

embraco**COMPRESSOR TECHNICAL DATA****COMPRESSOR DEFINITION**

Designation	EG AS100HLP
Nominal Voltage/Frequency	220-240 V 50 Hz
Engineering Number	513701292

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-134a		
3 Nominal voltage and frequency	220-240 / 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 Expantion device	Capillary tube		
8 Compressor cooling		Operating voltage range	
		50 Hz	60 Hz
8.1 LBP (32°C Ambient temperature)	Static	198 to 264 V	-
8.2 LBP (43°C Ambient temperature)	Static	198 to 264 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	1/3	[hp]
2 Displacement	7.95	[cm ³] (0.485 cu.in)
2.1 Bore [mm]	22.500	
2.2 Stroke [mm]	20.000	
3 Lubricant charge	230	[ml] (7.78 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ESTER / ISO10	
4 Weight (with oil charge)	10.99	[kg] (24.23 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 Hz 1 ~ (Single phase)	
2 Starting device type	PTC	
2.1 Starting device	7M220MD3/8EA17C3/8M220MD3	
3 Start capacitor	-	[μF(VAC minimum)]
4 Run capacitor	4(350)/5(350)	[μF(VAC minimum)]
5 Motor protection	4TM283NFBYY-53	
6 Start winding resistance	29.00	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	15.40	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	8.50	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50 Hz)	-	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50 Hz)	-	[A] - Measured according to UL 984
11 Approval boards certification	VDE	

UPDATE: 09JAN2014

513701292

embraco**COMPRESSOR TECHNICAL DATA****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]
839	211	246	154	0.87	4.77	5.46	1.38	1.60

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)	526	133	154	102	5.09	2.98	5.10	1.28	1.49
-30	(-22)	662	167	194	116	5.76	3.75	5.76	1.45	1.69
-25	(-13)	853	215	250	129	6.69	4.84	6.69	1.69	1.96
-20	(- 4)	1096	276	321	142	7.81	6.24	7.81	1.97	2.29
-15	(+ 5)	1389	350	407	155	9.04	7.93	9.04	2.28	2.65
-10	(+14)	1729	436	507	168	10.30	9.91	10.30	2.60	3.02

TEST CONDITIONS: @220V50Hz		ASHRAE32 Static		(Condensing temperature 45°C (+113°F))						
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)	422	106	124	106	4.05	2.39	4.05	1.02	1.19
-30	(-22)	593	149	174	124	4.79	3.36	4.78	1.21	1.40
-25	(-13)	821	207	241	141	5.76	4.66	5.76	1.45	1.69
-20	(- 4)	1102	278	323	158	6.90	6.28	6.89	1.74	2.02
-15	(+ 5)	1435	362	421	175	8.12	8.19	8.12	2.05	2.38
-10	(+14)	1816	458	532	194	9.34	10.41	9.34	2.35	2.74

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)	366	92	107	105	3.57	2.07	3.57	0.90	1.04
-30	(-22)	531	134	156	125	4.22	3.01	4.22	1.06	1.24
-25	(-13)	754	190	221	146	5.08	4.28	5.08	1.28	1.49
-20	(- 4)	1033	260	303	167	6.08	5.88	6.08	1.53	1.78
-15	(+ 5)	1364	344	400	189	7.14	7.79	7.14	1.80	2.09
-10	(+14)	1745	440	511	214	8.18	10.00	8.18	2.06	2.40



COMPRESSOR TECHNICAL DATA

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)	358	90	105	98	3.57	2.03	3.57	0.90	1.05
-30	(-22)	476	120	139	121	3.99	2.70	3.99	1.00	1.17
-25	(-13)	653	165	191	145	4.59	3.71	4.59	1.16	1.34
-20	(- 4)	887	224	260	170	5.30	5.05	5.30	1.34	1.55
-15	(+ 5)	1175	296	344	196	6.05	6.71	6.05	1.52	1.77
-10	(+14)	1515	382	444	226	6.74	8.68	6.74	1.70	1.98



COMPRESSOR TECHNICAL DATA

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		