

### COMPRESSOR DEFINITION

Designation	EG US100HLP
Nominal Voltage/Frequency	220-240 V 50-60 Hz
Engineering Number	513701135

### 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	1/3	[hp]
2 Displacement	7.95	[cm <sup>3</sup> ] (0.485 cu.in)
2.1 Bore [mm]	22.500	
2.2 Stroke [mm]	20.000	
3 Lubricant charge	280	[ml] (9.47 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ESTER / ISO7	
4 Weight (with oil charge)	10.82	[kg] (23.85 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	8EA17C1/QPS2-A22MG1/QPS2-A22MG1 092	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	4TM319LFBYY-53	
6 Start winding resistance	21.40	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	8.50	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50/60 Hz)	11.50/10.50	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50/60 Hz)	2.00/1.70	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50/60 Hz)	2.50/2.00	[A] - Measured according to UL 984
11 Approval boards certification	CE - 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]	
855	215	251	159	1.20	4.86	5.37	1.35	1.57	

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]	
1050	265	308	185	1.16	5.97	5.67	1.43	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)	442	111	129	107	0.83	2.50	4.12	1.04	1.21
-30	(-22)	620	156	182	126	0.97	3.52	4.94	1.25	1.45
-25	(-13)	828	209	242	146	1.11	4.70	5.71	1.44	1.67
-20	(- 4)	1074	271	315	166	1.25	6.11	6.46	1.63	1.89
-15	(+ 5)	1369	345	401	188	1.41	7.82	7.25	1.83	2.12
-10	(+14)	1724	434	505	211	1.58	9.88	8.11	2.04	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)	362	91	106	102	0.79	2.05	3.54	0.89	1.04
-30	(-22)	554	140	162	126	0.97	3.14	4.37	1.10	1.28
-25	(-13)	769	194	225	151	1.14	4.36	5.11	1.29	1.50
-20	(- 4)	1016	256	298	176	1.32	5.78	5.79	1.46	1.70
-15	(+ 5)	1306	329	383	202	1.51	7.45	6.46	1.63	1.89
-10	(+14)	1648	415	483	229	1.71	9.44	7.17	1.81	2.10

### 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)	263	66	77	87	0.69	1.49	3.05	0.77	0.89	
-30 (-22)	471	119	138	118	0.92	2.67	3.89	0.98	1.14	
-25 (-13)	695	175	204	150	1.15	3.94	4.60	1.16	1.35	
-20 (- 4)	945	238	277	182	1.38	5.38	5.21	1.31	1.53	
-15 (+ 5)	1231	310	361	214	1.62	7.03	5.77	1.45	1.69	
-10 (+14)	1564	394	458	248	1.87	8.96	6.31	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)	543	137	159	124	0.80	3.07	4.35	1.10	1.28	
-30 (-22)	762	192	223	147	0.94	4.32	5.22	1.31	1.53	
-25 (-13)	1017	256	298	170	1.07	5.77	6.02	1.52	1.77	
-20 (- 4)	1319	332	387	194	1.21	7.51	6.82	1.72	2.00	
-15 (+ 5)	1682	424	493	219	1.36	9.60	7.65	1.93	2.24	
-10 (+14)	2117	534	620	246	1.52	12.13	8.56	2.16	2.51	

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)	445	112	130	119	0.77	2.52	3.73	0.94	1.09	
-30 (-22)	681	172	200	147	0.94	3.86	4.61	1.16	1.35	
-25 (-13)	945	238	277	176	1.10	5.36	5.39	1.36	1.58	
-20 (- 4)	1248	314	366	205	1.27	7.10	6.11	1.54	1.79	
-15 (+ 5)	1604	404	470	235	1.46	9.15	6.82	1.72	2.00	
-10 (+14)	2024	510	593	267	1.65	11.60	7.56	1.90	2.22	

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)	323	81	95	101	0.67	1.83	3.22	0.81	0.94	
-30 (-22)	578	146	170	137	0.89	3.28	4.11	1.04	1.20	
-25 (-13)	854	215	250	174	1.11	4.85	4.86	1.22	1.42	
-20 (- 4)	1160	292	340	212	1.33	6.60	5.50	1.39	1.61	
-15 (+ 5)	1512	381	443	250	1.56	8.63	6.08	1.53	1.78	
-10 (+14)	1921	484	563	289	1.80	11.00	6.66	1.68	1.95	

### F - EXTERNAL CHARACTERISTICS

1 Base plate	Universal 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	Straight		
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	6.5 +0.12/-0.08	[mm]	(0.256" +0.005"/-0.003")
3.3.1 Material	Copper		
3.3.2 Shape	Straight		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		