COMPRESSOR DEFINITION

Designation	**EM C3140U**
Nominal Voltage/Frequency	**220-240 V 50 Hz**
Engineering Number	**711WA52**

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 / ISO22	
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	VDE	

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]
886	223	260	184	0.91	2.97	4.83	1.22	1.42

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)**	959	242	281	182	0.89	3.07	5.27	1.33	1.54
-30	**(-22)**	1217	307	357	203	0.98	3.92	6.00	1.51	1.76
-25	**(-13)**	1533	386	449	224	1.07	4.95	6.85	1.73	2.01
-20	**(- 4)**	1906	480	559	245	1.16	6.18	7.79	1.96	2.28
-15	**(+ 5)**	2337	589	685	265	1.25	7.61	8.82	2.22	2.58
-10	**(+14)**	2825	712	828	285	1.34	9.26	9.92	2.50	2.91
-5	**(+23)**	3370	849	988	304	1.43	11.13	11.08	2.79	3.25
0	**(+32)**	3973	1001	1164	324	1.52	13.23	12.28	3.09	3.60

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)**	837	211	245	188	0.91	2.94	4.46	1.12	1.31
-30	**(-22)**	1065	268	312	213	1.02	3.76	5.01	1.26	1.47
-25	**(-13)**	1344	339	394	238	1.13	4.75	5.63	1.42	1.65
-20	**(- 4)**	1673	422	490	264	1.25	5.94	6.32	1.59	1.85
-15	**(+ 5)**	2052	517	601	290	1.36	7.33	7.06	1.78	2.07
-10	**(+14)**	2482	625	727	316	1.48	8.93	7.84	1.97	2.30
-5	**(+23)**	2961	746	868	343	1.60	10.74	8.64	2.18	2.53
0	**(+32)**	3492	880	1023	369	1.72	12.78	9.46	2.38	2.77

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)**	700	177	205	198	0.95	2.73	3.53	0.89	1.04
-30	**(-22)**	903	228	265	225	1.07	3.54	4.02	1.01	1.18
-25	**(-13)**	1149	290	337	253	1.20	4.52	4.55	1.15	1.33
-20	**(- 4)**	1438	362	421	281	1.33	5.69	5.12	1.29	1.50
-15	**(+ 5)**	1771	446	519	311	1.47	7.05	5.70	1.44	1.67
-10	**(+14)**	2146	541	629	342	1.61	8.61	6.30	1.59	1.84
-5	**(+23)**	2565	646	752	373	1.75	10.38	6.88	1.73	2.02
0	**(+32)**	3027	763	887	405	1.89	12.37	7.45	1.88	2.18

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 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	Straight		
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 46°		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		