

### COMPRESSOR DEFINITION

Designation	EM IE30HJP
Nominal Voltage/Frequency	220 V 60 Hz
Engineering Number	513306128

### A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-134a		
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		
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	14.2	[kgf/cm <sup>2</sup> ] (202 psig)	/ °C - °F
9.2 Peak	15.9	[kgf/cm <sup>2</sup> ] (226 psig)	/ °C - °F
10 Maximum winding temperature	130	[ °C ]	

### B - MECHANICAL DATA

1 Commercial designation	1/10	[hp]
2 Displacement	2.83	[cm <sup>3</sup> ] (0.173 cu.in)
2.1 Bore [mm]	19.000	
2.2 Stroke [mm]	10.000	
3 Lubricant charge	180	[ml] (6.09 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ESTER / ISO10	
4 Weight (with oil charge)	7.24	[kg] (15.96 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	PTC	
2.1 Starting device	MSC34X 220V	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	MSC34A23J3	
6 Start winding resistance	25.00	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	40.00	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	2.90	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	0.62	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (60 Hz)	-	[A] - Measured according to UL 984
11 Approval boards certification	TUV	

### 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]
307	77	90	70	0.48	1.74	4.37	1.10	1.28

### E - PERFORMANCE - CURVES

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]	[Btu/Wh]	[kcal/Wh]	[W/W]	
-35 (-31)	180	45	53	51	0.43	1.02	3.56	0.90	1.04	
-30 (-22)	255	64	75	58	0.45	1.45	4.40	1.11	1.29	
-25 (-13)	345	87	101	66	0.46	1.96	5.26	1.33	1.54	
-20 (- 4)	451	114	132	73	0.49	2.57	6.18	1.56	1.81	
-15 (+ 5)	576	145	169	81	0.51	3.29	7.17	1.81	2.10	
-10 (+14)	722	182	212	88	0.53	4.14	8.26	2.08	2.42	

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)	157	39	46	49	0.42	0.89	3.17	0.80	0.93	
-30 (-22)	226	57	66	58	0.44	1.28	3.91	0.99	1.15	
-25 (-13)	311	78	91	67	0.47	1.77	4.65	1.17	1.36	
-20 (- 4)	413	104	121	76	0.50	2.35	5.39	1.36	1.58	
-15 (+ 5)	535	135	157	87	0.53	3.06	6.17	1.56	1.81	
-10 (+14)	679	171	199	97	0.57	3.89	7.00	1.76	2.05	

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)	123	31	36	47	0.42	0.70	2.64	0.67	0.77	
-30 (-22)	188	47	55	56	0.44	1.06	3.37	0.85	0.99	
-25 (-13)	268	68	79	66	0.47	1.52	4.05	1.02	1.19	
-20 (- 4)	367	92	107	78	0.51	2.09	4.70	1.19	1.38	
-15 (+ 5)	486	122	142	91	0.55	2.77	5.35	1.35	1.57	
-10 (+14)	628	158	184	104	0.60	3.60	6.01	1.51	1.76	

### E - PERFORMANCE - CURVES

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)	80	20	23	42	0.41	0.45	1.88	0.47	0.55
-30	(-22)	140	35	41	52	0.43	0.79	2.68	0.67	0.78
-25	(-13)	216	54	63	64	0.46	1.22	3.39	0.85	0.99
-20	(- 4)	311	78	91	77	0.50	1.77	4.03	1.01	1.18
-15	(+ 5)	427	108	125	93	0.55	2.44	4.62	1.16	1.35
-10	(+14)	568	143	166	110	0.62	3.25	5.18	1.31	1.52

### F - EXTERNAL CHARACTERISTICS

1 Base plate	Universal EUEM		
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	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	6.5 +0.12/-0.08	[mm]	(0.256" +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		