

COMPRESSOR DEFINITION

Designation	T 2168GK
Nominal Voltage/Frequency	208-230 V 60 Hz
Engineering Number	936CD44

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-404A		
3 Nominal voltage and frequency	208-230 / 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	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	3/4	[hp]
2 Displacement	17.39	[cm ³] (1.061 cu.in)
2.1 Bore [mm]	34.120	
2.2 Stroke [mm]	19.030	
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	[kg] (37.48 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	208-230 V 60 Hz 1~ (Single phase)	
2 Starting device type	Voltage Relay	
2.1 Starting device	3ARR3B3U3	
3 Start capacitor	72-88(330)	[μF(VAC minimum)]
4 Run capacitor	15(450)	[μF(VAC minimum)]
5 Motor protection	3HM195-105	
6 Start winding resistance	6.00	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	2.04	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	32.50	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	3.70	[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: @208V60Hz			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]
3008	758	881	649	3.19	20.39	4.63	1.17	1.36

E - PERFORMANCE - CURVES

TEST CONDITIONS: @208V50Hz			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)	1151	290	337	393	2.24	7.74	2.89	0.73	0.85
-35 (-31)	1618	408	474	430	2.44	10.91	3.79	0.95	1.11
-30 (-22)	2178	549	638	475	2.69	14.73	4.62	1.16	1.35
-25 (-13)	2855	720	837	529	2.98	19.40	5.41	1.36	1.59
-20 (- 4)	3672	925	1076	592	3.33	25.08	6.19	1.56	1.81
-15 (+ 5)	4653	1173	1363	665	3.73	31.97	6.97	1.76	2.04
-10 (+14)	5820	1467	1705	748	4.19	40.26	7.79	1.96	2.28

TEST CONDITIONS: @208V50Hz			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)	873	220	256	284	1.68	5.86	3.11	0.78	0.91
-35 (-31)	1360	343	398	361	2.09	9.15	3.74	0.94	1.10
-30 (-22)	1924	485	564	441	2.51	12.99	4.35	1.10	1.27
-25 (-13)	2588	652	758	523	2.95	17.55	4.94	1.24	1.45
-20 (- 4)	3376	851	989	608	3.42	23.01	5.55	1.40	1.63
-15 (+ 5)	4312	1087	1263	696	3.91	29.57	6.19	1.56	1.81
-10 (+14)	5417	1365	1587	787	4.42	37.40	6.90	1.74	2.02

TEST CONDITIONS: @208V50Hz			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)	604	152	177	177	1.13	4.04	3.38	0.85	0.99
-35 (-31)	1112	280	326	295	1.75	7.47	3.76	0.95	1.10
-30 (-22)	1680	423	492	409	2.34	11.32	4.13	1.04	1.21
-25 (-13)	2332	588	683	518	2.93	15.78	4.53	1.14	1.33
-20 (- 4)	3092	779	906	623	3.51	21.03	4.97	1.25	1.46
-15 (+ 5)	3983	1004	1167	725	4.08	27.26	5.48	1.38	1.61
-10 (+14)	5029	1267	1473	825	4.64	34.65	6.09	1.53	1.78

E - PERFORMANCE - CURVES

TEST CONDITIONS: @208V60Hz		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)	1347	339	395	459	2.29	9.05	2.89	0.73	0.85	
-35 (-31)	1893	477	555	503	2.49	12.76	3.79	0.95	1.11	
-30 (-22)	2548	642	747	556	2.74	17.24	4.62	1.16	1.35	
-25 (-13)	3341	842	979	619	3.04	22.69	5.41	1.36	1.59	
-20 (- 4)	4297	1083	1259	693	3.39	29.35	6.18	1.56	1.81	
-15 (+ 5)	5444	1372	1595	779	3.80	37.41	6.97	1.76	2.04	
-10 (+14)	6810	1716	1995	876	4.28	47.11	7.78	1.96	2.28	

TEST CONDITIONS: @208V60Hz		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)	1021	257	299	331	1.71	6.85	3.11	0.78	0.91	
-35 (-31)	1591	401	466	423	2.13	10.71	3.75	0.94	1.10	
-30 (-22)	2250	567	659	516	2.56	15.19	4.35	1.10	1.27	
-25 (-13)	3028	763	887	612	3.01	20.53	4.94	1.24	1.45	
-20 (- 4)	3950	995	1157	711	3.49	26.92	5.54	1.40	1.62	
-15 (+ 5)	5044	1271	1478	814	3.98	34.59	6.19	1.56	1.81	
-10 (+14)	6338	1597	1857	922	4.51	43.76	6.90	1.74	2.02	

TEST CONDITIONS: @208V60Hz		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)	707	178	207	207	1.16	4.73	3.39	0.85	0.99	
-35 (-31)	1301	328	381	345	1.78	8.74	3.76	0.95	1.10	
-30 (-22)	1965	495	576	478	2.39	13.25	4.13	1.04	1.21	
-25 (-13)	2729	688	800	606	2.99	18.46	4.53	1.14	1.33	
-20 (- 4)	3618	912	1060	729	3.58	24.61	4.97	1.25	1.46	
-15 (+ 5)	4661	1175	1366	849	4.16	31.89	5.48	1.38	1.61	
-10 (+14)	5884	1483	1724	965	4.73	40.54	6.09	1.53	1.78	

F - EXTERNAL CHARACTERISTICS

1 Base plate	Universal		
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		