 |
| | 8 | 95 | 1.93 | 2.55 | 3.30 | 4.12 | 4.86 | 5.09 | 5.14 |
| | 9 | 95 | 2.27 | 2.99 | 3.88 | 4.86 | 5.73 | 6.02 | 6.10 |
| | 11 | 95 | 2.83 | 3.77 | 4.89 | 6.08 | 7.02 | 7.23 | 7.15 |
| | 12.5 | 95 | 3.11 | 4.06 | 5.23 | 6.54 | 7.72 | 8.11 | 8.24 |
| TGE 20 | 12.5 | 95 | 2.97 | 4.04 | 5.40 | 7.01 | 8.60 | 9.19 | 9.47 |
| | 16 | 95 | 3.71 | 5.07 | 6.80 | 8.87 | 10.9 | 11.7 | 12.1 |
| | 20 | 95 | 4.58 | 6.25 | 8.30 | 10.7 | 12.9 | 13.7 | 14.1 |
| | 21 | 95 | 6.02 | 8.10 | 10.5 | 13.0 | 14.9 | 15.3 | 15.1 |
| TGE 40 | 26 | 95 | 6.02 | 8.23 | 11.1 | 14.6 | 18.1 | 19.5 | 20.3 |
| | 30 | 95 | 6.85 | 9.38 | 12.7 | 16.6 | 20.6 | 22.22 | 23.1 |
| | 40 | 95 | 8.29 | 11.3 | 15.2 | 20.2 | 25.4 | 27.4 | 28.4 |
| | 42 | 95 | 11.6 | 15.4 | 20.0 | 24.9 | 28.9 | 29.9 | 29.9 |

Subcooling correction factor 'fsub'

| Subcooling [K] | 2 | 4 | 10 | 15 | 20 | 25 | 30 |
|-------------------|------|------|------|------|------|------|------|
| Correction factor | 0.98 | 1.00 | 1.06 | 1.11 | 1.16 | 1.21 | 1.26 |

Distributer correction factor 'fp' *

| Pressure drop [bar] Δp | Evaporating temperature [°C] | | | | | | |
|------------------------|------------------------------|------|------|------|------|------|------|
| | -40 | -30 | -20 | -10 | 0 | 10 | 15 |
| 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 0.93 | 0.93 | 0.92 | 0.92 | 0.90 | 0.87 | 0.83 |
| 1.5 | 0.90 | 0.89 | 0.88 | 0.87 | 0.84 | 0.79 | 0.74 |
| 2 | 0.86 | 0.85 | 0.84 | 0.82 | 0.79 | 0.71 | 0.62 |

*Calculated at 32 °C condensing temperature.

Subcooling correction factor 'fsub'

| Subcooling [°F] | 2 | 7 | 10 | 20 | 30 | 40 | 50 |
|-------------------|------|------|------|------|------|------|------|
| Correction factor | 0.97 | 1.00 | 1.02 | 1.07 | 1.13 | 1.19 | 1.24 |

Distributer correction factor 'fp' *

| Pressure drop [psi] Δp | Evaporating temperature [°F] | | | | | | |
|------------------------|------------------------------|------|------|------|------|------|------|
| | -40 | -20 | 0 | 20 | 40 | 50 | 60 |
| 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 15 | 0.93 | 0.93 | 0.92 | 0.91 | 0.89 | 0.86 | 0.82 |
| 25 | 0.88 | 0.87 | 0.86 | 0.84 | 0.80 | 0.76 | 0.68 |
| 30 | 0.86 | 0.85 | 0.83 | 0.81 | 0.75 | 0.70 | 0.60 |

*Calculated at 90 °F condensing temperature.

Capacity in kW. -40 – 15 °C.
Opening superheat sh = 4 K
SI units R134a

| Valve type | Orifice no. | Cond. temp. [°C] | Evaporating temperature [°C] | | | | | | |
|------------|-------------|------------------|------------------------------|------|------|------|------|------|------|
| | | | -40 | -30 | -20 | -10 | 0 | 10 | 15 |
| TGE 10 | 3 | 45 | 2.41 | 3.12 | 3.98 | 5.00 | 6.10 | 7.13 | 7.52 |
| | 4 | 45 | 3.25 | 4.21 | 5.39 | 6.78 | 8.29 | 9.71 | 10.3 |
| | 6 | 45 | 4.78 | 6.21 | 7.96 | 10.0 | 12.3 | 14.4 | 15.2 |
| | 8 | 45 | 6.48 | 8.44 | 10.8 | 13.5 | 16.6 | 19.4 | 20.4 |
| | 9 | 45 | 7.60 | 9.85 | 12.7 | 15.0 | 19.5 | 22.7 | 23.9 |
| | 11 | 45 | 9.44 | 12.4 | 16.1 | 20.3 | 24.6 | 28.1 | 29.0 |
| | 12.5 | 45 | 10.3 | 13.3 | 17.0 | 21.3 | 26.1 | 30.4 | 32.1 |
| TGE 20 | 12.5 | 45 | 12.1 | 15.6 | 19.9 | 24.9 | 30.3 | 35.3 | 37.1 |
| | 12.5 | 45 | 10.0 | 13.3 | 17.4 | 22.5 | 28.3 | 34.2 | 36.6 |
| | 16 | 45 | 12.4 | 16.5 | 21.7 | 28.1 | 35.6 | 43.3 | 46.5 |
| | 20 | 45 | 15.3 | 20.3 | 26.5 | 34.0 | 42.6 | 51.1 | 54.5 |
| TGE 40 | 21 | 45 | 20.8 | 27.4 | 35.5 | 44.3 | 52.8 | 59.2 | 60.9 |
| | 26 | 45 | 19.7 | 26.2 | 34.7 | 45.3 | 58.0 | 71.0 | 76.7 |
| | 30 | 45 | 22.3 | 29.8 | 39.4 | 51.6 | 65.9 | 80.7 | 87.1 |
| | 40 | 45 | 27.0 | 35.9 | 47.6 | 62.7 | 81.4 | 102 | 110 |
| | 42 | 45 | 40.6 | 52.9 | 68.0 | 85.3 | 103 | 117 | 121 |

Capacity in TR. -40 – 60 °F
Opening superheat sh = 7.2 °F
US units R134a

| Valve type | Orifice no. | Cond. temp. [°F] | Evaporating temperature [°F] | | | | | | |
|------------|-------------|------------------|------------------------------|------|------|------|------|------|------|
| | | | -40 | -20 | 0 | 20 | 40 | 50 | 60 |
| TGE 10 | 3 | 115 | 0.68 | 0.91 | 1.19 | 1.52 | 1.88 | 2.04 | 2.16 |
| | 4 | 115 | 0.92 | 1.23 | 1.61 | 2.06 | 2.55 | 2.77 | 2.95 |
| | 6 | 115 | 1.35 | 1.81 | 2.37 | 3.05 | 3.78 | 4.10 | 4.36 |
| | 8 | 115 | 1.83 | 2.45 | 3.22 | 4.13 | 5.09 | 5.52 | 5.85 |
| | 9 | 115 | 2.14 | 2.86 | 3.78 | 4.86 | 5.98 | 6.47 | 6.87 |
| | 11 | 115 | 2.66 | 3.61 | 4.80 | 6.18 | 7.51 | 8.02 | 8.33 |
| | 12.5 | 115 | 2.90 | 3.84 | 5.05 | 6.48 | 7.99 | 8.66 | 9.20 |
| TGE 20 | 12.5 | 115 | 3.40 | 4.51 | 5.91 | 7.55 | 9.27 | 10.0 | 10.7 |
| | 12.5 | 115 | 2.83 | 3.85 | 5.20 | 6.88 | 8.79 | 9.72 | 10.5 |
| | 16 | 115 | 3.50 | 4.79 | 6.48 | 8.62 | 11.1 | 12.3 | 13.3 |
| | 20 | 115 | 4.30 | 5.89 | 7.92 | 10.4 | 13.2 | 14.5 | 15.6 |
| TGE 40 | 21 | 115 | 5.88 | 8.00 | 10.6 | 13.4 | 16.0 | 16.9 | 17.5 |
| | 26 | 115 | 5.53 | 7.61 | 10.4 | 13.9 | 18.1 | 20.1 | 22.0 |
| | 30 | 115 | 6.26 | 8.64 | 11.8 | 15.8 | 20.5 | 22.9 | 24.9 |
| | 40 | 115 | 7.59 | 10.4 | 14.2 | 19.3 | 25.6 | 28.9 | 31.6 |
| | 42 | 115 | 11.5 | 15.4 | 20.4 | 25.9 | 31.2 | 33.3 | 34.8 |

Capacity in kW. -40 – 15 °C.
Opening superheat sh = 4 K
SI units R134a

| Valve type | Orifice no. | Cond. temp. [°C] | Evaporating temperature [°C] | | | | | | |
|------------|-------------|------------------|------------------------------|------|------|------|-------|------|------|
| | | | -40 | -30 | -20 | -10 | 0 | 10 | 15 |
| TGE 10 | 3 | 55 | 2.31 | 3.00 | 3.86 | 4.89 | 6.07 | 7.29 | 7.85 |
| | 4 | 55 | 3.09 | 4.02 | 5.18 | 6.59 | 8.20 | 9.88 | 10.6 |
| | 6 | 55 | 4.48 | 5.86 | 7.57 | 9.65 | 12.0 | 14.5 | 15.7 |
| | 8 | 55 | 6.00 | 7.88 | 10.2 | 13.0 | 16.2 | 19.5 | 20.9 |
| | 9 | 55 | 6.95 | 9.11 | 11.9 | 15.2 | 19.0 | 22.8 | 24.6 |
| | 11 | 55 | 8.68 | 11.6 | 15.2 | 19.6 | 24.4 | 28.8 | 30.5 |
| | 12.5 | 55 | 9.30 | 12.1 | 15.7 | 20.1 | 25.2 | 30.3 | 32.7 |
| TGE 20 | 12.5 | 55 | 10.9 | 14.2 | 18.4 | 23.5 | 29.3 | 35.3 | 38.0 |
| | 12.5 | 55 | 9.41 | 12.4 | 16.3 | 21.1 | 27.0 | 33.5 | 36.6 |
| | 16 | 55 | 11.5 | 15.3 | 20.1 | 26.2 | 33.7 | 42.0 | 46.1 |
| | 20 | 55 | 14.1 | 18.7 | 24.6 | 31.8 | 40.4 | 49.9 | 54.4 |
| TGE 40 | 21 | 55 | 19.7 | 26.3 | 34.4 | 43.7 | 53.1 | 61.2 | 64.3 |
| | 26 | 55 | 17.7 | 23.7 | 31.5 | 41.5 | 53.9 | 68.0 | 74.9 |
| | 30 | 55 | 20.0 | 26.8 | 35.6 | 47.0 | 61.1 | 77.1 | 85.0 |
| | 40 | 55 | 24.2 | 32.3 | 43.0 | 57.2 | 75.9 | 98.5 | 110 |
| | 42 | 55 | 39.3 | 51.6 | 67.0 | 85.0 | 104.0 | 121 | 128 |

Capacity in TR. -40 – 60 °F
Opening superheat sh = 7.2 °F
US units R134a

| Valve type | Orifice no. | Cond. temp. [°F] | Evaporating temperature [°F] | | | | | | |
|------------|-------------|------------------|------------------------------|------|------|------|------|------|------|
| | | | -40 | -20 | 0 | 20 | 40 | 50 | 60 |
| TGE 10 | 3 | 135 | 0.65 | 0.87 | 1.14 | 1.48 | 1.87 | 2.06 | 2.25 |
| | 4 | 135 | 0.86 | 1.16 | 1.53 | 2.00 | 2.52 | 2.79 | 3.04 |
| | 6 | 135 | 1.25 | 1.68 | 2.24 | 2.92 | 3.70 | 4.10 | 4.46 |
| | 8 | 135 | 1.67 | 2.26 | 3.00 | 3.92 | 4.96 | 5.48 | 5.96 |
| | 9 | 135 | 1.92 | 2.60 | 3.49 | 4.60 | 5.83 | 6.44 | 7.01 |
| | 11 | 135 | 2.41 | 3.32 | 4.49 | 5.92 | 7.46 | 8.16 | 8.71 |
| | 12.5 | 135 | 2.56 | 3.45 | 4.61 | 6.06 | 7.71 | 8.54 | 9.30 |
| TGE 20 | 12.5 | 135 | 3.00 | 4.05 | 5.40 | 7.08 | 8.98 | 9.93 | 10.8 |
| | 12.5 | 135 | 2.62 | 3.56 | 4.81 | 6.41 | 8.35 | 9.39 | 10.4 |
| | 16 | 135 | 3.21 | 4.37 | 5.93 | 7.96 | 10.4 | 11.8 | 13.1 |
| | 20 | 135 | 3.91 | 5.37 | 7.24 | 9.60 | 12.4 | 14.0 | 15.4 |
| TGE 40 | 21 | 135 | 5.51 | 7.59 | 10.2 | 13.2 | 16.1 | 17.4 | 18.4 |
| | 26 | 135 | 4.90 | 6.76 | 9.27 | 12.6 | 16.7 | 18.9 | 21.2 |
| | 30 | 135 | 5.51 | 7.63 | 10.5 | 14.2 | 18.9 | 21.5 | 24.0 |
| | 40 | 135 | 6.67 | 9.20 | 12.7 | 17.4 | 23.8 | 27.5 | 31.2 |
| | 42 | 135 | 11.0 | 15.0 | 20.0 | 25.8 | 31.8 | 34.5 | 36.9 |

Subcooling correction factor 'fsub'

| Subcooling [K] | 2 | 4 | 10 | 15 | 20 | 25 | 30 |
|-------------------|------|------|------|------|------|------|------|
| Correction factor | 0.98 | 1.00 | 1.06 | 1.11 | 1.16 | 1.21 | 1.26 |

Subcooling correction factor 'fsub'

| Subcooling [°F] | 2 | 7 | 10 | 20 | 30 | 40 | 50 |
|-------------------|------|------|------|------|------|------|------|
| Correction factor | 0.97 | 1.00 | 1.02 | 1.07 | 1.13 | 1.19 | 1.24 |

Distributor correction factor 'fp'*

| Pressure drop [bar] Δp | Evaporating temperature [°C] | | | | | | |
|------------------------|------------------------------|------|------|------|------|------|------|
| | -40 | -30 | -20 | -10 | 0 | 10 | 15 |
| 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 0.93 | 0.93 | 0.92 | 0.92 | 0.90 | 0.87 | 0.83 |
| 1.5 | 0.90 | 0.89 | 0.88 | 0.87 | 0.84 | 0.79 | 0.74 |
| 2 | 0.86 | 0.85 | 0.84 | 0.82 | 0.79 | 0.71 | 0.62 |

*Calculated at 32 °C condensing temperature.

Distributor correction factor 'fp'*

| Pressure drop [psi] Δp | Evaporating temperature [°F] | | | | | | |
|------------------------|------------------------------|------|------|------|------|------|------|
| | -40 | -20 | 0 | 20 | 40 | 50 | 60 |
| 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 15 | 0.93 | 0.93 | 0.92 | 0.91 | 0.89 | 0.86 | 0.82 |
| 25 | 0.88 | 0.87 | 0.86 | 0.84 | 0.80 | 0.76 | 0.68 |
| 30 | 0.86 | 0.85 | 0.83 | 0.81 | 0.75 | 0.70 | 0.60 |

*Calculated at 90 °F condensing temperature.

Capacity in kW. -30 – 10 °C.
Opening superheat sh = 4 K

SI units R1234ze

| Valve type | Orifice no. | Cond. temp. [°C] | Evaporating temperature [°C] | | | | |
|------------|-------------|------------------|------------------------------|------|------|------|------|
| | | | -30 | -20 | -10 | 0 | 10 |
| TGE 10 | 3 | 25 | 2.45 | 3.20 | 3.94 | 4.51 | 4.56 |
| | 4 | 25 | 3.33 | 4.36 | 5.39 | 6.19 | 6.28 |
| | 6 | 25 | 4.97 | 6.52 | 8.07 | 9.25 | 9.35 |
| | 8 | 25 | 6.79 | 8.91 | 11.0 | 12.6 | 12.6 |
| | 9 | 25 | 7.94 | 10.5 | 13.0 | 14.9 | 15.0 |
| | 11 | 25 | 10.0 | 13.2 | 16.1 | 18.0 | 17.4 |
| | 12.5 | 25 | 10.7 | 14.2 | 17.7 | 20.3 | 20.5 |
| TGE 20 | 12.5 | 25 | 5.52 | 9.56 | 14.2 | 18.7 | 20.7 |
| | 16 | 25 | 6.86 | 12.0 | 18.0 | 23.8 | 26.6 |
| | 20 | 25 | 8.82 | 15.3 | 22.1 | 28.3 | 31.0 |
| | 21 | 25 | 9.57 | 19.0 | 27.2 | 32.9 | 33.8 |
| TGE 40 | 26 | 25 | 20.1 | 28.1 | 37.1 | 45.6 | 48.8 |
| | 30 | 25 | 22.9 | 32.0 | 42.4 | 52.0 | 55.6 |
| | 40 | 25 | 27.5 | 38.5 | 51.3 | 63.4 | 67.4 |
| | 42 | 25 | 35.6 | 47.7 | 59.8 | 68.7 | 69.1 |

Capacity in TR. -22 – 50 °F
Opening superheat sh = 7.2 °F

US units R1234ze

| Valve type | Orifice no. | Cond. temp. [°F] | Evaporating temperature [°F] | | | | | |
|------------|-------------|------------------|------------------------------|------|------|------|------|------|
| | | | -30 | -20 | 0 | 20 | 40 | 50 |
| TGE 10 | 3 | 75 | 0.61 | 0.72 | 0.95 | 1.17 | 1.28 | 1.25 |
| | 4 | 75 | 0.82 | 0.97 | 1.30 | 1.60 | 1.77 | 1.72 |
| | 6 | 75 | 1.23 | 1.46 | 1.94 | 2.40 | 2.64 | 2.57 |
| | 8 | 75 | 1.68 | 1.99 | 2.66 | 3.27 | 3.57 | 3.46 |
| | 9 | 75 | 1.96 | 2.33 | 3.12 | 3.86 | 4.24 | 4.12 |
| | 11 | 75 | 2.48 | 2.95 | 3.93 | 4.75 | 5.02 | 4.76 |
| | 12.5 | 75 | 2.63 | 3.14 | 4.23 | 5.26 | 5.80 | 5.63 |
| TGE 20 | 12.5 | 75 | 1.13 | 1.69 | 2.99 | 4.46 | 5.60 | 5.71 |
| | 16 | 75 | 1.40 | 2.10 | 3.77 | 5.65 | 7.15 | 7.32 |
| | 20 | 75 | 1.78 | 2.71 | 4.76 | 6.86 | 8.41 | 8.54 |
| | 21 | 75 | 1.49 | 3.03 | 5.93 | 8.28 | 9.48 | 9.29 |
| TGE 40 | 26 | 75 | 4.88 | 5.97 | 8.53 | 11.4 | 13.4 | 13.5 |
| | 30 | 75 | 5.56 | 6.80 | 9.73 | 13.0 | 15.3 | 15.3 |
| | 40 | 75 | 6.67 | 8.16 | 11.7 | 15.7 | 18.6 | 18.5 |
| | 42 | 75 | 8.65 | 10.4 | 14.2 | 17.8 | 19.5 | 18.9 |

Capacity in kW. -30 – 10 °C.
Opening superheat sh = 4 K

SI units R1234ze

| Valve type | Orifice no. | Cond. temp. [°C] | Evaporating temperature [°C] | | | | |
|------------|-------------|------------------|------------------------------|------|------|------|------|
| | | | -30 | -20 | -10 | 0 | 10 |
| TGE 10 | 3 | 35 | 2.46 | 3.28 | 4.17 | 5.01 | 5.60 |
| | 4 | 35 | 3.32 | 4.44 | 5.66 | 6.83 | 7.65 |
| | 6 | 35 | 4.90 | 6.59 | 8.42 | 10.2 | 11.4 |
| | 8 | 35 | 6.64 | 8.93 | 11.4 | 13.7 | 15.3 |
| | 9 | 35 | 7.72 | 10.4 | 13.4 | 16.2 | 18.2 |
| | 11 | 35 | 9.82 | 13.3 | 17.0 | 20.1 | 21.5 |
| | 12.5 | 35 | 10.2 | 14.0 | 18.0 | 22.0 | 24.6 |
| TGE 20 | 12.5 | 35 | 5.35 | 9.41 | 14.4 | 19.8 | 24.4 |
| | 16 | 35 | 6.55 | 11.7 | 18.0 | 25.0 | 31.0 |
| | 20 | 35 | 8.06 | 14.7 | 22.1 | 29.8 | 36.2 |
| | 21 | 35 | 9.04 | 19.3 | 28.7 | 36.6 | 41.4 |
| TGE 40 | 26 | 35 | 19.1 | 27.0 | 36.7 | 47.4 | 56.7 |
| | 30 | 35 | 21.6 | 30.6 | 41.7 | 54.0 | 64.4 |
| | 40 | 35 | 25.9 | 36.9 | 50.8 | 66.9 | 80.6 |
| | 42 | 35 | 36.3 | 49.6 | 64.0 | 77.3 | 85.5 |

Capacity in TR. -22 – 50 °F
Opening superheat sh = 7.2 °F

US units R1234ze

| Valve type | Orifice no. | Cond. temp. [°F] | Evaporating temperature [°F] | | | | | |
|------------|-------------|------------------|------------------------------|------|------|------|------|------|
| | | | -30 | -20 | 0 | 20 | 40 | 50 |
| TGE 10 | 3 | 95 | 0.60 | 0.72 | 0.99 | 1.27 | 1.51 | 1.59 |
| | 4 | 95 | 0.82 | 0.98 | 1.34 | 1.72 | 2.06 | 2.17 |
| | 6 | 95 | 1.20 | 1.44 | 1.98 | 2.56 | 3.07 | 3.23 |
| | 8 | 95 | 1.62 | 1.95 | 2.69 | 3.47 | 4.14 | 4.34 |
| | 9 | 95 | 1.88 | 2.27 | 3.14 | 4.08 | 4.90 | 5.15 |
| | 11 | 95 | 2.38 | 2.89 | 4.02 | 5.15 | 5.96 | 6.10 |
| | 12.5 | 95 | 2.49 | 3.02 | 4.21 | 5.51 | 6.64 | 6.99 |
| TGE 20 | 12.5 | 95 | 1.09 | 1.63 | 2.96 | 4.59 | 6.27 | 6.94 |
| | 16 | 95 | 1.31 | 2.01 | 3.69 | 5.76 | 7.93 | 8.81 |
| | 20 | 95 | 1.54 | 2.48 | 4.62 | 7.00 | 9.35 | 10.3 |
| | 21 | 95 | 1.25 | 2.89 | 6.09 | 8.97 | 11.1 | 11.8 |
| TGE 40 | 26 | 95 | 4.58 | 5.64 | 8.23 | 11.4 | 14.8 | 16.1 |
| | 30 | 95 | 5.18 | 6.39 | 9.35 | 13.0 | 16.8 | 18.3 |
| | 40 | 95 | 6.21 | 7.66 | 11.3 | 15.9 | 20.9 | 22.9 |
| | 42 | 95 | 8.80 | 10.7 | 15.0 | 19.5 | 23.3 | 24.3 |

Subcooling correction factor 'fsub'

| Subcooling [K] | 2 | 4 | 10 | 15 | 20 | 25 | 30 |
|-------------------|------|------|------|------|------|------|------|
| Correction factor | 0.98 | 1.00 | 1.06 | 1.12 | 1.17 | 1.22 | 1.29 |

Subcooling correction factor 'fsub'

| Subcooling [°F] | 2 | 7 | 10 | 20 | 30 | 40 | 50 |
|-------------------|------|------|------|------|------|------|------|
| Correction factor | 0.97 | 1.00 | 1.02 | 1.08 | 1.14 | 1.20 | 1.27 |

Distributer correction factor 'fp' *

| Pressure drop [bar] Δp | Evaporating temperature [°C] | | | | |
|------------------------|------------------------------|------|------|------|------|
| | -30 | -20 | -10 | 0 | 10 |
| 0 | 1 | 1 | 1 | 1 | 1 |
| 1 | 0.90 | 0.90 | 0.89 | 0.86 | 0.82 |
| 1.5 | 0.85 | 0.84 | 0.82 | 0.79 | 0.71 |
| 2 | 0.80 | 0.78 | 0.75 | 0.70 | 0.59 |

*Calculated at 32 °C condensing temperature.

Distributer correction factor 'fp' *

| Pressure drop [psi] Δp | Evaporating temperature [°F] | | | | | |
|------------------------|------------------------------|------|------|------|------|------|
| | -30 | -20 | 0 | 20 | 40 | 50 |
| 0 | 1 | 1 | 1 | 1 | 1 | 1 |
| 15 | 0.90 | 0.90 | 0.89 | 0.88 | 0.85 | 0.81 |
| 25 | 0.83 | 0.83 | 0.81 | 0.78 | 0.72 | 0.66 |
| 30 | 0.80 | 0.79 | 0.77 | 0.73 | 0.65 | 0.57 |

*Calculated at 90 °F condensing temperature.

Capacity in kW. -30 – 10 °C.

Opening superheat sh = 4 K

SI units R1234ze

| Valve type | Orifice no. | Cond. temp. [°C] | Evaporating temperature [°C] | | | | |
|------------|-------------|------------------|------------------------------|------|------|------|------|
| | | | -30 | -20 | -10 | 0 | 10 |
| TGE 10 | 3 | 45 | 2.40 | 3.24 | 4.20 | 5.20 | 6.10 |
| | 4 | 45 | 3.22 | 4.37 | 5.67 | 7.03 | 8.27 |
| | 6 | 45 | 4.68 | 6.39 | 8.34 | 10.4 | 12.2 |
| | 8 | 45 | 6.27 | 8.58 | 11.2 | 14.0 | 16.4 |
| | 9 | 45 | 7.24 | 9.97 | 13.1 | 16.4 | 19.4 |
| | 11 | 45 | 9.25 | 12.9 | 17.0 | 20.9 | 23.7 |
| | 12.5 | 45 | 9.46 | 13.2 | 17.4 | 22.0 | 26.1 |
| TGE 20 | 12.5 | 45 | 5.02 | 8.96 | 13.9 | 19.5 | 25.3 |
| | 16 | 45 | 6.07 | 11.0 | 17.2 | 24.4 | 31.7 |
| | 20 | 45 | 7.02 | 13.5 | 21.0 | 29.2 | 37.3 |
| | 21 | 45 | 8.12 | 18.7 | 29.0 | 38.1 | 45.3 |
| TGE 40 | 26 | 45 | 17.5 | 25.0 | 34.4 | 45.7 | 57.4 |
| | 30 | 45 | 19.7 | 28.3 | 39.0 | 51.8 | 65.1 |
| | 40 | 45 | 23.6 | 34.0 | 47.6 | 64.9 | 83.6 |
| | 42 | 45 | 36.1 | 50.0 | 65.5 | 81.4 | 94.4 |

Capacity in TR. -22 – 50 °F

Opening superheat sh = 7.2 °F

US units R1234ze

| Valve type | Orifice no. | Cond. temp. [°F] | Evaporating temperature [°F] | | | | | |
|------------|-------------|------------------|------------------------------|------|------|------|------|------|
| | | | -30 | -20 | 0 | 20 | 40 | 50 |
| TGE 10 | 3 | 115 | 0.58 | 0.70 | 0.98 | 1.29 | 1.60 | 1.74 |
| | 4 | 115 | 0.78 | 0.94 | 1.31 | 1.73 | 2.16 | 2.36 |
| | 6 | 115 | 1.13 | 1.37 | 1.92 | 2.55 | 3.20 | 3.49 |
| | 8 | 115 | 1.51 | 1.83 | 2.58 | 3.43 | 4.29 | 4.66 |
| | 9 | 115 | 1.73 | 2.12 | 3.00 | 4.01 | 5.05 | 5.51 |
| | 11 | 115 | 2.20 | 2.71 | 3.89 | 5.19 | 6.35 | 6.76 |
| | 12.5 | 115 | 2.25 | 2.76 | 3.96 | 5.35 | 6.78 | 7.40 |
| TGE 20 | 12.5 | 115 | 1.00 | 1.52 | 2.81 | 4.42 | 6.27 | 7.16 |
| | 16 | 115 | 1.18 | 1.84 | 3.45 | 5.49 | 7.83 | 8.98 |
| | 20 | 115 | 1.23 | 2.15 | 4.24 | 6.67 | 9.30 | 10.6 |
| | 21 | 115 | 0.91 | 2.61 | 5.96 | 9.12 | 11.9 | 12.9 |
| TGE 40 | 26 | 115 | 4.14 | 5.12 | 7.55 | 10.7 | 14.4 | 16.2 |
| | 30 | 115 | 4.66 | 5.77 | 8.54 | 12.1 | 16.3 | 18.4 |
| | 40 | 115 | 5.56 | 6.90 | 10.3 | 14.9 | 20.7 | 23.7 |
| | 42 | 115 | 8.69 | 10.6 | 15.1 | 20.2 | 25.0 | 27.0 |

Capacity in kW. -30 – 10 °C.

Opening superheat sh = 4 K

SI units R1234ze

| Valve type | Orifice no. | Cond. temp. [°C] | Evaporating temperature [°C] | | | | |
|------------|-------------|------------------|------------------------------|------|-------|------|------|
| | | | -30 | -20 | -10 | 0 | 10 |
| TGE 10 | 3 | 55 | 2.28 | 3.11 | 4.07 | 5.13 | 6.18 |
| | 4 | 55 | 3.05 | 4.18 | 5.48 | 6.90 | 8.32 |
| | 6 | 55 | 4.34 | 6.00 | 7.94 | 10.1 | 12.2 |
| | 8 | 55 | 5.74 | 7.97 | 10.57 | 13.4 | 16.2 |
| | 9 | 55 | 6.58 | 9.21 | 12.3 | 15.7 | 19.1 |
| | 11 | 55 | 8.41 | 12.0 | 16.2 | 20.5 | 24.1 |
| | 12.5 | 55 | 8.45 | 12.0 | 16.1 | 20.8 | 25.4 |
| TGE 20 | 12.5 | 55 | 4.61 | 8.31 | 12.9 | 18.4 | 24.2 |
| | 16 | 55 | 5.47 | 10.1 | 15.8 | 22.7 | 30.1 |
| | 20 | 55 | 5.80 | 12.0 | 19.2 | 27.2 | 35.7 |
| | 21 | 55 | 6.95 | 17.7 | 28.2 | 37.9 | 46.3 |
| TGE 40 | 26 | 55 | 15.7 | 22.4 | 31.1 | 41.7 | 53.7 |
| | 30 | 55 | 17.6 | 25.2 | 35.1 | 47.1 | 60.6 |
| | 40 | 55 | 20.9 | 30.2 | 42.7 | 59.0 | 78.8 |
| | 42 | 55 | 35.2 | 49.0 | 64.9 | 81.8 | 97.4 |

Capacity in TR. -22 – 50 °F

Opening superheat sh = 7.2 °F

US units R1234ze

| Valve type | Orifice no. | Cond. temp. [°F] | Evaporating temperature [°F] | | | | | |
|------------|-------------|------------------|------------------------------|------|------|------|------|------|
| | | | -30 | -20 | 0 | 20 | 40 | 50 |
| TGE 10 | 3 | 135 | 0.54 | 0.66 | 0.93 | 1.24 | 1.58 | 1.75 |
| | 4 | 135 | 0.73 | 0.89 | 1.25 | 1.67 | 2.12 | 2.35 |
| | 6 | 135 | 1.02 | 1.25 | 1.79 | 2.41 | 3.10 | 3.43 |
| | 8 | 135 | 1.34 | 1.65 | 2.37 | 3.21 | 4.11 | 4.55 |
| | 9 | 135 | 1.53 | 1.90 | 2.74 | 3.73 | 4.82 | 5.36 |
| | 11 | 135 | 1.94 | 2.43 | 3.59 | 4.93 | 6.26 | 6.82 |
| | 12.5 | 135 | 1.95 | 2.43 | 3.55 | 4.90 | 6.38 | 7.11 |
| TGE 20 | 12.5 | 135 | 0.90 | 1.38 | 2.58 | 4.08 | 5.85 | 6.76 |
| | 16 | 135 | 1.03 | 1.64 | 3.13 | 5.00 | 7.22 | 8.38 |
| | 20 | 135 | 0.88 | 1.75 | 3.73 | 6.04 | 8.62 | 9.95 |
| | 21 | 135 | 0.53 | 2.23 | 5.61 | 8.87 | 11.8 | 13.1 |
| TGE 40 | 26 | 135 | 3.64 | 4.51 | 6.68 | 9.52 | 13.0 | 14.8 |
| | 30 | 135 | 4.06 | 5.05 | 7.51 | 10.7 | 14.7 | 16.8 |
| | 40 | 135 | 4.82 | 5.99 | 9.00 | 13.1 | 18.7 | 21.8 |
| | 42 | 135 | 8.38 | 10.3 | 14.8 | 19.9 | 25.2 | 27.7 |

Subcooling correction factor 'fsub'

| Subcooling [K] | 2 | 4 | 10 | 15 | 20 | 25 | 30 |
|-------------------|------|------|------|------|------|------|------|
| Correction factor | 0.98 | 1.00 | 1.06 | 1.12 | 1.17 | 1.22 | 1.29 |

Subcooling correction factor 'fsub'

| Subcooling [°F] | 2 | 7 | 10 | 20 | 30 | 40 | 50 |
|-------------------|------|------|------|------|------|------|------|
| Correction factor | 0.97 | 1.00 | 1.02 | 1.08 | 1.14 | 1.20 | 1.27 |

Distributer correction factor 'fp' *

| Pressure drop [bar] Δp | Evaporating temperature [°C] | | | | |
|------------------------|------------------------------|------|------|------|------|
| | -30 | -20 | -10 | 0 | 10 |
| 0 | 1 | 1 | 1 | 1 | 1 |
| 1 | 0.90 | 0.90 | 0.89 | 0.86 | 0.82 |
| 1.5 | 0.85 | 0.84 | 0.82 | 0.79 | 0.71 |
| 2 | 0.80 | 0.78 | 0.75 | 0.70 | 0.59 |

*Calculated at 32 °C condensing temperature.

Distributer correction factor 'fp' *

| Pressure drop [psi] Δp | Evaporating temperature [°F] | | | | | |
|------------------------|------------------------------|------|------|------|------|------|
| | -30 | -20 | 0 | 20 | 40 | 50 |
| 0 | 1 | 1 | 1 | 1 | 1 | 1 |
| 15 | 0.90 | 0.90 | 0.89 | 0.88 | 0.85 | 0.81 |
| 25 | 0.83 | 0.83 | 0.81 | 0.78 | 0.72 | 0.66 |
| 30 | 0.80 | 0.79 | 0.77 | 0.73 | 0.65 | 0.57 |

*Calculated at 90 °F condensing temperature.

**Capacity in kW. -40 – 15 °C.
Opening superheat sh = 4 K**

SI units R407F

| Valve type | Orifice no. | Cond. temp. [°C] | Evaporating temperature [°C] | | | | | | |
|------------|-------------|------------------|------------------------------|------|------|------|------|------|------|
| | | | -40 | -30 | -20 | -10 | 0 | 10 | 15 |
| TGE 10 | 3 | 25 | 4.75 | 5.89 | 7.19 | 8.52 | 9.61 | 9.98 | 9.64 |
| | 4 | 25 | 6.42 | 7.97 | 9.75 | 11.6 | 13.1 | 13.6 | 13.2 |
| | 6 | 25 | 9.46 | 11.8 | 14.4 | 17.1 | 19.3 | 20.1 | 19.5 |
| | 8 | 25 | 12.9 | 16.0 | 19.5 | 23.1 | 25.9 | 26.8 | 25.8 |
| | 9 | 25 | 15.0 | 18.7 | 22.9 | 27.2 | 30.7 | 31.9 | 30.8 |
| | 11 | 25 | 19.0 | 23.8 | 29.1 | 34.0 | 37.1 | 36.8 | 34.7 |
| | 12.5 | 25 | 20.0 | 25.0 | 30.7 | 36.5 | 41.4 | 43.1 | 41.8 |
| TGE 20 | 16 | 25 | 23.4 | 29.2 | 35.7 | 42.4 | 47.9 | 49.8 | 48.2 |
| | 12.5 | 25 | 19.4 | 24.7 | 31.0 | 37.9 | 44.3 | 47.8 | 47.1 |
| | 16 | 25 | 24.2 | 30.9 | 38.9 | 47.8 | 56.1 | 60.8 | 60.2 |
| | 20 | 25 | 29.8 | 37.7 | 47.1 | 57.0 | 65.9 | 70.1 | 68.6 |
| TGE 40 | 21 | 25 | 39.8 | 49.7 | 60.3 | 69.9 | 76.2 | 75.6 | 71.3 |
| | 26 | 25 | 39.0 | 49.9 | 63.3 | 78.3 | 92.7 | 102 | 101 |
| | 30 | 25 | 44.3 | 56.8 | 72.0 | 89.0 | 105 | 115 | 115 |
| | 40 | 25 | 53.3 | 68.5 | 87.6 | 110 | 132 | 143 | 139 |
| | 42 | 25 | 78.0 | 96.6 | 117 | 137 | 151 | 152 | 144 |

**Capacity in TR. -40 – 60 °F
Opening superheat sh = 7.2 °F**

US units R407F

| Valve type | Orifice no. | Cond. temp. [°F] | Evaporating temperature [°F] | | | | | | |
|------------|-------------|------------------|------------------------------|------|------|------|------|------|------|
| | | | -40 | -20 | 0 | 20 | 40 | 50 | 60 |
| TGE 10 | 3 | 75 | 1.35 | 1.71 | 2.12 | 2.52 | 2.77 | 2.78 | 2.63 |
| | 4 | 75 | 1.82 | 2.32 | 2.88 | 3.42 | 3.78 | 3.79 | 3.60 |
| | 6 | 75 | 2.69 | 3.42 | 4.26 | 5.07 | 5.59 | 5.60 | 5.32 |
| | 8 | 75 | 3.66 | 4.65 | 5.76 | 6.82 | 7.47 | 7.46 | 7.06 |
| | 9 | 75 | 4.27 | 5.44 | 6.77 | 8.05 | 8.88 | 8.89 | 8.44 |
| | 11 | 75 | 5.40 | 6.92 | 8.56 | 9.94 | 10.5 | 10.2 | 9.44 |
| | 12.5 | 75 | 5.69 | 7.28 | 9.09 | 10.9 | 12.0 | 12.0 | 11.5 |
| TGE 20 | 16 | 75 | 6.68 | 8.51 | 10.6 | 12.6 | 13.9 | 13.9 | 13.2 |
| | 12.5 | 75 | 5.53 | 7.21 | 9.23 | 11.4 | 13.1 | 13.4 | 12.9 |
| | 16 | 75 | 6.90 | 9.02 | 11.6 | 14.4 | 16.6 | 17.0 | 16.6 |
| | 20 | 75 | 8.49 | 11.0 | 14.0 | 17.1 | 19.3 | 19.6 | 18.8 |
| TGE 40 | 21 | 75 | 11.3 | 14.4 | 17.7 | 20.4 | 21.6 | 21.0 | 19.4 |
| | 26 | 75 | 11.1 | 14.6 | 18.9 | 23.7 | 27.6 | 28.5 | 28.0 |
| | 30 | 75 | 12.7 | 16.6 | 21.5 | 27.0 | 31.3 | 32.3 | 31.7 |
| | 40 | 75 | 15.2 | 20.1 | 26.3 | 33.3 | 39.0 | 39.7 | 38.0 |
| | 42 | 75 | 22.1 | 28.0 | 34.3 | 40.1 | 43.1 | 42.3 | 39.2 |

**Capacity in kW. -40 – 15 °C.
Opening superheat sh = 4 K**

SI units R407F

| Valve type | Orifice no. | Cond. temp. [°C] | Evaporating temperature [°C] | | | | | | |
|------------|-------------|------------------|------------------------------|------|------|------|------|------|------|
| | | | -40 | -30 | -20 | -10 | 0 | 10 | 15 |
| TGE 10 | 3 | 35 | 4.68 | 5.85 | 7.24 | 8.76 | 10.2 | 11.2 | 11.5 |
| | 4 | 35 | 6.28 | 7.88 | 9.76 | 11.8 | 13.8 | 15.3 | 15.6 |
| | 6 | 35 | 9.17 | 11.5 | 14.3 | 17.4 | 20.3 | 22.4 | 22.8 |
| | 8 | 35 | 12.4 | 15.5 | 19.3 | 23.3 | 27.1 | 29.7 | 30.2 |
| | 9 | 35 | 14.4 | 18.1 | 22.5 | 27.4 | 32.0 | 35.2 | 35.9 |
| | 11 | 35 | 18.3 | 23.3 | 29.1 | 35.0 | 39.7 | 41.8 | 41.5 |
| | 12.5 | 35 | 18.9 | 23.9 | 29.9 | 36.5 | 42.7 | 47.2 | 48.2 |
| TGE 20 | 16 | 35 | 22.2 | 28.0 | 34.9 | 42.4 | 49.6 | 54.9 | 56.1 |
| | 12.5 | 35 | 18.7 | 23.9 | 30.3 | 37.7 | 45.3 | 51.6 | 53.6 |
| | 16 | 35 | 23.1 | 29.6 | 37.8 | 47.2 | 57.0 | 65.2 | 67.9 |
| | 20 | 35 | 28.4 | 36.2 | 45.8 | 56.5 | 67.4 | 76.0 | 78.5 |
| TGE 40 | 21 | 35 | 39.3 | 49.7 | 61.2 | 72.5 | 81.7 | 86.0 | 85.6 |
| | 26 | 35 | 36.6 | 47.2 | 60.5 | 76.2 | 92.8 | 107 | 112 |
| | 30 | 35 | 41.5 | 53.5 | 68.7 | 86.5 | 105 | 121 | 127 |
| | 40 | 35 | 49.3 | 63.8 | 82.6 | 106 | 133 | 157 | 163 |
| | 42 | 35 | 78.2 | 97.7 | 120 | 143 | 163 | 174 | 174 |

**Capacity in TR. -40 – 60 °F
Opening superheat sh = 7.2 °F**

US units R407F

| Valve type | Orifice no. | Cond. temp. [°F] | Evaporating temperature [°F] | | | | | | |
|------------|-------------|------------------|------------------------------|------|-------|------|------|------|------|
| | | | -40 | -20 | 0 | 20 | 40 | 50 | 60 |
| TGE 10 | 3 | 95 | 1.33 | 1.70 | 2.15 | 2.63 | 3.05 | 3.19 | 3.26 |
| | 4 | 95 | 1.78 | 2.29 | 2.90 | 3.56 | 4.13 | 4.33 | 4.43 |
| | 6 | 95 | 2.60 | 3.36 | 4.25 | 5.22 | 6.06 | 6.35 | 6.49 |
| | 8 | 95 | 3.51 | 4.52 | 5.72 | 6.99 | 8.07 | 8.43 | 8.57 |
| | 9 | 95 | 4.08 | 5.27 | 6.70 | 8.22 | 9.55 | 10.0 | 10.2 |
| | 11 | 95 | 5.19 | 6.78 | 8.63 | 10.4 | 11.7 | 11.9 | 11.8 |
| | 12.5 | 95 | 5.37 | 6.97 | 8.89 | 11.0 | 12.8 | 13.4 | 13.7 |
| TGE 20 | 16 | 95 | 6.31 | 8.16 | 10.37 | 12.8 | 14.9 | 15.6 | 16.0 |
| | 12.5 | 95 | 5.30 | 6.97 | 9.05 | 11.4 | 13.7 | 14.7 | 15.3 |
| | 16 | 95 | 6.55 | 8.65 | 11.3 | 14.3 | 17.3 | 18.5 | 19.4 |
| | 20 | 95 | 8.05 | 10.7 | 13.7 | 17.1 | 20.4 | 21.6 | 22.4 |
| TGE 40 | 21 | 95 | 11.2 | 14.5 | 18.1 | 21.6 | 24.0 | 24.4 | 24.3 |
| | 26 | 95 | 10.4 | 13.8 | 18.1 | 23.2 | 28.3 | 30.5 | 32.0 |
| | 30 | 95 | 11.8 | 15.6 | 20.6 | 26.4 | 32.1 | 34.5 | 36.2 |
| | 40 | 95 | 14.0 | 18.6 | 24.8 | 32.7 | 41.2 | 44.6 | 46.5 |
| | 42 | 95 | 22.2 | 28.4 | 35.5 | 42.6 | 48.1 | 49.5 | 49.5 |

Subcooling correction factor 'fsub'

| Subcooling [K] | 2 | 4 | 10 | 15 | 20 | 25 | 30 |
|-------------------|------|------|------|------|------|------|------|
| Correction factor | 0.98 | 1.00 | 1.06 | 1.12 | 1.17 | 1.22 | 1.27 |

Distributor correction factor 'fp' *

| Pressure drop [bar] Δp | Evaporating temperature [°C] | | | | | | |
|---------------------------|------------------------------|------|------|------|------|------|------|
| | -40 | -30 | -20 | -10 | 0 | 10 | 15 |
| 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 0.97 | 0.96 | 0.96 | 0.96 | 0.95 | 0.94 | 0.93 |
| 1.5 | 0.95 | 0.95 | 0.94 | 0.94 | 0.93 | 0.91 | 0.89 |
| 2 | 0.93 | 0.93 | 0.92 | 0.91 | 0.90 | 0.87 | 0.85 |

*Calculated at 32 °C condensing temperature.

Subcooling correction factor 'fsub'

| Subcooling [°F] | 2 | 7 | 10 | 20 | 30 | 40 | 50 |
|-------------------|------|------|------|------|------|------|------|
| Correction factor | 0.97 | 1.00 | 1.02 | 1.08 | 1.14 | 1.20 | 1.25 |

Distributor correction factor 'fp' *

| Pressure drop [psi] Δp | Evaporating temperature [°F] | | | | | | |
|---------------------------|------------------------------|------|------|------|------|------|------|
| | -40 | -20 | 0 | 20 | 40 | 50 | 60 |
| 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 15 | 0.96 | 0.96 | 0.96 | 0.95 | 0.95 | 0.94 | 0.93 |
| 25 | 0.94 | 0.94 | 0.93 | 0.92 | 0.91 | 0.89 | 0.87 |
| 30 | 0.93 | 0.92 | 0.92 | 0.91 | 0.89 | 0.87 | 0.84 |

*Calculated at 90 °F condensing temperature.

**Capacity in kW. -40 – 15 °C.
Opening superheat sh = 4 K**
SI units R407F

| Valve type | Orifice no. | Cond. temp. [°C] | Evaporating temperature [°C] | | | | | | |
|------------|-------------|------------------|------------------------------|------|------|------|------|------|------|
| | | | -40 | -30 | -20 | -10 | 0 | 10 | 15 |
| TGE 10 | 3 | 45 | 4.46 | 5.63 | 7.04 | 8.64 | 10.3 | 11.7 | 12.3 |
| | 4 | 45 | 5.94 | 7.52 | 9.43 | 11.6 | 13.8 | 15.8 | 16.6 |
| | 6 | 45 | 8.59 | 10.9 | 13.7 | 16.9 | 20.2 | 23.0 | 24.1 |
| | 8 | 45 | 11.5 | 14.6 | 18.3 | 22.5 | 26.8 | 30.4 | 31.7 |
| | 9 | 45 | 13.3 | 16.9 | 21.3 | 26.4 | 31.5 | 36.0 | 37.7 |
| | 11 | 45 | 16.9 | 21.9 | 27.9 | 34.4 | 40.3 | 44.2 | 45.0 |
| | 12.5 | 45 | 17.2 | 22.1 | 28.0 | 34.8 | 41.8 | 47.9 | 50.2 |
| TGE 20 | 16 | 45 | 20.2 | 25.9 | 32.7 | 40.5 | 48.7 | 56.1 | 58.9 |
| | 12.5 | 45 | 17.3 | 22.3 | 28.5 | 35.9 | 43.9 | 51.5 | 54.8 |
| | 16 | 45 | 21.3 | 27.4 | 35.3 | 44.6 | 54.8 | 64.6 | 68.9 |
| | 20 | 45 | 26.1 | 33.6 | 42.8 | 53.6 | 65.2 | 76.1 | 80.6 |
| TGE 40 | 21 | 45 | 37.7 | 48.1 | 59.9 | 72.2 | 83.2 | 90.6 | 92.3 |
| | 26 | 45 | 33.1 | 43.0 | 55.6 | 71.0 | 88.1 | 105 | 112 |
| | 30 | 45 | 37.4 | 48.6 | 62.9 | 80.3 | 99.8 | 119 | 127 |
| TGE 40 | 40 | 45 | 44.2 | 57.3 | 74.8 | 97.8 | 126 | 157 | 170 |
| | 42 | 45 | 76.3 | 95.9 | 119 | 144 | 167 | 184 | 189 |

**Capacity in TR. -40 – 60 °F
Opening superheat sh = 7.2 °F**
US units R407F

| Valve type | Orifice no. | Cond. temp. [°F] | Evaporating temperature [°F] | | | | | | |
|------------|-------------|------------------|------------------------------|------|------|------|------|------|------|
| | | | -40 | -20 | 0 | 20 | 40 | 50 | 60 |
| TGE 10 | 3 | 115 | 1.26 | 1.63 | 2.09 | 2.60 | 3.11 | 3.33 | 3.50 |
| | 4 | 115 | 1.67 | 2.17 | 2.79 | 3.49 | 4.19 | 4.49 | 4.73 |
| | 6 | 115 | 2.41 | 3.15 | 4.05 | 5.08 | 6.09 | 6.53 | 6.88 |
| | 8 | 115 | 3.22 | 4.20 | 5.41 | 6.77 | 8.08 | 8.63 | 9.06 |
| | 9 | 115 | 3.72 | 4.88 | 6.31 | 7.93 | 9.53 | 10.2 | 10.8 |
| | 11 | 115 | 4.75 | 6.33 | 8.28 | 10.3 | 12.0 | 12.6 | 12.8 |
| | 12.5 | 115 | 4.82 | 6.36 | 8.27 | 10.5 | 12.6 | 13.6 | 14.3 |
| TGE 20 | 16 | 115 | 5.67 | 7.46 | 9.66 | 12.2 | 14.8 | 15.9 | 16.8 |
| | 12.5 | 115 | 4.87 | 6.44 | 8.46 | 10.9 | 13.4 | 14.6 | 15.6 |
| | 16 | 115 | 5.96 | 7.92 | 10.5 | 13.5 | 16.7 | 18.3 | 19.6 |
| | 20 | 115 | 7.31 | 9.68 | 12.7 | 16.2 | 19.8 | 21.5 | 23.0 |
| TGE 40 | 21 | 115 | 10.6 | 13.9 | 17.7 | 21.6 | 24.7 | 25.8 | 26.4 |
| | 26 | 115 | 9.28 | 12.4 | 16.5 | 21.5 | 27.0 | 29.6 | 32.0 |
| | 30 | 115 | 10.5 | 14.0 | 18.7 | 24.4 | 30.5 | 33.5 | 36.1 |
| TGE 40 | 40 | 115 | 12.4 | 16.5 | 22.2 | 30.0 | 39.5 | 44.3 | 48.5 |
| | 42 | 115 | 21.6 | 27.8 | 35.2 | 43.1 | 50.0 | 52.5 | 54.1 |

**Capacity in kW. -40 – 15 °C.
Opening superheat sh = 4 K**
SI units R407F

| Valve type | Orifice no. | Cond. temp. [°C] | Evaporating temperature [°C] | | | | | | |
|------------|-------------|------------------|------------------------------|------|------|------|------|------|------|
| | | | -40 | -30 | -20 | -10 | 0 | 10 | 15 |
| TGE 10 | 3 | 55 | 4.11 | 5.23 | 6.60 | 8.19 | 9.91 | 11.5 | 12.3 |
| | 4 | 55 | 5.43 | 6.92 | 8.76 | 10.9 | 13.2 | 15.5 | 16.5 |
| | 6 | 55 | 7.73 | 9.89 | 12.6 | 15.7 | 19.1 | 22.4 | 23.8 |
| | 8 | 55 | 10.2 | 13.1 | 16.7 | 20.8 | 25.3 | 29.4 | 31.2 |
| | 9 | 55 | 11.7 | 15.1 | 19.3 | 24.2 | 29.6 | 34.7 | 36.9 |
| | 11 | 55 | 15.0 | 19.7 | 25.6 | 32.4 | 39.0 | 44.1 | 45.7 |
| | 12.5 | 55 | 14.9 | 19.4 | 24.9 | 31.5 | 38.7 | 45.7 | 48.7 |
| TGE 20 | 16 | 55 | 17.6 | 22.7 | 29.2 | 36.8 | 45.3 | 53.7 | 57.5 |
| | 12.5 | 55 | 15.5 | 20.0 | 25.7 | 32.7 | 40.5 | 48.4 | 52.1 |
| | 16 | 55 | 18.8 | 24.4 | 31.5 | 40.2 | 50.1 | 60.3 | 65.1 |
| | 20 | 55 | 23.0 | 29.8 | 38.3 | 48.5 | 59.9 | 71.4 | 76.8 |
| TGE 40 | 21 | 55 | 34.8 | 44.9 | 56.7 | 69.3 | 81.1 | 90.3 | 93.4 |
| | 26 | 55 | 28.7 | 37.4 | 48.7 | 62.9 | 79.2 | 96.4 | 105 |
| | 30 | 55 | 32.3 | 42.1 | 54.9 | 71.0 | 89.5 | 109 | 118 |
| TGE 40 | 40 | 55 | 38.4 | 49.8 | 65.0 | 85.5 | 113 | 145 | 161 |
| | 42 | 55 | 72.3 | 91.5 | 114 | 140 | 165 | 185 | 193 |

**Capacity in TR. -40 – 60 °F
Opening superheat sh = 7.2 °F**
US units R407F

| Valve type | Orifice no. | Cond. temp. [°F] | Evaporating temperature [°F] | | | | | | |
|------------|-------------|------------------|------------------------------|------|------|------|------|------|------|
| | | | -40 | -20 | 0 | 20 | 40 | 50 | 60 |
| TGE 10 | 3 | 135 | 1.14 | 1.49 | 1.93 | 2.45 | 2.99 | 3.24 | 3.47 |
| | 4 | 135 | 1.50 | 1.97 | 2.56 | 3.25 | 3.99 | 4.34 | 4.66 |
| | 6 | 135 | 2.13 | 2.80 | 3.66 | 4.67 | 5.75 | 6.26 | 6.71 |
| | 8 | 135 | 2.80 | 3.70 | 4.84 | 6.18 | 7.57 | 8.22 | 8.80 |
| | 9 | 135 | 3.21 | 4.27 | 5.61 | 7.20 | 8.90 | 9.69 | 10.4 |
| | 11 | 135 | 4.10 | 5.57 | 7.47 | 9.65 | 11.6 | 12.4 | 13.0 |
| | 12.5 | 135 | 4.07 | 5.45 | 7.22 | 9.35 | 11.6 | 12.7 | 13.7 |
| TGE 20 | 16 | 135 | 4.78 | 6.40 | 8.45 | 10.9 | 13.7 | 15.0 | 16.2 |
| | 12.5 | 135 | 4.26 | 5.66 | 7.49 | 9.73 | 12.2 | 13.4 | 14.6 |
| | 16 | 135 | 5.15 | 6.88 | 9.16 | 12.0 | 15.1 | 16.7 | 18.2 |
| | 20 | 135 | 6.29 | 8.40 | 11.1 | 14.4 | 18.0 | 19.8 | 21.5 |
| TGE 40 | 21 | 135 | 9.66 | 12.8 | 16.6 | 20.5 | 24.1 | 25.4 | 26.5 |
| | 26 | 135 | 7.83 | 10.5 | 14.1 | 18.7 | 23.9 | 26.6 | 29.2 |
| | 30 | 135 | 8.78 | 11.8 | 15.9 | 21.1 | 27.0 | 30.1 | 33.0 |
| TGE 40 | 40 | 135 | 10.51 | 14.0 | 18.9 | 25.7 | 34.7 | 39.9 | 45.0 |
| | 42 | 135 | 20.2 | 26.3 | 33.6 | 41.6 | 49.3 | 52.4 | 54.8 |

Subcooling correction factor 'fsub'

| Subcooling [K] | 2 | 4 | 10 | 15 | 20 | 25 | 30 |
|-------------------|------|------|------|------|------|------|------|
| Correction factor | 0.98 | 1.00 | 1.06 | 1.12 | 1.17 | 1.22 | 1.27 |

Subcooling correction factor 'fsub'

| Subcooling [°F] | 2 | 7 | 10 | 20 | 30 | 40 | 50 |
|-------------------|------|------|------|------|------|------|------|
| Correction factor | 0.97 | 1.00 | 1.02 | 1.08 | 1.14 | 1.20 | 1.25 |

Distributer correction factor 'fp' *

| Pressure drop [bar] Δp | Evaporating temperature [°C] | | | | | | |
|------------------------|------------------------------|------|------|------|------|------|------|
| | -40 | -30 | -20 | -10 | 0 | 10 | 15 |
| 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 0.97 | 0.96 | 0.96 | 0.96 | 0.95 | 0.94 | 0.93 |
| 1.5 | 0.95 | 0.95 | 0.94 | 0.94 | 0.93 | 0.91 | 0.89 |
| 2 | 0.93 | 0.93 | 0.92 | 0.91 | 0.90 | 0.87 | 0.85 |

*Calculated at 32 °C condensing temperature.

Distributer correction factor 'fp' *

| Pressure drop [psi] Δp | Evaporating temperature [°F] | | | | | | |
|------------------------|------------------------------|------|------|------|------|------|------|
| | -40 | -20 | 0 | 20 | 40 | 50 | 60 |
| 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 15 | 0.96 | 0.96 | 0.96 | 0.95 | 0.95 | 0.94 | 0.93 |
| 25 | 0.94 | 0.94 | 0.93 | 0.92 | 0.91 | 0.89 | 0.87 |
| 30 | 0.93 | 0.92 | 0.92 | 0.91 | 0.89 | 0.87 | 0.84 |

*Calculated at 90 °F condensing temperature.

Capacity in kW. -40 – 15 °C
Opening superheat sh = 4 K

SI units R407A

| Valve type | Orifice no. | Cond. temp. [°C] | Evaporating temperature [°C] | | | | | | |
|------------|-------------|------------------|------------------------------|------|------|------|-------|------|------|
| | | | -40 | -30 | -20 | -10 | 0 | 10 | 15 |
| TGE 10 | 3 | 25 | 3.89 | 4.95 | 6.15 | 7.35 | 8.33 | 8.72 | 8.52 |
| | 4 | 25 | 5.26 | 6.70 | 8.34 | 9.99 | 11.4 | 11.9 | 11.6 |
| | 6 | 25 | 7.77 | 9.90 | 12.3 | 14.8 | 16.8 | 17.6 | 17.2 |
| | 8 | 25 | 10.5 | 13.4 | 16.7 | 20.0 | 22.6 | 23.5 | 22.9 |
| | 9 | 25 | 12.6 | 16.0 | 19.8 | 23.8 | 27.2 | 28.4 | 27.5 |
| | 11 | 25 | 15.6 | 20.0 | 24.9 | 29.4 | 32.4 | 32.4 | 30.9 |
| | 12.5 | 25 | 16.7 | 21.3 | 26.7 | 32.2 | 36.8 | 38.5 | 37.4 |
| TGE 20 | 16 | 25 | 19.6 | 25.0 | 31.1 | 37.4 | 42.6 | 44.5 | 43.2 |
| | 12.5 | 25 | 15.8 | 20.6 | 26.4 | 32.8 | 38.5 | 41.7 | 41.3 |
| | 16 | 25 | 19.6 | 25.8 | 33.2 | 41.3 | 48.9 | 53.2 | 52.9 |
| | 20 | 25 | 24.2 | 31.6 | 40.2 | 49.4 | 57.5 | 61.5 | 60.5 |
| TGE 40 | 21 | 25 | 33.0 | 42.2 | 52.1 | 61.3 | 67.4 | 67.4 | 63.7 |
| | 26 | 25 | 31.5 | 40.9 | 52.5 | 65.7 | 78.6 | 86.9 | 86.9 |
| | 30 | 25 | 35.9 | 46.6 | 59.8 | 74.8 | 89.4 | 98.6 | 98.6 |
| | 40 | 25 | 43.2 | 56.2 | 72.4 | 91.7 | 110.9 | 122 | 120 |
| | 42 | 25 | 62.4 | 78.6 | 96.8 | 115 | 128 | 131 | 125 |

Capacity in TR. -40 – 60 °F
Opening superheat sh = 7.2 °F

US units R407A

| Valve type | Orifice no. | Cond. temp. [°F] | Evaporating temperature [°F] | | | | | | |
|------------|-------------|------------------|------------------------------|------|------|------|------|------|------|
| | | | -40 | -20 | 0 | 20 | 40 | 50 | 60 |
| TGE 10 | 3 | 75 | 1.11 | 1.44 | 1.82 | 2.18 | 2.41 | 2.43 | 2.34 |
| | 4 | 75 | 1.50 | 1.95 | 2.47 | 2.96 | 3.29 | 3.32 | 3.20 |
| | 6 | 75 | 2.22 | 2.89 | 3.66 | 4.39 | 4.87 | 4.91 | 4.73 |
| | 8 | 75 | 3.01 | 3.93 | 4.95 | 5.93 | 6.54 | 6.56 | 6.28 |
| | 9 | 75 | 3.58 | 4.66 | 5.89 | 7.09 | 7.88 | 7.92 | 7.54 |
| | 11 | 75 | 4.45 | 5.85 | 7.37 | 8.65 | 9.19 | 9.02 | 8.46 |
| | 12.5 | 75 | 4.76 | 6.24 | 7.93 | 9.60 | 10.7 | 10.8 | 10.3 |
| TGE 20 | 16 | 75 | 5.59 | 7.30 | 9.23 | 11.1 | 12.4 | 12.4 | 11.8 |
| | 12.5 | 75 | 4.50 | 6.05 | 7.92 | 9.87 | 11.4 | 11.7 | 11.4 |
| | 16 | 75 | 5.61 | 7.57 | 9.95 | 12.5 | 14.5 | 14.9 | 14.6 |
| | 20 | 75 | 6.93 | 9.26 | 12.0 | 14.8 | 16.9 | 17.2 | 16.7 |
| TGE 40 | 21 | 75 | 9.38 | 12.3 | 15.4 | 18.0 | 19.2 | 18.8 | 17.3 |
| | 26 | 75 | 9.01 | 12.0 | 15.8 | 19.9 | 23.5 | 24.4 | 24.0 |
| | 30 | 75 | 10.3 | 13.7 | 18.0 | 22.7 | 26.7 | 27.7 | 27.3 |
| | 40 | 75 | 12.4 | 16.5 | 21.8 | 27.9 | 33.1 | 34.0 | 32.8 |
| | 42 | 75 | 17.7 | 22.8 | 28.5 | 33.8 | 36.7 | 36.4 | 34.0 |

Capacity in kW. -40 – 15 °C
Opening superheat sh = 4 K

SI units R407A

| Valve type | Orifice no. | Cond. temp. [°C] | Evaporating temperature [°C] | | | | | | |
|------------|-------------|------------------|------------------------------|------|------|------|------|------|------|
| | | | -40 | -30 | -20 | -10 | 0 | 10 | 15 |
| TGE 10 | 3 | 35 | 3.74 | 4.81 | 6.09 | 7.48 | 8.81 | 9.78 | 10.0 |
| | 4 | 35 | 5.01 | 6.47 | 8.21 | 10.1 | 11.9 | 13.3 | 13.6 |
| | 6 | 35 | 7.32 | 9.46 | 12.0 | 14.8 | 17.5 | 19.5 | 20.0 |
| | 8 | 35 | 9.85 | 12.7 | 16.2 | 19.9 | 23.5 | 25.9 | 26.5 |
| | 9 | 35 | 11.9 | 15.3 | 19.4 | 23.8 | 28.1 | 31.2 | 31.9 |
| | 11 | 35 | 14.5 | 19.1 | 24.4 | 29.9 | 34.4 | 36.6 | 36.5 |
| | 12.5 | 35 | 15.6 | 20.3 | 25.8 | 31.9 | 37.7 | 42.0 | 43.0 |
| TGE 20 | 16 | 35 | 18.4 | 23.8 | 30.1 | 37.1 | 43.8 | 48.9 | 50.1 |
| | 12.5 | 35 | 14.7 | 19.3 | 25.2 | 32.0 | 39.1 | 45.0 | 46.8 |
| | 16 | 35 | 18.1 | 24.0 | 31.3 | 40.0 | 49.1 | 56.9 | 59.5 |
| | 20 | 35 | 22.3 | 29.4 | 38.0 | 48.0 | 58.2 | 66.5 | 68.9 |
| TGE 40 | 21 | 35 | 32.3 | 41.8 | 52.4 | 63.1 | 71.8 | 76.3 | 76.2 |
| | 26 | 35 | 29.4 | 38.4 | 49.9 | 63.6 | 78.3 | 91.4 | 96.2 |
| | 30 | 35 | 33.3 | 43.6 | 56.7 | 72.2 | 88.9 | 104 | 109 |
| | 40 | 35 | 39.7 | 52.0 | 68.0 | 88.3 | 112 | 133 | 139 |
| | 42 | 35 | 62.0 | 78.8 | 98.4 | 119 | 138 | 149 | 150 |

Capacity in TR. -40 – 60 °F
Opening superheat sh = 7.2 °F

US units R407A

| Valve type | Orifice no. | Cond. temp. [°F] | Evaporating temperature [°F] | | | | | | |
|------------|-------------|------------------|------------------------------|------|------|------|------|------|------|
| | | | -40 | -20 | 0 | 20 | 40 | 50 | 60 |
| TGE 10 | 3 | 95 | 1.06 | 1.40 | 1.82 | 2.26 | 2.64 | 2.78 | 2.85 |
| | 4 | 95 | 1.42 | 1.89 | 2.45 | 3.05 | 3.58 | 3.77 | 3.88 |
| | 6 | 95 | 2.08 | 2.76 | 3.58 | 4.48 | 5.27 | 5.54 | 5.68 |
| | 8 | 95 | 2.80 | 3.72 | 4.82 | 6.00 | 7.03 | 7.36 | 7.52 |
| | 9 | 95 | 3.38 | 4.47 | 5.77 | 7.18 | 8.43 | 8.86 | 9.08 |
| | 11 | 95 | 4.13 | 5.57 | 7.27 | 8.96 | 10.2 | 10.4 | 10.3 |
| | 12.5 | 95 | 4.44 | 5.91 | 7.70 | 9.63 | 11.3 | 11.9 | 12.2 |
| TGE 20 | 16 | 95 | 5.22 | 6.93 | 8.98 | 11.2 | 13.2 | 13.9 | 14.2 |
| | 12.5 | 95 | 4.17 | 5.66 | 7.56 | 9.77 | 11.9 | 12.8 | 13.3 |
| | 16 | 95 | 5.15 | 7.01 | 9.41 | 12.2 | 15.0 | 16.2 | 16.9 |
| | 20 | 95 | 6.34 | 8.58 | 11.4 | 14.6 | 17.7 | 18.9 | 19.6 |
| TGE 40 | 21 | 95 | 9.17 | 12.2 | 15.6 | 18.8 | 21.1 | 21.7 | 21.6 |
| | 26 | 95 | 8.34 | 11.2 | 15.0 | 19.4 | 24.0 | 26.0 | 27.5 |
| | 30 | 95 | 9.46 | 12.8 | 17.0 | 22.1 | 27.2 | 29.4 | 31.1 |
| | 40 | 95 | 11.3 | 15.2 | 20.5 | 27.2 | 34.7 | 37.8 | 39.7 |
| | 42 | 95 | 17.6 | 23.0 | 29.2 | 35.7 | 40.8 | 42.3 | 42.7 |

Subcooling correction factor 'fsub'

| Subcooling [K] | 2 | 4 | 10 | 15 | 20 | 25 | 30 |
|-------------------|------|------|------|------|------|------|------|
| Correction factor | 0.98 | 1.00 | 1.07 | 1.12 | 1.18 | 1.24 | 1.29 |

Distributer correction factor 'fp' *

| Pressure drop [bar] Δp | Evaporating temperature [°C] | | | | | | |
|------------------------|------------------------------|------|------|------|------|------|------|
| | -40 | -30 | -20 | -10 | 0 | 10 | 15 |
| | Correction factor | | | | | | |
| 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 0.96 | 0.96 | 0.96 | 0.96 | 0.95 | 0.94 | 0.92 |
| 1.5 | 0.95 | 0.94 | 0.94 | 0.93 | 0.92 | 0.90 | 0.88 |
| 2 | 0.93 | 0.92 | 0.92 | 0.91 | 0.89 | 0.87 | 0.84 |

*Calculated at 32 °C condensing temperature.

Subcooling correction factor 'fsub'

| 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 'fp' *

| Pressure drop [psi] Δp | Evaporating temperature [°F] | | | | | | |
|------------------------|------------------------------|------|------|------|------|------|------|
| | -40 | -20 | 0 | 20 | 40 | 50 | 60 |
| | Correction factor | | | | | | |
| 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 15 | 0.96 | 0.96 | 0.96 | 0.95 | 0.94 | 0.93 | 0.92 |
| 25 | 0.94 | 0.93 | 0.93 | 0.92 | 0.90 | 0.89 | 0.86 |
| 30 | 0.92 | 0.92 | 0.91 | 0.90 | 0.88 | 0.86 | 0.83 |

*Calculated at 90 °F condensing temperature.

Capacity in kW. -40 – 15 °C
Opening superheat sh = 4 K
SI units R407A

| Valve type | Orifice no. | Cond. temp. [°C] | Evaporating temperature [°C] | | | | | | |
|------------|-------------|------------------|------------------------------|------|------|------|------|------|------|
| | | | -40 | -30 | -20 | -10 | 0 | 10 | 15 |
| TGE 10 | 3 | 45 | 3.45 | 4.49 | 5.76 | 7.22 | 8.73 | 10.1 | 10.6 |
| | 4 | 45 | 4.59 | 5.99 | 7.70 | 9.68 | 11.8 | 13.6 | 14.3 |
| | 6 | 45 | 6.63 | 8.66 | 11.2 | 14.1 | 17.1 | 19.8 | 20.9 |
| | 8 | 45 | 8.83 | 11.5 | 14.9 | 18.8 | 22.8 | 26.2 | 27.5 |
| | 9 | 45 | 10.9 | 14.1 | 18.1 | 22.8 | 27.5 | 31.7 | 33.3 |
| | 11 | 45 | 13.0 | 17.3 | 22.7 | 28.7 | 34.3 | 38.1 | 39.0 |
| | 12.5 | 45 | 14.0 | 18.5 | 23.9 | 30.1 | 36.6 | 42.3 | 44.5 |
| TGE 20 | 12.5 | 45 | 13.2 | 17.4 | 22.8 | 29.5 | 37.0 | 44.3 | 47.4 |
| | 16 | 45 | 16.1 | 21.4 | 28.2 | 36.6 | 46.1 | 55.5 | 59.6 |
| | 20 | 45 | 19.8 | 26.2 | 34.2 | 44.0 | 54.9 | 65.4 | 69.8 |
| | 21 | 45 | 30.5 | 39.9 | 50.9 | 62.3 | 72.5 | 79.7 | 81.7 |
| TGE 40 | 26 | 45 | 26.4 | 34.7 | 45.5 | 58.7 | 73.8 | 88.9 | 95.8 |
| | 30 | 45 | 29.8 | 39.2 | 51.5 | 66.6 | 83.6 | 101 | 108 |
| | 40 | 45 | 35.3 | 46.5 | 61.2 | 80.6 | 105 | 132 | 144 |
| | 42 | 45 | 59.7 | 76.6 | 96.6 | 119 | 140 | 157 | 162 |

Capacity in TR. -40 – 60 °F
Opening superheat sh = 7.2 °F
US units R407A

| Valve type | Orifice no. | Cond. temp. [°F] | Evaporating temperature [°F] | | | | | | |
|------------|-------------|------------------|------------------------------|------|------|------|------|------|------|
| | | | -40 | -20 | 0 | 20 | 40 | 50 | 60 |
| TGE 10 | 3 | 115 | 0.97 | 1.30 | 1.71 | 2.18 | 2.65 | 2.86 | 3.03 |
| | 4 | 115 | 1.29 | 1.73 | 2.28 | 2.92 | 3.57 | 3.86 | 4.09 |
| | 6 | 115 | 1.86 | 2.50 | 3.31 | 4.25 | 5.20 | 5.61 | 5.95 |
| | 8 | 115 | 2.47 | 3.33 | 4.41 | 5.66 | 6.90 | 7.42 | 7.83 |
| | 9 | 115 | 3.04 | 4.08 | 5.37 | 6.85 | 8.33 | 8.97 | 9.50 |
| | 11 | 115 | 3.62 | 5.00 | 6.73 | 8.64 | 10.3 | 11.0 | 11.1 |
| | 12.5 | 115 | 3.93 | 5.33 | 7.08 | 9.10 | 11.1 | 12.0 | 12.7 |
| TGE 20 | 12.5 | 115 | 3.69 | 5.02 | 6.79 | 8.97 | 11.4 | 12.5 | 13.5 |
| | 16 | 115 | 4.51 | 6.16 | 8.37 | 11.1 | 14.2 | 15.6 | 16.9 |
| | 20 | 115 | 5.54 | 7.54 | 10.1 | 13.3 | 16.8 | 18.4 | 19.9 |
| | 21 | 115 | 8.59 | 11.6 | 15.1 | 18.7 | 21.6 | 22.7 | 23.3 |
| TGE 40 | 26 | 115 | 7.37 | 10.0 | 13.5 | 17.9 | 22.7 | 25.0 | 27.3 |
| | 30 | 115 | 8.32 | 11.3 | 15.3 | 20.2 | 25.7 | 28.4 | 30.8 |
| | 40 | 115 | 9.88 | 13.4 | 18.2 | 24.7 | 32.9 | 37.2 | 41.0 |
| | 42 | 115 | 16.9 | 22.2 | 28.7 | 35.7 | 42.0 | 44.5 | 46.3 |

Capacity in kW. -40 – 15 °C
Opening superheat sh = 4 K
SI units R407A

| Valve type | Orifice no. | Cond. temp. [°C] | Evaporating temperature [°C] | | | | | | |
|------------|-------------|------------------|------------------------------|------|------|------|------|------|------|
| | | | -40 | -30 | -20 | -10 | 0 | 10 | 15 |
| TGE 10 | 3 | 55 | 3.07 | 4.01 | 5.20 | 6.61 | 8.16 | 9.67 | 10.3 |
| | 4 | 55 | 4.04 | 5.30 | 6.89 | 8.80 | 10.9 | 13.0 | 14.0 |
| | 6 | 55 | 5.74 | 7.56 | 9.87 | 12.6 | 15.7 | 18.7 | 20.1 |
| | 8 | 55 | 7.56 | 9.98 | 13.0 | 16.7 | 20.8 | 24.7 | 26.3 |
| | 9 | 55 | 9.41 | 12.4 | 16.2 | 20.6 | 25.5 | 30.2 | 32.3 |
| | 11 | 55 | 11.0 | 14.9 | 20.0 | 26.0 | 32.1 | 37.0 | 38.6 |
| | 12.5 | 55 | 12.0 | 16.0 | 21.0 | 27.0 | 33.6 | 40.0 | 42.9 |
| TGE 20 | 12.5 | 55 | 11.4 | 15.0 | 19.8 | 25.8 | 32.9 | 40.4 | 44.0 |
| | 16 | 55 | 13.8 | 18.2 | 24.2 | 31.7 | 40.7 | 50.2 | 54.8 |
| | 20 | 55 | 16.9 | 22.3 | 29.4 | 38.1 | 48.5 | 59.5 | 64.7 |
| | 21 | 55 | 27.7 | 36.7 | 47.4 | 58.9 | 69.9 | 78.7 | 81.8 |
| TGE 40 | 26 | 55 | 22.5 | 29.8 | 39.4 | 51.5 | 65.7 | 80.9 | 88.5 |
| | 30 | 55 | 25.3 | 33.6 | 44.5 | 58.2 | 74.3 | 91.5 | 100 |
| | 40 | 55 | 30.3 | 39.9 | 52.7 | 69.9 | 92.6 | 120 | 134 |
| | 42 | 55 | 55.6 | 71.9 | 91.6 | 114 | 136 | 156 | 163 |

Capacity in TR. -40 – 60 °F
Opening superheat sh = 7.2 °F
US units R407A

| Valve type | Orifice no. | Cond. temp. [°F] | Evaporating temperature [°F] | | | | | | |
|------------|-------------|------------------|------------------------------|------|------|------|------|------|------|
| | | | -40 | -20 | 0 | 20 | 40 | 50 | 60 |
| TGE 10 | 3 | 135 | 0.84 | 1.14 | 1.51 | 1.97 | 2.46 | 2.70 | 2.91 |
| | 4 | 135 | 1.11 | 1.50 | 2.01 | 2.62 | 3.28 | 3.61 | 3.90 |
| | 6 | 135 | 1.57 | 2.13 | 2.86 | 3.76 | 4.73 | 5.20 | 5.62 |
| | 8 | 135 | 2.06 | 2.81 | 3.78 | 4.96 | 6.23 | 6.83 | 7.37 |
| | 9 | 135 | 2.56 | 3.50 | 4.70 | 6.13 | 7.67 | 8.40 | 9.08 |
| | 11 | 135 | 2.99 | 4.21 | 5.82 | 7.73 | 9.58 | 10.3 | 10.9 |
| | 12.5 | 135 | 3.24 | 4.48 | 6.09 | 8.03 | 10.1 | 11.1 | 12.0 |
| TGE 20 | 12.5 | 135 | 3.11 | 4.22 | 5.74 | 7.69 | 9.97 | 11.1 | 12.3 |
| | 16 | 135 | 3.76 | 5.12 | 7.00 | 9.44 | 12.3 | 13.8 | 15.3 |
| | 20 | 135 | 4.60 | 6.27 | 8.48 | 11.3 | 14.6 | 16.4 | 18.0 |
| | 21 | 135 | 7.64 | 10.5 | 13.9 | 17.5 | 20.8 | 22.1 | 23.1 |
| TGE 40 | 26 | 135 | 6.12 | 8.4 | 11.4 | 15.3 | 19.9 | 22.3 | 24.7 |
| | 30 | 135 | 6.86 | 9.4 | 12.9 | 17.3 | 22.5 | 25.2 | 27.9 |
| | 40 | 135 | 8.24 | 11.2 | 15.3 | 21.0 | 28.6 | 33.0 | 37.5 |
| | 42 | 135 | 15.4 | 20.6 | 26.9 | 34.0 | 40.9 | 43.8 | 46.3 |

Subcooling correction factor 'fsub'

| Subcooling [K] | 2 | 4 | 10 | 15 | 20 | 25 | 30 |
|-------------------|------|------|------|------|------|------|------|
| Correction factor | 0.98 | 1.00 | 1.07 | 1.12 | 1.18 | 1.24 | 1.29 |

Distributer correction factor 'fp' *

| Pressure drop [bar] Δp | Evaporating temperature [°C] | | | | | | |
|------------------------|------------------------------|------|------|------|------|------|------|
| | -40 | -30 | -20 | -10 | 0 | 10 | 15 |
| 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 0.96 | 0.96 | 0.96 | 0.96 | 0.95 | 0.94 | 0.92 |
| 1.5 | 0.95 | 0.94 | 0.94 | 0.93 | 0.92 | 0.90 | 0.88 |
| 2 | 0.93 | 0.92 | 0.92 | 0.91 | 0.89 | 0.87 | 0.84 |

*Calculated at 32 °C condensing temperature.

Subcooling correction factor 'fsub'

| 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 'fp' *

| Pressure drop [psi] Δp | Evaporating temperature [°F] | | | | | | |
|------------------------|------------------------------|------|------|------|------|------|------|
| | -40 | -20 | 0 | 20 | 40 | 50 | 60 |
| 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 15 | 0.96 | 0.96 | 0.96 | 0.95 | 0.94 | 0.93 | 0.92 |
| 25 | 0.94 | 0.93 | 0.93 | 0.92 | 0.90 | 0.89 | 0.86 |
| 30 | 0.92 | 0.92 | 0.91 | 0.90 | 0.88 | 0.86 | 0.83 |

*Calculated at 90 °F condensing temperature.

Capacity in kW. -40 – 15 °C
Opening superheat sh = 4 K

SI units R404A/R507

| Valve type | Orifice no. | Cond. temp. [°C] | Evaporating temperature [°C] | | | | | | |
|------------|-------------|------------------|------------------------------|------|------|------|------|-------|------|
| | | | -40 | -30 | -20 | -10 | 0 | 10 | 15 |
| TGE 10 | 3 | 25 | 3.13 | 4.03 | 5.00 | 5.92 | 6.53 | 6.41 | 5.88 |
| | 4 | 25 | 4.24 | 5.47 | 6.80 | 8.06 | 8.92 | 8.77 | 8.04 |
| | 6 | 25 | 6.27 | 8.10 | 10.1 | 12.0 | 13.2 | 13.0 | 11.9 |
| | 8 | 25 | 8.54 | 11.0 | 13.7 | 16.2 | 17.8 | 17.3 | 15.8 |
| | 9 | 25 | 10.0 | 12.9 | 16.0 | 19.0 | 21.0 | 20.8 | 19.0 |
| | 11 | 25 | 12.7 | 16.4 | 20.2 | 23.5 | 25.1 | 23.5 | 21.0 |
| | 12.5 | 25 | 13.4 | 17.3 | 21.7 | 25.8 | 28.5 | 28.3 | 25.9 |
| TGE 20 | 16 | 25 | 15.7 | 20.2 | 25.2 | 29.8 | 33.0 | 32.6 | 29.8 |
| | 12.5 | 25 | 12.9 | 17.1 | 21.9 | 26.8 | 30.5 | 30.8 | 28.6 |
| | 16 | 25 | 16.2 | 21.5 | 27.6 | 33.9 | 38.9 | 39.5 | 36.7 |
| | 20 | 25 | 19.9 | 26.1 | 33.2 | 40.3 | 45.5 | 45.12 | 41.5 |
| TGE 40 | 21 | 25 | 26.2 | 33.6 | 41.2 | 47.6 | 50.7 | 47.8 | 42.6 |
| | 26 | 25 | 26.3 | 34.8 | 44.8 | 55.3 | 64.0 | 66.7 | 62.9 |
| | 30 | 25 | 30.0 | 39.6 | 51.0 | 63.0 | 72.8 | 75.7 | 71.3 |
| | 40 | 25 | 36.0 | 47.8 | 62.1 | 77.7 | 90.4 | 91.8 | 84.4 |
| | 42 | 25 | 51.0 | 65.0 | 79.9 | 93.2 | 101 | 95.9 | 85.7 |

Capacity in TR. -40 – 60 °F
Opening superheat sh = 7.2 °F

US units R404A/R507

| Valve type | Orifice no. | Cond. temp. [°F] | Evaporating temperature [°F] | | | | | | |
|------------|-------------|------------------|------------------------------|------|------|------|------|-------|------|
| | | | -40 | -20 | 0 | 20 | 40 | 50 | 60 |
| TGE 10 | 3 | 75 | 0.89 | 1.18 | 1.48 | 1.74 | 1.84 | 1.77 | 1.57 |
| | 4 | 75 | 1.21 | 1.60 | 2.01 | 2.37 | 2.52 | 2.42 | 2.15 |
| | 6 | 75 | 1.79 | 2.37 | 2.99 | 3.53 | 3.74 | 3.59 | 3.18 |
| | 8 | 75 | 2.44 | 3.22 | 4.05 | 4.76 | 5.00 | 4.79 | 4.21 |
| | 9 | 75 | 2.87 | 3.77 | 4.75 | 5.60 | 5.96 | 5.75 | 5.05 |
| | 11 | 75 | 3.63 | 4.79 | 5.96 | 6.84 | 6.93 | 6.49 | 5.58 |
| | 12.5 | 75 | 3.84 | 5.08 | 6.43 | 7.61 | 8.11 | 7.84 | 6.91 |
| TGE 20 | 16 | 75 | 4.50 | 5.93 | 7.47 | 8.81 | 9.36 | 9.02 | 7.92 |
| | 12.5 | 75 | 3.70 | 5.03 | 6.55 | 7.99 | 8.74 | 8.53 | 7.65 |
| | 16 | 75 | 4.63 | 6.32 | 8.26 | 10.2 | 11.2 | 11.0 | 9.85 |
| | 20 | 75 | 5.69 | 7.69 | 9.92 | 12.0 | 13.0 | 12.5 | 11.1 |
| TGE 40 | 21 | 75 | 7.47 | 9.79 | 12.1 | 13.8 | 14.1 | 13.2 | 11.3 |
| | 26 | 75 | 7.54 | 10.2 | 13.4 | 16.6 | 18.7 | 18.6 | 16.9 |
| | 30 | 75 | 8.59 | 11.7 | 15.3 | 18.9 | 21.2 | 21.1 | 19.2 |
| | 40 | 75 | 10.3 | 14.1 | 18.7 | 23.4 | 26.1 | 25.4 | 22.5 |
| | 42 | 75 | 14.5 | 19.0 | 23.5 | 27.2 | 28.0 | 26.42 | 22.6 |

Capacity in kW. -40 – 15 °C
Opening superheat sh = 4 K

SI units R404A/R507

| Valve type | Orifice no. | Cond. temp. [°C] | Evaporating temperature [°C] | | | | | | |
|------------|-------------|------------------|------------------------------|------|------|------|------|------|------|
| | | | -40 | -30 | -20 | -10 | 0 | 10 | 15 |
| TGE 10 | 3 | 35 | 2.91 | 3.83 | 4.87 | 5.98 | 6.97 | 7.52 | 7.50 |
| | 4 | 35 | 3.92 | 5.16 | 6.58 | 8.10 | 9.47 | 10.2 | 10.2 |
| | 6 | 35 | 5.74 | 7.57 | 9.67 | 11.9 | 13.9 | 15.1 | 15.0 |
| | 8 | 35 | 7.75 | 10.2 | 13.0 | 16.0 | 18.6 | 20.0 | 19.8 |
| | 9 | 35 | 9.23 | 12.1 | 15.3 | 18.7 | 21.7 | 23.4 | 23.5 |
| | 11 | 35 | 11.6 | 15.3 | 19.5 | 23.6 | 26.9 | 27.8 | 26.9 |
| | 12.5 | 35 | 12.2 | 16.1 | 20.6 | 25.2 | 29.3 | 31.6 | 31.7 |
| TGE 20 | 16 | 35 | 14.3 | 18.9 | 24.0 | 29.4 | 34.0 | 36.7 | 36.8 |
| | 12.5 | 35 | 11.7 | 15.7 | 20.5 | 26.0 | 31.4 | 35.0 | 35.3 |
| | 16 | 35 | 14.5 | 19.5 | 25.7 | 32.7 | 39.6 | 44.4 | 45.0 |
| | 20 | 35 | 17.8 | 23.8 | 31.0 | 39.0 | 46.7 | 51.5 | 51.6 |
| TGE 40 | 21 | 35 | 24.7 | 32.3 | 40.5 | 48.2 | 53.9 | 55.6 | 54.5 |
| | 26 | 35 | 23.7 | 31.8 | 41.7 | 52.9 | 63.8 | 72.0 | 74.1 |
| | 30 | 35 | 27.0 | 36.1 | 47.4 | 60.1 | 72.4 | 81.6 | 83.8 |
| | 40 | 35 | 31.9 | 43.0 | 57.1 | 74.3 | 92.2 | 104 | 105 |
| | 42 | 35 | 48.5 | 63.0 | 79.1 | 95.0 | 107 | 112 | 111 |

Capacity in TR. -40 – 60 °F
Opening superheat sh = 7.2 °F

US units R404A/R507

| Valve type | Orifice no. | Cond. temp. [°F] | Evaporating temperature [°F] | | | | | | |
|------------|-------------|------------------|------------------------------|------|------|------|------|------|------|
| | | | -40 | -20 | 0 | 20 | 40 | 50 | 60 |
| TGE 10 | 3 | 95 | 0.83 | 1.12 | 1.45 | 1.80 | 2.07 | 2.14 | 2.12 |
| | 4 | 95 | 1.11 | 1.51 | 1.96 | 2.44 | 2.82 | 2.91 | 2.89 |
| | 6 | 95 | 1.63 | 2.21 | 2.89 | 3.59 | 4.14 | 4.28 | 4.25 |
| | 8 | 95 | 2.20 | 2.98 | 3.88 | 4.81 | 5.52 | 5.67 | 5.61 |
| | 9 | 95 | 2.62 | 3.52 | 4.57 | 5.62 | 6.43 | 6.64 | 6.65 |
| | 11 | 95 | 3.28 | 4.47 | 5.80 | 7.06 | 7.84 | 7.88 | 7.60 |
| | 12.5 | 95 | 3.47 | 4.70 | 6.14 | 7.58 | 8.68 | 8.97 | 8.98 |
| TGE 20 | 16 | 95 | 4.07 | 5.50 | 7.15 | 8.81 | 10.1 | 10.4 | 10.4 |
| | 12.5 | 95 | 3.31 | 4.59 | 6.16 | 7.92 | 9.46 | 9.92 | 10.0 |
| | 16 | 95 | 4.11 | 5.72 | 7.70 | 9.95 | 12.0 | 12.6 | 12.8 |
| | 20 | 95 | 5.05 | 6.97 | 9.28 | 11.8 | 14.0 | 14.6 | 14.6 |
| TGE 40 | 21 | 95 | 7.01 | 9.41 | 12.0 | 14.3 | 15.7 | 15.8 | 15.4 |
| | 26 | 95 | 6.73 | 9.30 | 12.5 | 16.1 | 19.3 | 20.4 | 21.1 |
| | 30 | 95 | 7.65 | 10.6 | 14.2 | 18.3 | 21.9 | 23.2 | 23.8 |
| | 40 | 95 | 9.05 | 12.6 | 17.2 | 22.8 | 28.1 | 29.6 | 29.9 |
| | 42 | 95 | 13.8 | 18.4 | 23.5 | 28.3 | 31.4 | 31.9 | 31.3 |

Subcooling correction factor 'fsub'

| Subcooling [K] | 2 | 4 | 10 | 15 | 20 | 25 | 30 |
|-------------------|------|------|------|------|------|------|------|
| Correction factor | 0.97 | 1.00 | 1.08 | 1.15 | 1.22 | 1.29 | 1.36 |

Distributer correction factor 'fp' *

| Pressure drop [bar] Δp | Evaporating temperature [°C] | | | | | | |
|------------------------|------------------------------|------|------|------|------|------|------|
| | -40 | -30 | -20 | -10 | 0 | 10 | 15 |
| | Correction factor | | | | | | |
| 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 0.96 | 0.96 | 0.96 | 0.95 | 0.94 | 0.92 | 0.91 |
| 1.5 | 0.94 | 0.94 | 0.94 | 0.93 | 0.91 | 0.88 | 0.86 |
| 2 | 0.92 | 0.92 | 0.91 | 0.90 | 0.88 | 0.84 | 0.80 |

*Calculated at 32 °C condensing temperature.

Subcooling correction factor 'fsub'

| Subcooling [°F] | 2 | 7 | 10 | 20 | 30 | 40 | 50 |
|-------------------|------|------|------|------|------|------|------|
| Correction factor | 0.96 | 1.00 | 1.02 | 1.10 | 1.18 | 1.25 | 1.33 |

Distributer correction factor 'fp' *

| Pressure drop [psi] Δp | Evaporating temperature [°F] | | | | | | |
|------------------------|------------------------------|------|------|------|------|------|------|
| | -40 | -20 | 0 | 20 | 40 | 50 | 60 |
| | Correction factor | | | | | | |
| 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 15 | 0.96 | 0.96 | 0.96 | 0.95 | 0.93 | 0.92 | 0.90 |
| 25 | 0.94 | 0.93 | 0.92 | 0.91 | 0.89 | 0.87 | 0.83 |
| 30 | 0.92 | 0.92 | 0.91 | 0.89 | 0.86 | 0.84 | 0.79 |

*Calculated at 90 °F condensing temperature.

Capacity in kW. -40 – 15 °C
Opening superheat sh = 4 K
SI units R404A/R507

| Valve type | Orifice no. | Cond. temp. [°C] | Evaporating temperature [°C] | | | | | | |
|------------|-------------|------------------|------------------------------|------|------|------|------|------|------|
| | | | -40 | -30 | -20 | -10 | 0 | 10 | 15 |
| TGE 10 | 3 | 45 | 2.57 | 3.44 | 4.47 | 5.64 | 6.83 | 7.81 | 8.10 |
| | 4 | 45 | 3.43 | 4.61 | 6.00 | 7.58 | 9.22 | 10.6 | 11.0 |
| | 6 | 45 | 4.98 | 6.70 | 8.74 | 11.1 | 13.5 | 15.4 | 16.0 |
| | 8 | 45 | 6.67 | 8.97 | 11.7 | 14.8 | 17.9 | 20.4 | 21.1 |
| | 9 | 45 | 8.01 | 10.7 | 13.9 | 17.4 | 20.8 | 23.6 | 24.5 |
| | 11 | 45 | 9.94 | 13.5 | 17.7 | 22.2 | 26.4 | 29.1 | 29.4 |
| | 12.5 | 45 | 10.5 | 14.1 | 18.5 | 23.3 | 27.9 | 31.6 | 32.8 |
| TGE 20 | 12.5 | 45 | 10.0 | 13.6 | 18.1 | 23.5 | 29.4 | 34.7 | 36.6 |
| | 16 | 45 | 12.3 | 16.8 | 22.4 | 29.2 | 36.8 | 43.8 | 46.3 |
| | 20 | 45 | 15.1 | 20.6 | 27.2 | 35.0 | 43.7 | 51.4 | 54.0 |
| | 21 | 45 | 22.1 | 29.4 | 37.7 | 46.0 | 53.1 | 57.5 | 58.4 |
| TGE 40 | 26 | 45 | 20.2 | 27.5 | 36.6 | 47.5 | 58.9 | 69.4 | 73.9 |
| | 30 | 45 | 22.9 | 31.1 | 41.6 | 53.9 | 66.8 | 78.6 | 83.5 |
| | 40 | 45 | 26.8 | 36.5 | 49.4 | 65.9 | 85.5 | 104 | 110 |
| | 42 | 45 | 44.0 | 58.0 | 74.1 | 91.1 | 106 | 117 | 119 |

Capacity in TR. -40 – 60 °F
Opening superheat sh = 7.2 °F
US units R404A/R507

| Valve type | Orifice no. | Cond. temp. [°F] | Evaporating temperature [°F] | | | | | | |
|------------|-------------|------------------|------------------------------|------|------|------|------|------|------|
| | | | -40 | -20 | 0 | 20 | 40 | 50 | 60 |
| TGE 10 | 3 | 115 | 0.72 | 0.99 | 1.32 | 1.70 | 2.06 | 2.21 | 2.31 |
| | 4 | 115 | 0.96 | 1.33 | 1.77 | 2.28 | 2.78 | 2.99 | 3.12 |
| | 6 | 115 | 1.39 | 1.93 | 2.58 | 3.33 | 4.06 | 4.36 | 4.55 |
| | 8 | 115 | 1.85 | 2.58 | 3.45 | 4.43 | 5.39 | 5.76 | 5.99 |
| | 9 | 115 | 2.23 | 3.06 | 4.09 | 5.20 | 6.24 | 6.65 | 6.95 |
| | 11 | 115 | 2.76 | 3.89 | 5.23 | 6.65 | 7.87 | 8.23 | 8.34 |
| | 12.5 | 115 | 2.91 | 4.05 | 5.45 | 6.97 | 8.37 | 8.92 | 9.33 |
| TGE 20 | 12.5 | 115 | 2.78 | 3.91 | 5.36 | 7.10 | 8.96 | 9.78 | 10.4 |
| | 16 | 115 | 3.42 | 4.84 | 6.64 | 8.85 | 11.2 | 12.3 | 13.1 |
| | 20 | 115 | 4.20 | 5.90 | 8.02 | 10.6 | 13.3 | 14.5 | 15.3 |
| | 21 | 115 | 6.16 | 8.47 | 11.1 | 13.7 | 15.7 | 16.3 | 16.6 |
| TGE 40 | 26 | 115 | 5.60 | 7.89 | 10.8 | 14.3 | 17.9 | 19.5 | 21.0 |
| | 30 | 115 | 6.34 | 8.94 | 12.3 | 16.3 | 20.3 | 22.1 | 23.7 |
| | 40 | 115 | 7.42 | 10.5 | 14.7 | 20.1 | 26.5 | 29.3 | 31.4 |
| | 42 | 115 | 12.3 | 16.7 | 21.9 | 27.2 | 31.6 | 33.1 | 34.0 |

Capacity in kW. -40 – 15 °C
Opening superheat sh = 4 K
SI units R404A/R507

| Valve type | Orifice no. | Cond. temp. [°C] | Evaporating temperature [°C] | | | | | | |
|------------|-------------|------------------|------------------------------|------|------|------|------|------|------|
| | | | -40 | -30 | -20 | -10 | 0 | 10 | 15 |
| TGE 10 | 3 | 55 | 2.13 | 2.91 | 3.83 | 4.92 | 6.11 | 7.25 | 7.72 |
| | 4 | 55 | 2.82 | 3.86 | 5.11 | 6.57 | 8.19 | 9.75 | 10.4 |
| | 6 | 55 | 4.04 | 5.55 | 7.36 | 9.49 | 11.9 | 14.1 | 15.0 |
| | 8 | 55 | 5.36 | 7.37 | 9.77 | 12.6 | 15.7 | 18.6 | 19.8 |
| | 9 | 55 | 6.39 | 8.72 | 11.6 | 14.9 | 18.4 | 21.6 | 23.0 |
| | 11 | 55 | 7.95 | 11.2 | 15.0 | 19.3 | 23.7 | 27.3 | 28.4 |
| | 12.5 | 55 | 8.25 | 11.4 | 15.3 | 19.8 | 24.5 | 28.8 | 30.7 |
| TGE 20 | 12.5 | 55 | 8.07 | 11.1 | 14.9 | 19.6 | 25.0 | 30.7 | 33.3 |
| | 16 | 55 | 9.86 | 13.6 | 18.3 | 24.2 | 31.1 | 38.4 | 41.7 |
| | 20 | 55 | 12.1 | 16.7 | 22.2 | 29.1 | 37.1 | 45.6 | 49.3 |
| | 21 | 55 | 18.3 | 25.0 | 32.8 | 41.0 | 48.5 | 54.3 | 56.3 |
| TGE 40 | 26 | 55 | 15.8 | 21.9 | 29.7 | 39.3 | 50.1 | 61.0 | 66.2 |
| | 30 | 55 | 17.8 | 24.7 | 33.6 | 44.5 | 56.7 | 69.0 | 74.9 |
| | 40 | 55 | 21.0 | 29.0 | 39.6 | 53.8 | 72.0 | 92.2 | 101 |
| | 42 | 55 | 37.1 | 49.9 | 65.2 | 81.9 | 98.0 | 111 | 116 |

Capacity in TR. -40 – 60 °F
Opening superheat sh = 7.2 °F
US units R404A/R507

| Valve type | Orifice no. | Cond. temp. [°F] | Evaporating temperature [°F] | | | | | | |
|------------|-------------|------------------|------------------------------|------|------|------|------|------|------|
| | | | -40 | -20 | 0 | 20 | 40 | 50 | 60 |
| TGE 10 | 3 | 135 | 0.57 | 0.81 | 1.10 | 1.44 | 1.81 | 1.99 | 2.14 |
| | 4 | 135 | 0.76 | 1.08 | 1.47 | 1.93 | 2.43 | 2.67 | 2.87 |
| | 6 | 135 | 1.08 | 1.54 | 2.11 | 2.78 | 3.51 | 3.86 | 4.15 |
| | 8 | 135 | 1.43 | 2.04 | 2.79 | 3.68 | 4.63 | 5.08 | 5.45 |
| | 9 | 135 | 1.69 | 2.40 | 3.31 | 4.36 | 5.43 | 5.93 | 6.38 |
| | 11 | 135 | 2.12 | 3.10 | 4.29 | 5.65 | 6.99 | 7.52 | 7.87 |
| | 12.5 | 135 | 2.18 | 3.13 | 4.36 | 5.78 | 7.23 | 7.89 | 8.49 |
| TGE 20 | 12.5 | 135 | 2.16 | 3.08 | 4.25 | 5.73 | 7.45 | 8.33 | 9.13 |
| | 16 | 135 | 2.63 | 3.77 | 5.23 | 7.08 | 9.27 | 10.4 | 11.4 |
| | 20 | 135 | 3.22 | 4.61 | 6.34 | 8.50 | 11.0 | 12.4 | 13.5 |
| | 21 | 135 | 4.91 | 6.96 | 9.40 | 12.0 | 14.2 | 15.0 | 15.7 |
| TGE 40 | 26 | 135 | 4.16 | 6.00 | 8.46 | 11.5 | 14.8 | 16.5 | 18.2 |
| | 30 | 135 | 4.68 | 6.77 | 9.56 | 13.0 | 16.8 | 18.7 | 20.6 |
| | 40 | 135 | 5.57 | 7.99 | 11.3 | 15.9 | 21.8 | 25.0 | 27.9 |
| | 42 | 135 | 10.0 | 14.0 | 18.8 | 24.0 | 28.8 | 30.8 | 32.4 |

Subcooling correction factor 'fsub'

| Subcooling [K] | 2 | 4 | 10 | 15 | 20 | 25 | 30 |
|-------------------|------|------|------|------|------|------|------|
| Correction factor | 0.97 | 1.00 | 1.08 | 1.15 | 1.22 | 1.29 | 1.36 |

Subcooling correction factor 'fsub'

| Subcooling [°F] | 2 | 7 | 10 | 20 | 30 | 40 | 50 |
|-------------------|------|------|------|------|------|------|------|
| Correction factor | 0.96 | 1.00 | 1.02 | 1.10 | 1.18 | 1.25 | 1.33 |

Distributer correction factor 'fp'*

| Pressure drop [bar] Δp | Evaporating temperature [°C] | | | | | | |
|------------------------|------------------------------|------|------|------|------|------|------|
| | -40 | -30 | -20 | -10 | 0 | 10 | 15 |
| | Correction factor | | | | | | |
| 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 0.96 | 0.96 | 0.96 | 0.95 | 0.94 | 0.92 | 0.91 |
| 1.5 | 0.94 | 0.94 | 0.94 | 0.93 | 0.91 | 0.88 | 0.86 |
| 2 | 0.92 | 0.92 | 0.91 | 0.90 | 0.88 | 0.84 | 0.80 |

*Calculated at 32 °C condensing temperature.

Distributer correction factor 'fp'*

| Pressure drop [psi] Δp | Evaporating temperature [°F] | | | | | | |
|------------------------|------------------------------|------|------|------|------|------|------|
| | -40 | -20 | 0 | 20 | 40 | 50 | 60 |
| | Correction factor | | | | | | |
| 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 15 | 0.96 | 0.96 | 0.96 | 0.95 | 0.93 | 0.92 | 0.90 |
| 25 | 0.94 | 0.93 | 0.92 | 0.91 | 0.89 | 0.87 | 0.83 |
| 30 | 0.92 | 0.92 | 0.91 | 0.89 | 0.86 | 0.84 | 0.79 |

*Calculated at 90 °F condensing temperature.

Capacity in kW. -40 – 15 °C.
Opening superheat sh = 4 K

SI units R407C

| Valve type | Orifice no. | Cond. temp. [°C] | Evaporating temperature [°C] | | | | | | |
|------------|-------------|------------------|------------------------------|------|------|------|------|------|------|
| | | | -40 | -30 | -20 | -10 | 0 | 10 | 15 |
| TGE 10 | 3 | 25 | 4.13 | 5.24 | 6.49 | 7.76 | 8.80 | 9.24 | 9.07 |
| | 4 | 25 | 5.58 | 7.09 | 8.80 | 10.6 | 12.0 | 12.6 | 12.4 |
| | 6 | 25 | 8.23 | 10.5 | 13.0 | 15.6 | 17.8 | 18.7 | 18.3 |
| | 8 | 25 | 11.2 | 14.2 | 17.6 | 21.1 | 23.9 | 24.9 | 24.3 |
| | 9 | 25 | 13.3 | 16.9 | 21.0 | 25.2 | 28.7 | 30.1 | 29.3 |
| | 11 | 25 | 16.5 | 21.2 | 26.3 | 31.1 | 34.2 | 34.4 | 32.9 |
| | 12.5 | 25 | 17.7 | 22.6 | 28.2 | 34.0 | 38.9 | 40.9 | 39.8 |
| TGE 20 | 12.5 | 25 | 16.7 | 21.8 | 27.9 | 34.6 | 40.7 | 44.2 | 44.0 |
| | 16 | 25 | 20.8 | 27.2 | 35.0 | 43.6 | 51.6 | 56.4 | 56.3 |
| | 20 | 25 | 25.7 | 33.4 | 42.5 | 52.2 | 60.8 | 65.2 | 64.4 |
| | 21 | 25 | 35.0 | 44.6 | 55.0 | 64.7 | 71.3 | 71.5 | 67.9 |
| TGE 40 | 26 | 25 | 33.4 | 43.3 | 55.4 | 69.4 | 83.0 | 92.1 | 92.6 |
| | 30 | 25 | 38.1 | 49.3 | 63.1 | 79.0 | 94.4 | 105 | 105 |
| | 40 | 25 | 45.8 | 59.4 | 76.5 | 96.8 | 117 | 129 | 127 |
| | 42 | 25 | 66.1 | 83.1 | 102 | 121 | 136 | 139 | 133 |

Capacity in TR. -40 – 60 °F
Opening superheat sh = 7.2 °F

US units R407C

| Valve type | Orifice no. | Cond. temp. [°F] | Evaporating temperature [°F] | | | | | | |
|------------|-------------|------------------|------------------------------|------|------|------|------|------|------|
| | | | -40 | -20 | 0 | 20 | 40 | 50 | 60 |
| TGE 10 | 3 | 75 | 1.17 | 1.52 | 1.92 | 2.30 | 2.55 | 2.57 | 2.49 |
| | 4 | 75 | 1.59 | 2.07 | 2.61 | 3.13 | 3.48 | 3.52 | 3.41 |
| | 6 | 75 | 2.35 | 3.05 | 3.86 | 4.63 | 5.15 | 5.21 | 5.04 |
| | 8 | 75 | 3.19 | 4.15 | 5.23 | 6.26 | 6.91 | 6.95 | 6.70 |
| | 9 | 75 | 3.79 | 4.92 | 6.21 | 7.48 | 8.34 | 8.40 | 8.04 |
| | 11 | 75 | 4.72 | 6.18 | 7.77 | 9.13 | 9.72 | 9.57 | 9.02 |
| | 12.5 | 75 | 5.04 | 6.59 | 8.37 | 10.1 | 11.3 | 11.4 | 10.9 |
| TGE 20 | 12.5 | 75 | 4.76 | 6.39 | 8.35 | 10.4 | 12.0 | 12.4 | 12.2 |
| | 16 | 75 | 5.94 | 8.00 | 10.5 | 13.2 | 15.3 | 15.8 | 15.6 |
| | 20 | 75 | 7.33 | 9.79 | 12.7 | 15.7 | 17.9 | 18.2 | 17.8 |
| | 21 | 75 | 9.93 | 13.0 | 16.2 | 19.0 | 20.3 | 19.9 | 18.5 |
| TGE 40 | 26 | 75 | 9.54 | 12.7 | 16.6 | 21.0 | 24.8 | 25.8 | 25.6 |
| | 30 | 75 | 10.9 | 14.5 | 18.9 | 23.9 | 28.2 | 29.3 | 29.1 |
| | 40 | 75 | 13.1 | 17.5 | 23.0 | 29.5 | 35.0 | 36.0 | 34.9 |
| | 42 | 75 | 18.7 | 24.1 | 30.1 | 35.7 | 38.8 | 38.6 | 36.2 |

Capacity in kW. -40 – 15 °C.
Opening superheat sh = 4 K

SI units R407C

| Valve type | Orifice no. | Cond. temp. [°C] | Evaporating temperature [°C] | | | | | | |
|------------|-------------|------------------|------------------------------|------|------|------|------|------|------|
| | | | -40 | -30 | -20 | -10 | 0 | 10 | 15 |
| TGE 10 | 3 | 35 | 4.00 | 5.14 | 6.49 | 7.96 | 9.36 | 10.4 | 10.7 |
| | 4 | 35 | 5.37 | 6.91 | 8.74 | 10.8 | 12.7 | 14.1 | 14.5 |
| | 6 | 35 | 7.84 | 10.1 | 12.8 | 15.8 | 18.6 | 20.8 | 21.3 |
| | 8 | 35 | 10.5 | 13.6 | 17.2 | 21.2 | 24.9 | 27.6 | 28.2 |
| | 9 | 35 | 12.7 | 16.3 | 20.6 | 25.3 | 29.8 | 33.2 | 34.0 |
| | 11 | 35 | 15.6 | 20.3 | 26.0 | 31.8 | 36.6 | 38.9 | 38.9 |
| | 12.5 | 35 | 16.7 | 21.6 | 27.5 | 33.9 | 40.1 | 44.7 | 45.8 |
| TGE 20 | 12.5 | 35 | 15.7 | 20.6 | 26.8 | 34.0 | 41.5 | 47.8 | 49.9 |
| | 16 | 35 | 19.4 | 25.6 | 33.4 | 42.5 | 52.2 | 60.5 | 63.3 |
| | 20 | 35 | 23.9 | 31.3 | 40.5 | 51.0 | 61.9 | 70.7 | 73.3 |
| | 21 | 35 | 34.6 | 44.6 | 55.8 | 67.1 | 76.3 | 81.2 | 81.2 |
| TGE 40 | 26 | 35 | 31.5 | 41.0 | 53.1 | 67.6 | 83.2 | 97.2 | 103 |
| | 30 | 35 | 35.7 | 46.5 | 60.3 | 76.8 | 94.4 | 110 | 116 |
| | 40 | 35 | 42.5 | 55.6 | 72.5 | 93.9 | 119 | 142 | 148 |
| | 42 | 35 | 66.3 | 84.1 | 105 | 127 | 146 | 158 | 160 |

Capacity in TR. -40 – 60 °F
Opening superheat sh = 7.2 °F

US units R407C

| Valve type | Orifice no. | Cond. temp. [°F] | Evaporating temperature [°F] | | | | | | |
|------------|-------------|------------------|------------------------------|------|------|------|------|------|------|
| | | | -40 | -20 | 0 | 20 | 40 | 50 | 60 |
| TGE 10 | 3 | 95 | 1.14 | 1.50 | 1.93 | 2.40 | 2.81 | 2.95 | 3.04 |
| | 4 | 95 | 1.52 | 2.02 | 2.61 | 3.24 | 3.81 | 4.01 | 4.13 |
| | 6 | 95 | 2.23 | 2.95 | 3.82 | 4.76 | 5.60 | 5.90 | 6.06 |
| | 8 | 95 | 2.99 | 3.97 | 5.13 | 6.38 | 7.47 | 7.83 | 8.01 |
| | 9 | 95 | 3.62 | 4.77 | 6.15 | 7.64 | 8.96 | 9.43 | 9.67 |
| | 11 | 95 | 4.42 | 5.94 | 7.74 | 9.53 | 10.8 | 11.1 | 11.0 |
| | 12.5 | 95 | 4.75 | 6.31 | 8.20 | 10.2 | 12.1 | 12.7 | 13.0 |
| TGE 20 | 12.5 | 95 | 4.46 | 6.04 | 8.05 | 10.4 | 12.7 | 13.6 | 14.2 |
| | 16 | 95 | 5.51 | 7.48 | 10.0 | 13.0 | 16.0 | 17.2 | 18.1 |
| | 20 | 95 | 6.79 | 9.16 | 12.1 | 15.5 | 18.8 | 20.1 | 20.9 |
| | 21 | 95 | 9.81 | 13.0 | 16.6 | 20.0 | 22.5 | 23.1 | 23.0 |
| TGE 40 | 26 | 95 | 8.93 | 12.0 | 16.0 | 20.7 | 25.5 | 27.6 | 29.2 |
| | 30 | 95 | 10.1 | 13.6 | 18.1 | 23.5 | 28.9 | 31.3 | 33.1 |
| | 40 | 95 | 12.1 | 16.3 | 21.8 | 29.0 | 36.8 | 40.2 | 42.3 |
| | 42 | 95 | 18.8 | 24.5 | 31.1 | 37.9 | 43.4 | 45.0 | 45.4 |

Subcooling correction factor 'fsub'

| Subcooling [K] | 2 | 4 | 10 | 15 | 20 | 25 | 30 |
|-------------------|------|------|------|------|------|------|------|
| Correction factor | 0.98 | 1.00 | 1.06 | 1.12 | 1.17 | 1.22 | 1.27 |

Subcooling correction factor 'fsub'

| Subcooling [°F] | 2 | 7 | 10 | 20 | 30 | 40 | 50 |
|-------------------|------|------|------|------|------|------|------|
| Correction factor | 0.97 | 1.00 | 1.02 | 1.08 | 1.14 | 1.19 | 1.25 |

Distributer correction factor 'fp'*

| Pressure drop [bar] Δp | Evaporating temperature [°C] | | | | | | |
|------------------------|------------------------------|------|------|------|------|------|------|
| | -40 | -30 | -20 | -10 | 0 | 10 | 15 |
| 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 0.96 | 0.96 | 0.96 | 0.95 | 0.95 | 0.93 | 0.92 |
| 1.5 | 0.94 | 0.94 | 0.94 | 0.93 | 0.92 | 0.90 | 0.88 |
| 2 | 0.92 | 0.92 | 0.91 | 0.91 | 0.89 | 0.86 | 0.84 |

*Calculated at 32 °C condensing temperature.

Distributer correction factor 'fp'*

| Pressure drop [psi] Δp | Evaporating temperature [°F] | | | | | | |
|------------------------|------------------------------|------|------|------|------|------|------|
| | -40 | -20 | 0 | 20 | 40 | 50 | 60 |
| 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 15 | 0.96 | 0.96 | 0.96 | 0.95 | 0.94 | 0.93 | 0.92 |
| 25 | 0.93 | 0.93 | 0.93 | 0.92 | 0.90 | 0.88 | 0.86 |
| 30 | 0.92 | 0.92 | 0.91 | 0.90 | 0.88 | 0.86 | 0.83 |

*Calculated at 90 °C condensing temperature.

Capacity in kW. -40 – 15 °C.
Opening superheat sh = 4 K

SI units R407C

| Valve type | Orifice no. | Cond. temp. [°C] | Evaporating temperature [°C] | | | | | | |
|------------|-------------|------------------|------------------------------|------|------|------|------|------|------|
| | | | -40 | -30 | -20 | -10 | 0 | 10 | 15 |
| TGE 10 | 3 | 45 | 3.75 | 4.85 | 6.20 | 7.75 | 9.36 | 10.8 | 11.4 |
| | 4 | 45 | 4.98 | 6.47 | 8.29 | 10.4 | 12.6 | 14.6 | 15.4 |
| | 6 | 45 | 7.19 | 9.35 | 12.0 | 15.1 | 18.4 | 21.3 | 22.4 |
| | 8 | 45 | 9.57 | 12.5 | 16.0 | 20.2 | 24.4 | 28.1 | 29.5 |
| | 9 | 45 | 11.8 | 15.3 | 19.5 | 24.4 | 29.5 | 33.9 | 35.7 |
| | 11 | 45 | 14.1 | 18.7 | 24.4 | 30.8 | 36.8 | 40.8 | 41.8 |
| | 12.5 | 45 | 15.2 | 19.9 | 25.7 | 32.4 | 39.3 | 45.4 | 47.7 |
| TGE 20 | 12.5 | 45 | 14.3 | 18.8 | 24.6 | 31.7 | 39.7 | 47.4 | 50.8 |
| | 16 | 45 | 17.5 | 23.1 | 30.3 | 39.3 | 49.4 | 59.5 | 63.8 |
| | 20 | 45 | 21.5 | 28.3 | 36.8 | 47.2 | 58.9 | 70.1 | 74.8 |
| | 21 | 45 | 33.1 | 43.2 | 54.8 | 66.9 | 77.8 | 85.4 | 87.6 |
| TGE 40 | 26 | 45 | 28.6 | 37.5 | 49.0 | 63.1 | 79.1 | 95.2 | 103 |
| | 30 | 45 | 32.3 | 42.4 | 55.4 | 71.5 | 89.6 | 108 | 116 |
| | 40 | 45 | 38.3 | 50.2 | 65.9 | 86.6 | 113 | 141 | 154 |
| | 42 | 45 | 64.8 | 82.7 | 104 | 127 | 150 | 168 | 174 |

Capacity in TR. -40 – 60 °F
Opening superheat sh = 7.2 °F

US units R407C

| Valve type | Orifice no. | Cond. temp. [°F] | Evaporating temperature [°F] | | | | | | |
|------------|-------------|------------------|------------------------------|------|------|------|------|------|------|
| | | | -40 | -20 | 0 | 20 | 40 | 50 | 60 |
| TGE 10 | 3 | 115 | 1.05 | 1.40 | 1.84 | 2.34 | 2.84 | 3.07 | 3.25 |
| | 4 | 115 | 1.40 | 1.87 | 2.46 | 3.14 | 3.83 | 4.14 | 4.39 |
| | 6 | 115 | 2.02 | 2.70 | 3.56 | 4.56 | 5.58 | 6.02 | 6.38 |
| | 8 | 115 | 2.68 | 3.60 | 4.75 | 6.08 | 7.40 | 7.96 | 8.40 |
| | 9 | 115 | 3.30 | 4.41 | 5.79 | 7.37 | 8.94 | 9.63 | 10.2 |
| | 11 | 115 | 3.94 | 5.41 | 7.26 | 9.29 | 11.0 | 11.6 | 11.9 |
| | 12.5 | 115 | 4.27 | 5.76 | 7.63 | 9.78 | 11.9 | 12.9 | 13.6 |
| TGE 20 | 12.5 | 115 | 4.01 | 5.43 | 7.31 | 9.64 | 12.2 | 13.4 | 14.5 |
| | 16 | 115 | 4.90 | 6.66 | 9.02 | 12.0 | 15.2 | 16.8 | 18.2 |
| | 20 | 115 | 6.02 | 8.15 | 10.9 | 14.3 | 18.0 | 19.8 | 21.3 |
| | 21 | 115 | 9.33 | 12.5 | 16.3 | 20.0 | 23.2 | 24.3 | 25.0 |
| TGE 40 | 26 | 115 | 8.01 | 10.8 | 14.6 | 19.2 | 24.3 | 26.9 | 29.2 |
| | 30 | 115 | 9.04 | 12.2 | 16.5 | 21.7 | 27.6 | 30.4 | 33.1 |
| | 40 | 115 | 10.7 | 14.5 | 19.6 | 26.6 | 35.3 | 39.9 | 44.0 |
| | 42 | 115 | 18.3 | 24.0 | 30.9 | 38.3 | 45.1 | 47.8 | 49.6 |

Capacity in kW. -40 – 15 °C.
Opening superheat sh = 4 K

SI units R407C

| Valve type | Orifice no. | Cond. temp. [°C] | Evaporating temperature [°C] | | | | | | |
|------------|-------------|------------------|------------------------------|------|------|------|------|------|------|
| | | | -40 | -30 | -20 | -10 | 0 | 10 | 15 |
| TGE 10 | 3 | 55 | 3.39 | 4.41 | 5.68 | 7.20 | 8.86 | 10.5 | 11.2 |
| | 4 | 55 | 4.46 | 5.82 | 7.54 | 9.59 | 11.8 | 14.1 | 15.0 |
| | 6 | 55 | 6.35 | 8.31 | 10.8 | 13.8 | 17.1 | 20.3 | 21.7 |
| | 8 | 55 | 8.36 | 11.0 | 14.3 | 18.2 | 22.6 | 26.7 | 28.5 |
| | 9 | 55 | 10.4 | 13.6 | 17.7 | 22.5 | 27.7 | 32.7 | 35.0 |
| | 11 | 55 | 12.2 | 16.4 | 21.9 | 28.3 | 34.8 | 40.1 | 41.8 |
| | 12.5 | 55 | 13.2 | 17.5 | 23.0 | 29.5 | 36.5 | 43.4 | 46.4 |
| TGE 20 | 12.5 | 55 | 12.6 | 16.5 | 21.6 | 28.1 | 35.8 | 43.8 | 47.7 |
| | 16 | 55 | 15.3 | 20.0 | 26.4 | 34.5 | 44.2 | 54.4 | 59.4 |
| | 20 | 55 | 18.7 | 24.5 | 32.1 | 41.5 | 52.6 | 64.4 | 70.0 |
| | 21 | 55 | 30.6 | 40.3 | 51.8 | 64.2 | 75.9 | 85.3 | 88.7 |
| TGE 40 | 26 | 55 | 24.9 | 32.8 | 43.1 | 56.1 | 71.3 | 87.7 | 95.8 |
| | 30 | 55 | 28.0 | 36.9 | 48.6 | 63.4 | 80.7 | 99.1 | 108 |
| | 40 | 55 | 33.5 | 43.8 | 57.6 | 76.1 | 101 | 130 | 145 |
| | 42 | 55 | 61.5 | 79.0 | 100 | 124 | 148 | 169 | 177 |

Capacity in TR. -40 – 60 °F
Opening superheat sh = 7.2 °F

US units R407C

| Valve type | Orifice no. | Cond. temp. [°F] | Evaporating temperature [°F] | | | | | | |
|------------|-------------|------------------|------------------------------|------|------|------|------|------|-------|
| | | | -40 | -20 | 0 | 20 | 40 | 50 | 60 |
| TGE 10 | 3 | 135 | 0.94 | 1.25 | 1.66 | 2.15 | 2.68 | 2.93 | 3.16 |
| | 4 | 135 | 1.23 | 1.65 | 2.20 | 2.86 | 3.58 | 3.92 | 4.24 |
| | 6 | 135 | 1.74 | 2.35 | 3.14 | 4.10 | 5.15 | 5.66 | 6.11 |
| | 8 | 135 | 2.29 | 3.10 | 4.15 | 5.42 | 6.78 | 7.43 | 8.01 |
| | 9 | 135 | 2.85 | 3.86 | 5.16 | 6.70 | 8.35 | 9.14 | 9.87 |
| | 11 | 135 | 3.32 | 4.64 | 6.39 | 8.44 | 10.4 | 11.2 | 11.80 |
| | 12.5 | 135 | 3.60 | 4.95 | 6.69 | 8.77 | 11.0 | 12.1 | 13.1 |
| TGE 20 | 12.5 | 135 | 3.46 | 4.66 | 6.30 | 8.40 | 10.9 | 12.1 | 13.4 |
| | 16 | 135 | 4.18 | 5.65 | 7.69 | 10.3 | 13.4 | 15.0 | 16.6 |
| | 20 | 135 | 5.12 | 6.92 | 9.31 | 12.4 | 15.9 | 17.8 | 19.6 |
| | 21 | 135 | 8.49 | 11.6 | 15.2 | 19.1 | 22.6 | 24.0 | 25.1 |
| TGE 40 | 26 | 135 | 6.80 | 9.24 | 12.5 | 16.7 | 21.6 | 24.2 | 26.8 |
| | 30 | 135 | 7.63 | 10.4 | 14.1 | 18.9 | 24.5 | 27.4 | 30.3 |
| | 40 | 135 | 9.16 | 12.4 | 16.8 | 22.9 | 31.1 | 35.9 | 40.7 |
| | 42 | 135 | 17.2 | 22.7 | 29.5 | 37.1 | 44.5 | 47.7 | 50.3 |

Subcooling correction factor 'fsub'

| Subcooling [K] | 2 | 4 | 10 | 15 | 20 | 25 | 30 |
|-------------------|------|------|------|------|------|------|------|
| Correction factor | 0.98 | 1.00 | 1.06 | 1.12 | 1.17 | 1.22 | 1.27 |

Subcooling correction factor 'fsub'

| Subcooling [°F] | 2 | 7 | 10 | 20 | 30 | 40 | 50 |
|-------------------|------|------|------|------|------|------|------|
| Correction factor | 0.97 | 1.00 | 1.02 | 1.08 | 1.14 | 1.19 | 1.25 |

Distributer correction factor 'fp'*

| Pressure drop [bar] Δp | Evaporating temperature [°C] | | | | | | |
|------------------------|------------------------------|------|------|------|------|------|------|
| | -40 | -30 | -20 | -10 | 0 | 10 | 15 |
| 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 0.96 | 0.96 | 0.96 | 0.95 | 0.95 | 0.93 | 0.92 |
| 1.5 | 0.94 | 0.94 | 0.94 | 0.93 | 0.92 | 0.90 | 0.88 |
| 2 | 0.92 | 0.92 | 0.91 | 0.91 | 0.89 | 0.86 | 0.84 |

*Calculated at 32 °C condensing temperature.

Distributer correction factor 'fp'*

| Pressure drop [psi] Δp | Evaporating temperature [°F] | | | | | | |
|------------------------|------------------------------|------|------|------|------|------|------|
| | -40 | -20 | 0 | 20 | 40 | 50 | 60 |
| 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 15 | 0.96 | 0.96 | 0.96 | 0.95 | 0.94 | 0.93 | 0.92 |
| 25 | 0.93 | 0.93 | 0.93 | 0.92 | 0.90 | 0.88 | 0.86 |
| 30 | 0.92 | 0.92 | 0.91 | 0.90 | 0.88 | 0.86 | 0.83 |

*Calculated at 90 °F condensing temperature.

Capacity in kW. -40 – 15 °C
Opening superheat sh = 4 K

SI units R290

| Valve type | Orifice no. | Cond. temp. [°C] | Evaporating temperature [°C] | | | | | | |
|------------|-------------|------------------|------------------------------|------|------|------|------|------|------|
| | | | -40 | -30 | -20 | -10 | 0 | 10 | 15 |
| TGE 10 | 3 | 25 | 4.76 | 5.99 | 7.27 | 8.42 | 9.14 | 8.85 | 8.03 |
| | 4 | 25 | 6.47 | 8.15 | 9.90 | 11.5 | 12.5 | 12.1 | 11.0 |
| | 6 | 25 | 9.60 | 12.1 | 14.7 | 17.1 | 18.6 | 18.0 | 16.3 |
| | 8 | 25 | 13.1 | 16.5 | 20.0 | 23.1 | 25.0 | 24.0 | 21.6 |
| | 9 | 25 | 15.3 | 19.4 | 23.6 | 27.5 | 29.9 | 29.0 | 26.0 |
| | 11 | 25 | 19.5 | 24.5 | 29.5 | 33.4 | 35.0 | 32.5 | 28.7 |
| | 12.5 | 25 | 19.9 | 25.1 | 30.6 | 35.8 | 39.0 | 38.0 | 34.3 |
| TGE 20 | 12.5 | 25 | 18.5 | 23.7 | 29.6 | 35.4 | 39.7 | 39.7 | 36.5 |
| | 16 | 25 | 23.2 | 29.9 | 37.4 | 45.0 | 50.7 | 50.9 | 47.0 |
| | 20 | 25 | 28.7 | 36.6 | 45.3 | 53.7 | 59.7 | 58.8 | 53.6 |
| | 21 | 25 | 36.6 | 45.9 | 55.4 | 63.3 | 67.1 | 63.0 | 55.8 |
| TGE 40 | 26 | 25 | 39.3 | 51.2 | 64.5 | 78.1 | 89.0 | 90.5 | 83.9 |
| | 30 | 25 | 44.8 | 58.4 | 73.6 | 89.1 | 101 | 103 | 95.2 |
| | 40 | 25 | 53.9 | 70.2 | 89.3 | 109 | 125 | 125 | 114 |
| | 42 | 25 | 72.9 | 91.5 | 111 | 128 | 136 | 129 | 115 |

Capacity in TR. -40 – 60 °F
Opening superheat sh = 7.2 °F

US units R290

| Valve type | Orifice no. | Cond. temp. [°F] | Evaporating temperature [°F] | | | | | | |
|------------|-------------|------------------|------------------------------|------|------|------|------|------|------|
| | | | -40 | -20 | 0 | 20 | 40 | 50 | 60 |
| TGE 10 | 3 | 75 | 1.35 | 1.74 | 2.13 | 2.45 | 2.55 | 2.44 | 2.12 |
| | 4 | 75 | 1.84 | 2.37 | 2.90 | 3.35 | 3.49 | 3.34 | 2.91 |
| | 6 | 75 | 2.73 | 3.52 | 4.32 | 4.99 | 5.19 | 4.95 | 4.31 |
| | 8 | 75 | 3.73 | 4.79 | 5.87 | 6.74 | 6.96 | 6.61 | 5.72 |
| | 9 | 75 | 4.37 | 5.63 | 6.94 | 8.03 | 8.37 | 7.98 | 6.85 |
| | 11 | 75 | 5.54 | 7.12 | 8.61 | 9.63 | 9.59 | 8.92 | 7.58 |
| | 12.5 | 75 | 5.65 | 7.29 | 9.02 | 10.5 | 11.0 | 10.5 | 9.03 |
| TGE 20 | 12.5 | 75 | 5.26 | 6.91 | 8.76 | 10.5 | 11.3 | 10.9 | 9.71 |
| | 16 | 75 | 6.62 | 8.73 | 11.1 | 13.3 | 14.5 | 14.1 | 12.5 |
| | 20 | 75 | 8.17 | 10.7 | 13.4 | 15.8 | 16.9 | 16.2 | 14.2 |
| | 21 | 75 | 10.4 | 13.3 | 16.2 | 18.3 | 18.5 | 17.3 | 14.7 |
| TGE 40 | 26 | 75 | 11.2 | 15.0 | 19.2 | 23.3 | 25.6 | 25.0 | 22.3 |
| | 30 | 75 | 12.8 | 17.1 | 21.9 | 26.5 | 29.1 | 28.5 | 25.3 |
| | 40 | 75 | 15.4 | 20.6 | 26.6 | 32.6 | 35.6 | 34.4 | 30.1 |
| | 42 | 75 | 20.7 | 26.5 | 32.4 | 37.0 | 37.8 | 35.5 | 30.3 |

Capacity in kW. -40 – 15 °C
Opening superheat sh = 4 K

SI units R290

| Valve type | Orifice no. | Cond. temp. [°C] | Evaporating temperature [°C] | | | | | | |
|------------|-------------|------------------|------------------------------|------|------|------|------|------|------|
| | | | -40 | -30 | -20 | -10 | 0 | 10 | 15 |
| TGE 10 | 3 | 35 | 4.68 | 5.98 | 7.40 | 8.84 | 10.1 | 10.8 | 10.7 |
| | 4 | 35 | 6.32 | 8.08 | 10.0 | 12.0 | 13.7 | 14.7 | 14.6 |
| | 6 | 35 | 9.30 | 11.9 | 14.8 | 17.7 | 20.3 | 21.6 | 21.4 |
| | 8 | 35 | 12.6 | 16.1 | 20.0 | 23.8 | 27.1 | 28.7 | 28.4 |
| | 9 | 35 | 14.8 | 19.0 | 23.6 | 28.2 | 32.1 | 34.1 | 34.0 |
| | 11 | 35 | 18.8 | 24.2 | 29.8 | 35.1 | 38.8 | 39.6 | 38.3 |
| | 12.5 | 35 | 19.0 | 24.4 | 30.4 | 36.5 | 41.7 | 44.5 | 44.3 |
| TGE 20 | 12.5 | 35 | 17.7 | 23.0 | 29.2 | 36.0 | 42.6 | 46.9 | 47.2 |
| | 16 | 35 | 22.2 | 28.8 | 36.7 | 45.5 | 54.0 | 59.8 | 60.4 |
| | 20 | 35 | 27.3 | 35.3 | 44.5 | 54.4 | 63.8 | 69.6 | 69.7 |
| | 21 | 35 | 36.4 | 46.3 | 56.8 | 66.7 | 74.0 | 76.3 | 74.6 |
| TGE 40 | 26 | 35 | 36.8 | 48.6 | 62.3 | 77.6 | 92.8 | 104 | 106 |
| | 30 | 35 | 41.9 | 55.3 | 70.9 | 88.3 | 106 | 118 | 120 |
| | 40 | 35 | 50.5 | 66.5 | 86.1 | 109 | 132 | 147 | 148 |
| | 42 | 35 | 73.3 | 93.1 | 115 | 135 | 151 | 157 | 155 |

Capacity in TR. -40 – 60 °F
Opening superheat sh = 7.2 °F

US units R290

| Valve type | Orifice no. | Cond. temp. [°F] | Evaporating temperature [°F] | | | | | | |
|------------|-------------|------------------|------------------------------|------|------|------|------|------|------|
| | | | -40 | -20 | 0 | 20 | 40 | 50 | 60 |
| TGE 10 | 3 | 95 | 1.33 | 1.74 | 2.19 | 2.64 | 2.98 | 3.05 | 3.02 |
| | 4 | 95 | 1.79 | 2.35 | 2.97 | 3.59 | 4.06 | 4.16 | 4.12 |
| | 6 | 95 | 2.64 | 3.47 | 4.39 | 5.30 | 5.99 | 6.14 | 6.07 |
| | 8 | 95 | 3.57 | 4.69 | 5.92 | 7.12 | 7.99 | 8.16 | 8.02 |
| | 9 | 95 | 4.21 | 5.53 | 7.00 | 8.42 | 9.46 | 9.69 | 9.62 |
| | 11 | 95 | 5.33 | 7.04 | 8.81 | 10.4 | 11.3 | 11.2 | 10.8 |
| | 12.5 | 95 | 5.40 | 7.10 | 9.03 | 10.9 | 12.3 | 12.6 | 12.6 |
| TGE 20 | 12.5 | 95 | 6.33 | 8.30 | 10.5 | 12.7 | 14.3 | 14.6 | 14.5 |
| | 16 | 95 | 8.30 | 10.5 | 12.7 | 14.3 | 14.6 | 14.5 | 14.5 |
| | 20 | 95 | 10.3 | 13.5 | 16.8 | 19.8 | 21.5 | 21.7 | 21.1 |
| | 21 | 95 | 10.3 | 13.5 | 16.8 | 19.8 | 21.5 | 21.7 | 21.1 |
| TGE 40 | 26 | 95 | 10.5 | 14.2 | 18.6 | 23.5 | 28.0 | 29.5 | 30.0 |
| | 30 | 95 | 11.9 | 16.2 | 21.2 | 26.8 | 31.8 | 33.5 | 34.0 |
| | 40 | 95 | 14.3 | 19.4 | 25.8 | 33.2 | 39.9 | 41.8 | 41.9 |
| | 42 | 95 | 20.8 | 27.1 | 33.9 | 40.2 | 44.2 | 44.7 | 43.7 |

Subcooling correction factor 'fsub'

| Subcooling [K] | 2 | 4 | 10 | 15 | 20 | 25 | 30 |
|-------------------|------|------|------|------|------|------|------|
| Correction factor | 0.98 | 1.00 | 1.06 | 1.11 | 1.16 | 1.21 | 1.26 |

Subcooling correction factor 'fsub'

| Subcooling [°F] | 2 | 7 | 10 | 20 | 30 | 40 | 50 |
|-------------------|------|------|------|------|------|------|------|
| Correction factor | 0.97 | 1.00 | 1.02 | 1.07 | 1.13 | 1.18 | 1.24 |

Distributer correction factor 'fp' *

| Pressure drop [bar] Δp | Evaporating temperature [°C] | | | | | | |
|------------------------|------------------------------|------|------|------|------|------|------|
| | -40 | -30 | -20 | -10 | 0 | 10 | 15 |
| | Correction factor | | | | | | |
| 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 0.95 | 0.95 | 0.94 | 0.93 | 0.92 | 0.89 | 0.87 |
| 1.5 | 0.92 | 0.92 | 0.91 | 0.90 | 0.88 | 0.84 | 0.79 |
| 2 | 0.90 | 0.89 | 0.88 | 0.86 | 0.83 | 0.77 | 0.71 |

*Calculated at 32 °C condensing temperature.

Distributer correction factor 'fp' *

| Pressure drop [psi] Δp | Evaporating temperature [°F] | | | | | | |
|------------------------|------------------------------|------|------|------|------|------|------|
| | -40 | -20 | 0 | 20 | 40 | 50 | 60 |
| | Correction factor | | | | | | |
| 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 15 | 0.95 | 0.94 | 0.94 | 0.93 | 0.91 | 0.89 | 0.86 |
| 25 | 0.91 | 0.91 | 0.90 | 0.88 | 0.84 | 0.81 | 0.75 |
| 30 | 0.89 | 0.89 | 0.87 | 0.85 | 0.81 | 0.77 | 0.69 |

*Calculated at 90 °F condensing temperature.

Capacity in kW, -40 – 15 °C
Opening superheat sh = 4 K
SI units R290

| Valve type | Orifice no. | Cond. temp. [°C] | Evaporating temperature [°C] | | | | | | |
|------------|-------------|------------------|------------------------------|------|------|------|------|------|------|
| | | | -40 | -30 | -20 | -10 | 0 | 10 | 15 |
| TGE 10 | 3 | 45 | 4.48 | 5.78 | 7.25 | 8.85 | 10.4 | 11.7 | 12.1 |
| | 4 | 45 | 6.00 | 7.76 | 9.76 | 11.9 | 14.1 | 15.9 | 16.4 |
| | 6 | 45 | 8.73 | 11.3 | 14.3 | 17.5 | 20.7 | 23.2 | 24.0 |
| | 8 | 45 | 11.7 | 15.2 | 19.2 | 23.4 | 27.6 | 30.8 | 31.6 |
| | 9 | 45 | 13.8 | 18.0 | 22.7 | 27.7 | 32.5 | 36.2 | 37.4 |
| | 11 | 45 | 17.5 | 23.0 | 29.0 | 35.0 | 40.3 | 43.4 | 43.7 |
| | 12.5 | 45 | 17.5 | 22.8 | 29.0 | 35.7 | 42.0 | 46.9 | 48.5 |
| TGE 20 | 16 | 45 | 20.6 | 26.7 | 33.9 | 41.5 | 48.8 | 54.6 | 56.5 |
| | 12.5 | 45 | 16.5 | 21.6 | 27.7 | 34.8 | 42.4 | 49.2 | 51.7 |
| | 16 | 45 | 20.5 | 26.8 | 34.5 | 43.6 | 53.4 | 62.3 | 65.6 |
| | 20 | 45 | 25.3 | 32.9 | 41.9 | 52.4 | 63.4 | 73.2 | 76.6 |
| TGE 40 | 21 | 45 | 35.0 | 45.1 | 56.3 | 67.4 | 76.9 | 83.0 | 84.2 |
| | 26 | 45 | 33.5 | 44.6 | 57.8 | 73.3 | 90.3 | 107 | 113 |
| | 30 | 45 | 37.9 | 50.6 | 65.6 | 83.2 | 103 | 121 | 128 |
| | 40 | 45 | 45.8 | 60.8 | 79.7 | 103 | 130 | 155 | 163 |
| | 42 | 45 | 71.5 | 91.8 | 115 | 138 | 158 | 172 | 175 |

Capacity in TR, -40 – 60 °F
Opening superheat sh = 7.2 °F
US units R290

| Valve type | Orifice no. | Cond. temp. [°F] | Evaporating temperature [°F] | | | | | | |
|------------|-------------|------------------|------------------------------|------|------|------|------|------|------|
| | | | -40 | -20 | 0 | 20 | 40 | 50 | 60 |
| TGE 10 | 3 | 115 | 1.26 | 1.67 | 2.15 | 2.66 | 3.14 | 3.33 | 3.46 |
| | 4 | 115 | 1.69 | 2.25 | 2.89 | 3.59 | 4.25 | 4.52 | 4.70 |
| | 6 | 115 | 2.46 | 3.28 | 4.23 | 5.26 | 6.23 | 6.62 | 6.87 |
| | 8 | 115 | 3.30 | 4.40 | 5.67 | 7.02 | 8.28 | 8.76 | 9.06 |
| | 9 | 115 | 3.88 | 5.19 | 6.72 | 8.31 | 9.74 | 10.3 | 10.7 |
| | 11 | 115 | 4.91 | 6.65 | 8.57 | 10.5 | 12.0 | 12.4 | 12.5 |
| | 12.5 | 115 | 4.92 | 6.60 | 8.59 | 10.7 | 12.6 | 13.3 | 13.9 |
| TGE 20 | 16 | 115 | 5.78 | 7.73 | 10.0 | 12.4 | 14.7 | 15.5 | 16.2 |
| | 12.5 | 115 | 4.65 | 6.24 | 8.22 | 10.5 | 12.9 | 14.0 | 14.8 |
| | 16 | 115 | 5.76 | 7.76 | 10.3 | 13.2 | 16.3 | 17.7 | 18.8 |
| | 20 | 115 | 7.10 | 9.51 | 12.4 | 15.8 | 19.3 | 20.8 | 21.9 |
| TGE 40 | 21 | 115 | 9.89 | 13.1 | 16.6 | 20.1 | 22.8 | 23.7 | 24.1 |
| | 26 | 115 | 9.39 | 12.9 | 17.2 | 22.2 | 27.6 | 30.2 | 32.2 |
| | 30 | 115 | 10.6 | 14.6 | 19.5 | 25.2 | 31.4 | 34.2 | 36.5 |
| | 40 | 115 | 12.8 | 17.6 | 23.7 | 31.5 | 40.1 | 43.9 | 46.7 |
| | 42 | 115 | 20.2 | 26.7 | 33.9 | 41.2 | 47.1 | 49.1 | 50.3 |

Capacity in kW, -40 – 15 °C
Opening superheat sh = 4 K
SI units R290

| Valve type | Orifice no. | Cond. temp. [°C] | Evaporating temperature [°C] | | | | | | |
|------------|-------------|------------------|------------------------------|------|------|------|------|------|------|
| | | | -40 | -30 | -20 | -10 | 0 | 10 | 15 |
| TGE 10 | 3 | 55 | 4.16 | 5.42 | 6.87 | 8.49 | 10.2 | 11.8 | 12.5 |
| | 4 | 55 | 5.54 | 7.23 | 9.19 | 11.4 | 13.7 | 15.9 | 16.8 |
| | 6 | 55 | 7.97 | 10.4 | 13.3 | 16.5 | 19.9 | 23.1 | 24.4 |
| | 8 | 55 | 10.6 | 13.9 | 17.7 | 22.0 | 26.4 | 30.5 | 32.2 |
| | 9 | 55 | 12.4 | 16.3 | 21.0 | 26.1 | 31.3 | 35.9 | 37.9 |
| | 11 | 55 | 15.7 | 21.1 | 27.1 | 33.4 | 39.5 | 44.2 | 45.5 |
| | 12.5 | 55 | 15.5 | 20.5 | 26.5 | 33.2 | 40.1 | 46.3 | 48.9 |
| TGE 20 | 16 | 55 | 18.2 | 24.0 | 31.0 | 38.8 | 46.8 | 54.2 | 57.4 |
| | 12.5 | 55 | 15.0 | 19.7 | 25.3 | 32.2 | 39.9 | 47.8 | 51.3 |
| | 16 | 55 | 18.5 | 24.3 | 31.4 | 40.0 | 49.9 | 60.0 | 64.7 |
| | 20 | 55 | 22.7 | 29.7 | 38.2 | 48.2 | 59.5 | 71.0 | 76.1 |
| TGE 40 | 21 | 55 | 32.6 | 42.6 | 53.8 | 65.4 | 76.2 | 84.6 | 87.6 |
| | 26 | 55 | 29.5 | 39.6 | 51.8 | 66.3 | 83.1 | 101 | 110 |
| | 30 | 55 | 33.3 | 44.7 | 58.6 | 75.1 | 94.1 | 114 | 124 |
| | 40 | 55 | 40.3 | 53.6 | 70.8 | 93.0 | 120 | 150 | 163 |
| | 42 | 55 | 67.8 | 87.8 | 111 | 135 | 158 | 177 | 184 |

Capacity in TR, -40 – 60 °F
Opening superheat sh = 7.2 °F
US units R290

| Valve type | Orifice no. | Cond. temp. [°F] | Evaporating temperature [°F] | | | | | | |
|------------|-------------|------------------|------------------------------|------|------|------|------|------|------|
| | | | -40 | -20 | 0 | 20 | 40 | 50 | 60 |
| TGE 10 | 3 | 135 | 1.16 | 1.55 | 2.01 | 2.53 | 3.07 | 3.32 | 3.54 |
| | 4 | 135 | 1.54 | 2.07 | 2.69 | 3.40 | 4.14 | 4.48 | 4.78 |
| | 6 | 135 | 2.21 | 2.98 | 3.89 | 4.93 | 6.00 | 6.50 | 6.94 |
| | 8 | 135 | 2.93 | 3.96 | 5.17 | 6.54 | 7.94 | 8.58 | 9.11 |
| | 9 | 135 | 3.39 | 4.64 | 6.12 | 7.76 | 9.37 | 10.1 | 10.8 |
| | 11 | 135 | 4.34 | 6.02 | 7.93 | 9.94 | 11.8 | 12.5 | 13.0 |
| | 12.5 | 135 | 4.25 | 5.81 | 7.73 | 9.88 | 12.0 | 13.0 | 13.9 |
| TGE 20 | 16 | 135 | 4.99 | 6.81 | 9.03 | 11.5 | 14.1 | 15.2 | 16.3 |
| | 12.5 | 135 | 4.16 | 5.60 | 7.42 | 9.62 | 12.1 | 13.4 | 14.5 |
| | 16 | 135 | 5.11 | 6.90 | 9.18 | 12.0 | 15.1 | 16.8 | 18.3 |
| | 20 | 135 | 6.28 | 8.46 | 11.1 | 14.4 | 18.0 | 19.8 | 21.5 |
| TGE 40 | 21 | 135 | 9.06 | 12.2 | 15.8 | 19.4 | 22.7 | 24.0 | 25.0 |
| | 26 | 135 | 8.10 | 11.3 | 15.1 | 19.8 | 25.3 | 28.1 | 30.8 |
| | 30 | 135 | 9.12 | 12.7 | 17.1 | 22.4 | 28.6 | 31.8 | 34.9 |
| | 40 | 135 | 11.1 | 15.2 | 20.7 | 28.0 | 37.0 | 41.7 | 46.1 |
| | 42 | 135 | 18.9 | 25.3 | 32.6 | 40.2 | 47.2 | 50.1 | 52.4 |

Subcooling correction factor 'fsub'

| Subcooling [K] | 2 | 4 | 10 | 15 | 20 | 25 | 30 |
|-------------------|------|------|------|------|------|------|------|
| Correction factor | 0.98 | 1.00 | 1.06 | 1.11 | 1.16 | 1.21 | 1.26 |

Subcooling correction factor 'fsub'

| Subcooling [°F] | 2 | 7 | 10 | 20 | 30 | 40 | 50 |
|-------------------|------|------|------|------|------|------|------|
| Correction factor | 0.97 | 1.00 | 1.02 | 1.07 | 1.13 | 1.18 | 1.24 |

Distributer correction factor 'fp' *

| Pressure drop [bar] Δp | Evaporating temperature [°C] | | | | | | |
|---------------------------|------------------------------|------|------|------|------|------|------|
| | -40 | -30 | -20 | -10 | 0 | 10 | 15 |
| | Correction factor | | | | | | |
| 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 0.95 | 0.95 | 0.94 | 0.93 | 0.92 | 0.89 | 0.87 |
| 1.5 | 0.92 | 0.92 | 0.91 | 0.90 | 0.88 | 0.84 | 0.79 |
| 2 | 0.90 | 0.89 | 0.88 | 0.86 | 0.83 | 0.77 | 0.71 |

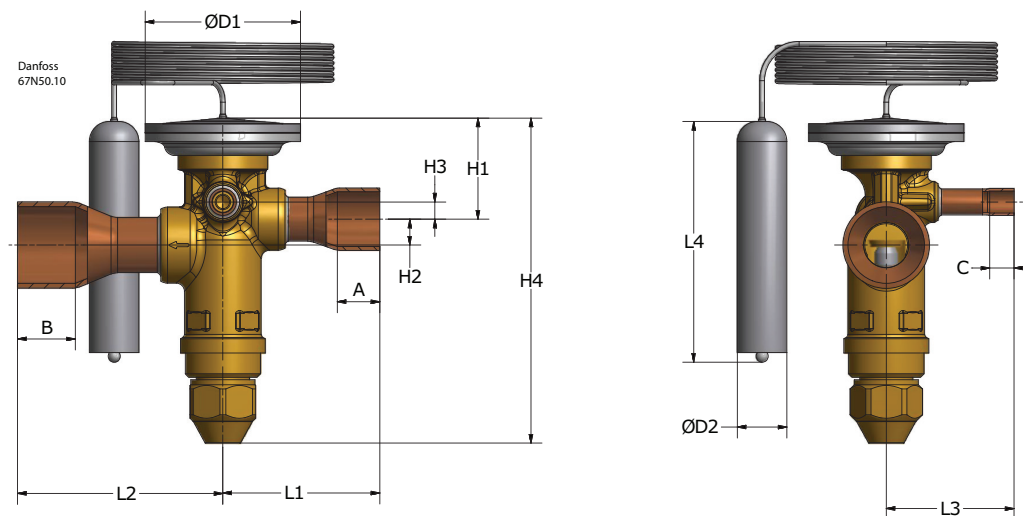
*Calculated at 32 °C condensing temperature.

Distributer correction factor 'fp' *

| Pressure drop [psi] Δp | Evaporating temperature [°F] | | | | | | |
|---------------------------|------------------------------|------|------|------|------|------|------|
| | -40 | -20 | 0 | 20 | 40 | 50 | 60 |
| | Correction factor | | | | | | |
| 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 15 | 0.95 | 0.94 | 0.94 | 0.93 | 0.91 | 0.89 | 0.86 |
| 25 | 0.91 | 0.91 | 0.90 | 0.88 | 0.84 | 0.81 | 0.75 |
| 30 | 0.89 | 0.89 | 0.87 | 0.85 | 0.81 | 0.77 | 0.69 |

*Calculated at 90 °F condensing temperature.

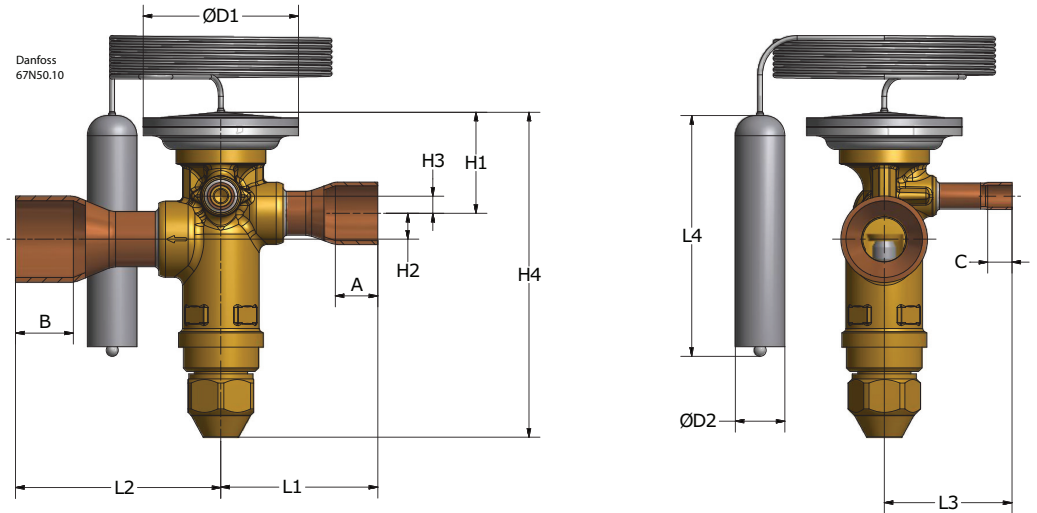
Dimensions and weights



Dimensions and weight in SI units

| Type | Connections. ODF solder inlet x outlet x equalization | | Capillary tube length [m] | H1 | H2 | H3 | H4 | L1 | L2 | L3 | L4 | ØD1 | ØD2 | A | B | C | Weight [kg] |
|--------|---|-------------|---------------------------|------|------|------|------|------|------|------|------|------|-------|------|------|------|-------------|
| | [in.] | [mm] | | [mm] | [mm] | [mm] | [mm] | [mm] | [mm] | [mm] | [mm] | [mm] | [mm] | [mm] | [mm] | [mm] | |
| TGE 10 | 3/8 x 3/8 x 1/4 | 10 x 16 x 6 | 1.5 | 28.5 | 7.5 | 5.0 | 93.0 | 41.5 | 45.5 | 37.0 | 70 | 45 | 14.35 | 9.0 | 12 | 7 | 0.37 |
| | 1/2 x 3/8 x 1/4 | 12 x 16 x 6 | 1.5 | 28.5 | 7.5 | 5.0 | 93.0 | 41.5 | 45.5 | 37.0 | 70 | 45 | 14.35 | 10 | 12 | 7 | 0.37 |
| | 1/2 x 7/8 x 1/4 | 12 x 22 x 6 | 1.5 | 28.5 | 7.5 | 5.0 | 93.0 | 41.5 | 59.5 | 37.0 | 70 | 45 | 14.35 | 10 | 17 | 7 | 0.37 |
| | 5/8 x 3/8 x 1/4 | 16 x 16 x 6 | 1.5 | 28.5 | 7.5 | 5.0 | 93.0 | 45.5 | 45.5 | 37.0 | 70 | 45 | 14.35 | 12 | 12 | 7 | 0.37 |
| | 5/8 x 7/8 x 1/4 | 16 x 22 x 6 | 1.5 | 28.5 | 7.5 | 5.0 | 93.0 | 45.5 | 59.5 | 37.0 | 70 | 45 | 14.35 | 12 | 17 | 7 | 0.37 |
| | 3/4 x 1 1/8 x 1/4 | 16 x 28 x 6 | 1.5 | 28.5 | 7.5 | 5.0 | 93.0 | 45.5 | 59.5 | 37.0 | 70 | 45 | 14.35 | 12 | 20 | 7 | 0.37 |
| | 7/8 x 7/8 x 1/4 | 22 x 22 x 6 | 1.5 | 28.5 | 7.5 | 5.0 | 93.0 | 45.5 | 59.5 | 37.0 | 70 | 45 | 14.35 | 12 | 17 | 7 | 0.37 |
| TGE 20 | 3/8 x 3/8 x 1/4 | 16 x 16 x 6 | 1.5 | 32.0 | 9.0 | 8.0 | 121 | 48.0 | 62.0 | 40.5 | 78 | 53 | 19.20 | 12 | 12 | 7 | 0.57 |
| | 5/8 x 3/8 x 1/4 | 16 x 22 x 6 | 1.5 | 32.0 | 9.0 | 8.0 | 121 | 48.0 | 62.0 | 40.5 | 78 | 53 | 19.20 | 12 | 17 | 7 | 0.57 |
| | 3/8 x 1 1/8 x 1/4 | 16 x 28 x 6 | 1.5 | 32.0 | 9.0 | 8.0 | 121 | 48.0 | 66.0 | 40.5 | 78 | 53 | 19.20 | 12 | 20 | 7 | 0.57 |
| | 7/8 x 7/8 x 1/4 | 22 x 22 x 6 | 1.5 | 32.0 | 9.0 | 8.0 | 121 | 62.0 | 62.0 | 40.5 | 78 | 53 | 19.20 | 17 | 17 | 7 | 0.57 |
| | 7/8 x 1 1/8 x 1/4 | 22 x 28 x 6 | 1.5 | 32.0 | 9.0 | 8.0 | 121 | 62.0 | 66.0 | 40.5 | 78 | 53 | 19.20 | 17 | 20 | 7 | 0.57 |
| | 7/8 x 1 3/8 x 1/4 | 22 x 35 x 6 | 1.5 | 32.0 | 9.0 | 8.0 | 121 | 62.0 | 66.0 | 40.5 | 78 | 53 | 19.20 | 17 | 24 | 7 | 0.57 |
| | 1 1/8 x 1 1/8 x 1/4 | 28 x 28 x 6 | 1.5 | 32.0 | 9.0 | 8.0 | 121 | 62.0 | 66.0 | 40.5 | 78 | 53 | 19.20 | 20 | 20 | 7 | 0.57 |
| TGE 40 | 1 1/8 x 1 3/8 x 1/4 | 28 x 35 x 6 | 1.5 | 32.0 | 9.0 | 8.0 | 121 | 62.0 | 66.0 | 40.5 | 78 | 53 | 19.20 | 20 | 24 | 7 | 0.57 |
| | 7/8 x 7/8 x 1/4 | 22 x 22 x 6 | 3 | 39.0 | 15 | 11 | 148 | 65.5 | 69.5 | 43.5 | 78 | 60 | 19.20 | 17 | 20 | 7 | 0.93 |
| | 7/8 x 1 1/8 x 1/4 | 22 x 28 x 6 | 3 | 39.0 | 15 | 11 | 148 | 65.5 | 69.5 | 43.5 | 78 | 60 | 19.20 | 17 | 20 | 7 | 0.93 |
| | 7/8 x 1 3/8 x 1/4 | 22 x 35 x 6 | 3 | 39.0 | 15 | 11 | 148 | 65.5 | 74.5 | 43.5 | 78 | 60 | 19.20 | 17 | 25 | 7 | 0.93 |
| TGE 40 | 1 1/8 x 1 1/8 x 1/4 | 28 x 28 x 6 | 3 | 39.0 | 15 | 11 | 148 | 69.5 | 69.5 | 43.5 | 78 | 60 | 19.20 | 20 | 20 | 7 | 0.93 |
| | 1 1/8 x 1 3/8 x 1/4 | 28 x 35 x 6 | 3 | 39.0 | 15 | 11 | 148 | 69.5 | 74.5 | 43.5 | 78 | 60 | 19.20 | 20 | 25 | 7 | 0.93 |

Dimensions and weights



Dimensions and weight in US units

| Type | Connections. ODF solder inlet x outlet x equalization | | Capillary tube length [in.] | H1 | H2 | H3 | H4 | L1 | L2 | L3 | L4 | ØD1 | ØD2 | A | B | C | Weight |
|---------------------|---|-------------|-----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|
| | [in.] | [mm] | | [in.] | [in.] | [in.] | [in.] | [in.] | [in.] | [in.] | [in.] | [in.] | [in.] | [in.] | [in.] | [in.] | [in.] |
| TGE 10 | 3/8 x 5/8 x 1/4 | 10 x 16 x 6 | 59 | 1.12 | 0.30 | 0.20 | 3.66 | 1.63 | 1.79 | 1.46 | 2.76 | 1.77 | 0.56 | 0.36 | 0.48 | 0.28 | 0.81 |
| | 1/2 x 5/8 x 1/4 | 12 x 16 x 6 | 59 | 1.12 | 0.30 | 0.20 | 3.66 | 1.63 | 1.79 | 1.46 | 2.76 | 1.77 | 0.56 | 0.39 | 0.48 | 0.28 | 0.81 |
| | 1/2 x 7/8 x 1/4 | 12 x 22 x 6 | 59 | 1.12 | 0.30 | 0.20 | 3.66 | 1.63 | 2.34 | 1.46 | 2.76 | 1.77 | 0.56 | 0.39 | 0.66 | 0.28 | 0.81 |
| | 5/8 x 5/8 x 1/4 | 16 x 16 x 6 | 59 | 1.12 | 0.30 | 0.20 | 3.66 | 1.79 | 1.79 | 1.46 | 2.76 | 1.77 | 0.56 | 0.48 | 0.48 | 0.28 | 0.81 |
| | 5/8 x 7/8 x 1/4 | 16 x 22 x 6 | 59 | 1.12 | 0.30 | 0.20 | 3.66 | 1.79 | 2.34 | 1.46 | 2.76 | 1.77 | 0.56 | 0.48 | 0.66 | 0.28 | 0.81 |
| | 5/8 x 1 1/8 x 1/4 | 16 x 28 x 6 | 59 | 1.12 | 0.30 | 0.20 | 3.66 | 1.79 | 2.34 | 1.46 | 2.76 | 1.77 | 0.56 | 0.48 | 0.78 | 0.28 | 0.81 |
| | 7/8 x 7/8 x 1/4 | 22 x 22 x 6 | 59 | 1.12 | 0.30 | 0.20 | 3.66 | 1.79 | 2.34 | 1.46 | 2.76 | 1.77 | 0.56 | 0.48 | 0.66 | 0.28 | 0.81 |
| 7/8 x 1 1/8 x 1/4 | 22 x 28 x 6 | 59 | 1.12 | 0.30 | 0.20 | 3.66 | 1.79 | 2.34 | 1.46 | 2.76 | 1.77 | 0.56 | 0.48 | 0.78 | 0.28 | 0.81 | |
| TGE 20 | 5/8 x 5/8 x 1/4 | 16 x 16 x 6 | 59 | 1.26 | 0.35 | 0.31 | 4.76 | 1.89 | 2.44 | 1.59 | 3.07 | 2.09 | 0.76 | 0.48 | 0.48 | 0.28 | 1.27 |
| | 5/8 x 7/8 x 1/4 | 16 x 22 x 6 | 59 | 1.26 | 0.35 | 0.31 | 4.76 | 1.89 | 2.44 | 1.59 | 3.07 | 2.09 | 0.76 | 0.48 | 0.66 | 0.28 | 1.27 |
| | 5/8 x 1 1/8 x 1/4 | 16 x 28 x 6 | 59 | 1.26 | 0.35 | 0.31 | 4.76 | 1.89 | 2.6 | 1.59 | 3.07 | 2.09 | 0.76 | 0.48 | 0.78 | 0.28 | 1.27 |
| | 7/8 x 7/8 x 1/4 | 22 x 22 x 6 | 59 | 1.26 | 0.35 | 0.31 | 4.76 | 2.44 | 2.44 | 1.59 | 3.07 | 2.09 | 0.76 | 0.66 | 0.66 | 0.28 | 1.27 |
| | 7/8 x 1 1/8 x 1/4 | 22 x 28 x 6 | 59 | 1.26 | 0.35 | 0.31 | 4.76 | 2.44 | 2.6 | 1.59 | 3.07 | 2.09 | 0.76 | 0.66 | 0.78 | 0.28 | 1.27 |
| | 7/8 x 1 3/8 x 1/4 | 22 x 35 x 6 | 59 | 1.26 | 0.35 | 0.31 | 4.76 | 2.44 | 2.6 | 1.59 | 3.07 | 2.09 | 0.76 | 0.66 | 0.98 | 0.28 | 1.27 |
| | 1 1/8 x 1 1/8 x 1/4 | 28 x 28 x 6 | 59 | 1.26 | 0.35 | 0.31 | 4.76 | 2.44 | 2.6 | 1.59 | 3.07 | 2.09 | 0.76 | 0.78 | 0.78 | 0.28 | 1.27 |
| 1 1/8 x 1 3/8 x 1/4 | 28 x 35 x 6 | 59 | 1.26 | 0.35 | 0.31 | 4.76 | 2.44 | 2.6 | 1.59 | 3.07 | 2.09 | 0.76 | 0.78 | 0.98 | 0.28 | 1.27 | |
| TGE 40 | 7/8 x 7/8 x 1/4 | 22 x 22 x 6 | 118 | 1.54 | 0.59 | 0.43 | 5.83 | 2.58 | 2.74 | 1.71 | 3.07 | 2.36 | 0.76 | 0.66 | 0.78 | 0.28 | 2.05 |
| | 7/8 x 1 1/8 x 1/4 | 22 x 28 x 6 | 118 | 1.54 | 0.59 | 0.43 | 5.83 | 2.58 | 2.74 | 1.71 | 3.07 | 2.36 | 0.76 | 0.66 | 0.78 | 0.28 | 2.05 |
| | 7/8 x 1 3/8 x 1/4 | 22 x 35 x 6 | 118 | 1.54 | 0.59 | 0.43 | 5.83 | 2.58 | 2.93 | 1.71 | 3.07 | 2.36 | 0.76 | 0.66 | 0.98 | 0.28 | 2.05 |
| | 1 1/8 x 1 1/8 x 1/4 | 28 x 28 x 6 | 118 | 1.54 | 0.59 | 0.43 | 5.83 | 2.74 | 2.74 | 1.71 | 3.07 | 2.36 | 0.76 | 0.78 | 0.78 | 0.28 | 2.05 |
| | 1 1/8 x 1 3/8 x 1/4 | 28 x 35 x 6 | 118 | 1.54 | 0.59 | 0.43 | 5.83 | 2.74 | 2.93 | 1.71 | 3.07 | 2.36 | 0.76 | 0.78 | 0.98 | 0.28 | 2.05 |

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