

COMPRESSOR DEFINITION

Designation	EG U110HLCW
Nominal Voltage/Frequency	220-240 V 50-60 Hz
Engineering Number	513700243

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-134a		
3 Nominal voltage and frequency	220-240 / 50-60	[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/Fan	198 to 255 V	198 to 242 V
8.2 LBP (43°C Ambient temperature)	Static/Fan	198 to 255 V	198 to 242 V
8.3 HBP (32°C Ambient temperature)	-	-	-
8.4 HBP (43°C Ambient temperature)	-	-	-
9 Maximum condensing pressures/temperature			
9.1 Operating (gauge)	16.2	[kgf/cm ²] (230 psig)	/ °C - °F
9.2 Peak (gauge)	20.6	[kgf/cm ²] (293 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1/3	[hp]
2 Displacement	9.50	[cm ³] (0.580 cu.in)
2.1 Bore [mm]	24.000	
2.2 Stroke [mm]	21.000	
3 Lubricant charge	280	[ml] (9.47 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ESTER / ISO10	
4 Weight (with oil charge)	11.2	[kg] (24.69 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	220-240 V 50-60 Hz 1 ~ (Single phase)	
2 Starting device type	PTC	
2.1 Starting device	7M220MD3/8M220MD3	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	5(350)	[µF(VAC minimum)]
5 Motor protection	4TM293RFBYY-53	
6 Start winding resistance	13.50	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	10.00	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50/60 Hz)	-	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50/60 Hz)	-	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50/60 Hz)	-	[A] - Measured according to UL 984
11 Approval boards certification	VDE	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @220V50Hz			ASHRAELBP32 Fan		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]
935	236	274	172	0.95	5.31	5.44	1.37	1.59

TEST CONDITIONS: @220V60Hz			ASHRAELBP32 Fan		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]
1110	280	325	200	0.96	6.31	5.54	1.40	1.62

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V50Hz			ASHRAE32 Fan		(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)	495	125	145	115	0.72	2.80	4.31	1.09	1.26
-30 (-22)	699	176	205	138	0.82	3.96	5.05	1.27	1.48
-25 (-13)	931	235	273	161	0.92	5.28	5.79	1.46	1.70
-20 (- 4)	1205	304	353	183	1.01	6.86	6.58	1.66	1.93
-15 (+ 5)	1540	388	451	206	1.09	8.79	7.46	1.88	2.19
-10 (+14)	1952	492	572	230	1.19	11.19	8.46	2.13	2.48

TEST CONDITIONS: @220V50Hz			ASHRAE32 Fan		(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)	409	103	120	110	0.70	2.31	3.71	0.93	1.09
-30 (-22)	614	155	180	138	0.82	3.48	4.44	1.12	1.30
-25 (-13)	844	213	247	164	0.93	4.79	5.14	1.30	1.51
-20 (- 4)	1116	281	327	191	1.04	6.35	5.85	1.47	1.71
-15 (+ 5)	1447	365	424	219	1.15	8.26	6.62	1.67	1.94
-10 (+14)	1853	467	543	247	1.27	10.62	7.47	1.88	2.19

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V50Hz		ASHRAE32 Fan			(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)	309	78	91	100	0.67	1.75	3.10	0.78	0.91	
-30 (-22)	516	130	151	132	0.80	2.92	3.85	0.97	1.13	
-25 (-13)	747	188	219	163	0.92	4.24	4.55	1.15	1.33	
-20 (- 4)	1018	257	298	195	1.05	5.79	5.23	1.32	1.53	
-15 (+ 5)	1348	340	395	228	1.18	7.69	5.92	1.49	1.74	
-10 (+14)	1751	441	513	262	1.33	10.03	6.67	1.68	1.96	

TEST CONDITIONS: @220V60Hz		ASHRAE32 Fan			(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)	567	143	166	128	0.61	3.20	4.43	1.12	1.30	
-30 (-22)	820	207	240	158	0.77	4.65	5.17	1.30	1.52	
-25 (-13)	1111	280	325	188	0.92	6.31	5.90	1.49	1.73	
-20 (- 4)	1455	367	426	219	1.06	8.28	6.65	1.68	1.95	
-15 (+ 5)	1869	471	548	250	1.20	10.67	7.46	1.88	2.19	
-10 (+14)	2370	597	694	282	1.34	13.58	8.37	2.11	2.45	

TEST CONDITIONS: @220V60Hz		ASHRAE32 Fan			(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)	466	117	137	121	0.59	2.64	3.86	0.97	1.13	
-30 (-22)	710	179	208	155	0.76	4.03	4.58	1.15	1.34	
-25 (-13)	992	250	291	189	0.92	5.63	5.25	1.32	1.54	
-20 (- 4)	1328	335	389	225	1.08	7.56	5.91	1.49	1.73	
-15 (+ 5)	1736	437	509	262	1.25	9.91	6.60	1.66	1.93	
-10 (+14)	2232	562	654	302	1.44	12.79	7.36	1.85	2.16	

TEST CONDITIONS: @220V60Hz		ASHRAE32 Fan			(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)	366	92	107	109	0.53	2.07	3.33	0.84	0.98	
-30 (-22)	593	149	174	145	0.71	3.36	4.04	1.02	1.18	
-25 (-13)	859	217	252	184	0.89	4.88	4.67	1.18	1.37	
-20 (- 4)	1181	298	346	226	1.08	6.72	5.26	1.33	1.54	
-15 (+ 5)	1575	397	462	270	1.28	8.99	5.85	1.48	1.72	
-10 (+14)	2059	519	603	317	1.50	11.80	6.48	1.63	1.90	

F - EXTERNAL CHARACTERISTICS

1 Base plate	Universal EG/F/AMEM version 2		
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	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)	4.9 +0.02/-0.05	[mm]	(0.193" +0.001"/-0.002")
3.5 Connector sealing	Rubber Plugs		