

COMPRESSOR DEFINITION

Designation	EM T2125U
Nominal Voltage/Frequency	220-240 V 50 Hz
Engineering Number	872EA92

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 Back Pressure R290		
4.1 Evaporating temperature range	-40°C to -10°C	(-40°F to 14°F)	
5 Motor type	CSIR		
6 Starting torque	HST - High starting torque		
7 Expansion device	Capillary tube or Expansion valve		
8 Compressor cooling	Operating voltage range		
		50 Hz	60 Hz
8.1 LBP (32°C Ambient temperature)	-	-	-
8.2 LBP (43°C Ambient temperature)	-	-	-
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	1/3+	[hp]
2 Displacement	5.96	[cm ³] (0.364 cu.in)
2.1 Bore [mm]	22.500	
2.2 Stroke [mm]	15.000	
3 Lubricant charge	180	[ml] (6.09 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ESTER / ISO22	
4 Weight (with oil charge)	7.8	[kg] (17.20 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	Current Relay	
2.1 Starting device	MTRP-36	
3 Start capacitor	53-64(330)	[μF(VAC minimum)]
4 Run capacitor	-	[μF(VAC minimum)]
5 Motor protection	MSP61AMK-3259	
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)	9.80	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50 Hz)	-	[A]
10 FLA - Full Load Amperage HBP (50 Hz)	-	[A]
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]
1028	259	301	204	1.42	3.06	5.04	1.27	1.48

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)	522	131	153	130	1.26	1.54	4.00	1.01	1.17
-35 (-31)	667	168	196	146	1.29	1.97	4.58	1.15	1.34
-30 (-22)	846	213	248	160	1.32	2.51	5.27	1.33	1.54
-25 (-13)	1058	267	310	174	1.35	3.15	6.07	1.53	1.78
-20 (- 4)	1303	328	382	187	1.38	3.89	6.96	1.75	2.04
-15 (+ 5)	1582	399	463	199	1.42	4.74	7.95	2.00	2.33
-10 (+14)	1893	477	555	209	1.45	5.69	9.02	2.27	2.64

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)	470	118	138	133	1.27	1.39	3.54	0.89	1.04
-35 (-31)	614	155	180	151	1.30	1.82	4.08	1.03	1.20
-30 (-22)	793	200	232	168	1.34	2.35	4.71	1.19	1.38
-25 (-13)	1006	254	295	186	1.38	2.99	5.41	1.36	1.58
-20 (- 4)	1253	316	367	203	1.43	3.74	6.18	1.56	1.81
-15 (+ 5)	1535	387	450	219	1.48	4.60	7.01	1.77	2.05
-10 (+14)	1850	466	542	235	1.53	5.56	7.90	1.99	2.31

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)	428	108	125	135	1.27	1.26	3.15	0.79	0.92
-35 (-31)	564	142	165	155	1.31	1.67	3.65	0.92	1.07
-30 (-22)	735	185	215	175	1.36	2.18	4.21	1.06	1.23
-25 (-13)	942	237	276	196	1.41	2.80	4.82	1.21	1.41
-20 (- 4)	1185	299	347	217	1.47	3.53	5.46	1.38	1.60
-15 (+ 5)	1462	368	428	238	1.53	4.38	6.14	1.55	1.80
-10 (+14)	1774	447	520	259	1.60	5.34	6.84	1.72	2.01

F - EXTERNAL CHARACTERISTICS

1 Base plate	European Standard		
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 42°		
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 +0.08/-0.08	[mm]	(0.236" +0.003"/-0.003")
3.3.1 Material	Copper(OD)		
3.3.2 Shape	Slanted 42°		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		