

COMPRESSOR DEFINITION

Designation	EM D55CLT
Nominal Voltage/Frequency	220-240 V 50 Hz
Engineering Number	701VA77

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	9.04	[cm ³] (0.552 cu.in)
2.1 Bore [mm]	24.000	
2.2 Stroke [mm]	20.000	
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)	8.1	[kg] (17.86 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 2021	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	3(350)/4(350)	[µF(VAC minimum)]
5 Motor protection	AE18BQX	
6 Start winding resistance	21.36	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	18.81	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	5.54	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50 Hz)	0.87	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50 Hz)	1.07	[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]
528	133	155	82	0.40	1.66	6.46	1.63	1.89

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)	278	70	81	51	0.25	0.87	5.40	1.36	1.58	
-30 (-22)	387	97	113	60	0.31	1.21	6.44	1.62	1.89	
-25 (-13)	520	131	152	69	0.36	1.63	7.53	1.90	2.21	
-20 (- 4)	679	171	199	78	0.39	2.13	8.66	2.18	2.54	
-15 (+ 5)	865	218	253	88	0.42	2.72	9.83	2.48	2.88	
-10 (+14)	1081	272	317	98	0.46	3.41	11.04	2.78	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)	262	66	77	51	0.27	0.82	5.11	1.29	1.50	
-30 (-22)	369	93	108	62	0.32	1.16	5.97	1.50	1.75	
-25 (-13)	499	126	146	73	0.37	1.57	6.86	1.73	2.01	
-20 (- 4)	654	165	192	84	0.41	2.05	7.79	1.96	2.28	
-15 (+ 5)	834	210	245	95	0.45	2.63	8.75	2.20	2.56	
-10 (+14)	1043	263	306	107	0.50	3.29	9.74	2.45	2.85	

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)	242	61	71	51	0.28	0.76	4.73	1.19	1.38	
-30 (-22)	348	88	102	64	0.33	1.09	5.45	1.37	1.60	
-25 (-13)	475	120	139	77	0.37	1.49	6.20	1.56	1.82	
-20 (- 4)	625	158	183	90	0.41	1.97	6.97	1.76	2.04	
-15 (+ 5)	800	202	234	103	0.47	2.52	7.77	1.96	2.28	
-10 (+14)	1001	252	293	116	0.54	3.16	8.59	2.17	2.52	

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)	212	53	62	50	0.28	0.66	4.21	1.06	1.23
-30	(-22)	316	80	93	65	0.32	0.99	4.85	1.22	1.42
-25	(-13)	439	111	129	80	0.35	1.38	5.50	1.39	1.61
-20	(- 4)	585	147	171	95	0.40	1.84	6.17	1.55	1.81
-15	(+ 5)	753	190	221	110	0.45	2.37	6.85	1.73	2.01
-10	(+14)	946	238	277	125	0.54	2.99	7.55	1.90	2.21

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	6.1 +0.10/+0.00	[mm]	(0.240" +0.004"/+0.000")
3.3.1 Material	Copper		
3.3.2 Shape	Slanted 45° up + 45° to Back		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		