

### COMPRESSOR DEFINITION

Designation	EM T35CLP
Nominal Voltage/Frequency	100 V 50-60 Hz
Engineering Number	513306050

### A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-600a		
3 Nominal voltage and frequency	100 / 50-60	[ 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	85 to 110 V	85 to 110 V
8.2 LBP (43°C Ambient temperature)	Static	85 to 110 V	85 to 110 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 <sup>2</sup> ] (109 psig)	/ °C - °F
9.2 Peak (gauge)	9.8	[kgf/cm <sup>2</sup> ] (139 psig)	/ °C - °F
10 Maximum winding temperature	130	[ °C ]	

### B - MECHANICAL DATA

1 Commercial designation		[hp]
2 Displacement	4.50	[cm <sup>3</sup> ] (0.275 cu.in)
2.1 Bore [mm]	21.000	
2.2 Stroke [mm]	13.000	
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)	7.2	[kg] (15.87 lb.)
5 Nitrogen charge	-	[kgf/cm <sup>2</sup> ]

### C - ELETRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	100 V 50-60 Hz 1 ~ (Single phase)	
2 Starting device type	PTC	
2.1 Starting device	V115	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	T0062/07	
6 Start winding resistance	7.90	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	6.50	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50/60 Hz)	6.90/6.50	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50/60 Hz)	1.45/1.30	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50/60 Hz)	-	[A] - Measured according to UL 984
11 Approval boards certification		

### D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @100V50Hz			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]
255	64	75	62	1.11	0.80	4.15	1.05	1.22

TEST CONDITIONS: @100V60Hz			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]
305	77	89	68	1.02	0.96	4.49	1.13	1.32

### E - PERFORMANCE - CURVES

TEST CONDITIONS: @100V50Hz			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)	133	33	39	45	1.04	0.41	2.94	0.74	0.86
-30 (-22)	198	50	58	50	1.07	0.62	3.92	0.99	1.15
-25 (-13)	265	67	78	55	1.10	0.83	4.81	1.21	1.41
-20 (- 4)	340	86	100	59	1.12	1.07	5.73	1.44	1.68
-15 (+ 5)	428	108	125	64	1.13	1.35	6.77	1.71	1.98
-10 (+14)	534	135	157	67	1.15	1.69	8.05	2.03	2.36

TEST CONDITIONS: @100V50Hz			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)	117	29	34	46	1.05	0.37	2.57	0.65	0.75
-30 (-22)	181	46	53	51	1.08	0.57	3.55	0.89	1.04
-25 (-13)	247	62	72	56	1.10	0.78	4.38	1.10	1.28
-20 (- 4)	321	81	94	62	1.13	1.01	5.19	1.31	1.52
-15 (+ 5)	409	103	120	67	1.15	1.29	6.07	1.53	1.78
-10 (+14)	516	130	151	72	1.18	1.63	7.14	1.80	2.09

### E - PERFORMANCE - CURVES

TEST CONDITIONS: @100V50Hz		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)	105	26	31	47	1.06	0.33	2.23	0.56	0.65	
-30 (-22)	166	42	49	51	1.09	0.52	3.22	0.81	0.94	
-25 (-13)	230	58	68	57	1.11	0.72	4.03	1.02	1.18	
-20 (- 4)	302	76	89	63	1.14	0.95	4.75	1.20	1.39	
-15 (+ 5)	388	98	114	70	1.17	1.22	5.50	1.39	1.61	
-10 (+14)	493	124	144	77	1.21	1.56	6.38	1.61	1.87	

TEST CONDITIONS: @100V50Hz		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)	85	21	25	47	1.07	0.27	1.78	0.45	0.52	
-30 (-22)	143	36	42	51	1.09	0.45	2.82	0.71	0.82	
-25 (-13)	203	51	60	57	1.12	0.64	3.61	0.91	1.06	
-20 (- 4)	271	68	80	64	1.15	0.85	4.28	1.08	1.25	
-15 (+ 5)	353	89	104	72	1.19	1.11	4.92	1.24	1.44	
-10 (+14)	455	115	133	80	1.24	1.44	5.64	1.42	1.65	

TEST CONDITIONS: @100V60Hz		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)	168	42	49	50	0.92	0.53	3.39	0.85	0.99	
-30 (-22)	239	60	70	54	0.95	0.75	4.39	1.11	1.29	
-25 (-13)	314	79	92	59	0.98	0.98	5.31	1.34	1.55	
-20 (- 4)	400	101	117	64	1.01	1.26	6.23	1.57	1.83	
-15 (+ 5)	508	128	149	70	1.05	1.60	7.24	1.83	2.12	
-10 (+14)	645	163	189	76	1.10	2.03	8.43	2.12	2.47	

TEST CONDITIONS: @100V60Hz		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)	155	39	45	50	0.92	0.49	3.10	0.78	0.91	
-30 (-22)	221	56	65	55	0.95	0.69	3.98	1.00	1.16	
-25 (-13)	290	73	85	61	0.99	0.91	4.76	1.20	1.39	
-20 (- 4)	372	94	109	67	1.03	1.17	5.54	1.40	1.62	
-15 (+ 5)	476	120	139	74	1.08	1.50	6.40	1.61	1.88	
-10 (+14)	609	154	179	82	1.14	1.92	7.42	1.87	2.17	

### E - PERFORMANCE - CURVES

TEST CONDITIONS: @100V60Hz		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)	144	36	42	50	0.91	0.45	2.84	0.71	0.83
-30	(-22)	204	51	60	56	0.95	0.64	3.60	0.91	1.06
-25	(-13)	268	67	78	63	1.00	0.84	4.27	1.08	1.25
-20	(- 4)	344	87	101	70	1.05	1.08	4.93	1.24	1.44
-15	(+ 5)	443	112	130	78	1.11	1.39	5.66	1.43	1.66
-10	(+14)	573	144	168	87	1.18	1.81	6.53	1.65	1.91

TEST CONDITIONS: @100V60Hz		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)	117	29	34	50	0.92	0.37	2.33	0.59	0.68
-30	(-22)	170	43	50	57	0.96	0.53	3.01	0.76	0.88
-25	(-13)	228	57	67	65	1.02	0.72	3.59	0.90	1.05
-20	(- 4)	299	75	88	73	1.08	0.94	4.14	1.04	1.21
-15	(+ 5)	393	99	115	83	1.15	1.24	4.76	1.20	1.39
-10	(+14)	518	131	152	93	1.24	1.64	5.51	1.39	1.61

### F - EXTERNAL CHARACTERISTICS

1 Base plate	European Standard EUEM		
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° 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	6.1 +0.10/+0.00	[mm]	(0.240" +0.004"/+0.000")
3.3.1 Material	Copper		
3.3.2 Shape	Slanted 45° up + 45° to Back		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		