

COMPRESSOR DEFINITION

Designation	EM 2U60HLP
Nominal Voltage/Frequency	115-127 V 60 Hz
Engineering Number	513305518

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-134a		
3 Nominal voltage and frequency	115-127 / 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	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	-	103 to 140 V
8.2 LBP (43°C Ambient temperature)	Static	-	103 to 140 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 ²] (202 psig)	/ °C - °F
9.2 Peak	15.9	[kgf/cm ²] (226 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1/5	[hp]
2 Displacement	5.54	[cm ³] (0.338 cu.in)
2.1 Bore [mm]	21.000	
2.2 Stroke [mm]	16.000	
3 Lubricant charge	150	[ml] (5.07 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ESTER / ISO10	
4 Weight (with oil charge)	8.19	[kg] (18.06 lb.)
5 Nitrogen charge	0.2 to 0.3	[kgf/cm ²] (2.84 to 4.27 psig)

C - ELETRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	115-127 V 60 Hz 1 ~ (Single phase)	
2 Starting device type	PTC	
2.1 Starting device	8EA14D7/QPS2-A4R7MB4	
3 Start capacitor	124-149(220)	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	CP4TMC460N61	
6 Start winding resistance	3.18	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	3.06	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	17.23	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	-	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (60 Hz)	-	[A] - Measured according to UL 984
11 Approval boards certification		

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]
650	164	190	121		3.69	5.39	1.36	1.58

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)	381	96	112	80	1.35	2.16	4.77	1.20	1.40
-30	(-22)	517	130	152	92	1.42	2.93	5.63	1.42	1.65
-25	(-13)	686	173	201	105	1.50	3.90	6.51	1.64	1.91
-20	(- 4)	893	225	262	119	1.58	5.09	7.45	1.88	2.18
-15	(+ 5)	1144	288	335	135	1.69	6.53	8.46	2.13	2.48
-10	(+14)	1444	364	423	151	1.80	8.27	9.56	2.41	2.80

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)	346	87	101	82	1.37	1.95	4.23	1.07	1.24
-30	(-22)	476	120	140	96	1.44	2.70	5.00	1.26	1.46
-25	(-13)	638	161	187	111	1.53	3.62	5.77	1.45	1.69
-20	(- 4)	835	210	245	127	1.63	4.75	6.57	1.66	1.93
-15	(+ 5)	1073	270	314	144	1.75	6.13	7.42	1.87	2.17
-10	(+14)	1358	342	398	162	1.88	7.78	8.33	2.10	2.44

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)	303	76	89	81	1.36	1.71	3.73	0.94	1.09
-30	(-22)	433	109	127	97	1.45	2.45	4.46	1.13	1.31
-25	(-13)	591	149	173	115	1.56	3.35	5.17	1.30	1.52
-20	(- 4)	782	197	229	134	1.68	4.45	5.88	1.48	1.72
-15	(+ 5)	1012	255	297	154	1.82	5.78	6.60	1.66	1.94
-10	(+14)	1286	324	377	174	1.97	7.37	7.37	1.86	2.16

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)	239	60	70	75	1.33	1.35	3.15	0.79	0.92
-30	(-22)	372	94	109	95	1.43	2.11	3.89	0.98	1.14
-25	(-13)	531	134	156	116	1.56	3.02	4.57	1.15	1.34
-20	(- 4)	721	182	211	138	1.70	4.10	5.23	1.32	1.53
-15	(+ 5)	947	239	277	161	1.87	5.40	5.88	1.48	1.72
-10	(+14)	1214	306	356	186	2.05	6.96	6.55	1.65	1.92

F - EXTERNAL CHARACTERISTICS

1 Base plate	European Standard EUEM		
2 Tray holder	No		
3 Connectors			
3.1 SUCTION	6.1 +0.10/+0.00	[mm]	(0.240" +0.004"/+0.000")
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 parallel BP+24°to Back		
3.3 PROCESS	6.1 +0.10/+0.00	[mm]	(0.240" +0.004"/+0.000")
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		