

COMPRESSOR DEFINITION

Designation	EM 2U30HLP
Nominal Voltage/Frequency	115-127 V 60 Hz
Engineering Number	513305527

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	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 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	1/10	[hp]
2 Displacement	3.00	[cm ³] (0.183 cu.in)
2.1 Bore [mm]	19.000	
2.2 Stroke [mm]	10.600	
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)	7.3	[kg] (16.09 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	7M4R7MD3/8EA14C3/8EA14E63/8EA21C3/8EA21E63/8M4R7M	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	12(164)	[µF(VAC minimum)]
5 Motor protection	CP4TMC283N61	
6 Start winding resistance	6.95	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	10.80	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	5.95	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	1.35	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (60 Hz)	1.65	[A] - Measured according to UL 984
11 Approval boards certification	IMTRO - TUV	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @127V60Hz			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]
322	81	94	68	0.59	1.83	4.76	1.20	1.39

E - PERFORMANCE - CURVES

TEST CONDITIONS: @127V60Hz		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)	203	51	59	51	0.39	1.15	3.99	1.01	1.17
-30 (-22)	266	67	78	57	0.43	1.51	4.62	1.16	1.35
-25 (-13)	366	92	107	65	0.47	2.08	5.56	1.40	1.63
-20 (- 4)	495	125	145	74	0.52	2.82	6.71	1.69	1.97
-15 (+ 5)	645	163	189	82	0.58	3.68	7.96	2.01	2.33
-10 (+14)	808	204	237	89	0.62	4.63	9.21	2.32	2.70

TEST CONDITIONS: @127V60Hz		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)	194	49	57	53	0.40	1.10	3.69	0.93	1.08
-30 (-22)	240	61	70	58	0.43	1.36	4.14	1.04	1.21
-25 (-13)	327	82	96	66	0.48	1.86	4.91	1.24	1.44
-20 (- 4)	446	113	131	75	0.54	2.54	5.89	1.48	1.72
-15 (+ 5)	591	149	173	85	0.60	3.37	6.96	1.75	2.04
-10 (+14)	753	190	221	94	0.67	4.31	8.02	2.02	2.35

TEST CONDITIONS: @127V60Hz		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)	173	44	51	53	0.39	0.98	3.26	0.82	0.96
-30 (-22)	204	51	60	58	0.42	1.15	3.60	0.91	1.05
-25 (-13)	279	70	82	66	0.48	1.58	4.24	1.07	1.24
-20 (- 4)	391	99	115	76	0.54	2.23	5.09	1.28	1.49
-15 (+ 5)	532	134	156	88	0.62	3.04	6.02	1.52	1.77
-10 (+14)	694	175	203	100	0.70	3.98	6.95	1.75	2.04

E - PERFORMANCE - CURVES

TEST CONDITIONS: @127V60Hz		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)	139	35	41	50	0.38	0.79	2.74	0.69	0.80
-30	(-22)	156	39	46	55	0.41	0.88	3.00	0.76	0.88
-25	(-13)	222	56	65	64	0.46	1.26	3.56	0.90	1.04
-20	(- 4)	329	83	96	75	0.54	1.87	4.33	1.09	1.27
-15	(+ 5)	468	118	137	89	0.63	2.67	5.18	1.31	1.52
-10	(+14)	632	159	185	105	0.74	3.62	6.02	1.52	1.76

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 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		