

### COMPRESSOR DEFINITION

Designation	EG U90HLC
Nominal Voltage/Frequency	220-240 V 50-60 Hz
Engineering Number	513700163

### 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	RSCR		
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 242 V
8.2 LBP (43°C Ambient temperature)	Static	198 to 255 V	198 to 242 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 <sup>2</sup> ] (202 psig)	/ °C - °F
9.2 Peak	15.9	[kgf/cm <sup>2</sup> ] (226 psig)	/ °C - °F
10 Maximum winding temperature	130	[ °C ]	

### B - MECHANICAL DATA

1 Commercial designation	1/4+	[hp]
2 Displacement	7.95	[cm <sup>3</sup> ] (0.485 cu.in)
2.1 Bore [mm]	22.500	
2.2 Stroke [mm]	20.000	
3 Lubricant charge	280	[ml] (9.47 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ESTER / ISO10	
4 Weight (with oil charge)	11.1	[kg] (24.47 lb.)
5 Nitrogen charge	0.2 to 0.3	[kgf/cm <sup>2</sup> ] (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	8EA17C3/8EA5B3/QPS2-A22MD3	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	5(320)/6(320)/10(320)	[µF(VAC minimum)]
5 Motor protection	4TM302KFBYY-53	
6 Start winding resistance	13.50	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	10.00	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50/60 Hz)	9.40/9.00	[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)	-	[A] - Measured according to UL 984
11 Approval boards certification	CE - OFT - UKCA	

### 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]
800	202	234	147	0.85	4.55	5.44	1.37	1.59

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	169	0.81	5.40	5.62	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)	422	106	124	101	0.69	2.39	4.20	1.06	1.23
-30 (-22)	645	162	189	119	0.77	3.66	5.25	1.32	1.54
-25 (-13)	812	205	238	138	0.81	4.61	5.84	1.47	1.71
-20 (- 4)	981	247	288	158	0.83	5.58	6.28	1.58	1.84
-15 (+ 5)	1212	305	355	177	0.87	6.92	6.90	1.74	2.02
-10 (+14)	1562	394	458	194	0.95	8.95	8.00	2.02	2.34

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)	365	92	107	98	0.68	2.07	3.75	0.94	1.10
-30 (-22)	578	146	169	119	0.77	3.28	4.76	1.20	1.39
-25 (-13)	739	186	217	140	0.82	4.20	5.27	1.33	1.55
-20 (- 4)	906	228	265	163	0.85	5.15	5.61	1.41	1.64
-15 (+ 5)	1138	287	333	187	0.91	6.49	6.08	1.53	1.78
-10 (+14)	1493	376	437	210	1.01	8.55	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)	300	76	88	93	0.66	1.70	3.20	0.81	0.94	
-30 (-22)	498	125	146	115	0.75	2.82	4.20	1.06	1.23	
-25 (-13)	646	163	189	139	0.81	3.67	4.68	1.18	1.37	
-20 (- 4)	805	203	236	166	0.87	4.58	4.93	1.24	1.45	
-15 (+ 5)	1032	260	302	194	0.95	5.89	5.29	1.33	1.55	
-10 (+14)	1386	349	406	224	1.07	7.94	6.07	1.53	1.78	

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)	512	129	150	112	0.57	2.90	4.52	1.14	1.33	
-30 (-22)	706	178	207	140	0.69	4.00	5.07	1.28	1.48	
-25 (-13)	940	237	275	163	0.76	5.34	5.81	1.46	1.70	
-20 (- 4)	1226	309	359	184	0.80	6.98	6.69	1.69	1.96	
-15 (+ 5)	1575	397	461	205	0.86	8.99	7.66	1.93	2.24	
-10 (+14)	1997	503	585	230	0.99	11.44	8.66	2.18	2.54	

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)	435	110	128	110	0.56	2.46	4.00	1.01	1.17	
-30 (-22)	626	158	184	138	0.69	3.55	4.57	1.15	1.34	
-25 (-13)	857	216	251	163	0.76	4.87	5.28	1.33	1.55	
-20 (- 4)	1139	287	334	187	0.82	6.48	6.08	1.53	1.78	
-15 (+ 5)	1483	374	434	213	0.91	8.46	6.92	1.74	2.03	
-10 (+14)	1899	479	557	244	1.06	10.88	7.75	1.95	2.27	

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)	367	92	107	105	0.53	2.07	3.47	0.87	1.02	
-30 (-22)	546	138	160	133	0.67	3.10	4.08	1.03	1.20	
-25 (-13)	765	193	224	160	0.75	4.34	4.78	1.21	1.40	
-20 (- 4)	1033	260	303	187	0.83	5.88	5.53	1.39	1.62	
-15 (+ 5)	1363	343	399	219	0.94	7.78	6.25	1.58	1.83	
-10 (+14)	1765	445	517	256	1.13	10.11	6.92	1.74	2.03	

### 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		