

COMPRESSOR DEFINITION

Designation	EG U70HLC
Nominal Voltage/Frequency	115-127 V 60 Hz
Engineering Number	513700223

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-134a		
3 Nominal voltage and frequency	115-127 / 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 Expantion device	Capillary tube		
8 Compressor cooling		Operating voltage range	
		50 Hz	60 Hz
8.1 LBP (32°C Ambient temperature)	Static/Fan	-	94 to 140 V
8.2 LBP (43°C Ambient temperature)	Static/Fan	-	94 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/cm²] (230 psig)	/ °C - °F
9.2 Peak (gauge)	20.6	[kgf/cm²] (293 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1/4	[hp]
2 Displacement	6.36	[cm ³] (0.388 cu.in)
2.1 Bore [mm]	22.500	
2.2 Stroke [mm]	16.000	
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 ²] (2.84 to 4.27 psig)

C - ELETRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	115-127 V 60 Hz 1 ~ (Single phase)	
2 Starting device type	PTC	
2.1 Starting device	490D314R7/7M4R7MD3/8EA14C3/8EA1B3/8EA21C3/8EA3B3/	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	20(180)	[µF(VAC minimum)]
5 Motor protection	4TM427NFBYY-53	
6 Start winding resistance	3.50	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	3.80	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	11.50	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	2.00	[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]
700	176	205	126	1.10	3.98	5.56	1.40	1.63

E - PERFORMANCE - CURVES

TEST CONDITIONS:		ASHRAE32				(Condensing temperature 45°C (+113°F))				
@115V60Hz		Static								
Evaporating temperature		Cooling capacity			Power consumption	Current consumption	Gas flow rate	EFFICIENCY RATE		
		+/- 5%			+/- 5%	+/- 5%	+/- 5%	+/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	(-31)	366	92	107	85	0.79	2.07	4.28	1.08	1.25
-30	(-22)	530	133	155	102	0.92	3.00	5.22	1.31	1.53
-25	(-13)	722	182	212	119	1.06	4.10	6.10	1.54	1.79
-20	(- 4)	954	240	280	136	1.21	5.43	7.02	1.77	2.06
-15	(+ 5)	1238	312	363	153	1.36	7.07	8.06	2.03	2.36
-10	(+14)	1585	399	464	170	1.52	9.08	9.30	2.34	2.73

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)	286	72	84	82	0.75	1.62	3.49	0.88	1.02
-30	(-22)	446	112	131	100	0.90	2.53	4.47	1.13	1.31
-25	(-13)	628	158	184	119	1.06	3.56	5.29	1.33	1.55
-20	(- 4)	844	213	247	140	1.23	4.80	6.04	1.52	1.77
-15	(+ 5)	1105	279	324	162	1.41	6.31	6.81	1.72	2.00
-10	(+14)	1424	359	417	185	1.61	8.16	7.67	1.93	2.25

TEST CONDITIONS:		ASHRAE32			(Condensing temperature 65°C (+149°F))					
@115V60Hz		Static								
Evaporating temperature		Cooling capacity			Power consumption	Current consumption	Gas flow rate	EFFICIENCY RATE		
		+/- 5%			+/- 5%	+/- 5%	+/- 5%	+/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	(-31)	185	47	54	67	0.71	1.05	2.74	0.69	0.80
-30	(-22)	349	88	102	87	0.87	1.98	3.91	0.99	1.15
-25	(-13)	529	133	155	109	1.05	3.01	4.82	1.21	1.41
-20	(- 4)	738	186	216	134	1.24	4.20	5.56	1.40	1.63
-15	(+ 5)	987	249	289	160	1.45	5.63	6.20	1.56	1.82
-10	(+14)	1287	324	377	189	1.69	7.37	6.83	1.72	2.00

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)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		