

Model: MT80

Data

Type: Hermetic piston compressors

Producer: Maneurop

Series: MT

Model: MT80

Technical data

Cylinder count:	2
Displacement [m ³ /h]:	23,63
Cylinder capacity [cm ³]:	135,8
RPM [min ⁻¹]:	2900
Weight [kg]:	40
Oil charge [dm ³]:	2
Oil type:	160P
Crankcase heater type:	PTC 35 W
Maximum system test pressure low side / high side:	25 / 30
Maximum number of starts without softstart [1/h]:	12
Refrigerant charge limit [dm ³]:	5
Refrigerant:	R22
Sound power [dB]:	79
Sound power with accoustic hood [dB]:	73

Connections

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

Approvals

CCC	+
CE	+
UL	+

Model: MT80

Capacity

R22

Cooling capacity [W]

$t_c \setminus t_e$	-25	-20	-15	-10	-5	0	5	10	15
30	5 520	7 599	10 050	12 912	16 227	20 035	24 375	29 289	34 816
35	4 921	6 933	9 295	12 048	15 232	18 888	23 055	27 775	33 086
40	4 393	6 323	8 583	11 213	14 252	17 742	21 722	26 233	31 315
45	3 947	5 782	7 925	10 417	13 298	16 607	20 386	24 675	29 514
50	-	5 319	7 332	9 672	12 380	15 496	19 060	23 112	27 693
55	-	-	6 815	8 989	11 510	14 418	17 753	21 554	25 864
60	-	-	-	8 379	10 699	13 385	16 476	20 014	24 037
65	-	-	-	-	9 958	12 407	15 241	18 500	22 225

Power input [W]

$t_c \setminus t_e$	-25	-20	-15	-10	-5	0	5	10	15
30	2 936	3 341	3 745	4 138	4 509	4 848	5 144	5 389	5 570
35	3 097	3 516	3 937	4 351	4 748	5 117	5 448	5 730	5 954
40	3 271	3 705	4 147	4 585	5 011	5 412	5 780	6 104	6 373
45	3 459	3 912	4 377	4 843	5 299	5 737	6 144	6 512	6 829
50	-	4 138	4 628	5 124	5 615	6 091	6 542	6 956	7 324
55	-	-	4 903	5 432	5 960	6 478	6 973	7 438	7 860
60	-	-	-	5 768	6 336	6 897	7 442	7 958	8 437
65	-	-	-	-	6 744	7 352	7 948	8 520	9 058

Current [A]

$t_c \setminus t_e$	-25	-20	-15	-10	-5	0	5	10	15
30	6.01	6.43	6.88	7.35	7.81	8.25	8.65	8.98	9.24
35	6.18	6.62	7.11	7.61	8.12	8.61	9.07	9.47	9.80
40	6.36	6.84	7.36	7.91	8.47	9.02	9.54	10.02	10.43
45	6.56	7.08	7.64	8.24	8.86	9.48	10.07	10.63	11.14
50	-	7.35	7.96	8.62	9.31	10.00	10.67	11.32	11.92
55	-	-	8.32	9.05	9.81	10.58	11.34	12.08	12.78
60	-	-	-	9.53	10.37	11.22	12.08	12.93	13.74
65	-	-	-	-	10.99	11.94	12.90	13.86	14.78

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Capacity

Mass flow [kg/s]

$t_c \setminus t_e$	-25	-20	-15	-10	-5	0	5	10	15
30	112.55	153.36	200.23	253.86	314.95	384.20	462.31	549.97	647.89
35	103.99	145.04	192.04	245.68	306.67	375.70	453.47	540.68	638.03
40	96.43	137.31	184.03	237.28	297.76	366.16	443.19	529.54	625.91
45	90.31	130.62	176.66	229.10	288.66	356.03	431.90	516.99	611.97
50	-	125.41	170.35	221.59	279.82	345.74	420.06	503.47	596.66
55	-	-	165.56	215.18	271.68	335.75	408.10	489.43	580.42
60	-	-	-	210.32	264.67	326.49	396.47	475.30	563.69
65	-	-	-	-	259.26	318.41	385.61	461.55	546.92

C.O.P. [W/W]

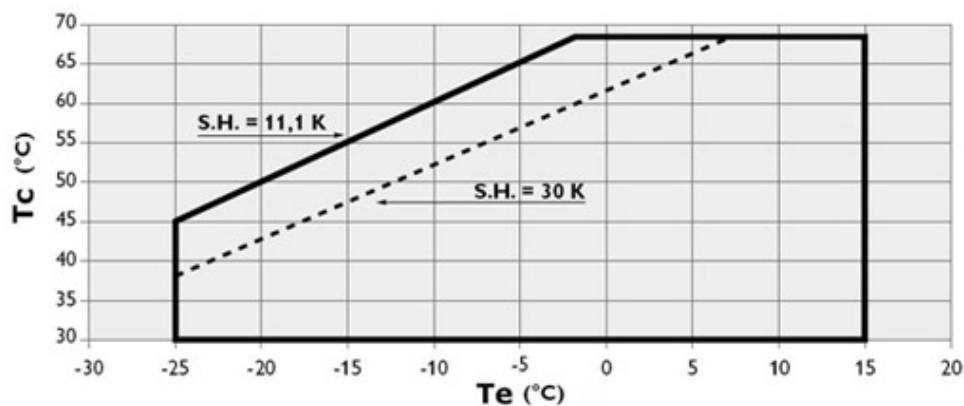
$t_c \setminus t_e$	-25	-20	-15	-10	-5	0	5	10	15
30	1.88	2.27	2.68	3.12	3.60	4.13	4.74	5.44	6.25
35	1.59	1.97	2.36	2.77	3.21	3.69	4.23	4.85	5.56
40	1.34	1.71	2.07	2.45	2.84	3.28	3.76	4.30	4.91
45	1.14	1.48	1.81	2.15	2.51	2.89	3.32	3.79	4.32
50	-	1.29	1.58	1.89	2.20	2.54	2.91	3.32	3.78
55	-	-	1.39	1.65	1.93	2.23	2.55	2.90	3.29
60	-	-	-	1.45	1.69	1.94	2.21	2.51	2.85
65	-	-	-	-	1.48	1.69	1.92	2.17	2.45

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

t_c - Condensing temperature [°C]

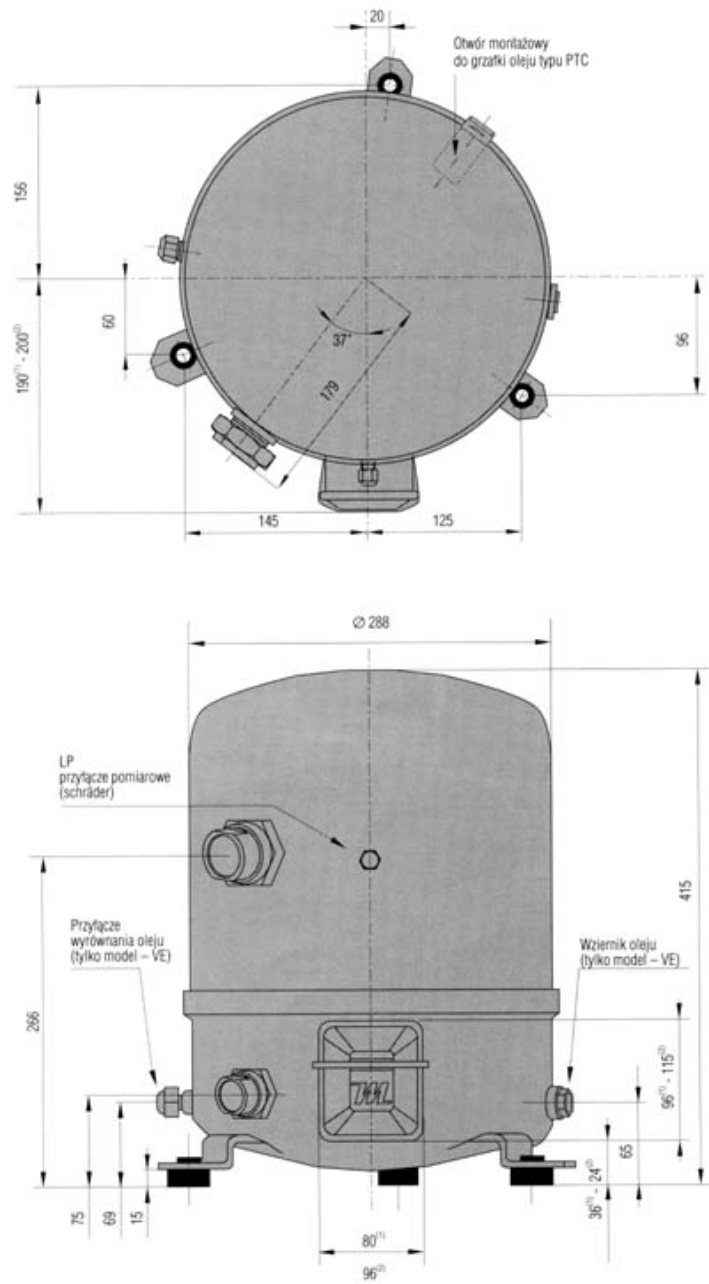
t_e - Evaporating temperature [°C]

Application range



Model: MT80

Dimensions



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Image

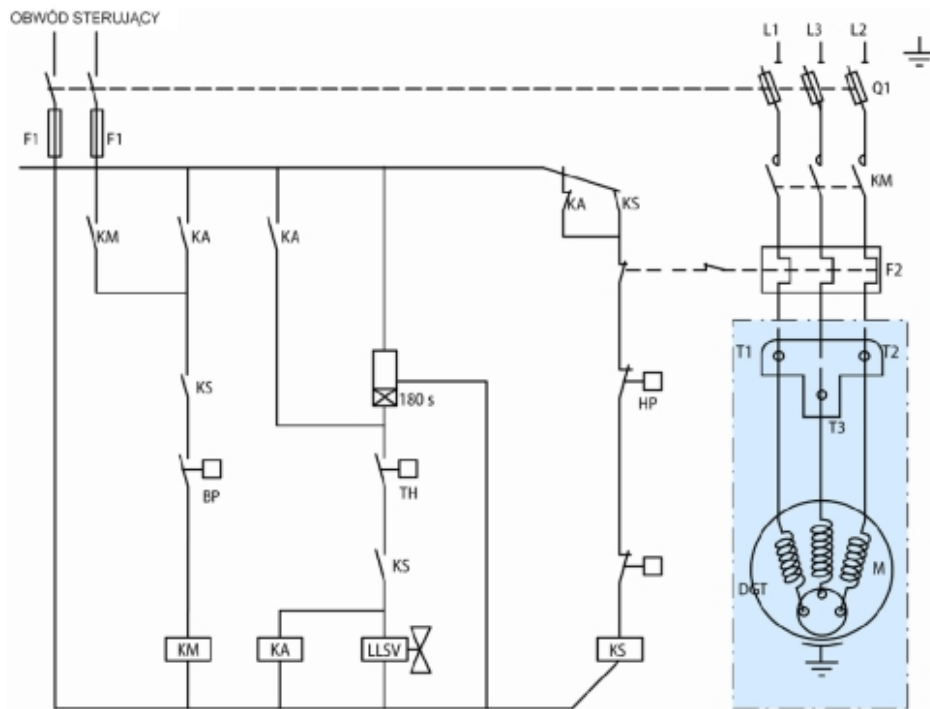


Three-phase power supply

Electrical data

Motor voltage code:	3	4	6	7	9
Starting current [A]:	140	80	132		102
Maximum Continuous Current (MCC) [A]:	36	18	132		22,5
Winding resistance (between phases) [Ω]:	0,48	1,9	0,56		1,3

Connection diagram for systems without refrigerant suction



TH: Thermostat

180 s: Optional short cycle timer (3min) 5 pts

KA: Control relay

LLSV: Liquid Solenoid valve

KM: Compressor contactor

KS: Safety lock out relay

BP: Low pressure switch

HP: High pressure switch

Q1: Fused disconnect

F1: Fuses

F2: External overload protection

M: Compressor's engine

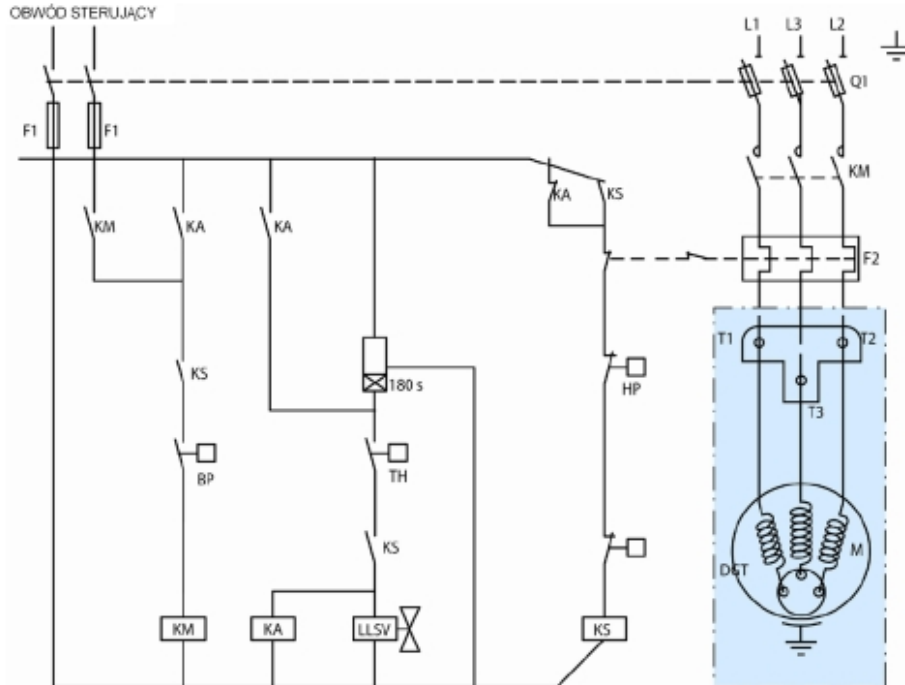
thM: Motor safety thermostat

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Electrical

DGT: Discharge gas thermostat

Connection diagram for systems with refrigerant suction



TH: Thermostat

180 s: Optional short cycle timer (3min) 5 pts

KA: Control relay

LLSV: Liquid Solenoid valve

KM: Compressor contactor

KS: Safety lock out relay

BP: Low pressure switch

HP: High pressure switch

Q1: Fused disconnect

F1: Fuses

F2: External overload protection

M: Compressor's engine

thM: Motor safety thermostat

DGT: Discharge gas thermostat

Equipment

- ▶ crankcase heater - PTC 35 W
- ▶ belt type heater - crankcase heater 65W, 230V
- ▶ Rotolock valves
 - suction: Rotolock valve connection 1 3/4", connection with supplied sleeve 1 1/8"
 - discharge: Rotolock valve connection 1 1/4", connection with supplied sleeve 3/4"
- ▶ soft-start kit - electronic softstart MCI 15C
- ▶ acoustic hood - acoustic shield of Danfoss catalogue number 7755002