COMPRESSOR DEFINITION

Designation	**EM IE40HJP**
Nominal Voltage/Frequency	**220 V 50-60 Hz**
Engineering Number	**513306122**

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-134a		
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 Expantion device	Capillary tube		
8 Compressor cooling		Operating voltage range	
		50 Hz	60 Hz
8.1 LBP (32ºC Ambient temperature)	Static	198 to 242 V	198 to 242 V
8.2 LBP (43ºC Ambient temperature)	Static	198 to 242 V	198 to 242 V
8.3 HBP (32ºC Ambient temperature)	-	-	-
8.4 HBP (43ºC Ambient temperature)	-	-	-
9 Maximum condensing temperature			
9.1 Operating (gauge)	14.2	[kgf/cm²] (202 psig)	/ ºC - ºF
9.2 Peak (gauge)	15.9	[kgf/cm²] (226 psig)	/ ºC - ºF
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1/8	[hp]
2 Displacement	3.40	[cm³] (0.207 cu.in)
2.1 Bore [mm]	19.000	
2.2 Stroke [mm]	12.000	
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)	6.55	[kg] (14.44 lb.)
5 Nitrogen charge	0.2 to 0.3	[kgf/cm²] (2.84 to 4.27 psig)

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/QPS2-A22MG1	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	4TM189KFBYY-53	
6 Start winding resistance	19.75	[Ω at 25ºC (77ºF)] +/- 8%
7 Run winding resistance	33.45	[Ω at 25ºC (77ºF)] +/- 8%
8 LRA - Locked rotor amperage (50/60 Hz)	-	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50/60 Hz)	-	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50/60 Hz)	-	[A] - Measured according to UL 984
11 Approval boards certification	IMTRO - IRAM - 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]
325	82	95	83	0.69	1.85	3.94	0.99	1.15

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]
393	99	115	90	1.20	2.23	4.36	1.10	1.28

E - PERFORMANCE - CURVES

TEST CONDITIONS: **@220V50Hz**		**ASHRAE32** **Static**			(Condensing temperature **35ºC (+95ºF))**					
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)**	237	60	69	63	0.66	1.35	3.40	0.86	1.00
-30	**(-22)**	228	58	67	69	0.67	1.29	3.50	0.88	1.03
-25	**(-13)**	294	74	86	75	0.68	1.67	4.18	1.05	1.22
-20	**(- 4)**	422	106	124	82	0.69	2.40	5.30	1.34	1.55
-15	**(+ 5)**	597	150	175	89	0.70	3.41	6.72	1.69	1.97
-10	**(+14)**	806	203	236	96	0.72	4.62	8.32	2.10	2.44

TEST CONDITIONS: **@220V50Hz**		**ASHRAE32** **Static**			(Condensing temperature **45ºC (+113ºF))**					
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)**	139	35	41	62	0.66	0.78	2.56	0.64	0.75
-30	**(-22)**	194	49	57	70	0.67	1.09	3.08	0.78	0.90
-25	**(-13)**	297	75	87	78	0.68	1.69	3.95	1.00	1.16
-20	**(- 4)**	436	110	128	86	0.69	2.48	5.03	1.27	1.47
-15	**(+ 5)**	596	150	175	94	0.71	3.40	6.19	1.56	1.81
-10	**(+14)**	765	193	224	103	0.73	4.38	7.29	1.84	2.14

E - PERFORMANCE - CURVES

TEST CONDITIONS: **ASHRAE32** (Condensing temperature **55ºC (+131ºF))**
@220V50Hz **Static**

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)**	135	34	40	61	0.66	0.76	2.30	0.58	0.67
-30	**(-22)**	222	56	65	70	0.67	1.26	3.06	0.77	0.90
-25	**(-13)**	331	83	97	80	0.68	1.88	3.93	0.99	1.15
-20	**(- 4)**	449	113	131	90	0.70	2.56	4.79	1.21	1.41
-15	**(+ 5)**	562	142	165	100	0.72	3.21	5.50	1.39	1.61
-10	**(+14)**	658	166	193	111	0.75	3.77	5.93	1.49	1.74

TEST CONDITIONS: **ASHRAE32** (Condensing temperature **65ºC (+149ºF))**
@220V50Hz **Static**

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)**	102	26	30	57	0.65	0.57	1.76	0.44	0.51
-30	**(-22)**	187	47	55	68	0.66	1.06	2.56	0.65	0.75
-25	**(-13)**	270	68	79	79	0.68	1.53	3.26	0.82	0.96
-20	**(- 4)**	335	84	98	91	0.70	1.91	3.72	0.94	1.09
-15	**(+ 5)**	370	93	108	103	0.73	2.11	3.79	0.96	1.11
-10	**(+14)**	361	91	106	116	0.76	2.06	3.35	0.84	0.98

TEST CONDITIONS: **ASHRAE32** (Condensing temperature **35ºC (+95ºF))**
@220V60Hz **Static**

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)**	232	58	68	66	0.56	1.31	3.52	0.89	1.03
-30	**(-22)**	311	78	91	75	0.58	1.77	4.17	1.05	1.22
-25	**(-13)**	414	104	121	84	0.60	2.35	4.94	1.25	1.45
-20	**(- 4)**	541	136	158	93	0.63	3.08	5.84	1.47	1.71
-15	**(+ 5)**	693	175	203	101	0.65	3.96	6.84	1.72	2.00
-10	**(+14)**	873	220	256	110	0.68	5.00	7.94	2.00	2.33

TEST CONDITIONS: **ASHRAE32** (Condensing temperature **45ºC (+113ºF))**
@220V60Hz **Static**

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)**	216	54	63	67	0.56	1.22	3.23	0.81	0.95
-30	**(-22)**	297	75	87	78	0.58	1.69	3.84	0.97	1.12
-25	**(-13)**	400	101	117	88	0.61	2.27	4.52	1.14	1.33
-20	**(- 4)**	525	132	154	99	0.64	2.99	5.28	1.33	1.55
-15	**(+ 5)**	675	170	198	110	0.68	3.85	6.10	1.54	1.79
-10	**(+14)**	850	214	249	122	0.72	4.87	6.98	1.76	2.04

E - PERFORMANCE - CURVES

TEST CONDITIONS: **ASHRAE32** (Condensing temperature **55ºC (+131ºF))**
@220V60Hz **Static**

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)**	183	46	54	66	0.56	1.03	2.76	0.70	0.81
-30	**(-22)**	266	67	78	79	0.59	1.51	3.36	0.85	0.99
-25	**(-13)**	368	93	108	92	0.62	2.09	4.00	1.01	1.17
-20	**(- 4)**	491	124	144	105	0.66	2.79	4.66	1.17	1.37
-15	**(+ 5)**	637	161	187	119	0.71	3.64	5.34	1.34	1.56
-10	**(+14)**	807	203	236	134	0.76	4.62	6.02	1.52	1.77

TEST CONDITIONS: **ASHRAE32** (Condensing temperature **65ºC (+149ºF))**
@220V60Hz **Static**

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)**	137	35	40	62	0.55	0.77	2.23	0.56	0.65
-30	**(-22)**	220	55	65	76	0.58	1.25	2.86	0.72	0.84
-25	**(-13)**	321	81	94	92	0.62	1.82	3.48	0.88	1.02
-20	**(- 4)**	442	111	129	108	0.67	2.51	4.08	1.03	1.20
-15	**(+ 5)**	583	147	171	126	0.73	3.33	4.66	1.17	1.36
-10	**(+14)**	746	188	219	144	0.80	4.28	5.19	1.31	1.52

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 42º 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		