

COMPRESSOR DEFINITION

Designation	EG US80HLP
Nominal Voltage/Frequency	220-240 V 50-60 Hz
Engineering Number	513701084

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	1/4	[hp]
2 Displacement	6.36	[cm ³] (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)	10.42	[kg] (22.97 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	4TM283NFBYY-53	
6 Start winding resistance	25.20	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	12.10	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50/60 Hz)	9.40/8.75	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50/60 Hz)	1.60/1.50	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50/60 Hz)	1.90/1.70	[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]
665	168	195	128	1.09	3.78	5.20	1.31	1.52

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	146	1.00	4.66	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)	324	82	95	84	0.72	1.83	3.85	0.97	1.13
-30 (-22)	488	123	143	103	0.88	2.77	4.71	1.19	1.38
-25 (-13)	667	168	195	122	1.03	3.79	5.49	1.38	1.61
-20 (- 4)	871	219	255	140	1.18	4.96	6.26	1.58	1.83
-15 (+ 5)	1107	279	324	157	1.32	6.32	7.06	1.78	2.07
-10 (+14)	1386	349	406	174	1.46	7.94	7.97	2.01	2.33

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	75	0.64	1.48	3.48	0.88	1.02
-30 (-22)	419	106	123	97	0.83	2.38	4.26	1.07	1.25
-25 (-13)	596	150	175	120	1.02	3.38	4.94	1.25	1.45
-20 (- 4)	801	202	235	143	1.22	4.56	5.59	1.41	1.64
-15 (+ 5)	1044	263	306	167	1.42	5.96	6.25	1.57	1.83
-10 (+14)	1332	336	390	190	1.62	7.63	6.99	1.76	2.05

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	69	0.60	1.14	2.94	0.74	0.86	
-30 (-22)	345	87	101	93	0.80	1.96	3.71	0.93	1.09	
-25 (-13)	513	129	150	118	1.01	2.91	4.36	1.10	1.28	
-20 (- 4)	714	180	209	145	1.23	4.06	4.95	1.25	1.45	
-15 (+ 5)	957	241	280	173	1.45	5.46	5.54	1.40	1.62	
-10 (+14)	1250	315	366	201	1.69	7.16	6.18	1.56	1.81	

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	0.66	2.27	4.16	1.05	1.22	
-30 (-22)	602	152	176	118	0.80	3.41	5.08	1.28	1.49	
-25 (-13)	823	207	241	139	0.94	4.67	5.92	1.49	1.73	
-20 (- 4)	1074	271	315	160	1.08	6.11	6.74	1.70	1.98	
-15 (+ 5)	1366	344	400	180	1.22	7.80	7.61	1.92	2.23	
-10 (+14)	1710	431	501	199	1.35	9.80	8.59	2.16	2.52	

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	86	0.59	1.83	3.76	0.95	1.10	
-30 (-22)	517	130	151	111	0.77	2.93	4.59	1.16	1.35	
-25 (-13)	734	185	215	137	0.94	4.17	5.32	1.34	1.56	
-20 (- 4)	988	249	289	164	1.12	5.62	6.02	1.52	1.76	
-15 (+ 5)	1287	324	377	191	1.30	7.35	6.73	1.70	1.97	
-10 (+14)	1644	414	482	218	1.48	9.42	7.53	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)	248	63	73	79	0.55	1.41	3.16	0.80	0.93	
-30 (-22)	426	107	125	106	0.73	2.41	3.99	1.01	1.17	
-25 (-13)	633	159	185	135	0.93	3.59	4.69	1.18	1.38	
-20 (- 4)	881	222	258	166	1.13	5.01	5.33	1.34	1.56	
-15 (+ 5)	1181	298	346	197	1.33	6.74	5.97	1.50	1.75	
-10 (+14)	1542	389	452	230	1.55	8.84	6.67	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		