

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

**Producer: Frascold**

**Series: C-TSH**

## **Model: C-TSH8-90 270 Y ECO**

### **Technical data**

|                                   |               |
|-----------------------------------|---------------|
| Nominal motor power [kW/HP]:      | 66,5 / 90     |
| Displacement [m <sup>3</sup> /h]: | 270           |
| Capacity control [%]:             | 100 - 75 - 50 |
| RPM [min <sup>-1</sup> ]:         | 1740          |
| Weight net [kg]:                  | 433           |
| Weight gross [kg]:                | 465           |
| Oil charge [dm <sup>3</sup> ]:    | 13            |

### **Electrical data**

|                                                      |            |
|------------------------------------------------------|------------|
|                                                      | <u>PWS</u> |
| Power supply [V/~/Hz]:                               | 400/3/50   |
| Locked rotor current [A]:                            | 499        |
| Locked rotor current (D.O.L. - $\Delta\Delta$ ) [A]: | 814        |
| Max. operating current [A]:                          | 185        |
| Max. power input [kW]:                               | 116        |

### **Connections**

|                 |                   |               |
|-----------------|-------------------|---------------|
|                 | <u>milimeters</u> | <u>inches</u> |
| Suction line:   | 80                | 3 1/8         |
| Discharge line: | 54                | 2 1/8         |

R22

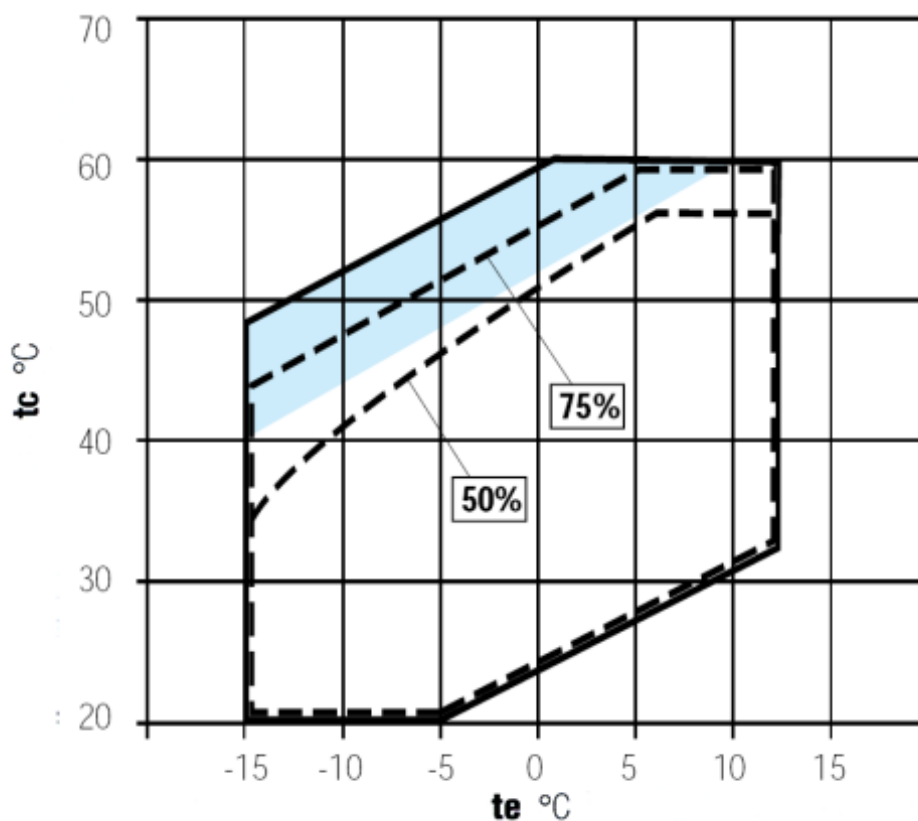
**Cooling capacity [W]**

| $t_c \setminus t_e$ | 12.5    | 10      | 5       | 0       | -5      | -10     | -15     |
|---------------------|---------|---------|---------|---------|---------|---------|---------|
| 30                  | -       | -       | 303 460 | 258 760 | 219 010 | 183 730 | 152 530 |
| 40                  | 354 350 | 328 950 | 282 100 | 240 160 | 202 810 | 169 610 | 140 190 |
| 50                  | 326 810 | 303 290 | 259 810 | 220 810 | 185 980 | 154 950 | -       |
| 55                  | 312 630 | 290 150 | 248 540 | 211 120 | 177 650 | -       | -       |

**Power input [W]**

| $t_c \setminus t_e$ | 12.5  | 10    | 5     | 0     | -5    | -10   | -15   |
|---------------------|-------|-------|-------|-------|-------|-------|-------|
| 30                  | -     | -     | 56.98 | 54.09 | 51.54 | 49.33 | 47.96 |
| 40                  | 70.83 | 69.84 | 67.32 | 64.49 | 61.80 | 59.45 | 58.05 |
| 50                  | 84.96 | 83.69 | 80.71 | 77.62 | 74.97 | 73.09 | -     |
| 55                  | 93.91 | 92.33 | 88.92 | 85.75 | 83.39 | -     | -     |

## Application limits



With liquid injection or oil cooler

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

t<sub>c</sub> - Condensing temperature [°C]

t<sub>e</sub> - Evaporating temperature [°C]

R407C

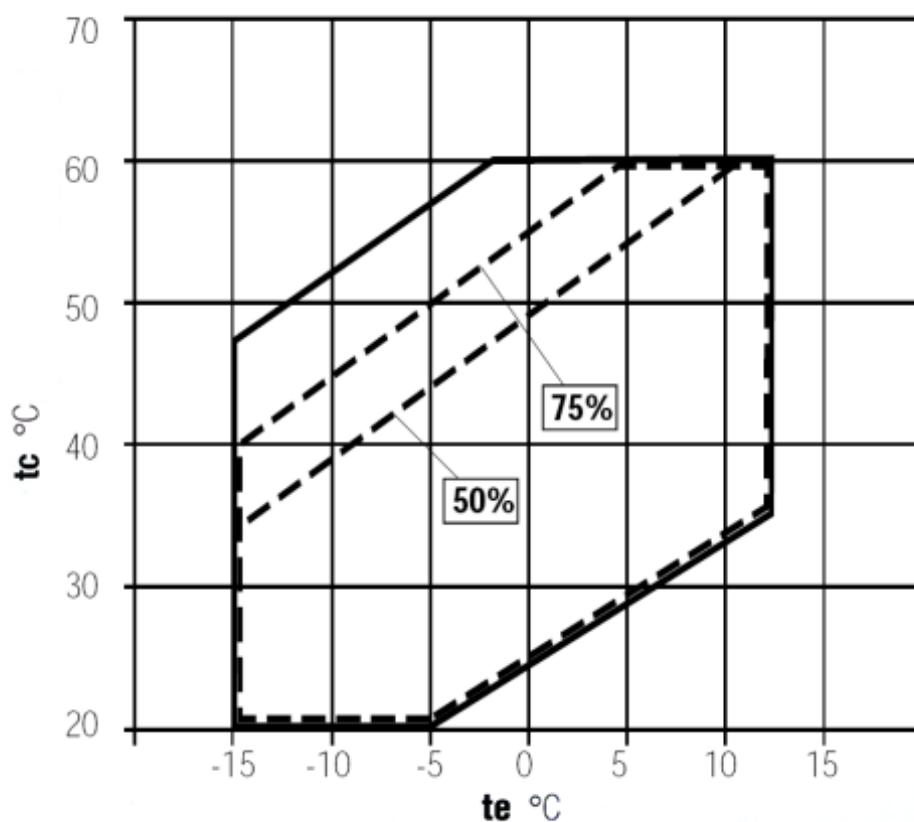
**Cooling capacity [W]**

| $t_c \setminus t_e$ | 12.5    | 10      | 5       | 0       | -5      | -10     | -15     |
|---------------------|---------|---------|---------|---------|---------|---------|---------|
| 30                  | -       | -       | 289 410 | 246 640 | 209 080 | 176 300 | 147 830 |
| 40                  | 341 410 | 316 450 | 270 890 | 230 740 | 195 410 | 164 490 | 137 560 |
| 50                  | 317 960 | 294 940 | 252 800 | 215 550 | 182 670 | 153 840 | -       |
| 55                  | 306 030 | 284 180 | 244 130 | 208 660 | 177 300 | -       | -       |

**Power input [W]**

| $t_c \setminus t_e$ | 12.5  | 10    | 5     | 0     | -5    | -10   | -15   |
|---------------------|-------|-------|-------|-------|-------|-------|-------|
| 30                  | -     | -     | 54.42 | 51.59 | 49.11 | 47.16 | 46.25 |
| 40                  | 68.54 | 67.32 | 64.62 | 61.74 | 59.15 | 57.19 | 56.46 |
| 50                  | 82.71 | 81.29 | 78.32 | 75.38 | 73.02 | 71.73 | -     |
| 55                  | 91.14 | 89.48 | 86.30 | 83.50 | 81.77 | -     | -     |

## Application limits

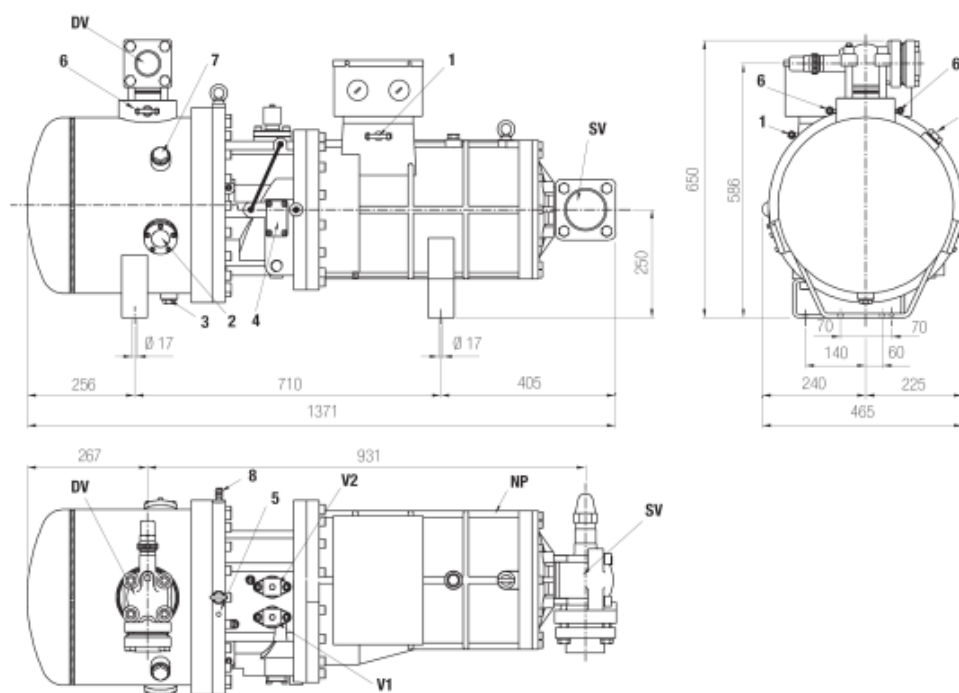


With liquid injection or oil cooler

Operating conditions: suction gas overheating 10K, 10K 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%        |

