

COMPRESSOR DEFINITION

Designation	EM 2S75HLP
Nominal Voltage/Frequency	220 V 50 Hz
Engineering Number	513304583

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-134a		
3 Nominal voltage and frequency	220 / 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	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 242 V	-
8.2 LBP (43°C Ambient temperature)	Static	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	6.76	[cm ³] (0.413 cu.in)
2.1 Bore [mm]	22.500	
2.2 Stroke [mm]	17.000	
3 Lubricant charge	150	[ml] (5.07 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ESTER / ISO10	
4 Weight (with oil charge)	7.56	[kg] (16.67 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 V 50 Hz 1 ~ (Single phase)	
2 Starting device type	PTC	
2.1 Starting device	8EA17C3/8EA17E61/8EA17E62/8EA17E63/QPS2-A22MD3/QPS3	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	5(330)	[µF(VAC minimum)]
5 Motor protection	4TM283KFBYY-53	
6 Start winding resistance	27.56	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	18.74	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	5.46	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50 Hz)	0.54	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50 Hz)	0.54	[A] - Measured according to UL 984
11 Approval boards certification	TUV	

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]
657	166	193	120	0.55	3.73	5.49	1.38	1.61

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)	373	94	109	73	0.41	2.11	5.10	1.29	1.50
-30	(-22)	517	130	151	90	0.46	2.93	5.78	1.46	1.69
-25	(-13)	698	176	205	106	0.52	3.96	6.61	1.66	1.94
-20	(- 4)	917	231	269	122	0.59	5.22	7.55	1.90	2.21
-15	(+ 5)	1176	296	345	137	0.67	6.71	8.59	2.16	2.52
-10	(+14)	1474	371	432	152	0.74	8.44	9.70	2.44	2.84

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)	317	80	93	77	0.41	1.79	4.16	1.05	1.22
-30	(-22)	455	115	133	94	0.46	2.58	4.86	1.23	1.43
-25	(-13)	633	160	186	111	0.53	3.60	5.67	1.43	1.66
-20	(- 4)	852	215	250	129	0.62	4.85	6.55	1.65	1.92
-15	(+ 5)	1112	280	326	148	0.71	6.35	7.48	1.89	2.19
-10	(+14)	1414	356	414	168	0.80	8.10	8.44	2.13	2.47

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)	269	68	79	79	0.41	1.52	3.44	0.87	1.01
-30	(-22)	396	100	116	95	0.46	2.25	4.17	1.05	1.22
-25	(-13)	566	143	166	114	0.53	3.21	4.95	1.25	1.45
-20	(- 4)	778	196	228	134	0.63	4.43	5.77	1.46	1.69
-15	(+ 5)	1034	261	303	156	0.74	5.90	6.61	1.66	1.94
-10	(+14)	1335	336	391	180	0.85	7.65	7.42	1.87	2.17

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)	229	58	67	80	0.42	1.30	2.85	0.72	0.83
-30	(-22)	340	86	100	95	0.46	1.93	3.60	0.91	1.06
-25	(-13)	496	125	145	114	0.54	2.81	4.37	1.10	1.28
-20	(- 4)	696	176	204	136	0.64	3.96	5.14	1.29	1.51
-15	(+ 5)	943	238	276	161	0.76	5.38	5.87	1.48	1.72
-10	(+14)	1236	311	362	189	0.90	7.08	6.54	1.65	1.92

F - EXTERNAL CHARACTERISTICS

1 Base plate	New Base Plate EUEM		
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	Slanted 42° up + 45° to Back		
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	Slanted parallel BP+24°to Back		
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	Slanted parallel BP+45°to Back		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		