
GACO SARL

28, Rue Bencharif Madani

25000 BELLEVUE/CONSTANTINE - ALGERIE

Tel. : 031 92 54 56 / 031 93 22 23 - Fax : 031 92 13 45

Email : gacosarl@gmail.com / benkobbi_fares@yahoo.fr

**Type: Hermetic piston compressors****Producer: Maneurop****Series: MT****Model: MT50****Technical data**

Cylinder count:	2
Displacement [m ³ /h]:	14,9
Cylinder capacity [cm ³]:	85,6
RPM [min ⁻¹]:	2900
Weight [kg]:	35
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]:	83
Sound power with accoustic hood [dB]:	76

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	+

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**R22****Cooling capacity [W]**

$t_c \setminus t_e$	-25	-20	-15	-10	-5	0	5	10	15
30	3 648	4 753	6 130	7 824	9 878	12 335	15 238	18 630	22 555
35	3 276	4 344	5 673	7 306	9 288	11 660	14 467	17 752	21 557
40	2 914	3 937	5 210	6 775	8 676	10 957	13 660	16 829	20 506
45	2 564	3 535	4 743	6 232	8 046	10 227	12 818	15 863	19 406
50	-	3 139	4 276	5 681	7 399	9 472	11 944	14 859	18 258
55	-	-	3 810	5 124	6 738	8 696	11 041	13 816	17 065
60	-	-	-	4 563	6 066	7 901	10 111	12 740	15 830
65	-	-	-	-	5 385	7 089	9 156	11 630	14 554

Power input [W]

$t_c \setminus t_e$	-25	-20	-15	-10	-5	0	5	10	15
30	1 668	1 952	2 230	2 493	2 733	2 941	3 108	3 226	3 286
35	1 789	2 083	2 374	2 653	2 912	3 143	3 336	3 482	3 575
40	1 896	2 202	2 508	2 806	3 086	3 342	3 562	3 740	3 867
45	1 986	2 307	2 630	2 949	3 253	3 535	3 786	3 997	4 160
50	-	2 395	2 738	3 079	3 410	3 721	4 004	4 250	4 451
55	-	-	2 830	3 196	3 554	3 896	4 214	4 498	4 739
60	-	-	-	3 295	3 684	4 059	4 413	4 737	5 021
65	-	-	-	-	3 796	4 207	4 600	4 965	5 294

Current [A]

$t_c \setminus t_e$	-25	-20	-15	-10	-5	0	5	10	15
30	4.12	4.16	4.33	4.58	4.89	5.19	5.46	5.66	5.73
35	4.16	4.23	4.44	4.76	5.14	5.54	5.92	6.24	6.46
40	4.21	4.32	4.59	4.98	5.44	5.94	6.44	6.89	7.25
45	4.27	4.43	4.76	5.22	5.77	6.38	7.00	7.58	8.10
50	-	4.52	4.92	5.46	6.11	6.83	7.57	8.30	8.98
55	-	-	5.05	5.68	6.44	7.27	8.15	9.03	9.87
60	-	-	-	5.87	6.73	7.69	8.71	9.74	10.75
65	-	-	-	-	6.98	8.07	9.23	10.42	11.61

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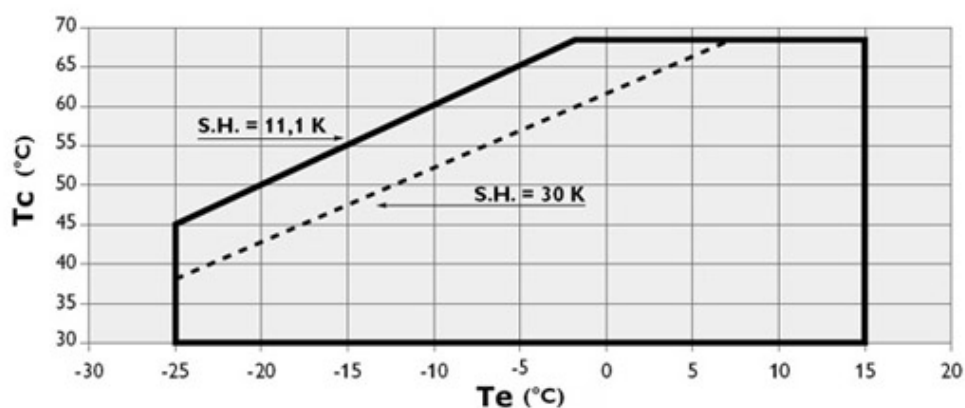
**Mass flow [kg/s]**

$t_c \setminus t_e$	-25	-20	-15	-10	-5	0	5	10	15
30	74.32	96.21	122.68	154.51	192.44	237.26	289.71	350.55	420.56
35	69.08	90.89	117.33	149.16	187.14	232.04	284.61	345.63	415.85
40	63.90	85.45	111.68	143.34	181.20	226.01	278.54	339.54	409.80
45	58.73	79.86	105.70	137.02	174.57	219.11	271.42	332.25	402.36
50	-	74.06	99.34	130.13	167.20	211.31	263.23	323.70	393.50
55	-	-	92.55	122.65	159.07	202.56	253.90	313.84	383.15
60	-	-	-	114.51	150.10	192.81	243.40	302.64	371.29
65	-	-	-	-	140.26	182.01	231.68	290.04	357.85

C.O.P. [W/W]

$t_c \setminus t_e$	-25	-20	-15	-10	-5	0	5	10	15
30	2.19	2.43	2.75	3.14	3.61	4.19	4.90	5.77	6.86
35	1.83	2.09	2.39	2.75	3.19	3.71	4.34	5.10	6.03
40	1.54	1.79	2.08	2.41	2.81	3.28	3.83	4.50	5.30
45	1.29	1.53	1.80	2.11	2.47	2.89	3.39	3.97	4.67
50	-	1.31	1.56	1.84	2.17	2.55	2.98	3.50	4.10
55	-	-	1.35	1.60	1.90	2.23	2.62	3.07	3.60
60	-	-	-	1.38	1.65	1.95	2.29	2.69	3.15
65	-	-	-	-	1.42	1.69	1.99	2.34	2.75

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

 t_c - Condensing temperature [°C] t_e - Evaporating temperature [°C]**Application range**

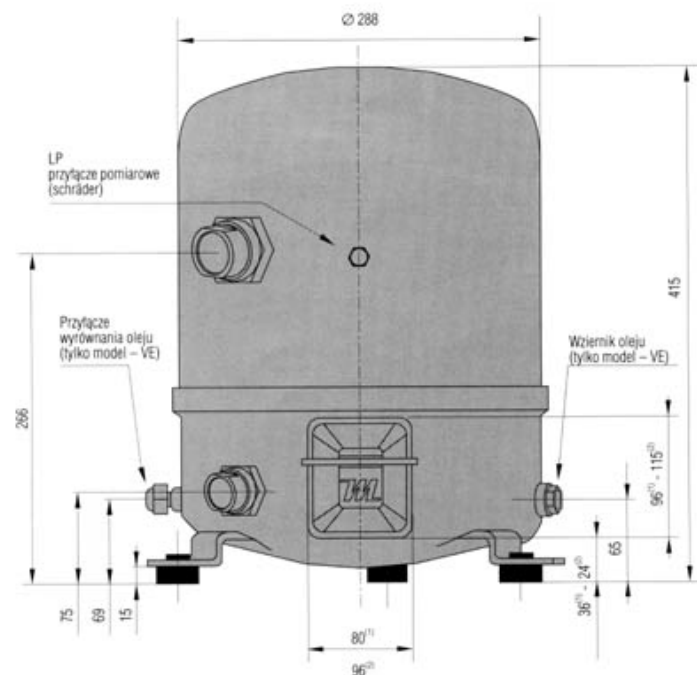
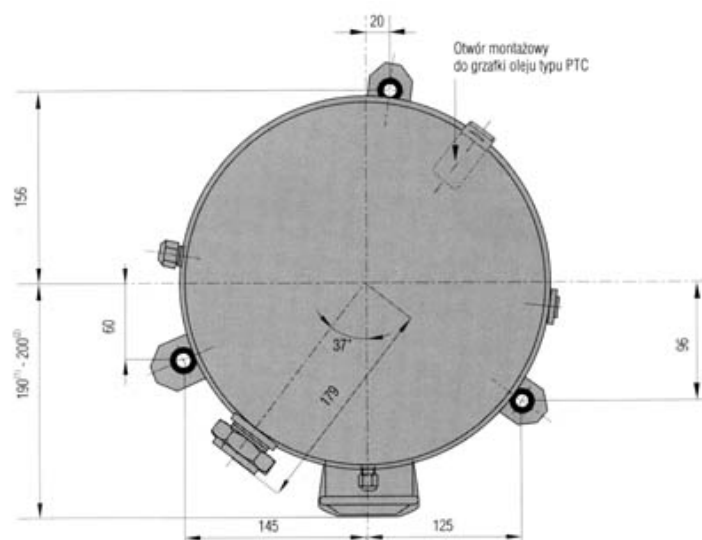
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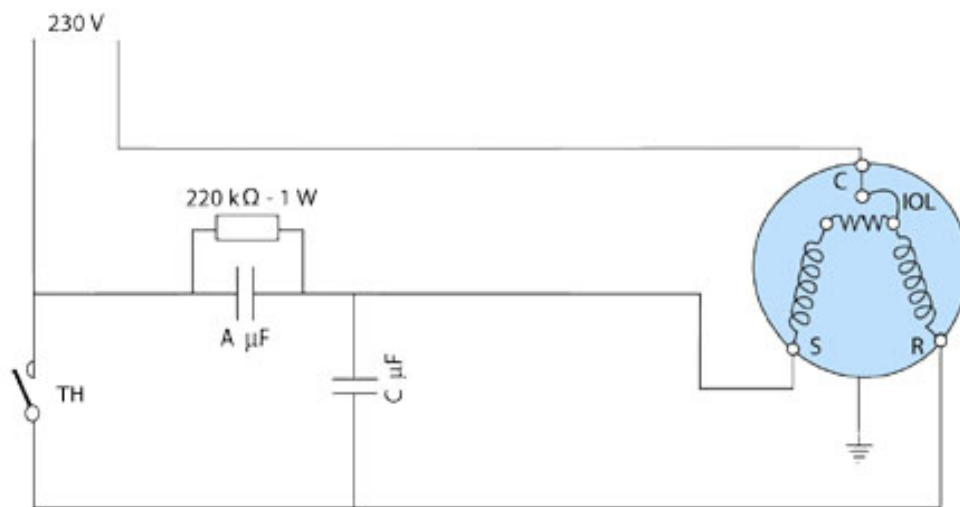


Single phase power supply

Electrical data

Motor voltage code:	1	5
Starting current [A]:	114	92
Maximum Continuous Current (MCC) [A]:	36	29
Winding resistance (between phases) (run/start) [Ω]:	0,37/1,79	0,52/2,65

PSC starting with additional winding



IOL: inner motor protection (klixon)

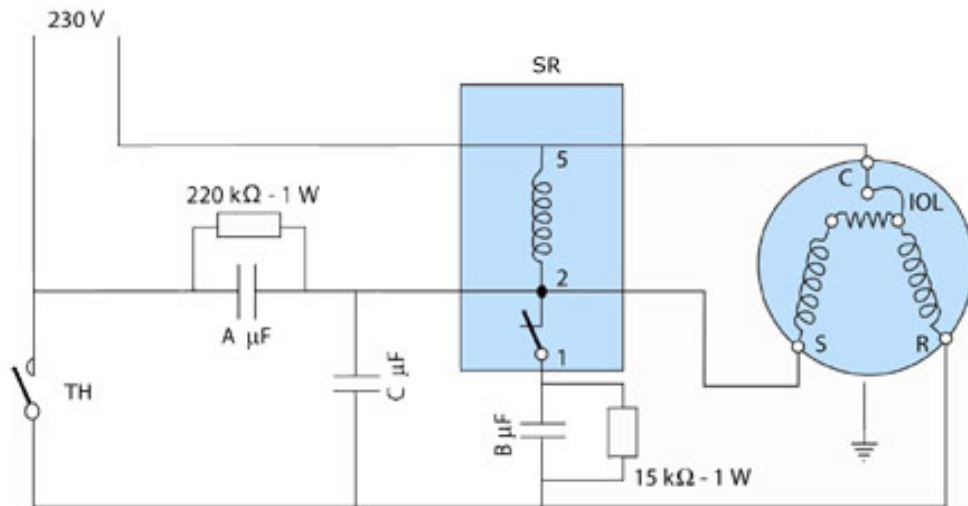
A, C: main condensers

C: starting condenser / S: common

TH: thermostat

SR: movement transmitter

CSR starting with additional winding



IOL: inner motor protection (klixon)

A, C: main condensers

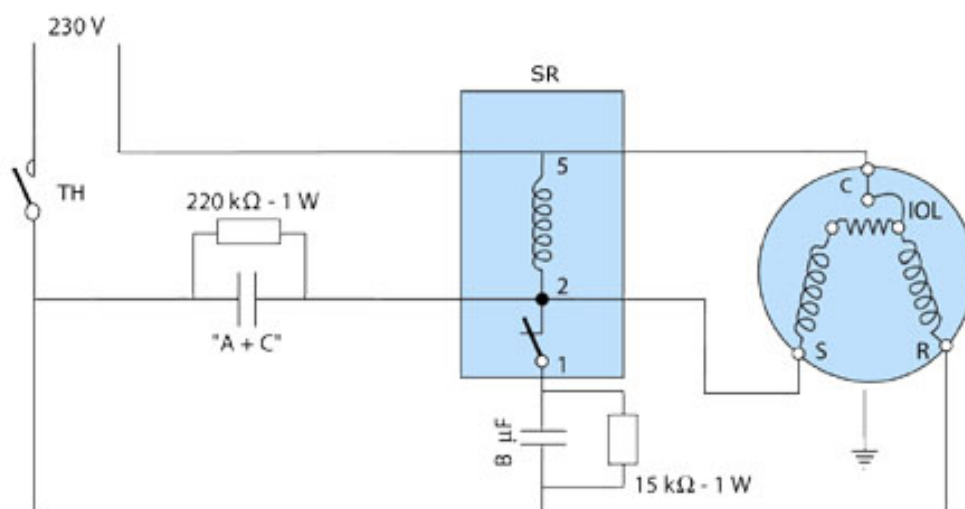
B: starting condenser

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

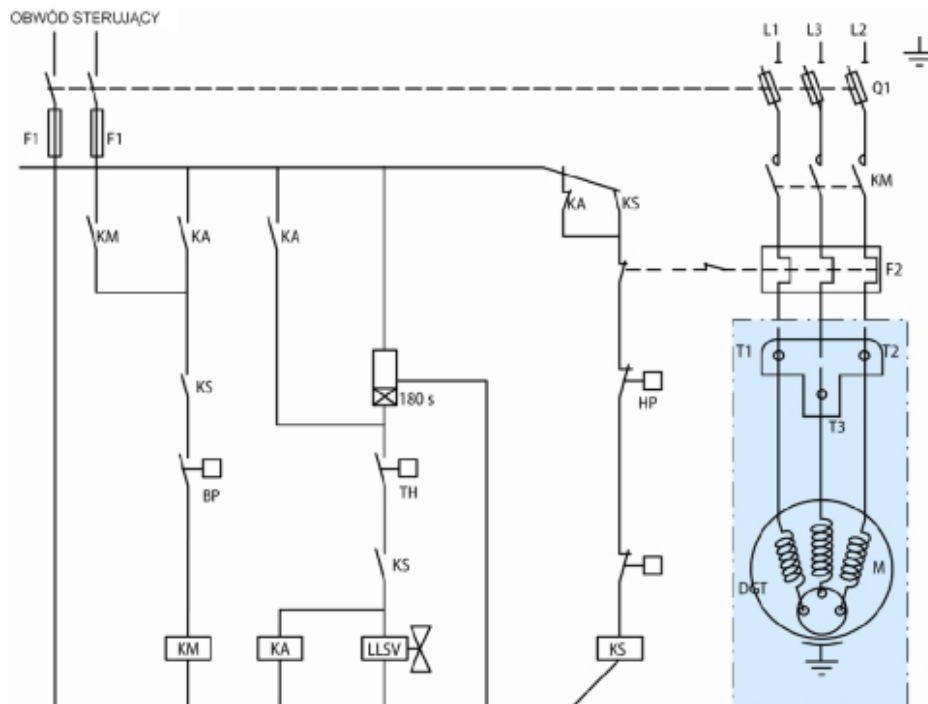
condensers A and C are replaced by one condenser of capacity A + C

Three-phase power supply

Electrical data

Motor voltage code:	3	4	6	7	9
Starting current [A]:	115	42	77	44	78
Maximum Continuous Current (MCC) [A]:	25	12	77	10	13,5
Winding resistance (between phases) [Ω]:	0,72	3,8	1,39	5,83	1,68

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

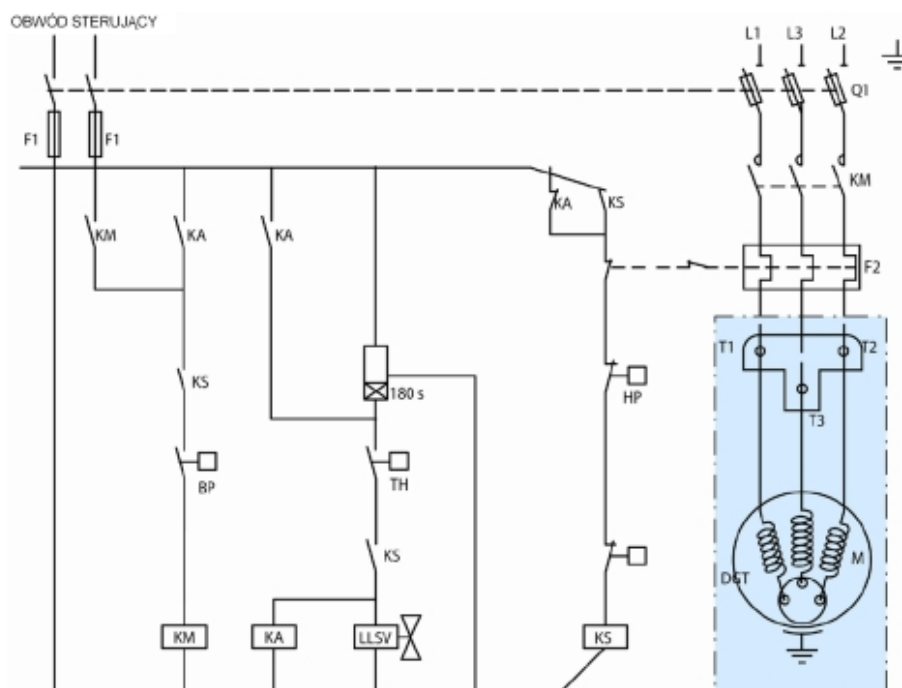
F2: External overload protection

M: Compressor's engine

thM: Motor safety thermostat

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

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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
- ▶ accoustic hood - acoustic shield of Danfoss catalogue number 7755002