
GACO SARL

28, Rue Bencharif Madani
25000 BELLEVUE/CONSTANTINE - ALGERIE
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Type: Hermetic piston compressors
Producer: Maneurop
Series: MT

Model: MT22

Technical data

Cylinder count:	1
Displacement [m ³ /h]:	6,63
Cylinder capacity [cm ³]:	38,1
RPM [min ⁻¹]:	2900
Weight [kg]:	21
Oil charge [dm ³]:	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 ³]:	3
Refrigerant:	R22
Sound power [dB]:	74
Sound power with accoustic hood [dB]:	68

Connections

	<u>milimeters</u>	<u>inches</u>
Suction Rotolock valve connection:		1"
Discharge Rotolock valve connection:		1"
Suction connection with supplied sleeve:		1/2"
Discharge connection with supplied sleeve:		3/8"

Approvals

CCC	+
CE	+
UL	+

R22**Cooling capacity [W]**

t_c \ t_e	-25	-20	-15	-10	-5	0	5	10	15
30	1 317	1 928	2 653	3 506	4 501	5 650	6 967	8 466	10 160
35	1 119	1 712	2 412	3 235	4 193	5 300	6 569	8 014	9 648
40	926	1 495	2 168	2 956	3 874	4 935	6 152	7 539	9 110
45	738	1 281	1 921	2 671	3 545	4 556	5 717	7 043	8 545
50	-	1 069	1 673	2 381	3 207	4 164	5 266	6 525	7 957
55	-	-	1 425	2 087	2 861	3 761	4 799	5 989	7 345
60	-	-	-	1 791	2 509	3 347	4 317	5 434	6 710
65	-	-	-	-	2 151	2 923	3 822	4 861	6 055

Power input [W]

t_c \ t_e	-25	-20	-15	-10	-5	0	5	10	15
30	707	860	1 004	1 132	1 238	1 317	1 361	1 365	1 323
35	739	898	1 051	1 190	1 309	1 403	1 464	1 488	1 467
40	760	928	1 090	1 242	1 376	1 486	1 566	1 610	1 612
45	769	947	1 121	1 286	1 436	1 564	1 664	1 731	1 757
50	-	954	1 141	1 322	1 489	1 636	1 758	1 848	1 900
55	-	-	1 150	1 347	1 533	1 701	1 846	1 961	2 041
60	-	-	-	1 360	1 566	1 757	1 927	2 068	2 176
65	-	-	-	-	1 589	1 803	1 998	2 168	2 306

Current [A]

t_c \ t_e	-25	-20	-15	-10	-5	0	5	10	15
30	2.04	2.15	2.28	2.40	2.51	2.59	2.64	2.64	2.58
35	2.07	2.19	2.32	2.45	2.58	2.68	2.76	2.79	2.76
40	2.09	2.21	2.35	2.50	2.65	2.78	2.88	2.94	2.95
45	2.10	2.23	2.38	2.55	2.72	2.87	3.00	3.10	3.15
50	-	2.24	2.41	2.59	2.78	2.97	3.13	3.26	3.35
55	-	-	2.42	2.62	2.84	3.05	3.25	3.42	3.55
60	-	-	-	2.65	2.89	3.13	3.37	3.57	3.75
65	-	-	-	-	2.93	3.21	3.48	3.73	3.95

Mass flow [kg/s]

$t_c \setminus t_e$	-25	-20	-15	-10	-5	0	5	10	15
30	26.95	39.07	53.06	69.15	87.59	108.60	132.43	159.29	189.44
35	23.63	35.82	49.87	65.99	84.44	105.44	129.23	156.05	186.11
40	20.28	32.46	46.46	62.53	80.90	101.80	125.47	152.13	182.03
45	16.87	28.94	42.82	58.74	76.93	97.64	121.09	147.51	177.15
50	-	25.22	38.88	54.56	72.50	92.92	116.06	142.16	171.45
55	-	-	34.63	49.98	67.55	87.60	110.34	136.02	164.87
60	-	-	-	44.94	62.07	81.65	103.90	129.07	157.38
65	-	-	-	-	56.00	75.02	96.70	121.26	148.95

C.O.P. [W/W]

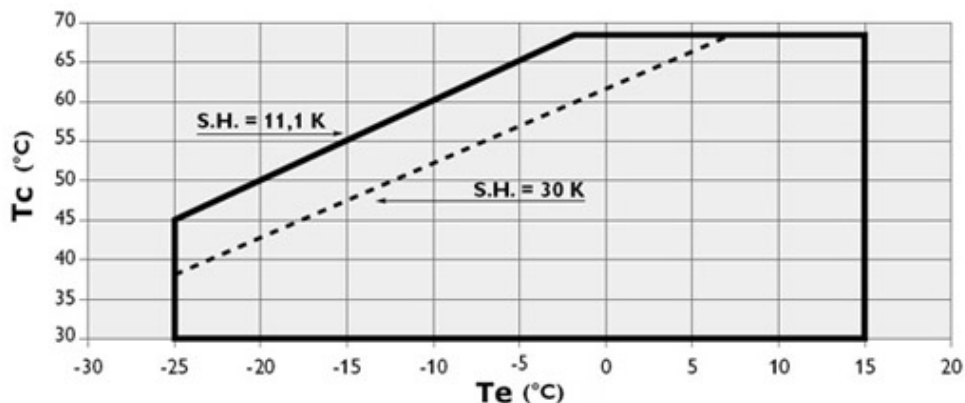
$t_c \setminus t_e$	-25	-20	-15	-10	-5	0	5	10	15
30	1.86	2.24	2.64	3.10	3.63	4.29	5.12	6.20	7.68
35	1.51	1.90	2.30	2.72	3.20	3.78	4.49	5.39	6.58
40	1.22	1.61	1.99	2.38	2.82	3.32	3.93	4.68	5.65
45	0.96	1.35	1.71	2.08	2.47	2.91	3.43	4.07	4.86
50	-	1.12	1.47	1.80	2.15	2.54	2.99	3.53	4.19
55	-	-	1.24	1.55	1.87	2.21	2.60	3.05	3.60
60	-	-	-	1.32	1.60	1.90	2.24	2.63	3.08
65	-	-	-	-	1.35	1.62	1.91	2.24	2.63

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

t_c - Condensing temperature [°C]

t_e - Evaporating temperature [°C]

Application range



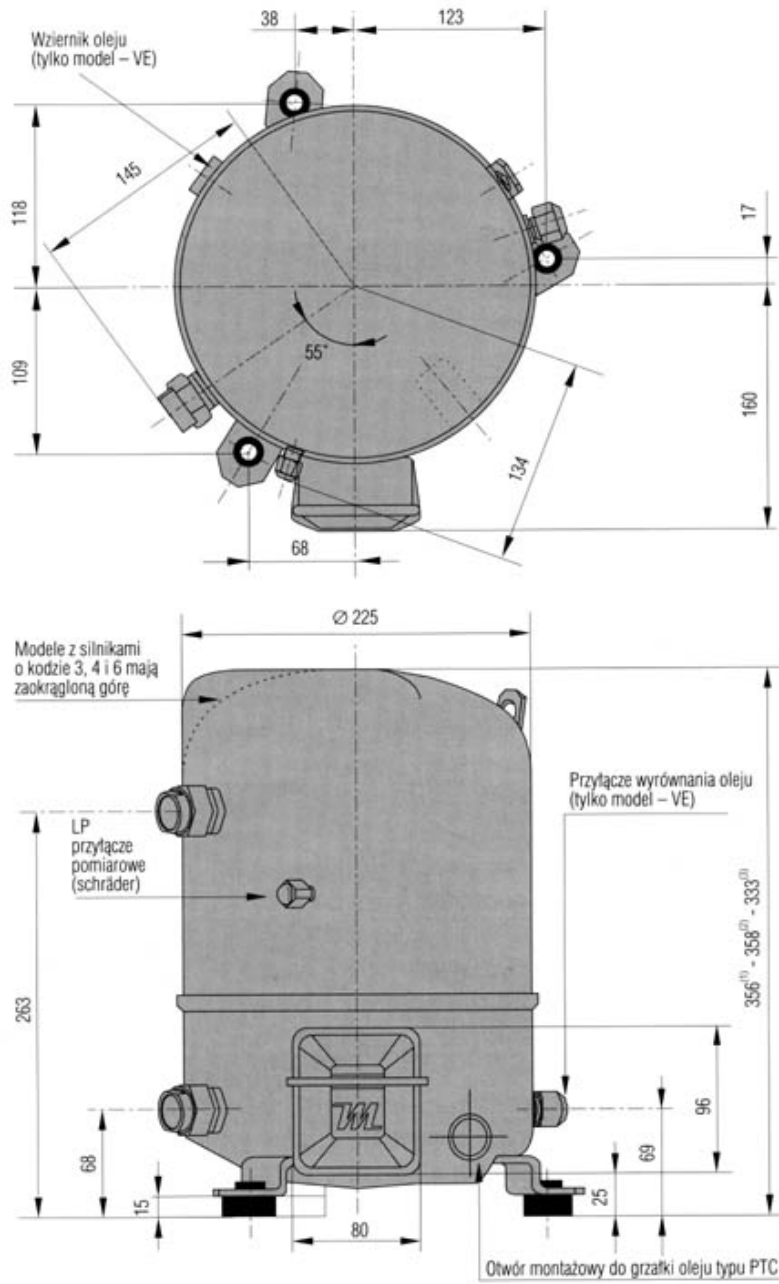
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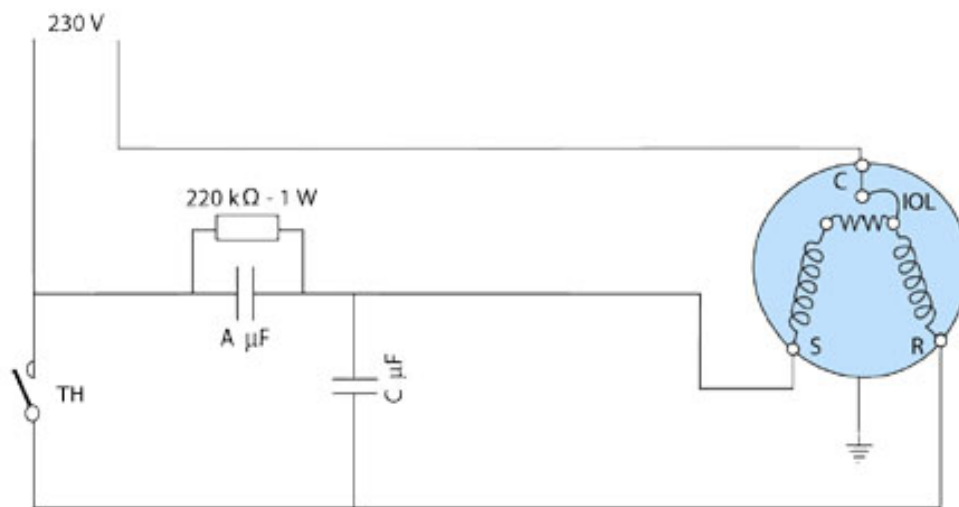


Single phase power supply

Electrical data

Motor voltage code:	1	5
Starting current [A]:	49,3	41
Maximum Continuous Current (MCC) [A]:	17	15
Winding resistance (between phases) (run/start) [Ω]:	1,25/2,49	1,78/4,74
Main condenser (A) (PSC/CSR) [μ F]:		20
Main condenser (C) (PSC/CSR) [μ F]:		10
Starting condenser (B) (CSR) [μ F]:		100
Starting relay (CSR):		3ARR3J4A4

PSC starting with additional winding



IOL: inner motor protection (klixon)

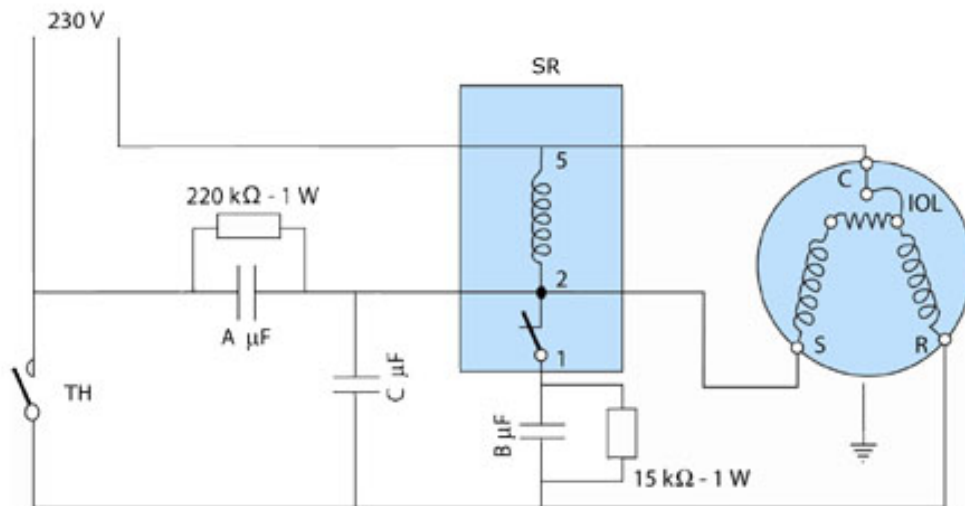
A, C: main condensers

C: starting condenser / S: common

TH: thermostat

SR: movement transmitter

CSR starting with additional winding



IOL: inner motor protection (klixon)

A, C: main condensers

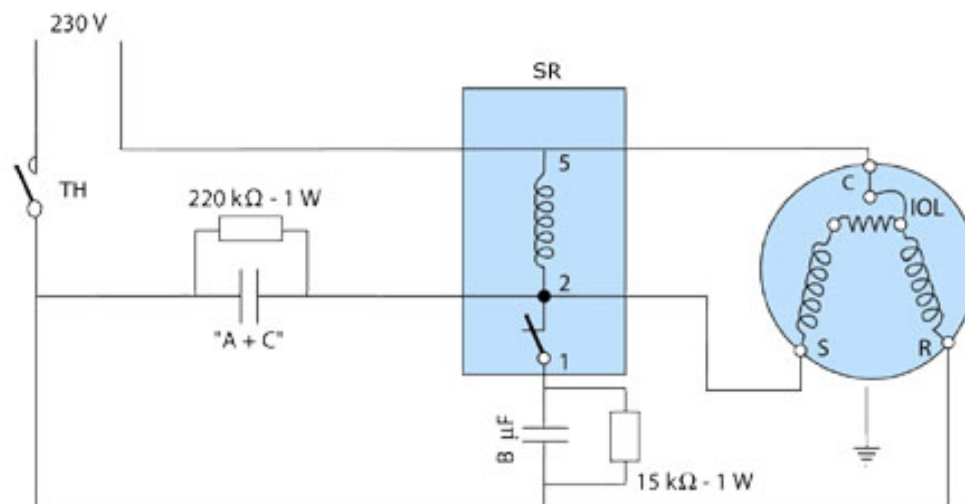
B: starting condenser

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

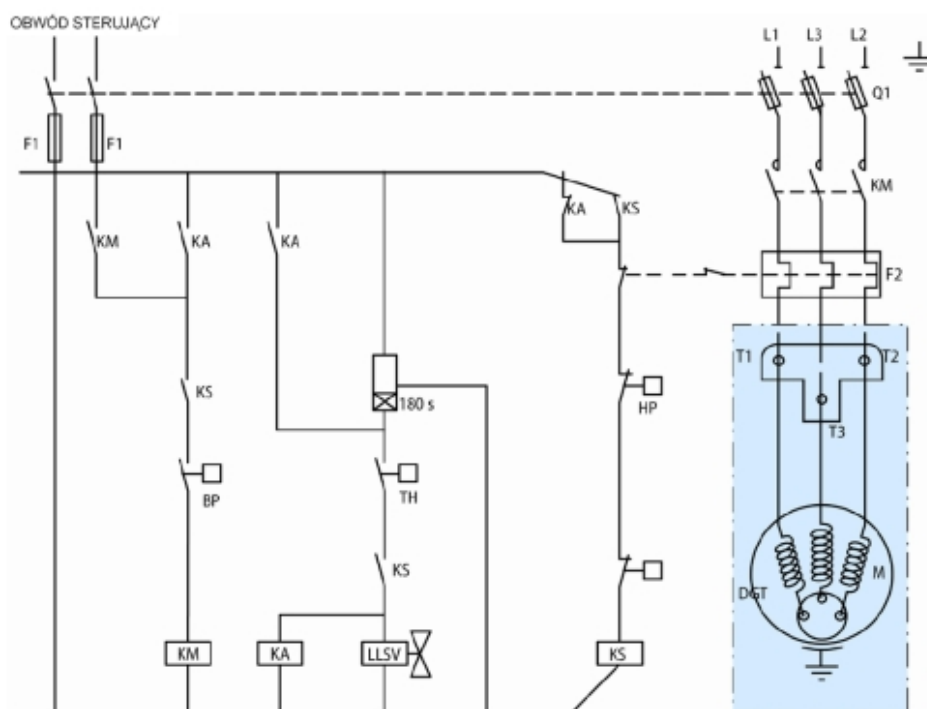
condensers A and C are replaced by one condenser of capacity A + C

Three-phase power supply

Electrical data

Motor voltage code:	3	4	6	7	9
Starting current [A]:	38	16	30	16	22,5
Maximum Continuous Current (MCC) [A]:	11	6	30	4,5	6
Winding resistance (between phases) [Ω]:	2,49	10,24	3,38	15,2	6,58

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

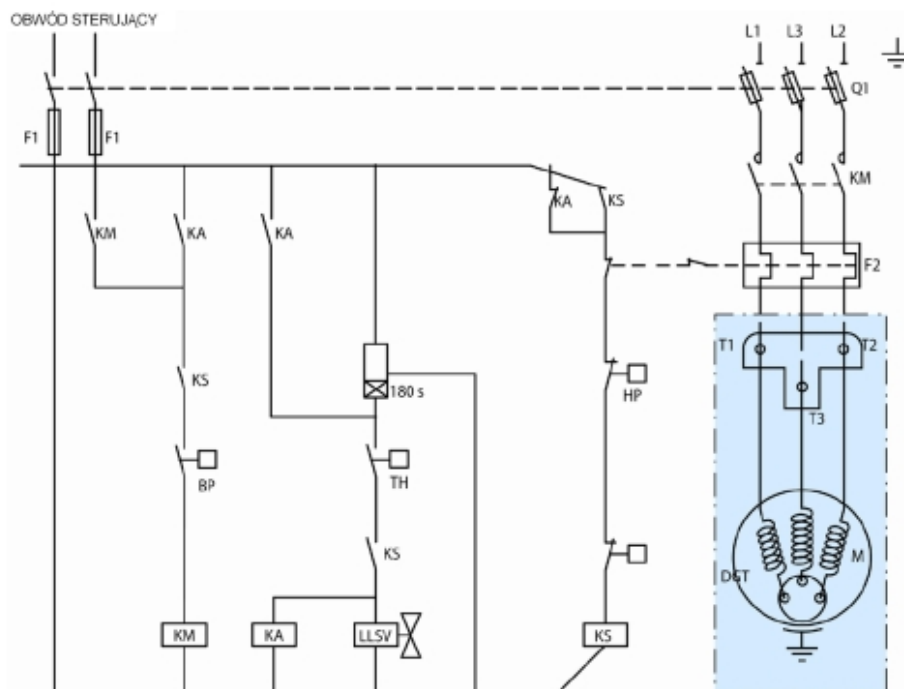
F2: External overload protection

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 55W, 230V
- ▶ Rotolock valves
 - suction: Rotolock valve connection 1", connection with supplied sleeve 1/2"
 - discharge: Rotolock valve connection 1", connection with supplied sleeve 3/8"
- ▶ soft-start kit - electronic softstart MCI 15C
- ▶ acoustic hood - acoustic shield of Danfoss catalogue number 7755001