COMPRESSOR DEFINITION

Designation	**EM C3140U**
Nominal Voltage/Frequency	**220-240 V 50 Hz**
Engineering Number	**721TA50**

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-Medium Back Pressure (Commercial Compressors)		
4.1 Evaporating temperature range	-35°C to 0°C	(-31°F to 32°F)	
5 Motor type	RSCR		
6 Starting torque	LST - Low Starting Torque		
7 Expantion device	Capillary tube		
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	9.04	[cm³] (0.552 cu.in)
2.1 Bore [mm]	24.000	
2.2 Stroke [mm]	20.000	
3 Lubricant charge	150	[ml] (5.07 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ESTER / ISO10	
4 Weight (with oil charge)	8.2	[kg] (18.08 lb.)
5 Nitrogen charge	-	[kgf/cm²]

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	MI2021/V230	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	8(330)	[µF(VAC minimum)]
5 Motor protection	MRA-38172-3166	
6 Start winding resistance	13.30	[Ω at 25ºC (77ºF)] +/- 8%
7 Run winding resistance	9.25	[Ω at 25ºC (77ºF)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	10.30	[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		

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS:			**EN12900LBP**			Evaporating temperature		**-35°C (-31°F)**
@220V50Hz			**Fan**			(Condensing temperature		**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]
890	224	261	191	0.96	2.98	4.66	1.17	1.37

E - PERFORMANCE - CURVES

TEST CONDITIONS: **EN12900** (Condensing temperature **35ºC (+95ºF))**
@220V50Hz **Fan**

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)**	950	239	278	184	0.93	3.05	5.16	1.30	1.51
-30	**(-22)**	1195	301	350	206	1.02	3.85	5.83	1.47	1.71
-25	**(-13)**	1500	378	439	226	1.10	4.84	6.63	1.67	1.94
-20	**(- 4)**	1864	470	546	246	1.19	6.04	7.57	1.91	2.22
-15	**(+ 5)**	2287	576	670	266	1.27	7.45	8.61	2.17	2.52
-10	**(+14)**	2771	698	812	284	1.35	9.08	9.76	2.46	2.86
-5	**(+23)**	3313	835	971	301	1.43	10.94	11.00	2.77	3.22
0	**(+32)**	3915	987	1147	318	1.52	13.04	12.32	3.10	3.61

TEST CONDITIONS: **EN12900** (Condensing temperature **45ºC (+113ºF))**
@220V50Hz **Fan**

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)**	812	205	238	193	0.98	2.85	4.22	1.06	1.24
-30	**(-22)**	1033	260	303	219	1.08	3.64	4.74	1.19	1.39
-25	**(-13)**	1306	329	383	244	1.19	4.62	5.35	1.35	1.57
-20	**(- 4)**	1629	411	477	268	1.29	5.79	6.06	1.53	1.78
-15	**(+ 5)**	2004	505	587	292	1.39	7.16	6.85	1.73	2.01
-10	**(+14)**	2430	612	712	315	1.50	8.74	7.70	1.94	2.26
-5	**(+23)**	2907	733	852	338	1.60	10.54	8.61	2.17	2.52
0	**(+32)**	3435	866	1007	360	1.71	12.57	9.56	2.41	2.80

TEST CONDITIONS: **EN12900** (Condensing temperature **55ºC (+131ºF))**
@220V50Hz **Fan**

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)**	665	168	195	196	0.98	2.60	3.39	0.85	0.99
-30	**(-22)**	860	217	252	226	1.11	3.37	3.80	0.96	1.11
-25	**(-13)**	1097	276	321	256	1.24	4.31	4.29	1.08	1.26
-20	**(- 4)**	1377	347	403	285	1.37	5.44	4.83	1.22	1.41
-15	**(+ 5)**	1700	428	498	315	1.50	6.76	5.41	1.36	1.58
-10	**(+14)**	2065	520	605	344	1.64	8.28	6.02	1.52	1.76
-5	**(+23)**	2474	623	725	372	1.77	10.01	6.66	1.68	1.95
0	**(+32)**	2925	737	857	400	1.91	11.95	7.30	1.84	2.14

F - EXTERNAL CHARACTERISTICS

1 Base plate	European Standard		
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 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 0° up + 45° to Back		
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 43° up + 45° to Back		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		