COMPRESSOR DEFINITION

Designation	**EM T2117U**
Nominal Voltage/Frequency	**220-240 V 50 Hz**
Engineering Number	**513306244**

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	1/5	[hp]
2 Displacement	4.50	[cm³] (0.275 cu.in)
2.1 Bore [mm]	21.000	
2.2 Stroke [mm]	13.000	
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)	7.76	[kg] (17.11 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	MTRP-0015/QL2-3.76 **	
3 Start capacitor	43-53(330)	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	T0231/G6	
6 Start winding resistance	21.10	[Ω at 25ºC (77ºF)] +/- 8%
7 Run winding resistance	14.40	[Ω at 25ºC (77ºF)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	7.70	[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: **@220V50Hz**			**EN12900LBP_HH** **Static**		Evaporating temperature (Condensing temperature		**-35°C (-31°F)** **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]
420	106	123	109	0.91	1.33	3.85	0.97	1.13

E - PERFORMANCE - CURVES

TEST CONDITIONS: **EN12900HH** (Condensing temperature **35ºC (+95ºF))**
@220V50Hz **Static**

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)**	356	90	104	97	0.89	1.07	3.67	0.92	1.07
-35	**(-31)**	458	116	134	107	0.90	1.39	4.28	1.08	1.25
-30	**(-22)**	582	147	171	118	0.92	1.77	4.95	1.25	1.45
-25	**(-13)**	730	184	214	128	0.94	2.22	5.69	1.44	1.67
-20	**(- 4)**	905	228	265	138	0.97	2.76	6.56	1.65	1.92
-15	**(+ 5)**	1109	279	325	147	1.00	3.40	7.57	1.91	2.22
-10	**(+14)**	1345	339	394	153	1.04	4.15	8.77	2.21	2.57

TEST CONDITIONS: **EN12900HH** (Condensing temperature **45ºC (+113ºF))**
@220V50Hz **Static**

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)**	288	72	84	100	0.90	0.95	2.89	0.73	0.85
-35	**(-31)**	382	96	112	111	0.92	1.26	3.44	0.87	1.01
-30	**(-22)**	495	125	145	124	0.94	1.64	3.99	1.01	1.17
-25	**(-13)**	628	158	184	137	0.97	2.09	4.58	1.16	1.34
-20	**(- 4)**	784	198	230	149	1.01	2.62	5.24	1.32	1.54
-15	**(+ 5)**	966	243	283	161	1.05	3.24	6.00	1.51	1.76
-10	**(+14)**	1176	296	345	171	1.09	3.96	6.89	1.74	2.02

TEST CONDITIONS: **EN12900HH** (Condensing temperature **55ºC (+131ºF))**
@220V50Hz **Static**

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)**	222	56	65	99	0.89	0.81	2.23	0.56	0.65
-35	**(-31)**	309	78	91	113	0.92	1.13	2.74	0.69	0.80
-30	**(-22)**	411	103	120	128	0.96	1.50	3.22	0.81	0.94
-25	**(-13)**	529	133	155	144	1.00	1.95	3.68	0.93	1.08
-20	**(- 4)**	666	168	195	160	1.04	2.46	4.16	1.05	1.22
-15	**(+ 5)**	826	208	242	176	1.09	3.07	4.69	1.18	1.38
-10	**(+14)**	1010	255	296	190	1.15	3.77	5.31	1.34	1.56

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		