

# Model: MT72

## Data

---

**Type: Hermetic piston compressors**

**Producer: Maneurop**

**Series: MT**

## Model: MT72

### Technical data

Cylinder count:	2
Displacement [m <sup>3</sup> /h]:	21,04
Cylinder capacity [cm <sup>3</sup> ]:	120,9
RPM [min <sup>-1</sup> ]:	2900
Weight [kg]:	40
Oil charge [dm <sup>3</sup> ]:	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 <sup>3</sup> ]:	5
Refrigerant:	R22
Sound power [dB]:	79
Sound power with accoustic hood [dB]:	72

### 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:		7/8"
Discharge connection with supplied sleeve:		3/4"

### Approvals

CCC	+
CE	+
UL	+

# Model: MT72

## Capacity

R22

### Cooling capacity [W]

$t_c \setminus t_e$	-25	-20	-15	-10	-5	0	5	10	15
30	4 846	6 672	8 825	11 342	14 257	17 607	21 428	25 754	30 622
35	4 313	6 078	8 152	10 570	13 368	16 582	20 247	24 399	29 073
40	3 850	5 542	7 524	9 831	12 499	15 563	19 060	23 024	27 492
45	3 466	5 073	6 950	9 133	11 658	14 561	17 877	21 641	25 890
50	-	4 681	6 441	8 488	10 858	13 586	16 708	20 260	24 277
55	-	-	6 008	7 906	10 108	12 649	15 565	18 892	22 665
60	-	-	-	7 397	9 419	11 760	14 458	17 547	21 063
65	-	-	-	-	8 801	10 930	13 397	16 235	19 482

### Power input [W]

$t_c \setminus t_e$	-25	-20	-15	-10	-5	0	5	10	15
30	2 637	2 993	3 347	3 689	4 011	4 304	4 557	4 761	4 909
35	2 768	3 137	3 507	3 870	4 216	4 536	4 822	5 062	5 249
40	2 911	3 295	3 684	4 070	4 443	4 794	5 114	5 394	5 623
45	3 068	3 469	3 880	4 291	4 694	5 079	5 436	5 757	6 032
50	-	3 660	4 096	4 536	4 971	5 391	5 789	6 154	6 476
55	-	-	4 333	4 804	5 274	5 734	6 174	6 585	6 959
60	-	-	-	5 098	5 606	6 107	6 593	7 054	7 480
65	-	-	-	-	5 968	6 513	7 047	7 560	8 043

### Current [A]

$t_c \setminus t_e$	-25	-20	-15	-10	-5	0	5	10	15
30	5.52	5.92	6.35	6.78	7.20	7.59	7.94	8.23	8.44
35	5.67	6.09	6.54	7.01	7.47	7.92	8.32	8.67	8.94
40	5.83	6.28	6.77	7.28	7.79	8.28	8.74	9.15	9.50
45	6.01	6.50	7.02	7.58	8.14	8.69	9.22	9.70	10.12
50	-	6.74	7.31	7.91	8.53	9.15	9.74	10.30	10.80
55	-	-	7.63	8.29	8.98	9.66	10.33	10.97	11.56
60	-	-	-	8.72	9.47	10.23	10.98	11.70	12.38
65	-	-	-	-	10.02	10.85	11.69	12.51	13.29

# Model: MT72

## Capacity

### Mass flow [kg/s]

$t_c \setminus t_e$	-25	-20	-15	-10	-5	0	5	10	15
30	99.05	134.87	176.04	223.17	276.89	337.81	406.56	483.74	569.97
35	91.19	127.21	168.47	215.59	269.18	329.87	398.26	474.99	560.66
40	84.46	120.31	161.28	208.00	261.09	321.17	388.84	464.74	549.47
45	79.26	114.56	154.87	200.82	253.03	312.12	378.70	453.39	536.81
50	-	110.36	149.64	194.45	245.40	303.12	368.23	441.34	523.07
55	-	-	145.99	189.28	238.60	294.58	357.84	428.99	508.65
60	-	-	-	185.72	233.04	286.90	347.93	416.75	493.97
65	-	-	-	-	229.11	280.48	338.91	405.01	479.41

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

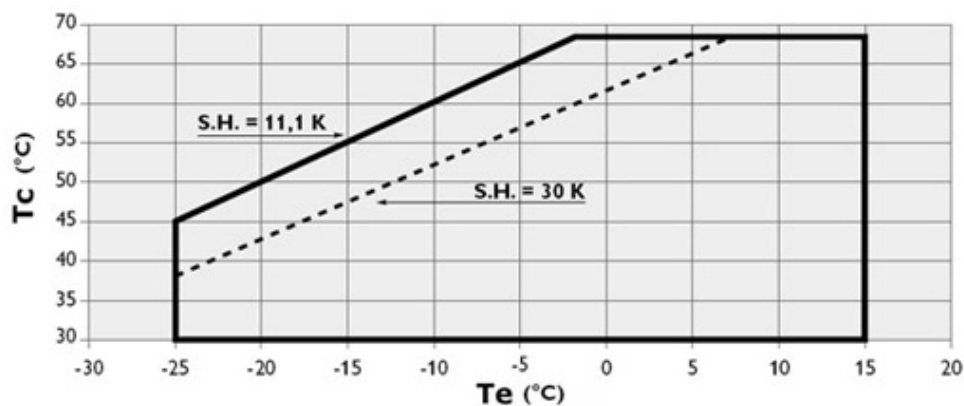
$t_c \setminus t_e$	-25	-20	-15	-10	-5	0	5	10	15
30	1.84	2.23	2.64	3.07	3.55	4.09	4.70	5.41	6.24
35	1.56	1.94	2.32	2.73	3.17	3.66	4.20	4.82	5.54
40	1.32	1.68	2.04	2.42	2.81	3.25	3.73	4.27	4.89
45	1.13	1.46	1.79	2.13	2.48	2.87	3.29	3.76	4.29
50	-	1.28	1.57	1.87	2.18	2.52	2.89	3.29	3.75
55	-	-	1.39	1.65	1.92	2.21	2.52	2.87	3.26
60	-	-	-	1.45	1.68	1.93	2.19	2.49	2.82
65	-	-	-	-	1.47	1.68	1.90	2.15	2.42

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

$t_c$  - Condensing temperature [°C]

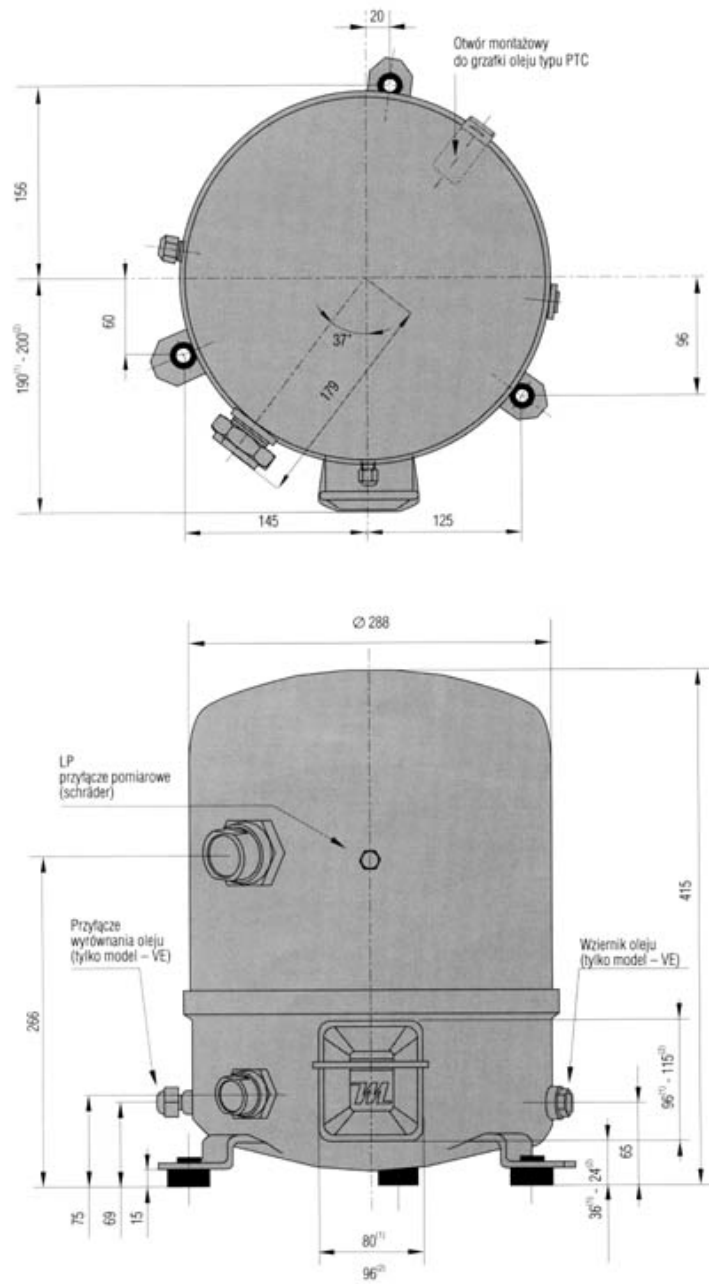
$t_e$  - Evaporating temperature [°C]

### Application range



# Model: MT72

## Dimensions



# Model: MT72

Image

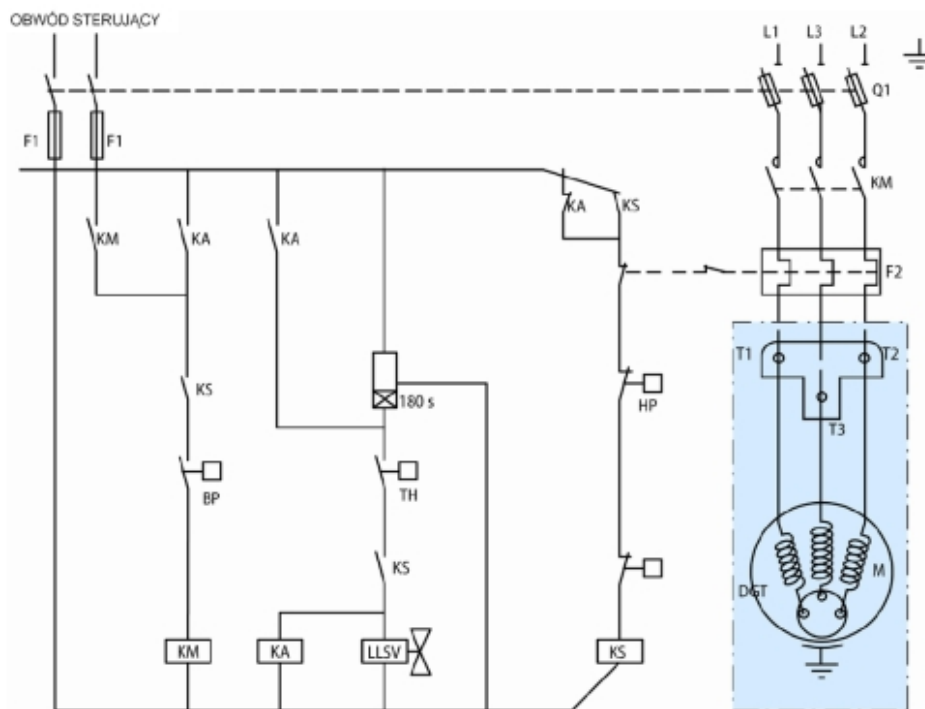


### Three-phase power supply

#### Electrical data

Motor voltage code:	3	4	6	7	9
Starting current [A]:	135	80	143		100
Maximum Continuous Current (MCC) [A]:	31	15,5	143		18,5
Winding resistance (between phases) [ $\Omega$ ]:	0,55	1,9	0,56		1,32

### Connection diagram for systems without refrigerant suction



TH: Termostat

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

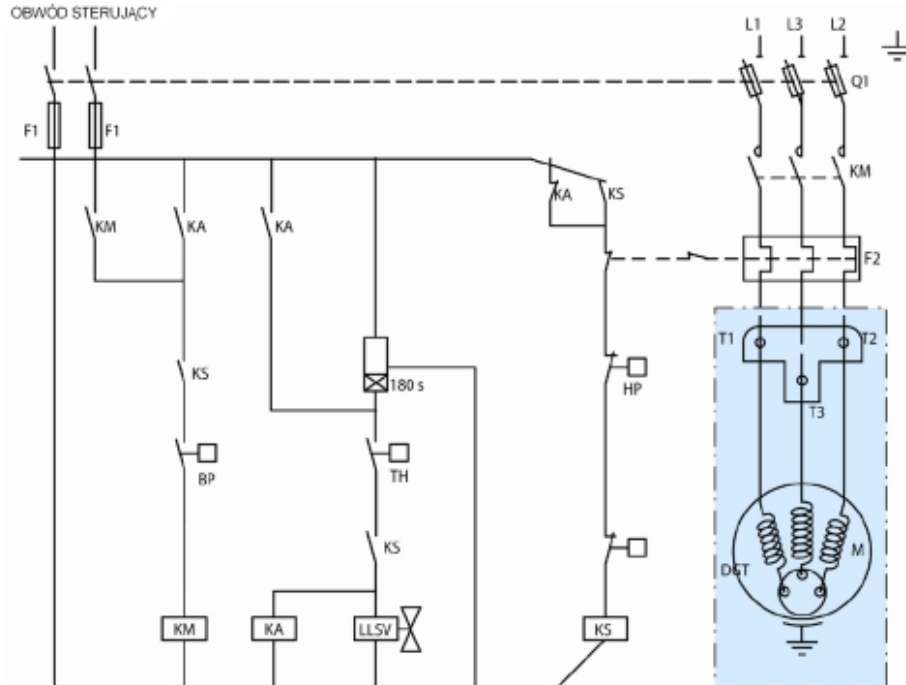
thM: Motor safety thermostat

# Model: MT72

## 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 7/8"
  - 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