

### COMPRESSOR DEFINITION

Designation	EM 65NR
Nominal Voltage/Frequency	220 V 60 Hz
Engineering Number	513303181

### A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	Blend		
3 Nominal voltage and frequency	220 / 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/CSIR		
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 242 V
8.2 LBP (43°C Ambient temperature)	Static	-	198 to 242 V
8.3 HBP (32°C Ambient temperature)	-	-	-
8.4 HBP (43°C Ambient temperature)	-	-	-
9 Maximum condensing temperature			
9.1 Operating	14.5	[kgf/cm <sup>2</sup> ] (206 psig)	/ °C - °F
9.2 Peak	18.2	[kgf/cm <sup>2</sup> ] (259 psig)	/ °C - °F
10 Maximum winding temperature	130	[ °C ]	

### B - MECHANICAL DATA

1 Commercial designation	1/5	[hp]
2 Displacement	5.54	[cm <sup>3</sup> ] (0.338 cu.in)
2.1 Bore [mm]	21.000	
2.2 Stroke [mm]	16.000	
3 Lubricant charge	200	[ml] (6.76 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	MINERAL / ISO32	
4 Weight (with oil charge)	7.55	[kg] (16.64 lb.)
5 Nitrogen charge	0.2 to 0.3	[kgf/cm <sup>2</sup> ] (2.84 to 4.27 psig)

### C - ELETRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	220 V 60 Hz 1 ~ (Single phase)	
2 Starting device type	Current Relay	
2.1 Starting device	213514148	
3 Start capacitor	53-64(180)	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	4TM734LFBYY-53	
6 Start winding resistance	38.20	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	11.75	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	12.00	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	1.40	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (60 Hz)	-	[A] - Measured according to UL 984
11 Approval boards certification	CE - TUV - UKCA	

### D - PERFORMANCE - CHECK POINT DATA

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]
635	160	186	158	1.06	4.65	4.02	1.01	1.18

### E - PERFORMANCE - CURVES

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]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35 (-31)	361	91	106	118	1.00	2.63	3.04	0.77	0.89
-30 (-22)	481	121	141	134	1.03	3.51	3.58	0.90	1.05
-25 (-13)	626	158	183	151	1.07	4.58	4.17	1.05	1.22
-20 (- 4)	800	202	234	168	1.13	5.86	4.78	1.21	1.40
-15 (+ 5)	1005	253	294	185	1.19	7.39	5.42	1.37	1.59
-10 (+14)	1244	314	365	205	1.26	9.17	6.06	1.53	1.78

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]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35 (-31)	312	79	91	116	0.93	2.27	2.72	0.68	0.80
-30 (-22)	435	110	128	134	0.98	3.18	3.25	0.82	0.95
-25 (-13)	581	146	170	153	1.04	4.25	3.80	0.96	1.11
-20 (- 4)	753	190	221	172	1.11	5.52	4.36	1.10	1.28
-15 (+ 5)	953	240	279	193	1.18	7.00	4.92	1.24	1.44
-10 (+14)	1184	298	347	216	1.27	8.73	5.47	1.38	1.60

TEST CONDITIONS: @220V60Hz			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)	259	65	76	113	0.94	1.89	2.30	0.58	0.67
-30 (-22)	378	95	111	133	1.00	2.76	2.82	0.71	0.83
-25 (-13)	516	130	151	154	1.07	3.77	3.34	0.84	0.98
-20 (- 4)	676	170	198	176	1.14	4.96	3.85	0.97	1.13
-15 (+ 5)	862	217	253	199	1.22	6.34	4.33	1.09	1.27
-10 (+14)	1077	271	316	226	1.30	7.94	4.79	1.21	1.40

### F - EXTERNAL CHARACTERISTICS

1 Base plate	Universal AMEM		
2 Tray holder	Yes		
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	Straight		
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		
3.3 PROCESS	6.5 +0.12/-0.08	[mm]	(0.256" +0.005"/-0.003")
3.3.1 Material	Copper		
3.3.2 Shape	Straight		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		