

COMPRESSOR DEFINITION

Designation	EM X3125U
Nominal Voltage/Frequency	220-240 V 50 Hz
Engineering Number	513300752

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-290		
2.1 Max Refrigerant Charge	150 [g]		
3 Nominal voltage and frequency	220-240 / 50	[V / Hz]	
4 Application type	Low-Medium (Plus) Back Pressure		
4.1 Evaporating temperature range	-35°C to 5°C	(-31°F to 41°F)	
5 Motor type	RSCR		
6 Starting torque	LST - Low Starting Torque		
7 Expansion device	Capillary tube		
8 Compressor cooling	Operating voltage range		
Application	Ambient Temp.	Cooling	50 Hz 60 Hz
L/MBP	43 °C	Fan	198 to 255 V -
9 Maximum condensing temperature			
9.1 Operating	[60]	[°C]	
9.2 Peak	[70]	[°C]	
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation		[hp]
2 Displacement	6,09	[cm ³] (0.372 cu.in)
2.1 Bore [mm]	21,000	
2.2 Stroke [mm]	17,600	
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)	7,65	[kg] (16.87 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	8EA17C3/8EA17E61/8EA17E62/8EA17E63/QPS2-A22MD3	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	5(450)	[µF(VAC minimum)]
5 Motor protection	BT74-120A61D3	
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 (50/60 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	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]	
1000	252	293	177	0,84	2,98	5,67	1,43	1,66	

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]
-35	(-31)	702	177	206	122	0,60	2,15	5,73	1,44	1,68
-30	(-22)	874	220	256	135	0,66	1,85	6,44	1,62	1,89
-25	(-13)	1085	273	318	148	0,71	2,76	7,30	1,84	2,14
-20	(- 4)	1338	337	392	161	0,77	4,28	8,34	2,10	2,44
-15	(+ 5)	1640	413	480	172	0,82	5,82	9,58	2,42	2,81
-10	(+14)	1993	502	584	181	0,86	6,77	11,07	2,79	3,24
-5	(+23)	2402	605	704	189	0,90	6,56	12,81	3,23	3,76
0	(+32)	2871	724	841	194	0,92	4,57	14,85	3,74	4,35
+5	(+41)	3406	858	998	197	0,93	0,21	17,20	4,33	5,04

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)	636	160	186	129	0,63	2,02	4,99	1,26	1,46
-30	(-22)	810	204	237	145	0,70	1,65	5,61	1,41	1,64
-25	(-13)	1020	257	299	160	0,77	2,51	6,33	1,59	1,85
-20	(- 4)	1271	320	373	176	0,84	4,01	7,16	1,81	2,10
-15	(+ 5)	1567	395	459	190	0,91	5,55	8,14	2,05	2,39
-10	(+14)	1912	482	560	204	0,97	6,53	9,29	2,34	2,72
-5	(+23)	2311	582	677	216	1,02	6,36	10,64	2,68	3,12
0	(+32)	2767	697	811	227	1,07	4,44	12,22	3,08	3,58
+5	(+41)	3286	828	963	235	1,11	0,17	14,05	3,54	4,12

E - PERFORMANCE - CURVES

TEST CONDITIONS:		ASHRAE32			(Condensing temperature 55°C (+131°F))					
@220V50Hz		Fan								
Evaporating temperature		Cooling capacity			Power consumption	Current consumption	Gas flow rate	EFFICIENCY RATE		
		+/- 5%			+/- 5%	+/- 5%	+/- 5%	+/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	(-31)	586	148	172	132	0,64	1,90	4,49	1,13	1,32
-30	(-22)	759	191	222	150	0,73	1,46	5,10	1,29	1,49
-25	(-13)	965	243	283	169	0,81	2,27	5,74	1,45	1,68
-20	(- 4)	1209	305	354	188	0,89	3,75	6,43	1,62	1,88
-15	(+ 5)	1496	377	438	207	0,98	5,29	7,20	1,81	2,11
-10	(+14)	1829	461	536	225	1,06	6,29	8,08	2,04	2,37
-5	(+23)	2213	558	649	242	1,14	6,16	9,10	2,29	2,67
0	(+32)	2653	668	777	257	1,21	4,31	10,29	2,59	3,01
+5	(+41)	3152	794	924	271	1,28	0,14	11,66	2,94	3,42

TEST CONDITIONS:		ASHRAE32			(Condensing temperature 65°C (+149°F))					
@220V50Hz		Fan								
Evaporating temperature		Cooling capacity			Power consumption	Current consumption	Gas flow rate	EFFICIENCY RATE		
		+/- 5%			+/- 5%	+/- 5%	+/- 5%	+/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	(-31)	522	132	153	132	0,65	1,73	3,84	0,97	1,13
-30	(-22)	690	174	202	154	0,74	1,22	4,50	1,13	1,32
-25	(-13)	888	224	260	176	0,84	1,99	5,12	1,29	1,50
-20	(- 4)	1121	283	329	198	0,94	3,44	5,73	1,45	1,68
-15	(+ 5)	1395	351	409	221	1,05	4,97	6,37	1,60	1,87
-10	(+14)	1712	431	502	244	1,15	5,99	7,05	1,78	2,06
-5	(+23)	2078	524	609	266	1,26	5,91	7,80	1,97	2,29
0	(+32)	2497	629	732	287	1,35	4,13	8,65	2,18	2,54
+5	(+41)	2973	749	871	307	1,45	0,04	9,63	2,43	2,82

F - EXTERNAL CHARACTERISTICS

1 Base plate	Universal		
2 Tray holder	Yes		
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 + 0° 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 0° 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		