

### COMPRESSOR DEFINITION

Designation	EM D40CLT
Nominal Voltage/Frequency	220-240 V 50 Hz
Engineering Number	700LA90

### 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 <sup>2</sup> ] (98 psig)	/ °C - °F
9.2 Peak	7.8	[kgf/cm <sup>2</sup> ] (111 psig)	/ °C - °F
10 Maximum winding temperature	130	[ °C ]	

### B - MECHANICAL DATA

1 Commercial designation		[hp]
2 Displacement	7.23	[cm <sup>3</sup> ] (0.441 cu.in)
2.1 Bore [mm]	24.000	
2.2 Stroke [mm]	16.000	
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)	7.8	[kg] (17.20 lb.)
5 Nitrogen charge	-	[kgf/cm <sup>2</sup> ]

### 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/TSD2-220V1.2	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	3(350)	[µF(VAC minimum)]
5 Motor protection	4TM166KDBYY-73	
6 Start winding resistance	25.17	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	32.50	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	3.68	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50 Hz)	0.54	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50 Hz)	0.68	[A] - Measured according to UL 984
11 Approval boards certification	VDE	

### D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @220V50Hz			ASHRAE LBP-NOFAN Static		Evaporating temperature (Condensing temperature		-23.3°C (-9.94°F) 54.4°C (129.92°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]
400	101	117	62	0.28	1.26	6.43	1.62	1.88

### E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V50Hz		ASHRAE32-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)	251	63	74	41	0.19	0.79	6.08	1.53	1.78
-30 (-22)	327	82	96	47	0.23	1.02	6.99	1.76	2.05
-25 (-13)	425	107	125	54	0.26	1.34	7.92	2.00	2.32
-20 (- 4)	548	138	161	62	0.30	1.72	8.90	2.24	2.61
-15 (+ 5)	695	175	204	70	0.33	2.19	9.94	2.51	2.91
-10 (+14)	866	218	254	78	0.36	2.73	11.06	2.79	3.24

TEST CONDITIONS: @220V50Hz		ASHRAE32-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)	220	55	64	41	0.20	0.69	5.35	1.35	1.57
-30 (-22)	296	75	87	48	0.23	0.93	6.17	1.55	1.81
-25 (-13)	395	100	116	56	0.27	1.24	6.99	1.76	2.05
-20 (- 4)	517	130	151	66	0.31	1.62	7.83	1.97	2.30
-15 (+ 5)	661	167	194	76	0.35	2.08	8.72	2.20	2.55
-10 (+14)	828	209	243	86	0.39	2.61	9.65	2.43	2.83

TEST CONDITIONS: @220V50Hz		ASHRAE32-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)	187	47	55	41	0.19	0.58	4.61	1.16	1.35
-30 (-22)	264	66	77	49	0.23	0.83	5.38	1.36	1.58
-25 (-13)	362	91	106	59	0.28	1.14	6.13	1.54	1.80
-20 (- 4)	481	121	141	70	0.32	1.51	6.87	1.73	2.01
-15 (+ 5)	622	157	182	82	0.37	1.96	7.62	1.92	2.23
-10 (+14)	784	198	230	93	0.42	2.47	8.41	2.12	2.46

### E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V50Hz		ASHRAE32-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)	155	39	45	39	0.18	0.49	3.97	1.00	1.16
-30	(-22)	232	58	68	49	0.23	0.73	4.72	1.19	1.38
-25	(-13)	329	83	96	60	0.28	1.03	5.42	1.37	1.59
-20	(- 4)	445	112	130	73	0.33	1.40	6.10	1.54	1.79
-15	(+ 5)	582	147	170	86	0.39	1.83	6.76	1.70	1.98
-10	(+14)	738	186	216	100	0.45	2.33	7.43	1.87	2.18

### F - EXTERNAL CHARACTERISTICS

1 Base plate	European Standard		
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 0° 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		