

# Model: SZ240

## Data

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**Type:** Hermetic scroll compressors

**Producer:** Maneurop

**Series:** SZ

## Model: SZ240

### Technical data

Displacement [m <sup>3</sup> /h]:	60,5
:	347,8
RPM [min <sup>-1</sup> ]:	2900
Weight [kg]:	150
Oil charge [dm <sup>3</sup> ]:	8
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> ]:	16
Refrigerant:	R407C, R134a

### 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	+

# Model: SZ240

## Capacity

R134a

### Cooling capacity [W]

$t_c \setminus t_e$	-15	-10	-5	0	5	10	15
30	18 481	23 304	29 172	36 280	44 823	54 997	66 995
35	17 486	22 107	27 687	34 422	42 505	52 133	63 500
40	16 457	20 891	26 197	32 573	40 211	49 309	60 060
45	15 377	19 637	24 685	30 716	37 925	46 506	56 655
50	14 227	18 329	23 133	28 834	35 628	43 708	53 270
55	-	16 949	21 524	26 911	33 303	40 897	49 887
60	-	-	19 841	24 927	30 933	38 055	46 488
65	-	-	-	22 867	28 502	35 167	43 056
70	-	-	-	-	25 990	32 213	39 575

### Power input [W]

$t_c \setminus t_e$	-15	-10	-5	0	5	10	15
30	7 675	7 759	7 829	7 888	7 939	7 983	8 024
35	8 409	8 510	8 596	8 671	8 738	8 799	8 856
40	9 210	9 328	9 431	9 523	9 607	9 684	9 758
45	10 089	10 224	10 345	10 455	10 557	10 652	10 744
50	11 056	11 211	11 351	11 479	11 599	11 713	11 823
55	-	12 299	12 459	12 607	12 746	12 880	13 009
60	-	-	13 682	13 850	14 010	14 163	14 313
65	-	-	-	15 220	15 401	15 576	15 746
70	-	-	-	-	16 932	17 129	17 321

### Current [A]

$t_c \setminus t_e$	-15	-10	-5	0	5	10	15
30	18.42	18.41	18.46	18.54	18.61	18.65	18.63
35	19.07	19.08	19.16	19.26	19.36	19.43	19.44
40	19.82	19.86	19.95	20.08	20.21	20.31	20.35
45	20.70	20.76	20.88	21.03	21.18	21.31	21.38
50	21.73	21.81	21.95	22.12	22.30	22.46	22.56
55	-	23.03	23.19	23.39	23.60	23.78	23.92
60	-	-	24.64	24.86	25.09	25.30	25.46
65	-	-	-	26.55	26.80	27.04	27.23
70	-	-	-	-	28.76	29.03	29.25

# Model: SZ240

## Capacity

### Mass flow [kg/s]

$t_c \setminus t_e$	-15	-10	-5	0	5	10	15
30	427.31	528.66	648.39	790.15	957.59	1 154.38	1 384.17
35	424.63	525.94	644.74	784.70	949.47	1 142.70	1 368.05
40	421.06	522.75	641.07	779.66	942.17	1 132.28	1 353.63
45	416.09	518.60	636.86	774.51	935.21	1 122.62	1 340.40
50	409.22	512.99	631.62	768.76	928.08	1 113.23	1 327.87
55	-	505.41	624.84	761.91	920.28	1 103.60	1 315.53
60	-	-	616.03	753.46	911.31	1 093.23	1 302.88
65	-	-	-	742.91	900.66	1 081.62	1 289.42
70	-	-	-	-	887.85	1 068.26	1 274.66

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

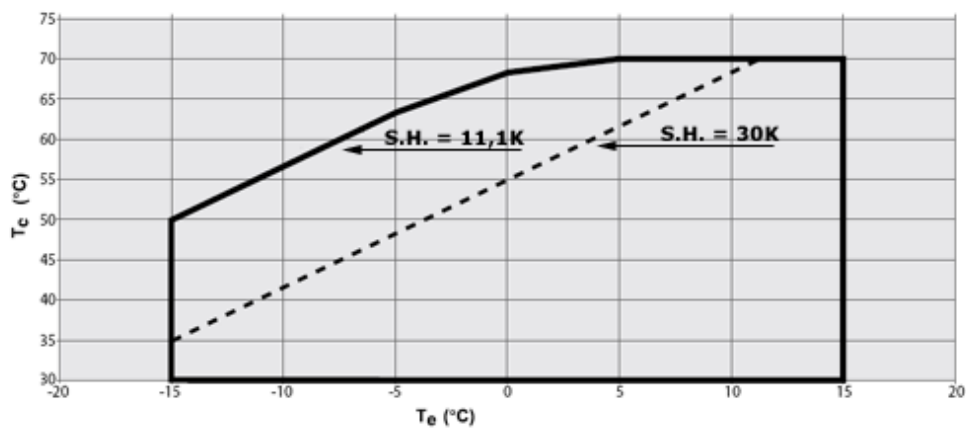
$t_c \setminus t_e$	-15	-10	-5	0	5	10	15
30	2.41	3.00	3.73	4.60	5.65	6.89	8.35
35	2.08	2.60	3.22	3.97	4.86	5.93	7.17
40	1.79	2.24	2.78	3.42	4.19	5.09	6.15
45	1.52	1.92	2.39	2.94	3.59	4.37	5.27
50	1.29	1.63	2.04	2.51	3.07	3.73	4.51
55	-	1.38	1.73	2.13	2.61	3.18	3.83
60	-	-	1.45	1.80	2.21	2.69	3.25
65	-	-	-	1.50	1.85	2.26	2.73
70	-	-	-	-	1.53	1.88	2.28

Operating conditions: suction superheat: 10 K, subcooling: 0 K

$t_c$  - Condensing temperature [°C]

$t_e$  - Evaporating temperature [°C]

### Application range



# Model: SZ240

## Capacity

R407C

### Cooling capacity [W]

$t_c \setminus t_e$	-20	-15	-10	-5	0	5	10	15
30	23 780	30 408	38 270	47 538	58 382	70 973	85 483	102 083
35	22 384	28 806	36 393	45 318	55 750	67 862	81 824	97 807
40	20 935	27 125	34 411	42 967	52 962	64 568	77 955	93 296
45	19 451	25 382	32 342	40 503	50 034	61 108	73 895	88 567
50	17 949	23 596	30 204	37 943	46 985	57 501	69 662	83 639
55	-	21 784	28 012	35 304	43 831	53 763	65 271	78 528
60	-	-	25 786	32 605	40 589	49 911	60 742	73 251
65	-	-	-	-	37 279	45 965	56 090	67 827

### Power input [W]

$t_c \setminus t_e$	-20	-15	-10	-5	0	5	10	15
30	10 577	10 687	10 818	10 958	11 096	11 220	11 320	11 385
35	11 690	11 798	11 934	12 086	12 244	12 396	12 530	12 636
40	12 937	13 041	13 180	13 343	13 520	13 697	13 865	14 013
45	14 347	14 446	14 588	14 761	14 955	15 157	15 358	15 544
50	15 954	16 046	16 189	16 371	16 581	16 807	17 038	17 264
55	-	17 872	18 015	18 205	18 429	18 678	18 939	19 201
60	-	-	20 097	20 293	20 531	20 801	21 090	21 389
65	-	-	-	-	22 918	23 208	23 525	23 858

### Current [A]

$t_c \setminus t_e$	-20	-15	-10	-5	0	5	10	15
30	20.74	21.18	21.53	21.81	22.06	22.31	22.58	22.91
35	22.08	22.51	22.84	23.10	23.32	23.54	23.78	24.07
40	23.56	24.00	24.33	24.59	24.81	25.01	25.23	25.51
45	25.24	25.71	26.06	26.34	26.57	26.78	27.00	27.28
50	27.16	27.67	28.07	28.38	28.64	28.88	29.13	29.42
55	-	29.94	30.40	30.76	31.08	31.36	31.66	31.98
60	-	-	33.09	33.54	33.92	34.27	34.63	35.01
65	-	-	-	-	37.21	37.65	38.09	38.55

# Model: SZ240

## Capacity

### Mass flow [kg/s]

$t_c \setminus t_e$	-20	-15	-10	-5	0	5	10	15
30	463.82	584.91	725.28	887.56	1 074.38	1 288.35	1 532.11	1 808.29
35	456.00	577.70	718.51	881.05	1 067.94	1 281.82	1 525.30	1 801.01
40	447.00	568.96	709.84	872.28	1 058.89	1 272.30	1 515.14	1 790.03
45	436.93	558.79	699.39	861.36	1 047.33	1 259.92	1 501.76	1 775.47
50	425.91	547.31	687.27	848.42	1 033.39	1 244.80	1 485.27	1 757.44
55	-	534.64	673.60	833.57	1 017.17	1 227.04	1 465.79	1 736.06
60	-	-	658.49	816.91	998.80	1 206.76	1 443.43	1 711.44
65	-	-	-	-	978.38	1 184.08	1 418.32	1 683.70

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

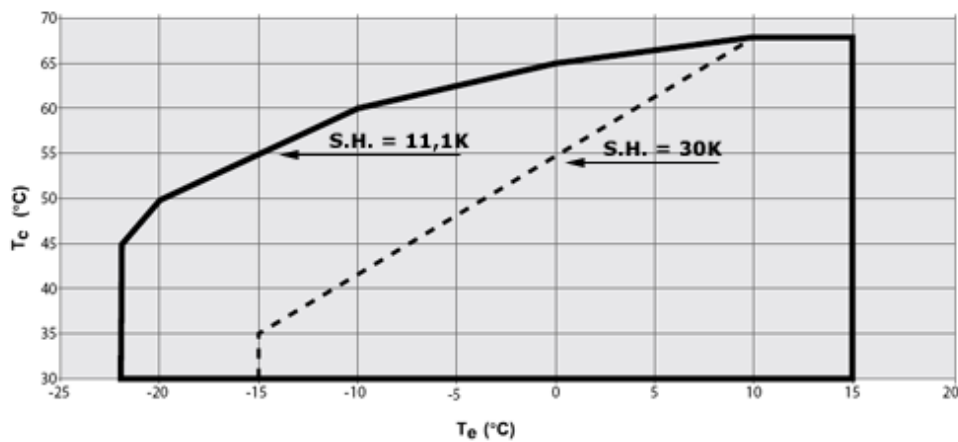
$t_c \setminus t_e$	-20	-15	-10	-5	0	5	10	15
30	2.25	2.85	3.54	4.34	5.26	6.33	7.55	8.97
35	1.91	2.44	3.05	3.75	4.55	5.47	6.53	7.74
40	1.62	2.08	2.61	3.22	3.92	4.71	5.62	6.66
45	1.36	1.76	2.22	2.74	3.35	4.03	4.81	5.70
50	1.13	1.47	1.87	2.32	2.83	3.42	4.09	4.84
55	-	1.22	1.55	1.94	2.38	2.88	3.45	4.09
60	-	-	1.28	1.61	1.98	2.40	2.88	3.42
65	-	-	-	-	1.63	1.98	2.38	2.84

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

$t_c$  - Condensing temperature [°C]

$t_e$  - Evaporating temperature [°C]

### Application range



# Model: SZ240

## Dimensions

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D	344 mm
H	729 mm
H1	196 mm
H2	656 mm

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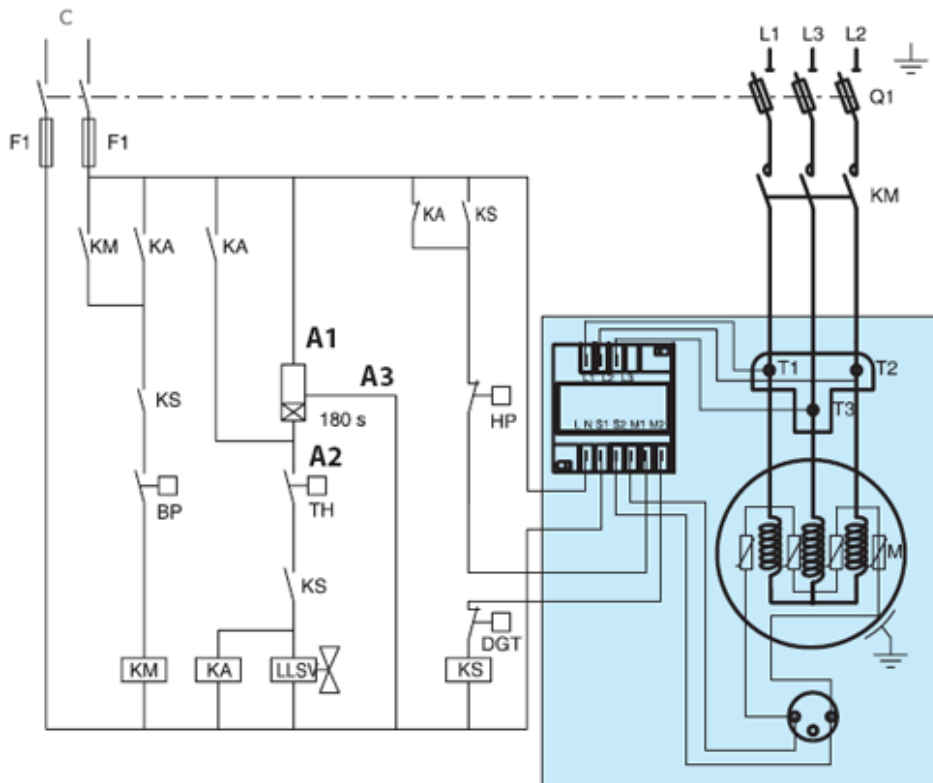
# Model: SZ240

## Electrical

### Electrical data

Starting current [A]:	215
Maximum Continuous Current (MCC) [A]:	50
Winding resistance (between phases) [ $\Omega$ ]:	0,616

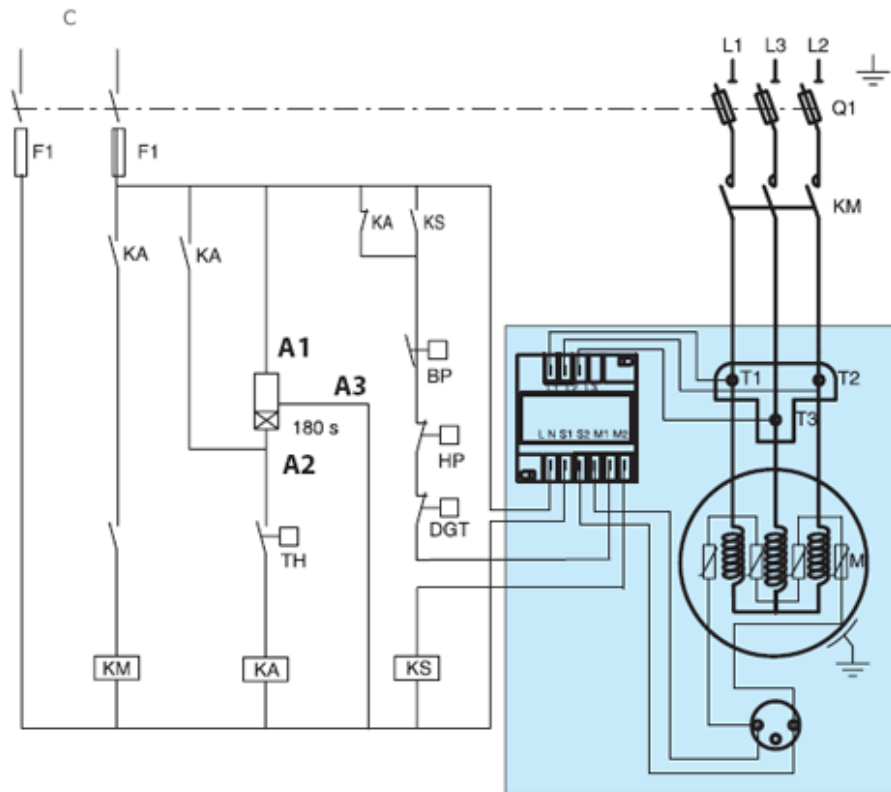
### Connection diagram for systems with refrigerant suction



- 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



### 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

### **Equipment**

- ▶ oil equalization - thread adapter 1/2"
- ▶ belt type heater - crankcase heater 130W, 230V
- ▶ soft-start kit - electronic softstart MCI 50C
- ▶ acoustic hood - acoustic shield of Danfoss catalogue number 7755016
- ▶ discharge thermostatic protection - discharge temperature protection accessory - Danfoss catalogue number 7750009