

COMPRESSOR DEFINITION

Designation	EM C1150U
Nominal Voltage/Frequency	220-240 V 50 Hz
Engineering Number	721RA80

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 Preeure R290 LC Restricted		
4.1 Evaporating temperature range	-40°C to -10°C	(-40°F to 14°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 (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	1/2	[hp]
2 Displacement	12.21	[cm ³] (0.745 cu.in)
2.1 Bore [mm]	26.000	
2.2 Stroke [mm]	23.000	
3 Lubricant charge	200	[ml] (6.76 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/cm ²]

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	10(350)	[μF(VAC minimum)]
5 Motor protection	MRA-38172-3166	
6 Start winding resistance	13.30	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	9.25	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	10.50	[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 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]
1214	306	356	259	1.20	4.07	4.68	1.18	1.37

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V50Hz			EN12900 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)	1018	257	298	222	1.04	3.25	4.57	1.15	1.34
-35	(-31)	1307	329	383	254	1.19	4.19	5.15	1.30	1.51
-30	(-22)	1660	418	486	285	1.33	5.34	5.82	1.47	1.71
-25	(-13)	2078	524	609	316	1.47	6.71	6.59	1.66	1.93
-20	(- 4)	2560	645	750	345	1.61	8.30	7.42	1.87	2.17
-15	(+ 5)	3107	783	911	374	1.75	10.13	8.31	2.09	2.43
-10	(+14)	3719	937	1090	402	1.89	12.19	9.23	2.33	2.71

TEST CONDITIONS: @220V50Hz			EN12900 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)	875	221	256	231	1.08	3.06	3.80	0.96	1.11
-35	(-31)	1122	283	329	266	1.24	3.94	4.22	1.06	1.24
-30	(-22)	1427	360	418	302	1.40	5.03	4.73	1.19	1.38
-25	(-13)	1790	451	525	338	1.57	6.33	5.29	1.33	1.55
-20	(- 4)	2212	557	648	375	1.74	7.86	5.90	1.49	1.73
-15	(+ 5)	2692	678	789	412	1.92	9.62	6.53	1.65	1.91
-10	(+14)	3230	814	946	450	2.09	11.62	7.18	1.81	2.11

TEST CONDITIONS: @220V50Hz			EN12900 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)	725	183	212	235	1.10	2.82	3.08	0.78	0.90
-35	(-31)	934	235	274	273	1.28	3.64	3.42	0.86	1.00
-30	(-22)	1194	301	350	314	1.47	4.68	3.80	0.96	1.11
-25	(-13)	1507	380	442	357	1.67	5.93	4.22	1.06	1.24
-20	(- 4)	1872	472	549	402	1.88	7.40	4.66	1.18	1.37
-15	(+ 5)	2289	577	671	448	2.10	9.11	5.11	1.29	1.50
-10	(+14)	2758	695	808	497	2.33	11.06	5.54	1.40	1.62

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 42° up + 45° to Back		
3.2 DISCHARGE	6.1 +0.10/+0.00	[mm]	(0.240" +0.004"/+0.000")
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		