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**GACO SARL**

28, Rue Bencharif Madani

25000 BELLEVUE/CONSTANTINE - ALGERIE

Tel. : 031 92 54 56 / 031 93 22 23 - Fax : 031 92 13 45

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**Type: Hermetic scroll compressors****Producer: Maneurop****Series: SZ****Model: SZ380****Technical data**

|                                                    |              |
|----------------------------------------------------|--------------|
| Displacement [m <sup>3</sup> /h]:                  | 92,4         |
| :                                                  | 531,2        |
| RPM [min <sup>-1</sup> ]:                          | 2900         |
| Weight [kg]:                                       | 158          |
| Oil charge [dm <sup>3</sup> ]:                     | 8,4          |
| Oil type:                                          | 160SZ        |
| Maximum system test pressure low side / high side: | 25 / 32      |
| Maximum number of starts without softstart [1/h]:  | 12           |
| Refrigerant charge limit [dm <sup>3</sup> ]:       | 20           |
| Refrigerant:                                       | R407C, R134a |

**Connections**

|                                            |               |
|--------------------------------------------|---------------|
|                                            | <u>inches</u> |
| Suction Rotolock valve connection:         | -             |
| Discharge Rotolock valve connection:       | -             |
| Suction connection with supplied sleeve:   | 2 1/8"        |
| Discharge connection with supplied sleeve: | 1 3/8"        |

**Approvals**

|     |   |
|-----|---|
| CCC | - |
| CE  | + |
| UL  | + |

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**R407C****Cooling capacity [W]**

| $t_c \setminus t_e$ | -20    | -15    | -10    | -5     | 0      | 5       | 10      | 15      |
|---------------------|--------|--------|--------|--------|--------|---------|---------|---------|
| <b>30</b>           | 40 505 | 49 857 | 60 957 | 74 036 | 89 325 | 107 055 | 127 457 | 150 763 |
| <b>35</b>           | 38 484 | 47 540 | 58 259 | 70 872 | 85 611 | 102 705 | 122 387 | 144 887 |
| <b>40</b>           | 36 309 | 45 027 | 55 324 | 67 431 | 81 578 | 97 997  | 116 918 | 138 572 |
| <b>45</b>           | 34 003 | 42 344 | 52 178 | 63 738 | 77 253 | 92 955  | 111 074 | 131 842 |
| <b>50</b>           | 31 591 | 39 514 | 48 846 | 59 817 | 72 659 | 87 603  | 104 880 | 124 721 |
| <b>55</b>           | -      | 36 563 | 45 350 | 55 693 | 67 822 | 81 968  | 98 362  | 117 235 |
| <b>60</b>           | -      | -      | 41 718 | 51 391 | 62 766 | 76 073  | 91 543  | 109 407 |
| <b>65</b>           | -      | -      | -      | -      | 57 515 | 69 942  | 84 448  | 101 263 |

**Power input [W]**

| $t_c \setminus t_e$ | -20    | -15    | -10    | -5     | 0      | 5      | 10     | 15     |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|
| <b>30</b>           | 15 398 | 15 787 | 16 190 | 16 602 | 17 019 | 17 440 | 17 859 | 18 273 |
| <b>35</b>           | 17 090 | 17 486 | 17 902 | 18 334 | 18 780 | 19 235 | 19 697 | 20 161 |
| <b>40</b>           | 18 981 | 19 372 | 19 791 | 20 234 | 20 698 | 21 178 | 21 672 | 22 176 |
| <b>45</b>           | 21 121 | 21 498 | 21 910 | 22 354 | 22 825 | 23 321 | 23 837 | 24 370 |
| <b>50</b>           | 23 564 | 23 917 | 24 312 | 24 745 | 25 214 | 25 714 | 26 243 | 26 796 |
| <b>55</b>           | -      | 26 679 | 27 047 | 27 461 | 27 917 | 28 412 | 28 942 | 29 504 |
| <b>60</b>           | -      | -      | 30 168 | 30 552 | 30 985 | 31 464 | 31 986 | 32 547 |
| <b>65</b>           | -      | -      | -      | -      | 34 471 | 34 925 | 35 428 | 35 978 |

**Current [A]**

| $t_c \setminus t_e$ | -20   | -15   | -10   | -5    | 0     | 5     | 10    | 15    |
|---------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| <b>30</b>           | 30.86 | 31.30 | 31.73 | 32.15 | 32.55 | 32.94 | 33.31 | 33.65 |
| <b>35</b>           | 32.80 | 33.30 | 33.81 | 34.31 | 34.80 | 35.29 | 35.77 | 36.24 |
| <b>40</b>           | 34.97 | 35.51 | 36.07 | 36.63 | 37.19 | 37.76 | 38.33 | 38.90 |
| <b>45</b>           | 37.50 | 38.06 | 38.64 | 39.24 | 39.85 | 40.48 | 41.12 | 41.76 |
| <b>50</b>           | 40.51 | 41.06 | 41.65 | 42.26 | 42.90 | 43.56 | 44.25 | 44.94 |
| <b>55</b>           | -     | 44.65 | 45.22 | 45.83 | 46.47 | 47.15 | 47.85 | 48.58 |
| <b>60</b>           | -     | -     | 49.48 | 50.06 | 50.68 | 51.35 | 52.05 | 52.79 |
| <b>65</b>           | -     | -     | -     | -     | 55.67 | 56.30 | 56.98 | 57.70 |

## Mass flow [kg/s]

| $t_c \setminus t_e$ | -20    | -15    | -10      | -5       | 0        | 5        | 10       | 15       |
|---------------------|--------|--------|----------|----------|----------|----------|----------|----------|
| 30                  | 790.84 | 960.23 | 1 156.46 | 1 383.25 | 1 644.32 | 1 943.36 | 2 284.09 | 2 670.22 |
| 35                  | 783.87 | 953.96 | 1 150.87 | 1 378.33 | 1 640.03 | 1 939.70 | 2 281.04 | 2 667.76 |
| 40                  | 774.31 | 944.54 | 1 141.58 | 1 369.15 | 1 630.94 | 1 930.68 | 2 272.07 | 2 658.83 |
| 45                  | 762.08 | 931.90 | 1 128.51 | 1 355.62 | 1 616.95 | 1 916.21 | 2 257.10 | 2 643.33 |
| 50                  | 747.08 | 915.93 | 1 111.56 | 1 337.67 | 1 597.98 | 1 896.20 | 2 236.03 | 2 621.19 |
| 55                  | -      | 896.56 | 1 090.65 | 1 315.20 | 1 573.94 | 1 870.56 | 2 208.77 | 2 592.30 |
| 60                  | -      | -      | 1 065.69 | 1 288.13 | 1 544.73 | 1 839.20 | 2 175.25 | 2 556.59 |
| 65                  | -      | -      | -        | -        | 1 510.28 | 1 802.04 | 2 135.37 | 2 513.96 |

## C.O.P. [W/W]

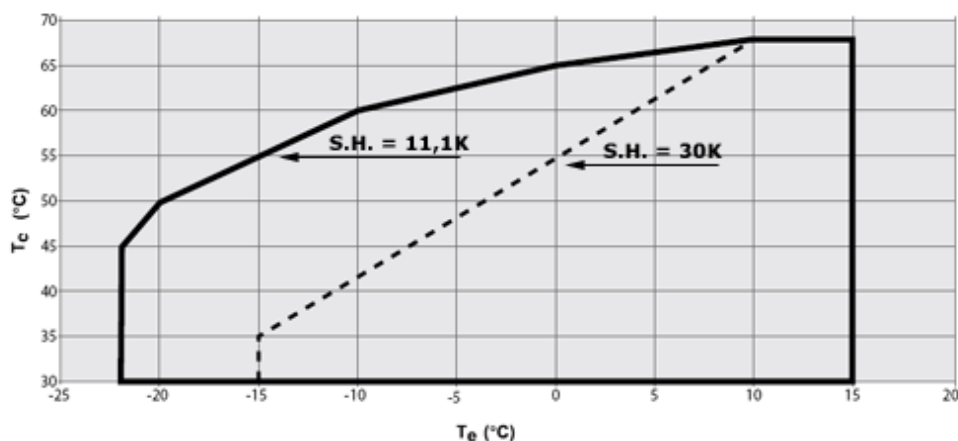
| $t_c \setminus t_e$ | -20  | -15  | -10  | -5   | 0    | 5    | 10   | 15   |
|---------------------|------|------|------|------|------|------|------|------|
| 30                  | 2.63 | 3.16 | 3.77 | 4.46 | 5.25 | 6.14 | 7.14 | 8.25 |
| 35                  | 2.25 | 2.72 | 3.25 | 3.87 | 4.56 | 5.34 | 6.21 | 7.19 |
| 40                  | 1.91 | 2.32 | 2.80 | 3.33 | 3.94 | 4.63 | 5.39 | 6.25 |
| 45                  | 1.61 | 1.97 | 2.38 | 2.85 | 3.38 | 3.99 | 4.66 | 5.41 |
| 50                  | 1.34 | 1.65 | 2.01 | 2.42 | 2.88 | 3.41 | 4.00 | 4.65 |
| 55                  | -    | 1.37 | 1.68 | 2.03 | 2.43 | 2.89 | 3.40 | 3.97 |
| 60                  | -    | -    | 1.38 | 1.68 | 2.03 | 2.42 | 2.86 | 3.36 |
| 65                  | -    | -    | -    | -    | 1.67 | 2.00 | 2.38 | 2.81 |

Operating conditions: suction superheat: 11.1 K, subcooling: 8.3 K

$t_c$  - Condensing temperature [°C]

$t_e$  - Evaporating temperature [°C]

## Application range



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|    |        |
|----|--------|
| D  | 344    |
| H  | 770    |
| H1 | 203    |
| H2 | 695 mm |

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## **Electrical data**

Starting current [A]:

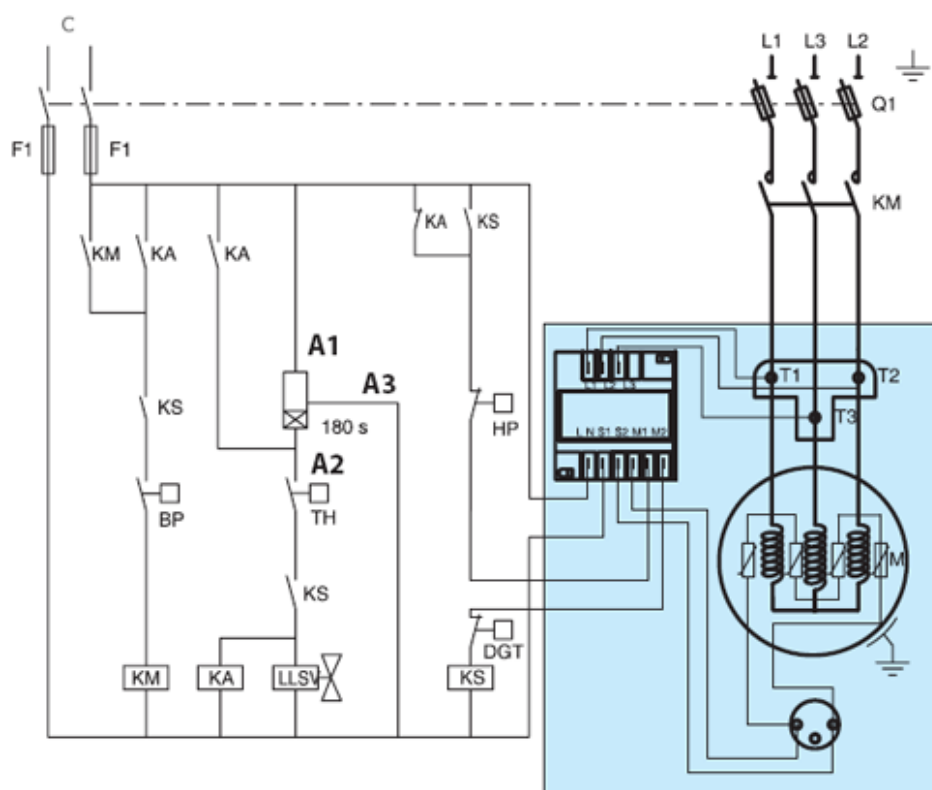
320

Maximum Continuous Current (MCC) [A]:

72

Winding resistance (between phases) [ $\Omega$ ]:

## **Connection diagram for systems with refrigerant suction**



TH: Thermostat

180 s: ATI electronic timer

KA: Control transmitter CI 4-2

LLSV: Electromagnetic liquid valve

KM: Main contactor CI

KS: Fuses' switch

BP: Low pressure switch

HP: High pressure switch

Q1: Safety switch

F1: Fuses / S: Thermal relay TI

F2: Thermal relay TI

M: Compressor's engine

DGT: Discharge gas thermostat

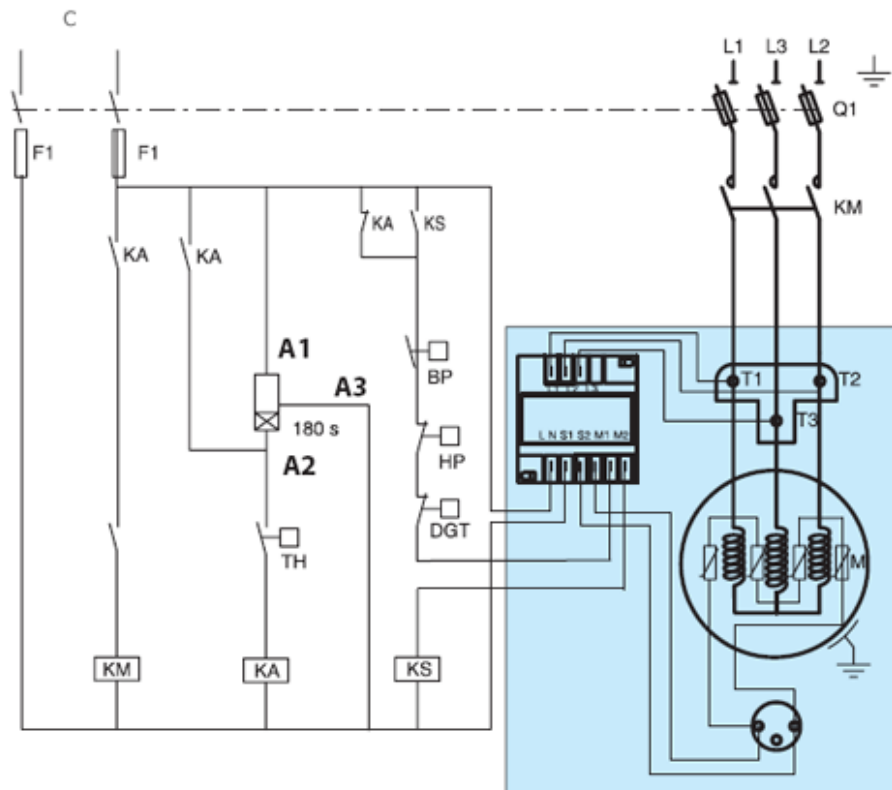
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**Connection diagram for systems without refrigerant suction**

TH: Thermostat

180 s: ATI electronic timer

KA: Control transmitter CI 4-2

LLSV: Electromagnetic liquid valve

KM: Main contactor CI

KS: Fuses' switch

BP: Low pressure switch

HP: High pressure switch

Q1: Safety switch

F1: Fuses / S: Thermal relay TI

F2: Thermal relay TI

M: Compressor's engine

DGT: Discharge gas thermostat

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## **Equipment**

- ▶ oil equalization - thread adapter 1/2"
- ▶ belt type heater - crankcase heater -W, -V
- ▶ soft-start kit - electronic softstart -
- ▶ accoustic hood - acoustic shield of Danfoss catalogue number 7755022
- ▶ discharge thermostatic protection - discharge temperature protection accessory - Danfoss catalogue number 7750009