

COMPRESSOR DEFINITION

Designation	T 2168GK-
Nominal Voltage/Frequency	115 V 60 Hz
Engineering Number	936DG68

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 - High 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	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	115 V 60 Hz 1~ (Single phase)	
2 Starting device type	Current Relay	
2.1 Starting device	3ARR2KCP188S	
3 Start capacitor	145-175(165)	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	CST00HK-3031	
6 Start winding resistance	4.10	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	0.54	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	55.00	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	9.20	[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: @115V60Hz			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	763	9.08	20.39	3.94	0.99	1.15

E - PERFORMANCE - CURVES

TEST CONDITIONS: @115V50Hz			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	374	6.74	7.74	3.06	0.77	0.90
-35	(-31)	1618	408	474	449	7.27	10.91	3.62	0.91	1.06
-30	(-22)	2178	549	638	528	7.87	14.73	4.15	1.05	1.22
-25	(-13)	2855	720	837	610	8.58	19.40	4.69	1.18	1.37
-20	(- 4)	3672	925	1076	695	9.41	25.08	5.26	1.33	1.54
-15	(+ 5)	4653	1173	1363	784	10.39	31.97	5.91	1.49	1.73
-10	(+14)	5820	1467	1705	878	11.54	40.26	6.66	1.68	1.95

TEST CONDITIONS: @115V50Hz			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	314	6.58	5.86	2.77	0.70	0.81
-35	(-31)	1360	343	398	412	7.17	9.15	3.30	0.83	0.97
-30	(-22)	1924	485	564	511	7.84	12.99	3.78	0.95	1.11
-25	(-13)	2588	652	758	611	8.59	17.55	4.25	1.07	1.25
-20	(- 4)	3376	851	989	711	9.47	23.01	4.74	1.20	1.39
-15	(+ 5)	4312	1087	1263	813	10.48	29.57	5.29	1.33	1.55
-10	(+14)	5417	1365	1587	915	11.66	37.40	5.92	1.49	1.74

TEST CONDITIONS: @115V50Hz			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	255	6.42	4.04	2.39	0.60	0.70
-35	(-31)	1112	280	326	377	7.08	7.47	2.92	0.74	0.86
-30	(-22)	1680	423	492	496	7.80	11.32	3.39	0.85	0.99
-25	(-13)	2332	588	683	612	8.61	15.78	3.82	0.96	1.12
-20	(- 4)	3092	779	906	727	9.52	21.03	4.26	1.07	1.25
-15	(+ 5)	3983	1004	1167	840	10.56	27.26	4.74	1.19	1.39
-10	(+14)	5029	1267	1473	951	11.76	34.65	5.29	1.33	1.55

E - PERFORMANCE - CURVES

TEST CONDITIONS:		ASHRAE32			(Condensing temperature 35°C (+95°F))					
@115V60Hz		Fan								
Evaporating temperature		Cooling capacity			Power consumption	Current consumption	Gas flow rate	EFFICIENCY RATE		
		+/- 5%			+/- 5%	+/- 5%	+/- 5%	+/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-40	(-40)	1347	339	395	438	6.88	9.05	3.06	0.77	0.90
-35	(-31)	1893	477	555	526	7.42	12.76	3.62	0.91	1.06
-30	(-22)	2548	642	747	618	8.03	17.24	4.15	1.05	1.22
-25	(-13)	3341	842	979	714	8.75	22.69	4.68	1.18	1.37
-20	(- 4)	4297	1083	1259	814	9.60	29.35	5.26	1.33	1.54
-15	(+ 5)	5444	1372	1595	918	10.60	37.41	5.91	1.49	1.73
-10	(+14)	6810	1716	1995	1027	11.78	47.11	6.66	1.68	1.95

TEST CONDITIONS:		ASHRAE32			(Condensing temperature 45°C (+113°F))					
@115V60Hz		Fan								
Evaporating temperature		Cooling capacity			Power consumption	Current consumption	Gas flow rate	EFFICIENCY RATE		
		+/- 5%			+/- 5%	+/- 5%	+/- 5%	+/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-40	(-40)	1021	257	299	367	6.72	6.85	2.76	0.70	0.81
-35	(-31)	1591	401	466	483	7.32	10.71	3.29	0.83	0.97
-30	(-22)	2250	567	659	598	8.00	15.19	3.78	0.95	1.11
-25	(-13)	3028	763	887	715	8.77	20.53	4.25	1.07	1.25
-20	(- 4)	3950	995	1157	832	9.66	26.92	4.74	1.20	1.39
-15	(+ 5)	5044	1271	1478	951	10.69	34.59	5.29	1.33	1.55
-10	(+14)	6338	1597	1857	1070	11.89	43.76	5.93	1.49	1.74

TEST CONDITIONS:		ASHRAE32			(Condensing temperature 55°C (+131°F))					
@115V60Hz		Fan								
Evaporating temperature		Cooling capacity			Power consumption	Current consumption	Gas flow rate	EFFICIENCY RATE		
		+/- 5%			+/- 5%	+/- 5%	+/- 5%	+/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-40	(-40)	707	178	207	299	6.56	4.73	2.39	0.60	0.70
-35	(-31)	1301	328	381	441	7.23	8.74	2.92	0.73	0.85
-30	(-22)	1965	495	576	580	7.96	13.25	3.38	0.85	0.99
-25	(-13)	2729	688	800	717	8.78	18.46	3.82	0.96	1.12
-20	(- 4)	3618	912	1060	851	9.71	24.61	4.26	1.07	1.25
-15	(+ 5)	4661	1175	1366	983	10.78	31.89	4.74	1.19	1.39
-10	(+14)	5884	1483	1724	1112	12.00	40.54	5.29	1.33	1.55

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		