

### COMPRESSOR DEFINITION

Designation	T 2140GK
Nominal Voltage/Frequency	220-240 V 50 Hz
Engineering Number	933BA42

### A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-404A		
3 Nominal voltage and frequency	220-240 / 50	[ 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)	14.05	[kg] (30.97 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	220-240 V 50 Hz 1 ~ (Single phase)	
2 Starting device type	Current Relay	
2.1 Starting device	MTRP-0030	
3 Start capacitor	88-108(330)	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	T0645/01	
6 Start winding resistance	15.60	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	4.80	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	20.00	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50 Hz)	3.10	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50 Hz)	-	[A] - Measured according to UL 984
11 Approval boards certification	IMQ	

### D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @220V50Hz			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	3.11	10.68	3.70	0.93	1.08

### E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V50Hz			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	2.84	3.35	1.59	0.40	0.47
-35	(-31)	889	224	260	313	2.85	5.99	2.90	0.73	0.85
-30	(-22)	1331	335	390	335	2.90	9.00	4.02	1.01	1.18
-25	(-13)	1839	463	539	370	3.00	12.49	4.96	1.25	1.45
-20	(- 4)	2427	612	711	419	3.15	16.57	5.74	1.45	1.68
-15	(+ 5)	3108	783	911	485	3.36	21.36	6.37	1.61	1.87
-10	(+14)	3898	982	1142	570	3.64	26.97	6.89	1.74	2.02

TEST CONDITIONS: @220V50Hz			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	2.69	2.36	1.40	0.35	0.41
-35	(-31)	724	182	212	289	2.78	4.87	2.50	0.63	0.73
-30	(-22)	1142	288	335	334	2.88	7.71	3.43	0.87	1.01
-25	(-13)	1621	408	475	385	3.02	10.99	4.23	1.07	1.24
-20	(- 4)	2175	548	637	445	3.20	14.82	4.89	1.23	1.43
-15	(+ 5)	2817	710	825	516	3.42	19.32	5.45	1.37	1.60
-10	(+14)	3562	898	1044	601	3.70	24.59	5.92	1.49	1.73

TEST CONDITIONS: @220V50Hz			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	196	2.56	1.41	1.14	0.29	0.33
-35	(-31)	565	142	166	265	2.71	3.80	2.06	0.52	0.60
-30	(-22)	961	242	282	332	2.87	6.48	2.86	0.72	0.84
-25	(-13)	1412	356	414	401	3.04	9.56	3.54	0.89	1.04
-20	(- 4)	1933	487	566	472	3.25	13.15	4.13	1.04	1.21
-15	(+ 5)	2538	639	744	548	3.48	17.37	4.65	1.17	1.36
-10	(+14)	3240	816	949	631	3.76	22.32	5.11	1.29	1.50

### 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		