

COMPRESSOR DEFINITION

Designation	EG US80HLP
Nominal Voltage/Frequency	220-240 V 50-60 Hz
Engineering Number	513701068

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	280	[ml] (9.47 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ESTER / ISO7	
4 Weight (with oil charge)	10.47	[kg] (23.08 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	127	1.09	3.78	5.24	1.32	1.54

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	145	1.00	4.66	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)	324	82	95	84	0.72	1.83	3.88	0.98	1.14
-30 (-22)	488	123	143	102	0.88	2.77	4.74	1.20	1.39
-25 (-13)	667	168	195	121	1.03	3.79	5.53	1.39	1.62
-20 (- 4)	871	219	255	139	1.18	4.96	6.31	1.59	1.85
-15 (+ 5)	1107	279	324	156	1.32	6.32	7.12	1.79	2.09
-10 (+14)	1386	349	406	173	1.46	7.94	8.03	2.02	2.35

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	3.51	0.88	1.03
-30 (-22)	419	106	123	96	0.83	2.38	4.29	1.08	1.26
-25 (-13)	596	150	175	119	1.02	3.38	4.98	1.26	1.46
-20 (- 4)	801	202	235	142	1.22	4.56	5.63	1.42	1.65
-15 (+ 5)	1044	263	306	166	1.42	5.96	6.30	1.59	1.84
-10 (+14)	1332	336	390	189	1.62	7.63	7.04	1.77	2.06

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]
-35	(-31)	201	51	59	69	0.60	1.14	2.96	0.75	0.87
-30	(-22)	345	87	101	92	0.80	1.96	3.73	0.94	1.09
-25	(-13)	513	129	150	117	1.01	2.91	4.39	1.11	1.29
-20	(- 4)	714	180	209	144	1.23	4.06	4.99	1.26	1.46
-15	(+ 5)	957	241	280	171	1.45	5.46	5.58	1.41	1.64
-10	(+14)	1250	315	366	200	1.69	7.16	6.24	1.57	1.83

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]
-35	(-31)	401	101	117	96	0.66	2.27	4.18	1.05	1.23
-30	(-22)	602	152	176	117	0.80	3.41	5.11	1.29	1.50
-25	(-13)	823	207	241	138	0.94	4.67	5.96	1.50	1.75
-20	(- 4)	1074	271	315	159	1.08	6.11	6.79	1.71	1.99
-15	(+ 5)	1366	344	400	179	1.22	7.80	7.66	1.93	2.25
-10	(+14)	1710	431	501	198	1.35	9.80	8.65	2.18	2.53

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]
-35	(-31)	324	82	95	85	0.59	1.83	3.78	0.95	1.11
-30	(-22)	517	130	151	111	0.77	2.93	4.62	1.16	1.35
-25	(-13)	734	185	215	136	0.94	4.17	5.36	1.35	1.57
-20	(- 4)	988	249	289	163	1.12	5.62	6.06	1.53	1.78
-15	(+ 5)	1287	324	377	190	1.30	7.35	6.78	1.71	1.99
-10	(+14)	1644	414	482	216	1.48	9.42	7.58	1.91	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]
-35	(-31)	248	63	73	78	0.55	1.41	3.18	0.80	0.93
-30	(-22)	426	107	125	105	0.73	2.41	4.02	1.01	1.18
-25	(-13)	633	159	185	134	0.93	3.59	4.73	1.19	1.39
-20	(- 4)	881	222	258	164	1.13	5.01	5.37	1.35	1.57
-15	(+ 5)	1181	298	346	196	1.33	6.74	6.01	1.52	1.76
-10	(+14)	1542	389	452	229	1.55	8.84	6.71	1.69	1.97

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		