

COMPRESSOR DEFINITION

Designation	EM T30CLP
Nominal Voltage/Frequency	208-230 V 50-60 Hz
Engineering Number	513306046

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-600a		
3 Nominal voltage and frequency	208-230 / 50-60	[V / Hz]	
4 Application type	Low Back Pressure		
4.1 Evaporating temperature range	-35°C to -10°C	(-31°F to 14°F)	
5 Motor type	RSIR		
6 Starting torque	LST - Low Starting Torque		
7 Expansion device	Capillary tube		
8 Compressor cooling	Operating voltage range		
		50 Hz	60 Hz
8.1 LBP (32°C Ambient temperature)	Static	185 to 255 V	185 to 255 V
8.2 LBP (43°C Ambient temperature)	Static	185 to 255 V	185 to 255 V
8.3 HBP (32°C Ambient temperature)	-	-	-
8.4 HBP (43°C Ambient temperature)	-	-	-
9 Maximum condensing temperature			
9.1 Operating	6.9	[kgf/cm ²] (98 psig)	/ °C - °F
9.2 Peak	7.8	[kgf/cm ²] (111 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation		[hp]
2 Displacement	5.96	[cm ³] (0.364 cu.in)
2.1 Bore [mm]	22.500	
2.2 Stroke [mm]	15.000	
3 Lubricant charge	180	[ml] (6.09 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	MINERAL / ISO10	
4 Weight (with oil charge)	7.2	[kg] (15.87 lb.)
5 Nitrogen charge	-	[kgf/cm ²]

C - ELETRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	208-230 V 50-60 Hz 1 ~ (Single phase)	
2 Starting device type	PTC	
2.1 Starting device	V230	
3 Start capacitor	-	[μF(VAC minimum)]
4 Run capacitor	-	[μF(VAC minimum)]
5 Motor protection	T0225/07	
6 Start winding resistance	22.20	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	20.75	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50/60 Hz)	5.15/4.80	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50/60 Hz)	0.95/0.85	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50/60 Hz)	1.10/0.96	[A] - Measured according to UL 984
11 Approval boards certification	VDE	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @230V50Hz			CECOMAFLBP Static		Evaporating temperature (Condensing temperature		-25°C (-13°F) 55°C (131°F))	
Cooling capacity +/- 5%			Power consumption +/- 5%	Current consumption +/- 5%	Gas flow rate +/- 5%	EFFICIENCY RATE +/- 7%		
[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
263	66	77	85	0.82	1.00	3.10	0.78	0.91

E - PERFORMANCE - CURVES

TEST CONDITIONS: @230V50Hz			CECOMAF Static		(Condensing temperature 35°C (+95°F))					
Evaporating temperature		Cooling capacity +/- 5%			Power consumption +/- 5%	Current consumption +/- 5%	Gas flow rate +/- 5%	EFFICIENCY RATE +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	(-31)	264	67	77	76	0.82	0.85	3.47	0.87	1.02
-30	(-22)	290	73	85	73	0.82	0.93	3.95	1.00	1.16
-25	(-13)	349	88	102	76	0.82	1.12	4.56	1.15	1.33
-20	(- 4)	438	110	128	83	0.82	1.41	5.29	1.33	1.55
-15	(+ 5)	557	140	163	92	0.83	1.79	6.16	1.55	1.80
-10	(+14)	703	177	206	100	0.84	2.27	7.17	1.81	2.10

TEST CONDITIONS: @230V50Hz			CECOMAF Static		(Condensing temperature 45°C (+113°F))					
Evaporating temperature		Cooling capacity +/- 5%			Power consumption +/- 5%	Current consumption +/- 5%	Gas flow rate +/- 5%	EFFICIENCY RATE +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	(-31)	224	56	66	76	0.81	0.77	2.95	0.74	0.86
-30	(-22)	246	62	72	74	0.81	0.85	3.29	0.83	0.96
-25	(-13)	299	75	87	79	0.82	1.04	3.74	0.94	1.10
-20	(- 4)	380	96	111	88	0.83	1.32	4.31	1.09	1.26
-15	(+ 5)	489	123	143	98	0.84	1.71	5.00	1.26	1.47
-10	(+14)	623	157	182	108	0.86	2.18	5.83	1.47	1.71

TEST CONDITIONS: @230V50Hz			CECOMAF Static		(Condensing temperature 55°C (+131°F))					
Evaporating temperature		Cooling capacity +/- 5%			Power consumption +/- 5%	Current consumption +/- 5%	Gas flow rate +/- 5%	EFFICIENCY RATE +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	(-31)	189	48	55	78	0.81	0.72	2.43	0.61	0.71
-30	(-22)	206	52	60	78	0.82	0.79	2.66	0.67	0.78
-25	(-13)	251	63	74	84	0.83	0.96	2.99	0.75	0.88
-20	(- 4)	323	81	95	94	0.84	1.23	3.42	0.86	1.00
-15	(+ 5)	419	106	123	106	0.86	1.60	3.96	1.00	1.16
-10	(+14)	539	136	158	117	0.88	2.07	4.63	1.17	1.36

E - PERFORMANCE - CURVES

TEST CONDITIONS:		CECOMAF			(Condensing temperature 65°C (+149°F))					
@230V50Hz		Static								
Evaporating temperature	Cooling capacity			Power consumption	Current consumption	Gas flow rate	EFFICIENCY RATE			
	+/- 5%			+/- 5%	+/- 5%	+/- 5%	+/- 7%			
°C (°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]	
-35 (-31)	162	41	47	78	0.82	0.68	2.06	0.52	0.60	
-30 (-22)	171	43	50	79	0.82	0.73	2.21	0.56	0.65	
-25 (-13)	207	52	61	86	0.83	0.88	2.44	0.61	0.71	
-20 (- 4)	266	67	78	97	0.84	1.13	2.76	0.69	0.81	
-15 (+ 5)	349	88	102	110	0.86	1.48	3.18	0.80	0.93	
-10 (+14)	453	114	133	122	0.89	1.93	3.71	0.93	1.09	

TEST CONDITIONS:		CECOMAF			(Condensing temperature 35°C (+95°F))					
@230V60Hz		Static								
Evaporating temperature	Cooling capacity			Power consumption	Current consumption	Gas flow rate	EFFICIENCY RATE			
	+/- 5%			+/- 5%	+/- 5%	+/- 5%	+/- 7%			
°C (°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]	
-35 (-31)	271	68	79	73	0.65	0.87	3.72	0.94	1.09	
-30 (-22)	322	81	94	68	0.63	1.04	4.67	1.18	1.37	
-25 (-13)	402	101	118	72	0.64	1.29	5.46	1.38	1.60	
-20 (- 4)	514	130	151	83	0.67	1.65	6.20	1.56	1.82	
-15 (+ 5)	659	166	193	96	0.70	2.12	7.02	1.77	2.06	
-10 (+14)	840	212	246	107	0.73	2.71	8.04	2.03	2.36	

TEST CONDITIONS:		CECOMAF			(Condensing temperature 45°C (+113°F))					
@230V60Hz		Static								
Evaporating temperature	Cooling capacity			Power consumption	Current consumption	Gas flow rate	EFFICIENCY RATE			
	+/- 5%			+/- 5%	+/- 5%	+/- 5%	+/- 7%			
°C (°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]	
-35 (-31)	270	68	79	80	0.67	0.94	3.37	0.85	0.99	
-30 (-22)	303	76	89	75	0.65	1.06	4.00	1.01	1.17	
-25 (-13)	363	91	106	81	0.67	1.26	4.47	1.13	1.31	
-20 (- 4)	451	114	132	93	0.70	1.57	4.91	1.24	1.44	
-15 (+ 5)	572	144	167	107	0.74	1.99	5.44	1.37	1.59	
-10 (+14)	725	183	212	119	0.77	2.53	6.19	1.56	1.81	

TEST CONDITIONS:		CECOMAF			(Condensing temperature 55°C (+131°F))					
@230V60Hz		Static								
Evaporating temperature	Cooling capacity			Power consumption	Current consumption	Gas flow rate	EFFICIENCY RATE			
	+/- 5%			+/- 5%	+/- 5%	+/- 5%	+/- 7%			
°C (°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]	
-35 (-31)	242	61	71	80	0.67	0.92	3.03	0.76	0.89	
-30 (-22)	263	66	77	77	0.66	1.00	3.44	0.87	1.01	
-25 (-13)	309	78	91	84	0.68	1.18	3.72	0.94	1.09	
-20 (- 4)	382	96	112	97	0.71	1.46	3.97	1.00	1.16	
-15 (+ 5)	484	122	142	112	0.75	1.85	4.32	1.09	1.27	
-10 (+14)	617	156	181	125	0.79	2.37	4.90	1.24	1.44	

E - PERFORMANCE - CURVES

TEST CONDITIONS: @230V60Hz		CECOMAF Static			(Condensing temperature 65°C (+149°F))					
Evaporating temperature		Cooling capacity +/- 5%			Power consumption +/- 5%	Current consumption +/- 5%	Gas flow rate +/- 5%	EFFICIENCY RATE +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	(-31)	196	49	58	80	0.67	0.83	2.45	0.62	0.72
-30	(-22)	212	54	62	78	0.66	0.90	2.76	0.70	0.81
-25	(-13)	251	63	74	86	0.68	1.07	2.95	0.74	0.86
-20	(- 4)	315	79	92	100	0.72	1.34	3.12	0.79	0.92
-15	(+ 5)	406	102	119	117	0.76	1.73	3.41	0.86	1.00
-10	(+14)	526	133	154	132	0.81	2.24	3.94	0.99	1.15

F - EXTERNAL CHARACTERISTICS

1 Base plate	European Standard EUEM		
2 Tray holder	Yes		
3 Connectors			
3.1 SUCTION	6.1 +0.10/+0.00	[mm]	(0.240" +0.004"/+0.000")
3.1.1 Material	Copper		
3.1.2 Shape	Slanted 42° up + 45° to Back		
3.2 DISCHARGE	4.94 +0.08/-0.08	[mm]	(0.194" +0.003"/-0.003")
3.2.1 Material	Copper		
3.2.2 Shape	Slanted parallel BP+24°to Back		
3.3 PROCESS	6 +0.08/-0.08	[mm]	(0.236" +0.003"/-0.003")
3.3.1 Material	Copper(OD)		
3.3.2 Shape	Slanted 43° up + 45° to Back		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		