



Type: Hermetic scroll compressors
Producer: Maneurop
Series: SZ

Model: SZ110

Technical data

Displacement [m³/h]:	25,1
:	144,2
RPM [min ⁻¹]:	2900
Weight [kg]:	73
Oil charge [dm³]:	3,3
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 [dm³]:	10
Refrigerant:	R407C, R134a, R404A/R507A

Connections

	<u>inches</u>
Suction Rotolock valve connection:	-
Discharge Rotolock valve connection:	-
Suction connection with supplied sleeve:	1 3/8"
Discharge connection with supplied sleeve:	7/8"

Approvals

CCC	-
CE	+
UL	+

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**R134a****Cooling capacity [W]**

$t_c \setminus t_e$	-15	-10	-5	0	5	10	15
30	8 681	11 005	13 735	16 908	20 562	24 735	29 464
35	8 249	10 513	13 165	16 243	19 785	23 829	28 412
40	7 788	9 980	12 543	15 516	18 936	22 841	27 268
45	7 298	9 408	11 872	14 729	18 016	21 770	26 030
50	6 781	8 797	11 151	13 881	17 024	20 618	24 701
55	-	8 148	10 382	12 974	15 963	19 386	23 280
60	-	-	9 565	12 009	14 832	18 073	21 768
65	-	-	-	10 986	13 633	16 681	20 167
70	-	-	-	9 905	12 367	15 211	18 476

Power input [W]

$t_c \setminus t_e$	-15	-10	-5	0	5	10	15
30	3 144	3 164	3 177	3 179	3 168	3 143	3 102
35	3 499	3 520	3 535	3 539	3 531	3 509	3 470
40	3 898	3 922	3 938	3 944	3 939	3 920	3 885
45	4 345	4 371	4 389	4 398	4 396	4 380	4 348
50	4 844	4 871	4 891	4 903	4 904	4 892	4 864
55	-	5 425	5 449	5 464	5 468	5 460	5 436
60	-	-	6 064	6 082	6 090	6 086	6 067
65	-	-	-	6 762	6 774	6 774	6 760
70	-	-	-	7 507	7 523	7 527	7 518

Current [A]

$t_c \setminus t_e$	-15	-10	-5	0	5	10	15
30	9.37	9.40	9.41	9.42	9.40	9.37	9.32
35	9.65	9.68	9.69	9.70	9.69	9.66	9.61
40	9.99	10.02	10.04	10.05	10.05	10.02	9.98
45	10.40	10.44	10.46	10.47	10.47	10.45	10.41
50	10.89	10.93	10.96	10.98	10.98	10.96	10.93
55	-	11.51	11.54	11.56	11.57	11.56	11.53
60	-	-	12.22	12.24	12.26	12.25	12.23
65	-	-	-	13.02	13.04	13.04	13.03
70	-	-	-	13.91	13.93	13.94	13.93

Mass flow [kg/s]

$t_c \setminus t_e$	-15	-10	-5	0	5	10	15
30	185.77	230.76	282.34	341.07	407.49	482.15	565.59
35	183.74	229.40	281.58	340.83	407.68	482.68	566.38
40	181.31	227.50	280.12	339.73	406.86	482.05	565.86
45	178.30	224.87	277.79	337.60	404.86	480.10	563.87
50	174.54	221.34	274.40	334.28	401.52	476.65	560.23
55	-	216.74	269.80	329.59	396.66	471.54	554.78
60	-	-	263.81	323.36	390.10	464.58	547.33
65	-	-	-	315.42	381.69	455.60	537.72
70	-	-	-	305.59	371.23	444.45	525.77

C.O.P. [W/W]

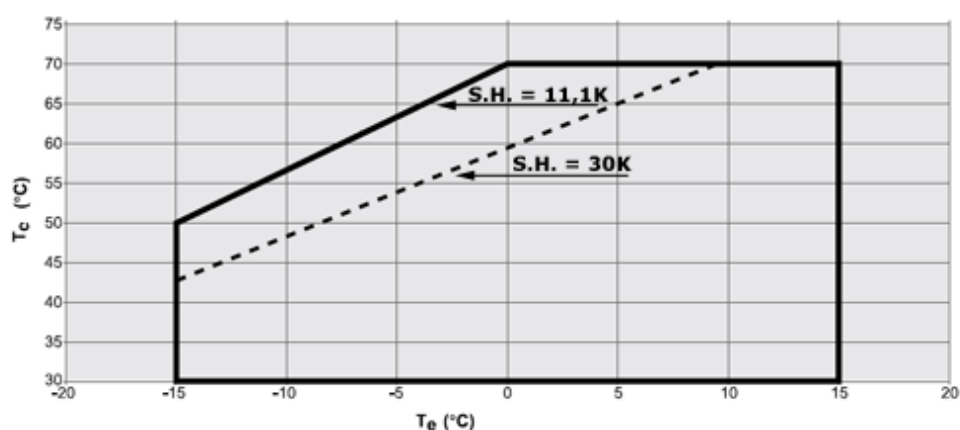
$t_c \setminus t_e$	-15	-10	-5	0	5	10	15
30	2.76	3.48	4.32	5.32	6.49	7.87	9.50
35	2.36	2.99	3.72	4.59	5.60	6.79	8.19
40	2.00	2.54	3.19	3.93	4.81	5.83	7.02
45	1.68	2.15	2.71	3.35	4.10	4.97	5.99
50	1.40	1.81	2.28	2.83	3.47	4.21	5.08
55	-	1.50	1.91	2.37	2.92	3.55	4.28
60	-	-	1.58	1.97	2.44	2.97	3.59
65	-	-	-	1.62	2.01	2.46	2.98
70	-	-	-	1.32	1.64	2.02	2.46

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

$t_c \setminus t_e$	-20	-15	-10	-5	0	5	10	15
30	9 976	12 730	16 025	19 918	24 465	29 724	35 750	42 602
35	9 343	12 025	15 221	18 988	23 383	28 463	34 285	40 906
40	8 690	11 282	14 361	17 985	22 210	27 094	32 693	39 064
45	-	10 502	13 447	16 909	20 947	25 616	30 973	37 077
50	-	-	12 478	15 761	19 592	24 029	29 128	34 945
55	-	-	-	14 541	18 149	22 335	27 156	32 670
60	-	-	-	-	16 615	20 533	25 059	30 252
65	-	-	-	-	14 994	18 624	22 838	27 690

Power input [W]

$t_c \setminus t_e$	-20	-15	-10	-5	0	5	10	15
30	4 411	4 455	4 491	4 514	4 520	4 508	4 472	4 409
35	4 928	4 972	5 007	5 029	5 035	5 021	4 983	4 919
40	5 519	5 562	5 596	5 617	5 622	5 606	5 567	5 501
45	-	6 234	6 267	6 287	6 290	6 273	6 233	6 165
50	-	-	7 029	7 048	7 050	7 031	6 989	6 918
55	-	-	-	7 908	7 909	7 888	7 844	7 771
60	-	-	-	-	8 876	8 854	8 808	8 733
65	-	-	-	-	9 962	9 938	9 889	9 812

Current [A]

$t_c \setminus t_e$	-20	-15	-10	-5	0	5	10	15
30	10.42	10.48	10.53	10.56	10.55	10.51	10.42	10.27
35	10.93	11.00	11.05	11.08	11.07	11.03	10.94	10.80
40	11.56	11.63	11.68	11.71	11.70	11.66	11.58	11.44
45	-	12.38	12.43	12.46	12.46	12.42	12.34	12.21
50	-	-	13.33	13.36	13.36	13.33	13.25	13.12
55	-	-	-	14.41	14.42	14.39	14.31	14.19
60	-	-	-	-	15.65	15.63	15.56	15.44
65	-	-	-	-	17.08	17.06	16.99	16.88

Mass flow [kg/s]

$t_c \setminus t_e$	-20	-15	-10	-5	0	5	10	15
30	192.99	242.07	299.35	365.70	441.96	529.02	627.74	738.97
35	188.64	238.50	296.50	363.49	440.35	527.93	627.10	738.72
40	183.91	234.33	292.81	360.22	437.43	525.30	624.69	736.48
45	-	229.41	288.15	355.75	433.08	521.01	620.39	732.11
50	-	-	282.38	349.94	427.17	514.92	614.07	725.48
55	-	-	-	342.67	419.56	506.91	605.59	716.46
60	-	-	-	-	410.12	496.84	594.82	704.93
65	-	-	-	-	398.74	484.58	581.63	690.75

C.O.P. [W/W]

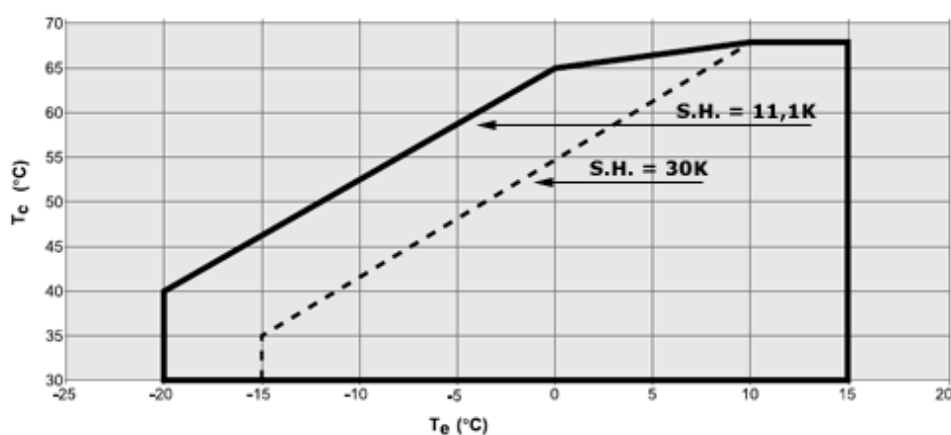
$t_c \setminus t_e$	-20	-15	-10	-5	0	5	10	15
30	2.26	2.86	3.57	4.41	5.41	6.59	7.99	9.66
35	1.90	2.42	3.04	3.78	4.64	5.67	6.88	8.32
40	1.57	2.03	2.57	3.20	3.95	4.83	5.87	7.10
45	-	1.68	2.15	2.69	3.33	4.08	4.97	6.01
50	-	-	1.78	2.24	2.78	3.42	4.17	5.05
55	-	-	-	1.84	2.29	2.83	3.46	4.20
60	-	-	-	-	1.87	2.32	2.85	3.46
65	-	-	-	-	1.51	1.87	2.31	2.82

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

t_c - Condensing temperature [°C]

t_e - Evaporating temperature [°C]

Application range



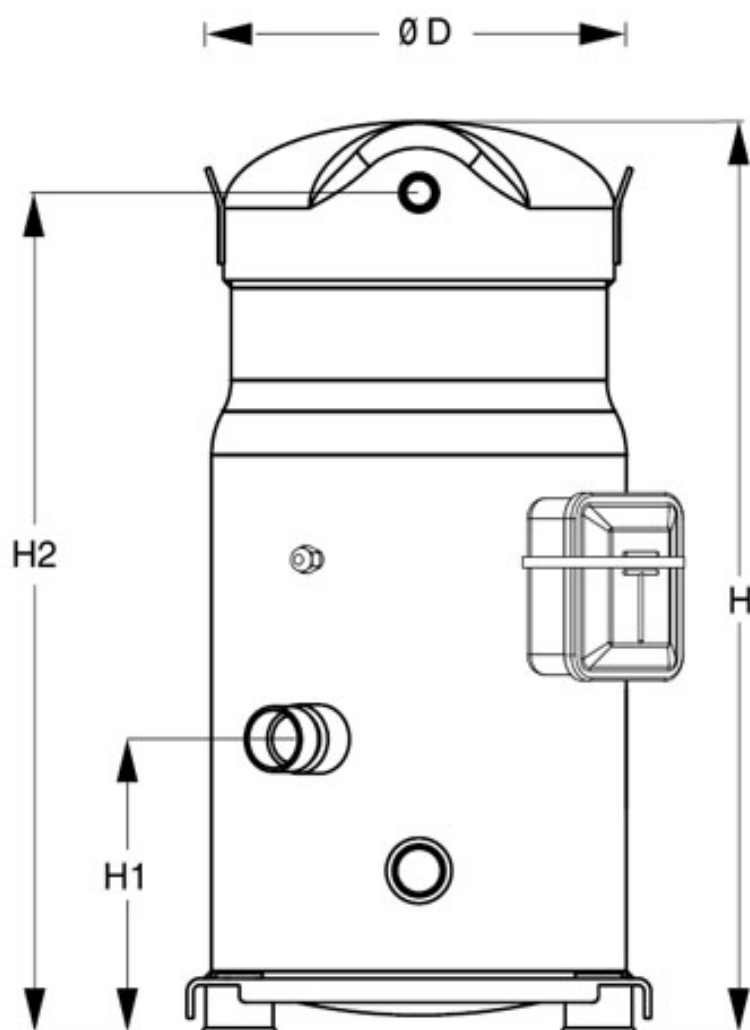
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D	254
H	558 mm
H1	178 mm
H2	515 mm

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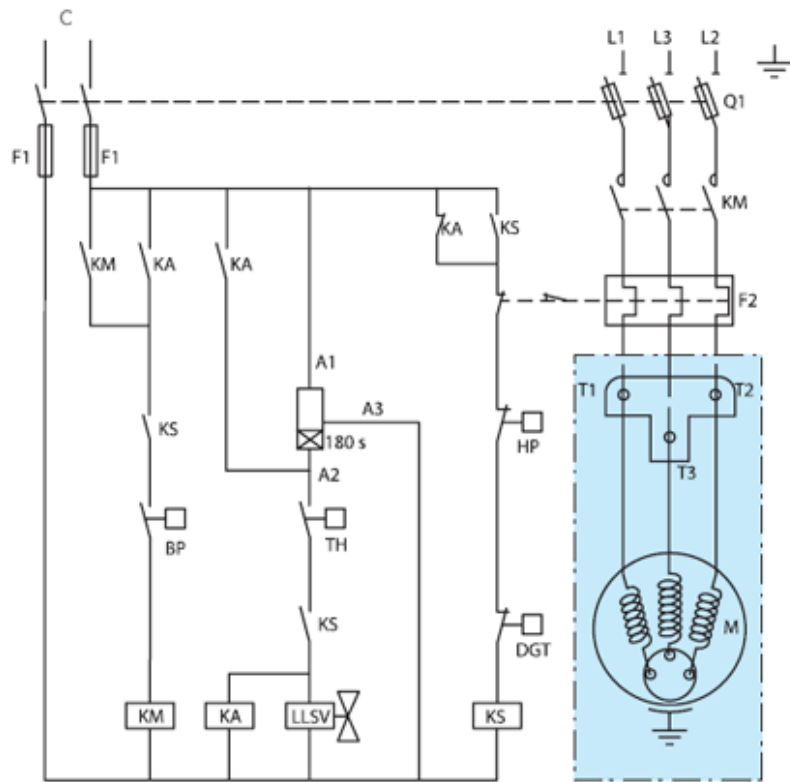
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Electrical data

Starting current [A]:	130
Maximum Continuous Current (MCC) [A]:	20
Winding resistance (between phases) [Ω]:	1,05

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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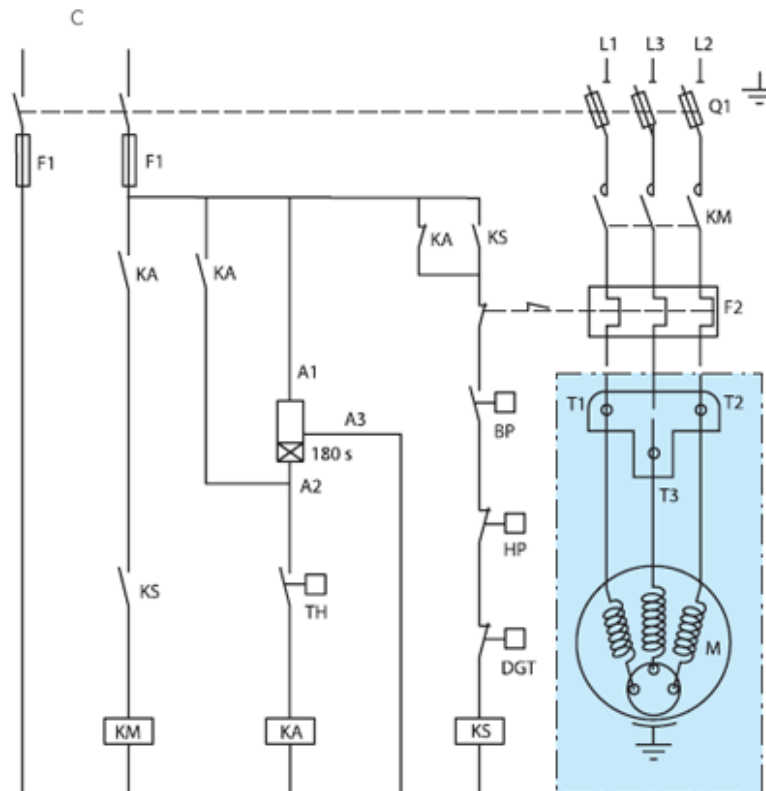
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Connection diagram for systems without refrigerant suction



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 3/8"
- ▶ belt type heater - crankcase heater 65W, 230V
- ▶ soft-start kit - electronic softstart MCI 15C
- ▶ accoustic hood - acoustic shield of Danfoss catalogue number 7755010
- ▶ discharge thermostatic protection - discharge temperature protection accessory - Danfoss catalogue number 7750009