COMPRESSOR DEFINITION

Designation	**EM T2130U**
Nominal Voltage/Frequency	**220-240 V 50 Hz**
Engineering Number	**513306231**

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 Expantion device	Capillary tube or Expansion valve		
8 Compressor cooling		Operating voltage range	
		50 Hz	60 Hz
8.1 LBP (32ºC Ambient temperature)	-	-	-
8.2 LBP (43ºC Ambient temperature)	-	-	-
8.3 HBP (32ºC Ambient temperature)	-	-	-
8.4 HBP (43ºC Ambient temperature)	-	-	-
9 Maximum condensing temperature			
9.1 Operating	18.4	[kgf/cm²] (262 psig)	/ ºC - ºF
9.2 Peak	20.6	[kgf/cm²] (293 psig)	/ ºC - ºF
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1/2-	[hp]
2 Displacement	6.76	[cm³] (0.413 cu.in)
2.1 Bore [mm]	22.500	
2.2 Stroke [mm]	17.000	
3 Lubricant charge	180	[ml] (6.09 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ALQUILB / ISO22	
4 Weight (with oil charge)	8	[kg] (17.64 lb.)
5 Nitrogen charge	0.2 to 0.3	[kgf/cm²] (2.84 to 4.27 psig)

C - ELECTRICAL 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	MTRPH-0025-65/QL2-5.15 **	
3 Start capacitor	72-88(330)	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	DRB200L52AXF	
6 Start winding resistance	16.95	[Ω at 25ºC (77ºF)] +/- 8%
7 Run winding resistance	10.10	[Ω at 25ºC (77ºF)] +/- 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	CE - UKCA - VDE	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS:			**EN12900LBP_HH**		Evaporating temperature		**-35°C (-31°F)**	
@220V50Hz			**Fan**		(Condensing temperature		**40°C (104°F))**	
Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
669	169	196	175	1.50	2.12	3.82	0.96	1.12

E - PERFORMANCE - CURVES

TEST CONDITIONS:		**EN12900HH**					(Condensing temperature **35ºC (+95ºF))**			
@220V50Hz		**Fan**								
Evaporating temperature		Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
°C	**(°F)**	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-40	**(-40)**	558	141	164	155	1.46	1.69	3.60	0.91	1.06
-35	**(-31)**	720	181	211	171	1.49	2.18	4.20	1.06	1.23
-30	**(-22)**	916	231	269	188	1.52	2.78	4.88	1.23	1.43
-25	**(-13)**	1149	289	337	204	1.56	3.50	5.63	1.42	1.65
-20	**(- 4)**	1418	357	415	220	1.60	4.33	6.45	1.63	1.89
-15	**(+ 5)**	1724	434	505	235	1.65	5.29	7.34	1.85	2.15
-10	**(+14)**	2069	521	606	249	1.69	6.38	8.30	2.09	2.43

TEST CONDITIONS:		**EN12900HH**					(Condensing temperature **45ºC (+113ºF))**			
@220V50Hz		**Fan**								
Evaporating temperature		Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
°C	**(°F)**	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-40	**(-40)**	468	118	137	159	1.45	1.54	2.97	0.75	0.87
-35	**(-31)**	615	155	180	178	1.49	2.03	3.46	0.87	1.01
-30	**(-22)**	795	200	233	198	1.54	2.63	4.01	1.01	1.18
-25	**(-13)**	1007	254	295	218	1.59	3.35	4.60	1.16	1.35
-20	**(- 4)**	1253	316	367	239	1.65	4.18	5.24	1.32	1.54
-15	**(+ 5)**	1535	387	450	259	1.71	5.14	5.93	1.49	1.74
-10	**(+14)**	1852	467	543	279	1.78	6.24	6.65	1.67	1.95

TEST CONDITIONS:		**EN12900HH**					(Condensing temperature **55ºC (+131ºF))**			
@220V50Hz		**Fan**								
Evaporating temperature		Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
°C	**(°F)**	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-40	**(-40)**	386	97	113	162	1.45	1.41	2.37	0.60	0.70
-35	**(-31)**	513	129	150	183	1.50	1.88	2.81	0.71	0.82
-30	**(-22)**	670	169	196	205	1.55	2.46	3.27	0.82	0.96
-25	**(-13)**	857	216	251	228	1.62	3.15	3.76	0.95	1.10
-20	**(- 4)**	1076	271	315	253	1.69	3.98	4.26	1.07	1.25
-15	**(+ 5)**	1327	334	389	278	1.77	4.93	4.77	1.20	1.40
-10	**(+14)**	1611	406	472	304	1.86	6.01	5.30	1.34	1.55

F - EXTERNAL CHARACTERISTICS

1 Base plate	European Standard EUEM		
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 42º 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 parallet 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		