

### COMPRESSOR DEFINITION

Designation	T 2134Z
Nominal Voltage/Frequency	208-230 V 60 Hz
Engineering Number	203HD63

### A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-134a		
3 Nominal voltage and frequency	208-230 / 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)	14	[kg] (30.86 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	208-230 V 60 Hz 1~ (Single phase)	
2 Starting device type	Current Relay	
2.1 Starting device	MTRP-55	
3 Start capacitor	72-88(330)	[μF(VAC minimum)]
4 Run capacitor	-	[μF(VAC minimum)]
5 Motor protection	T0736/20	
6 Start winding resistance	6.40	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	3.54	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	21.50	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	3.50	[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: @200V50Hz			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]
1250	315	366	336	2.40	7.10	3.72	0.94	1.09

### E - PERFORMANCE - CURVES

TEST CONDITIONS: @200V50Hz			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)	611	154	179	208	1.90	3.45	2.89	0.73	0.85
-30	(-22)	938	236	275	250	2.06	5.31	3.74	0.94	1.09
-25	(-13)	1312	331	384	297	2.23	7.45	4.43	1.12	1.30
-20	(- 4)	1752	441	513	348	2.41	9.97	5.05	1.27	1.48
-15	(+ 5)	2277	574	667	400	2.60	13.00	5.68	1.43	1.66
-10	(+14)	2905	732	851	454	2.82	16.64	6.37	1.60	1.87

TEST CONDITIONS: @200V50Hz			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)	469	118	137	199	1.93	2.65	2.40	0.60	0.70
-30	(-22)	828	209	243	251	2.09	4.69	3.28	0.83	0.96
-25	(-13)	1214	306	356	305	2.26	6.90	3.98	1.00	1.17
-20	(- 4)	1647	415	483	362	2.45	9.37	4.57	1.15	1.34
-15	(+ 5)	2145	541	629	419	2.66	12.24	5.13	1.29	1.50
-10	(+14)	2727	687	799	476	2.90	15.62	5.72	1.44	1.68

TEST CONDITIONS: @200V50Hz			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)	251	63	74	168	1.87	1.41	1.93	0.49	0.57
-30	(-22)	665	168	195	235	2.05	3.77	2.85	0.72	0.84
-25	(-13)	1086	274	318	304	2.25	6.17	3.56	0.90	1.04
-20	(- 4)	1535	387	450	373	2.48	8.73	4.12	1.04	1.21
-15	(+ 5)	2028	511	594	441	2.74	11.58	4.60	1.16	1.35
-10	(+14)	2586	652	758	508	3.03	14.82	5.09	1.28	1.49

### E - PERFORMANCE - CURVES

TEST CONDITIONS: @200V60Hz		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)	741	187	217	248	2.37	4.19	2.97	0.75	0.87
-30	(-22)	1167	294	342	311	2.54	6.61	3.73	0.94	1.09
-25	(-13)	1627	410	477	372	2.72	9.24	4.39	1.11	1.29
-20	(- 4)	2147	541	629	430	2.91	12.22	5.01	1.26	1.47
-15	(+ 5)	2752	694	806	488	3.13	15.71	5.63	1.42	1.65
-10	(+14)	3467	874	1016	546	3.38	19.86	6.33	1.59	1.85

TEST CONDITIONS: @200V60Hz		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)	522	132	153	223	2.30	2.94	2.49	0.63	0.73
-30	(-22)	985	248	289	298	2.51	5.58	3.30	0.83	0.97
-25	(-13)	1468	370	430	369	2.72	8.34	3.97	1.00	1.16
-20	(- 4)	1997	503	585	439	2.95	11.36	4.56	1.15	1.33
-15	(+ 5)	2595	654	760	508	3.21	14.81	5.10	1.29	1.50
-10	(+14)	3288	829	964	578	3.51	18.84	5.68	1.43	1.66

TEST CONDITIONS: @200V60Hz		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)	303	76	89	199	2.24	1.70	1.95	0.49	0.57
-30	(-22)	804	203	236	284	2.48	4.56	2.84	0.72	0.83
-25	(-13)	1310	330	384	367	2.73	7.44	3.55	0.89	1.04
-20	(- 4)	1847	466	541	448	3.00	10.51	4.12	1.04	1.21
-15	(+ 5)	2439	615	715	529	3.29	13.92	4.62	1.16	1.35
-10	(+14)	3111	784	912	610	3.63	17.82	5.10	1.29	1.49

### 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		