

### COMPRESSOR DEFINITION

Designation	EG YS80HLP
Nominal Voltage/Frequency	220-240 V 50-60 Hz
Engineering Number	513701104

### 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	RSIR		
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	198 to 255 V	198 to 255 V
8.2 LBP (43°C Ambient temperature)	Static	198 to 255 V	198 to 255 V
8.3 HBP (32°C Ambient temperature)	-	-	-
8.4 HBP (43°C Ambient temperature)	-	-	-
9 Maximum condensing temperature			
9.1 Operating	14.2	[kgf/cm <sup>2</sup> ] (202 psig)	/ °C - °F
9.2 Peak	15.9	[kgf/cm <sup>2</sup> ] (226 psig)	/ °C - °F
10 Maximum winding temperature	130	[ °C ]	

### B - MECHANICAL DATA

1 Commercial designation	1/4	[hp]
2 Displacement	6.36	[cm <sup>3</sup> ] (0.388 cu.in)
2.1 Bore [mm]	22.500	
2.2 Stroke [mm]	16.000	
3 Lubricant charge	230	[ml] (7.78 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ESTER / ISO10	
4 Weight (with oil charge)	10.32	[kg] (22.75 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	Combo	
2.1 Starting device	MSC34X 220V	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	MSC34A49H3	
6 Start winding resistance	25.10	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	11.15	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50/60 Hz)	-	[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	CE - TUV - UKCA - VDE	

### 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]
665	168	195	125	1.04	3.78	5.31	1.34	1.56

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]
820	207	240	145	0.97	4.66	5.65	1.42	1.66

### 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)	324	82	95	82	0.68	1.83	3.93	0.99	1.15
-30 (-22)	488	123	143	101	0.83	2.77	4.81	1.21	1.41
-25 (-13)	667	168	195	119	0.97	3.79	5.61	1.41	1.64
-20 (- 4)	871	219	255	137	1.12	4.96	6.39	1.61	1.87
-15 (+ 5)	1107	279	324	154	1.26	6.32	7.21	1.82	2.11
-10 (+14)	1386	349	406	170	1.40	7.94	8.14	2.05	2.38

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)	262	66	77	74	0.62	1.48	3.56	0.90	1.04
-30 (-22)	419	106	123	95	0.79	2.38	4.35	1.10	1.28
-25 (-13)	596	150	175	118	0.98	3.38	5.05	1.27	1.48
-20 (- 4)	801	202	235	140	1.16	4.56	5.71	1.44	1.67
-15 (+ 5)	1044	263	306	163	1.35	5.96	6.38	1.61	1.87
-10 (+14)	1332	336	390	186	1.54	7.63	7.14	1.80	2.09

### 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)	201	51	59	68	0.57	1.14	3.00	0.76	0.88	
-30 (-22)	345	87	101	91	0.76	1.96	3.79	0.95	1.11	
-25 (-13)	513	129	150	116	0.96	2.91	4.45	1.12	1.30	
-20 (- 4)	714	180	209	142	1.17	4.06	5.06	1.27	1.48	
-15 (+ 5)	957	241	280	169	1.39	5.46	5.66	1.43	1.66	
-10 (+14)	1250	315	366	197	1.61	7.16	6.32	1.59	1.85	

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)	401	101	117	96	0.64	2.27	4.19	1.06	1.23	
-30 (-22)	602	152	176	117	0.78	3.41	5.12	1.29	1.50	
-25 (-13)	823	207	241	138	0.91	4.67	5.97	1.50	1.75	
-20 (- 4)	1074	271	315	159	1.04	6.11	6.80	1.71	1.99	
-15 (+ 5)	1366	344	400	178	1.18	7.80	7.68	1.94	2.25	
-10 (+14)	1710	431	501	197	1.30	9.80	8.66	2.18	2.54	

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)	324	82	95	85	0.58	1.83	3.79	0.95	1.11	
-30 (-22)	517	130	151	110	0.74	2.93	4.63	1.17	1.36	
-25 (-13)	734	185	215	136	0.91	4.17	5.37	1.35	1.57	
-20 (- 4)	988	249	289	163	1.09	5.62	6.07	1.53	1.78	
-15 (+ 5)	1287	324	377	189	1.26	7.35	6.79	1.71	1.99	
-10 (+14)	1644	414	482	216	1.44	9.42	7.60	1.91	2.23	

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)	248	63	73	78	0.53	1.41	3.19	0.80	0.93	
-30 (-22)	426	107	125	105	0.71	2.41	4.03	1.01	1.18	
-25 (-13)	633	159	185	134	0.89	3.59	4.74	1.19	1.39	
-20 (- 4)	881	222	258	164	1.09	5.01	5.38	1.36	1.58	
-15 (+ 5)	1181	298	346	196	1.29	6.74	6.03	1.52	1.77	
-10 (+14)	1542	389	452	228	1.50	8.84	6.73	1.70	1.97	

### 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		
3.1.2 Shape	Slanted		
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	Slanted		
3.3 PROCESS	6.5 +0.12/-0.08	[mm]	(0.256" +0.005"/-0.003")
3.3.1 Material	Copper		
3.3.2 Shape	Slanted		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		