

COMPRESSOR DEFINITION

Designation	EG US70HLP
Nominal Voltage/Frequency	220-240 V 50-60 Hz
Engineering Number	513701279

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	230	[ml] (7.78 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ESTER / ISO10	
4 Weight (with oil charge)	10.43	[kg] (22.99 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	7M220MC1/8EA17C1/8M220MC1/QPS2-A22MG1/QPS2-A22MG	
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	TUV - 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	105	0.87	3.18	5.35	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]
695	175	204	124	0.81	3.95	5.60	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)	270	68	79	68	0.56	1.53	3.99	1.01	1.17
-30 (-22)	400	101	117	83	0.68	2.27	4.78	1.20	1.40
-25 (-13)	563	142	165	100	0.81	3.20	5.62	1.42	1.65
-20 (- 4)	756	190	221	116	0.96	4.30	6.50	1.64	1.90
-15 (+ 5)	972	245	285	132	1.09	5.55	7.42	1.87	2.17
-10 (+14)	1209	305	354	145	1.21	6.93	8.38	2.11	2.45

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	60	0.51	1.30	3.86	0.97	1.13
-30 (-22)	343	86	101	78	0.64	1.94	4.44	1.12	1.30
-25 (-13)	496	125	145	98	0.80	2.81	5.07	1.28	1.48
-20 (- 4)	683	172	200	119	0.98	3.89	5.74	1.45	1.68
-15 (+ 5)	901	227	264	140	1.16	5.14	6.46	1.63	1.89
-10 (+14)	1146	289	336	159	1.33	6.56	7.20	1.82	2.11

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	54	0.46	1.02	3.36	0.85	0.98	
-30 (-22)	274	69	80	72	0.60	1.55	3.85	0.97	1.13	
-25 (-13)	412	104	121	94	0.78	2.34	4.40	1.11	1.29	
-20 (- 4)	592	149	173	118	0.98	3.37	4.99	1.26	1.46	
-15 (+ 5)	808	204	237	143	1.20	4.62	5.62	1.42	1.65	
-10 (+14)	1058	266	310	168	1.41	6.06	6.28	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)	335	85	98	80	0.52	1.90	4.19	1.06	1.23	
-30 (-22)	497	125	146	99	0.64	2.82	5.01	1.26	1.47	
-25 (-13)	700	176	205	118	0.77	3.97	5.88	1.48	1.72	
-20 (- 4)	938	236	275	138	0.89	5.34	6.81	1.71	1.99	
-15 (+ 5)	1207	304	354	156	1.01	6.89	7.77	1.96	2.28	
-10 (+14)	1501	378	440	172	1.12	8.60	8.77	2.21	2.57	

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	71	0.47	1.62	4.04	1.02	1.18	
-30 (-22)	426	107	125	92	0.60	2.42	4.65	1.17	1.36	
-25 (-13)	616	155	180	116	0.75	3.50	5.31	1.34	1.56	
-20 (- 4)	848	214	249	140	0.91	4.83	6.02	1.52	1.76	
-15 (+ 5)	1119	282	328	165	1.08	6.39	6.76	1.70	1.98	
-10 (+14)	1422	358	417	189	1.24	8.15	7.55	1.90	2.21	

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	64	0.43	1.27	3.51	0.88	1.03	
-30 (-22)	340	86	100	86	0.57	1.93	4.03	1.02	1.18	
-25 (-13)	512	129	150	112	0.73	2.91	4.61	1.16	1.35	
-20 (- 4)	735	185	215	140	0.91	4.18	5.22	1.32	1.53	
-15 (+ 5)	1004	253	294	170	1.11	5.73	5.88	1.48	1.72	
-10 (+14)	1313	331	385	199	1.31	7.52	6.58	1.66	1.93	

F - EXTERNAL CHARACTERISTICS

1 Base plate	European Standard 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	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		