

COMPRESSOR DEFINITION

Designation	EM D20CLT
Nominal Voltage/Frequency	220-240 V 50 Hz
Engineering Number	700KA89

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-600a		
3 Nominal voltage and frequency	220-240 / 50	[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	RSCR		
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	187 to 255 V	-
8.2 LBP (43°C Ambient temperature)	Static	187 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	1/12	[hp]
2 Displacement	3.97	[cm ³] (0.242 cu.in)
2.1 Bore [mm]	19.000	
2.2 Stroke [mm]	14.000	
3 Lubricant charge	150	[ml] (5.07 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ALQUILB / ISO5	
4 Weight (with oil charge)	7.1	[kg] (15.65 lb.)
5 Nitrogen charge	-	[kgf/cm ²]

C - ELETRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	220-240 V 50 Hz 1 ~ (Single phase)	
2 Starting device type	TSD	
2.1 Starting device	TSD2-220V	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	2.5(350)	[µF(VAC minimum)]
5 Motor protection	4TM129KFBYY	
6 Start winding resistance	22.16	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	51.44	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	2.10	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50 Hz)	0.36	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50 Hz)	0.44	[A] - Measured according to UL 984
11 Approval boards certification	VDE	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @220V50Hz			CECOMAFLBP-NOFAN 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]
163	41	48	33	0.16	0.62	4.91	1.24	1.44

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V50Hz		CECOMAF-NOFAN 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)	130	33	38	24	0.12	0.42	5.43	1.37	1.59	
-30 (-22)	175	44	51	27	0.13	0.56	6.49	1.64	1.90	
-25 (-13)	232	58	68	31	0.15	0.74	7.41	1.87	2.17	
-20 (- 4)	299	75	88	36	0.17	0.96	8.35	2.10	2.45	
-15 (+ 5)	376	95	110	40	0.18	1.21	9.45	2.38	2.77	
-10 (+14)	463	117	136	43	0.19	1.49	10.86	2.74	3.18	

TEST CONDITIONS: @220V50Hz		CECOMAF-NOFAN 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)	99	25	29	24	0.12	0.34	4.23	1.07	1.24	
-30 (-22)	141	35	41	27	0.13	0.49	5.22	1.31	1.53	
-25 (-13)	193	49	56	32	0.15	0.67	6.01	1.51	1.76	
-20 (- 4)	255	64	75	37	0.17	0.89	6.76	1.70	1.98	
-15 (+ 5)	327	82	96	43	0.19	1.14	7.61	1.92	2.23	
-10 (+14)	407	103	119	47	0.21	1.43	8.71	2.19	2.55	

TEST CONDITIONS: @220V50Hz		CECOMAF-NOFAN 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)	78	20	23	24	0.12	0.30	3.30	0.83	0.97	
-30 (-22)	115	29	34	27	0.14	0.44	4.23	1.07	1.24	
-25 (-13)	162	41	47	33	0.16	0.62	4.92	1.24	1.44	
-20 (- 4)	218	55	64	40	0.19	0.83	5.49	1.38	1.61	
-15 (+ 5)	284	71	83	46	0.21	1.08	6.11	1.54	1.79	
-10 (+14)	357	90	105	52	0.23	1.37	6.93	1.75	2.03	

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V50Hz		CECOMAF-NOFAN 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)	54	14	16	22	0.11	0.23	2.48	0.62	0.73
-30	(-22)	86	22	25	26	0.13	0.36	3.38	0.85	0.99
-25	(-13)	127	32	37	33	0.16	0.54	3.96	1.00	1.16
-20	(- 4)	176	44	52	40	0.19	0.75	4.39	1.11	1.29
-15	(+ 5)	234	59	69	48	0.22	0.99	4.80	1.21	1.41
-10	(+14)	299	75	88	55	0.25	1.27	5.34	1.35	1.57

F - EXTERNAL CHARACTERISTICS

1 Base plate	European Standard
2 Tray holder	No
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	5.1 +0.10/+0.00 [mm] (0.201" +0.004"/+0.000")
3.2.1 Material	Copper
3.2.2 Shape	Slanted 42° up + 45° 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