

### COMPRESSOR DEFINITION

Designation	T 2140GK
Nominal Voltage/Frequency	115 V 60 Hz
Engineering Number	933BG42

### A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-404A		
3 Nominal voltage and frequency	115 / 60	[ V / Hz ]	
4 Application type	Low Back Pressure R404A		
4.1 Evaporating temperature range	-40°C to -10°C	(-40°F to 14°F)	
5 Motor type	CSIR		
6 Starting torque	HST - Hight 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)	25.7	[kgf/cm <sup>2</sup> ] (365 psig)	/ °C - °F
9.2 Peak (gauge)	28.7	[kgf/cm <sup>2</sup> ] (408 psig)	/ °C - °F
10 Maximum winding temperature	130	[ °C ]	

### B - MECHANICAL DATA

1 Commercial designation	1/2	[hp]
2 Displacement	12.55	[cm <sup>3</sup> ] (0.766 cu.in)
2.1 Bore [mm]	31.740	
2.2 Stroke [mm]	15.870	
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	115 V 60 Hz 1~ (Single phase)	
2 Starting device type	Current Relay	
2.1 Starting device	MTRPH-0016	
3 Start capacitor	189-227(165)	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	T0736/20	
6 Start winding resistance	3.40	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	1.05	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	36.00	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	6.70	[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]
1576	397	462	426	7.35	10.68	3.70	0.93	1.08

### 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]
-40	(-40)	498	126	146	301	5.68	3.35	1.62	0.41	0.47
-35	(-31)	889	224	260	327	5.71	5.99	2.76	0.70	0.81
-30	(-22)	1331	335	390	362	5.76	9.00	3.71	0.93	1.09
-25	(-13)	1839	463	539	407	5.89	12.49	4.52	1.14	1.32
-20	(- 4)	2427	612	711	460	6.12	16.57	5.24	1.32	1.54
-15	(+ 5)	3108	783	911	522	6.51	21.36	5.93	1.49	1.74
-10	(+14)	3898	982	1142	591	7.10	26.97	6.63	1.67	1.94

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]
-40	(-40)	352	89	103	248	5.48	2.36	1.41	0.36	0.41
-35	(-31)	724	182	212	291	5.61	4.87	2.48	0.63	0.73
-30	(-22)	1142	288	335	342	5.75	7.71	3.35	0.85	0.98
-25	(-13)	1621	408	475	399	5.94	10.99	4.07	1.03	1.19
-20	(- 4)	2175	548	637	463	6.23	14.82	4.70	1.18	1.38
-15	(+ 5)	2817	710	825	533	6.66	19.32	5.28	1.33	1.55
-10	(+14)	3562	898	1044	608	7.27	24.59	5.86	1.48	1.72

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]
-40	(-40)	211	53	62	195	5.29	1.41	1.13	0.28	0.33
-35	(-31)	565	142	166	255	5.51	3.80	2.16	0.54	0.63
-30	(-22)	961	242	282	321	5.73	6.48	2.98	0.75	0.87
-25	(-13)	1412	356	414	391	5.99	9.56	3.63	0.92	1.06
-20	(- 4)	1933	487	566	466	6.34	13.15	4.18	1.05	1.22
-15	(+ 5)	2538	639	744	544	6.81	17.37	4.67	1.18	1.37
-10	(+14)	3240	816	949	626	7.44	22.32	5.16	1.30	1.51

### 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]
-40	(-40)	583	147	171	352	6.64	3.92	1.61	0.41	0.47
-35	(-31)	1040	262	305	382	6.68	7.01	2.76	0.69	0.81
-30	(-22)	1557	392	456	424	6.74	10.53	3.71	0.93	1.09
-25	(-13)	2151	542	630	476	6.89	14.62	4.52	1.14	1.32
-20	(- 4)	2839	715	832	538	7.17	19.39	5.24	1.32	1.53
-15	(+ 5)	3637	916	1066	610	7.62	24.99	5.92	1.49	1.74
-10	(+14)	4561	1149	1336	692	8.31	31.55	6.63	1.67	1.94

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]
-40	(-40)	412	104	121	290	6.42	2.76	1.41	0.36	0.41
-35	(-31)	847	213	248	340	6.56	5.70	2.48	0.63	0.73
-30	(-22)	1336	337	392	400	6.73	9.02	3.35	0.85	0.98
-25	(-13)	1897	478	556	467	6.95	12.86	4.07	1.03	1.19
-20	(- 4)	2545	641	746	542	7.29	17.34	4.70	1.18	1.38
-15	(+ 5)	3296	831	966	623	7.80	22.60	5.27	1.33	1.55
-10	(+14)	4168	1050	1221	712	8.51	28.78	5.86	1.48	1.72

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]
-40	(-40)	246	62	72	228	6.19	1.65	1.13	0.28	0.33
-35	(-31)	661	167	194	299	6.45	4.44	2.16	0.54	0.63
-30	(-22)	1124	283	329	375	6.71	7.58	2.97	0.75	0.87
-25	(-13)	1652	416	484	458	7.01	11.18	3.63	0.91	1.06
-20	(- 4)	2262	570	663	545	7.42	15.38	4.18	1.05	1.22
-15	(+ 5)	2969	748	870	636	7.97	20.32	4.67	1.18	1.37
-10	(+14)	3790	955	1111	732	8.71	26.12	5.16	1.30	1.51

### F - EXTERNAL CHARACTERISTICS

1 Base plate	European Standard		
2 Tray holder	No		
3 Connectors			
3.1 SUCTION	8 +0.07/+0.00	[mm]	(0.315" +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	8 +0.07/+0.00	[mm]	(0.315" +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		