

COMPRESSOR DEFINITION

Designation	EM Y6135Y
Nominal Voltage/Frequency	220-240 V 50-60 Hz
Engineering Number	720DI72

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-600a		
3 Nominal voltage and frequency	220-240 / 50-60	[V / Hz]	
4 Application type	High Back Pressure (Commercial Compressors)		
4.1 Evaporating temperature range	-15°C to 10°C	(5°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	6.9	[kgf/cm ²] (98 psig)	/ °C - °F
9.2 Peak	7.8	[kgf/cm ²] (111 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1/8	[hp]
2 Displacement	7.23	[cm ³] (0.441 cu.in)
2.1 Bore [mm]	24.000	
2.2 Stroke [mm]	16.000	
3 Lubricant charge	150	[ml] (5.07 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ALQUILB / ISO5	
4 Weight (with oil charge)	7.6	[kg] (16.75 lb.)
5 Nitrogen charge	-	[kgf/cm ²]

C - ELECTRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	220-240 V 50-60 Hz 1 ~ (Single phase)	
2 Starting device type	Current Relay	
2.1 Starting device	MTRP-0013/MTRPH-0013	
3 Start capacitor	64-77(330)	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	DRB276K61AY	
6 Start winding resistance	15.90	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	24.70	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50/60 Hz)	8.50/8.50	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50/60 Hz)	-	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50/60 Hz)	-	[A] - Measured according to UL 984
11 Approval boards certification	VDE	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @220V50Hz			ASHRAEHBP46 Static		Evaporating temperature (Condensing temperature		7.2°C (44.96°F) 54.4°C (129.92°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]
1412	356	414	156	0.93	4.97	9.05	2.28	2.65

TEST CONDITIONS: @220V60Hz			ASHRAEHBP46 Static		Evaporating temperature (Condensing temperature		7.2°C (44.96°F) 54.4°C (129.92°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]
1595	402	467	179	0.97	5.61	8.91	2.25	2.61

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V50Hz			ASHRAE46 Static		(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]
-15 (+5)	723	182	212	88	0.72	2.16	8.23	2.07	2.41
-10 (+14)	901	227	264	95	0.74	2.70	9.45	2.38	2.77
-5 (+23)	1115	281	327	103	0.76	3.35	10.85	2.74	3.18
0 (+32)	1366	344	400	110	0.78	4.11	12.42	3.13	3.64
+5 (+41)	1653	417	484	117	0.80	4.99	14.12	3.56	4.14
+10 (+50)	1977	498	579	124	0.82	5.99	15.94	4.02	4.67

TEST CONDITIONS: @220V50Hz			ASHRAE46 Static		(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]
-15 (+5)	629	159	184	96	0.73	2.03	6.56	1.65	1.92
-10 (+14)	790	199	231	105	0.76	2.55	7.53	1.90	2.21
-5 (+23)	984	248	288	114	0.79	3.18	8.62	2.17	2.53
0 (+32)	1211	305	355	123	0.82	3.93	9.84	2.48	2.88
+5 (+41)	1472	371	431	132	0.85	4.79	11.15	2.81	3.27
+10 (+50)	1766	445	518	141	0.88	5.77	12.54	3.16	3.67

E - PERFORMANCE - CURVES

TEST CONDITIONS:		ASHRAE46			(Condensing temperature 55°C (+131°F))					
@220V50Hz		Static								
Evaporating temperature	Cooling capacity			Power consumption	Current consumption	Gas flow rate	EFFICIENCY RATE			
	+/- 5%						+/- 7%			
°C (°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]	
-15 (+5)	544	137	160	102	0.77	1.90	5.33	1.34	1.56	
-10 (+14)	687	173	201	113	0.81	2.40	6.07	1.53	1.78	
-5 (+23)	859	216	252	125	0.85	3.01	6.90	1.74	2.02	
0 (+32)	1062	268	311	136	0.88	3.74	7.80	1.96	2.28	
+5 (+41)	1295	326	379	148	0.91	4.57	8.75	2.20	2.56	
+10 (+50)	1557	392	456	160	0.94	5.52	9.73	2.45	2.85	

TEST CONDITIONS:		ASHRAE46			(Condensing temperature 35°C (+95°F))					
@220V60Hz		Static								
Evaporating temperature	Cooling capacity			Power consumption	Current consumption	Gas flow rate	EFFICIENCY RATE			
	+/- 5%						+/- 7%			
°C (°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]	
-15 (+5)	797	201	233	96	0.67	2.38	8.26	2.08	2.42	
-10 (+14)	988	249	289	107	0.70	2.96	9.22	2.32	2.70	
-5 (+23)	1227	309	360	118	0.74	3.68	10.38	2.62	3.04	
0 (+32)	1516	382	444	130	0.78	4.56	11.70	2.95	3.43	
+5 (+41)	1853	467	543	141	0.83	5.59	13.14	3.31	3.85	
+10 (+50)	2238	564	656	152	0.88	6.78	14.68	3.70	4.30	

TEST CONDITIONS:		ASHRAE46			(Condensing temperature 45°C (+113°F))					
@220V60Hz		Static								
Evaporating temperature	Cooling capacity			Power consumption	Current consumption	Gas flow rate	EFFICIENCY RATE			
	+/- 5%						+/- 7%			
°C (°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]	
-15 (+5)	699	176	205	104	0.69	2.25	6.77	1.71	1.98	
-10 (+14)	878	221	257	116	0.73	2.83	7.56	1.90	2.21	
-5 (+23)	1098	277	322	129	0.78	3.55	8.47	2.13	2.48	
0 (+32)	1358	342	398	143	0.83	4.40	9.47	2.39	2.77	
+5 (+41)	1660	418	486	158	0.89	5.40	10.52	2.65	3.08	
+10 (+50)	2002	504	586	173	0.96	6.53	11.61	2.92	3.40	

TEST CONDITIONS:		ASHRAE46			(Condensing temperature 55°C (+131°F))					
@220V60Hz		Static								
Evaporating temperature	Cooling capacity			Power consumption	Current consumption	Gas flow rate	EFFICIENCY RATE			
	+/- 5%						+/- 7%			
°C (°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]	
-15 (+5)	603	152	177	110	0.71	2.10	5.48	1.38	1.61	
-10 (+14)	767	193	225	125	0.76	2.68	6.14	1.55	1.80	
-5 (+23)	964	243	283	141	0.82	3.38	6.84	1.72	2.00	
0 (+32)	1195	301	350	158	0.89	4.20	7.55	1.90	2.21	
+5 (+41)	1458	367	427	177	0.97	5.15	8.26	2.08	2.42	
+10 (+50)	1754	442	514	196	1.05	6.22	8.91	2.25	2.61	

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 42°		
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		