

COMPRESSOR DEFINITION

Designation	EG US90HLP
Nominal Voltage/Frequency	220-240 V 50-60 Hz
Engineering Number	513701118

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	7.15	[cm ³] (0.436 cu.in)
2.1 Bore [mm]	22.500	
2.2 Stroke [mm]	18.000	
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)	10.05	[kg] (22.16 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	25.00	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	9.50	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50/60 Hz)	11.00/10.00	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50/60 Hz)	1.90/1.70	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50/60 Hz)	2.30/2.00	[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]
770	194	226	145	1.22	4.38	5.30	1.34	1.55

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]
950	239	278	168	1.10	5.40	5.67	1.43	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)	405	102	119	96	0.83	2.29	4.20	1.06	1.23
-30 (-22)	571	144	167	114	0.97	3.24	4.98	1.25	1.46
-25 (-13)	757	191	222	134	1.13	4.30	5.67	1.43	1.66
-20 (- 4)	977	246	286	154	1.29	5.56	6.36	1.60	1.86
-15 (+ 5)	1245	314	365	175	1.46	7.10	7.12	1.80	2.09
-10 (+14)	1574	397	461	195	1.61	9.02	8.05	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)	334	84	98	92	0.80	1.89	3.65	0.92	1.07
-30 (-22)	507	128	149	114	0.97	2.87	4.43	1.12	1.30
-25 (-13)	696	175	204	138	1.15	3.95	5.06	1.28	1.48
-20 (- 4)	915	231	268	162	1.35	5.21	5.65	1.42	1.66
-15 (+ 5)	1178	297	345	188	1.55	6.73	6.27	1.58	1.84
-10 (+14)	1500	378	439	213	1.75	8.59	7.00	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)	256	64	75	82	0.72	1.45	3.12	0.79	0.91	
-30 (-22)	432	109	127	108	0.92	2.45	3.91	0.99	1.15	
-25 (-13)	620	156	182	136	1.14	3.52	4.53	1.14	1.33	
-20 (- 4)	834	210	245	166	1.38	4.75	5.04	1.27	1.48	
-15 (+ 5)	1089	274	319	197	1.63	6.21	5.53	1.39	1.62	
-10 (+14)	1398	352	410	229	1.89	8.01	6.09	1.54	1.79	

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)	499	126	146	111	0.74	2.82	4.48	1.13	1.31	
-30 (-22)	704	177	206	132	0.87	3.99	5.32	1.34	1.56	
-25 (-13)	934	235	274	155	1.01	5.30	6.06	1.53	1.78	
-20 (- 4)	1205	304	353	178	1.16	6.86	6.80	1.71	1.99	
-15 (+ 5)	1535	387	450	201	1.31	8.77	7.62	1.92	2.23	
-10 (+14)	1942	489	569	225	1.45	11.13	8.62	2.17	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]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35 (-31)	412	104	121	106	0.72	2.33	3.91	0.99	1.15	
-30 (-22)	626	158	183	131	0.87	3.55	4.74	1.19	1.39	
-25 (-13)	859	217	252	159	1.04	4.88	5.42	1.37	1.59	
-20 (- 4)	1130	285	331	187	1.22	6.43	6.05	1.52	1.77	
-15 (+ 5)	1454	366	426	216	1.40	8.30	6.71	1.69	1.97	
-10 (+14)	1851	466	542	246	1.58	10.60	7.49	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)	316	80	92	95	0.65	1.78	3.34	0.84	0.98	
-30 (-22)	533	134	156	125	0.83	3.02	4.19	1.06	1.23	
-25 (-13)	765	193	224	157	1.03	4.34	4.84	1.22	1.42	
-20 (- 4)	1029	259	302	192	1.25	5.86	5.39	1.36	1.58	
-15 (+ 5)	1343	339	394	227	1.47	7.67	5.92	1.49	1.73	
-10 (+14)	1724	435	505	264	1.71	9.88	6.52	1.64	1.91	

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	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		