

COMPRESSOR DEFINITION

Designation	EM YE70CLP
Nominal Voltage/Frequency	220 V 50-60 Hz
Engineering Number	513306579

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-600a		
3 Nominal voltage and frequency	220 / 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	187 to 242 V	187 to 242 V
8.2 LBP (43°C Ambient temperature)	Static	187 to 242 V	187 to 242 V
8.3 HBP (32°C Ambient temperature)	-	-	-
8.4 HBP (43°C Ambient temperature)	-	-	-
9 Maximum condensing pressures/temperature			
9.1 Operating (gauge)	7.7	[kgf/cm ²] (109 psig)	/ °C - °F
9.2 Peak (gauge)	9.8	[kgf/cm ²] (139 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1/5	[hp]
2 Displacement	10.61	[cm ³] (0.647 cu.in)
2.1 Bore [mm]	26.000	
2.2 Stroke [mm]	20.000	
3 Lubricant charge	180	[ml] (6.09 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ALQUILB / ISO5	
4 Weight (with oil charge)	7.74	[kg] (17.06 lb.)
5 Nitrogen charge	-	[kgf/cm ²]

C - ELETRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	220 V 50-60 Hz 1 ~ (Single phase)	
2 Starting device type	PTC	
2.1 Starting device	7M220MC1/8EA17C1	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	4TM283NFBYY-53	
6 Start winding resistance	14.88	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	11.88	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50/60 Hz)	8.20/7.76	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50/60 Hz)	1.43/1.40	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50/60 Hz)	1.86/1.65	[A] - Measured according to UL 984
11 Approval boards certification	IMTRO - TUV	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @220V50Hz			ASHRAELBP32 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]
603	152	177	135	1.10	1.89	4.46	1.12	1.31

TEST CONDITIONS: @220V60Hz			ASHRAELBP32 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]
656	165	192	131	1.00	2.06	5.02	1.27	1.47

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V50Hz			ASHRAE32 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)					0.00	0.00	0.00	0.00	0.00
-30 (-22)					0.00	0.00	0.00	0.00	0.00
-25 (-13)					0.00	0.00	0.00	0.00	0.00
-20 (- 4)					0.00	0.00	0.00	0.00	0.00
-15 (+ 5)					0.00	0.00	0.00	0.00	0.00
-10 (+14)					0.00	0.00	0.00	0.00	0.00

TEST CONDITIONS: @220V50Hz			ASHRAE32 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)					0.00	0.00	0.00	0.00	0.00
-30 (-22)					0.00	0.00	0.00	0.00	0.00
-25 (-13)					0.00	0.00	0.00	0.00	0.00
-20 (- 4)					0.00	0.00	0.00	0.00	0.00
-15 (+ 5)					0.00	0.00	0.00	0.00	0.00
-10 (+14)					0.00	0.00	0.00	0.00	0.00

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V50Hz		ASHRAE32 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]
-35	(-31)					0.00	0.00	0.00	0.00	0.00	0.00
-30	(-22)					0.00	0.00	0.00	0.00	0.00	0.00
-25	(-13)					0.00	0.00	0.00	0.00	0.00	0.00
-20	(- 4)					0.00	0.00	0.00	0.00	0.00	0.00
-15	(+ 5)					0.00	0.00	0.00	0.00	0.00	0.00
-10	(+14)					0.00	0.00	0.00	0.00	0.00	0.00

TEST CONDITIONS: @220V60Hz		ASHRAE32 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]
-35	(-31)					0.00	0.00	0.00	0.00	0.00	0.00
-30	(-22)					0.00	0.00	0.00	0.00	0.00	0.00
-25	(-13)					0.00	0.00	0.00	0.00	0.00	0.00
-20	(- 4)					0.00	0.00	0.00	0.00	0.00	0.00
-15	(+ 5)					0.00	0.00	0.00	0.00	0.00	0.00
-10	(+14)					0.00	0.00	0.00	0.00	0.00	0.00

TEST CONDITIONS: @220V60Hz		ASHRAE32 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]
-35	(-31)					0.00	0.00	0.00	0.00	0.00	0.00
-30	(-22)					0.00	0.00	0.00	0.00	0.00	0.00
-25	(-13)					0.00	0.00	0.00	0.00	0.00	0.00
-20	(- 4)					0.00	0.00	0.00	0.00	0.00	0.00
-15	(+ 5)					0.00	0.00	0.00	0.00	0.00	0.00
-10	(+14)					0.00	0.00	0.00	0.00	0.00	0.00

TEST CONDITIONS: @220V60Hz		ASHRAE32 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]
-35	(-31)					0.00	0.00	0.00	0.00	0.00	0.00
-30	(-22)					0.00	0.00	0.00	0.00	0.00	0.00
-25	(-13)					0.00	0.00	0.00	0.00	0.00	0.00
-20	(- 4)					0.00	0.00	0.00	0.00	0.00	0.00
-15	(+ 5)					0.00	0.00	0.00	0.00	0.00	0.00
-10	(+14)					0.00	0.00	0.00	0.00	0.00	0.00

F - EXTERNAL CHARACTERISTICS

1 Base plate	New Base Plate EUEM		
2 Tray holder	No		
3 Connectors			
3.1 SUCTION	6.5 +0.12/-0.08	[mm]	(0.256" +0.005"/-0.003")
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 30° up + 24° to Back		
3.3 PROCESS	8.2 +0.12/-0.08	[mm]	(0.323" +0.005"/-0.003")
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		