

### COMPRESSOR DEFINITION

Designation	<b>T 2134Z</b>
Nominal Voltage/Frequency	<b>115 V 60 Hz</b>
Engineering Number	<b>203HG63</b>

### A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-134a		
3 Nominal voltage and frequency	115 / 60	[ 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	CSIR		
6 Starting torque	HST - High starting torque		
7 Expansion device	Capillary tube or Expansion valve		
8 Compressor cooling		Operating voltage range	
		50 Hz	60 Hz
8.1 LBP (32°C Ambient temperature)	-	-	-
8.2 LBP (43°C Ambient temperature)	-	-	-
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 <sup>2</sup> ] (230 psig)	/ °C - °F
9.2 Peak (gauge)	20.6	[kgf/cm <sup>2</sup> ] (293 psig)	/ °C - °F
10 Maximum winding temperature	130	[ °C ]	

### B - MECHANICAL DATA

1 Commercial designation	1/2	[hp]
2 Displacement	19.04	[cm <sup>3</sup> ] (1.162 cu.in)
2.1 Bore [mm]	34.120	
2.2 Stroke [mm]	20.830	
3 Lubricant charge	550	[ml] (18.60 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ESTER / ISO22	
4 Weight (with oil charge)	13.7	[kg] (30.20 lb.)
5 Nitrogen charge	0.2 to 0.3	[kgf/cm <sup>2</sup> ] (2.84 to 4.27 psig)

### C - ELETRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	115 V 60 Hz 1~ (Single phase)	
2 Starting device type	Current Relay	
2.1 Starting device	MTRPH-66	
3 Start capacitor	189-227(165)	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	T0793/G9	
6 Start winding resistance		[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance		[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	30.00	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	5.10	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (60 Hz)	-	[A] - Measured according to UL 984
11 Approval boards certification	UL	

### D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @100V50Hz			ASHRAELBP32 Fan		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]
1240	312	363	334	4.90	7.05	3.71	0.93	1.09

### E - PERFORMANCE - CURVES

TEST CONDITIONS: @100V50Hz			ASHRAE32 Fan		(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)	670	169	196	265	3.95	3.79	2.38	0.60	0.70
-30	(-22)	1048	264	307	288	4.09	5.94	3.63	0.91	1.06
-25	(-13)	1469	370	430	320	4.26	8.34	4.62	1.16	1.35
-20	(- 4)	1947	491	571	361	4.48	11.08	5.41	1.36	1.58
-15	(+ 5)	2498	629	732	411	4.79	14.26	6.07	1.53	1.78
-10	(+14)	3136	790	919	469	5.22	17.97	6.66	1.68	1.95

TEST CONDITIONS: @100V50Hz			ASHRAE32 Fan		(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)	438	110	128	207	3.69	2.47	2.17	0.55	0.64
-30	(-22)	837	211	245	255	3.92	4.74	3.27	0.82	0.96
-25	(-13)	1267	319	371	308	4.17	7.19	4.12	1.04	1.21
-20	(- 4)	1745	440	511	366	4.47	9.93	4.79	1.21	1.40
-15	(+ 5)	2284	576	669	428	4.85	13.04	5.34	1.35	1.56
-10	(+14)	2901	731	850	495	5.33	16.62	5.85	1.47	1.71

TEST CONDITIONS: @100V50Hz			ASHRAE32 Fan		(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)	208	52	61	148	3.48	1.16	1.87	0.47	0.55
-30	(-22)	626	158	183	221	3.82	3.55	2.84	0.72	0.83
-25	(-13)	1066	269	312	296	4.18	6.06	3.58	0.90	1.05
-20	(- 4)	1543	389	452	371	4.58	8.78	4.17	1.05	1.22
-15	(+ 5)	2071	522	607	446	5.04	11.82	4.65	1.17	1.36
-10	(+14)	2665	672	781	522	5.61	15.27	5.11	1.29	1.50

### E - PERFORMANCE - CURVES

TEST CONDITIONS: @100V60Hz		ASHRAE32 Fan			(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)	785	198	230	250	4.81	4.44	3.10	0.78	0.91
-30	(-22)	1227	309	359	314	4.91	6.95	3.89	0.98	1.14
-25	(-13)	1718	433	504	376	5.11	9.76	4.59	1.16	1.34
-20	(- 4)	2278	574	667	435	5.42	12.96	5.25	1.32	1.54
-15	(+ 5)	2922	736	856	492	5.83	16.68	5.93	1.49	1.74
-10	(+14)	3669	924	1075	547	6.33	21.02	6.68	1.68	1.96

TEST CONDITIONS: @100V60Hz		ASHRAE32 Fan			(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)	514	130	151	221	4.55	2.90	2.40	0.61	0.70
-30	(-22)	980	247	287	303	4.76	5.55	3.22	0.81	0.94
-25	(-13)	1483	374	434	378	5.07	8.42	3.93	0.99	1.15
-20	(- 4)	2041	514	598	447	5.48	11.62	4.58	1.16	1.34
-15	(+ 5)	2673	673	783	511	5.97	15.26	5.24	1.32	1.53
-10	(+14)	3394	855	994	570	6.56	19.44	5.94	1.50	1.74

TEST CONDITIONS: @100V60Hz		ASHRAE32 Fan			(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)	243	61	71	193	4.29	1.36	1.66	0.42	0.49
-30	(-22)	732	185	215	291	4.61	4.15	2.53	0.64	0.74
-25	(-13)	1247	314	365	379	5.03	7.08	3.27	0.82	0.96
-20	(- 4)	1805	455	529	459	5.53	10.27	3.93	0.99	1.15
-15	(+ 5)	2423	611	710	530	6.12	13.83	4.58	1.15	1.34
-10	(+14)	3119	786	914	593	6.79	17.87	5.26	1.32	1.54

### F - EXTERNAL CHARACTERISTICS

1 Base plate	Universal		
2 Tray holder	No		
3 Connectors			
3.1 SUCTION	9.6 +0.07/+0.00	[mm]	(0.378" +0.003"/+0.000")
3.1.1 Material	Copper		
3.1.2 Shape	Slanted 42°		
3.2 DISCHARGE	6.42 +0.08/+0.00	[mm]	(0.253" +0.003"/+0.000")
3.2.1 Material	Copper		
3.2.2 Shape	Straight		
3.3 PROCESS	9.6 +0.07/+0.00	[mm]	(0.378" +0.003"/+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		