

### COMPRESSOR DEFINITION

Designation	EG Y80HLP
Nominal Voltage/Frequency	220-240 V 50-60 Hz
Engineering Number	513700302

### A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-134a		
3 Nominal voltage and frequency	220-240 / 50-60	[ V / Hz ]	
4 Application type	Low Back Pressure		
4.1 Evaporating temperature range	-35°C to -10°C	(-31°F to 14°F)	
5 Motor type	RSCR		
6 Starting torque	LST - Low Starting Torque		
7 Expansion device	Capillary tube		
8 Compressor cooling	Operating voltage range		
		50 Hz	60 Hz
8.1 LBP (32°C Ambient temperature)	Static	187 to 255 V	187 to 242 V
8.2 LBP (43°C Ambient temperature)	Static	187 to 255 V	187 to 242 V
8.3 HBP (32°C Ambient temperature)	-	-	-
8.4 HBP (43°C Ambient temperature)	-	-	-
9 Maximum condensing pressures/temperature			
9.1 Operating (gauge)	16.2	[kgf/cm <sup>2</sup> ] (230 psig)	/ °C - °F
9.2 Peak (gauge)	20.6	[kgf/cm <sup>2</sup> ] (293 psig)	/ °C - °F
10 Maximum winding temperature	130	[ °C ]	

### B - MECHANICAL DATA

1 Commercial designation	1/4	[hp]
2 Displacement	6.76	[cm <sup>3</sup> ] (0.413 cu.in)
2.1 Bore [mm]	22.500	
2.2 Stroke [mm]	17.000	
3 Lubricant charge	280	[ml] (9.47 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ESTER / ISO10	
4 Weight (with oil charge)	11.25	[kg] (24.80 lb.)
5 Nitrogen charge	0.2 to 0.3	[kgf/cm <sup>2</sup> ] (2.84 to 4.27 psig)

### C - ELETRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	220-240 V 50-60 Hz 1 ~ (Single phase)	
2 Starting device type	PTC	
2.1 Starting device	7M220MD3/8EA17C3/8EA5B3	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	4(350)/5(350)	[µF(VAC minimum)]
5 Motor protection	4TM283KFBYY-53	
6 Start winding resistance	14.25	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	12.45	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50/60 Hz)	8.30/6.80	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50/60 Hz)	1.30/1.20	[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		

### D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @220V50Hz			ASHRAELBP32 Static		Evaporating temperature (Condensing temperature		-23.3°C (-9.94°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]
690	174	202	125	0.66	3.92	5.51	1.39	1.61

TEST CONDITIONS: @220V60Hz			ASHRAELBP32 Static		Evaporating temperature (Condensing temperature		-23.3°C (-9.94°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]
815	205	239	145	0.68	4.63	5.61	1.41	1.64

### E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V50Hz			ASHRAE32 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]
-35 (-31)	358	90	105	85	0.50	2.03	4.23	1.07	1.24
-30 (-22)	506	127	148	100	0.57	2.87	5.07	1.28	1.49
-25 (-13)	681	172	200	115	0.63	3.87	5.94	1.50	1.74
-20 (- 4)	891	225	261	130	0.69	5.07	6.85	1.73	2.01
-15 (+ 5)	1143	288	335	146	0.75	6.53	7.84	1.97	2.30
-10 (+14)	1443	364	423	161	0.81	8.27	8.93	2.25	2.62

TEST CONDITIONS: @220V50Hz			ASHRAE32 Static		(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]
-35 (-31)	293	74	86	84	0.49	1.66	3.50	0.88	1.03
-30 (-22)	444	112	130	101	0.57	2.52	4.35	1.10	1.28
-25 (-13)	620	156	182	119	0.64	3.52	5.18	1.31	1.52
-20 (- 4)	827	208	242	138	0.71	4.71	6.01	1.51	1.76
-15 (+ 5)	1072	270	314	156	0.79	6.12	6.86	1.73	2.01
-10 (+14)	1363	343	399	175	0.87	7.81	7.78	1.96	2.28

### E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V50Hz		ASHRAE32 Static			(Condensing temperature 65°C (+149°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]
-35 (-31)	239	60	70	80	0.48	1.35	2.98	0.75	0.87	
-30 (-22)	388	98	114	100	0.56	2.20	3.83	0.97	1.12	
-25 (-13)	560	141	164	121	0.65	3.18	4.61	1.16	1.35	
-20 (- 4)	760	191	223	142	0.74	4.32	5.35	1.35	1.57	
-15 (+ 5)	995	251	291	164	0.83	5.68	6.08	1.53	1.78	
-10 (+14)	1271	320	373	187	0.93	7.28	6.81	1.72	2.00	

TEST CONDITIONS: @220V60Hz		ASHRAE32 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]
-35 (-31)	420	106	123	97	0.47	2.38	4.31	1.09	1.26	
-30 (-22)	598	151	175	117	0.56	3.39	5.12	1.29	1.50	
-25 (-13)	810	204	237	136	0.65	4.60	5.97	1.50	1.75	
-20 (- 4)	1061	267	311	155	0.74	6.04	6.85	1.73	2.01	
-15 (+ 5)	1359	342	398	175	0.83	7.76	7.77	1.96	2.28	
-10 (+14)	1710	431	501	195	0.92	9.80	8.74	2.20	2.56	

TEST CONDITIONS: @220V60Hz		ASHRAE32 Static			(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]
-35 (-31)	359	90	105	95	0.46	2.03	3.80	0.96	1.11	
-30 (-22)	528	133	155	116	0.55	2.99	4.55	1.15	1.33	
-25 (-13)	732	184	215	138	0.65	4.16	5.31	1.34	1.55	
-20 (- 4)	977	246	286	161	0.75	5.56	6.08	1.53	1.78	
-15 (+ 5)	1268	320	372	185	0.86	7.24	6.87	1.73	2.01	
-10 (+14)	1614	407	473	210	0.98	9.24	7.68	1.93	2.25	

TEST CONDITIONS: @220V60Hz		ASHRAE32 Static			(Condensing temperature 65°C (+149°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]
-35 (-31)	301	76	88	92	0.45	1.70	3.27	0.83	0.96	
-30 (-22)	462	116	135	115	0.54	2.62	4.00	1.01	1.17	
-25 (-13)	658	166	193	140	0.65	3.74	4.71	1.19	1.38	
-20 (- 4)	896	226	262	166	0.77	5.10	5.41	1.36	1.59	
-15 (+ 5)	1181	298	346	194	0.90	6.74	6.11	1.54	1.79	
-10 (+14)	1520	383	445	224	1.04	8.71	6.80	1.71	1.99	

### F - EXTERNAL CHARACTERISTICS

1 Base plate	European Standard EG/F/AMEM Version 2		
2 Tray holder	No		
3 Connectors			
3.1 SUCTION	8.2 +0.12/-0.08	[mm]	(0.323" +0.005"/-0.003")
3.1.1 Material	Copper plated steel		
3.1.2 Shape	Slanted		
3.2 DISCHARGE	5 +0.18/-0.06	[mm]	(0.197" +0.007"/-0.002")
3.2.1 Material	Copper plated steel		
3.2.2 Shape	Slanted		
3.3 PROCESS	6.5 +0.12/-0.08	[mm]	(0.256" +0.005"/-0.003")
3.3.1 Material	Copper plated steel		
3.3.2 Shape	Straight		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		