

COMPRESSOR DEFINITION

Designation	EG US70HLP
Nominal Voltage/Frequency	220-240 V 50-60 Hz
Engineering Number	513701148

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	1/5+	[hp]
2 Displacement	5.56	[cm ³] (0.339 cu.in)
2.1 Bore [mm]	22.500	
2.2 Stroke [mm]	14.000	
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)	10.48	[kg] (23.10 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	4TM283KFBYY-53	
6 Start winding resistance	25.60	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	13.90	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50/60 Hz)	7.80/7.20	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50/60 Hz)	1.40/1.25	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50/60 Hz)	1.60/1.45	[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]
560	141	164	104	0.87	3.18	5.40	1.36	1.58

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]
695	175	204	123	0.81	3.95	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)	270	68	79	67	0.56	1.53	4.04	1.02	1.18
-30	(-22)	400	101	117	82	0.68	2.27	4.83	1.22	1.41
-25	(-13)	563	142	165	99	0.81	3.20	5.67	1.43	1.66
-20	(- 4)	756	190	221	115	0.96	4.30	6.56	1.65	1.92
-15	(+ 5)	972	245	285	131	1.09	5.55	7.49	1.89	2.20
-10	(+14)	1209	305	354	144	1.21	6.93	8.46	2.13	2.48

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)	230	58	67	59	0.51	1.30	3.90	0.98	1.14
-30	(-22)	343	86	101	77	0.64	1.94	4.48	1.13	1.31
-25	(-13)	496	125	145	97	0.80	2.81	5.12	1.29	1.50
-20	(- 4)	683	172	200	117	0.98	3.89	5.80	1.46	1.70
-15	(+ 5)	901	227	264	138	1.16	5.14	6.52	1.64	1.91
-10	(+14)	1146	289	336	158	1.33	6.56	7.28	1.83	2.13

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)	181	46	53	53	0.46	1.02	3.39	0.86	0.99	
-30 (-22)	274	69	80	72	0.60	1.55	3.89	0.98	1.14	
-25 (-13)	412	104	121	93	0.78	2.34	4.44	1.12	1.30	
-20 (- 4)	592	149	173	117	0.98	3.37	5.03	1.27	1.48	
-15 (+ 5)	808	204	237	142	1.20	4.62	5.67	1.43	1.66	
-10 (+14)	1058	266	310	166	1.41	6.06	6.34	1.60	1.86	

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)	335	85	98	80	0.52	1.90	4.22	1.06	1.24	
-30 (-22)	497	125	146	98	0.64	2.82	5.05	1.27	1.48	
-25 (-13)	700	176	205	117	0.77	3.97	5.93	1.50	1.74	
-20 (- 4)	938	236	275	137	0.89	5.34	6.86	1.73	2.01	
-15 (+ 5)	1207	304	354	155	1.01	6.89	7.83	1.97	2.30	
-10 (+14)	1501	378	440	171	1.12	8.60	8.84	2.23	2.59	

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)	286	72	84	70	0.47	1.62	4.07	1.03	1.19	
-30 (-22)	426	107	125	91	0.60	2.42	4.69	1.18	1.37	
-25 (-13)	616	155	180	115	0.75	3.50	5.35	1.35	1.57	
-20 (- 4)	848	214	249	139	0.91	4.83	6.06	1.53	1.78	
-15 (+ 5)	1119	282	328	164	1.08	6.39	6.82	1.72	2.00	
-10 (+14)	1422	358	417	187	1.24	8.15	7.61	1.92	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)	224	56	66	63	0.43	1.27	3.54	0.89	1.04	
-30 (-22)	340	86	100	85	0.57	1.93	4.07	1.03	1.19	
-25 (-13)	512	129	150	111	0.73	2.91	4.64	1.17	1.36	
-20 (- 4)	735	185	215	139	0.91	4.18	5.27	1.33	1.54	
-15 (+ 5)	1004	253	294	168	1.11	5.73	5.93	1.49	1.74	
-10 (+14)	1313	331	385	197	1.31	7.52	6.63	1.67	1.94	

F - EXTERNAL CHARACTERISTICS

1 Base plate	Universal EG/F/AMEM version 2		
2 Tray holder	No		
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	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		