

COMPRESSOR DEFINITION

Designation	EG US100HLP
Nominal Voltage/Frequency	220-240 V 50-60 Hz
Engineering Number	513701057

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 ²] (202 psig)	/ °C - °F
9.2 Peak	15.9	[kgf/cm ²] (226 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1/3	[hp]
2 Displacement	7.95	[cm ³] (0.485 cu.in)
2.1 Bore [mm]	22.500	
2.2 Stroke [mm]	20.000	
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)	10.82	[kg] (23.85 lb.)
5 Nitrogen charge	0.2 to 0.3	[kgf/cm ²] (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	160	1.20	4.86	5.34	1.35	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]
1050	265	308	186	1.16	5.97	5.64	1.42	1.65

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	108	0.83	2.50	4.10	1.03	1.20
-30 (-22)	620	156	182	127	0.97	3.52	4.91	1.24	1.44
-25 (-13)	828	209	242	147	1.11	4.70	5.67	1.43	1.66
-20 (- 4)	1074	271	315	167	1.25	6.11	6.42	1.62	1.88
-15 (+ 5)	1369	345	401	189	1.41	7.82	7.21	1.82	2.11
-10 (+14)	1724	434	505	213	1.58	9.88	8.06	2.03	2.36

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	103	0.79	2.05	3.52	0.89	1.03
-30 (-22)	554	140	162	127	0.97	3.14	4.34	1.09	1.27
-25 (-13)	769	194	225	152	1.14	4.36	5.07	1.28	1.49
-20 (- 4)	1016	256	298	177	1.32	5.78	5.75	1.45	1.69
-15 (+ 5)	1306	329	383	203	1.51	7.45	6.42	1.62	1.88
-10 (+14)	1648	415	483	231	1.71	9.44	7.12	1.79	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)	263	66	77	87	0.69	1.49	3.03	0.76	0.89	
-30 (-22)	471	119	138	119	0.92	2.67	3.87	0.98	1.13	
-25 (-13)	695	175	204	151	1.15	3.94	4.57	1.15	1.34	
-20 (- 4)	945	238	277	183	1.38	5.38	5.18	1.30	1.52	
-15 (+ 5)	1231	310	361	216	1.62	7.03	5.73	1.44	1.68	
-10 (+14)	1564	394	458	250	1.87	8.96	6.27	1.58	1.84	

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	125	0.80	3.07	4.33	1.09	1.27	
-30 (-22)	762	192	223	147	0.94	4.32	5.19	1.31	1.52	
-25 (-13)	1017	256	298	171	1.07	5.77	5.99	1.51	1.76	
-20 (- 4)	1319	332	387	195	1.21	7.51	6.78	1.71	1.99	
-15 (+ 5)	1682	424	493	220	1.36	9.60	7.61	1.92	2.23	
-10 (+14)	2117	534	620	247	1.52	12.13	8.51	2.15	2.49	

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	120	0.77	2.52	3.71	0.94	1.09	
-30 (-22)	681	172	200	148	0.94	3.86	4.59	1.16	1.34	
-25 (-13)	945	238	277	177	1.10	5.36	5.36	1.35	1.57	
-20 (- 4)	1248	314	366	206	1.27	7.10	6.08	1.53	1.78	
-15 (+ 5)	1604	404	470	236	1.46	9.15	6.78	1.71	1.99	
-10 (+14)	2024	510	593	268	1.65	11.60	7.52	1.89	2.20	

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	3.20	0.81	0.94	
-30 (-22)	578	146	170	138	0.89	3.28	4.09	1.03	1.20	
-25 (-13)	854	215	250	175	1.11	4.85	4.83	1.22	1.42	
-20 (- 4)	1160	292	340	213	1.33	6.60	5.47	1.38	1.60	
-15 (+ 5)	1512	381	443	251	1.56	8.63	6.05	1.52	1.77	
-10 (+14)	1921	484	563	291	1.80	11.00	6.62	1.67	1.94	

F - EXTERNAL CHARACTERISTICS

1 Base plate	Universal EG/F/AMEM version 2		
2 Tray holder	Yes		
3 Connectors			
3.1 SUCTION	6.5 +0.12/-0.08	[mm]	(0.256" +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		