

COMPRESSOR DEFINITION

Designation	T 2140Z
Nominal Voltage/Frequency	200-220 V 50 Hz / 230 V 60 Hz
Engineering Number	207HK11

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-134a		
3 Nominal voltage and frequency	200-220 / 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	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 ²] (230 psig)	/ °C - °F
9.2 Peak (gauge)	20.6	[kgf/cm ²] (293 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	3/4	[hp]
2 Displacement	22.37	[cm ³] (1.365 cu.in)
2.1 Bore [mm]	36.990	
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)	14.2	[kg] (31.31 lb.)
5 Nitrogen charge	0.2 to 0.3	[kgf/cm ²] (2.84 to 4.27 psig)

C - ELETRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	200-220 V 50 Hz / 230 V 60 Hz 1 ~ (Single phase)	
2 Starting device type	Current Relay	
2.1 Starting device	MTRP-57	
3 Start capacitor	53-64(330)	[μF(VAC minimum)]
4 Run capacitor	-	[μF(VAC minimum)]
5 Motor protection	T0188/01	
6 Start winding resistance	13.10	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	3.10	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	-	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50 Hz)	-	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50 Hz)	-	[A] - Measured according to UL 984
11 Approval boards certification		

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]
1456	367	427	382	2.92	8.27	3.81	0.96	1.12

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)	969	244	284	260	2.57	5.48	3.53	0.89	1.04
-30 (-22)	1150	290	337	294	2.63	6.52	3.90	0.98	1.14
-25 (-13)	1517	382	445	341	2.77	8.62	4.47	1.13	1.31
-20 (- 4)	2069	521	606	400	2.98	11.78	5.17	1.30	1.52
-15 (+ 5)	2806	707	822	472	3.27	16.02	5.94	1.50	1.74
-10 (+14)	3726	939	1092	557	3.63	21.35	6.69	1.69	1.96

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)	863	217	253	254	2.56	4.87	3.25	0.82	0.95
-30 (-22)	1051	265	308	296	2.64	5.96	3.55	0.89	1.04
-25 (-13)	1411	356	413	350	2.80	8.01	4.04	1.02	1.18
-20 (- 4)	1941	489	569	416	3.04	11.05	4.66	1.17	1.37
-15 (+ 5)	2642	666	774	495	3.36	15.08	5.34	1.34	1.56
-10 (+14)	3512	885	1029	586	3.75	20.12	6.00	1.51	1.76

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)	756	191	222	248	2.55	4.26	2.96	0.75	0.87
-30 (-22)	952	240	279	298	2.65	5.39	3.20	0.81	0.94
-25 (-13)	1305	329	382	359	2.84	7.41	3.63	0.92	1.06
-20 (- 4)	1814	457	531	432	3.10	10.32	4.18	1.05	1.23
-15 (+ 5)	2479	625	726	518	3.45	14.15	4.79	1.21	1.40
-10 (+14)	3298	831	966	616	3.87	18.89	5.37	1.35	1.57

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)	1133	286	332	303	2.99	6.40	3.54	0.89	1.04
-30	(-22)	1346	339	394	344	3.07	7.63	3.90	0.98	1.14
-25	(-13)	1775	447	520	399	3.23	10.08	4.47	1.13	1.31
-20	(- 4)	2421	610	709	468	3.49	13.78	5.17	1.30	1.52
-15	(+ 5)	3282	827	962	552	3.82	18.74	5.94	1.50	1.74
-10	(+14)	4359	1098	1277	651	4.23	24.98	6.70	1.69	1.96

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)	1009	254	296	296	2.99	5.70	3.26	0.82	0.95
-30	(-22)	1230	310	360	346	3.08	6.97	3.55	0.89	1.04
-25	(-13)	1651	416	484	409	3.27	9.38	4.04	1.02	1.18
-20	(- 4)	2272	572	666	487	3.56	12.93	4.66	1.17	1.37
-15	(+ 5)	3091	779	906	579	3.93	17.65	5.34	1.35	1.56
-10	(+14)	4109	1036	1204	685	4.39	23.54	6.00	1.51	1.76

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)	885	223	259	290	3.00	4.99	2.96	0.75	0.87
-30	(-22)	1114	281	326	349	3.10	6.31	3.20	0.81	0.94
-25	(-13)	1527	385	447	420	3.32	8.67	3.63	0.91	1.06
-20	(- 4)	2122	535	622	506	3.63	12.08	4.18	1.05	1.23
-15	(+ 5)	2899	731	850	605	4.03	16.55	4.79	1.21	1.40
-10	(+14)	3858	972	1131	720	4.53	22.10	5.38	1.36	1.58

F - EXTERNAL CHARACTERISTICS

1 Base plate	European Standard		
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		