

### COMPRESSOR DEFINITION

Designation	<b>EM U60HLC</b>
Nominal Voltage/Frequency	<b>115 V 60 Hz</b>
Engineering Number	<b>196AG50</b>

### A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-134a		
3 Nominal voltage and frequency	115 / 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	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	-	103 to 127 V
8.2 LBP (43°C Ambient temperature)	Static	-	103 to 127 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		[hp]
2 Displacement	5.19	[cm <sup>3</sup> ] (0.317 cu.in)
2.1 Bore [mm]	21.000	
2.2 Stroke [mm]	15.000	
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)	7.6	[kg] (16.75 lb.)
5 Nitrogen charge	-	[kgf/cm <sup>2</sup> ]

### C - ELETRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	115 V 60 Hz 1 ~ (Single phase)	
2 Starting device type	PTC	
2.1 Starting device	8EA14C3/8EA21C3/8EA3B3/8EA4B3/QPS2-A4R7MD3	
3 Start capacitor	-	[μF(VAC minimum)]
4 Run capacitor	12(180)	[μF(VAC minimum)]
5 Motor protection	4TM319NFBYY-53	
6 Start winding resistance	5.30	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	4.00	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	11.00	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	1.22	[A]
10 FLA - Full Load Amperage HBP (60 Hz)	-	[A]
11 Approval boards certification	UL	

### D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @115V60Hz			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]
605	152	177	121	1.22	3.44	5.00	1.26	1.47

### E - PERFORMANCE - CURVES

TEST CONDITIONS: @115V60Hz			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)	353	89	103	82	0.91	1.99	4.30	1.08	1.26
-30 (-22)	488	123	143	94	1.01	2.77	5.20	1.31	1.52
-25 (-13)	653	164	191	107	1.12	3.71	6.08	1.53	1.78
-20 (- 4)	848	214	249	122	1.24	4.83	6.98	1.76	2.04
-15 (+ 5)	1079	272	316	137	1.35	6.16	7.91	1.99	2.32
-10 (+14)	1347	340	395	152	1.47	7.72	8.91	2.25	2.61

TEST CONDITIONS: @115V60Hz			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)	323	81	95	84	0.95	1.83	3.87	0.97	1.13
-30 (-22)	449	113	132	97	1.05	2.55	4.64	1.17	1.36
-25 (-13)	606	153	177	112	1.17	3.44	5.39	1.36	1.58
-20 (- 4)	795	200	233	129	1.29	4.53	6.16	1.55	1.80
-15 (+ 5)	1022	257	299	147	1.42	5.83	6.96	1.75	2.04
-10 (+14)	1288	325	377	165	1.56	7.38	7.82	1.97	2.29

TEST CONDITIONS: @115V60Hz			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)	283	71	83	83	0.97	1.60	3.41	0.86	1.00
-30 (-22)	399	101	117	98	1.08	2.26	4.10	1.03	1.20
-25 (-13)	547	138	160	115	1.20	3.10	4.77	1.20	1.40
-20 (- 4)	730	184	214	134	1.34	4.15	5.44	1.37	1.59
-15 (+ 5)	952	240	279	154	1.48	5.43	6.15	1.55	1.80
-10 (+14)	1215	306	356	175	1.64	6.96	6.91	1.74	2.02

### E - PERFORMANCE - CURVES

TEST CONDITIONS: @115V60Hz		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)	243	61	71	85	0.98	1.38	2.86	0.72	0.84
-30	(-22)	348	88	102	100	1.10	1.97	3.50	0.88	1.03
-25	(-13)	486	123	142	119	1.23	2.76	4.12	1.04	1.21
-20	(- 4)	662	167	194	140	1.38	3.77	4.74	1.20	1.39
-15	(+ 5)	878	221	257	162	1.54	5.01	5.40	1.36	1.58
-10	(+14)	1137	287	333	186	1.72	6.52	6.11	1.54	1.79

### F - EXTERNAL CHARACTERISTICS

1 Base plate	Universal		
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 42°		
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 parallel to Base Plate		
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 42°		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		