

COMPRESSOR DEFINITION

Designation	EM T40CLP
Nominal Voltage/Frequency	220-240 V 50 Hz
Engineering Number	891DA73

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-600a		
3 Nominal voltage and frequency	220-240 / 50	[V / Hz]	
4 Application type	Low-Medium Back Pressure		
4.1 Evaporating temperature range	-35°C to -5°C	(-31°F to 23°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	198 to 254 V	-
8.2 LBP (43°C Ambient temperature)	Static	198 to 254 V	-
8.3 HBP (32°C Ambient temperature)	-	-	-
8.4 HBP (43°C Ambient temperature)	-	-	-
9 Maximum condensing pressures/temperature			
9.1 Operating (gauge)	7.7	[kgf/cm ²] (109 psig)	/ °C - °F
9.2 Peak (gauge)	9.8	[kgf/cm ²] (139 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation		[hp]
2 Displacement	7.23	[cm ³] (0.441 cu.in)
2.1 Bore [mm]	24.000	
2.2 Stroke [mm]	16.000	
3 Lubricant charge	180	[ml] (6.09 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	MINERAL / ISO7	
4 Weight (with oil charge)	7.35	[kg] (16.20 lb.)
5 Nitrogen charge	-	[kgf/cm ²]

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	MSDA3	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	4TM189NFBYY-153	
6 Start winding resistance	32.00	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	26.60	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	3.90	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50 Hz)	0.63	[A]
10 FLA - Full Load Amperage HBP (50 Hz)	-	[A]
11 Approval boards certification	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]
414	104	121	95	0.64	1.30	4.37	1.10	1.28

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)	247	62	72	65	0.56	0.77	3.79	0.95	1.11
-30	(-22)	330	83	97	74	0.57	1.03	4.48	1.13	1.31
-25	(-13)	431	109	126	82	0.59	1.35	5.26	1.33	1.54
-20	(- 4)	552	139	162	90	0.61	1.73	6.12	1.54	1.79
-15	(+ 5)	696	175	204	99	0.64	2.19	7.04	1.77	2.06
-10	(+14)	863	218	253	107	0.66	2.72	8.04	2.03	2.36
-5	(+23)	1058	267	310	116	0.69	3.35	9.10	2.29	2.67

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)	230	58	67	67	0.56	0.72	3.44	0.87	1.01
-30	(-22)	311	78	91	77	0.58	0.97	4.04	1.02	1.19
-25	(-13)	409	103	120	87	0.60	1.28	4.72	1.19	1.38
-20	(- 4)	527	133	154	97	0.63	1.66	5.45	1.37	1.60
-15	(+ 5)	667	168	195	107	0.66	2.10	6.24	1.57	1.83
-10	(+14)	831	209	243	117	0.69	2.62	7.09	1.79	2.08
-5	(+23)	1021	257	299	128	0.73	3.23	8.00	2.02	2.34

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)	203	51	59	68	0.56	0.64	3.00	0.76	0.88
-30	(-22)	281	71	82	79	0.58	0.88	3.54	0.89	1.04
-25	(-13)	376	95	110	91	0.61	1.18	4.14	1.04	1.21
-20	(- 4)	489	123	143	102	0.64	1.54	4.78	1.21	1.40
-15	(+ 5)	625	157	183	114	0.68	1.97	5.47	1.38	1.60
-10	(+14)	784	197	230	126	0.72	2.47	6.21	1.56	1.82
-5	(+23)	969	244	284	139	0.77	3.06	6.98	1.76	2.04

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)	176	44	52	68	0.56	0.55	2.59	0.65	0.76
-30	(-22)	250	63	73	80	0.58	0.78	3.10	0.78	0.91
-25	(-13)	341	86	100	93	0.61	1.07	3.65	0.92	1.07
-20	(- 4)	450	113	132	106	0.65	1.41	4.23	1.07	1.24
-15	(+ 5)	580	146	170	120	0.69	1.83	4.85	1.22	1.42
-10	(+14)	733	185	215	134	0.75	2.31	5.49	1.38	1.61
-5	(+23)	912	230	267	148	0.81	2.89	6.16	1.55	1.80

F - EXTERNAL CHARACTERISTICS

1 Base plate	European Standard		
2 Tray holder	No		
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	4.95 +0.05/+0.05	[mm]	(0.195" +0.002"/+0.002")
3.2.1 Material	Copper		
3.2.2 Shape	Vertical		
3.3 PROCESS	6 +0.08/-0.08	[mm]	(0.236" +0.003"/-0.003")
3.3.1 Material	Copper(OD)		
3.3.2 Shape	Slanted 42°		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		