

### COMPRESSOR DEFINITION

Designation	EG U80HLCW
Nominal Voltage/Frequency	115 V 60 Hz
Engineering Number	513700078

### 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 / ISO10	
4 Weight (with oil charge)	11.23	[kg] (24.76 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	149	1.42	4.66	5.51	1.39	1.61

### 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	96	1.00	2.48	4.56	1.15	1.34
-30 (-22)	609	154	178	118	1.16	3.45	5.18	1.31	1.52
-25 (-13)	816	206	239	139	1.33	4.63	5.92	1.49	1.73
-20 (- 4)	1072	270	314	159	1.52	6.10	6.76	1.70	1.98
-15 (+ 5)	1391	351	408	180	1.74	7.94	7.71	1.94	2.26
-10 (+14)	1785	450	523	203	1.97	10.23	8.75	2.20	2.56

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	92	0.95	2.03	3.90	0.98	1.14
-30 (-22)	534	134	156	117	1.14	3.02	4.53	1.14	1.33
-25 (-13)	738	186	216	141	1.35	4.19	5.23	1.32	1.53
-20 (- 4)	986	248	289	165	1.58	5.61	5.99	1.51	1.75
-15 (+ 5)	1289	325	378	189	1.83	7.36	6.80	1.71	1.99
-10 (+14)	1661	418	487	216	2.11	9.51	7.67	1.93	2.25

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	80	0.88	1.51	3.35	0.85	0.98
-30 (-22)	447	113	131	110	1.10	2.53	4.01	1.01	1.17
-25 (-13)	651	164	191	138	1.34	3.70	4.69	1.18	1.37
-20 (- 4)	891	225	261	166	1.60	5.07	5.38	1.36	1.58
-15 (+ 5)	1180	297	346	195	1.89	6.74	6.09	1.53	1.78
-10 (+14)	1531	386	449	226	2.21	8.77	6.80	1.71	1.99

### 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)	4.9 +0.02/-0.05	[mm]	(0.193" +0.001"/-0.002")
3.5 Connector sealing	Rubber Plugs		