

COMPRESSOR DEFINITION

Designation	EM X3134U
Nominal Voltage/Frequency	220-240 V 50 Hz
Engineering Number	513300779

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-290		
3 Nominal voltage and frequency	220-240 / 50	[V / Hz]	
4 Application type	Low-Medium Back Pressure (Light Commercial - Curves until T.Evap -4		
4.1 Evaporating temperature range	-40°C to 0°C	(-40°F to 32°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)	Fan	187 to 255 V	-
8.2 LBP (43°C Ambient temperature)	Fan	187 to 255 V	-
8.3 HBP (32°C Ambient temperature)	-	-	-
8.4 HBP (43°C Ambient temperature)	-	-	-
9 Maximum condensing temperature			
9.1 Operating	18.4	[kgf/cm ²] (262 psig)	/ °C - °F
9.2 Peak	20.6	[kgf/cm ²] (293 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation		[hp]
2 Displacement	7.95	[cm ³] (0.485 cu.in)
2.1 Bore [mm]	22.500	
2.2 Stroke [mm]	20.000	
3 Lubricant charge	150	[ml] (5.07 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ESTER / ISO22	
4 Weight (with oil charge)	7.6	[kg] (16.75 lb.)
5 Nitrogen charge	-	[kgf/cm ²]

C - ELETRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	220-240 V 50 Hz 1 ~ (Single phase)	
2 Starting device type	PTC	
2.1 Starting device	8EA17C3/QPS2-A22MD3	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	5(450)	[µF(VAC minimum)]
5 Motor protection	DRB35K61A2	
6 Start winding resistance		[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance		[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	10.50	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50 Hz)	-	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50 Hz)	-	[A] - Measured according to UL 984
11 Approval boards certification	CCC	

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]	
1385	349	406	246	1.33	4.12	5.63	1.42	1.65	

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V50Hz		ASHRAE32 Fan				(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]
-40	(-40)	745	188	218	134	0.94	2.20	5.58	1.41	1.64
-35	(-31)	997	251	292	168	1.05	2.95	5.87	1.48	1.72
-30	(-22)	1307	329	383	199	1.15	3.88	6.48	1.63	1.90
-25	(-13)	1670	421	489	225	1.23	4.97	7.37	1.86	2.16
-20	(- 4)	2080	524	609	246	1.31	6.21	8.52	2.15	2.50
-15	(+ 5)	2532	638	742	262	1.37	7.59	9.87	2.49	2.89
-10	(+14)	3020	761	885	271	1.41	9.09	11.41	2.88	3.34
-5	(+23)	3539	892	1037	274	1.43	10.70	13.10	3.30	3.84
0	(+32)	4083	1029	1196	268	1.42	12.41	14.91	3.76	4.37

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]
-40	(-40)	714	180	209	150	0.99	2.11	4.85	1.22	1.42
-35	(-31)	892	225	261	180	1.09	2.64	4.97	1.25	1.46
-30	(-22)	1139	287	334	209	1.19	3.38	5.37	1.35	1.57
-25	(-13)	1449	365	425	236	1.29	4.31	6.01	1.51	1.76
-20	(- 4)	1816	458	532	261	1.38	5.42	6.86	1.73	2.01
-15	(+ 5)	2236	563	655	283	1.46	6.70	7.88	1.99	2.31
-10	(+14)	2702	681	792	301	1.54	8.13	9.04	2.28	2.65
-5	(+23)	3209	809	940	314	1.60	9.70	10.31	2.60	3.02
0	(+32)	3751	945	1099	323	1.64	11.40	11.66	2.94	3.42

E - PERFORMANCE - CURVES

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]
-40	(-40)	688	173	202	162	1.02	2.03	4.25	1.07	1.24
-35	(-31)	801	202	235	189	1.11	2.37	4.30	1.08	1.26
-30	(-22)	993	250	291	216	1.21	2.94	4.59	1.16	1.35
-25	(-13)	1258	317	369	245	1.32	3.74	5.08	1.28	1.49
-20	(- 4)	1591	401	466	273	1.43	4.75	5.73	1.45	1.68
-15	(+ 5)	1986	501	582	301	1.55	5.95	6.52	1.64	1.91
-10	(+14)	2438	614	714	328	1.66	7.33	7.41	1.87	2.17
-5	(+23)	2941	741	862	352	1.76	8.89	8.37	2.11	2.45
0	(+32)	3490	879	1023	374	1.86	10.61	9.35	2.36	2.74

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]
-40	(-40)	603	152	177	167	1.00	1.78	3.47	0.87	1.02
-35	(-31)	659	166	193	190	1.09	1.95	3.56	0.90	1.04
-30	(-22)	804	202	235	216	1.20	2.38	3.84	0.97	1.13
-25	(-13)	1032	260	302	246	1.32	3.07	4.28	1.08	1.25
-20	(- 4)	1339	337	392	278	1.46	3.99	4.85	1.22	1.42
-15	(+ 5)	1718	433	503	313	1.60	5.14	5.51	1.39	1.61
-10	(+14)	2164	545	634	348	1.75	6.51	6.22	1.57	1.82
-5	(+23)	2671	673	783	383	1.91	8.08	6.96	1.75	2.04
0	(+32)	3234	815	948	419	2.06	9.83	7.69	1.94	2.25

F - EXTERNAL CHARACTERISTICS

1 Base plate	Universal
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 40° up + 45° to Back
3.2 DISCHARGE	4.9 +0.10/-0.05 [mm] (0.193" +0.004"/-0.002")
3.2.1 Material	Copper
3.2.2 Shape	Slanted 42° up + 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 40° up + 45° to Back
3.4 Oil cooler (Copper)	No [mm]
3.5 Connector sealing	Rubber Plugs