

COMPRESSOR DEFINITION

Designation	EG U70HLC
Nominal Voltage/Frequency	220-240 V 50-60 Hz
Engineering Number	513700066

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 ²] (230 psig)	/ °C - °F
9.2 Peak (gauge)	20.6	[kgf/cm ²] (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)	11.11	[kg] (24.49 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	220-240 V 50-60 Hz 1 ~ (Single phase)	
2 Starting device type	PTC	
2.1 Starting device	7M220MD3/8EA17C3/8EA17C93/8EA5B3/8M220MD3	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	5(350)	[µF(VAC minimum)]
5 Motor protection	4TM197NFBYY-53	
6 Start winding resistance	12.10	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	14.10	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50/60 Hz)	7.50/6.20	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50/60 Hz)	1.20/1.10	[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	OFT - VDE	

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]
600	151	176	112	0.56	3.41	5.36	1.35	1.57

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]
700	176	205	127	0.60	3.98	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)	322	81	94	77	0.42	1.82	4.18	1.05	1.23
-30 (-22)	436	110	128	89	0.47	2.47	4.96	1.25	1.45
-25 (-13)	607	153	178	103	0.53	3.45	5.88	1.48	1.72
-20 (- 4)	823	207	241	119	0.59	4.68	6.89	1.74	2.02
-15 (+ 5)	1069	269	313	135	0.66	6.10	7.92	2.00	2.32
-10 (+14)	1332	336	390	150	0.72	7.63	8.92	2.25	2.61

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)	262	66	77	76	0.40	1.48	3.43	0.86	1.00
-30 (-22)	368	93	108	89	0.46	2.08	4.19	1.05	1.23
-25 (-13)	533	134	156	106	0.53	3.03	5.05	1.27	1.48
-20 (- 4)	745	188	218	125	0.61	4.24	5.97	1.50	1.75
-15 (+ 5)	989	249	290	144	0.69	5.65	6.88	1.73	2.02
-10 (+14)	1252	315	367	163	0.77	7.17	7.73	1.95	2.26

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)	183	46	54	69	0.38	1.03	2.67	0.67	0.78	
-30 (-22)	290	73	85	85	0.45	1.64	3.49	0.88	1.02	
-25 (-13)	459	116	135	105	0.53	2.61	4.38	1.10	1.28	
-20 (- 4)	676	170	198	127	0.63	3.85	5.29	1.33	1.55	
-15 (+ 5)	928	234	272	150	0.73	5.30	6.16	1.55	1.80	
-10 (+14)	1200	302	352	174	0.83	6.87	6.92	1.74	2.03	

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)	366	92	107	84	0.42	2.07	4.39	1.11	1.29	
-30 (-22)	530	133	155	100	0.48	3.00	5.32	1.34	1.56	
-25 (-13)	722	182	212	118	0.56	4.10	6.13	1.54	1.80	
-20 (- 4)	954	240	280	138	0.64	5.43	6.91	1.74	2.03	
-15 (+ 5)	1238	312	363	159	0.73	7.07	7.77	1.96	2.28	
-10 (+14)	1585	399	464	179	0.83	9.08	8.80	2.22	2.58	

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)	286	72	84	84	0.43	1.62	3.41	0.86	1.00	
-30 (-22)	446	112	131	101	0.50	2.53	4.40	1.11	1.29	
-25 (-13)	628	158	184	122	0.58	3.56	5.20	1.31	1.52	
-20 (- 4)	844	213	247	144	0.67	4.80	5.89	1.49	1.73	
-15 (+ 5)	1105	279	324	168	0.77	6.31	6.59	1.66	1.93	
-10 (+14)	1424	359	417	192	0.88	8.16	7.38	1.86	2.16	

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)	185	47	54	77	0.41	1.05	2.38	0.60	0.70	
-30 (-22)	349	88	102	97	0.48	1.98	3.53	0.89	1.03	
-25 (-13)	529	133	155	119	0.58	3.01	4.41	1.11	1.29	
-20 (- 4)	738	186	216	145	0.68	4.20	5.11	1.29	1.50	
-15 (+ 5)	987	249	289	173	0.81	5.63	5.74	1.45	1.68	
-10 (+14)	1287	324	377	201	0.94	7.37	6.39	1.61	1.87	

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		