embraco

COMPRESSOR TECHNICAL DATA

COMPRESSOR DEFINITION

Designation	**EM T60HLP**
Nominal Voltage/Frequency	**220-240 V 50 Hz**
Engineering Number	**192GA47**

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 R134a		
4.1 Evaporating temperature range	-30°C to -5°C	(-22°F to 23°F)	
5 Motor type	RSIR		
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 (32ºC Ambient temperature)	-	-	-
8.2 LBP (43ºC Ambient temperature)	-	-	-
8.3 HBP (32ºC Ambient temperature)	-	-	-
8.4 HBP (43ºC Ambient temperature)	-	-	-
9 Maximum condensing pressures/temperature			
9.1 Operating (gauge)	16.2	[kgf/cm²] (230 psig)	/ ºC - ºF
9.2 Peak (gauge)	20.6	[kgf/cm²] (293 psig)	/ ºC - ºF
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation		[hp]
2 Displacement	6.76	[cm³] (0.413 cu.in)
2.1 Bore [mm]	22.500	
2.2 Stroke [mm]	17.000	
3 Lubricant charge	180	[ml] (6.09 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ESTER / ISO22	
4 Weight (with oil charge)	7.65	[kg] (16.87 lb.)
5 Nitrogen charge	-	[kgf/cm²]

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	V230	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	T0536/26	
6 Start winding resistance	43.60	[Ω at 25ºC (77ºF)] +/- 8%
7 Run winding resistance	17.00	[Ω at 25ºC (77ºF)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	6.20	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50 Hz)	0.99	[A]
10 FLA - Full Load Amperage HBP (50 Hz)	-	[A]
11 Approval boards certification	IMQ	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS:	EN12900LBP_HH	Evaporating temperature	-35°C (-31°F)
@220V50Hz	Static	(Condensing temperature	40°C (104°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]
335	84	98	100	0.85		3.35	0.84	0.98

E - PERFORMANCE - CURVES

TEST CONDITIONS: **EN12900HH** (Condensing temperature **35ºC (+95ºF)**)
@220V50Hz **Static**

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	98	0.85	0.00	3.59	0.91	1.05
-30	**(-22)**	477	120	140	113	0.89	0.00	4.21	1.06	1.23
-25	**(-13)**	632	159	185	129	0.93	0.00	4.91	1.24	1.44
-20	**(- 4)**	827	208	242	146	0.98	0.00	5.66	1.43	1.66
-15	**(+ 5)**	1062	268	311	165	1.04	0.00	6.42	1.62	1.88
-10	**(+14)**	1333	336	391	185	1.10	0.00	7.19	1.81	2.11

TEST CONDITIONS: **EN12900HH** (Condensing temperature **45ºC (+113ºF)**)
@220V50Hz **Static**

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)**	302	76	89	101	0.86	0.00	2.94	0.74	0.86
-30	**(-22)**	402	101	118	117	0.90	0.00	3.44	0.87	1.01
-25	**(-13)**	540	136	158	135	0.95	0.00	4.00	1.01	1.17
-20	**(- 4)**	714	180	209	156	1.01	0.00	4.58	1.15	1.34
-15	**(+ 5)**	922	232	270	178	1.08	0.00	5.17	1.30	1.51
-10	**(+14)**	1163	293	341	203	1.16	0.00	5.73	1.44	1.68

TEST CONDITIONS: **EN12900HH** (Condensing temperature **55ºC (+131ºF)**)
@220V50Hz **Static**

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)**	238	60	70	101	0.87	0.00	2.31	0.58	0.68
-30	**(-22)**	325	82	95	119	0.91	0.00	2.73	0.69	0.80
-25	**(-13)**	446	112	131	140	0.97	0.00	3.19	0.80	0.93
-20	**(- 4)**	598	151	175	164	1.03	0.00	3.65	0.92	1.07
-15	**(+ 5)**	780	197	229	190	1.12	0.00	4.10	1.03	1.20
-10	**(+14)**	990	249	290	220	1.22	0.00	4.51	1.14	1.32

F - EXTERNAL CHARACTERISTICS

1 Base plate	European Standard		
2 Tray holder	Yes		
3 Connectors			
3.1 SUCTION	6.1 +0.10/+0.00	[mm]	(0.240" +0.004"/+0.000")
3.1.1 Material	Copper		
3.1.2 Shape	Slanted 42°		
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	6.1 +0.10/+0.00	[mm]	(0.240" +0.004"/+0.000")
3.3.1 Material	Copper		
3.3.2 Shape	Slanted 42°		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		