

COMPRESSOR DEFINITION

Designation	EM T2125U
Nominal Voltage/Frequency	220-240 V 50 Hz
Engineering Number	513306233

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 - Hight 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)	7.75	[kg] (17.09 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 Hz 1 ~ (Single phase)	
2 Starting device type	Current Relay	
2.1 Starting device	MTRP-36/QL2-4.35 **	
3 Start capacitor	53-64(330)	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	DRB180K52AXF	
6 Start winding resistance	19.15	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	11.30	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	-	[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	VDE	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @220V50Hz			EN12900LBP_HH Fan		Evaporating temperature (Condensing temperature		-35°C (-31°F) 40°C (104°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]
604	152	177	148	1.30	1.91	4.08	1.03	1.20

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V50Hz			EN12900HH 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)	512	129	150	130	1.26	1.55	3.92	0.99	1.15
-35	(-31)	655	165	192	146	1.29	1.98	4.49	1.13	1.32
-30	(-22)	830	209	243	160	1.32	2.52	5.17	1.30	1.52
-25	(-13)	1037	261	304	174	1.35	3.16	5.95	1.50	1.74
-20	(- 4)	1275	321	374	187	1.38	3.90	6.81	1.72	2.00
-15	(+ 5)	1546	390	453	199	1.42	4.74	7.77	1.96	2.28
-10	(+14)	1850	466	542	209	1.45	5.70	8.82	2.22	2.58

TEST CONDITIONS: @220V50Hz			EN12900HH 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)	423	106	124	133	1.27	1.39	3.19	0.80	0.93
-35	(-31)	553	139	162	151	1.30	1.83	3.68	0.93	1.08
-30	(-22)	714	180	209	168	1.34	2.37	4.23	1.07	1.24
-25	(-13)	904	228	265	186	1.38	3.01	4.86	1.22	1.42
-20	(- 4)	1125	284	330	203	1.43	3.75	5.54	1.40	1.62
-15	(+ 5)	1376	347	403	219	1.48	4.61	6.28	1.58	1.84
-10	(+14)	1658	418	486	235	1.53	5.58	7.08	1.78	2.08

TEST CONDITIONS: @220V50Hz			EN12900HH 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)	349	88	102	135	1.27	1.27	2.56	0.65	0.75
-35	(-31)	460	116	135	155	1.31	1.68	2.98	0.75	0.87
-30	(-22)	600	151	176	175	1.36	2.20	3.44	0.87	1.01
-25	(-13)	768	193	225	196	1.41	2.82	3.93	0.99	1.15
-20	(- 4)	963	243	282	217	1.47	3.56	4.44	1.12	1.30
-15	(+ 5)	1187	299	348	238	1.53	4.41	4.99	1.26	1.46
-10	(+14)	1440	363	422	259	1.60	5.37	5.55	1.40	1.63

F - EXTERNAL CHARACTERISTICS

1 Base plate	European Standard EUEM		
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 42° up + 45° to Back		
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	Slanted parallel BP+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 45° up + 45° to Back		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		