

COMPRESSOR DEFINITION

Designation	EM U65HLP
Nominal Voltage/Frequency	200-230 V 50 Hz
Engineering Number	513306183

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-134a		
3 Nominal voltage and frequency	200-230 / 50	[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	187 to 255 V	-
8.2 LBP (43°C Ambient temperature)	Static	187 to 255 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	5.96	[cm ³] (0.364 cu.in)
2.1 Bore [mm]	22.500	
2.2 Stroke [mm]	15.000	
3 Lubricant charge	180	[ml] (6.09 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ESTER / ISO10	
4 Weight (with oil charge)	7.77	[kg] (17.13 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	200-230V 50Hz 1 ~ (Single phase)	
2 Starting device type	PTC	
2.1 Starting device	7M220MC1/8EA17B1/8EA17C1	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	4TM283NFBYY-53	
6 Start winding resistance	22.80	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	13.25	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	7.50	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50 Hz)	1.40	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50 Hz)	-	[A] - Measured according to UL 984
11 Approval boards certification	IRAM - 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]
621	156	182	128	1.00	3.53	4.85	1.22	1.42

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V50Hz		ASHRAE32 Static				(Condensing temperature 35°C (+95°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)	365	92	107	88	0.91	2.07	4.16	1.05	1.22
-30	(-22)	497	125	146	99	0.93	2.82	5.00	1.26	1.47
-25	(-13)	644	162	189	111	0.96	3.66	5.80	1.46	1.70
-20	(- 4)	810	204	237	123	0.99	4.61	6.58	1.66	1.93
-15	(+ 5)	1001	252	293	137	1.03	5.71	7.35	1.85	2.15
-10	(+14)	1222	308	358	151	1.07	7.00	8.13	2.05	2.38

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)	325	82	95	90	0.92	1.84	3.62	0.91	1.06
-30	(-22)	458	115	134	104	0.95	2.60	4.40	1.11	1.29
-25	(-13)	610	154	179	118	0.98	3.47	5.16	1.30	1.51
-20	(- 4)	787	198	230	133	1.02	4.48	5.92	1.49	1.73
-15	(+ 5)	992	250	291	148	1.06	5.67	6.68	1.68	1.96
-10	(+14)	1233	311	361	165	1.11	7.07	7.47	1.88	2.19

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)	287	72	84	90	0.92	1.62	3.21	0.81	0.94
-30	(-22)	411	104	120	105	0.95	2.33	3.89	0.98	1.14
-25	(-13)	558	141	164	122	0.99	3.17	4.56	1.15	1.33
-20	(- 4)	734	185	215	140	1.03	4.18	5.24	1.32	1.53
-15	(+ 5)	944	238	277	158	1.09	5.39	5.95	1.50	1.74
-10	(+14)	1194	301	350	178	1.15	6.84	6.70	1.69	1.96

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)	252	64	74	86	0.91	1.43	2.91	0.73	0.85
-30	(-22)	356	90	104	104	0.94	2.01	3.43	0.86	1.01
-25	(-13)	487	123	143	124	0.99	2.76	3.96	1.00	1.16
-20	(- 4)	652	164	191	145	1.05	3.71	4.52	1.14	1.32
-15	(+ 5)	855	215	250	167	1.11	4.88	5.12	1.29	1.50
-10	(+14)	1102	278	323	189	1.19	6.31	5.79	1.46	1.70

F - EXTERNAL CHARACTERISTICS

1 Base plate	Universal		
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		