



# Thermostatic expansion valve

Type TGE

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**Introduction**

TGE is a new dedicated designed series of thermostatic expansion valves with lots of technical innovations for all normal refrigerants including R410A, and use in applications such as:

- Air conditioning systems,
- Heat pumps,
- Water chillers,
- Refrigerated containers,
- Traditional refrigeration systems.

The hermetic tight design meets the environmental demands for today and future. The capacity from 4 to 50 TR (14 kW to 175 kW) (R410A).

This leaflet contains data and code numbers for TGE valves for refrigerants R410A, R22, R407C, R134a, R404A, R507. Versions for other refrigerants can be produced to order, contact Danfoss for further information.


**Features**

- Hermetic TXV for R22, R134a, R404A, R507, R407C, R410A
- Head pressure independent
- Version with MOP (Max. Operating Pressure)
- Straightway flow
- Balance port (BP)
- Low hysteresis
- Opening superheat (OSH) max. 4°K
- Max. working pressure 46 bar/ 667 psi
- Lifetime for heat pump application
- Cylindrical bulb design with new bulb strap
- Biflow with expansion in both directions
- Adjustable superheat setting
- Laser welded, stainless steel power element / capillary tube
- Mechanical connections (solder/flare, MIO, ORFS) available

**Standard programme**

Thermostatic charge for R410A, R22, R134a, and R407C:

N -40 → +10°C without MOP

-40 → +50°F without MOP

K -25 → +10°C MOP + 15°C

-15 → +50°F MOP + 60°F

Static superheat (SS): 4K / 7.2°F

**Connection**

Type	Inlet ODF solder	Outlet ODF solder
TGE10	$\frac{3}{8}, \frac{1}{2}, \frac{5}{8}$	$\frac{5}{8}, \frac{7}{8}, 1-\frac{1}{8}$
	10, 12, 16	16, 22, 28
TGE20/40	$\frac{5}{8}, \frac{7}{8}, 1-\frac{1}{8}$	$\frac{5}{8}, \frac{7}{8}, 1-\frac{1}{8}, 1-\frac{3}{8}$
	16, 22, 28	16, 22, 28, 35

**Capillary tube length**

Type	Capillary tube length	
TGE10	1.5 m	5 ft
TGE20	1.5 m or 3 m	5 ft or 10 ft
TGE40	1.5 m or 3 m	5 ft or 10 ft

**Valve options**

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

- Refrigerants
- Evaporator range
- MOP point
- Static superheat setting (0K / 0°F → 8K / 14.4°F)
- Flare connections

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

**Technical data**
**Max. operating temperature**

- Thermostatic element

N charge: 100°C / 210°F (R410A)

K charge: 150°C / 302°F (R410A)

Valve body: 110°C / 230°F

Max. working pressure 46 / 667 psig

Max. test pressure 51 bar / 740 psig

TGE valves are designed for biflow operations.

**MOP function**

Refrigerant	Range K
	-25 → +10°C / -15 → +50°F
	MOP point for evaporating temperature $t_e$ and evaporating pressure $p_e$ $t_e = +15°C / +60°F$
R22	100 psig / 8 bar
R407C	95 psig / 7.5 bar
R134a	55 psig / 5 bar
R410A	167 psig / 12.5 bar
R404A/ R507	120 psig / 8.4 bar

**Identification**

Importat valve information is provided on the diaphragm element (fig. 1)

Main valve example:

TGE = Valve type  
 9 TR = Rated capacity  $Q_{nom}$  in tons of refrigeration  
 32 kW = Rated capacity  $Q_{nom}$  in kW  
 R410A = Refrigerant  
 -25 / +10°C = Evaporating temperature range (°C)  
 -13 / + 50°F = Evaporating temperature range (°F)  
 067N3006 = Code number  
 MOP K = Max. Operating Pressure in K  
 PS 46 bar / MWP 670 psig = Max. Working Pressure in bar and psig  
 080912 = Date code (Sep 12, 2008)

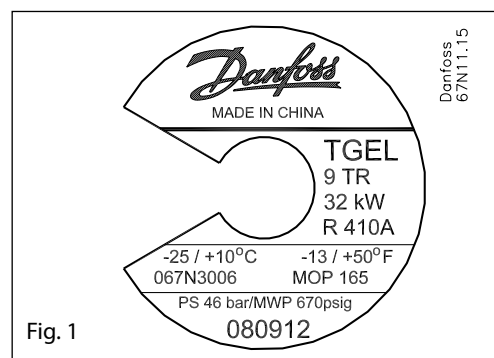


Fig. 1

Refrigerant code: R22 = X  
 R410A = L  
 R407C = Z  
 R134a = N  
 R404A/ R507 = S

**Rated capacity\*)**

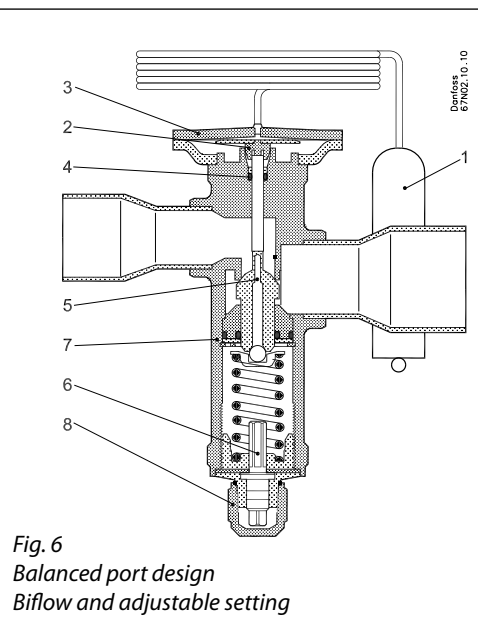
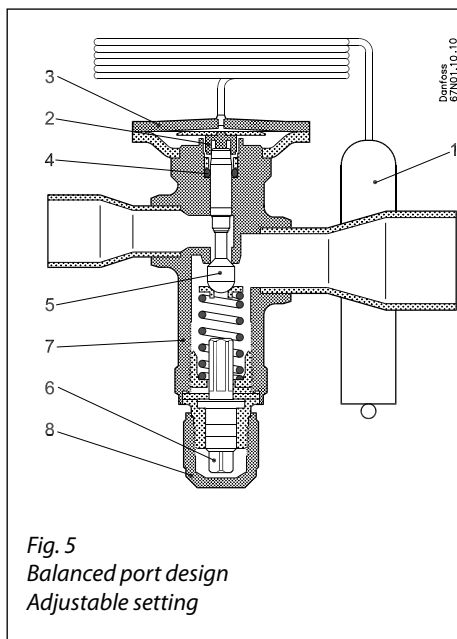
Typ	R22		R134a		R404A/R507		R407C		R410A	
	kW	TR	kW	TR	kW	TR	kW	TR	kW	TR
TGE 10	10.0	3.0	6.0	1.5	7.0	2.0	9.0	2.5	12.0	3.5
	14.0	4.0	8.0	2.5	9.0	2.5	13.0	3.5	16.0	4.5
	20.0	6.0	12.0	3.5	14.0	4.0	19.0	5.0	24.0	6.5
	27.0	7.5	17.0	4.5	18.0	5.0	25.0	7.0	32.0	9.0
	38.0	11.0	24.0	7.0	26.0	7.5	36.0	10.0	45.0	13.0
TGE 20	43.0	12.0	29.0	8.0	31.0	9.0	42.0	12.0	54.0	15.0
	54.0	15.0	37.0	10.0	39.0	11.0	53.0	15.0	68.0	19.0
	63.0	18.0	44.0	12.0	45.0	13.0	62.0	18.0	79.0	23.0
TGE 40	92.0	26.0	61.0	17.0	64.0	18.0	84.0	24.0	110.0	31.0
	104.0	30.0	70.0	20.0	72.0	21.0	95.0	27.0	125.0	35.0
	134.0	38.0	87.0	25.0	92.0	26.0	121.0	34.0	161.0	46.0

\*) Rated capacity according to ASERCOM standard

 Evaporating temperature,  $T_e = 4°C$ , Liquid temperature,  $T_l = 37°C$   
 Condensing temperature,  $T_c = 38°C$ , Opening surperheat,  $OS = 4K$

**Design and function**

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



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

Static superheat (SS) can be adjusted by the setting spindle (6), see fig. 5. 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 (factory setting)

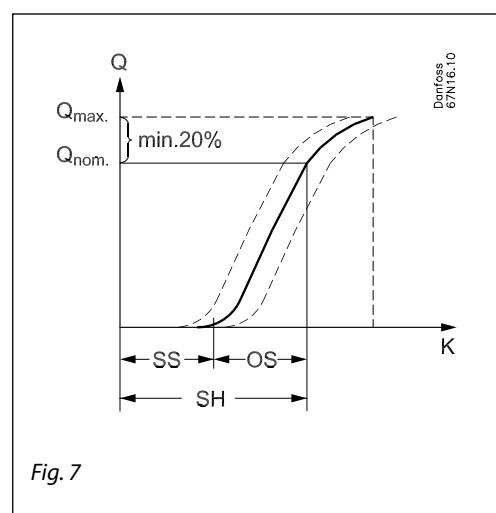
Opening superheat OS = 4K / 7.2°F

The opening superheat is 4K, i.e. from the point the valve begins to open up to nominal 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).


**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

**Application**

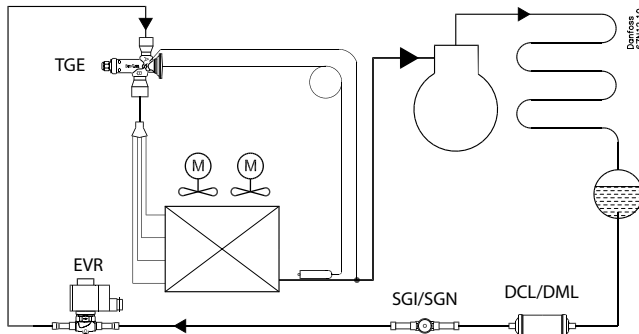


Fig. 2  
Traditional refrigeration plant

Fig. 2 is a diagram of a traditional refrigeration plant where TGE is used for flow in one direction only.

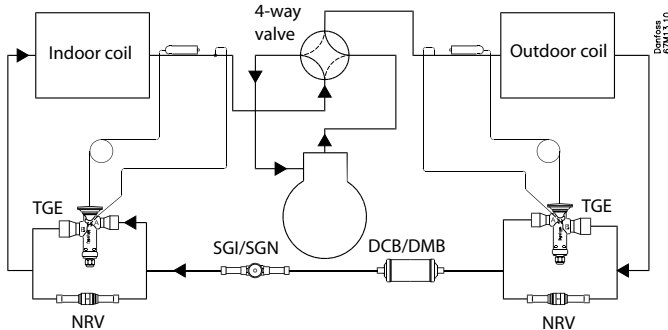


Fig. 3  
Conventional system with summer/winter operation

Fig. 3 is 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.

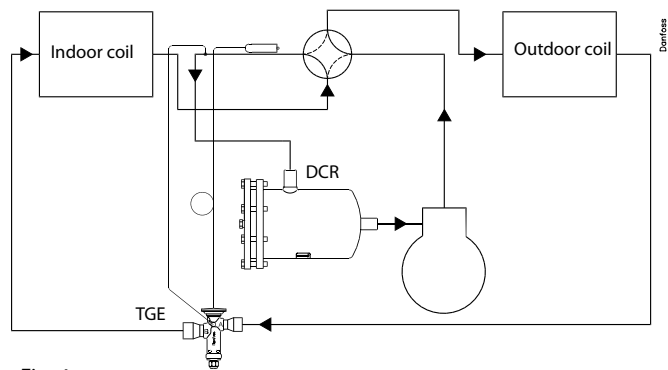


Fig. 4  
Simplified heat pump system

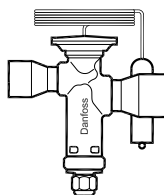
Fig. 4 is a heat pump system similar to that in fig. 3 but with a more compact design, where the distance between evaporator and condenser is very short. This system has only one bi-flow TGE valve metering liquid refrigerant effectively in both directions. Changeover is by means of a 4-way valve.

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.

**Ordering**

The valve and bulb straps are supplied in industrial packs or multi packs:  
 Industrial pack, TGE10 / 12 pcs  
 Industrial pack, TGE20 / 8 pcs  
 Industrial pack, TGE40 / 8 pcs

Multi pack, TGE10 / 12 pcs  
 Multi pack, TGE20 / 8 pcs  
 Multi pack, TGE40 / 6 pcs

**Ordering  
Standard range**


Range N = -40 → +10°C OS = 4 K

Type and rated capacity $Q_{nom.}^{2)}$ TR	Rated capacity $Q_{nom.}^{2)}$ kW	Inch version			mm version		
		Connection Solder ODF × ODF <sup>1)</sup> in.	Code no. Multi pack	Code no. Industrial pack	Connection Solder ODF × ODF <sup>1)</sup> mm	Code no. Multi pack	Code no. Industrial pack

**TGEX 10**

TGEX 3	10	$\frac{3}{8} \times \frac{5}{8}$	<b>067N2150</b>	<b>067N2170</b>	10 × 16	<b>067N2190</b>	<b>067N2210</b>
TGEX 3	10	$\frac{1}{2} \times \frac{5}{8}$	<b>067N2151</b>	<b>067N2171</b>	12 × 16	<b>067N2191</b>	<b>067N2211</b>
TGEX 4	14	$\frac{1}{2} \times \frac{7}{8}$	<b>067N2152</b>	<b>067N2172</b>	12 × 22	<b>067N2192</b>	<b>067N2212</b>
TGEX 6	20	$\frac{1}{2} \times \frac{5}{8}$	<b>067N2153</b>	<b>067N2173</b>	12 × 16	<b>067N2193</b>	<b>067N2213</b>
TGEX 6	20	$\frac{1}{2} \times \frac{7}{8}$	<b>067N2154</b>	<b>067N2174</b>	12 × 22	<b>067N2194</b>	<b>067N2214</b>
TGEX 6	20	$\frac{5}{8} \times \frac{7}{8}$	<b>067N2155</b>	<b>067N2175</b>	16 × 22	<b>067N2195</b>	<b>067N2215</b>
TGEX 7.5	27	$\frac{5}{8} \times \frac{7}{8}$	<b>067N2156</b>	<b>067N2176</b>	16 × 22	<b>067N2196</b>	<b>067N2216</b>
TGEX 11	38	$\frac{5}{8} \times \frac{7}{8}$	<b>067N2157</b>	<b>067N2177</b>	16 × 22	<b>067N2197</b>	<b>067N2217</b>
TGEX 11	38	$\frac{5}{8} \times 1 \frac{1}{8}$	<b>067N2158</b>	<b>067N2178</b>	16 × 28	<b>067N2198</b>	<b>067N2218</b>

**TGEX 20**

TGEX 12	43	$\frac{5}{8} \times \frac{7}{8}$	<b>067N2159</b>	<b>067N2179</b>	16 × 22	<b>067N2199</b>	<b>067N2219</b>
TGEX 12	43	$\frac{5}{8} \times 1 \frac{1}{8}$	<b>067N2160</b>	<b>067N2180</b>	16 × 28	<b>067N2200</b>	<b>067N2220</b>
TGEX 15	54	$\frac{5}{8} \times 1 \frac{1}{8}$	<b>067N2161</b>	<b>067N2181</b>	16 × 28	<b>067N2201</b>	<b>067N2221</b>
TGEX 15	54	$\frac{7}{8} \times 1 \frac{1}{8}$	<b>067N2162</b>	<b>067N2182</b>	22 × 28	<b>067N2202</b>	<b>067N2222</b>
TGEX 18	63	$\frac{7}{8} \times 1 \frac{1}{8}$	<b>067N2163</b>	<b>067N2183</b>	22 × 28	<b>067N2203</b>	<b>067N2223</b>
TGEX 18	63	$\frac{7}{8} \times 1 \frac{3}{8}$	<b>067N2164</b>	<b>067N2184</b>	22 × 35	<b>067N2204</b>	<b>067N2224</b>

**TGE 40**

TGEX 26	92	$\frac{7}{8} \times 1 \frac{3}{8}$	<b>067N2165</b>	<b>067N2185</b>	22 × 35	<b>067N2205</b>	<b>067N2225</b>
TGEX 26	92	$1 \frac{1}{8} \times 1 \frac{3}{8}$	<b>067N2166</b>	<b>067N2186</b>	28 × 35	<b>067N2206</b>	<b>067N2226</b>
TGEX 30	104	$\frac{7}{8} \times 1 \frac{3}{8}$	<b>067N2167</b>	<b>067N2187</b>	22 × 35	<b>067N2207</b>	<b>067N2227</b>
TGEX 30	104	$1 \frac{1}{8} \times 1 \frac{3}{8}$	<b>067N2168</b>	<b>067N2188</b>	28 × 35	<b>067N2208</b>	<b>067N2228</b>
TGEX 38	134	$1 \frac{1}{8} \times 1 \frac{3}{8}$	<b>067N2169</b>	<b>067N2189</b>	28 × 35	<b>067N2209</b>	<b>067N2229</b>

Range K = -25 → +10°C with MOP 100 psig/8 bar abs. OS = 4 K

Type and rated capacity $Q_{nom.}^{2)}$ TR	Rated capacity $Q_{nom.}^{2)}$ kW	Inch version			mm version		
		Connection Solder ODF × ODF <sup>1)</sup> in.	Code no. Multi pack	Code no. Industrial pack	Connection Solder ODF × ODF <sup>1)</sup> mm	Code no. Multi pack	Code no. Industrial pack

**TGEX 10**

TGEX 3	10	$\frac{3}{8} \times \frac{5}{8}$	<b>067N2000</b>	<b>067N2020</b>	10 × 16	<b>067N2040</b>	<b>067N2060</b>
TGEX 3	10	$\frac{1}{2} \times \frac{5}{8}$	<b>067N2001</b>	<b>067N2021</b>	12 × 16	<b>067N2041</b>	<b>067N2061</b>
TGEX 4	14	$\frac{1}{2} \times \frac{7}{8}$	<b>067N2002</b>	<b>067N2022</b>	12 × 22	<b>067N2042</b>	<b>067N2062</b>
TGEX 6	20	$\frac{1}{2} \times \frac{5}{8}$	<b>067N2003</b>	<b>067N2023</b>	12 × 16	<b>067N2043</b>	<b>067N2063</b>
TGEX 6	20	$\frac{1}{2} \times \frac{7}{8}$	<b>067N2004</b>	<b>067N2024</b>	12 × 22	<b>067N2044</b>	<b>067N2064</b>
TGEX 6	20	$\frac{5}{8} \times \frac{7}{8}$	<b>067N2005</b>	<b>067N2025</b>	16 × 22	<b>067N2045</b>	<b>067N2065</b>
TGEX 7.5	27	$\frac{5}{8} \times \frac{7}{8}$	<b>067N2006</b>	<b>067N2026</b>	16 × 22	<b>067N2046</b>	<b>067N2066</b>
TGEX 11	38	$\frac{5}{8} \times \frac{7}{8}$	<b>067N2007</b>	<b>067N2027</b>	16 × 22	<b>067N2047</b>	<b>067N2067</b>
TGEX 11	38	$\frac{5}{8} \times 1 \frac{1}{8}$	<b>067N2008</b>	<b>067N2028</b>	16 × 28	<b>067N2048</b>	<b>067N2068</b>

**TGEX 20**

TGEX 12	43	$\frac{5}{8} \times \frac{7}{8}$	<b>067N2009</b>	<b>067N2029</b>	16 × 22	<b>067N2049</b>	<b>067N2069</b>
TGEX 12	43	$\frac{5}{8} \times 1 \frac{1}{8}$	<b>067N2010</b>	<b>067N2030</b>	16 × 28	<b>067N2050</b>	<b>067N2070</b>
TGEX 15	54	$\frac{5}{8} \times 1 \frac{1}{8}$	<b>067N2011</b>	<b>067N2031</b>	16 × 28	<b>067N2051</b>	<b>067N2071</b>
TGEX 15	54	$\frac{7}{8} \times 1 \frac{1}{8}$	<b>067N2012</b>	<b>067N2032</b>	22 × 28	<b>067N2052</b>	<b>067N2072</b>
TGEX 18	63	$\frac{7}{8} \times 1 \frac{1}{8}$	<b>067N2013</b>	<b>067N2033</b>	22 × 28	<b>067N2053</b>	<b>067N2073</b>
TGEX 18	63	$\frac{7}{8} \times 1 \frac{3}{8}$	<b>067N2014</b>	<b>067N2034</b>	22 × 35	<b>067N2054</b>	<b>067N2074</b>

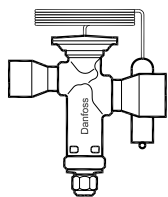
**TGE 40**

TGEX 26	92	$\frac{7}{8} \times 1 \frac{3}{8}$	<b>067N2015</b>	<b>067N2035</b>	22 × 35	<b>067N2055</b>	<b>067N2075</b>
TGEX 26	92	$1 \frac{1}{8} \times 1 \frac{3}{8}$	<b>067N2016</b>	<b>067N2036</b>	28 × 35	<b>067N2056</b>	<b>067N2076</b>
TGEX 30	104	$\frac{7}{8} \times 1 \frac{3}{8}$	<b>067N2017</b>	<b>067N2037</b>	22 × 35	<b>067N2057</b>	<b>067N2077</b>
TGEX 30	104	$1 \frac{1}{8} \times 1 \frac{3}{8}$	<b>067N2018</b>	<b>067N2038</b>	28 × 35	<b>067N2058</b>	<b>067N2078</b>
TGEX 38	134	$1 \frac{1}{8} \times 1 \frac{3}{8}$	<b>067N2019</b>	<b>067N2039</b>	28 × 35	<b>067N2059</b>	<b>067N2079</b>

<sup>1)</sup> Pressure equalisation =  $\frac{1}{4}$  in (6 mm) ODF

<sup>2)</sup> The rated capacity is based on: ASERCOM standard

Evaporating temperature,  $T_e = 4^\circ\text{C}$ ,  
Liquid temperature,  $T_l = 37^\circ\text{C}$   
Condensing temperature,  $T_c = 38^\circ\text{C}$ ,  
Opening superheat, OS=4K

**Ordering**  
**Standard range** (continued)


Range N = -40 → +10°C OS = 4 K

**R134a**

Type and rated capacity  $Q_{nom.}^{2)}$ TR	Rated capacity  $Q_{nom.}^{2)}$ kW	Inch version			mm version		
		Connection Solder ODF × ODF <sup>1)</sup>  in.	Code no. Multi pack	Code no. Industrial pack	Connection Solder ODF × ODF <sup>1)</sup>  mm	Code no. Multi pack	Code no. Industrial pack

**TGEN 10**

TGEN 1.5	6	$3/8 \times 5/8$	<b>067N5150</b>	<b>067N5170</b>	10 × 16	<b>067N5190</b>	<b>067N5210</b>
TGEN 1.5	6	$1/2 \times 5/8$	<b>067N5151</b>	<b>067N5171</b>	12 × 16	<b>067N5191</b>	<b>067N5211</b>
TGEN 2.5	8	$1/2 \times 7/8$	<b>067N5152</b>	<b>067N5172</b>	12 × 22	<b>067N5192</b>	<b>067N5212</b>
TGEN 3.5	12	$1/2 \times 5/8$	<b>067N5153</b>	<b>067N5173</b>	12 × 16	<b>067N5193</b>	<b>067N5213</b>
TGEN 3.5	12	$1/2 \times 7/8$	<b>067N5154</b>	<b>067N5174</b>	12 × 22	<b>067N5194</b>	<b>067N5214</b>
TGEN 3.5	12	$5/8 \times 7/8$	<b>067N5155</b>	<b>067N5175</b>	16 × 22	<b>067N5195</b>	<b>067N5215</b>
TGEN 4.5	17	$5/8 \times 7/8$	<b>067N5156</b>	<b>067N5176</b>	16 × 22	<b>067N5196</b>	<b>067N5216</b>
TGEN 7	24	$5/8 \times 7/8$	<b>067N5157</b>	<b>067N5177</b>	16 × 22	<b>067N5197</b>	<b>067N5217</b>
TGEN 7	24	$5/8 \times 1 1/8$	<b>067N5158</b>	<b>067N5178</b>	16 × 28	<b>067N5198</b>	<b>067N5218</b>

**TGEN 20**

TGEN 8	29	$5/8 \times 7/8$	<b>067N5159</b>	<b>067N5179</b>	16 × 22	<b>067N5199</b>	<b>067N5219</b>
TGEN 8	29	$5/8 \times 1 1/8$	<b>067N5160</b>	<b>067N5180</b>	16 × 28	<b>067N5200</b>	<b>067N5220</b>
TGEN 10	37	$5/8 \times 1 1/8$	<b>067N5161</b>	<b>067N5181</b>	16 × 28	<b>067N5201</b>	<b>067N5221</b>
TGEN 10	37	$7/8 \times 1 1/8$	<b>067N5162</b>	<b>067N5182</b>	22 × 28	<b>067N5202</b>	<b>067N5222</b>
TGEN 12	44	$7/8 \times 1 1/8$	<b>067N5163</b>	<b>067N5183</b>	22 × 28	<b>067N5203</b>	<b>067N5223</b>
TGEN 12	44	$7/8 \times 1 3/8$	<b>067N5164</b>	<b>067N5184</b>	22 × 35	<b>067N5204</b>	<b>067N5224</b>

**TGEN 40**

TGEN 17	61	$7/8 \times 1 3/8$	<b>067N5165</b>	<b>067N5185</b>	22 × 35	<b>067N5205</b>	<b>067N5225</b>
TGEN 17	61	$1 1/8 \times 1 3/8$	<b>067N5166</b>	<b>067N5186</b>	28 × 35	<b>067N5206</b>	<b>067N5226</b>
TGEN 20	70	$7/8 \times 1 3/8$	<b>067N5167</b>	<b>067N5187</b>	22 × 35	<b>067N5207</b>	<b>067N5227</b>
TGEN 20	70	$1 1/8 \times 1 3/8$	<b>067N5168</b>	<b>067N5188</b>	28 × 35	<b>067N5208</b>	<b>067N5228</b>
TGEN 25	87	$1 1/8 \times 1 3/8$	<b>067N5169</b>	<b>067N5189</b>	28 × 35	<b>067N5209</b>	<b>067N5229</b>

Range K = -25 → +10°C with MOP 55 psig/ 5 bar abs. OS = 4 K

Type and rated capacity  $Q_{nom.}^{2)}$ TR	Rated capacity  $Q_{nom.}^{2)}$ kW	Inch version			mm version		
		Connection Solder ODF × ODF <sup>1)</sup>  in.	Code no. Multi pack	Code no. Industrial pack	Connection Solder ODF × ODF <sup>1)</sup>  mm	Code no. Multi pack	Code no. Industrial pack

**TGEN 10**

TGEN 1.5	6	$3/8 \times 5/8$	<b>067N5000</b>	<b>067N5020</b>	10 × 16	<b>067N5040</b>	<b>067N5060</b>
TGEN 1.5	6	$1/2 \times 5/8$	<b>067N5001</b>	<b>067N5021</b>	12 × 16	<b>067N5041</b>	<b>067N5061</b>
TGEN 2.5	8	$1/2 \times 7/8$	<b>067N5002</b>	<b>067N5022</b>	12 × 22	<b>067N5042</b>	<b>067N5062</b>
TGEN 3.5	12	$1/2 \times 5/8$	<b>067N5003</b>	<b>067N5023</b>	12 × 16	<b>067N5043</b>	<b>067N5063</b>
TGEN 3.5	12	$1/2 \times 7/8$	<b>067N5004</b>	<b>067N5024</b>	12 × 22	<b>067N5044</b>	<b>067N5064</b>
TGEN 3.5	12	$5/8 \times 7/8$	<b>067N5005</b>	<b>067N5025</b>	16 × 22	<b>067N5045</b>	<b>067N5065</b>
TGEN 4.5	17	$5/8 \times 7/8$	<b>067N5006</b>	<b>067N5026</b>	16 × 22	<b>067N5046</b>	<b>067N5066</b>
TGEN 7	24	$5/8 \times 7/8$	<b>067N5007</b>	<b>067N5027</b>	16 × 22	<b>067N5047</b>	<b>067N5067</b>
TGEN 7	24	$5/8 \times 1 1/8$	<b>067N5008</b>	<b>067N5028</b>	16 × 28	<b>067N5048</b>	<b>067N5068</b>

**TGEN 20**

TGEN 8	29	$5/8 \times 7/8$	<b>067N5009</b>	<b>067N5029</b>	16 × 22	<b>067N5049</b>	<b>067N5069</b>
TGEN 8	29	$5/8 \times 1 1/8$	<b>067N5010</b>	<b>067N5030</b>	16 × 28	<b>067N5050</b>	<b>067N5070</b>
TGEN 10	37	$5/8 \times 1 1/8$	<b>067N5011</b>	<b>067N5031</b>	16 × 28	<b>067N5051</b>	<b>067N5071</b>
TGEN 10	37	$7/8 \times 1 1/8$	<b>067N5012</b>	<b>067N5032</b>	22 × 28	<b>067N5052</b>	<b>067N5072</b>
TGEN 12	44	$7/8 \times 1 1/8$	<b>067N5013</b>	<b>067N5033</b>	22 × 28	<b>067N5053</b>	<b>067N5073</b>
TGEN 12	44	$7/8 \times 1 3/8$	<b>067N5014</b>	<b>067N5034</b>	22 × 35	<b>067N5054</b>	<b>067N5074</b>

**TGEN 40**

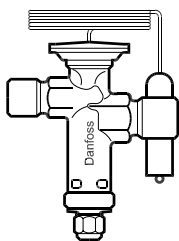
TGEN 17	61	$7/8 \times 1 3/8$	<b>067N5015</b>	<b>067N5035</b>	22 × 35	<b>067N5055</b>	<b>067N5075</b>
TGEN 17	61	$1 1/8 \times 1 3/8$	<b>067N5016</b>	<b>067N5036</b>	28 × 35	<b>067N5056</b>	<b>067N5076</b>
TGEN 20	70	$7/8 \times 1 3/8$	<b>067N5017</b>	<b>067N5037</b>	22 × 35	<b>067N5057</b>	<b>067N5077</b>
TGEN 20	70	$1 1/8 \times 1 3/8$	<b>067N5018</b>	<b>067N5038</b>	28 × 35	<b>067N5058</b>	<b>067N5078</b>
TGEN 25	87	$1 1/8 \times 1 3/8$	<b>067N5019</b>	<b>067N5039</b>	28 × 35	<b>067N5059</b>	<b>067N5079</b>

<sup>1)</sup> Pressure equalisation =  $1/4$  in (6 mm) ODF

<sup>2)</sup> The rated capacity is based on: ASERCOM standard

 Evaporating temperature,  $T_e = 4^\circ\text{C}$ ,  
 Liquid temperature,  $T_l = 37^\circ\text{C}$   
 Condensing temperature,  $T_c = 38^\circ\text{C}$ ,  
 Opening surperheat, OS=4K



**R134a**
**Ordering**  
**Standard range** (continued)


Range N = -40 → +10°C OS = 4 K

Type and rated capacity $Q_{nom.}^{1)}$ TR	Rated capacity $Q_{nom.}^{1)}$ kW	Inch version		
		Connection Screw  in.	Code no. Multi pack	Code no. Industrial pack
TGEN 1.5	6	$1/2 \times 5/8 \times 1/4$ MIO	<b>067N7150</b>	
TGEN 2.5	8	$1/2 \times 5/8 \times 1/4$ Flare		<b>067N7151</b>
TGEN 2.5	8	$1/2 \times 5/8 \times 1/4$ MIO	<b>067N7152</b>	
TGEN 2.5	8	$3/8 \times 1/2$ MIO $\times 1/4$ F	<b>067N7153</b>	
TGEN 2.5	8	$3/8 \times 1/2 \times 1/4$ Flare	<b>067N7154</b>	
TGEN 2.5	8	$3/8 \times 1/2 \times 1/4$ Flare		<b>067N7155</b>
TGEN 3.5	12	$1/2 \times 5/8 \times 1/4$ Flare		<b>067N7156</b>
TGEN 3.5	12	$1/2 \times 5/8 \times 1/4$ Flare	<b>067N7157</b>	
TGEN 3.5	12	$3/8 \times 1/2$ MIO $\times 1/4$ F	<b>067N7158</b>	
TGEN 3.5	12	$3/8 \times 1/2 \times 1/4$ Flare		<b>067N7159</b>
TGEN 3.5	12	$3/8 \times 1/2 \times 1/4$ Flare	<b>067N7160</b>	
TGEN 4.5	17	$1/2 \times 5/8 \times 1/4$ MIO	<b>067N7161</b>	
TGEN 4.5	17	$1/2 \times 5/8 \times 1/4$ MIO	<b>067N7161</b>	
TGEN 4.5	17	$3/8 \times 1/2 \times 1/4$ Flare		<b>067N7162</b>
TGEN 4.5	17	$3/8 \times 1/2 \times 1/4$ Flare	<b>067N7163</b>	
TGEN 4.5	17	$3/8 \times 1/2$ MIO $\times 1/4$ F	<b>067N7164</b>	
TGEN 4.5	17	$5/8 \times 3/4 \times 1/4$ MIO	<b>067N7165</b>	
TGEN 7	24	$5/8 \times 3/4 \times 1/4$ MIO	<b>067N7166</b>	
TGEN 8	29	$5/8 \times 3/4 \times 1/4$ MIO	<b>067N7167</b>	
TGEN 10	37	$5/8 \times 3/4 \times 1/4$ Flare	<b>067N7168</b>	
TGEN 10	37	$5/8 \times 3/4 \times 1/4$ MIO	<b>067N7160</b>	
TGEN 12	44	$5/8 \times 3/4 \times 1/4$ MIO		<b>067N7170</b>

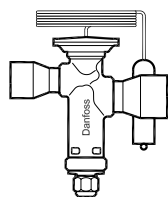
Range K = -25 → +10°C with MOP 55 psig/ 5 bar abs. OS = 4 K

Type and rated capacity $Q_{nom.}^{1)}$ TR	Rated capacity $Q_{nom.}^{1)}$ kW	Inch version		
		Connection Screw  in.	Code no. Multi pack	Code no. Industrial pack
TGEN 2.5	8	$3/8 \times 1/2 \times 1/4$ F	<b>067N7000</b>	
TGEN 3.5	12	$3/8 \times 1/2 \times 1/4$ F	<b>067N7003</b>	
TGEN 4.5	17	$3/8 \times 1/2 \times 1/4$ F		<b>067N7007</b>
TGEN 3.5	12	$1/2 \times 5/8 \times 1/4$ F	<b>067N7004</b>	
TGEN 3.5	12	$1/2 \times 5/8 \times 1/4$ F	<b>067N7005</b>	
TGEN 4.5	17	$1/2 \times 5/8 \times 1/4$ F	<b>067N7008</b>	
TGEN 4.5	17	$5/8 \times 3/4 \times 1/4$ F	<b>067N7013</b>	
TGEN 7	24	$5/8 \times 3/4 \times 1/4$ F	<b>067N7016</b>	
TGEN 8	29	$5/8 \times 3/4 \times 1/4$ F	<b>067N7018</b>	
TGEN 10	37	$5/8 \times 3/4 \times 1/4$ F	<b>067N7020</b>	
TGEN 12	44	$5/8 \times 3/4 \times 1/4$ F	<b>067N7021</b>	
TGEN 2.5	8	$3/8 \times 1/2$ MIO $1/4$ F		<b>067N7001</b>
TGEN 2.5	8	$1/2 \times 5/8 \times 1/4$ MIO	<b>067N7002</b>	
TGEN 4.5	17	$1/2 \times 5/8 \times 1/4$ MIO	<b>067N7010</b>	
TGEN 4.5	17	$1/2 \times 5/8 \times 1/4$ MIO		<b>067N7011</b>
TGEN 3.5	12	$1/2 \times 5/8$ MIO $\times 1/4$ F	<b>067N7006</b>	
TGEN 4.5	17	$3/8 \times 1/2$ MIO $\times 1/4$ F		<b>067N7009</b>
TGEN 4.5	17	$5/8 \times 3/4 \times 1/4$ MIO	<b>067N7012</b>	
TGEN 7	24	$5/8 \times 3/4 \times 1/4$ MIO	<b>067N7015</b>	
TGEN 8	29	$5/8 \times 3/4 \times 1/4$ MIO	<b>067N7017</b>	
TGEN 8	29	$5/8 \times 3/4 \times 1/4$ MIO	<b>067N7019</b>	
TGEN 2.5	8	$3/8 \times 1/2$ ORFS $\times 1/4$ F		<b>067N7040</b>
TGEN 3.5	12	$3/8 \times 1/2$ ORFS $\times 1/4$ F		<b>067N7041</b>
TGEN 4.5	17	$3/8 \times 1/2$ ORFS $\times 1/4$ F		<b>067N7042</b>
TGEN 4.5	17	$5/8 \times 3/4$ ORFS $\times 1/4$ F		<b>067N7043</b>
TGEN 12	44	$5/8 \times 3/4$ ORFS $\times 1/4$ F		<b>067N7044</b>

<sup>1)</sup>The rated capacity is based on:  
ASERCOM standard

 Evaporating temperature,  $T_e = 4^\circ\text{C}$ ,  
 Liquid temperature,  $T_l = 37^\circ\text{C}$   
 Condensing temperature,  $T_c = 38^\circ\text{C}$ ,  
 Opening superheat, OS=4K

 F: Flare  
 MIO: Male inserts O-ring  
 ORFS: O-ring face seal

**Ordering**  
**Standard range** (continued)


Range N = -40 → +10°C OS = 4 K

**R407C**

Type and rated capacity  $Q_{nom.}^{2)}$ TR	Rated capacity  $Q_{nom.}^{2)}$ kW	Inch version			mm version		
		Connection Solder ODF × ODF <sup>1)</sup> in.	Code no. Multi pack	Code no. Industrial pack	Connection Solder ODF × ODF <sup>1)</sup> mm	Code no. Multi pack	Code no. Industrial pack

**TGEZ 10**

TGEZ 2.5	9	$\frac{3}{8} \times \frac{5}{8}$	<b>067N4150</b>	<b>067N4170</b>	10 × 16	<b>067N4190</b>	<b>067N4210</b>
TGEZ 2.5	9	$\frac{1}{2} \times \frac{5}{8}$	<b>067N4151</b>	<b>067N4171</b>	12 × 16	<b>067N4191</b>	<b>067N4211</b>
TGEZ 3.5	13	$\frac{1}{2} \times \frac{7}{8}$	<b>067N4152</b>	<b>067N4172</b>	12 × 22	<b>067N4192</b>	<b>067N4212</b>
TGEZ 5	19	$\frac{1}{2} \times \frac{5}{8}$	<b>067N4153</b>	<b>067N4173</b>	12 × 16	<b>067N4193</b>	<b>067N4213</b>
TGEZ 5	19	$\frac{1}{2} \times \frac{7}{8}$	<b>067N4154</b>	<b>067N4174</b>	12 × 22	<b>067N4194</b>	<b>067N4214</b>
TGEZ 5	19	$\frac{5}{8} \times \frac{7}{8}$	<b>067N4155</b>	<b>067N4175</b>	16 × 22	<b>067N4195</b>	<b>067N4215</b>
TGEZ 7	25	$\frac{5}{8} \times \frac{7}{8}$	<b>067N4156</b>	<b>067N4176</b>	16 × 22	<b>067N4196</b>	<b>067N4216</b>
TGEZ 10	36	$\frac{5}{8} \times \frac{7}{8}$	<b>067N4157</b>	<b>067N4177</b>	16 × 22	<b>067N4197</b>	<b>067N4217</b>
TGEZ 10	36	$\frac{5}{8} \times 1 \frac{1}{8}$	<b>067N4158</b>	<b>067N4178</b>	16 × 28	<b>067N4198</b>	<b>067N4218</b>

**TGEZ 20**

TGEZ 12	42	$\frac{5}{8} \times \frac{7}{8}$	<b>067N4159</b>	<b>067N4179</b>	16 × 22	<b>067N4199</b>	<b>067N4219</b>
TGEZ 12	42	$\frac{5}{8} \times 1 \frac{1}{8}$	<b>067N4160</b>	<b>067N4180</b>	16 × 28	<b>067N4200</b>	<b>067N4220</b>
TGEZ 15	53	$\frac{5}{8} \times 1 \frac{1}{8}$	<b>067N4161</b>	<b>067N4181</b>	16 × 28	<b>067N4201</b>	<b>067N4221</b>
TGEZ 15	53	$\frac{7}{8} \times 1 \frac{1}{8}$	<b>067N4162</b>	<b>067N4182</b>	22 × 28	<b>067N4202</b>	<b>067N4222</b>
TGEZ 18	62	$\frac{7}{8} \times 1 \frac{1}{8}$	<b>067N4163</b>	<b>067N4183</b>	22 × 28	<b>067N4203</b>	<b>067N4223</b>
TGEZ 18	62	$\frac{7}{8} \times 1 \frac{3}{8}$	<b>067N4164</b>	<b>067N4184</b>	22 × 35	<b>067N4204</b>	<b>067N4224</b>

**TGEZ 40**

TGEZ 24	84	$\frac{7}{8} \times 1 \frac{3}{8}$	<b>067N4165</b>	<b>067N4185</b>	22 × 35	<b>067N4205</b>	<b>067N4225</b>
TGEZ 24	84	$1 \frac{1}{8} \times 1 \frac{3}{8}$	<b>067N4166</b>	<b>067N4186</b>	28 × 35	<b>067N4206</b>	<b>067N4226</b>
TGEZ 27	95	$\frac{7}{8} \times 1 \frac{3}{8}$	<b>067N4167</b>	<b>067N4187</b>	22 × 35	<b>067N4207</b>	<b>067N4227</b>
TGEZ 27	95	$1 \frac{1}{8} \times 1 \frac{3}{8}$	<b>067N4168</b>	<b>067N4188</b>	28 × 35	<b>067N4208</b>	<b>067N4228</b>
TGEZ 34	121	$1 \frac{1}{8} \times 1 \frac{3}{8}$	<b>067N4169</b>	<b>067N4189</b>	28 × 35	<b>067N4209</b>	<b>067N4229</b>

Range K = -25 → +10°C with MOP 95 psig/ 7.5 bar abs. OS = 4 K

Type and rated capacity  $Q_{nom.}^{2)}$ TR	Rated capacity  $Q_{nom.}^{2)}$ kW	Inch version			mm version		
		Connection Solder ODF × ODF <sup>1)</sup> in.	Code no. Multi pack	Code no. Industrial pack	Connection Solder ODF × ODF <sup>1)</sup> mm	Code no. Multi pack	Code no. Industrial pack

**TGEZ 10**

TGEZ 2.5	9	$\frac{3}{8} \times \frac{5}{8}$	<b>067N4000</b>	<b>067N4020</b>	10 × 16	<b>067N4040</b>	<b>067N4060</b>
TGEZ 2.5	9	$\frac{1}{2} \times \frac{5}{8}$	<b>067N4001</b>	<b>067N4021</b>	12 × 16	<b>067N4041</b>	<b>067N4061</b>
TGEZ 3.5	13	$\frac{1}{2} \times \frac{7}{8}$	<b>067N4002</b>	<b>067N4022</b>	12 × 22	<b>067N4042</b>	<b>067N4062</b>
TGEZ 5	19	$\frac{1}{2} \times \frac{5}{8}$	<b>067N4003</b>	<b>067N4023</b>	12 × 16	<b>067N4043</b>	<b>067N4063</b>
TGEZ 5	19	$\frac{1}{2} \times \frac{7}{8}$	<b>067N4004</b>	<b>067N4024</b>	12 × 22	<b>067N4044</b>	<b>067N4064</b>
TGEZ 5	19	$\frac{5}{8} \times \frac{7}{8}$	<b>067N4005</b>	<b>067N4025</b>	16 × 22	<b>067N4045</b>	<b>067N4065</b>
TGEZ 7	25	$\frac{5}{8} \times \frac{7}{8}$	<b>067N4006</b>	<b>067N4026</b>	16 × 22	<b>067N4046</b>	<b>067N4066</b>
TGEZ 10	36	$\frac{5}{8} \times \frac{7}{8}$	<b>067N4007</b>	<b>067N4027</b>	16 × 22	<b>067N4047</b>	<b>067N4067</b>
TGEZ 10	36	$\frac{5}{8} \times 1 \frac{1}{8}$	<b>067N4008</b>	<b>067N4028</b>	16 × 28	<b>067N4048</b>	<b>067N4068</b>

**TGEZ 20**

TGEZ 12	42	$\frac{5}{8} \times \frac{7}{8}$	<b>067N4009</b>	<b>067N4029</b>	16 × 22	<b>067N4049</b>	<b>067N4069</b>
TGEZ 12	42	$\frac{5}{8} \times 1 \frac{1}{8}$	<b>067N4010</b>	<b>067N4030</b>	16 × 28	<b>067N4050</b>	<b>067N4070</b>
TGEZ 15	53	$\frac{5}{8} \times 1 \frac{1}{8}$	<b>067N4011</b>	<b>067N4031</b>	16 × 28	<b>067N4051</b>	<b>067N4071</b>
TGEZ 15	53	$\frac{7}{8} \times 1 \frac{1}{8}$	<b>067N4012</b>	<b>067N4032</b>	22 × 28	<b>067N4052</b>	<b>067N4072</b>
TGEZ 18	62	$\frac{7}{8} \times 1 \frac{1}{8}$	<b>067N4013</b>	<b>067N4033</b>	22 × 28	<b>067N4053</b>	<b>067N4073</b>
TGEZ 18	62	$\frac{7}{8} \times 1 \frac{3}{8}$	<b>067N4014</b>	<b>067N4034</b>	22 × 35	<b>067N4054</b>	<b>067N4074</b>

**TGEZ 40**

TGEZ 24	84	$\frac{7}{8} \times 1 \frac{3}{8}$	<b>067N4015</b>	<b>067N4035</b>	22 × 35	<b>067N4055</b>	<b>067N4075</b>
TGEZ 24	84	$1 \frac{1}{8} \times 1 \frac{3}{8}$	<b>067N4016</b>	<b>067N4036</b>	28 × 35	<b>067N4056</b>	<b>067N4076</b>
TGEZ 27	95	$\frac{7}{8} \times 1 \frac{3}{8}$	<b>067N4017</b>	<b>067N4037</b>	22 × 35	<b>067N4057</b>	<b>067N4077</b>
TGEZ 27	95	$1 \frac{1}{8} \times 1 \frac{3}{8}$	<b>067N4018</b>	<b>067N4038</b>	28 × 35	<b>067N4058</b>	<b>067N4078</b>
TGEZ 34	121	$1 \frac{1}{8} \times 1 \frac{3}{8}$	<b>067N4019</b>	<b>067N4039</b>	28 × 35	<b>067N4059</b>	<b>067N4079</b>

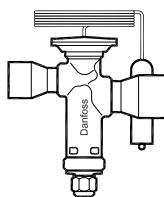
<sup>1)</sup> Pressure equalisation =  $\frac{1}{4}$  in (6 mm) ODF

<sup>2)</sup> The rated capacity is based on: ASERCOM standard

 Evaporating temperature,  $T_e = 4^\circ\text{C}$ ,  
 Liquid temperature,  $T_l = 37^\circ\text{C}$   
 Condensing temperature,  $T_c = 38^\circ\text{C}$ ,  
 Opening surperheat, OS=4K

# R410A

## Ordering Standard range (continued)



Range N = -40 → +10°C OS = 4 K

Type and rated capacity $Q_{nom.}^{2)}$ TR	Rated capacity $Q_{nom.}^{2)}$ kW	Inch version			mm version		
		Connection Solder ODF × ODF <sup>1)</sup> in.	Code no. Multi pack	Code no. Industrial pack	Connection Solder ODF × ODF <sup>1)</sup> mm	Code no. Multi pack	Code no. Industrial pack

### TGEL 10

TGEL 3.5	12	$3/8 \times 5/8$	067N3150	067N3170	10 × 16	067N3190	067N3210
TGEL 3.5	12	$1/2 \times 5/8$	067N3151	067N3171	12 × 16	067N3191	067N3211
TGEL 4.5	16	$1/2 \times 7/8$	067N3152	067N3172	12 × 22	067N3192	067N3212
TGEL 6.5	24	$1/2 \times 5/8$	067N3153	067N3173	12 × 16	067N3193	067N3213
TGEL 6.5	24	$1/2 \times 7/8$	067N3154	067N3174	12 × 22	067N3194	067N3214
TGEL 6.5	24	$5/8 \times 7/8$	067N3155	067N3175	16 × 22	067N3195	067N3215
TGEL 9	32	$5/8 \times 7/8$	067N3156	067N3176	16 × 22	067N3196	067N3216
TGEL 13	45	$5/8 \times 7/8$	067N3157	067N3177	16 × 22	067N3197	067N3217
TGEL 13	45	$5/8 \times 1 1/8$	067N3158	067N3178	16 × 28	067N3198	067N3218

### TGEL 20

TGEL 15	54	$5/8 \times 7/8$	067N3159	067N3179	16 × 22	067N3199	067N3219
TGEL 15	54	$5/8 \times 1 1/8$	067N3160	067N3180	16 × 28	067N3200	067N3220
TGEL 19	68	$5/8 \times 1 1/8$	067N3161	067N3181	16 × 28	067N3201	067N3221
TGEL 19	68	$7/8 \times 1 1/8$	067N3162	067N3182	22 × 28	067N3202	067N3222
TGEL 23	79	$7/8 \times 1 1/8$	067N3163	067N3183	22 × 28	067N3203	067N3223
TGEL 23	79	$7/8 \times 1 3/8$	067N3164	067N3184	22 × 35	067N3204	067N3224

### TGEL 40

TGEL 31	110	$7/8 \times 1 1/8$	067N3165	067N3185	22 × 28	067N3205	067N3225
TGEL 31	110	$1 1/8 \times 1 3/8$	067N3166	067N3186	28 × 35	067N3206	067N3226
TGEL 35	125	$7/8 \times 1 3/8$	067N3167	067N3187	22 × 35	067N3207	067N3227
TGEL 35	125	$1 1/8 \times 1 3/8$	067N3168	067N3188	28 × 35	067N3208	067N3228
TGEL 46	161	$1 1/8 \times 1 3/8$	067N3169	067N3189	28 × 35	067N3209	067N3229

Range K = -25 → +10°C with MOP 167 psig/12.5 bar abs. OS = 4 K

Type and rated capacity $Q_{nom.}^{2)}$ TR	Rated capacity $Q_{nom.}^{2)}$ kW	Inch version			mm version		
		Connection Solder ODF × ODF <sup>1)</sup> in.	Code no. Multi pack	Code no. Industrial pack	Connection Solder ODF × ODF <sup>1)</sup> mm	Code no. Multi pack	Code no. Industrial pack

### TGEL 10

TGEL 3.5	12	$3/8 \times 5/8$	067N3000	067N3020	10 × 16	067N3040	067N3060
TGEL 3.5	12	$1/2 \times 5/8$	067N3001	067N3021	12 × 16	067N3041	067N3061
TGEL 4.5	16	$1/2 \times 7/8$	067N3002	067N3022	12 × 22	067N3042	067N3062
TGEL 6.5	24	$1/2 \times 5/8$	067N3003	067N3023	12 × 16	067N3043	067N3063
TGEL 6.5	24	$1/2 \times 7/8$	067N3004	067N3024	12 × 22	067N3044	067N3064
TGEL 6.5	24	$5/8 \times 7/8$	067N3005	067N3025	16 × 22	067N3045	067N3065
TGEL 9	32	$5/8 \times 7/8$	067N3006	067N3026	16 × 22	067N3046	067N3066
TGEL 13	45	$5/8 \times 7/8$	067N3007	067N3027	16 × 22	067N3047	067N3067
TGEL 13	45	$5/8 \times 1 1/8$	067N3008	067N3028	16 × 28	067N3048	067N3068

### TGEL 20

TGEL 15	54	$5/8 \times 7/8$	067N3009	067N3029	16 × 22	067N3049	067N3069
TGEL 15	54	$5/8 \times 1 1/8$	067N3010	067N3030	16 × 28	067N3050	067N3070
TGEL 19	68	$5/8 \times 1 1/8$	067N3011	067N3031	16 × 28	067N3051	067N3071
TGEL 19	68	$7/8 \times 1 1/8$	067N3012	067N3032	22 × 28	067N3052	067N3072
TGEL 23	79	$7/8 \times 1 1/8$	067N3013	067N3033	22 × 28	067N3053	067N3073
TGEL 23	79	$7/8 \times 1 3/8$	067N3014	067N3034	22 × 35	067N3054	067N3074

### TGEL 40

TGEL 31	110	$7/8 \times 1 3/8$	067N3015	067N3035	22 × 28	067N3055	067N3075
TGEL 31	110	$1 1/8 \times 1 3/8$	067N3016	067N3036	28 × 35	067N3056	067N3076
TGEL 35	125	$7/8 \times 1 3/8$	067N3017	067N3037	22 × 35	067N3057	067N3077
TGEL 35	125	$1 1/8 \times 1 3/8$	067N3018	067N3038	28 × 35	067N3058	067N3078
TGEL 46	161	$1 1/8 \times 1 3/8$	067N3019	067N3039	28 × 35	067N3059	067N3079

<sup>1)</sup> Pressure equalisation =  $1/4$  in (6 mm) ODF

<sup>2)</sup> The rated capacity is based on: ASERCOM standard

Evaporating temperature,  $T_e = 4^\circ\text{C}$ ,  
Liquid temperature,  $T_l = 37^\circ\text{C}$   
Condensing temperature,  $T_c = 38^\circ\text{C}$ ,  
Opening superheat, OS=4K

**Capacity**
**R22**

Capacity in kW for range N and K, opening superheat OS = 4 K

Type and rated capacity	Rated capacity [kW]	Pressure drop across the valve $\Delta p$ bar								Pressure drop across the valve $\Delta p$ bar							
		2	4	6	8	10	12	14	16	2	4	6	8	10	12	14	16
<b>Evaporating temperature +15°C</b>										<b>Evaporating temperature +10°C</b>							
TGEX 3	10	7.1	9.4	10.8	11.7	12.2	12.5	12.7	12.8	6.8	9.0	10.4	11.1	11.6	11.9	12.0	12.1
TGEX 4	14	9.7	12.8	14.7	15.8	16.5	16.9	17.1	17.1	9.3	12.3	14.1	15.1	15.7	16.0	16.2	16.2
TGEX 6	20	14.2	18.7	21.4	23.9	23.9	24.3	24.5	24.5	13.8	18.1	20.6	22.0	22.7	23.2	23.3	23.2
TGEX 7.5	27	18.7	24.5	27.9	30.0	31.1	31.6	31.8	31.7	18.2	23.8	27.1	28.8	29.8	30.3	30.4	30.2
TGEX 11	38	24.2	32.2	37.3	40.6	42.6	43.9	44.7	45.1	23.9	31.7	36.6	39.5	41.3	42.6	43.3	43.6
TGEX 12	43	32.5	42.1	47.3	50.2	51.4	51.7	51.4	50.7	31.2	40.2	45.1	47.4	48.4	48.6	48.3	47.5
TGEX 15	54	41.8	53.9	60.3	63.7	64.9	65.0	64.4	63.3	40.1	51.5	57.4	60.1	61.1	61.4	60.4	59.3
TGEX 18	63	47.1	61.4	69.6	74.1	76.0	76.4	75.9	74.5	45.7	59.3	66.7	70.2	71.6	71.6	70.7	69.3
TGEX 26	92	74.0	94.2	104.4	109.2	110.2	109.4	107.5	104.8	71.1	90.1	99.5	103.0	103.6	102.7	100.7	98.0
TGEX 30	104	83.7	106.6	118.1	123.4	124.5	123.5	121.3	118.2	80.7	102.2	112.7	116.6	117.2	116.1	113.7	110.6
TGEX 38	134	99.3	129.8	147.4	157.4	161.9	163.5	163.0	160.9	96.0	124.9	141.0	149.0	152.5	153.3	152.1	149.3
<b>Evaporating temperature +5°C</b>										<b>Evaporating temperature 0°C</b>							
TGEX 3	10	6.6	8.6	9.8	10.5	10.9	11.2	11.3	11.4	6.2	8.2	9.2	9.8	10.2	10.5	10.6	10.6
TGEX 4	14	9.0	11.8	13.4	14.2	14.8	15.1	15.2	15.2	8.5	11.2	12.6	13.4	13.8	14.1	14.2	14.2
TGEX 6	20	13.3	17.3	19.6	20.8	21.5	21.9	22.0	21.9	12.7	16.5	18.5	19.6	20.2	20.5	20.5	20.4
TGEX 7.5	27	17.7	23.0	25.9	27.5	28.3	28.7	28.8	28.6	17.0	22.0	24.6	26.0	26.7	27.0	27.0	26.8
TGEX 11	38	23.5	31.0	35.5	38.1	39.8	40.9	41.6	41.9	22.9	30.1	34.1	36.5	38.1	39.0	39.6	39.8
TGEX 12	43	29.7	38.1	42.5	44.4	45.2	45.3	44.9	44.2	28.1	35.8	39.5	41.2	41.9	41.9	41.5	40.8
TGEX 15	54	38.2	48.8	54.1	56.2	57.0	56.9	56.2	55.1	36.1	45.8	50.3	52.1	52.7	52.5	51.8	50.7
TGEX 18	63	44.0	56.6	63.1	65.8	66.6	66.7	66.0	64.9	42.0	53.5	58.8	61.2	62.1	62.1	61.4	60.3
TGEX 26	92	67.9	85.5	93.6	96.3	96.6	95.5	93.5	90.8	64.2	80.4	87.1	89.3	89.3	88.0	86.0	83.5
TGEX 30	104	77.2	97.1	106.3	109.2	109.5	108.1	105.7	102.6	73.2	91.5	99.0	101.3	101.3	99.8	97.3	94.3
TGEX 38	134	92.2	119.1	133.2	139.4	141.9	141.8	139.9	136.5	87.7	112.4	124.0	128.9	130.3	129.3	126.6	122.6
<b>Evaporating temperature -5°C</b>										<b>Evaporating temperature -10°C</b>							
TGEX 3	10	5.9	7.7	8.6	9.2	9.5	9.7	9.8	9.8	5.5	7.1	7.9	8.4	8.7	8.9	9.0	9.0
TGEX 4	14	8.1	10.5	11.7	12.4	12.8	13.1	13.2	13.1	7.6	9.8	10.8	11.5	11.8	12.0	12.1	12.0
TGEX 6	20	12.1	15.6	17.3	18.3	18.8	19.0	19.0	18.9	11.4	14.5	16.0	16.9	17.3	17.5	17.5	17.4
TGEX 7.5	27	16.2	20.9	23.1	24.3	24.9	25.2	25.1	24.9	15.4	19.6	21.5	22.6	23.1	23.2	23.2	22.9
TGEX 11	38	22.1	28.9	32.4	34.6	36.0	36.9	37.3	37.4	21.2	27.4	30.6	32.5	33.7	34.4	34.7	34.8
TGEX 12	43	26.3	33.4	36.4	37.9	38.4	38.4	38.0	37.3	24.4	30.6	33.3	34.5	34.9	34.9	34.5	33.8
TGEX 15	54	33.8	42.7	46.3	47.9	48.3	48.1	47.4	46.3	31.3	39.1	42.3	43.6	43.9	43.6	42.9	41.9
TGEX 18	63	39.6	50.2	54.7	56.8	57.5	57.3	56.6	55.4	37.1	46.5	50.4	52.1	52.6	52.4	51.6	50.5
TGEX 26	92	60.2	75.0	80.3	82.0	81.8	80.5	78.5	76.0	56.0	68.8	73.2	74.6	74.2	72.9	71.0	68.6
TGEX 30	104	68.8	85.5	91.3	93.2	92.8	91.2	88.8	86.0	64.0	78.5	83.5	84.8	84.3	82.7	80.3	77.6
TGEX 38	134	82.6	104.9	114.0	117.6	117.9	116.0	112.6	107.9	77.0	96.1	103.4	105.7	105.0	102.2	98.0	93.9
<b>Evaporating temperature -15°C</b>										<b>Evaporating temperature -20°C</b>							
TGEX 3	10	5.1	6.6	7.3	7.7	8.0	8.1	8.2	8.2	4.7	6.0	6.6	7.0	7.2	7.3	7.4	7.4
TGEX 4	14	7.1	9.0	9.9	10.5	10.8	11.0	11.0	10.9	6.5	8.2	9.0	9.5	9.8	9.9	9.9	9.9
TGEX 6	20	10.6	13.4	14.7	15.5	15.8	16.0	15.9	15.8	9.8	1.2	13.4	14.0	14.3	14.4	14.4	14.2
TGEX 7.5	27	14.4	18.1	19.8	20.7	21.2	21.3	21.1	20.9	13.4	16.6	18.1	18.9	19.2	19.3	19.1	18.8
TGEX 11	38	20.1	25.6	28.5	30.2	31.2	31.8	32.0	31.9	18.9	23.7	26.2	27.7	28.5	28.9	29.0	28.8
TGEX 12	43	22.4	27.8	30.1	31.2	31.5	31.4	31.0	30.4	20.4	25.0	27.0	27.9	28.1	28.0	27.7	27.1
TGEX 15	54	28.8	35.5	38.2	39.3	39.6	39.2	38.6	37.6	26.2	31.9	34.2	35.2	35.3	35.0	34.4	33.5
TGEX 18	63	34.5	42.6	45.9	47.4	47.7	47.4	46.6	45.5	31.6	38.6	41.4	42.6	42.9	42.5	41.7	40.7
TGEX 26	92	51.5	62.4	66.2	67.2	66.7	65.4	63.6	61.4	46.9	56.0	59.2	60.0	59.4	58.2	56.5	54.5
TGEX 30	104	59.0	71.4	75.5	76.5	75.8	74.2	72.0	69.5	53.8	64.2	67.6	68.3	67.6	66.0	64.0	61.6
TGEX 38	134	71.0	86.9	92.4	93.4	91.7	89.5	87.0	84.1	64.6	77.4	81.3	82.2	81.5	80.0	77.4	74.7

**Correction for subcooling  $\Delta t_{sub}$** 

The evaporator capacity used must be corrected if the subcooling deviates from 4 K. The corrected capacity can be obtained by dividing the required evaporator capacity by the correction factor given across, and then selecting from the tables.

Correction factor	$\Delta t_{sub}$	4 K	10 K	15 K	20 K	25 K	30 K	35 K	40 K	45 K	50 K
	TGE 10										
TGE 20		1.00	1.06	1.11	1.15	1.20	1.24	1.29	1.33	1.37	1.42
TGE 40											

Note: Flash gas can form if subcooling is too low.

**Capacity** (continued)

**R22**

Capacity in kW for range N and K, opening superheat OS = 4 K

Type and rated capacity	Rated capacity [kW]	Pressure drop across the valve $\Delta p$ bar								Pressure drop across the valve $\Delta p$ bar							
		2	4	6	8	10	12	14	16	2	4	6	8	10	12	14	16
<b>Evaporating temperature -25°C</b>										<b>Evaporating temperature -30°C</b>							
TGEX 3	10	4.3	5.4	5.9	6.3	6.5	6.6	6.6	6.6	3.9	4.8	5.3	5.6	5.7	5.8	5.9	5.8
TGEX 4	14	6.0	7.4	8.1	8.5	8.7	8.8	8.9	8.8	5.3	6.6	7.2	7.6	7.8	7.8	7.8	7.8
TGEX 6	20	9.0	11.0	12.1	12.6	12.9	12.9	12.8	12.7	8.1	9.9	10.8	11.2	11.4	11.4	11.4	11.2
TGEX 7.5	27	12.3	15.1	16.4	17.0	17.3	17.3	17.1	16.8	11.1	13.5	14.6	15.2	15.3	15.3	15.1	14.8
TGEX 11	38	17.5	21.7	23.9	25.1	25.7	26.0	25.9	25.6	16.0	19.6	21.4	22.4	22.9	22.9	22.7	22.3
TGEX 12	43	18.4	22.2	23.9	24.7	24.9	24.8	24.5	24.0	16.2	19.5	21.0	21.7	21.9	21.8	21.5	21.0
TGEX 15	54	23.6	28.3	30.3	31.1	31.3	30.9	30.4	29.6	20.9	24.9	26.7	27.3	27.4	27.1	26.6	26.0
TGEX 18	63	28.7	34.5	37.0	38.0	38.1	37.7	37.0	36.1	25.6	30.6	32.7	33.5	33.6	33.2	32.6	31.7
TGEX 26	92	42.3	49.8	52.4	53.0	52.4	51.3	49.7	47.9	37.4	43.8	46.0	46.4	45.9	44.8	43.4	41.8
TGEX 30	104	48.6	57.0	60.0	60.4	59.6	58.2	56.3	54.2	43.0	50.2	52.6	52.9	52.2	50.8	49.1	47.2
TGEX 38	134	58.0	68.4	72.0	72.8	72.0	70.4	68.2	65.7	51.5	60.3	63.4	63.9	63.1	61.5	59.5	57.3
<b>Evaporating temperature -35°C</b>										<b>Evaporating temperature -40°C</b>							
TGEX 3	10	3.4	4.2	4.7	4.9	5.1	5.1	5.1	5.1	3.0	3.7	4.1	4.3	4.4	4.4	4.5	4.4
TGEX 4	14	4.7	5.8	6.4	6.7	6.8	6.9	6.9	6.8	4.2	5.1	5.5	5.8	5.9	6.0	5.9	5.9
TGEX 6	20	7.2	8.7	9.5	9.9	10.0	10.0	9.9	9.8	6.3	7.6	8.3	8.6	8.7	8.7	8.6	8.4
TGEX 7.5	27	9.9	12.0	12.9	13.4	13.5	13.4	13.2	12.9	8.8	10.5	11.3	11.7	11.7	11.7	11.5	11.2
TGEX 11	38	14.3	17.4	19.0	19.7	19.9	19.9	19.5	19.0	12.7	15.3	16.5	17.0	17.1	16.8	16.5	16.1
TGEX 12	43	14.2	17.0	18.3	18.9	19.1	19.0	18.7	18.7	12.3	14.7	15.8	16.4	16.5	16.5	16.2	15.9
TGEX 15	54	18.3	21.7	23.2	23.8	23.9	23.6	23.2	22.6	15.8	18.8	20.1	20.6	20.7	20.5	20.1	19.6
TGEX 18	63	22.5	26.8	28.6	29.3	29.3	29.0	28.4	27.7	19.6	23.3	24.8	25.4	25.4	25.1	24.6	24.0
TGEX 26	92	32.7	38.1	40.0	40.3	39.8	38.8	37.6	36.2	28.2	32.8	34.4	34.6	34.2	33.4	32.3	31.1
TGEX 30	104	37.7	43.8	45.8	46.0	45.3	44.0	42.6	40.1	32.6	37.7	39.4	39.5	38.9	37.8	36.5	35.1
TGEX 38	134	45.2	52.7	55.2	55.6	54.8	53.3	51.6	49.6	39.2	45.6	47.6	47.8	47.0	45.8	44.2	42.5

**Correction for subcooling  $\Delta t_{sub}$** 

The evaporator capacity used must be corrected if the subcooling deviates from 4 K. The corrected capacity can be obtained by dividing the required evaporator capacity by the correction factor given across, and then selecting from the tables.

Correction factor	$\Delta t_{sub}$	4 K	10 K	15 K	20 K	25 K	30 K	35 K	40 K	45 K	50 K
	TGE 10										
TGE 20		1.00	1.06	1.11	1.15	1.20	1.24	1.29	1.33	1.37	1.42
TGE 40											

Note: Flash gas can form if subcooling is too low.

**Capacity (continued)**
**R134a**

Capacity in kW for range N and K, opening superheat OS = 4 K

Type and rated capacity	Rated capacity [kW]	Pressure drop across the valve $\Delta p$ bar								Pressure drop across the valve $\Delta p$ bar							
		2	4	6	8	10	12	14	16	2	4	6	8	10	12	14	16
<b>Evaporating temperature +15°C</b>										<b>Evaporating temperature +10°C</b>							
TGEN 1.5	6	5.2	6.6	7.3	7.6	7.8	7.7	7.5		4.9	6.2	6.8	7.1	7.2	7.1	7.0	
TGEN 2.5	8	7.1	9.0	10.0	10.4	10.5	10.5	10.3	10.1	6.7	8.5	9.3	9.7	9.8	9.7	9.6	9.3
TGEN 3.5	12	10.6	13.4	14.7	15.3	15.4	15.3	15.0	14.6	10.1	12.7	13.8	14.3	14.4	14.2	13.9	13.5
TGEN 4.5	17	14.2	18.0	19.7	20.4	20.5	20.3	19.8	19.2	13.6	17.1	18.5	19.1	19.1	18.9	18.4	17.8
TGEN 7	24	19.3	24.8	27.5	28.8	29.4	29.5	29.2	28.6	18.7	23.9	26.2	27.3	27.8	27.4	26.8	
TGEN 8	29	26.8	33.4	36.0	36.6	36.4	35.5	34.3	32.9	25.3	31.4	33.4	33.9	33.6	32.7	31.6	30.2
TGEN 10	37	34.5	42.7	45.7	46.3	45.8	44.5	42.8	40.8	32.6	40.1	42.4	42.8	42.2	41.0	39.3	37.4
TGEN 12	44	39.7	49.7	53.5	54.2	53.5	52.2	50.4	48.2	37.9	46.9	49.7	50.4	49.8	48.5	46.6	44.5
TGEN 17	61	58.5	71.6	75.8	76.0	74.3	71.6	68.3	64.6	55.3	67.2	70.3	70.2	68.4	65.8	62.6	59.1
TGEN 20	70	66.6	81.4	86.1	86.2	84.2	81.1	77.2	73.0	63.1	76.6	80.0	79.7	77.6	74.5	70.8	66.8
TGEN 25	87	79.9	100.2	108.3	110.3	109.2	106.1	101.6	96.1	75.9	94.3	102.2	101.3	99.6	95.9	91.0	85.2
<b>Evaporating temperature +5°C</b>										<b>Evaporating temperature 0°C</b>							
TGEN 1.5	6	4.6	5.8	6.3	6.6	6.7	6.6	6.5	6.4	4.3	5.4	5.8	6.0	6.1	6.1	6.0	5.8
TGEN 2.5	8	6.3	7.9	8.6	8.9	9.0	9.0	8.8	8.6	5.9	7.3	7.9	8.2	8.3	8.2	8.0	7.8
TGEN 3.5	12	9.5	11.9	12.8	13.2	13.3	13.1	12.8	12.4	8.9	11.0	11.8	12.1	12.2	12.0	11.7	11.3
TGEN 4.5	17	12.9	16.1	17.3	17.7	17.7	17.5	17.0	16.4	12.2	14.9	16.0	16.3	16.3	16.0	15.6	15.0
TGEN 7	24	17.9	22.6	24.6	25.6	26.0	25.9	25.5	24.9	17.1	21.2	23.0	23.8	24.1	23.9	23.4	22.8
TGEN 8	29	23.7	29.0	30.8	31.1	30.7	29.9	28.8	27.5	22.1	26.6	28.1	28.3	27.9	27.1	26.0	24.8
TGEN 10	37	30.5	37.1	39.0	39.3	38.6	37.3	35.8	34.0	28.4	34.0	35.6	35.7	35.0	33.8	32.3	30.6
TGEN 12	44	35.8	43.7	46.1	46.6	45.9	44.5	42.8	40.7	33.6	40.4	42.5	42.7	41.9	40.6	38.8	36.9
TGEN 17	61	51.2	62.0	64.5	64.2	62.4	59.8	56.8	53.5	48.1	56.8	58.8	58.3	56.5	54.0	51.1	48.0
TGEN 20	70	59.2	70.8	73.5	73.0	70.8	67.8	64.9	60.5	55.1	64.9	67.0	66.3	64.1	61.2	57.9	54.3
TGEN 25	87	71.3	87.0	91.7	91.8	89.3	85.1	80.0	73.9	66.4	79.5	82.8	82.0	78.8	74.2	70.0	65.8
<b>Evaporating temperature -5°C</b>										<b>Evaporating temperature -10°C</b>							
TGEN 1.5	6	4.0	4.9	5.3	5.5	5.5	5.5	5.4	5.3	3.7	4.5	4.8	5.0	5.0	4.9	4.7	
TGEN 2.5	8	5.5	6.7	7.3	7.5	7.5	7.4	7.3	7.0	5.1	6.1	6.6	6.8	6.8	6.7	6.5	6.3
TGEN 3.5	12	8.3	10.1	10.8	11.1	11.1	10.9	10.6	10.2	7.7	9.2	9.8	10.0	10.0	9.8	9.5	9.1
TGEN 4.5	17	11.4	13.8	14.7	14.9	14.9	14.6	14.1	13.5	10.6	12.6	13.4	13.6	13.5	13.1	12.7	12.1
TGEN 7	24	16.1	19.7	21.3	21.9	22.0	21.8	21.3	20.6	15.1	18.1	19.5	20.0	20.0	19.7	19.1	18.4
TGEN 8	29	20.3	24.2	25.4	25.6	25.1	24.3	23.3	22.2	18.6	21.8	22.8	22.9	22.5	21.7	20.8	19.8
TGEN 10	37	26.1	30.8	32.2	32.2	31.5	30.3	28.9	27.4	23.9	27.8	28.9	28.8	28.1	27.0	25.7	24.3
TGEN 12	44	31.2	37.0	38.7	38.8	37.9	36.6	35.0	33.1	28.8	33.5	34.9	34.9	34.1	32.8	31.2	29.5
TGEN 17	61	44.4	51.6	53.1	52.4	50.7	48.3	45.7	42.9	40.6	46.4	47.6	46.9	45.2	43.0	40.5	38.0
TGEN 20	70	50.9	59.0	60.6	59.7	57.6	54.8	51.7	48.5	46.6	53.2	54.4	53.4	51.3	48.7	45.9	42.9
TGEN 25	87	61.2	71.7	73.8	72.1	69.4	66.2	62.6	58.7	56.0	64.0	65.3	64.3	62.0	59.0	55.6	52.0
<b>Evaporating temperature -15°C</b>										<b>Evaporating temperature -20°C</b>							
TGEN 1.5	6	3.4	4.0	4.3	4.5	4.5	4.4	4.3	4.2	3.0	3.6	3.9	4.0	4.0	3.9	3.7	
TGEN 2.5	8	4.6	5.5	5.9	6.1	6.1	6.0	5.8	5.6	4.2	5.0	5.3	5.4	5.4	5.3	5.2	5.0
TGEN 3.5	12	7.0	8.3	8.9	9.0	9.0	8.8	8.5	8.1	6.4	7.5	7.9	8.1	8.0	7.8	7.5	7.2
TGEN 4.5	17	9.7	11.4	12.1	12.2	12.1	11.8	11.3	10.8	8.8	10.3	10.9	11.0	10.8	10.5	10.1	9.6
TGEN 7	24	13.9	16.5	17.7	18.0	17.9	17.6	17.0	16.2	12.7	15.0	15.9	16.1	15.9	15.5	14.9	14.1
TGEN 8	29	16.7	19.4	20.3	20.3	19.9	19.3	18.4	17.5	14.9	17.3	18.0	18.0	17.6	17.0	16.2	15.4
TGEN 10	37	21.5	24.8	25.7	25.6	24.9	23.9	22.8	21.5	19.1	22.0	22.7	22.6	22.0	21.1	20.0	18.9
TGEN 12	44	26.1	30.2	31.3	31.1	30.3	29.1	27.7	26.1	23.4	26.9	27.8	27.6	26.8	25.7	24.4	23.0
TGEN 17	61	36.5	41.5	42.4	41.6	40.0	38.0	35.7	33.4	32.6	36.8	37.5	36.7	35.2	33.4	31.3	29.3
TGEN 20	70	42.0	47.5	48.4	47.4	45.4	43.0	40.4	37.3	37.5	42.2	42.8	41.8	40.0	37.8	35.4	33.0
TGEN 25	87	50.1	57.0	58.2	57.1	54.9	52.0	49.0	45.7	44.9	50.7	51.6	50.4	48.3	45.7	42.9	40.0

**Correction for subcooling  $\Delta t_{sub}$** 

The evaporator capacity used must be corrected if the subcooling deviates from 4 K. The corrected capacity can be obtained by dividing the required evaporator capacity by the correction factor given across, and then selecting from the tables.

Correction factor	$\Delta t_{sub}$	4 K	10 K	15 K	20 K	25 K	30 K	35 K	40 K	45 K	50 K
		TGE 10									
	TGE 20	1.00	1.08	1.13	1.18	1.23	1.29	1.34	1.39	1.44	1.49
	TGE 40										

Note: Flash gas can form if subcooling is too low.

**Capacity** (continued)

**R134a**

Capacity in kW for range N and K, opening superheat OS = 4 K

Type and rated capacity	Rated capacity [kW]	Pressure drop across the valve $\Delta p$ bar								Pressure drop across the valve $\Delta p$ bar							
		2	4	6	8	10	12	14	16	2	4	6	8	10	12	14	16
<b>Evaporating temperature -25°C</b>										<b>Evaporating temperature -30°C</b>							
TGEN 1.5	6	2.7	3.2	3.5	3.6	3.6	3.5	3.4	3.3	2.4	2.9	3.1	3.2	3.1	3.1	3.0	2.9
TGEN 2.5	8	3.8	4.5	4.7	4.8	4.8	4.7	4.6	4.4	3.4	4.0	4.2	4.3	4.3	4.2	4.0	3.9
TGEN 3.5	12	5.7	6.7	7.1	7.2	7.1	6.9	6.6	6.3	5.1	6.0	6.3	6.4	6.3	6.1	5.8	5.6
TGEN 4.5	17	7.9	9.2	9.7	9.8	9.6	9.3	8.9	8.4	7.1	8.3	8.6	8.7	8.5	8.2	7.8	7.4
TGEN 7	24	11.5	13.4	14.2	14.3	14.0	13.5	12.8	12.1	13.3	12.0	12.5	12.5	12.2	11.8	11.3	10.6
TGEN 8	29	13.2	15.2	15.8	15.8	15.5	14.9	14.2	13.5	11.6	13.4	13.9	13.9	13.5	13.0	12.4	11.8
TGEN 10	37	16.9	19.4	20.0	19.8	19.3	18.5	17.5	16.5	14.9	17.0	17.5	17.4	16.9	16.1	15.3	14.4
TGEN 12	44	20.8	23.8	24.6	24.3	23.6	22.6	21.4	20.1	18.4	21.0	21.6	21.4	20.7	19.8	18.7	17.5
TGEN 17	61	28.9	32.5	33.0	32.2	30.8	29.2	27.4	25.5	25.5	28.5	28.9	28.2	27.0	25.5	23.9	22.2
TGEN 20	70	33.3	37.3	37.7	36.7	35.0	33.1	31.0	28.8	29.4	32.8	33.0	32.1	30.6	28.8	27.0	25.0
TGEN 25	87	39.9	44.8	45.4	44.3	42.4	40.0	37.4	34.8	35.3	39.5	39.9	38.8	37.0	34.9	32.6	30.2
<b>Evaporating temperature -35°C</b>										<b>Evaporating temperature -40°C</b>							
TGEN 1.5	6	2.2	2.6	2.7	2.8	2.8	2.7	2.6	2.5	2.0	2.3	2.4	2.5	2.5	2.4	2.3	2.2
TGEN 2.5	8	3.0	3.5	3.7	3.8	3.8	3.7	3.5	3.4	2.7	3.2	3.3	3.4	3.3	3.2	3.1	3.0
TGEN 3.5	12	4.6	5.3	5.6	5.6	5.5	5.4	5.1	4.9	4.1	4.8	5.0	5.0	4.9	4.7	4.5	4.3
TGEN 4.5	17	6.4	7.4	7.7	7.7	7.5	7.2	6.9	6.5	5.7	6.6	6.8	6.8	6.6	6.4	6.0	5.7
TGEN 7	24	9.3	10.7	11.1	11.1	10.8	10.4	9.9	9.3	8.3	9.6	9.9	9.9	9.6	9.2	8.7	8.2
TGEN 8	29	10.2	11.7	12.2	12.1	11.9	11.4	10.9	10.3	8.9	10.3	10.7	10.6	10.4	10.0	9.5	9.0
TGEN 10	37	13.1	14.9	15.4	15.2	14.7	14.1	13.4	12.6	11.5	13.1	13.5	13.3	12.9	12.3	11.7	11.0
TGEN 12	44	16.3	18.5	19.0	18.7	18.1	17.3	16.3	15.3	14.3	16.2	16.7	16.4	15.9	15.1	14.3	13.4
TGEN 17	61	22.4	25.0	25.3	24.6	23.5	22.2	20.8	19.3	19.7	22.0	22.2	21.6	20.6	19.4	18.2	16.9
TGEN 20	70	25.9	28.8	28.9	28.1	26.7	25.1	23.5	21.7	22.8	25.2	25.4	24.6	23.4	22.0	20.4	18.9
TGEN 25	87	31.2	34.7	35.0	33.9	32.3	30.3	28.3	26.2	27.5	30.5	30.7	29.7	28.2	26.5	24.6	22.7

**Correction for subcooling  $\Delta t_{sub}$** 

The evaporator capacity used must be corrected if the subcooling deviates from 4 K. The corrected capacity can be obtained by dividing the required evaporator capacity by the correction factor given across, and then selecting from the tables.

Correction factor	$\Delta t_{sub}$	4 K	10 K	15 K	20 K	25 K	30 K	35 K	40 K	45 K	50 K
	TGE 10										
TGE 20		1.00	1.08	1.13	1.18	1.23	1.29	1.34	1.39	1.44	1.49
TGE 40											

Note: Flash gas can form if subcooling is too low.

**Capacity (continued)**

# R404A/ R507

Capacity in kW for range N and K, opening superheat OS = 4 K

Type and rated capacity	Rated capacity [kW]	Pressure drop across the valve $\Delta p$ bar								Pressure drop across the valve $\Delta p$ bar							
		2	4	6	8	10	12	14	16	2	4	6	8	10	12	14	16
<b>Evaporating temperature +15°C</b>										<b>Evaporating temperature +10°C</b>							
TGES 2	7	5.1	6.6	7.4	7.9	8.1	8.1	8.0	7.8	4.9	6.4	7.2	7.6	7.8	7.8	7.7	7.5
TGES 2.5	9	5.9	9.0	10.1	10.7	11.0	10.9	10.8	10.5	6.8	8.7	9.8	10.4	10.5	10.5	10.3	10.0
TGES 4	14	10.2	13.2	14.8	15.6	15.9	15.9	15.6	15.1	10.0	12.9	14.4	15.2	15.4	15.3	15.0	14.5
TGES 5	18	13.4	17.3	19.4	20.5	20.9	20.7	20.3	19.6	13.3	17.0	19.0	20.0	20.2	20.1	19.6	19.0
TGES 7.5	26	17.5	22.9	25.9	27.7	28.5	28.6	28.3	27.6	17.5	22.8	25.7	27.4	28.0	28.1	27.7	27.1
TGES 9	31	24.8	31.6	35.0	36.5	36.8	36.1	35.0	33.5	24.2	30.7	33.8	35.2	35.2	34.6	33.5	32.0
TGES 11	39	31.9	40.5	44.7	46.5	46.6	45.6	44.1	42.1	31.1	39.3	43.2	44.7	44.6	43.6	42.1	40.2
TGES 13	45	35.7	45.8	51.1	53.6	54.2	53.4	51.8	49.6	35.2	45.0	49.8	52.0	52.1	51.1	49.4	47.1
TGES 18	64	53.7	67.5	73.8	76.2	75.9	73.8	70.1	67.2	52.3	65.5	71.3	73.3	72.4	70.4	67.4	64.0
TGES 21	72	60.8	76.5	83.6	86.3	85.8	83.4	80.0	75.9	59.4	74.3	80.9	83.1	82.1	79.6	73.3	72.3
TGES 26	92	71.9	92.4	103.1	108.4	109.7	108.3	105.3	101.1	70.4	90.1	100.0	104.6	105.0	103.3	100.1	95.8
<b>Evaporating temperature +5°C</b>										<b>Evaporating temperature 0°C</b>							
TGES 2	7	4.8	6.2	6.9	7.3	7.4	7.4	7.3	7.1	4.6	5.9	6.6	6.9	7.0	7.0	6.9	6.7
TGES 2.5	9	6.6	8.4	9.4	9.9	10.1	10.0	9.8	9.6	6.3	8.1	9.0	9.4	9.5	9.4	9.3	9.0
TGES 4	14	9.7	12.5	13.9	14.6	14.7	14.6	14.3	13.8	9.4	12.0	13.3	13.8	13.9	13.8	13.5	13.1
TGES 5	18	13.0	16.6	18.5	19.3	19.4	19.3	18.8	17.2	12.6	16.1	17.8	18.4	18.5	18.3	17.8	17.2
TGES 7.5	26	17.3	22.9	25.3	26.7	27.2	27.2	26.9	26.3	17.0	21.9	24.6	26.7	26.2	26.2	25.8	25.2
TGES 9	31	23.4	29.5	32.4	33.4	33.4	32.7	31.6	30.3	22.4	28.1	30.8	31.5	31.3	30.6	29.6	28.3
TGES 11	39	30.0	37.8	41.4	42.5	42.2	41.2	39.7	37.9	28.8	36.0	39.2	39.9	39.6	38.6	37.1	35.4
TGES 13	45	34.4	43.6	48.1	49.6	49.4	48.2	46.4	44.3	33.3	41.9	45.8	46.7	46.3	45.3	43.7	41.7
TGES 18	64	50.5	62.9	68.2	69.5	68.5	66.4	63.5	60.2	48.3	59.9	64.5	65.2	64.1	62.0	59.2	56.0
TGES 21	72	57.5	71.5	77.5	78.8	77.7	75.2	72.0	68.1	55.1	68.2	73.5	74.1	72.8	70.3	67.1	63.4
TGES 26	92	68.4	87.0	96.0	99.3	99.2	97.1	93.7	89.4	65.8	83.1	91.0	93.0	92.4	90.1	86.5	82.0
<b>Evaporating temperature -5°C</b>										<b>Evaporating temperature -10°C</b>							
TGES 2	7	4.4	5.6	6.2	6.5	6.5	6.5	6.4	6.2	4.2	5.3	5.8	6.0	6.1	6.0	5.9	5.8
TGES 2.5	9	6.0	7.7	8.5	8.8	8.9	8.8	8.6	8.4	5.7	7.2	7.9	8.2	8.2	8.2	8.0	7.7
TGES 4	14	9.0	11.5	12.6	13.0	13.1	12.9	12.6	12.2	8.6	10.8	11.7	12.1	12.2	12.0	11.7	11.3
TGES 5	18	12.2	15.4	16.8	17.4	17.4	17.2	16.7	16.1	11.6	14.6	15.8	16.3	16.3	16.0	15.6	15.0
TGES 7.5	26	16.6	21.3	23.6	24.6	25.0	24.9	24.5	23.9	16.0	20.4	22.4	23.2	23.5	23.4	23.0	22.3
TGES 9	31	21.2	26.6	28.7	29.3	29.1	28.4	27.4	26.2	20.0	24.9	26.6	27.0	26.8	26.1	25.2	24.0
TGES 11	39	27.3	34.0	36.6	37.2	36.8	35.8	34.4	32.7	25.7	31.8	33.9	34.3	33.8	32.8	31.5	29.9
TGES 13	45	31.9	39.8	43.0	43.8	43.4	42.3	40.8	38.9	30.3	37.6	40.1	40.7	40.3	39.2	37.6	35.8
TGES 18	64	45.9	56.5	60.2	60.5	59.4	57.3	54.6	54.6	43.1	52.8	55.6	55.7	54.5	52.4	49.9	47.1
TGES 21	72	52.4	64.4	68.6	68.9	67.5	65.0	62.0	58.5	49.4	60.3	63.4	63.5	62.0	59.6	56.6	53.4
TGES 26	92	62.7	78.5	84.8	86.1	85.0	82.3	78.4	73.9	59.1	73.3	78.0	78.6	77.0	74.0	70.0	65.3
<b>Evaporating temperature -15°C</b>										<b>Evaporating temperature -20°C</b>							
TGES 2	7	3.9	4.9	5.3	5.5	5.6	5.5	5.4	5.3	3.6	4.5	4.9	5.1	5.1	5.1	4.9	4.8
TGES 2.5	9	5.4	6.7	7.3	7.5	7.6	7.5	7.3	7.1	5.0	6.2	6.7	6.9	6.9	6.8	6.7	6.4
TGES 4	14	8.1	10.1	10.9	11.2	11.2	11.0	10.7	10.3	7.6	9.3	10.0	10.3	10.2	10.1	9.8	9.4
TGES 5	18	11.0	13.7	14.7	15.1	15.1	14.8	14.3	13.8	10.3	12.7	13.6	13.9	13.8	13.5	13.1	12.5
TGES 7.5	26	15.3	19.3	21.0	21.8	22.0	21.8	21.3	20.7	14.5	18.1	19.5	20.2	20.3	20.0	19.5	18.9
TGES 9	31	18.6	22.9	24.4	24.7	24.4	23.8	22.9	21.8	17.2	20.9	22.1	22.4	22.1	21.4	20.6	19.6
TGES 11	39	24.0	29.4	31.0	31.3	30.8	29.8	28.6	27.1	22.2	26.8	28.2	28.3	27.8	26.9	25.7	24.4
TGES 13	45	28.5	35.0	37.1	37.5	37.0	35.9	34.4	32.7	26.6	32.2	33.9	34.2	33.6	32.5	31.1	29.5
TGES 18	64	40.2	48.6	50.8	50.8	49.5	47.5	45.2	42.5	37.1	44.2	46.0	45.8	44.6	42.7	40.5	38.1
TGES 21	72	46.1	55.6	58.0	57.9	56.4	54.0	51.3	48.2	42.6	50.7	52.6	52.3	50.8	48.6	46.0	43.2
TGES 26	92	55.2	67.4	70.8	70.8	68.7	65.3	61.8	58.2	51.0	61.0	63.4	62.7	61.1	58.5	55.5	52.2

**Correction for subcooling  $\Delta t_{sub}$** 

The evaporator capacity used must be corrected if the subcooling deviates from 4 K. The corrected capacity can be obtained by dividing the required evaporator capacity by the correction factor given across, and then selecting from the tables.

Correction factor	$\Delta t_{sub}$	4 K	10 K	15 K	20 K	25 K	30 K	35 K	40 K	45 K	50 K
		TGE 10									
	TGE 20	1.00	1.09	1.16	1.23	1.30	1.37	1.44	1.51	1.58	1.65
	TGE 40										

Note: Flash gas can form if subcooling is too low.



**Capacity** (continued)

# R404A/ R507

Capacity in kW for range N and K, opening superheat OS = 4 K

Type and rated capacity	Rated capacity [kW]	Pressure drop across the valve $\Delta p$ bar								Pressure drop across the valve $\Delta p$ bar							
		2	4	6	8	10	12	14	16	2	4	6	8	10	12	14	16
<b>Evaporating temperature -25°C</b>										<b>Evaporating temperature -30°C</b>							
TGES 2	7	3.4	4.1	4.5	4.6	4.6	4.6	4.5	4.3	3.1	3.7	4.0	4.1	4.1	4.1	4.0	3.9
TGES 2.5	9	4.6	5.7	6.1	6.3	6.3	6.2	6.0	5.8	4.3	5.1	5.5	5.6	5.6	5.5	5.4	5.2
TGES 4	14	7.0	8.5	9.1	9.3	9.3	9.1	8.8	8.4	6.5	7.7	8.2	8.4	8.3	8.2	7.9	7.5
TGES 5	18	9.6	11.7	12.4	12.6	12.5	12.2	11.8	11.3	8.9	10.6	11.3	11.4	11.3	11.0	10.6	10.1
TGES 7.5	26	13.7	16.7	18.0	18.5	18.5	18.2	17.7	17.0	12.7	15.3	16.4	16.7	16.7	16.3	15.8	15.1
TGES 9	31	15.8	18.9	19.9	20.1	19.8	19.2	18.4	17.5	14.3	16.9	17.8	17.9	17.6	17.0	16.3	15.5
TGES 11	39	20.3	24.2	25.3	25.4	24.9	24.0	23.0	21.7	18.4	21.6	22.6	22.6	22.1	21.3	20.3	19.2
TGES 13	45	24.6	29.3	30.7	30.9	30.3	29.2	27.9	26.4	22.5	26.4	27.6	27.6	27.0	26.0	24.8	23.4
TGES 18	64	33.9	39.8	41.3	41.0	39.8	38.0	36.0	33.8	30.7	35.5	36.7	36.3	35.2	33.6	31.7	29.7
TGES 21	72	39.0	45.7	47.2	46.8	45.3	43.3	40.9	38.3	35.4	40.8	42.0	41.5	40.1	38.2	36.0	33.7
TGES 26	92	46.6	54.6	56.7	56.3	54.6	52.2	49.4	46.4	42.3	48.9	50.5	50.0	48.4	46.2	43.6	40.8
<b>Evaporating temperature -35°C</b>										<b>Evaporating temperature -40°C</b>							
TGES 2	7	2.8	3.4	3.6	3.7	3.7	3.6	3.5	3.4	2.5	3.0	3.2	3.3	3.3	3.2	3.1	3.0
TGES 2.5	9	3.9	4.6	4.9	5.0	5.0	4.9	4.8	4.6	3.5	4.1	4.4	4.5	4.5	4.4	4.2	4.0
TGES 4	14	5.9	7.0	7.4	7.5	7.4	7.3	7.0	6.7	5.3	6.2	6.6	6.7	6.6	6.4	6.2	5.9
TGES 5	18	8.1	9.6	10.1	10.2	10.1	9.8	9.4	8.9	7.3	8.6	9.0	9.1	9.0	8.7	8.3	7.9
TGES 7.5	26	11.7	13.9	14.8	15.0	14.9	14.5	13.9	13.3	10.6	12.5	13.2	13.3	13.1	12.7	12.1	11.5
TGES 9	31	12.8	15.0	15.7	15.8	15.5	15.0	14.4	13.6	11.3	13.2	13.8	13.9	13.6	13.2	12.6	11.9
TGES 11	39	16.5	19.2	20.0	20.0	19.5	18.8	17.9	16.9	14.6	16.9	17.6	17.5	17.1	16.4	15.6	14.7
TGES 13	45	20.2	23.5	24.5	24.5	23.9	23.0	21.9	20.6	18.0	20.8	21.7	21.6	21.0	20.2	19.2	18.1
TGES 18	64	27.4	31.4	32.4	32.0	30.9	29.4	27.8	26.0	24.2	27.6	28.3	28.0	26.9	25.6	24.1	22.5
TGES 21	72	31.6	36.1	37.1	36.6	35.2	33.5	31.5	29.4	27.9	31.2	32.5	32.0	30.7	29.2	27.4	25.5
TGES 26	92	37.9	43.4	44.7	44.0	42.6	40.5	38.2	35.6	33.5	38.3	39.2	38.6	37.2	35.3	33.2	30.9

**Correction for subcooling  $\Delta t_{sub}$** 

The evaporator capacity used must be corrected if the subcooling deviates from 4 K. The corrected capacity can be obtained by dividing the required evaporator capacity by the correction factor given across, and then selecting from the tables.

Correction factor	$\Delta t_{sub}$	4 K	10 K	15 K	20 K	25 K	30 K	35 K	40 K	45 K	50 K
	TGE 10										
TGE 20		1.00	1.09	1.16	1.23	1.30	1.37	1.44	1.51	1.58	1.65
TGE 40											

Note: Flash gas can form if subcooling is too low.

**Capacity (continued)**
**R407C**

Capacity in kW for range N and K, opening superheat OS = 4 K

Type and rated capacity	Rated capacity [kW]	Pressure drop across the valve $\Delta p$ bar								Pressure drop across the valve $\Delta p$ bar							
		2	4	6	8	10	12	14	16	2	4	6	8	10	12	14	16
<b>Evaporating temperature +15°C</b>										<b>Evaporating temperature +10°C</b>							
TGEZ 2.5	9	5.7	7.5	8.6	9.2	9.5	9.7	9.7	9.7	5.5	7.2	8.2	8.7	9.0	9.1	9.2	9.1
TGEZ 3.5	13	7.9	10.3	11.7	12.5	12.9	13.1	13.1	13.0	7.6	9.9	11.2	11.9	12.2	12.4	12.4	12.3
TGEZ 5	19	11.8	15.3	17.4	18.5	19.1	19.3	19.2	19.0	11.4	14.8	16.7	17.6	18.1	18.2	18.2	18.0
TGEZ 7	25	15.8	20.6	23.3	24.8	25.4	25.6	25.6	25.2	15.4	19.9	22.4	23.6	24.2	24.4	24.3	23.9
TGEZ 10	36	21.4	28.2	32.2	34.6	35.8	36.5	36.7	36.6	21.0	27.5	31.3	33.3	34.4	35.0	35.2	35.0
TGEZ 12	42	33.5	42.9	47.8	50.1	50.7	50.5	49.6	48.4	32.2	41.0	45.5	47.2	47.7	47.3	46.5	45.3
TGEZ 15	53	43.1	54.9	60.9	63.5	64.1	63.5	62.3	60.5	41.4	52.5	57.9	59.8	60.2	59.5	58.2	56.5
TGEZ 18	62	48.7	62.8	70.3	73.9	75.0	74.6	73.2	71.1	47.2	60.5	67.4	69.9	70.5	69.7	68.0	66.2
TGEZ 24	84	70.6	89.3	98.2	101.6	101.7	100.2	97.6	94.3	67.7	85.1	93.2	95.5	95.3	93.7	91.1	87.9
TGEZ 27	95	80.2	101.3	111.4	115.2	115.3	113.5	110.4	106.6	77.1	96.8	105.9	108.4	108.1	106.1	103.1	99.4
TGEZ 34	121	95.4	123.3	138.4	145.8	148.2	147.9	145.6	141.8	91.9	118.0	131.6	137.0	138.6	137.6	134.7	130.6
<b>Evaporating temperature +5°C</b>										<b>Evaporating temperature 0°C</b>							
TGEZ 2.5	9	5.3	6.9	7.7	8.2	8.4	8.6	8.6	8.5	5.0	6.5	7.3	7.7	7.9	8.0	8.0	7.9
TGEZ 3.5	13	7.3	9.4	10.6	11.2	11.5	11.6	11.6	11.5	6.9	8.9	9.9	10.5	10.7	10.9	10.8	10.7
TGEZ 5	19	10.9	14.1	15.8	16.6	17.0	17.2	17.1	16.9	10.4	13.4	14.8	15.6	15.9	16.0	16.0	15.7
TGEZ 7	25	14.8	19.1	21.3	22.4	22.9	23.0	22.8	22.5	14.2	18.2	20.1	21.1	21.5	21.6	21.4	21.0
TGEZ 10	36	20.4	26.6	30.0	31.8	32.8	33.3	33.4	33.2	19.7	25.6	28.5	30.2	31.1	31.4	31.5	31.2
TGEZ 12	42	30.6	38.8	42.6	44.1	44.4	44.0	43.2	42.0	28.9	36.5	39.6	40.8	41.0	40.6	39.8	38.6
TGEZ 15	53	39.4	49.7	54.3	55.8	56.0	55.3	54.0	52.3	37.2	46.6	50.4	51.7	51.7	50.9	49.7	48.1
TGEZ 18	62	45.5	57.8	63.4	65.3	65.5	64.9	63.6	61.8	43.3	54.6	59.1	60.8	61.0	60.3	59.0	57.2
TGEZ 24	84	64.4	80.4	87.1	88.9	88.5	86.8	84.2	81.1	60.7	75.4	80.8	82.1	81.5	79.8	77.3	74.3
TGEZ 27	95	73.4	91.6	99.2	101.1	100.5	98.4	95.4	91.8	69.4	86.1	92.0	93.5	92.7	90.5	87.6	84.1
TGEZ 34	121	87.8	111.9	123.2	127.4	128.0	126.3	122.9	118.3	83.2	105.1	114.0	117.0	116.7	114.4	110.5	105.5
<b>Evaporating temperature -5°C</b>										<b>Evaporating temperature -10°C</b>							
TGEZ 2.5	9	4.8	6.1	6.8	7.1	7.3	7.4	7.4	7.4	4.5	5.7	6.3	6.6	6.8	6.9	6.8	6.8
TGEZ 3.5	13	6.6	8.4	9.3	9.7	10.0	10.1	10.1	9.9	6.2	7.8	8.6	9.0	9.2	9.3	9.3	9.2
TGEZ 5	19	9.9	12.6	13.9	14.5	14.8	14.9	14.8	14.6	9.4	11.8	12.9	13.5	13.7	13.8	13.7	13.4
TGEZ 7	25	13.5	17.2	18.9	19.7	20.0	20.1	19.9	19.5	12.8	16.1	17.6	18.3	18.6	18.6	18.4	18.1
TGEZ 10	36	19.0	24.4	27.0	28.4	29.2	29.5	29.4	29.1	18.1	23.0	25.3	26.6	27.2	27.4	27.3	27.0
TGEZ 12	42	27.1	33.9	36.5	37.5	37.6	37.2	36.3	35.2	25.2	31.1	33.3	34.2	34.2	33.7	32.9	31.9
TGEZ 15	53	34.8	43.3	46.4	47.4	47.3	46.6	45.3	43.8	32.4	39.7	42.3	43.2	43.0	42.2	41.0	39.6
TGEZ 18	62	40.9	51.1	54.9	56.3	56.4	55.6	54.2	52.4	38.4	47.3	50.6	51.7	51.6	50.7	49.4	47.7
TGEZ 24	84	56.8	70.0	74.2	75.2	74.5	72.7	70.3	67.5	52.8	64.0	67.7	68.4	67.5	65.8	63.5	60.9
TGEZ 27	95	65.1	79.9	84.7	85.7	84.5	82.6	79.8	76.5	60.5	73.3	77.3	78.0	76.9	74.8	72.1	69.0
TGEZ 34	121	78.1	97.4	104.2	106.1	105.1	102.0	97.7	92.3	72.6	88.9	94.3	95.1	93.2	90.1	87.0	83.4
<b>Evaporating temperature -15°C</b>										<b>Evaporating temperature -20°C</b>							
TGEZ 2.5	9	4.2	4.9	5.4	5.6	5.7	5.8	5.8	5.7	4.0	4.9	5.4	5.6	5.7	5.8	5.8	5.7
TGEZ 3.5	13	5.8	7.3	8.0	8.3	8.5	8.6	8.5	8.4	5.5	6.7	7.3	7.7	7.8	7.9	7.8	7.7
TGEZ 5	19	8.8	11.0	12.0	12.5	12.7	12.7	12.6	12.4	8.3	10.2	11.0	11.5	11.7	11.7	11.5	11.3
TGEZ 7	25	12.1	15.0	16.3	17.0	17.2	17.2	17.0	16.6	11.4	14.0	15.1	15.7	15.9	15.8	15.6	15.2
TGEZ 10	36	17.2	21.5	23.6	24.7	25.2	25.4	25.2	24.8	16.3	20.1	21.9	22.9	23.3	23.3	23.1	22.7
TGEZ 12	42	23.2	28.2	30.2	30.9	30.8	30.4	29.6	28.7	21.1	25.4	27.1	27.7	27.6	27.2	27.6	25.6
TGEZ 15	53	29.8	36.0	38.3	39.0	38.7	38.0	36.9	35.2	27.2	32.5	34.4	34.9	34.7	33.9	32.9	31.7
TGEZ 18	62	35.7	43.3	46.1	47.0	46.8	45.9	44.6	43.0	32.9	39.3	41.7	42.4	42.1	41.2	40.0	38.5
TGEZ 24	84	48.6	58.2	61.2	61.7	60.8	59.1	57.0	54.5	44.5	52.4	55.0	55.3	54.4	52.8	50.8	48.6
TGEZ 27	95	55.9	66.6	70.0	70.4	69.3	67.2	64.7	61.8	51.2	60.1	62.9	63.1	62.0	60.0	57.7	55.0
TGEZ 34	121	66.9	80.3	84.2	84.5	83.4	81.1	78.2	74.8	61.1	72.0	75.5	76.0	74.7	72.5	69.8	66.7

**Correction for subcooling  $\Delta t_{sub}$** 

The evaporator capacity used must be corrected if the subcooling deviates from 4 K. The corrected capacity can be obtained by dividing the required evaporator capacity by the correction factor given across, and then selecting from the tables.

Correction factor	$\Delta t_{sub}$	4 K	10 K	15 K	20 K	25 K	30 K	35 K	40 K	45 K	50 K
		TGE 10									
	TGE 20	1.00	1.08	1.13	1.18	1.24	1.29	1.34	1.39	1.45	1.50
	TGE 40										

Note: Flash gas can form if subcooling is too low.

**Capacity** (continued)

**R407C**

Capacity in kW for range N and K, opening superheat OS = 4 K

Type and rated capacity	Rated capacity [kW]	Pressure drop across the valve $\Delta p$ bar								Pressure drop across the valve $\Delta p$ bar							
		2	4	6	8	10	12	14	16	2	4	6	8	10	12	14	16
<b>Evaporating temperature -25°C</b>										<b>Evaporating temperature -30°C</b>							
TGEZ 2.5	9	3.7	4.5	4.9	5.2	5.3	5.3	5.2		3.4	4.2	4.5	4.7	4.8	4.9	4.8	4.8
TGEZ 3.5	13	5.1	6.2	6.8	7.1	7.2	7.2	7.1	7.0	4.7	5.7	6.2	6.5	6.6	6.6	6.5	6.4
TGEZ 5	19	7.7	9.4	10.2	10.6	10.7	10.7	10.5	10.3	7.2	8.7	9.4	9.7	9.8	9.8	9.7	9.4
TGEZ 7	25	10.7	12.9	14.0	14.4	14.6	14.5	14.3	13.9	9.9	11.9	12.9	13.3	13.4	13.3	13.1	12.7
TGEZ 10	36	15.3	18.7	20.3	21.1	21.4	21.4	21.1	20.6	14.3	17.3	18.7	19.4	19.6	19.5	19.2	18.7
TGEZ 12	42	19.1	22.7	24.2	24.7	24.6	24.2	23.5	22.7	17.0	20.2	21.4	21.8	21.8	21.4	20.8	20.1
TGEZ 15	53	24.6	29.0	30.7	31.1	30.8	30.1	29.2	28.1	21.9	25.8	27.2	27.5	27.3	26.6	25.8	24.8
TGEZ 18	62	29.9	35.4	37.4	37.9	37.6	36.8	35.6	34.2	26.9	31.6	33.3	33.7	33.4	32.6	31.5	30.3
TGEZ 24	84	40.2	47.0	49.1	46.3	48.4	46.9	45.1	43.0	36.0	41.8	43.6	43.7	42.9	41.5	39.8	38.0
TGEZ 27	95	46.3	53.9	56.2	56.3	55.1	53.3	51.2	48.8	41.5	48.1	50.0	49.9	48.9	47.2	45.2	43.0
TGEZ 34	121	55.4	64.6	67.6	67.8	66.6	64.5	61.9	59.1	49.7	57.7	60.2	60.2	59.0	57.1	54.7	52.1
<b>Evaporating temperature -35°C</b>										<b>Evaporating temperature -40°C</b>							
TGEZ 2.5	9	3.1	3.8	4.2	4.4	4.4	4.5	4.4	4.4	2.9	3.5	3.9	4.0	4.1	4.1	4.1	4.0
TGEZ 3.5	13	4.3	5.3	5.7	6.0	6.0	6.0	6.0	5.9	4.0	4.9	5.3	5.5	5.6	5.6	5.5	5.4
TGEZ 5	19	6.6	8.0	8.6	8.9	9.0	9.0	8.8	8.6	6.1	7.4	8.0	8.2	8.3	8.3	8.1	7.9
TGEZ 7	25	9.2	11.0	11.9	12.2	12.3	12.2	12.0	11.7	8.6	10.2	11.0	11.3	11.4	11.2	11.0	10.7
TGEZ 10	36	13.3	16.0	17.3	17.8	18.0	17.8	17.4	17.9	12.4	14.8	16.0	16.4	16.5	16.3	15.9	15.4
TGEZ 12	42	15.1	17.8	18.9	19.3	19.2	18.8	18.3	17.7	13.3	15.7	16.7	17.0	16.9	16.6	16.1	15.6
TGEZ 15	53	19.4	22.8	24.0	24.3	24.0	23.5	22.7	21.8	17.2	20.1	21.1	21.4	21.1	20.6	20.0	19.2
TGEZ 18	62	23.9	28.1	29.6	29.9	29.5	28.8	27.8	26.7	21.2	24.8	26.1	26.3	26.0	25.3	24.5	23.5
TGEZ 24	84	32.1	37.1	38.6	38.7	37.9	36.6	35.1	33.5	28.5	32.9	34.2	34.2	33.4	32.3	31.0	29.5
TGEZ 27	95	37.0	42.7	44.3	44.2	43.2	41.6	39.8	37.9	32.8	37.8	39.2	39.1	38.1	36.7	35.1	33.4
TGEZ 34	121	44.4	51.4	53.4	53.4	52.2	50.4	48.2	45.9	39.6	45.6	47.3	47.2	46.1	44.4	42.5	40.3

**Correction for subcooling  $\Delta t_{sub}$** 

The evaporator capacity used must be corrected if the subcooling deviates from 4 K. The corrected capacity can be obtained by dividing the required evaporator capacity by the correction factor given across, and then selecting from the tables.

Correction factor	$\Delta t_{sub}$	4 K	10 K	15 K	20 K	25 K	30 K	35 K	40 K	45 K	50 K
		TGE 10									
	TGE 20	1.00	1.08	1.13	1.18	1.24	1.29	1.34	1.39	1.45	1.50
	TGE 40										

Note: Flash gas can form if subcooling is too low.

**Capacity (continued)**

# R410A

Capacity in kW for range N and K, opening superheat OS = 4 K

Type and rated capacity	Rated capacity [kW]	Pressure drop across the valve $\Delta p$ bar								Pressure drop across the valve $\Delta p$ bar							
		3	6	9	12	15	18	21	24	3	6	9	12	15	18	21	24
<b>Evaporating temperature +15°C</b>										<b>Evaporating temperature +10°C</b>							
TGEL 3.5	12	8.7	11.3	12.7	13.5	13.8	13.9	13.7	13.3	8.5	11.0	12.4	13.1	13.3	13.4	13.2	12.9
TGEL 4.5	16	11.8	15.3	17.2	18.3	18.6	18.6	18.3	17.8	11.6	14.9	16.8	17.7	18.0	18.0	17.7	17.2
TGEL 6.5	24	17.4	22.4	25.1	26.5	26.9	26.8	26.3	25.4	17.0	21.9	24.5	25.7	26.1	26.0	25.4	24.6
TGEL 9	32	22.7	29.3	32.8	34.6	35.1	34.8	34.1	32.9	22.5	28.9	32.2	33.7	34.1	33.9	33.1	32.0
TGEL 13	45	29.6	38.7	43.9	47.0	48.2	48.6	48.2	47.1	29.6	38.6	43.7	46.4	47.6	47.9	47.6	46.6
TGEL 15	54	42.7	54.2	59.7	62.1	62.0	60.7	58.7	56.0	41.7	52.7	57.9	59.7	59.6	58.4	56.4	53.9
TGEL 19	68	54.9	69.3	75.9	78.6	78.1	76.3	73.4	69.7	53.6	67.4	73.6	75.6	75.0	73.2	70.4	67.0
TGEL 23	79	60.9	78.2	87.0	91.1	91.4	89.9	86.8	82.7	60.3	76.9	85.1	88.1	88.1	86.2	82.9	78.7
TGEL 31	110	92.5	115.5	125.6	128.9	127.1	123.2	117.7	111.2	90.3	112.3	121.6	123.7	121.8	117.9	112.7	106.5
TGEL 35	125	104.5	130.6	141.8	145.5	143.5	139.0	132.7	125.3	102.3	127.1	137.6	139.9	137.7	133.2	127.2	120.1
TGEL 46	161	123.8	159.2	177.5	186.4	187.7	185.1	179.6	171.8	121.7	155.6	172.7	179.5	180.1	177.0	171.3	163.4
<b>Evaporating temperature +5°C</b>										<b>Evaporating temperature 0°C</b>							
TGEL 3.5	12	8.2	10.6	11.9	12.5	12.8	12.8	12.6	12.3	7.9	10.1	11.3	11.8	12.1	12.1	11.9	11.7
TGEL 4.5	16	11.2	14.4	16.2	16.9	17.2	17.2	16.9	16.5	10.8	13.9	15.4	16.0	16.3	16.3	16.0	15.6
TGEL 6.5	24	16.6	21.3	23.7	24.7	25.0	24.9	24.4	23.6	16.0	20.5	22.6	23.5	23.7	23.6	23.1	22.4
TGEL 9	32	22.0	28.2	31.3	32.6	32.9	32.6	31.9	30.8	21.4	27.3	30.0	31.1	31.4	31.1	30.4	29.3
TGEL 13	45	29.4	38.1	43.0	45.4	46.5	46.8	46.4	45.5	28.9	37.4	41.8	43.9	44.9	45.2	44.8	43.9
TGEL 15	54	40.4	50.8	55.6	56.9	56.6	55.4	53.6	51.2	38.7	48.5	52.5	53.6	53.3	52.1	50.3	48.1
TGEL 19	68	51.9	64.9	70.6	71.9	71.3	69.4	66.8	63.6	49.7	61.9	66.7	67.7	67.0	65.2	62.7	59.7
TGEL 23	79	59.0	74.8	82.1	84.1	83.6	81.3	77.9	74.4	57.2	71.9	77.9	79.2	78.2	76.4	73.8	70.4
TGEL 31	110	87.3	108.0	116.4	117.5	115.4	111.6	106.6	100.8	83.7	103.0	109.8	110.4	108.3	104.5	99.8	94.3
TGEL 35	125	99.2	122.6	132.0	133.0	130.6	126.2	120.4	113.8	95.2	117.0	124.7	125.2	122.7	118.3	112.8	106.5
TGEL 46	161	118.5	150.5	166.0	170.7	170.4	166.7	160.6	152.6	114.2	144.0	156.7	160.1	158.9	154.5	147.9	139.7
<b>Evaporating temperature -5°C</b>										<b>Evaporating temperature -10°C</b>							
TGEL 3.5	12	7.5	9.6	10.6	11.1	11.3	11.3	11.2	10.9	7.1	9.0	9.9	10.3	10.5	10.4	10.2	10.2
TGEL 4.5	16	10.3	13.2	14.5	15.1	15.3	15.2	15.0	14.6	9.7	12.4	13.5	14.0	14.2	14.2	13.9	13.6
TGEL 6.5	24	15.4	19.5	21.3	22.1	22.3	22.1	21.7	21.0	14.6	18.4	20.0	20.6	20.8	20.6	20.2	19.5
TGEL 9	32	20.6	26.2	28.5	29.4	29.6	29.3	28.6	27.6	19.7	24.8	26.8	27.6	27.7	27.3	26.6	25.7
TGEL 13	45	28.2	36.2	40.1	42.1	43.0	43.1	42.7	41.8	27.2	34.7	38.1	39.8	40.6	40.1	39.2	39.2
TGEL 15	54	36.8	45.8	49.1	50.0	49.6	48.5	46.8	44.7	34.6	42.7	45.4	46.2	45.7	44.6	43.0	41.1
TGEL 19	68	47.2	58.4	62.3	63.1	62.3	60.5	58.2	55.4	44.4	54.4	57.6	58.2	57.3	55.7	53.4	50.9
TGEL 23	79	54.8	68.2	72.9	74.1	73.5	71.6	69.0	65.9	52.0	64.1	68.1	69.0	68.2	66.4	63.9	60.9
TGEL 31	110	79.5	97.2	102.5	102.7	100.5	96.9	92.4	87.3	74.7	90.5	94.7	94.7	92.4	88.9	84.7	80.0
TGEL 35	125	90.6	110.7	116.5	116.7	114.0	109.7	104.5	98.7	85.4	103.3	107.8	107.6	104.9	100.8	95.9	90.5
TGEL 46	161	108.9	136.1	146.0	148.1	145.9	140.8	133.8	125.3	102.7	126.7	134.2	134.9	131.7	125.9	118.4	109.6
<b>Evaporating temperature -15°C</b>										<b>Evaporating temperature -20°C</b>							
TGEL 3.5	12	6.7	8.4	9.1	9.5	9.7	9.7	9.6	9.3	6.2	7.7	8.4	8.7	8.8	8.7	8.5	8.5
TGEL 4.5	16	9.1	11.5	12.5	12.9	13.1	13.0	12.8	12.5	8.5	10.5	11.4	11.8	11.9	11.7	11.3	11.3
TGEL 6.5	24	13.7	17.1	18.5	19.1	19.2	19.0	18.5	17.9	12.8	15.7	16.9	17.4	17.5	17.3	16.9	16.3
TGEL 9	32	18.6	23.1	24.9	25.6	25.6	25.2	24.6	23.7	17.5	21.4	22.9	23.5	23.5	23.1	22.4	21.6
TGEL 13	45	26.0	32.7	35.8	37.3	37.9	37.8	37.3	36.4	24.6	30.5	33.2	34.5	34.9	34.7	34.1	33.2
TGEL 15	54	32.2	39.2	41.6	42.2	41.7	40.7	39.2	37.4	29.6	35.6	37.7	38.1	37.7	36.7	35.3	33.8
TGEL 19	68	41.3	50.0	52.7	53.1	52.2	50.7	48.6	46.2	38.0	45.4	47.7	47.9	47.1	45.7	43.8	41.6
TGEL 23	79	48.9	59.4	62.8	63.5	62.6	60.9	58.5	55.7	45.4	54.5	57.4	57.8	56.9	55.2	53.0	50.4
TGEL 31	110	69.6	83.1	86.6	86.3	84.1	80.9	76.9	72.6	64.1	75.6	78.4	78.0	75.9	72.8	69.2	63.5
TGEL 35	125	79.6	95.0	98.7	98.2	95.6	91.7	87.1	82.1	73.5	86.4	89.5	88.8	86.2	82.6	78.4	73.8
TGEL 46	161	95.8	116.0	121.5	120.9	116.8	110.6	105.3	99.5	88.3	104.7	108.3	106.7	103.9	99.8	94.9	89.5

**Correction for subcooling  $\Delta t_{sub}$** 

The evaporator capacity used must be corrected if the subcooling deviates from 4 K. The corrected capacity can be obtained by dividing the required evaporator capacity by the correction factor given across, and then selecting from the tables.

$\Delta t_{sub}$	4 °K	10 °K	15 °K	20 °K	25 °K	30 °K	35 °K	40 °K	45 °K	50 °K
Correction factor	1.00	1.08	1.14	1.20	1.26	1.31	1.37	1.43	1.48	1.54

Note: Flash gas can form if subcooling is too low.

**Capacity** (continued)

**R410A**

Capacity in kW for range N and K, opening superheat OS = 4 K

Type and rated capacity	Rated capacity [kW]	Pressure drop across the valve $\Delta p$ bar								Pressure drop across the valve $\Delta p$ bar							
		3	6	9	12	15	18	21	24	3	6	9	12	15	18	21	24
<b>Evaporating temperature -25°C</b>										<b>Evaporating temperature -30°C</b>							
TGEL 3.5	12	5.7	7.0	7.6	7.9	8.0	8.0	7.9	7.7	5.2	6.3	6.8	7.1	7.2	7.1	7.0	6.9
TGEL 4.5	16	7.8	9.6	10.3	10.7	10.8	10.7	10.5	10.2	7.1	8.6	9.3	9.6	9.7	9.6	9.4	9.1
TGEL 6.5	24	11.8	14.3	15.4	15.8	15.9	15.6	15.2	14.7	10.8	12.9	13.9	14.2	14.2	14.0	13.6	13.1
TGEL 9	32	16.2	19.5	20.9	21.3	20.9	20.3	19.5	19.5	14.8	17.7	18.9	19.2	19.1	18.7	18.2	17.4
TGEL 13	45	23.0	28.2	30.5	31.5	31.8	31.5	30.8	29.8	21.2	25.6	27.6	28.4	28.5	28.1	27.3	26.3
TGEL 15	54	26.9	32.0	33.7	34.1	33.7	32.8	31.6	30.1	24.1	28.4	29.9	30.2	29.8	29.0	27.9	26.7
TGEL 19	68	34.6	40.7	42.7	42.9	42.1	40.7	39.0	37.1	31.0	36.2	37.8	37.9	37.2	36.0	34.5	32.8
TGEL 23	79	41.7	49.3	51.7	52.0	51.1	49.5	47.4	45.1	37.7	44.1	46.1	46.3	45.4	43.9	42.1	40.0
TGEL 31	110	58.5	67.9	70.3	69.7	67.7	64.9	61.7	58.2	52.6	60.5	62.4	61.8	60.0	57.4	54.5	51.4
TGEL 35	125	67.2	77.8	80.3	79.5	77.0	73.7	69.9	65.7	60.5	69.3	71.3	70.5	68.2	65.2	61.7	58.1
TGEL 46	161	80.4	93.1	96.4	95.7	93.0	89.1	84.6	79.8	72.3	83.2	85.8	85.0	82.4	78.9	74.8	70.4
<b>Evaporating temperature -35°C</b>										<b>Evaporating temperature -40°C</b>							
TGEL 3.5	12	4.6	5.6	6.1	6.3	6.4	6.3	6.2	6.1	4.1	5.0	5.4	5.6	5.6	5.6	5.5	5.3
TGEL 4.5	16	6.4	7.7	8.3	8.5	8.6	8.5	8.3	8.1	5.7	6.8	7.3	7.5	7.6	7.5	7.3	7.1
TGEL 6.5	24	9.7	11.6	12.4	12.6	12.6	12.4	12.1	11.6	8.6	10.3	10.9	11.2	11.1	10.9	10.6	10.2
TGEL 9	32	13.4	15.9	16.9	17.1	17.0	16.7	16.1	15.4	12.0	14.1	14.9	15.2	15.0	14.7	14.2	13.5
TGEL 13	45	19.3	23.1	24.7	25.3	25.2	24.6	23.8	22.7	17.3	20.5	21.8	22.1	21.9	21.3	20.4	19.5
TGEL 15	54	21.2	24.9	26.2	26.5	26.1	25.4	24.5	23.4	18.5	21.6	22.8	23.0	22.7	22.1	21.3	20.4
TGEL 19	68	27.3	31.7	33.2	33.2	32.6	31.5	30.2	28.7	23.8	27.6	28.8	28.8	28.3	27.4	26.2	25.0
TGEL 23	79	33.5	38.9	40.7	40.7	39.9	38.6	36.9	35.1	29.3	34.0	35.5	35.5	34.8	33.6	32.2	30.5
TGEL 31	110	46.5	53.3	54.9	54.3	52.6	50.4	47.8	45.0	40.8	46.5	47.8	47.3	45.8	43.9	41.6	39.2
TGEL 35	125	53.6	61.2	62.8	61.9	59.8	57.1	54.1	50.9	47.0	53.4	54.8	54.0	52.1	49.7	47.1	44.2
TGEL 46	161	64.2	73.6	75.7	74.8	72.4	69.2	65.6	61.7	56.5	64.4	66.2	65.3	63.1	60.3	57.0	53.6

**Correction for subcooling  $\Delta t_{sub}$** 

The evaporator capacity used must be corrected if the subcooling deviates from 4 K. The corrected capacity can be obtained by dividing the required evaporator capacity by the correction factor given across, and then selecting from the tables.

$\Delta t_{sub}$	4 °K	10 °K	15 °K	20 °K	25 °K	30 °K	35 °K	40 °K	45 °K	50 °K
Correction factor	1.00	1.08	1.14	1.20	1.26	1.31	1.37	1.43	1.48	1.54

Note: Flash gas can form if subcooling is too low.

**Capacity**

**R22**

Capacity in Tons for range N and K, opening superheat OS: 7.2°F

Type	Rated capacity [tons]	Pressure drop across the valve Δp psig									Pressure drop across the valve Δp psig								
		40	70	100	130	160	190	220	250	40	70	100	130	160	190	220	250		
<b>Evaporating temperature +50°F</b>											<b>Evaporating temperature +40°F</b>								
TGEX 3	3	2.2	2.7	3.1	3.2	3.3	3.4	3.4	3.4	2.1	2.6	2.9	3.0	3.1	3.2	3.2	3.2		
TGEX 4	4	3.0	3.7	4.2	4.4	4.5	4.6	4.6	4.6	2.9	3.5	3.9	4.1	4.2	4.3	4.3	4.3		
TGEX 6	6	4.5	5.5	6.1	6.4	6.5	6.6	6.6	6.6	4.3	5.2	5.7	6.0	6.1	6.2	6.2	6.1		
TGEX 7.5	7.5	5.9	7.2	8.0	8.3	8.6	8.6	8.6	8.5	5.7	6.9	7.6	7.9	8.1	8.1	8.1	8.0		
TGEX 11	11	7.8	9.7	10.8	11.5	12.0	12.2	12.4	12.4	7.6	9.4	10.4	11.1	11.5	11.7	11.8	11.9		
TGEX 12	12	10.1	12.1	13.2	13.7	13.8	13.8	13.6	13.4	9.5	11.4	12.3	12.7	12.8	12.7	12.6	12.3		
TGEX 15	15	12.9	15.5	16.8	17.3	17.4	17.3	17.0	16.6	12.1	14.5	15.6	16.0	16.1	16.0	15.7	15.3		
TGEX 18	18	14.8	17.9	19.5	20.2	20.4	20.3	19.9	19.5	14.1	16.9	18.2	18.7	18.8	18.7	18.5	18.1		
TGEX 26	26	22.8	27.0	28.9	29.5	29.4	28.9	28.2	27.3	21.5	25.4	26.9	27.3	27.1	26.6	25.9	25.1		
TGEX 30	30	25.8	30.6	32.7	33.3	33.2	32.7	31.9	30.8	24.5	28.8	30.5	30.9	30.7	30.1	29.3	28.3		
TGEX 38	38	31.1	37.7	41.4	43.0	43.6	43.5	42.8	41.8	29.6	35.6	38.5	39.8	40.1	39.7	38.8	37.6		
<b>Evaporating temperature +30°F</b>											<b>Evaporating temperature +20°F</b>								
TGEX 3	3	2.0	2.4	2.7	2.8	2.9	2.9	3.0	3.0	1.9	2.3	2.5	2.6	2.7	2.7	2.7	2.7		
TGEX 4	4	2.7	3.3	3.6	3.8	3.9	4.0	4.0	4.0	2.6	3.1	3.3	3.5	3.6	3.6	3.6	3.6		
TGEX 6	6	4.1	4.9	5.3	5.6	5.7	5.7	5.7	5.7	3.8	4.6	4.9	5.1	5.2	5.3	5.3	5.2		
TGEX 7.5	7.5	5.4	6.6	7.1	7.4	7.5	7.6	7.5	7.4	5.1	6.1	6.6	6.6	6.8	7.0	6.9	6.8		
TGEX 11	11	7.4	9.0	9.9	10.5	10.9	11.1	11.2	11.2	7.1	8.5	9.4	9.9	10.2	10.3	10.4	10.4		
TGEX 12	12	8.9	10.6	11.3	11.6	11.7	11.6	11.5	11.2	8.2	9.7	10.3	10.6	10.6	10.5	10.4	10.1		
TGEX 15	15	11.4	13.5	14.3	14.7	14.7	14.6	14.3	13.9	10.5	12.3	13.0	13.3	13.3	13.2	12.9	12.5		
TGEX 18	18	13.3	15.8	16.8	17.3	17.4	17.3	17.0	16.6	12.4	14.6	15.5	15.8	15.9	15.7	15.4	15.1		
TGEX 26	26	20.2	23.6	24.7	25.0	24.8	24.3	23.6	22.8	18.7	21.5	22.5	22.6	22.4	21.9	21.2	20.5		
TGEX 30	30	23.0	26.8	28.1	28.4	28.1	27.5	26.7	25.7	21.3	24.5	25.5	25.7	25.4	24.8	24.0	23.1		
TGEX 38	38	27.8	33.2	35.4	36.2	36.2	35.6	34.5	33.1	25.8	30.3	32.0	32.4	32.1	31.2	29.9	28.3		
<b>Evaporating temperature +10°F</b>											<b>Evaporating temperature +0°F</b>								
TGEX 3	3	1.7	2.1	2.2	2.4	2.4	2.5	2.5	2.4	1.6	1.9	2.0	2.1	2.2	2.2	2.2	2.2		
TGEX 4	4	2.4	2.8	3.1	3.2	3.3	3.3	3.3	3.3	2.2	2.5	2.8	2.9	2.9	3.0	2.9	2.9		
TGEX 6	6	3.5	4.2	4.5	4.7	4.8	4.8	4.8	4.7	3.3	3.8	4.1	4.2	4.3	4.3	4.3	4.2		
TGEX 7.5	7.5	4.8	5.6	6.1	6.3	6.4	6.4	6.3	6.2	4.4	5.1	5.5	5.7	5.7	5.7	5.6	5.5		
TGEX 11	11	6.7	8.0	8.7	9.1	9.4	9.5	9.5	9.5	6.2	7.4	8.0	8.3	8.5	8.6	8.6	8.5		
TGEX 12	12	7.5	8.7	9.2	9.5	9.5	9.4	9.3	9.0	6.8	7.8	8.2	8.4	8.4	8.3	8.2	8.0		
TGEX 15	15	9.6	11.1	11.7	11.9	11.9	11.8	11.5	11.2	8.7	9.9	10.4	10.6	10.5	10.4	10.2	9.9		
TGEX 18	18	11.5	13.3	14.0	14.3	14.3	14.2	13.9	13.5	10.5	11.9	12.6	12.8	12.8	12.6	12.3	12.0		
TGEX 26	26	17.1	19.4	20.2	20.3	20.0	19.5	18.9	18.2	15.4	17.3	17.9	17.9	17.7	17.2	16.6	16.0		
TGEX 30	30	19.6	22.1	23.0	23.0	22.7	22.1	21.4	20.5	17.7	19.7	20.4	20.4	20.0	19.5	18.8	18.0		
TGEX 38	38	23.7	27.2	28.4	28.4	27.8	26.7	25.8	24.9	21.3	24.0	24.7	24.5	24.2	23.5	22.8	21.9		
<b>Evaporating temperature -10°F</b>											<b>Evaporating temperature -20°F</b>								
TGEX 3	3	1.4	1.7	1.8	1.9	1.9	2.0	2.0	1.9	1.3	1.5	1.6	1.7	1.7	1.7	1.7	1.7		
TGEX 4	4	1.9	2.3	2.5	2.6	2.6	2.6	2.6	2.6	1.7	2.0	2.2	2.2	2.3	2.3	2.3	2.3		
TGEX 6	6	2.9	3.4	3.6	3.8	3.8	3.8	3.8	3.7	2.6	3.0	3.2	3.3	3.3	3.3	3.3	3.2		
TGEX 7.5	7.5	4.0	4.6	4.9	5.1	5.1	5.1	5.0	4.9	3.6	4.1	4.4	4.5	4.5	4.5	4.4	4.3		
TGEX 11	11	5.7	6.7	7.2	7.5	7.6	7.7	7.6	7.5	5.1	6.0	6.4	6.6	6.7	6.7	6.6	6.5		
TGEX 12	12	6.0	6.8	7.2	7.4	7.4	7.3	7.2	7.0	5.2	5.9	6.3	6.4	6.4	6.3	6.2	6.1		
TGEX 15	15	7.7	8.7	9.1	9.3	9.2	9.1	8.9	8.6	6.7	7.6	7.9	8.0	8.0	7.9	7.7	7.5		
TGEX 18	18	9.3	10.6	11.1	11.3	11.2	11.1	10.8	10.5	8.2	9.3	9.7	9.8	9.8	9.6	9.4	9.1		
TGEX 26	26	13.6	15.2	15.7	15.7	15.4	15.0	14.5	13.9	11.9	13.2	13.6	13.6	13.3	12.9	12.5	12.0		
TGEX 30	30	15.7	17.4	17.9	17.9	17.5	17.0	16.4	15.7	13.7	15.1	15.5	15.4	15.1	14.6	14.1	13.5		
TGEX 38	38	18.8	20.8	21.5	21.5	21.1	20.6	19.8	19.0	16.4	18.2	18.7	18.7	18.3	17.7	17.1	16.4		
<b>Evaporating temperature -30°F</b>											<b>Evaporating temperature -40°F</b>								
TGEX 3	3	1.1	1.3	1.4	1.4	1.5	1.5	1.5	1.5	0.9	1.1	1.2	1.2	1.3	1.3	1.3	1.2		
TGEX 4	4	1.5	1.8	1.9	1.9	2.0	2.0	2.0	1.9	1.3	1.5	1.6	1.7	1.7	1.7	1.7	1.7		
TGEX 6	6	2.3	2.6	2.8	2.9	2.9	2.9	2.8	2.8	2.0	2.3	2.4	2.5	2.5	2.5	2.4	2.4		
TGEX 7.5	7.5	3.1	3.6	3.8	3.9	3.9	3.9	3.8	3.7	2.7	3.1	3.3	3.3	3.3	3.3	3.2	3.1		
TGEX 11	11	4.6	5.2	5.6	5.7	5.8	5.7	5.6	5.4	4.0	4.5	4.8	4.9	4.8	4.7	4.6	4.5		
TGEX 12	12	4.5	5.1	5.4	5.5	5.5	5.5	5.4	5.2	3.8	4.3	4.6	4.7	4.7	4.7	4.6	4.5		
TGEX 15	15	5.8	6.5	6.8	6.9	6.9	6.8	6.6	6.4	4.9	5.5	5.8	5.9	5.9	5.8	5.6	5.5		
TGEX 18	18	7.1	8.0	8.4	8.5	8.4	8.3	8.1	7.8	6.1	6.8	7.2	7.2	7.2	7.1	6.9	6.7		
TGEX 26	26	10.2	11.3	11.6	11.6	11.4	11.0	10.6	10.2	8.7	9.6	9.8	9.8	9.6	9.3	9.0	8.6		
TGEX 30	30	11.8	13.0	13.3	13.2	12.9	12.5	12.0	11.5	10.0	11.0	11.3	11.2	10.9	10.6	10.2	9.7		
TGEX 38	38	14.2	15.6	16.0	16.0	15.6	15.1	14.6	13.9	12.1	13.3	13.6	13.5	13.6	12.8	12.3	11.8		

**Correction for subcooling Δt<sub>sub</sub>**

The evaporator capacity used must be corrected if the subcooling deviates from 7.2°F.

The corrected capacity can be obtained by dividing the required evaporator capacity by the correction factor given across, and then selecting from the tables.

Note: Flash gas can form if subcooling is too low.

Δt <sub>sub</sub>	10 °F	20 °F	30 °F	40 °F	50 °F	60 °F	70 °F	80 °F	90 °F	100 °F
Correction factor	1.00	1.06	1.11	1.15	1.20	1.24	1.29	1.33	1.37	1.42

Capacity (continued)

# R134a

Capacity in Tons for range N and K, opening superheat OS: 7.2°F

Type	Rated capacity [tons]	Pressure drop across the valve Δp psig								Pressure drop across the valve Δp psig							
		40	60	80	100	120	140	160	180	40	60	80	100	120	140	160	180
<b>Evaporating temperature +50°F</b>										<b>Evaporating temperature +40°F</b>							
TGEN 1.5	1.5	1.6	1.8	1.9	2.0	2.0	2.1	2.1	2.0	1.5	1.7	1.8	1.8	1.9	1.9	1.9	1.9
TGEN 2.5	2.5	2.2	2.5	2.6	2.7	2.8	2.8	2.8	2.8	2.0	2.3	2.4	2.5	2.5	2.5	2.5	2.5
TGEN 3.5	3.5	3.2	3.6	3.9	4.0	4.1	4.1	4.1	4.0	3.0	3.4	3.6	3.7	3.7	3.7	3.7	3.7
TGEN 4.5	4.5	4.3	4.9	5.2	5.4	5.4	5.4	5.4	5.4	4.1	4.6	4.8	4.9	5.0	5.0	5.0	4.9
TGEN 7	7	6.0	6.8	7.3	7.6	7.8	7.9	7.9	7.9	5.7	6.4	6.9	7.1	7.3	7.3	7.9	7.9
TGEN 8	8	8.0	9.0	9.4	9.6	9.6	9.6	9.4	9.2	7.5	8.2	8.6	8.7	8.8	8.7	8.5	8.4
TGEN 10	10	10.3	11.5	12.0	12.2	12.2	12.1	11.8	11.6	9.6	10.5	10.9	11.1	11.0	10.9	10.7	10.4
TGEN 12	12	12.0	13.4	14.0	14.3	14.3	14.2	14.0	13.7	11.2	12.4	12.9	13.1	13.1	13.0	12.8	12.5
TGEN 17	17	17.4	19.2	19.9	20.0	19.9	19.6	19.1	18.6	16.1	17.6	18.1	18.2	18.0	17.7	17.2	16.7
TGEN 20	20	19.9	21.9	22.6	22.8	22.6	22.2	21.6	21.0	18.4	20.1	20.6	20.7	20.5	20.1	19.5	18.9
TGEN 25	25	24.1	27.0	28.3	28.8	28.8	28.4	27.8	27.0	22.4	24.7	25.5	25.9	25.7	25.2	24.5	23.6
<b>Evaporating temperature +30°F</b>										<b>Evaporating temperature +20°F</b>							
TGEN 1.5	1.5	1.4	1.5	1.6	1.7	1.7	1.7	1.7	1.7	1.2	1.4	1.4	1.5	1.5	1.5	1.5	1.5
TGEN 2.5	2.5	1.9	2.1	2.2	2.3	2.3	2.3	2.3	2.3	1.7	1.9	2.0	2.0	2.1	2.1	2.1	2.0
TGEN 3.5	3.5	2.8	3.1	3.3	3.3	3.4	3.4	3.4	3.3	2.5	2.8	2.9	3.0	3.0	3.0	3.0	3.0
TGEN 4.5	4.5	3.8	4.2	4.4	4.5	4.6	4.6	4.5	4.4	3.5	3.8	4.0	4.1	4.1	4.1	4.1	4.0
TGEN 7	7	5.4	6.0	6.3	6.6	6.7	6.7	6.7	6.6	5.0	5.5	5.8	6.0	6.1	6.1	6.0	6.0
TGEN 8	8	6.8	7.5	7.8	7.9	7.9	7.8	7.6	7.5	6.2	6.7	6.9	7.0	7.0	6.9	6.8	6.6
TGEN 10	10	8.8	9.5	9.8	10.0	9.9	9.8	9.6	9.3	7.9	8.5	8.8	8.9	8.8	8.7	8.5	8.2
TGEN 12	12	10.4	11.3	11.8	11.9	11.9	11.7	11.5	11.2	9.5	10.2	10.6	10.7	10.6	10.5	10.2	10.0
TGEN 17	17	14.8	15.9	16.3	16.4	16.1	15.8	15.4	14.8	13.3	14.2	14.6	14.5	14.3	14.0	13.6	13.1
TGEN 20	20	16.9	18.2	18.6	18.6	18.4	18.0	17.4	16.8	15.3	16.3	16.6	16.6	16.3	15.9	15.4	14.8
TGEN 25	25	20.5	22.2	22.9	23.0	22.6	22.0	21.1	20.3	18.4	19.7	20.1	20.0	19.6	19.2	18.6	17.9
<b>Evaporating temperature +10°F</b>										<b>Evaporating temperature +0°F</b>							
TGEN 1.5	1.5	1.1	1.2	1.3	1.3	1.4	1.4	1.4	1.3	1.0	1.1	1.1	1.2	1.2	1.2	1.2	1.2
TGEN 2.5	2.5	1.5	1.7	1.8	1.8	1.8	1.8	1.8	1.8	1.4	1.5	1.6	1.6	1.6	1.6	1.6	1.6
TGEN 3.5	3.5	2.3	2.5	2.6	2.7	2.7	2.7	2.7	2.6	2.1	2.3	2.4	2.4	2.4	2.4	2.4	2.3
TGEN 4.5	4.5	3.2	3.5	3.6	3.7	3.7	3.7	3.6	3.5	2.8	3.1	3.2	3.3	3.3	3.2	3.2	3.1
TGEN 7	7	4.5	5.0	5.2	5.4	5.4	5.4	5.4	5.3	4.1	4.5	4.7	4.8	4.8	4.8	4.7	4.6
TGEN 8	8	5.5	5.9	6.1	6.2	6.2	6.1	6.0	5.8	4.8	5.2	5.4	5.4	5.4	5.3	5.2	5.1
TGEN 10	10	7.0	7.5	7.8	7.8	7.8	7.6	7.4	7.2	6.2	6.6	6.8	6.8	6.8	6.6	6.5	6.3
TGEN 12	12	8.5	9.2	9.4	9.5	9.4	9.3	9.0	8.8	7.5	8.1	8.3	8.3	8.3	8.1	7.9	7.7
TGEN 17	17	11.9	12.6	12.9	12.8	12.6	12.3	11.9	11.4	10.5	11.1	11.3	11.4	11.0	10.7	10.3	9.9
TGEN 20	20	13.6	14.5	14.7	14.6	14.3	14.0	13.5	13.0	12.0	12.7	12.9	12.8	12.5	12.2	11.7	11.3
TGEN 25	25	16.3	17.3	17.6	17.6	17.3	16.8	16.3	15.7	14.4	15.3	15.5	15.4	15.1	14.7	14.2	13.6
<b>Evaporating temperature -10°F</b>										<b>Evaporating temperature -20°F</b>							
TGEN 1.5	1.5	0.9	1.0	1.0	1.0	1.1	1.1	1.0	1.0	0.9	1.0	1.0	1.0	1.1	1.1	1.0	1.0
TGEN 2.5	2.5	1.2	1.3	1.4	1.4	1.4	1.4	1.4	1.4	1.2	1.3	1.4	1.4	1.4	1.4	1.4	1.4
TGEN 3.5	3.5	1.8	2.0	2.1	2.1	2.1	2.1	2.1	2.0	1.8	2.0	2.1	2.1	2.1	2.1	2.1	2.0
TGEN 4.5	4.5	2.5	2.7	2.8	2.9	2.9	2.8	2.8	2.7	2.5	2.7	2.8	2.9	2.9	2.8	2.8	2.7
TGEN 7	7	3.7	4.0	4.2	4.2	4.2	4.2	4.1	4.0	3.7	4.0	4.2	4.2	4.2	4.2	4.1	4.0
TGEN 8	8	4.2	4.5	4.7	4.7	4.7	4.6	4.5	4.4	4.2	4.5	4.7	4.7	4.7	4.6	4.5	4.4
TGEN 10	10	5.4	5.8	5.9	5.9	5.9	5.8	5.6	5.4	5.4	5.8	5.9	5.9	5.9	5.8	5.6	5.4
TGEN 12	12	6.6	7.1	7.3	7.3	7.2	7.1	6.9	6.6	6.6	7.1	7.3	7.3	7.2	7.1	6.9	6.6
TGEN 17	17	9.1	9.7	9.8	9.7	9.5	9.2	8.9	8.6	7.9	8.4	8.5	8.4	8.2	8.0	7.7	7.4
TGEN 20	20	10.6	11.1	11.2	11.1	10.8	10.5	10.1	9.7	9.1	9.6	9.7	9.6	9.4	9.1	8.7	8.3
TGEN 25	25	12.6	13.3	13.5	13.4	13.1	12.7	12.3	11.8	11.0	11.6	11.7	11.6	11.3	11.0	10.5	10.1
<b>Evaporating temperature -30°F</b>										<b>Evaporating temperature -40°F</b>							
TGEN 1.5	1.5	0.9	1.0	1.0	1.0	1.1	1.1	1.0	1.0	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.7
TGEN 2.5	2.5	1.2	1.3	1.4	1.4	1.4	1.4	1.4	1.4	0.8	0.9	0.9	1.0	1.0	1.0	0.9	0.9
TGEN 3.5	3.5	1.8	2.0	2.1	2.1	2.1	2.1	2.1	2.0	1.3	1.4	1.4	1.4	1.4	1.4	1.4	1.3
TGEN 4.5	4.5	2.5	2.7	2.8	2.9	2.9	2.8	2.8	2.7	1.8	1.9	1.9	2.0	1.9	1.9	1.9	1.8
TGEN 7	7	3.7	4.0	4.2	4.2	4.2	4.2	4.1	4.0	2.6	2.7	2.8	2.8	2.8	2.8	2.7	2.6
TGEN 8	8	4.2	4.5	4.7	4.7	4.7	4.6	4.5	4.4	2.7	2.9	3.0	3.0	3.0	3.0	2.9	2.8
TGEN 10	10	5.4	5.8	5.9	5.9	5.9	5.8	5.6	5.4	3.5	3.7	3.8	3.8	3.8	3.7	3.6	3.5
TGEN 12	12	6.6	7.1	7.3	7.3	7.2	7.1	6.9	6.6	4.4	4.6	4.7	4.7	4.7	4.5	4.4	4.3
TGEN 17	17	6.9	7.2	7.3	7.2	7.1	6.9	6.6	6.3	6.0	6.3	6.3	6.3	6.1	5.9	5.7	5.5
TGEN 20	20	7.9	8.3	8.4	8.3	8.1	7.8	7.5	7.2	6.9	7.2	7.2	7.1	6.9	6.7	6.4	6.2
TGEN 25	25	9.6	10.1	10.1	10.0	9.7	9.4	9.0	8.6	8.3	8.7	8.8	8.6	8.4	8.1	7.8	7.4

Correction for subcooling  $\Delta t_{sub}$

The evaporator capacity used must be corrected if the subcooling deviates from 7.2°F.

The corrected capacity can be obtained by dividing the required evaporator capacity by the correction factor given across, and then selecting from the tables.

Note: Flash gas can form if subcooling is too low.

$\Delta t_{sub}$	10°F	20°F	30°F	40°F	50°F	60°F	70°F	80°F	90°F	100°F
Correction factor	1.00	1.08	1.13	1.18	1.23	1.29	1.34	1.39	1.44	1.49

Capacity (continued)

# R404A/ R507

Capacity in Tons for range N and K, opening superheat OS: 7.2°F

Type	Rated capacity [tons]	Pressure drop across the valve Δp psig								Pressure drop across the valve Δp psig							
		50	90	130	170	210	250	290	330	50	90	130	170	210	190	250	330
<b>Evaporating temperature +50°F</b>										<b>Evaporating temperature +40°F</b>							
TGES 2	2	1.7	2.0	2.2	2.2	2.1	2.0	1.9	1.8	1.6	1.9	2.0	2.1	2.0	1.9	1.8	1.7
TGES 2.5	2.5	2.3	2.8	2.9	2.9	2.9	2.7	2.6	2.4	2.2	2.6	2.8	2.8	2.7	2.6	2.4	2.2
TGES 4	4	3.4	4.0	4.3	4.3	4.2	4.0	3.7	3.4	3.3	3.9	4.1	4.1	4.0	3.8	3.5	3.2
TGES 5	5	4.6	5.4	5.7	5.7	5.5	5.2	4.9	4.4	4.5	5.2	5.5	5.4	5.2	5.0	4.6	4.2
TGES 7.5	7.5	6.2	7.4	7.9	8.0	7.9	7.6	7.2	6.7	6.1	7.3	7.7	7.8	7.6	7.4	6.9	6.4
TGES 9	9	8.2	9.6	9.9	9.7	9.3	8.7	8.0	7.2	7.9	9.1	9.3	9.1	8.7	8.2	7.5	6.8
TGES 11	11	10.6	12.2	12.6	12.3	11.7	10.9	10.0	9.0	10.1	11.6	11.8	11.5	11.0	10.2	9.3	8.4
TGES 13	13	12.1	14.1	14.7	14.4	13.7	12.8	11.7	10.5	11.7	13.5	13.8	13.5	12.8	12.0	11.0	9.9
TGES 18	18	17.9	20.4	20.8	20.1	19.0	17.5	15.9	14.2	17.1	19.4	19.5	18.9	17.7	16.4	14.9	13.3
TGES 21	21	20.3	23.1	23.6	22.8	21.4	19.8	18.0	16.0	19.5	22.0	22.2	21.4	20.1	18.5	16.8	15.0
TGES 26	26	24.5	28.7	29.9	29.5	28.2	26.4	24.1	21.6	23.5	27.3	28.1	27.5	26.2	24.3	22.1	19.7
<b>Evaporating temperature +30°F</b>										<b>Evaporating temperature +20°F</b>							
TGES 2	2	1.6	1.8	1.9	1.9	1.8	1.7	1.6	1.5	1.5	1.7	1.8	1.8	1.7	1.7	1.6	1.4
TGES 2.5	2.5	2.1	2.5	2.6	2.6	2.5	2.4	2.3	2.1	2.0	2.3	2.4	2.4	2.3	2.2	2.1	1.9
TGES 4	4	3.2	3.7	3.9	3.8	3.7	3.5	3.3	3.0	3.0	3.5	3.6	3.5	3.4	3.2	3.0	2.8
TGES 5	5	4.3	5.0	5.2	5.1	4.9	4.7	4.3	4.0	4.1	4.7	4.8	4.8	4.6	4.3	4.0	3.7
TGES 7.5	7.5	5.9	7.0	7.4	7.4	7.3	7.0	6.6	6.1	5.7	6.7	7.0	7.0	6.8	6.5	6.1	5.7
TGES 9	9	7.5	8.5	8.7	8.5	8.1	7.6	6.9	6.3	7.0	7.9	8.0	7.8	7.4	6.9	6.3	5.7
TGES 11	11	9.6	10.9	11.0	10.7	10.1	9.4	8.6	7.8	9.0	10.0	10.1	9.8	9.3	8.6	7.9	7.1
TGES 13	13	11.2	12.7	12.9	12.6	12.0	11.2	10.3	9.3	10.5	11.8	12.0	11.6	11.0	10.3	9.4	8.5
TGES 18	18	16.2	18.1	18.1	17.4	16.4	15.1	13.7	12.2	15.2	16.7	16.6	15.9	14.9	13.7	12.4	11.1
TGES 21	21	18.5	20.6	20.6	19.8	18.5	17.1	15.5	13.8	17.3	19.1	18.9	18.1	16.9	15.5	14.0	12.5
TGES 26	26	22.4	25.6	26.0	25.2	23.8	21.9	19.8	17.5	21.0	23.6	23.7	22.8	21.2	19.3	17.2	15.2
<b>Evaporating temperature +10°F</b>										<b>Evaporating temperature +0°F</b>							
TGES 2	2	1.4	1.6	1.6	1.6	1.6	1.5	1.4	1.3	1.3	1.4	1.5	1.5	1.4	1.4	1.3	1.2
TGES 2.5	2.5	1.9	2.1	2.2	2.2	2.1	2.0	1.9	1.7	1.7	1.9	2.0	2.0	1.9	1.8	1.7	1.6
TGES 4	4	2.8	3.2	3.3	3.2	3.1	3.0	2.7	2.5	2.6	2.9	3.0	2.9	2.8	2.7	2.5	2.2
TGES 5	5	3.8	4.3	4.4	4.4	4.2	3.9	3.7	3.3	3.6	4.0	4.1	4.0	3.8	3.6	3.3	3.0
TGES 7.5	7.5	5.5	6.3	6.5	6.5	6.3	6.0	5.6	5.2	5.1	5.8	6.0	5.9	5.7	5.4	5.1	4.6
TGES 9	9	6.5	7.2	7.3	7.0	6.7	6.2	5.7	5.2	5.9	6.5	6.5	6.3	6.0	5.5	5.1	4.6
TGES 11	11	8.3	9.1	9.2	8.9	8.3	7.7	7.1	6.4	7.6	8.2	8.2	7.9	7.4	6.9	6.3	5.6
TGES 13	13	9.9	10.9	11.0	10.6	10.0	9.3	8.5	7.7	9.1	9.9	9.9	9.6	9.0	8.3	7.6	6.8
TGES 18	18	14.0	15.2	15.1	14.4	13.4	12.3	11.1	9.9	12.8	13.7	13.5	12.8	11.9	10.9	9.9	8.8
TGES 21	21	16.0	17.4	17.2	16.4	15.2	13.9	12.6	11.2	14.7	15.7	15.4	14.6	13.6	12.4	11.2	9.9
TGES 26	26	19.4	21.3	21.2	20.1	18.5	16.8	15.2	13.6	17.7	19.0	18.6	17.6	16.4	15.0	13.5	12.0
<b>Evaporating temperature -10°F</b>										<b>Evaporating temperature -20°F</b>							
TGES 2	2	1.1	1.3	1.3	1.3	1.3	1.2	1.1	1.0	1.0	1.1	1.2	1.2	1.1	1.1	1.0	0.9
TGES 2.5	2.5	1.6	1.8	1.8	1.8	1.7	1.6	1.5	1.4	1.4	1.6	1.6	1.6	1.5	1.4	1.3	1.2
TGES 4	4	2.4	2.6	2.7	2.6	2.5	2.4	2.2	2.0	2.1	2.3	2.4	2.3	2.2	2.1	1.9	1.7
TGES 5	5	3.3	3.6	3.6	3.6	3.4	3.2	2.9	2.6	2.9	3.2	3.3	3.2	3.0	2.8	2.6	2.3
TGES 7.5	7.5	4.7	5.3	5.4	5.3	5.1	4.8	4.5	4.1	4.3	4.8	4.8	4.7	4.5	4.2	3.9	3.6
TGES 9	9	5.3	5.8	5.8	5.6	5.3	4.9	4.5	4.0	4.7	5.1	5.1	4.9	4.6	4.3	3.9	3.5
TGES 11	11	6.8	7.3	7.3	7.0	6.6	6.1	5.5	4.9	6.0	6.5	6.4	6.1	5.7	5.3	4.8	4.3
TGES 13	13	8.2	8.9	8.9	8.5	8.0	7.4	6.7	6.0	7.3	7.9	7.8	7.5	7.0	6.4	5.8	5.2
TGES 18	18	11.5	12.2	12.0	11.3	10.5	9.6	8.6	7.7	10.1	10.7	10.5	9.9	9.1	8.3	7.5	6.6
TGES 21	21	13.1	14.0	13.7	12.9	11.9	10.9	9.8	8.7	11.7	12.3	12.0	11.3	10.4	9.4	8.5	7.5
TGES 26	26	15.8	16.7	16.4	15.6	14.4	13.2	11.8	10.5	13.9	14.8	14.4	13.6	12.6	11.4	10.3	9.1
<b>Evaporating temperature -30°F</b>										<b>Evaporating temperature -40°F</b>							
TGES 2	2	0.9	1.0	1.0	1.0	1.0	0.9	0.9	0.8	0.8	0.9	0.9	0.9	0.8	0.8	0.7	0.7
TGES 2.5	2.5	1.2	1.4	1.4	1.4	1.3	1.2	1.1	1.0	1.1	1.2	1.2	1.2	1.1	1.1	1.0	0.9
TGES 4	4	1.9	2.1	2.1	2.0	1.9	1.8	1.7	1.5	1.7	1.8	1.8	1.8	1.7	1.6	1.4	1.3
TGES 5	5	2.6	2.9	2.9	2.8	2.6	2.4	2.2	2.0	2.3	2.5	2.5	2.4	2.3	2.1	1.9	1.7
TGES 7.5	7.5	3.8	4.2	4.3	4.1	3.9	3.6	3.3	2.9	3.4	3.7	3.7	3.5	3.3	3.0	2.8	2.5
TGES 9	9	4.1	4.4	4.4	4.2	4.0	3.7	3.4	3.0	3.5	3.8	3.8	3.6	3.4	3.2	2.9	2.6
TGES 11	11	5.2	5.6	5.6	5.3	5.0	4.6	4.1	3.7	4.5	4.8	4.8	4.6	4.3	3.9	3.5	3.1
TGES 13	13	12.2	6.9	6.8	6.5	6.1	5.6	5.0	4.5	5.6	6.0	5.9	5.6	5.2	4.8	4.3	3.8
TGES 18	18	8.9	9.3	9.1	8.6	7.9	7.2	6.4	5.7	7.7	8.1	7.8	7.3	6.8	6.1	5.5	4.8
TGES 21	21	10.2	10.7	10.4	9.7	9.0	8.1	7.3	6.4	8.9	9.2	8.9	8.4	7.7	6.9	6.2	5.4
TGES 26	26	12.3	12.9	12.5	11.8	10.9	9.8	8.8	7.7	10.7	11.1	10.8	10.1	9.3	8.4	7.5	6.6

**Correction for subcooling  $\Delta t_{sub}$**

The evaporator capacity used must be corrected if the subcooling deviates from 7.2°F.

The corrected capacity can be obtained by dividing the required evaporator capacity by the correction factor given across, and then selecting from the tables.

$\Delta t_{sub}$	10 °F	20 °F	30 °F	40 °F	50 °F	60 °F	70 °F	80 °F	90 °F	100 °F
Correction factor	1.00	1.09	1.16	1.23	1.30	1.37	1.44	1.51	1.58	1.65

Note: Flash gas can form if subcooling is too low.



Capacity (continued)

# R407C

Capacity in Tons for range N and K, opening superheat OS: 7.2°F

Type	Rated capacity [tons]	Pressure drop across the valve Δp psig								Pressure drop across the valve Δp psig							
		40	70	100	130	160	190	220	250	40	70	100	130	160	190	220	250
<b>Evaporating temperature +50°F</b>										<b>Evaporating temperature +40°F</b>							
TGEZ 2.5	2.5	1.8	2.2	2.4	2.5	2.6	2.6	2.6	2.6	1.7	2.1	2.3	2.4	2.4	2.4	2.4	2.4
TGEZ 3.5	3.5	2.5	3.0	3.3	3.4	3.5	3.5	3.5	3.5	2.3	2.8	3.1	3.2	3.3	3.3	3.3	3.2
TGEZ 5	5	3.7	4.5	4.9	5.1	5.2	5.2	5.1	5.1	3.5	4.2	4.6	4.8	4.8	4.8	4.8	4.7
TGEZ 7	7	5.0	6.0	6.6	6.8	6.9	6.9	6.8	6.7	4.7	5.7	6.2	6.4	6.5	6.5	6.4	6.3
TGEZ 10	10	6.8	8.3	9.2	9.6	9.9	10.0	10.0	9.9	6.6	8.0	8.7	9.2	9.4	9.4	9.4	9.3
TGEZ 12	12	10.3	12.3	13.2	13.5	13.5	13.4	13.0	12.6	9.7	11.5	12.3	12.5	12.5	12.3	12.0	11.6
TGEZ 15	15	13.2	15.7	16.8	17.1	17.0	16.8	16.3	15.7	12.5	14.7	15.6	15.8	15.7	15.4	15.0	14.4
TGEZ 18	18	15.2	18.2	19.6	20.0	20.0	19.6	19.1	18.4	14.5	17.2	18.2	18.5	18.4	18.1	17.7	17.1
TGEZ 24	24	21.6	25.4	26.9	27.2	26.9	26.3	25.4	24.4	20.4	23.8	24.9	25.1	24.7	24.1	23.2	22.2
TGEZ 27	27	24.6	28.8	30.6	30.9	30.6	29.7	28.7	27.5	23.2	27.1	28.3	28.5	28.1	27.3	26.3	25.2
TGEZ 34	34	29.6	35.5	38.3	39.3	39.3	37.7	41.6	36.3	28.0	33.3	35.4	36.1	35.9	35.1	33.8	32.3
<b>Evaporating temperature +30°F</b>										<b>Evaporating temperature +20°F</b>							
TGEZ 2.5	2.5	1.6	1.9	2.1	2.2	2.2	2.2	2.2	2.2	1.5	1.8	1.9	2.0	2.0	2.1	2.0	2.0
TGEZ 3.5	3.5	2.2	2.6	2.9	3.0	3.0	3.0	3.0	3.0	2.1	2.5	2.6	2.7	2.8	2.8	2.8	2.7
TGEZ 5	5	3.3	4.0	4.3	4.4	4.5	4.5	4.4	4.3	3.1	3.7	3.9	4.1	4.1	4.1	4.1	4.0
TGEZ 7	7	4.5	5.4	5.8	6.0	6.0	6.0	5.9	5.8	4.3	5.0	5.4	5.5	5.6	5.5	5.5	5.3
TGEZ 10	10	6.3	7.6	8.3	8.6	8.8	8.8	8.8	8.7	6.0	7.1	7.7	8.0	8.2	8.2	8.1	8.0
TGEZ 12	12	9.1	10.7	11.3	11.5	11.4	11.2	10.9	10.5	8.4	9.7	10.2	10.4	10.3	10.1	9.8	9.5
TGEZ 15	15	11.7	13.6	14.3	14.5	14.3	14.0	13.6	13.1	10.8	12.4	13.0	13.1	13.0	12.7	12.2	11.8
TGEZ 18	18	13.7	16.0	16.8	17.1	17.0	16.7	16.2	15.6	12.8	14.7	15.4	15.6	15.5	15.1	14.7	14.1
TGEZ 24	24	19.0	21.9	22.8	22.9	22.5	21.9	21.1	20.1	17.6	20.0	20.7	20.7	20.3	19.7	18.9	18.0
TGEZ 27	27	21.7	25.0	26.0	26.0	25.6	24.8	23.9	22.8	20.1	22.8	23.6	23.6	23.1	22.3	21.4	20.4
TGEZ 34	34	26.2	30.7	32.3	32.6	32.2	31.1	29.8	28.2	24.3	27.9	29.0	29.0	28.3	27.2	25.9	24.7
<b>Evaporating temperature +10°F</b>										<b>Evaporating temperature +0°F</b>							
TGEZ 2.5	2.5	1.4	1.6	1.8	1.9	1.9	1.9	1.9	1.8	1.3	1.5	1.6	1.7	1.7	1.7	1.7	1.7
TGEZ 3.5	3.5	1.9	2.3	2.4	2.5	2.5	2.5	2.5	2.5	1.8	2.1	2.2	2.3	2.3	2.3	2.3	2.3
TGEZ 5	5	2.9	3.4	3.6	3.7	3.8	3.8	3.7	3.6	2.7	3.1	3.3	3.4	3.4	3.4	3.4	3.3
TGEZ 7	7	4.0	4.6	5.0	5.1	5.1	5.1	5.0	4.9	3.7	4.3	4.5	4.7	4.7	4.6	4.5	4.4
TGEZ 10	10	5.7	6.7	7.2	7.4	7.5	7.5	7.4	7.3	5.3	6.2	6.6	6.8	6.9	6.9	6.8	6.6
TGEZ 12	12	7.7	8.8	9.2	9.3	9.2	9.0	8.8	8.5	6.9	7.8	8.2	8.3	8.2	8.0	7.8	7.5
TGEZ 15	15	9.9	11.2	11.7	11.7	11.6	11.3	10.9	10.5	8.9	10.0	10.4	10.4	10.3	10.0	9.6	9.2
TGEZ 18	18	11.8	13.4	14.0	14.1	14.0	13.6	13.2	12.7	10.7	12.1	12.6	12.6	12.4	12.1	11.7	11.2
TGEZ 24	24	16.1	18.0	18.6	18.5	18.1	17.5	16.8	16.0	14.5	16.1	16.5	16.4	16.1	15.5	14.8	14.1
TGEZ 27	27	18.4	20.6	21.2	21.1	20.6	19.9	19.1	18.1	16.6	18.4	18.9	18.8	18.3	17.6	16.8	16.0
TGEZ 34	34	22.2	25.0	25.7	25.4	24.8	24.0	23.0	22.0	19.9	22.0	22.7	22.6	22.0	21.3	20.4	19.4
<b>Evaporating temperature -10°F</b>										<b>Evaporating temperature -20°F</b>							
TGEZ 2.5	2.5	1.2	1.4	1.5	1.5	1.6	1.6	1.5	1.5	1.1	1.3	1.3	1.4	1.4	1.4	1.4	1.4
TGEZ 3.5	3.5	1.6	1.9	2.0	2.1	2.1	2.1	2.1	2.0	1.5	1.7	1.8	1.9	1.9	1.9	1.9	1.8
TGEZ 5	5	2.5	2.9	3.0	3.1	3.1	3.1	3.1	3.0	2.3	2.6	2.8	2.8	2.8	2.8	2.8	2.7
TGEZ 7	7	3.4	3.9	4.2	4.3	4.3	4.2	4.1	4.0	3.2	3.6	3.8	3.9	3.9	3.8	3.7	3.6
TGEZ 10	10	4.9	5.7	6.1	6.2	6.3	6.2	6.1	6.0	4.5	5.2	5.5	5.7	5.7	5.6	5.5	5.3
TGEZ 12	12	6.2	6.9	7.2	7.3	7.2	7.1	6.8	6.6	5.4	6.1	6.3	6.4	6.3	6.2	6.0	5.7
TGEZ 15	15	7.9	8.8	9.2	9.2	9.0	8.8	8.5	8.1	7.0	7.8	8.0	8.0	7.9	7.7	7.4	7.1
TGEZ 18	18	9.6	10.8	11.2	11.2	11.0	10.7	10.3	9.9	8.5	9.5	9.8	9.8	9.6	9.4	9.0	8.6
TGEZ 24	24	12.9	14.2	14.6	14.5	14.1	13.6	13.0	12.4	11.4	12.5	12.8	12.7	12.3	11.9	11.3	10.8
TGEZ 27	27	14.8	16.3	16.7	16.5	16.1	15.5	14.7	14.0	13.1	14.4	14.6	14.5	14.0	13.5	12.9	12.2
TGEZ 34	34	17.7	19.6	20.1	19.9	19.4	18.7	17.9	17.0	15.7	17.3	17.7	17.5	17.0	16.3	15.6	14.8
<b>Evaporating temperature -30°F</b>										<b>Evaporating temperature -40°F</b>							
TGEZ 2.5	2.5	1.0	1.1	1.2	1.3	1.3	1.3	1.3	1.2	0.9	1.1	1.1	1.2	1.2	1.2	1.1	1.1
TGEZ 3.5	3.5	1.4	1.6	1.7	1.7	1.7	1.7	1.7	1.7	1.3	1.4	1.5	1.6	1.6	1.6	1.5	1.5
TGEZ 5	5	2.1	2.4	2.5	2.6	2.6	2.6	2.5	2.4	1.9	2.2	2.3	2.4	2.4	2.3	2.3	2.2
TGEZ 7	7	2.9	3.3	3.5	3.5	3.5	3.5	3.4	3.3	2.7	3.0	3.2	3.2	3.2	3.2	3.1	3.0
TGEZ 10	10	4.2	4.8	5.0	5.2	5.1	5.1	4.9	4.8	3.9	4.4	4.6	4.7	4.7	4.6	4.4	4.3
TGEZ 12	12	4.7	5.3	5.5	5.6	5.5	5.4	5.2	5.0	4.1	4.6	4.8	4.8	4.8	4.6	4.5	4.3
TGEZ 15	15	6.1	6.8	7.0	7.0	6.9	6.7	6.4	6.1	5.3	5.9	6.1	6.1	5.9	5.8	5.5	5.3
TGEZ 18	18	7.5	8.3	8.6	8.6	8.4	8.2	7.8	7.5	6.6	7.3	7.5	7.5	7.3	7.1	6.8	6.5
TGEZ 24	24	10.0	11.0	11.2	11.1	10.8	10.3	9.9	9.4	8.7	9.6	9.8	9.6	9.4	9.0	8.6	8.1
TGEZ 27	27	11.5	12.6	12.8	12.6	12.3	11.7	11.2	10.6	10.1	11.0	11.2	11.0	10.7	10.2	9.7	9.2
TGEZ 34	34	13.8	15.2	15.4	15.3	14.8	14.2	13.5	12.8	12.1	13.3	13.5	13.3	12.9	12.3	11.7	11.1

**Correction for subcooling  $\Delta t_{sub}$**

The evaporator capacity used must be corrected if the subcooling deviates from 7.2°F.

The corrected capacity can be obtained by dividing the required evaporator capacity by the correction factor given across, and then selecting from the tables.

$\Delta t_{sub}$	10 °F	20 °F	30 °F	40 °F	50 °F	60 °F	70 °F	80 °F	90 °F	100 °F
Correction factor	1.00	1.08	1.13	1.18	1.24	1.29	1.34	1.39	1.45	1.50

Note: Flash gas can form if subcooling is too low.

Capacity (continued)

# R410A

Capacity in Tons for range N and K, opening superheat OS: 7.2°F

Type	Rated capacity [tons]	Pressure drop across the valve Δp psig								Pressure drop across the valve Δp psig							
		50	100	150	200	250	300	350	400	50	100	150	200	250	300	350	400
<b>Evaporating temperature +50°F</b>										<b>Evaporating temperature +40°F</b>							
TGEL 3.5	3.5	2.5	3.3	3.6	3.8	3.8	3.7	3.5		2.5	3.1	3.5	3.6	3.6	3.5	3.3	
TGEL 4.5	4.5	3.5	4.4	4.9	5.1	5.1	4.9	4.7		3.4	4.3	4.7	4.8	4.9	4.7	4.5	
TGEL 6.5	6.5	5.1	6.5	7.2	7.4	7.4	7.3	7.0		5.0	6.3	6.9	7.1	7.1	6.9	6.3	
TGEL 9	9	6.8	8.6	9.4	9.7	9.7	9.5	9.1		6.6	8.3	9.1	9.3	9.3	9.1	8.7	
TGEL 13	13	8.9	11.5	12.9	13.4	13.6	13.5	13.2		8.8	11.3	12.6	13.1	13.3	12.9	12.4	
TGEL 15	15	12.5	15.6	16.8	17.0	16.7	16.1	15.3		12.0	14.9	16.0	16.1	15.8	15.2	14.4	
TGEL 19	19	16.1	19.8	21.3	21.5	21.0	20.1	19.0		15.5	19.0	20.2	20.3	19.8	19.0	17.9	
TGEL 23	23	18.1	22.7	24.8	25.1	24.7	23.7	22.3		17.6	22.0	23.6	23.8	23.2	22.1	21.0	
TGEL 31	31	27.0	33.0	35.1	34.9	33.9	32.2	30.2		26.0	31.5	33.2	32.9	31.8	30.3	28.4	
TGEL 35	35	30.6	37.3	39.7	39.5	38.2	36.4	34.1		29.5	35.8	37.6	37.3	36.0	34.2	32.1	
TGEL 46	46	36.6	46.1	50.4	51.3	50.7	48.9	46.4		35.4	44.3	47.7	48.3	47.4	45.5	42.9	
<b>Evaporating temperature +30°F</b>										<b>Evaporating temperature +20°F</b>							
TGEL 3.5	3.5	2.3	3.0	3.3	3.4	3.4	3.4	3.1		2.2	2.8	3.0	3.1	3.2	3.1	3.0	
TGEL 4.5	4.5	3.2	4.1	4.4	4.6	4.6	4.5	4.4		3.0	3.8	4.1	4.2	4.2	4.2	4.1	
TGEL 6.5	6.5	4.8	6.0	6.5	6.7	6.6	6.5	6.3		4.5	5.6	6.1	6.2	6.2	6.0	5.8	
TGEL 9	9	6.4	8.0	8.6	8.8	8.8	8.6	8.2		6.1	7.6	8.1	8.2	8.2	8.0	7.7	
TGEL 13	13	8.6	11.0	12.1	12.6	12.7	12.6	12.3		8.4	10.6	11.5	11.9	12.0	11.9	11.6	
TGEL 15	15	11.5	14.1	14.9	15.0	14.7	14.2	13.4		10.8	13.1	13.8	13.8	13.5	13.0	12.4	
TGEL 19	19	14.7	18.0	18.9	18.9	18.4	17.6	16.7		14.7	18.0	18.9	18.9	18.4	16.2	15.3	
TGEL 23	23	17.0	20.9	22.1	22.1	21.6	20.8	19.7		16.1	19.6	20.5	20.5	20.0	19.2	18.2	
TGEL 31	31	24.7	29.8	31.0	30.6	29.6	28.1	26.3		23.2	27.7	28.6	28.2	27.1	25.7	24.1	
TGEL 35	35	28.1	33.9	35.2	34.7	33.5	31.7	29.7		26.5	31.5	32.5	32.0	30.7	29.1	27.2	
TGEL 46	46	33.9	42.0	44.5	44.7	43.5	41.4	38.8		32.0	39.0	40.8	40.6	39.1	36.9	34.1	
<b>Evaporating temperature +10°F</b>										<b>Evaporating temperature +0°F</b>							
TGEL 3.5	3.5	2.1	2.6	2.8	2.9	2.9	2.9	2.7		1.9	2.3	2.5	2.6	2.6	2.6	2.5	
TGEL 4.5	4.5	2.8	3.5	3.8	3.9	3.9	3.8	3.7		2.6	3.2	3.4	3.5	3.5	3.5	3.4	
TGEL 6.5	6.5	4.3	5.2	5.6	5.7	5.7	5.5	5.3		4.0	4.8	5.1	5.2	5.2	5.0	4.8	
TGEL 9	9	5.8	7.0	7.5	7.6	7.5	7.3	7.1		5.4	6.5	6.9	7.0	6.9	6.7	6.4	
TGEL 13	13	8.0	10.0	10.8	11.2	11.2	11.1	10.8		7.6	9.3	10.0	10.3	10.3	10.1	9.8	
TGEL 15	15	10.0	12.0	12.6	12.6	12.3	11.8	11.2		9.2	10.8	11.3	11.3	11.0	10.6	10.0	
TGEL 19	19	12.8	15.3	15.9	15.8	15.3	14.7	13.9		11.8	13.8	14.3	14.2	13.7	13.1	12.4	
TGEL 23	23	15.1	18.1	18.9	18.8	18.3	17.6	16.6		14.0	16.5	17.1	17.1	16.6	15.8	15.0	
TGEL 31	31	21.6	25.3	26.0	25.6	24.5	23.2	21.8		19.8	22.9	23.4	22.9	22.0	20.8	19.4	
TGEL 35	35	24.7	28.9	29.6	29.0	27.8	26.3	24.6		22.7	26.1	26.6	26.1	24.9	23.5	22.0	
TGEL 46	46	28.8	35.5	36.8	36.1	34.4	31.9	29.8		27.3	31.8	32.5	31.4	30.1	28.5	26.6	
<b>Evaporating temperature -10°F</b>										<b>Evaporating temperature -20°F</b>							
TGEL 3.5	3.5	1.8	2.1	2.3	2.3	2.4	2.3	2.3		1.6	1.9	2.0	2.1	2.1	2.1	2.0	
TGEL 4.5	4.5	2.4	2.9	3.1	3.2	3.2	3.1	3.0		2.2	2.6	2.8	2.8	2.8	2.8	2.7	
TGEL 6.5	6.5	3.6	4.3	4.6	4.7	4.6	4.5	4.3		3.3	3.9	4.1	4.2	4.1	4.0	3.8	
TGEL 9	9	5.0	5.9	6.2	6.3	6.2	6.0	5.7		4.5	5.3	5.6	5.6	5.5	5.3	5.1	
TGEL 13	13	7.1	8.5	9.1	9.3	9.3	9.1	8.8		6.4	7.7	8.2	8.3	8.2	8.0	7.7	
TGEL 15	15	8.3	9.7	10.1	10.0	9.8	9.4	8.9		7.3	8.5	8.8	8.8	8.5	8.2	7.8	
TGEL 19	19	10.6	12.3	12.7	12.6	12.2	11.6	11.0		9.4	10.8	11.1	11.0	10.6	10.1	9.6	
TGEL 23	23	12.8	14.8	15.4	15.2	14.8	14.1	13.3		11.4	13.1	13.5	13.4	13.0	12.4	11.7	
TGEL 31	31	17.9	20.4	20.8	20.3	19.4	18.4	17.2		15.9	18.0	18.2	17.8	17.0	16.0	15.0	
TGEL 35	35	20.6	23.3	23.7	23.1	22.1	20.8	19.4		18.3	20.6	20.8	20.2	19.3	18.2	16.9	
TGEL 46	46	24.7	28.0	28.5	27.8	26.7	25.2	23.5		21.8	24.7	25.1	24.5	23.4	22.0	20.6	
<b>Evaporating temperature -30°F</b>										<b>Evaporating temperature -40°F</b>							
TGEL 3.5	3.5	1.4	1.7	1.8	1.8	1.8	1.8	1.7		1.2	1.5	1.6	1.6	1.6	1.6	1.5	
TGEL 4.5	4.5	1.9	2.3	2.4	2.5	2.5	2.4	2.3		1.7	2.0	2.1	2.2	2.1	2.1	2.0	
TGEL 6.5	6.5	2.9	3.4	3.6	3.6	3.6	3.5	3.3		2.6	3.0	3.2	3.2	3.1	3.0	2.9	
TGEL 9	9	4.0	4.7	4.9	4.9	4.8	4.7	4.4		3.5	4.1	4.3	4.3	4.2	4.0	3.8	
TGEL 13	13	5.8	6.8	7.2	7.3	7.2	6.9	6.6		5.1	6.0	6.3	6.3	6.1	5.8	5.5	
TGEL 15	15	6.4	7.4	7.6	7.6	7.4	7.1	6.7		5.5	6.3	6.5	6.5	6.3	6.1	5.8	
TGEL 19	19	8.2	9.3	9.6	9.5	9.2	8.8	8.3		7.0	8.0	8.2	8.1	7.9	7.5	7.1	
TGEL 23	23	10.0	11.5	11.8	11.6	11.3	10.7	10.1		8.6	9.9	10.1	10.0	9.6	9.2	8.7	
TGEL 31	31	13.9	15.6	15.8	15.4	14.7	13.9	13.0		12.0	13.4	13.6	13.2	12.6	11.9	11.1	
TGEL 35	35	16.0	17.9	18.1	17.5	16.7	15.7	14.6		13.8	15.4	15.5	15.1	14.3	13.5	12.5	
TGEL 46	46	19.2	21.5	21.8	21.2	20.2	19.1	17.8		16.6	18.6	18.8	18.2	17.4	16.3	15.2	

**Correction for subcooling  $\Delta t_{sub}$**   
 The evaporator capacity used must be corrected if the subcooling deviates from 7.2°F.  
 The corrected capacity can be obtained by dividing the required evaporator capacity by the correction factor given across, and then selecting from the tables.

$\Delta t_{sub}$	10 °F	20 °F	30 °F	40 °F	50 °F	60 °F	70 °F	80 °F	90 °F	100 °F
Correction factor	1.00	1.08	1.14	1.20	1.26	1.31	1.37	1.43	1.48	1.54

Note: Flash gas can form if subcooling is too low.

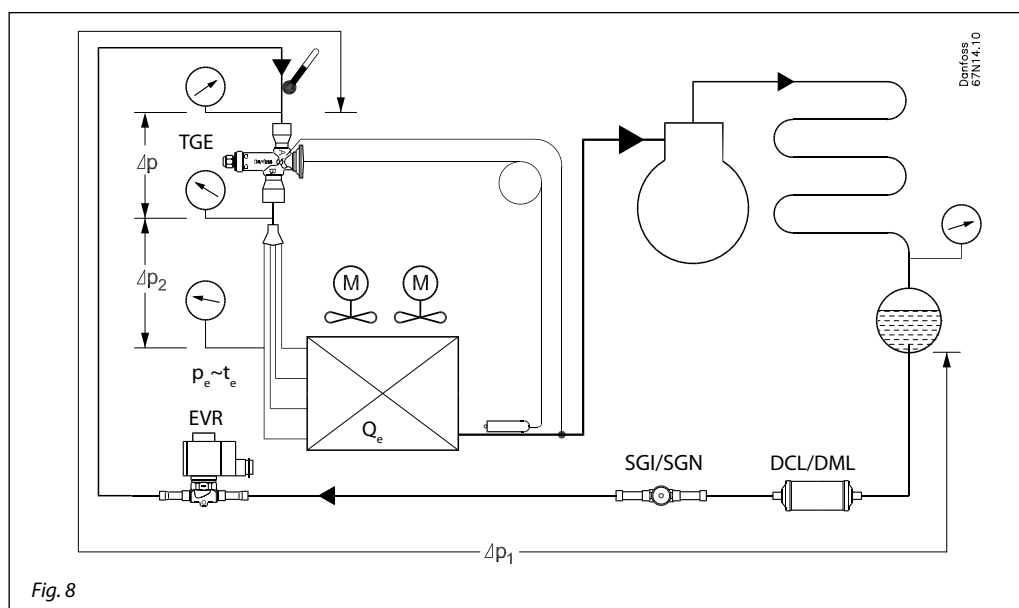
**Sizing**


Fig. 8

**Sizing examples (SI and US)**

Refrigerant R410A  
 Evaporator capacity  $Q_e = 25 \text{ kW} / 7 \text{ TR}$   
 Evaporator with several circuits, i.e. a valve with distributor is required  
 Evaporating temperature  $t_e = 0^\circ\text{C} / 32^\circ\text{F}$   
 $p_e = 8 \text{ bar} / 116 \text{ psi}$   
 Condensing temperature  $t_c = +36^\circ\text{C} / 96.8^\circ\text{F}$   
 $p_c = 22 \text{ bar} / 319 \text{ psi}$   
 Refrigerant liquid temperature  $t_l = +26^\circ\text{C} / 78.8^\circ\text{F}$   
 Subcooling  $\Delta t_{\text{sub}} = 36 - 26 = 10 \text{ K} / 96.8^\circ\text{F} - 78.8^\circ\text{F} = 18^\circ\text{F}$

From the data supplied determine pressure drop  $\Delta p$  across TGE.

Pressure drop  $\Delta p_1$  in liquid lines, pipe bends, filter, sight glass, solenoid valve, etc. can be assumed to be 0.5 bar / 7.25 psi  
 Pressure drop  $\Delta p_2$  in the liquid distributor can also be assumed as 0.5 bar / 7.25 psi.

From the diagram it can be seen that evaporating pressure  $p_e$  is equal to  $p_c - \Delta p - \Delta p_1 - \Delta p_2$ . Thus, pressure drop  $\Delta p$  across TGE equals  $p_c - p_e - \Delta p_1 - \Delta p_2 = 22 - 8 - 0.5 - 0.5 = 13 \text{ bar} / p_c - p_e - \Delta p_1 - \Delta p_2 = 319 - 116 - 7.25 - 7.25 = 188.5 \text{ psi}$ .

Pressure drop in risers, etc. is not taken into account.

The correction factor at  $\Delta t_{\text{sub}} = 10 \text{ K} / 18^\circ\text{F}$  is 1.08. The corrected evaporator capacity thus becomes  $25 \text{ kW} / 77\text{TR}$  divided by 1.08 =  $23.1 \text{ kW} / 6.5 \text{ TR}$ .

Since the capacity of the expansion valve must be equal to or slightly higher than the corrected evaporator capacity of  $23.1 \text{ kW} / 6.5 \text{ TR}$ , a TGEL 6.5 giving  $23.5 \text{ kW} / 6.5 \text{ TR}$  at  $\Delta p = 12 \text{ bar} / 190 \text{ psi}$  would be a suitable choice (See tables below).

## R410A

**Capacity in kW**

Type and rated capacity	Rated capacity [kW]	Pressure drop across the valve $\Delta p$ bar								Pressure drop across the valve $\Delta p$ bar							
		3	6	9	12	15	18	21	24	3	6	9	12	15	18	21	24
<b>Evaporating temperature <math>+5^\circ\text{C}</math></b>																	
TGEL 3.5	12	8.2	10.6	11.9	12.5	12.8	12.8	12.6	12.3	7.9	10.1	11.3	11.8	12.1	12.1	11.9	11.7
TGEL 4.5	16	11.2	14.4	16.2	16.9	17.2	17.2	16.9	16.5	10.8	13.9	15.4	16.0	16.3	16.3	16.0	15.6
TGEL 6.5	24	16.6	21.3	23.7	24.7	25.0	24.9	24.4	23.6	16.0	20.5	22.6	23.5	23.7	23.6	23.1	22.4
TGEL 9	32	22.0	28.2	31.3	32.6	32.9	32.6	31.9	30.8	21.4	27.3	30.0	31.1	31.4	31.1	30.4	29.3
TGEL 13	45	29.4	38.1	43.0	45.4	46.5	46.8	46.4	45.5	28.9	37.4	41.8	43.9	44.9	45.2	44.8	43.9

## R410A

**Capacity in Tons**

Type	Rated capacity [tons]	Pressure drop across the valve $\Delta p$ psig								Pressure drop across the valve $\Delta p$ psig							
		50	100	150	200	250	300	350	400	50	100	150	200	250	300	350	400
<b>Evaporating temperature <math>+30^\circ\text{F}</math></b>																	
TGEL 3.5	3.5	2.3	3.0	3.3	3.4	3.4	3.4	3.3	3.1	2.2	2.8	3.0	3.1	3.2	3.1	3.0	2.9
TGEL 4.5	4.5	3.2	4.1	4.4	4.6	4.6	4.5	4.4	4.2	3.0	3.8	4.1	4.2	4.2	4.2	4.1	3.9
TGEL 6.5	6.5	4.8	6.0	6.5	6.7	6.6	6.5	6.3	6.0	4.5	5.6	6.1	6.2	6.2	6.0	5.8	5.6
TGEL 9	9	6.4	8.0	8.6	8.8	8.8	8.6	8.2	7.8	6.1	7.6	8.1	8.2	8.2	8.0	7.7	7.3
TGEL 13	13	8.6	11.0	12.1	12.6	12.7	12.6	12.3	11.9	8.4	10.6	11.5	11.9	12.0	11.9	11.6	11.2

## Dimensions and weights

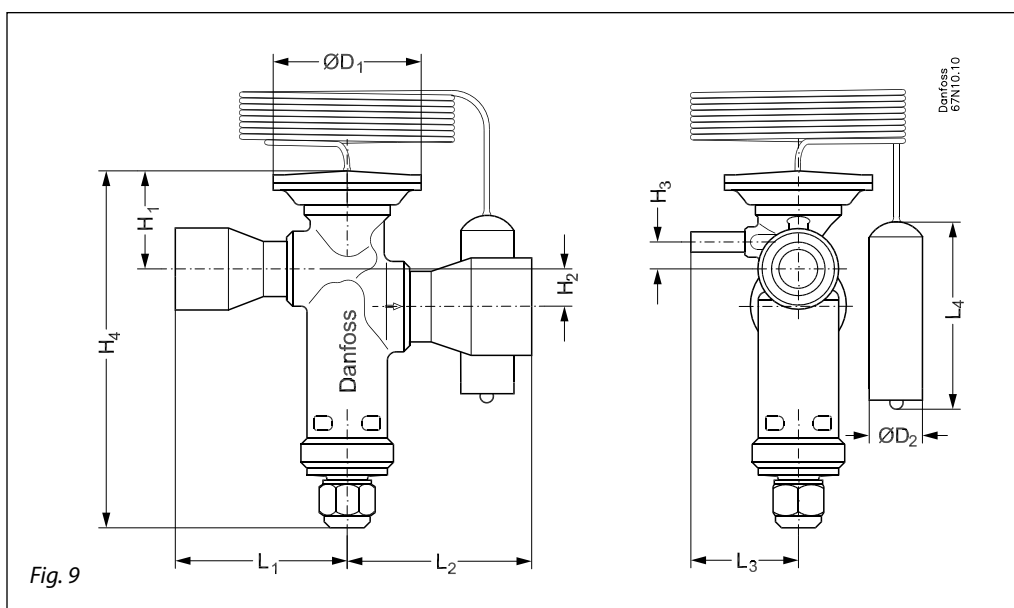


Fig. 9

Type	Connection inlet × outlet ODF solder		Capillary tube length m	H <sub>1</sub> mm	H <sub>2</sub> mm	H <sub>3</sub> mm	H <sub>4</sub> mm	L <sub>1</sub> mm	L <sub>2</sub> mm	L <sub>3</sub> mm	L <sub>4</sub> mm	ØD <sub>1</sub> mm	ØD <sub>2</sub> mm	Weight kg
	in.	mm												
TGE 10	$\frac{3}{8} \times \frac{5}{8}$	10 × 16	1.5	28.5	7.5	5	93	41.5	45.5	37.5	70	45	14.5	0.37
	$\frac{1}{2} \times \frac{5}{8}$	12 × 16												
	$\frac{1}{2} \times \frac{7}{8}$	12 × 22												
	$\frac{5}{8} \times \frac{5}{8}$													
	$\frac{5}{8} \times \frac{7}{8}$	16 × 22												
TGE 20	$\frac{5}{8} \times \frac{7}{8}$	16 × 22	1.5	32	9	8	117	48	62	40	78	53	19.2	0.57
	$\frac{7}{8} \times \frac{7}{8}$													
	$\frac{3}{8} \times 1\frac{1}{8}$	16 × 28												
	$\frac{7}{8} \times 1\frac{1}{8}$	22 × 28												
	$\frac{7}{8} \times 1\frac{3}{8}$													
TGE 40	$\frac{7}{8} \times 1\frac{3}{8}$	22 × 35	3	39	15	11	144	74.5	74.5	43.5	78	60	19.2	0.93
	$1\frac{1}{8} \times 1\frac{1}{8}$													
	$1\frac{1}{8} \times 1\frac{3}{8}$	28 × 35												

Type	Connection inlet × outlet ODF solder		Capillary tube length ft	H <sub>1</sub> in	H <sub>2</sub> in	H <sub>3</sub> in	H <sub>4</sub> in	L <sub>1</sub> in	L <sub>2</sub> in	L <sub>3</sub> in	L <sub>4</sub> in	ØD <sub>1</sub> in	ØD <sub>2</sub> in	Weight lbs
	in.	mm												
TGE 10	$\frac{3}{8} \times \frac{5}{8}$	10 × 16	4.92	1.12	0.30	0.20	3.66	1.63	1.79	1.48	2.76	1.77	0.57	0.81
	$\frac{1}{2} \times \frac{5}{8}$	12 × 16												
	$\frac{1}{2} \times \frac{7}{8}$	12 × 22												
	$\frac{5}{8} \times \frac{5}{8}$													
	$\frac{5}{8} \times \frac{7}{8}$	16 × 22												
TGE 20	$\frac{5}{8} \times \frac{7}{8}$	16 × 22	4.92	1.26	0.35	0.31	4.61	1.89	2.44	1.57	3.07	2.09	0.76	1.27
	$\frac{7}{8} \times \frac{7}{8}$													
	$\frac{5}{8} \times 1\frac{1}{8}$	16 × 28												
	$\frac{7}{8} \times 1\frac{1}{8}$	22 × 28												
	$\frac{7}{8} \times 1\frac{3}{8}$													
TGE 40	$\frac{7}{8} \times 1\frac{3}{8}$	22 × 35	9.84	1.54	0.59	0.43	5.67	2.58	2.93	1.71	3.07	2.36	0.76	2.05
	$1\frac{1}{8} \times 1\frac{1}{8}$													
	$1\frac{1}{8} \times 1\frac{3}{8}$	28 × 35												