

COMPRESSOR DEFINITION

Designation	EM 30HNP
Nominal Voltage/Frequency	220-240 V 50 Hz
Engineering Number	513302460

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-134a		
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	198 to 255 V	-
8.2 LBP (43°C Ambient temperature)	Static	198 to 255 V	-
8.3 HBP (32°C Ambient temperature)	-	-	-
8.4 HBP (43°C Ambient temperature)	-	-	-
9 Maximum condensing pressures/temperature			
9.1 Operating (gauge)	16.2	[kgf/cm ²] (230 psig)	/ °C - °F
9.2 Peak (gauge)	20.6	[kgf/cm ²] (293 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1/10	[hp]
2 Displacement	3.00	[cm ³] (0.183 cu.in)
2.1 Bore [mm]	19.000	
2.2 Stroke [mm]	10.600	
3 Lubricant charge	160	[ml] (5.41 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ESTER / ISO22	
4 Weight (with oil charge)	6.72	[kg] (14.81 lb.)
5 Nitrogen charge	0.2 to 0.3	[kgf/cm ²] (2.84 to 4.27 psig)

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	8EA5B1	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	4TM110NFBYY-53	
6 Start winding resistance	38.40	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	34.60	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	3.10	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50 Hz)	0.58	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50 Hz)	0.54	[A] - Measured according to UL 984
11 Approval boards certification	IRAM	

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]
210	53	62	67	0.48	1.19	3.13	0.79	0.92

E - PERFORMANCE - CURVES

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)	101	26	30	51	0.57	0.57	1.96	0.49	0.57
-30 (-22)	157	40	46	57	0.76	0.89	2.78	0.70	0.81
-25 (-13)	224	57	66	64	0.98	1.27	3.54	0.89	1.04
-20 (- 4)	307	77	90	72	1.21	1.75	4.27	1.08	1.25
-15 (+ 5)	406	102	119	81	1.45	2.32	5.02	1.27	1.47
-10 (+14)	525	132	154	90	1.70	3.01	5.82	1.47	1.71

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]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35 (-31)	68	17	20	46	0.38	0.39	1.49	0.38	0.44
-30 (-22)	122	31	36	55	0.57	0.69	2.21	0.56	0.65
-25 (-13)	188	47	55	65	0.78	1.07	2.88	0.73	0.84
-20 (- 4)	268	68	79	76	1.00	1.53	3.54	0.89	1.04
-15 (+ 5)	365	92	107	86	1.23	2.08	4.24	1.07	1.24
-10 (+14)	481	121	141	96	1.47	2.76	5.00	1.26	1.46

TEST CONDITIONS: @220V50Hz			ASHRAE32 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)	31	8	9	42	0.22	0.18	0.76	0.19	0.22
-30 (-22)	85	21	25	52	0.41	0.48	1.59	0.40	0.47
-25 (-13)	149	38	44	62	0.62	0.85	2.39	0.60	0.70
-20 (- 4)	228	57	67	72	0.83	1.30	3.19	0.80	0.93
-15 (+ 5)	323	81	95	80	1.06	1.84	4.04	1.02	1.18
-10 (+14)	437	110	128	88	1.28	2.50	4.97	1.25	1.46

F - EXTERNAL CHARACTERISTICS

1 Base plate	European Standard EG/F/AMEM Version 2		
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 plated steel		
3.1.2 Shape	Straight		
3.2 DISCHARGE	5 +0.18/-0.06	[mm]	(0.197" +0.007"/-0.002")
3.2.1 Material	Copper plated steel		
3.2.2 Shape	Slanted		
3.3 PROCESS	6.1 +0.10/+0.00	[mm]	(0.240" +0.004"/+0.000")
3.3.1 Material	Copper plated steel		
3.3.2 Shape	Straight		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		