

COMPRESSOR DEFINITION

Designation	T 2180GK
Nominal Voltage/Frequency	220-240 V 50 Hz
Engineering Number	936HA63

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	CSCR		
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 ²] (365 psig)	/ °C - °F
9.2 Peak (gauge)	28.7	[kgf/cm ²] (408 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1	[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)	17.2	[kg] (37.92 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	220-240 V 50 Hz 1 ~ (Single phase)	
2 Starting device type	Voltage Relay	
2.1 Starting device	3ARR3B3AV3	
3 Start capacitor	130-156(330)	[µF(VAC minimum)]
4 Run capacitor	15(450)	[µF(VAC minimum)]
5 Motor protection	3HM179-105	
6 Start winding resistance	11.60	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	2.50	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	30.00	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50 Hz)	4.00	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50 Hz)	-	[A] - Measured according to UL 984
11 Approval boards certification	CCC - 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]
3392	855	994	790	3.90	23.00	4.29	1.08	1.26

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)	1572	396	461	493	2.70	10.56	3.17	0.80	0.93
-35	(-31)	2199	554	644	574	2.98	14.83	3.85	0.97	1.13
-30	(-22)	2913	734	853	661	3.31	19.70	4.43	1.12	1.30
-25	(-13)	3737	942	1095	755	3.71	25.39	4.95	1.25	1.45
-20	(- 4)	4699	1184	1377	859	4.18	32.09	5.45	1.37	1.60
-15	(+ 5)	5823	1468	1706	974	4.75	40.02	5.96	1.50	1.75
-10	(+14)	7137	1799	2091	1101	5.42	49.37	6.50	1.64	1.91

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)	1219	307	357	446	2.36	8.17	2.72	0.69	0.80
-35	(-31)	1857	468	544	542	2.76	12.50	3.42	0.86	1.00
-30	(-22)	2573	648	754	645	3.20	17.37	4.00	1.01	1.17
-25	(-13)	3392	855	994	756	3.69	23.00	4.50	1.13	1.32
-20	(- 4)	4340	1094	1272	876	4.25	29.58	4.95	1.25	1.45
-15	(+ 5)	5443	1372	1595	1008	4.88	37.33	5.39	1.36	1.58
-10	(+14)	6727	1695	1971	1152	5.61	46.44	5.84	1.47	1.71

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)	873	220	256	399	2.03	5.84	2.21	0.56	0.65
-35	(-31)	1524	384	446	510	2.55	10.24	2.96	0.74	0.87
-30	(-22)	2244	565	658	628	3.09	15.12	3.56	0.90	1.04
-25	(-13)	3059	771	896	754	3.67	20.70	4.07	1.03	1.19
-20	(- 4)	3996	1007	1171	890	4.30	27.18	4.50	1.13	1.32
-15	(+ 5)	5080	1280	1488	1038	5.00	34.76	4.89	1.23	1.43
-10	(+14)	6336	1597	1857	1198	5.78	43.66	5.28	1.33	1.55

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	Vertical		
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	Vertical		
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	Vertical		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		