

Model: SM185

Data

Type: Hermetic scroll compressors

Producer: Maneurop

Series: SM

Model: SM185

Technical data

Displacement [m ³ /h]:	43,5
:	249,9
RPM [min ⁻¹]:	2900
Weight [kg]:	100
Oil charge [dm ³]:	6,2
Oil type:	160P
Maximum system test pressure low side / high side:	25 / 32
Maximum number of starts without softstart [1/h]:	12
Refrigerant charge limit [dm ³]:	13,5
Refrigerant:	R22

Connections

	<u>inches</u>
Suction Rotolock valve connection:	2 1/4"
Discharge Rotolock valve connection:	1 3/4"
Suction connection with supplied sleeve:	1 5/8"
Discharge connection with supplied sleeve:	1 1/8"

Approvals

CCC	-
CE	+
UL	+

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Capacity

R22

Cooling capacity [W]

$t_c \setminus t_e$	-20	-15	-10	-5	0	5	10	15
30	19 439	24 255	29 878	36 380	43 832	52 306	61 875	72 610
35	18 400	23 118	28 611	34 951	42 209	50 458	59 770	70 215
40	17 337	21 936	27 278	33 434	40 478	48 480	57 512	67 647
45	-	20 708	25 877	31 829	38 637	46 371	55 103	64 906
50	-	-	24 409	30 136	36 686	44 131	52 542	61 992
55	-	-	-	28 354	34 625	41 760	49 828	58 904
60	-	-	-	-	32 455	39 257	46 962	55 642
65	-	-	-	-	30 174	36 623	43 943	52 207

Power input [W]

$t_c \setminus t_e$	-20	-15	-10	-5	0	5	10	15
30	7 964	8 050	8 133	8 212	8 284	8 347	8 399	8 437
35	8 819	8 906	8 991	9 071	9 145	9 211	9 265	9 306
40	9 773	9 861	9 947	10 030	10 106	10 174	10 231	10 275
45	-	10 925	11 013	11 097	11 176	11 247	11 307	11 354
50	-	-	12 196	12 283	12 364	12 438	12 501	12 553
55	-	-	-	13 596	13 680	13 757	13 824	13 879
60	-	-	-	-	15 132	15 212	15 283	15 342
65	-	-	-	-	16 731	16 814	16 889	16 953

Current [A]

$t_c \setminus t_e$	-20	-15	-10	-5	0	5	10	15
30	17.62	17.72	17.80	17.88	17.93	17.97	17.99	17.98
35	18.55	18.65	18.74	18.82	18.88	18.93	18.95	18.95
40	19.61	19.72	19.82	19.90	19.97	20.03	20.06	20.08
45	-	20.94	21.05	21.14	21.22	21.29	21.33	21.36
50	-	-	22.45	22.55	22.64	22.72	22.78	22.82
55	-	-	-	24.14	24.25	24.34	24.42	24.48
60	-	-	-	-	26.06	26.17	26.26	26.34
65	-	-	-	-	28.09	28.21	28.32	28.42

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Capacity

Mass flow [kg/s]

$t_c \setminus t_e$	-20	-15	-10	-5	0	5	10	15
30	392.44	483.80	588.54	707.88	842.99	995.07	1 165.32	1 354.92
35	384.64	477.30	583.27	703.76	839.95	993.04	1 164.22	1 354.69
40	376.31	469.93	576.79	698.10	835.04	988.80	1 160.58	1 351.58
45	-	461.45	568.87	690.66	828.01	982.11	1 154.16	1 345.34
50	-	-	559.25	681.19	818.61	972.72	1 144.69	1 335.73
55	-	-	-	669.44	806.61	960.38	1 131.95	1 322.51
60	-	-	-	-	791.75	944.86	1 115.68	1 305.43
65	-	-	-	-	773.80	925.90	1 095.65	1 284.25

C.O.P. [W/W]

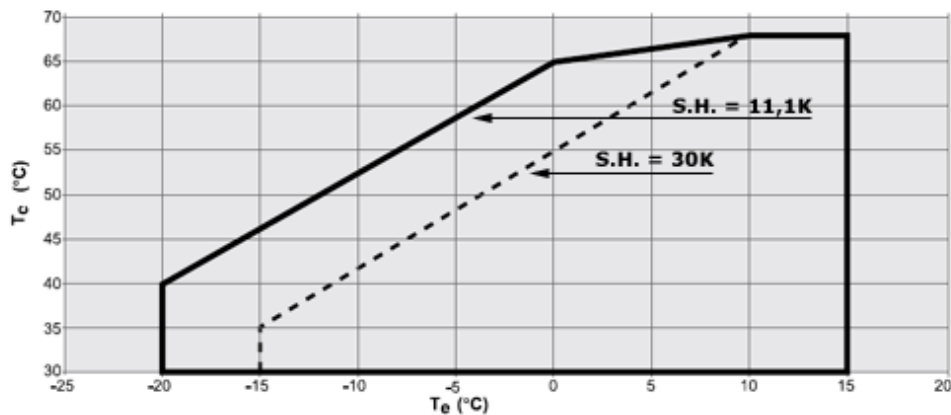
$t_c \setminus t_e$	-20	-15	-10	-5	0	5	10	15
30	2.44	3.01	3.67	4.43	5.29	6.27	7.37	8.61
35	2.09	2.60	3.18	3.85	4.62	5.48	6.45	7.55
40	1.77	2.22	2.74	3.33	4.01	4.77	5.62	6.58
45	-	1.90	2.35	2.87	3.46	4.12	4.87	5.72
50	-	-	2.00	2.45	2.97	3.55	4.20	4.94
55	-	-	-	2.09	2.53	3.04	3.60	4.24
60	-	-	-	-	2.14	2.58	3.07	3.63
65	-	-	-	-	1.80	2.18	2.60	3.08

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

t_c - Condensing temperature [°C]

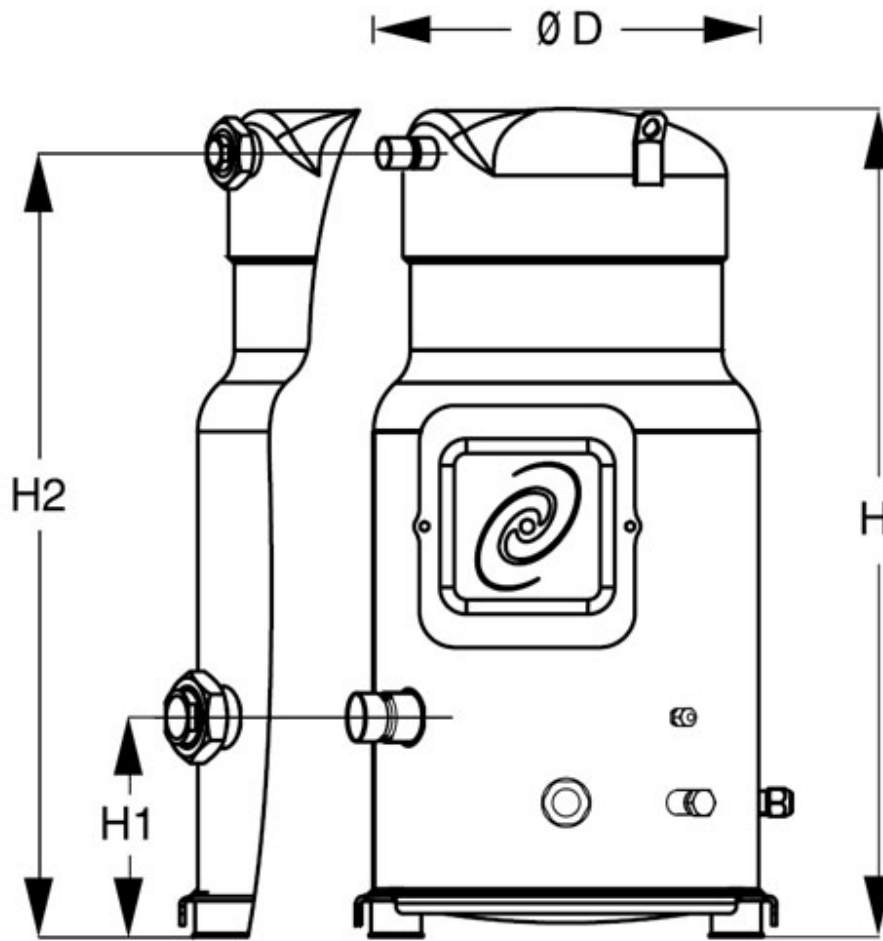
t_e - Evaporating temperature [°C]

Application range



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Dimensions



D	316 mm
H	678 mm
H1	180 mm
H2	641 mm

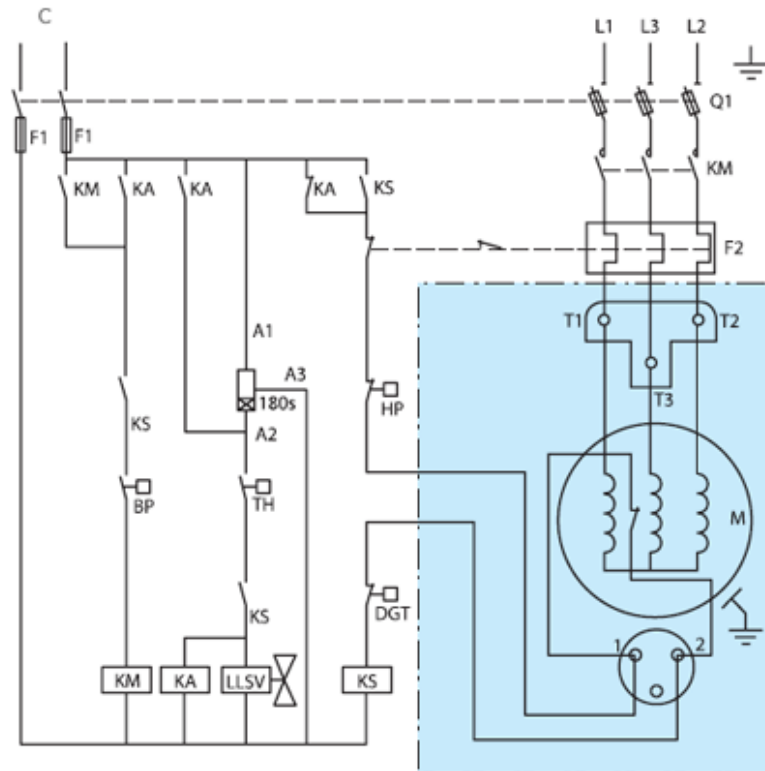
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Image



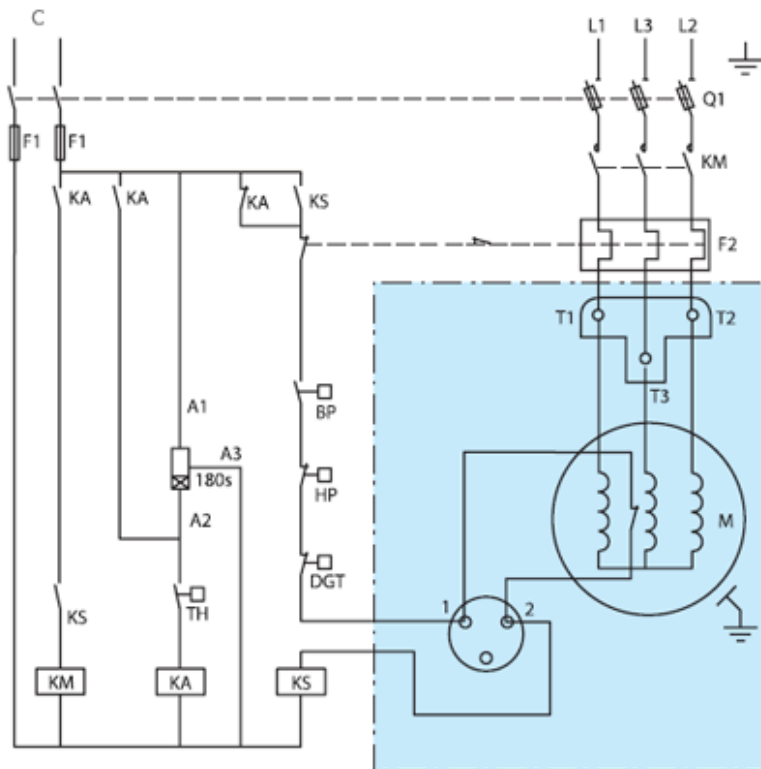
Electrical data

Starting current [A]:	175
Maximum Continuous Current (MCC) [A]:	-
Winding resistance (between phases) [Ω]:	0,77

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
- F2: Thermal relay TI
- M: Compressor's engine
- DGT: Discharge gas thermostat

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Equipment

- ▶ oil equalization - thread adapter 3/8"
- ▶ belt type heater - crankcase heater 75W, 230V
- ▶ soft-start kit - electronic softstart MCI 25C
- ▶ acoustic hood - acoustic shield of Danfoss catalogue number 7755007
- ▶ discharge thermostatic protection - discharge temperature protection accessory - Danfoss catalogue number 7750009