

COMPRESSOR DEFINITION

Designation	EM Y80CLP
Nominal Voltage/Frequency	220-240 V 50 Hz
Engineering Number	701MA77

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	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 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	12.21	[cm ³] (0.745 cu.in)
2.1 Bore [mm]	26.000	
2.2 Stroke [mm]	23.000	
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	[kg] (17.64 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	PTC	
2.1 Starting device	MI2021XV230	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	AE15BU	
6 Start winding resistance	16.10	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	12.55	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	8.75	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50 Hz)	1.65	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50 Hz)	1.94	[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]
717	181	210	129	0.89	2.25	5.55	1.40	1.63

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)	417	105	122	87	0.77	1.31	4.78	1.20	1.40
-30 (-22)	557	140	163	99	0.81	1.75	5.60	1.41	1.64
-25 (-13)	727	183	213	113	0.85	2.28	6.42	1.62	1.88
-20 (- 4)	929	234	272	128	0.90	2.92	7.26	1.83	2.13
-15 (+ 5)	1169	295	342	144	0.95	3.68	8.14	2.05	2.39
-10 (+14)	1449	365	425	160	1.00	4.57	9.08	2.29	2.66

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)	390	98	114	89	0.77	1.22	4.39	1.11	1.29
-30 (-22)	527	133	154	103	0.81	1.65	5.12	1.29	1.50
-25 (-13)	693	175	203	118	0.86	2.18	5.84	1.47	1.71
-20 (- 4)	893	225	262	136	0.92	2.81	6.56	1.65	1.92
-15 (+ 5)	1129	285	331	154	0.98	3.56	7.32	1.84	2.14
-10 (+14)	1407	354	412	173	1.05	4.44	8.12	2.05	2.38

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)	358	90	105	89	0.77	1.12	4.02	1.01	1.18
-30 (-22)	492	124	144	105	0.81	1.54	4.68	1.18	1.37
-25 (-13)	654	165	192	123	0.87	2.05	5.31	1.34	1.56
-20 (- 4)	850	214	249	143	0.93	2.67	5.94	1.50	1.74
-15 (+ 5)	1083	273	317	164	1.01	3.41	6.58	1.66	1.93
-10 (+14)	1356	342	397	187	1.10	4.28	7.27	1.83	2.13

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)	324	82	95	89	0.78	1.01	3.65	0.92	1.07
-30	(-22)	452	114	132	107	0.82	1.42	4.24	1.07	1.24
-25	(-13)	610	154	179	127	0.88	1.91	4.80	1.21	1.41
-20	(- 4)	801	202	235	150	0.96	2.52	5.35	1.35	1.57
-15	(+ 5)	1029	259	302	174	1.05	3.24	5.91	1.49	1.73
-10	(+14)	1298	327	380	200	1.15	4.10	6.49	1.64	1.90

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		