

**Type: Semi-hermetic twin screw compressors**

**Producer: Frascold**

**Series: C-TSH**

## **Model: C-TSH8-100 300 Y**

### **Technical data**

|                                   |               |
|-----------------------------------|---------------|
| Nominal motor power [kW/HP]:      | 74 / 100      |
| Displacement [m <sup>3</sup> /h]: | 300           |
| Capacity control [%]:             | 100 - 75 - 50 |
| RPM [min <sup>-1</sup> ]:         | 1740          |
| Weight net [kg]:                  | 475           |
| Weight gross [kg]:                | 510           |
| Oil charge [dm <sup>3</sup> ]:    | 19            |

### **Electrical data**

|                                                      |            |
|------------------------------------------------------|------------|
|                                                      | <u>PWS</u> |
| Power supply [V/~/Hz]:                               | 400/3/50   |
| Locked rotor current [A]:                            | 634        |
| Locked rotor current (D.O.L. - $\Delta\Delta$ ) [A]: | 1036       |
| Max. operating current [A]:                          | 216        |
| Max. power input [kW]:                               | 136        |

### **Connections**

|                 |                    |               |
|-----------------|--------------------|---------------|
|                 | <u>millimeters</u> | <u>inches</u> |
| Suction line:   | 80                 | 3 1/8         |
| Discharge line: | 67                 | 2 5/8         |

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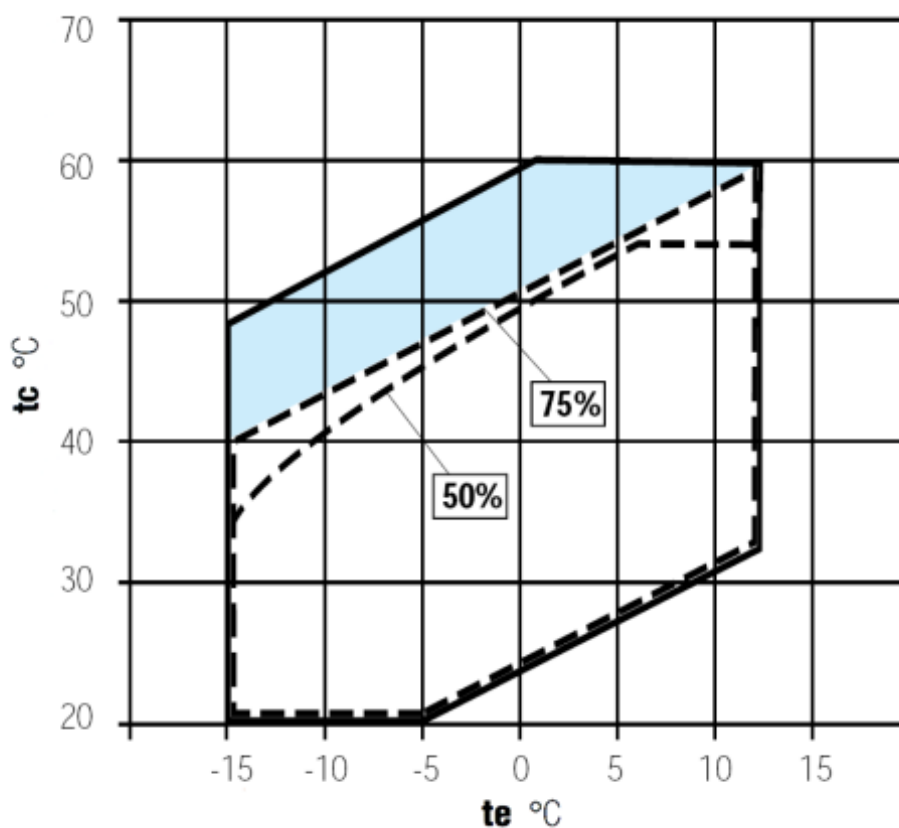
### **Cooling capacity [W]**

| <b>t<sub>c</sub> \ t<sub>e</sub></b> | <b>12.5</b> | <b>10</b> | <b>5</b> | <b>0</b> | <b>-5</b> | <b>-10</b> | <b>-15</b> |
|--------------------------------------|-------------|-----------|----------|----------|-----------|------------|------------|
| <b>30</b>                            | -           | -         | 312 490  | 262 520  | 218 820   | 180 810    | 147 650    |
| <b>40</b>                            | 360 550     | 332 030   | 280 110  | 234 510  | 194 660   | 159 960    | 129 860    |
| <b>50</b>                            | 318 390     | 292 790   | 246 210  | 205 320  | 169 620   | 138 550    | -          |
| <b>55</b>                            | 296 620     | 272 680   | 229 090  | 190 810  | 157 370   | -          | -          |

### **Power input [W]**

| <b>t<sub>c</sub> \ t<sub>e</sub></b> | <b>12.5</b> | <b>10</b> | <b>5</b> | <b>0</b> | <b>-5</b> | <b>-10</b> | <b>-15</b> |
|--------------------------------------|-------------|-----------|----------|----------|-----------|------------|------------|
| <b>30</b>                            | -           | -         | 60.38    | 56.93    | 53.86     | 51.22      | 49.41      |
| <b>40</b>                            | 75.23       | 73.79     | 70.41    | 66.82    | 63.48     | 60.56      | 58.68      |
| <b>50</b>                            | 88.54       | 86.90     | 83.15    | 79.23    | 75.71     | 72.83      | -          |
| <b>55</b>                            | 96.49       | 94.35     | 89.94    | 85.89    | 82.72     | -          | -          |

## Application limits



With liquid injection or oil cooler

Operating conditions: suction gas overheating 10K, 0K subcooling

$t_c$  - Condensing temperature [°C]

$t_e$  - Evaporating temperature [°C]

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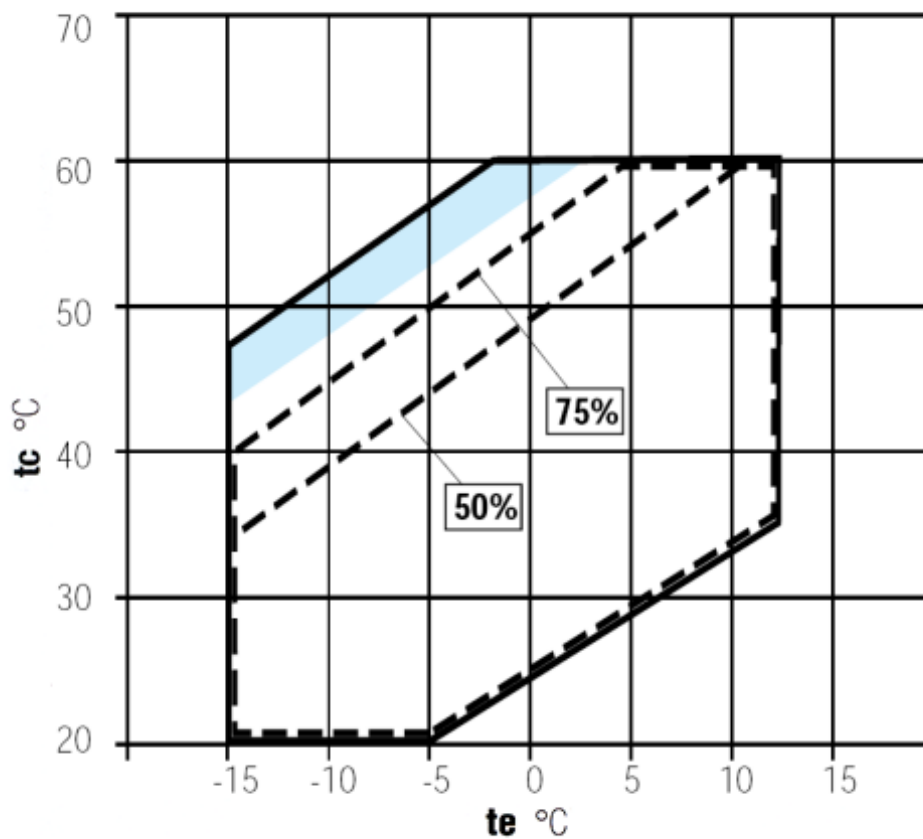
**Cooling capacity [W]**

| $t_c \setminus t_e$ | 12.5    | 10      | 5       | 0       | -5      | -10     | -15     |
|---------------------|---------|---------|---------|---------|---------|---------|---------|
| 30                  | -       | -       | 294 320 | 246 360 | 205 110 | 169 570 | 139 360 |
| 40                  | 340 770 | 312 780 | 262 430 | 218 980 | 181 580 | 149 580 | 122 370 |
| 50                  | 299 350 | 274 490 | 229 810 | 191 290 | 158 180 | 129 890 | -       |
| 55                  | 277 730 | 254 690 | 213 280 | 177 580 | 146 900 | -       | -       |

**Power input [W]**

| $t_c \setminus t_e$ | 12.5  | 10    | 5     | 0     | -5    | -10   | -15   |
|---------------------|-------|-------|-------|-------|-------|-------|-------|
| 30                  | -     | -     | 57.26 | 53.81 | 50.83 | 48.41 | 47.10 |
| 40                  | 71.94 | 70.27 | 66.72 | 63.07 | 59.82 | 57.24 | 55.94 |
| 50                  | 84.62 | 82.67 | 78.69 | 74.80 | 71.55 | 69.36 | -     |
| 55                  | 91.91 | 89.60 | 85.23 | 81.38 | 78.74 | -     | -     |

## Application limits

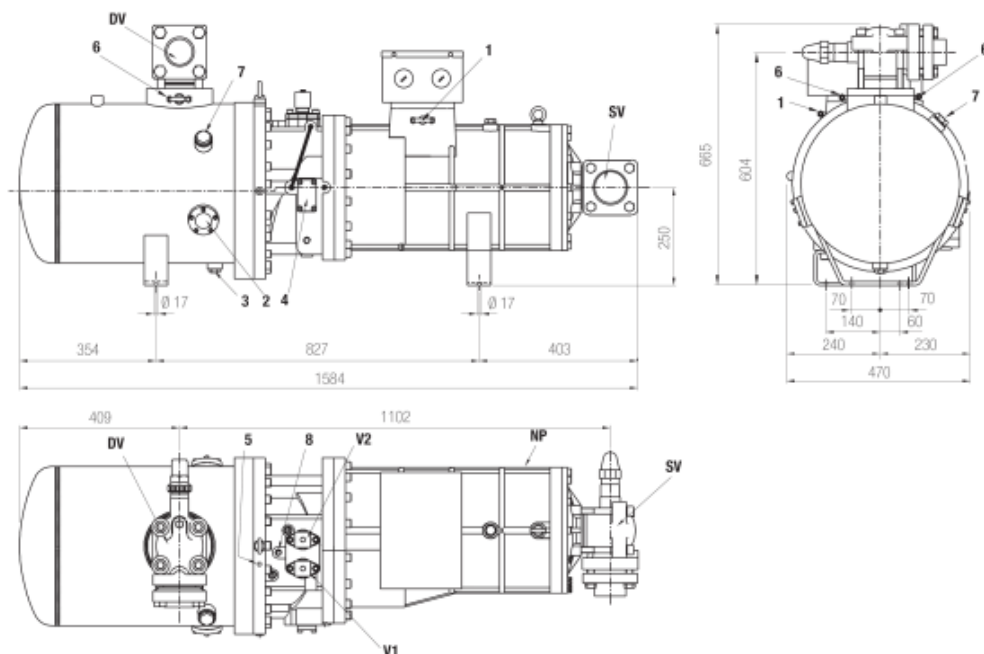


With liquid injection or oil cooler

Operating conditions: suction gas overheating 10K, 0K subcooling

$t_c$  - Condensing temperature [°C]

$t_e$  - Evaporating temperature [°C]



- |     |                                        |     |                                   |
|-----|----------------------------------------|-----|-----------------------------------|
| 1:  | low pressure connections               | 2:  | oil level sight glass             |
| 3:  | oil drain                              | 4:  | connections for remote oil cooler |
| 5:  | maximum discharge temperature sensor   | 6:  | capacity control valve            |
| 6:  | high pressure connections              | 7:  | oil charge plug                   |
| 8:  | liquid injection/economizer connection | DV: | discharge valve                   |
| NP: | name plate                             | SV: | suction valve                     |
| V1: | capacity control valve 50%             | V2: | capacity control valve 75%        |

