

### COMPRESSOR DEFINITION

Designation	EG U80HLC
Nominal Voltage/Frequency	115 V 60 Hz
Engineering Number	513700050

### A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-134a		
3 Nominal voltage and frequency	115 / 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	85 to 110 V	103 to 135 V
8.2 LBP (43°C Ambient temperature)	Static	85 to 110 V	103 to 135 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 / ISO7	
4 Weight (with oil charge)	11.18	[kg] (24.65 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	115 V 60 Hz 1 ~ (Single phase)	
2 Starting device type	Combo	
2.1 Starting device	3ARR5XC1E1/3ARR5XC4E1	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	12(180)	[µF(VAC minimum)]
5 Motor protection	3ARR5XC1E /3ARR5XC4E	
6 Start winding resistance	3.15	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	3.05	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	14.50	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	2.30	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (60 Hz)	-	[A] - Measured according to UL 984
11 Approval boards certification	UL	

### D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @115V60Hz			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	147	1.42	4.66	5.57	1.40	1.63

### E - PERFORMANCE - CURVES

TEST CONDITIONS: @115V60Hz			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)	439	111	129	95	1.00	2.48	4.63	1.17	1.36
-30 (-22)	609	154	178	117	1.16	3.45	5.25	1.32	1.54
-25 (-13)	816	206	239	137	1.33	4.63	5.99	1.51	1.75
-20 (- 4)	1072	270	314	157	1.52	6.10	6.83	1.72	2.00
-15 (+ 5)	1391	351	408	178	1.74	7.94	7.77	1.96	2.28
-10 (+14)	1785	450	523	202	1.97	10.23	8.81	2.22	2.58

TEST CONDITIONS: @115V60Hz			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)	359	90	105	90	0.95	2.03	3.97	1.00	1.16
-30 (-22)	534	134	156	116	1.14	3.02	4.59	1.16	1.35
-25 (-13)	738	186	216	140	1.35	4.19	5.28	1.33	1.55
-20 (- 4)	986	248	289	163	1.58	5.61	6.04	1.52	1.77
-15 (+ 5)	1289	325	378	188	1.83	7.36	6.86	1.73	2.01
-10 (+14)	1661	418	487	215	2.11	9.51	7.73	1.95	2.26

TEST CONDITIONS: @115V60Hz			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)	266	67	78	78	0.88	1.51	3.42	0.86	1.00
-30 (-22)	447	113	131	108	1.10	2.53	4.07	1.02	1.19
-25 (-13)	651	164	191	136	1.34	3.70	4.74	1.19	1.39
-20 (- 4)	891	225	261	164	1.60	5.07	5.43	1.37	1.59
-15 (+ 5)	1180	297	346	193	1.89	6.74	6.14	1.55	1.80
-10 (+14)	1531	386	449	224	2.21	8.77	6.85	1.73	2.01

### 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		