

# Model: MT36

## Data

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**Type:** Hermetic piston compressors

**Producer:** Maneurop

**Series:** MT

## Model: MT36

### Technical data

Cylinder count:	1
Displacement [m <sup>3</sup> /h]:	10,52
Cylinder capacity [cm <sup>3</sup> ]:	60,5
RPM [min <sup>-1</sup> ]:	2900
Weight [kg]:	25
Oil charge [dm <sup>3</sup> ]:	1
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> ]:	3
Refrigerant:	R22
Sound power [dB]:	70
Sound power with accoustic hood [dB]:	64

### Connections

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

### Approvals

CCC	+
CE	+
UL	+

# Model: MT36

## Capacity

R22

### Cooling capacity [W]

$t_c \setminus t_e$	-25	-20	-15	-10	-5	0	5	10	15
30	2 911	3 917	5 071	6 386	7 873	9 545	11 413	13 490	15 787
35	2 596	3 580	4 707	5 988	7 435	9 059	10 874	12 890	15 120
40	2 279	3 239	4 333	5 576	6 977	8 550	10 307	12 258	14 417
45	1 962	2 892	3 950	5 150	6 502	8 019	9 713	11 596	13 679
50	-	2 541	3 559	4 711	6 010	7 467	9 094	10 903	12 906
55	-	-	3 161	4 262	5 502	6 894	8 450	10 182	12 100
60	-	-	-	3 801	4 979	6 302	7 783	9 432	11 262
65	-	-	-	-	4 442	5 692	7 092	8 655	10 392

### Power input [W]

$t_c \setminus t_e$	-25	-20	-15	-10	-5	0	5	10	15
30	1 524	1 713	1 894	2 061	2 208	2 327	2 414	2 461	2 462
35	1 580	1 779	1 973	2 156	2 322	2 465	2 577	2 652	2 685
40	1 631	1 842	2 051	2 253	2 441	2 607	2 747	2 854	2 921
45	1 676	1 902	2 128	2 351	2 562	2 756	2 925	3 065	3 168
50	-	1 957	2 204	2 449	2 686	2 908	3 110	3 285	3 426
55	-	-	2 276	2 546	2 811	3 065	3 301	3 513	3 695
60	-	-	-	2 643	2 938	3 225	3 497	3 749	3 973
65	-	-	-	-	3 065	3 387	3 698	3 991	4 261

### Current [A]

$t_c \setminus t_e$	-25	-20	-15	-10	-5	0	5	10	15
30	3.35	3.54	3.74	3.94	4.12	4.27	4.38	4.44	4.44
35	3.41	3.61	3.83	4.05	4.26	4.45	4.60	4.71	4.75
40	3.47	3.68	3.92	4.17	4.41	4.64	4.84	4.99	5.10
45	3.51	3.75	4.02	4.30	4.58	4.85	5.09	5.30	5.47
50	-	3.81	4.11	4.43	4.75	5.07	5.37	5.64	5.86
55	-	-	4.20	4.56	4.93	5.30	5.66	5.99	6.29
60	-	-	-	4.70	5.12	5.54	5.96	6.36	6.73
65	-	-	-	-	5.31	5.80	6.29	6.76	7.21

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## Capacity

### Mass flow [kg/s]

$t_c \setminus t_e$	-25	-20	-15	-10	-5	0	5	10	15
30	59.38	79.04	101.08	125.71	153.11	183.49	217.04	253.97	294.48
35	54.90	74.87	97.20	122.07	149.70	180.27	213.98	251.05	291.65
40	50.12	70.34	92.88	117.94	145.72	176.42	210.23	247.36	288.01
45	44.97	65.37	88.07	113.25	141.13	171.89	205.74	242.87	283.49
50	-	59.94	82.72	107.97	135.87	166.63	200.45	237.52	278.05
55	-	-	76.79	102.03	129.90	160.60	194.32	231.27	271.65
60	-	-	-	95.40	123.17	153.74	187.30	224.06	264.22
65	-	-	-	-	115.62	146.00	179.34	215.85	255.73

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

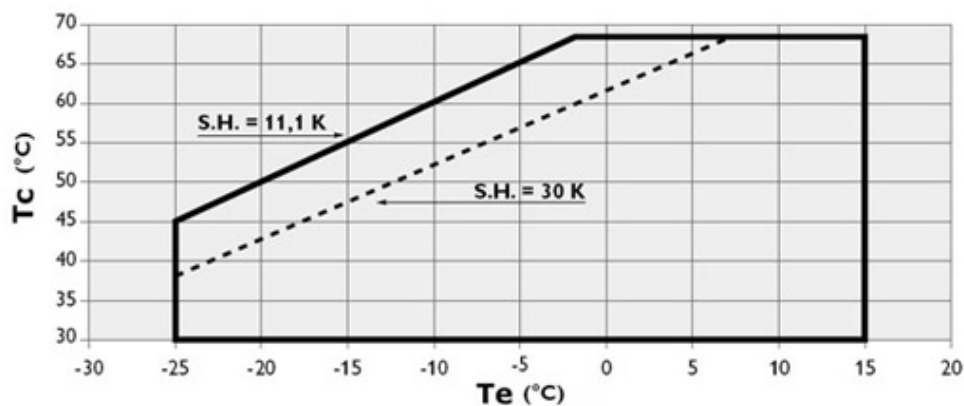
$t_c \setminus t_e$	-25	-20	-15	-10	-5	0	5	10	15
30	1.91	2.29	2.68	3.10	3.57	4.10	4.73	5.48	6.41
35	1.64	2.01	2.39	2.78	3.20	3.68	4.22	4.86	5.63
40	1.40	1.76	2.11	2.47	2.86	3.28	3.75	4.30	4.94
45	1.17	1.52	1.86	2.19	2.54	2.91	3.32	3.78	4.32
50	-	1.30	1.62	1.92	2.24	2.57	2.92	3.32	3.77
55	-	-	1.39	1.67	1.96	2.25	2.56	2.90	3.27
60	-	-	-	1.44	1.69	1.95	2.23	2.52	2.83
65	-	-	-	-	1.45	1.68	1.92	2.17	2.44

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

$t_c$  - Condensing temperature [°C]

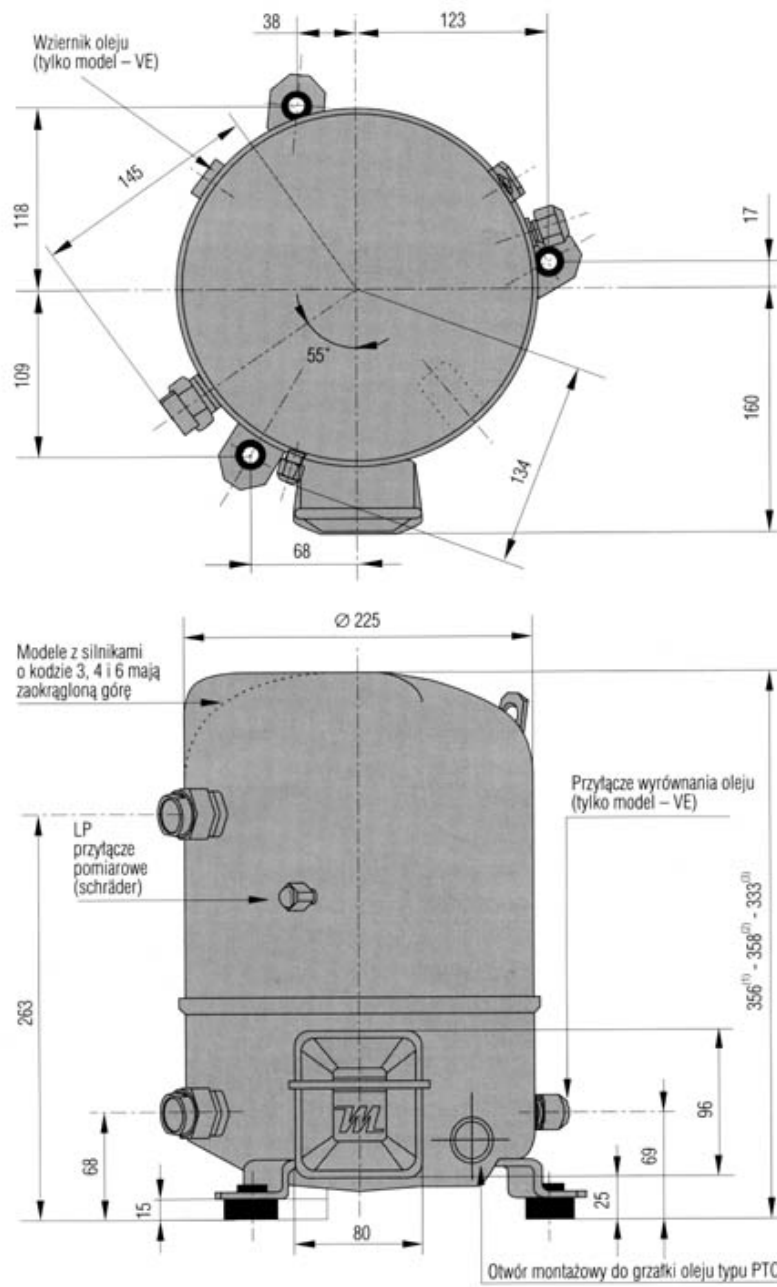
$t_e$  - Evaporating temperature [°C]

### Application range



# Model: MT36

## Dimensions



# Model: MT36

Image

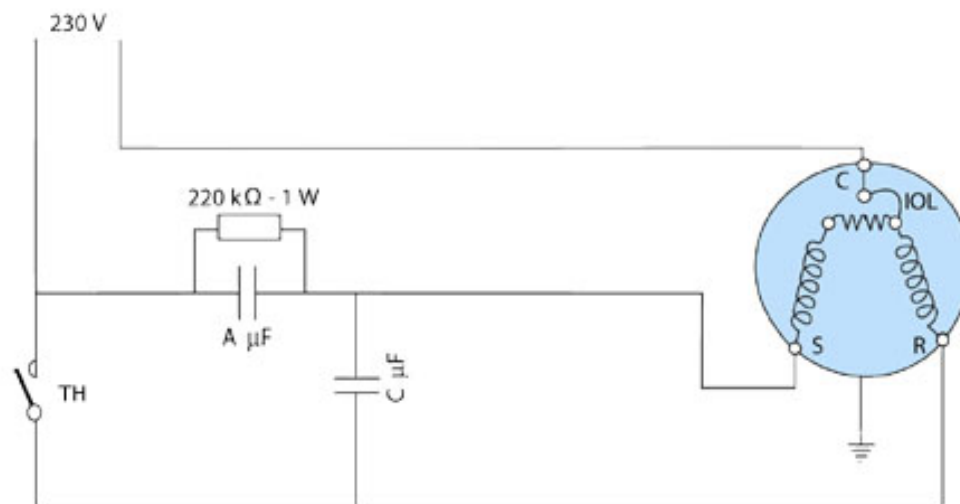


## Single phase power supply

### Electrical data

Motor voltage code:	1	5
Starting current [A]:	84	70
Maximum Continuous Current (MCC) [A]:	30	20
Winding resistance (between phases) (run/start) [ $\Omega$ ]:	0,64/2,85	0,89/4,35
Main condenser (A) (PSC/CSR) [ $\mu\text{F}$ ]:		25
Main condenser (C) (PSC/CSR) [ $\mu\text{F}$ ]:		10
Starting condenser (B) (CSR) [ $\mu\text{F}$ ]:		135
Starting relay (CSR):		3ARR3J4A4

### PSC starting with additional winding



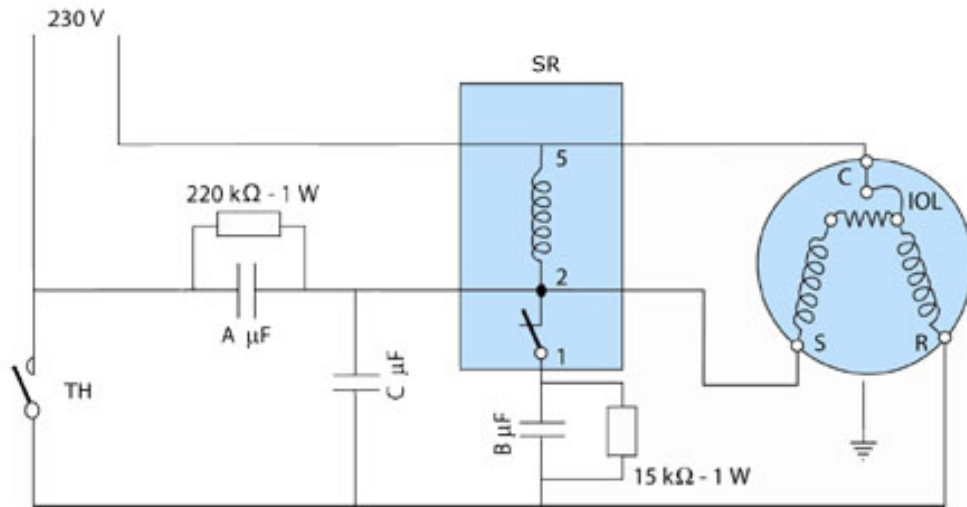
IOL: inner motor protection (klixon)

A, C: main condensers

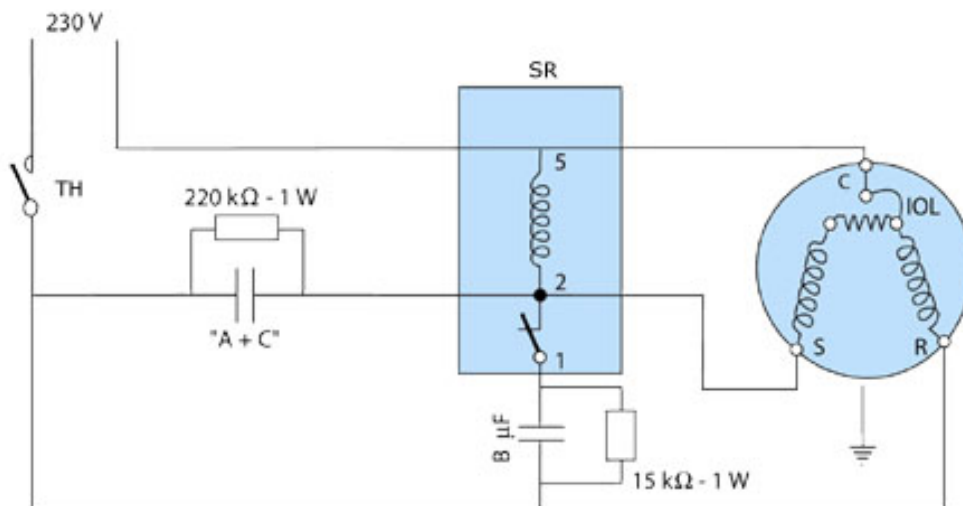
C: starting condenser / S: common

TH: thermostat

SR: movement transmitter

**CSR starting with additional winding**

IOL: inner motor protection (klixon)  
 A, C: main condensers  
 B: starting condenser  
 C: common / S: additional starting winding  
 TH: thermostat  
 SR: movement transmitter

**CSR starting without additional winding**

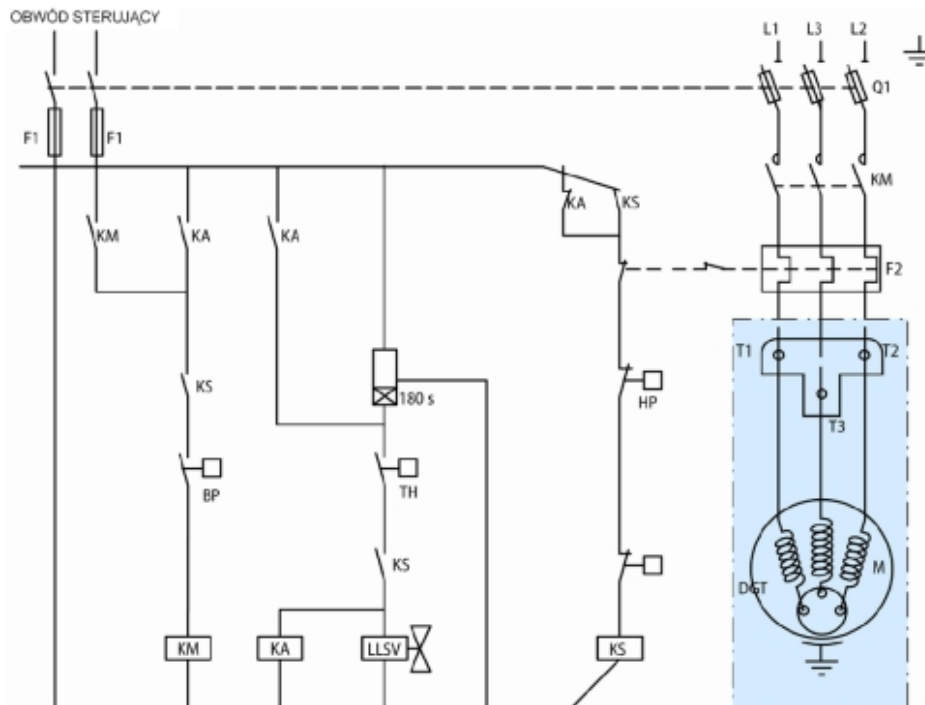
IOL: inner motor protection (klixon)  
 A, C: main condensers  
 B: starting condenser  
 C: common / S: additional starting winding  
 TH: thermostat  
 SR: movement transmitter  
 condensers A and C are replaced by one condenser of capacity A + C

### Three-phase power supply

#### Electrical data

Motor voltage code:	3	4	6	7	9
Starting current [A]:	74	30	74	26	35
Maximum Continuous	17	9	74	7	9,5
Current (MCC) [A]:					
Winding resistance	1,16	5,57	1,16	8,6	4,1
(between phases) [ $\Omega$ ]:					

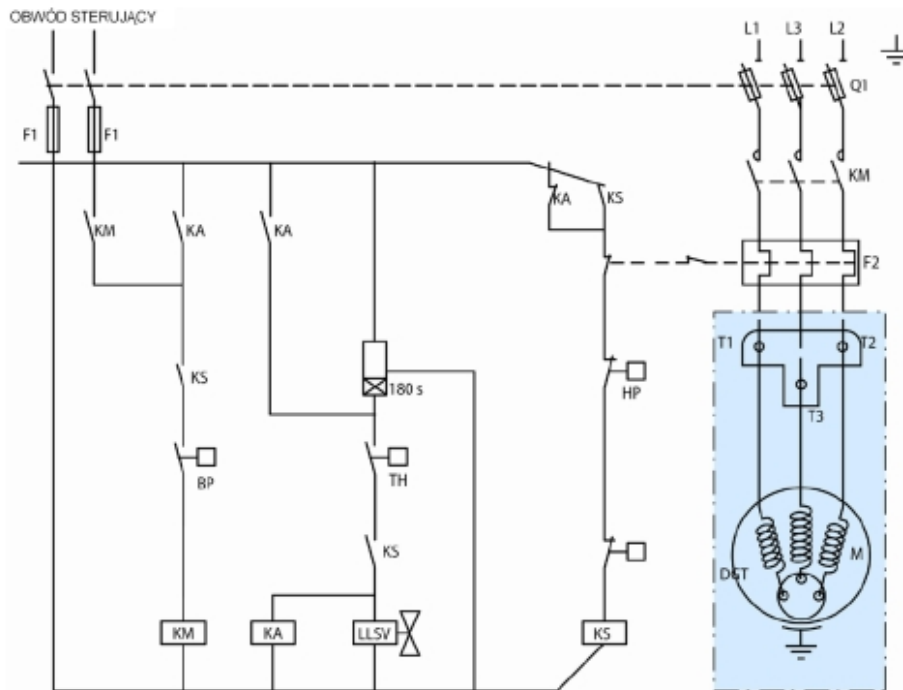
#### Connection diagram for systems without refrigerant suction



- 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
- 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 55W, 230V
- ▶ Rotolock valves
  - suction: Rotolock valve connection 1 1/4", connection with supplied sleeve 5/8"
  - discharge: Rotolock valve connection 1", connection with supplied sleeve 1/2"
- ▶ soft-start kit - electronic softstart MCI 15C
- ▶ acoustic hood - acoustic shield of Danfoss catalogue number 7755001