

### COMPRESSOR DEFINITION

Designation	EG U80HLC
Nominal Voltage/Frequency	220-240 V 50-60 Hz
Engineering Number	513700118

### 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 pressures/temperature			
9.1 Operating (gauge)	16.2	[kgf/cm <sup>2</sup> ] (230 psig)	/ °C - °F
9.2 Peak (gauge)	20.6	[kgf/cm <sup>2</sup> ] (293 psig)	/ °C - °F
10 Maximum winding temperature	130	[ °C ]	

### B - MECHANICAL DATA

1 Commercial designation	1/4	[hp]
2 Displacement	7.15	[cm <sup>3</sup> ] (0.436 cu.in)
2.1 Bore [mm]	22.500	
2.2 Stroke [mm]	18.000	
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)	11.14	[kg] (24.56 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	Combo	
2.1 Starting device	3ARR52U7L/3ARR56U7L	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	4(350)/5(350)	[µF(VAC minimum)]
5 Motor protection	3ARR52/56U7L	
6 Start winding resistance	14.25	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	12.45	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50/60 Hz)	-	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50/60 Hz)	-	[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		

### 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]
700	176	205	129	0.66	3.98	5.42	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]
820	207	240	149	0.70	4.66	5.50	1.39	1.61

### 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)	391	99	115	86	0.50	2.21	4.47	1.13	1.31
-30 (-22)	500	126	147	104	0.57	2.83	4.90	1.24	1.44
-25 (-13)	675	170	198	119	0.63	3.83	5.74	1.45	1.68
-20 (- 4)	907	229	266	133	0.69	5.16	6.81	1.72	2.00
-15 (+ 5)	1185	299	347	148	0.76	6.77	7.97	2.01	2.33
-10 (+14)	1498	378	439	165	0.83	8.59	9.04	2.28	2.65

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)	314	79	92	85	0.49	1.77	3.71	0.94	1.09
-30 (-22)	442	111	129	105	0.57	2.50	4.26	1.07	1.25
-25 (-13)	626	158	183	122	0.64	3.56	5.12	1.29	1.50
-20 (- 4)	856	216	251	139	0.71	4.87	6.10	1.54	1.79
-15 (+ 5)	1122	283	329	158	0.79	6.40	7.07	1.78	2.07
-10 (+14)	1413	356	414	180	0.89	8.09	7.85	1.98	2.30

### 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)	240	61	70	81	0.47	1.36	3.00	0.76	0.88	
-30 (-22)	382	96	112	102	0.56	2.16	3.69	0.93	1.08	
-25 (-13)	568	143	167	122	0.64	3.23	4.58	1.15	1.34	
-20 (- 4)	790	199	232	143	0.73	4.50	5.51	1.39	1.61	
-15 (+ 5)	1037	261	304	166	0.83	5.92	6.31	1.59	1.85	
-10 (+14)	1299	327	381	193	0.95	7.44	6.82	1.72	2.00	

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)	481	121	141	99	0.48	2.72	4.86	1.22	1.42	
-30 (-22)	671	169	197	122	0.55	3.81	5.46	1.38	1.60	
-25 (-13)	843	212	247	142	0.62	4.78	5.99	1.51	1.75	
-20 (- 4)	1041	262	305	160	0.70	5.92	6.56	1.65	1.92	
-15 (+ 5)	1311	330	384	179	0.80	7.48	7.29	1.84	2.13	
-10 (+14)	1698	428	497	202	0.92	9.73	8.29	2.09	2.43	

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)	402	101	118	97	0.47	2.27	4.14	1.04	1.21	
-30 (-22)	595	150	174	122	0.55	3.38	4.79	1.21	1.40	
-25 (-13)	761	192	223	143	0.63	4.32	5.32	1.34	1.56	
-20 (- 4)	945	238	277	163	0.74	5.38	5.83	1.47	1.71	
-15 (+ 5)	1192	300	349	185	0.85	6.80	6.44	1.62	1.89	
-10 (+14)	1547	390	453	211	1.00	8.87	7.26	1.83	2.13	

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)	327	82	96	91	0.44	1.85	3.61	0.91	1.06	
-30 (-22)	522	132	153	118	0.53	2.96	4.29	1.08	1.26	
-25 (-13)	681	172	200	141	0.63	3.87	4.79	1.21	1.40	
-20 (- 4)	849	214	249	164	0.74	4.83	5.21	1.31	1.53	
-15 (+ 5)	1072	270	314	190	0.87	6.12	5.67	1.43	1.66	
-10 (+14)	1394	351	408	221	1.02	7.99	6.28	1.58	1.84	

### 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		