

### COMPRESSOR DEFINITION

Designation	EM RS40CLP
Nominal Voltage/Frequency	220-240 V 50 Hz
Engineering Number	513300390

### 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	RSCR		
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	176 to 255 V	-
8.2 LBP (43°C Ambient temperature)	Static	176 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 <sup>2</sup> ] (98 psig)	/ °C - °F
9.2 Peak	7.8	[kgf/cm <sup>2</sup> ] (111 psig)	/ °C - °F
10 Maximum winding temperature	130	[ °C ]	

### B - MECHANICAL DATA

1 Commercial designation		[hp]
2 Displacement	7.51	[cm <sup>3</sup> ] (0.458 cu.in)
2.1 Bore [mm]	24.000	
2.2 Stroke [mm]	16.600	
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)	7.1	[kg] (15.65 lb.)
5 Nitrogen charge	-	[kgf/cm <sup>2</sup> ]

### 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	8EA17B3/8EA17C3/QP2-20A/QPS2-A22MD3	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	4(350)	[µF(VAC minimum)]
5 Motor protection	BT53-105	
6 Start winding resistance	19.30	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	23.90	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	5.52	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50 Hz)	0.95	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50 Hz)	1.17	[A] - Measured according to UL 984
11 Approval boards certification	CCC	

### 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]
416	105	122	73	0.37	1.31	5.73	1.44	1.68

### E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V50Hz		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)	257	65	75	51	0.27	0.81	5.05	1.27	1.48
-30	(-22)	350	88	103	59	0.30	1.10	5.96	1.50	1.75
-25	(-13)	461	116	135	67	0.33	1.45	6.94	1.75	2.03
-20	(- 4)	591	149	173	74	0.36	1.86	7.99	2.01	2.34
-15	(+ 5)	745	188	218	82	0.39	2.34	9.15	2.31	2.68
-10	(+14)	923	233	271	89	0.42	2.91	10.43	2.63	3.06

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)	219	55	64	50	0.27	0.69	4.37	1.10	1.28
-30	(-22)	309	78	91	59	0.31	0.97	5.22	1.31	1.53
-25	(-13)	417	105	122	68	0.34	1.31	6.10	1.54	1.79
-20	(- 4)	546	138	160	77	0.38	1.72	7.04	1.77	2.06
-15	(+ 5)	699	176	205	87	0.42	2.20	8.04	2.03	2.36
-10	(+14)	878	221	257	96	0.47	2.77	9.13	2.30	2.68

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)	192	48	56	50	0.27	0.60	3.82	0.96	1.12
-30	(-22)	276	70	81	59	0.31	0.87	4.63	1.17	1.36
-25	(-13)	379	96	111	69	0.35	1.19	5.44	1.37	1.59
-20	(- 4)	505	127	148	80	0.40	1.59	6.27	1.58	1.84
-15	(+ 5)	655	165	192	92	0.45	2.06	7.14	1.80	2.09
-10	(+14)	833	210	244	103	0.50	2.63	8.07	2.03	2.36

### E - PERFORMANCE - CURVES

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)	163	41	48	50	0.27	0.51	3.27	0.82	0.96
-30	(-22)	239	60	70	59	0.31	0.75	4.06	1.02	1.19
-25	(-13)	336	85	98	70	0.35	1.05	4.82	1.21	1.41
-20	(- 4)	456	115	134	82	0.40	1.43	5.57	1.40	1.63
-15	(+ 5)	601	152	176	95	0.46	1.89	6.32	1.59	1.85
-10	(+14)	776	196	227	109	0.52	2.45	7.10	1.79	2.08

### F - EXTERNAL CHARACTERISTICS

1 Base plate	European Standard
2 Tray holder	Yes
3 Connectors	
3.1 SUCTION	6.2 +0.05/+0.05 [mm] (0.244" +0.002"/+0.002")
3.1.1 Material	Copper
3.1.2 Shape	Slanted 25° up + 45° to Back
3.2 DISCHARGE	4.9 +0.10/-0.05 [mm] (0.193" +0.004"/-0.002")
3.2.1 Material	Copper
3.2.2 Shape	Slanted 0° up + 24° to Back
3.3 PROCESS	6.2 +0.05/+0.05 [mm] (0.244" +0.002"/+0.002")
3.3.1 Material	Copper
3.3.2 Shape	Slanted 40° up + 45° to Back
3.4 Oil cooler (Copper)	No [mm]
3.5 Connector sealing	Rubber Plugs