

### COMPRESSOR DEFINITION

Designation	EG U80HLC
Nominal Voltage/Frequency	115 V 60 Hz
Engineering Number	513700105

### 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	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	-	103 to 140 V
8.2 LBP (43°C Ambient temperature)	Static	-	103 to 140 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	PTC	
2.1 Starting device	490C814R7/7M4R7MC1/8EA14C1/8EA1B1/8EA21C1/8EA3B1/4	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	4TM427NFBYY-53	
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)	2.70	[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	154	1.89	4.66	5.32	1.34	1.56	

TEST CONDITIONS: @115V60Hz			ASHRAELBP32 Fan		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	154	1.89	4.66	5.32	1.34	1.56	

### 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	99	1.56	2.48	4.42	1.11	1.29	
-30 (-22)	609	154	178	121	1.69	3.45	5.07	1.28	1.48	
-25 (-13)	816	206	239	142	1.83	4.63	5.76	1.45	1.69	
-20 (- 4)	1072	270	314	165	1.98	6.10	6.51	1.64	1.91	
-15 (+ 5)	1391	351	408	189	2.15	7.94	7.35	1.85	2.15	
-10 (+14)	1785	450	523	215	2.36	10.23	8.28	2.09	2.43	

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	95	1.55	2.03	3.76	0.95	1.10	
-30 (-22)	534	134	156	120	1.69	3.02	4.42	1.11	1.30	
-25 (-13)	738	186	216	146	1.85	4.19	5.07	1.28	1.49	
-20 (- 4)	986	248	289	172	2.02	5.61	5.74	1.45	1.68	
-15 (+ 5)	1289	325	378	200	2.22	7.36	6.43	1.62	1.88	
-10 (+14)	1661	418	487	231	2.46	9.51	7.17	1.81	2.10	

### E - PERFORMANCE - CURVES

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	85	1.50	1.51	3.14	0.79	0.92
-30	(-22)	447	113	131	114	1.66	2.53	3.85	0.97	1.13
-25	(-13)	651	164	191	144	1.85	3.70	4.50	1.14	1.32
-20	(- 4)	891	225	261	175	2.05	5.07	5.11	1.29	1.50
-15	(+ 5)	1180	297	346	208	2.29	6.74	5.70	1.44	1.67
-10	(+14)	1531	386	449	244	2.58	8.77	6.29	1.59	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		