

COMPRESSOR DEFINITION

Designation	T 2180GJ
Nominal Voltage/Frequency	220-240 V 50 Hz
Engineering Number	936IA63

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 Expantion 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)	17.4	[kg] (38.36 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	3ARR3B4AA3	
3 Start capacitor	72-88(330)	[μF(VAC minimum)]
4 Run capacitor	15(450)	[μF(VAC minimum)]
5 Motor protection	3HM179-105	
6 Start winding resistance	10.08	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	2.70	[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)	4.06	[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]	
3392	855	994	810	4.00	23.00	4.19	1.06	1.23	

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)	1480	373	434	457	2.45	9.95	3.25	0.82	0.95
-35	(-31)	2137	539	626	558	2.87	14.41	3.82	0.96	1.12
-30	(-22)	2906	732	851	662	3.33	19.66	4.38	1.10	1.28
-25	(-13)	3785	954	1109	770	3.84	25.72	4.92	1.24	1.44
-20	(- 4)	4776	1204	1399	879	4.38	32.61	5.44	1.37	1.59
-15	(+ 5)	5877	1481	1722	991	4.96	40.38	5.94	1.50	1.74
-10	(+14)	7089	1786	2077	1104	5.59	49.04	6.41	1.62	1.88

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)	1314	331	385	441	2.38	8.82	2.98	0.75	0.87
-35	(-31)	1882	474	551	540	2.79	12.67	3.49	0.88	1.02
-30	(-22)	2581	650	756	648	3.25	17.43	3.98	1.00	1.17
-25	(-13)	3412	860	1000	766	3.78	23.14	4.45	1.12	1.30
-20	(- 4)	4375	1103	1282	892	4.37	29.82	4.90	1.24	1.44
-15	(+ 5)	5469	1378	1603	1027	5.02	37.50	5.33	1.34	1.56
-10	(+14)	6694	1687	1962	1170	5.73	46.22	5.72	1.44	1.68

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)	1157	292	339	425	2.31	7.75	2.71	0.68	0.79
-35	(-31)	1645	415	482	520	2.70	11.05	3.18	0.80	0.93
-30	(-22)	2286	576	670	632	3.17	15.40	3.62	0.91	1.06
-25	(-13)	3078	776	902	760	3.73	20.83	4.05	1.02	1.19
-20	(- 4)	4023	1014	1179	903	4.36	27.37	4.45	1.12	1.30
-15	(+ 5)	5120	1290	1500	1062	5.07	35.04	4.82	1.21	1.41
-10	(+14)	6368	1605	1866	1235	5.87	43.87	5.16	1.30	1.51

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		