

COMPRESSOR DEFINITION

Designation	EM 3D60HLT+
Nominal Voltage/Frequency	115-127 V 60 Hz
Engineering Number	513301712

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	1/4	[hp]
2 Displacement	5.19	[cm ³] (0.317 cu.in)
2.1 Bore [mm]	21.000	
2.2 Stroke [mm]	15.000	
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)	7.6	[kg] (16.75 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	TSD	
2.1 Starting device	TSD2-115V0.6	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	12(200)	[µF(VAC minimum)]
5 Motor protection	4TM427KFBYY-53	
6 Start winding resistance	6.03	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	4.53	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	9.39	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	1.71	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (60 Hz)	1.82	[A] - Measured according to UL 984
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]
637	161	187	102	0.89	3.62	6.25	1.58	1.83

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)	345	87	101	65	0.51	1.95	5.31	1.34	1.56	
-30 (-22)	491	124	144	77	0.59	2.78	6.41	1.61	1.88	
-25 (-13)	649	164	190	87	0.67	3.69	7.49	1.89	2.19	
-20 (- 4)	831	209	244	97	0.75	4.73	8.58	2.16	2.51	
-15 (+ 5)	1048	264	307	107	0.83	5.98	9.70	2.45	2.84	
-10 (+14)	1312	331	384	119	0.92	7.52	10.89	2.74	3.19	

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)	317	80	93	68	0.53	1.80	4.66	1.17	1.36	
-30 (-22)	467	118	137	82	0.63	2.65	5.68	1.43	1.66	
-25 (-13)	625	157	183	95	0.73	3.55	6.64	1.67	1.95	
-20 (- 4)	803	202	235	107	0.82	4.57	7.57	1.91	2.22	
-15 (+ 5)	1013	255	297	119	0.92	5.78	8.50	2.14	2.49	
-10 (+14)	1267	319	371	133	1.03	7.26	9.46	2.38	2.77	

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)	252	64	74	63	0.50	1.43	3.93	0.99	1.15	
-30 (-22)	410	103	120	82	0.64	2.32	4.95	1.25	1.45	
-25 (-13)	573	144	168	98	0.76	3.25	5.87	1.48	1.72	
-20 (- 4)	753	190	221	113	0.88	4.28	6.72	1.69	1.97	
-15 (+ 5)	962	242	282	129	1.00	5.49	7.53	1.90	2.21	
-10 (+14)	1211	305	355	145	1.13	6.94	8.33	2.10	2.44	

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)	149	38	44	51	0.42	0.84	2.99	0.75	0.88
-30	(-22)	321	81	94	75	0.59	1.82	4.08	1.03	1.20
-25	(-13)	494	125	145	96	0.75	2.81	5.04	1.27	1.48
-20	(- 4)	681	172	200	116	0.90	3.88	5.88	1.48	1.72
-15	(+ 5)	894	225	262	135	1.05	5.10	6.65	1.68	1.95
-10	(+14)	1144	288	335	156	1.21	6.55	7.37	1.86	2.16

F - EXTERNAL CHARACTERISTICS

1 Base plate	Universal		
2 Tray holder	No		
3 Connectors			
3.1 SUCTION	8.2 +0.12/-0.08	[mm]	(0.323" +0.005"/-0.003")
3.1.1 Material	Copper		
3.1.2 Shape	Straight		
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	Straight		
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	Straight		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		