

COMPRESSOR DEFINITION

Designation	EM C40CLT
Nominal Voltage/Frequency	220-240 V 50 Hz
Engineering Number	701NA90

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		[hp]
2 Displacement	7.23	[cm ³] (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)	7.7	[kg] (16.98 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	M.I.E-START ES1B	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	4(350)	[µF(VAC minimum)]
5 Motor protection	AX37FN	
6 Start winding resistance	18.80	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	41.00	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	3.43	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50 Hz)	0.51	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50 Hz)	0.59	[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	65	0.30	1.26	6.12	1.54	1.79

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)	242	61	71	45	0.20	0.76	5.41	1.36	1.59	
-30 (-22)	326	82	96	51	0.23	1.02	6.44	1.62	1.89	
-25 (-13)	433	109	127	57	0.27	1.36	7.53	1.90	2.21	
-20 (- 4)	561	141	165	65	0.31	1.76	8.66	2.18	2.54	
-15 (+ 5)	713	180	209	73	0.35	2.24	9.83	2.48	2.88	
-10 (+14)	887	223	260	81	0.39	2.80	11.02	2.78	3.23	

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)	221	56	65	43	0.21	0.69	5.10	1.29	1.49	
-30 (-22)	300	75	88	51	0.24	0.94	5.89	1.48	1.73	
-25 (-13)	401	101	118	60	0.28	1.26	6.74	1.70	1.97	
-20 (- 4)	526	133	154	69	0.32	1.65	7.64	1.92	2.24	
-15 (+ 5)	675	170	198	79	0.37	2.12	8.57	2.16	2.51	
-10 (+14)	846	213	248	89	0.42	2.67	9.53	2.40	2.79	

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)	196	49	57	43	0.21	0.61	4.55	1.15	1.33	
-30 (-22)	268	67	78	52	0.25	0.84	5.17	1.30	1.51	
-25 (-13)	364	92	107	62	0.29	1.14	5.85	1.47	1.71	
-20 (- 4)	483	122	142	73	0.34	1.52	6.58	1.66	1.93	
-15 (+ 5)	627	158	184	85	0.39	1.97	7.36	1.85	2.16	
-10 (+14)	795	200	233	97	0.44	2.51	8.16	2.06	2.39	

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)	174	44	51	44	0.22	0.54	3.89	0.98	1.14
-30	(-22)	238	60	70	54	0.26	0.75	4.41	1.11	1.29
-25	(-13)	326	82	96	65	0.30	1.02	5.00	1.26	1.47
-20	(- 4)	440	111	129	78	0.35	1.38	5.65	1.42	1.66
-15	(+ 5)	577	146	169	91	0.41	1.82	6.34	1.60	1.86
-10	(+14)	740	186	217	105	0.47	2.33	7.06	1.78	2.07

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		