

### COMPRESSOR DEFINITION

Designation	EM Y6210U
Nominal Voltage/Frequency	220-240 V 50 Hz
Engineering Number	721PA80

### 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	Medium Back Pressure (Commercial Compressors)		
4.1 Evaporating temperature range	-20°C to 10°C	(-4°F to 50°F)	
5 Motor type	CSIR		
6 Starting torque	HST - High starting torque		
7 Expansion device	Capillary tube or Expansion valve		
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 <sup>2</sup> ] (262 psig)	/ °C - °F
9.2 Peak	20.6	[kgf/cm <sup>2</sup> ] (293 psig)	/ °C - °F
10 Maximum winding temperature	130	[ °C ]	

### B - MECHANICAL DATA

1 Commercial designation	1/3	[hp]
2 Displacement	9.04	[cm <sup>3</sup> ] (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)	7.8	[kg] (17.20 lb.)
5 Nitrogen charge	-	[kgf/cm <sup>2</sup> ]

### C - ELETRICAL 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-0025-77	
3 Start capacitor	88-108(330)	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	DRB30N61AYF	
6 Start winding resistance	14.30	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	11.20	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	13.50	[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			EN12900MBP Fan		Evaporating temperature (Condensing temperature		-10°C (14°F) 45°C (113°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]
2357	594	691	365	2.16	8.48	6.46	1.63	1.89

### 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]
-20	(- 4)	1765	445	517	289	1.94	5.72	6.10	1.54	1.79
-15	(+ 5)	2165	546	634	309	2.01	7.06	6.99	1.76	2.05
-10	(+14)	2644	666	775	326	2.06	8.67	8.10	2.04	2.37
-5	(+23)	3202	807	938	341	2.10	10.57	9.42	2.37	2.76
0	(+32)	3841	968	1125	352	2.14	12.79	10.95	2.76	3.21
+5	(+41)	4559	1149	1336	360	2.17	15.33	12.70	3.20	3.72
+10	(+50)	5357	1350	1570	364	2.21	18.22	14.66	3.69	4.30

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]
-20	(- 4)	1509	380	442	314	1.99	5.36	4.84	1.22	1.42
-15	(+ 5)	1854	467	543	342	2.09	6.63	5.43	1.37	1.59
-10	(+14)	2269	572	665	367	2.18	8.17	6.17	1.56	1.81
-5	(+23)	2755	694	807	389	2.26	9.99	7.05	1.78	2.07
0	(+32)	3311	834	970	409	2.33	12.12	8.07	2.03	2.37
+5	(+41)	3937	992	1154	426	2.41	14.57	9.24	2.33	2.71
+10	(+50)	4634	1168	1358	441	2.49	17.36	10.55	2.66	3.09

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]
-20	(- 4)	1274	321	373	337	2.07	5.04	3.76	0.95	1.10
-15	(+ 5)	1563	394	458	373	2.20	6.22	4.20	1.06	1.23
-10	(+14)	1913	482	561	407	2.31	7.67	4.71	1.19	1.38
-5	(+23)	2324	586	681	439	2.42	9.40	5.30	1.33	1.55
0	(+32)	2795	704	819	470	2.54	11.42	5.95	1.50	1.74
+5	(+41)	3328	839	975	498	2.65	13.77	6.68	1.68	1.96
+10	(+50)	3922	988	1149	524	2.78	16.45	7.48	1.88	2.19

### 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		