

COMPRESSOR DEFINITION

Designation	T 2155GK-
Nominal Voltage/Frequency	115 V 60 Hz
Engineering Number	936BG61

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	1/2+	[hp]
2 Displacement	14.50	[cm ³] (0.885 cu.in)
2.1 Bore [mm]	34.120	
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)	16.4	[kg] (36.16 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	MTRPH-73-31	
3 Start capacitor	145-175(165)	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	T0829/20	
6 Start winding resistance	4.25	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	0.70	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	51.00	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	7.90	[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: @100V50Hz			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]
2003	505	587	531	7.64	13.58	3.77	0.95	1.10

E - PERFORMANCE - CURVES

TEST CONDITIONS: @100V50Hz			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)	791	199	232	344	6.56	5.32	2.27	0.57	0.67
-35	(-31)	1165	294	341	395	6.93	7.86	2.97	0.75	0.87
-30	(-22)	1635	412	479	449	7.30	11.06	3.67	0.92	1.07
-25	(-13)	2223	560	651	506	7.67	15.10	4.40	1.11	1.29
-20	(- 4)	2954	744	865	566	8.06	20.17	5.20	1.31	1.52
-15	(+ 5)	3851	971	1129	629	8.46	26.47	6.10	1.54	1.79
-10	(+14)	4940	1245	1448	695	8.90	34.17	7.12	1.79	2.09

TEST CONDITIONS: @100V50Hz			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)	618	156	181	264	6.18	4.15	2.34	0.59	0.69
-35	(-31)	994	251	291	344	6.61	6.70	2.89	0.73	0.85
-30	(-22)	1450	365	425	423	7.07	9.79	3.43	0.86	1.00
-25	(-13)	2009	506	589	502	7.55	13.62	4.00	1.01	1.17
-20	(- 4)	2695	679	790	580	8.07	18.37	4.64	1.17	1.36
-15	(+ 5)	3533	890	1035	657	8.64	24.23	5.36	1.35	1.57
-10	(+14)	4546	1146	1332	734	9.26	31.38	6.21	1.56	1.82

TEST CONDITIONS: @100V50Hz			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)	451	114	132	188	5.83	3.01	2.39	0.60	0.70
-35	(-31)	831	209	243	295	6.31	5.58	2.80	0.71	0.82
-30	(-22)	1274	321	373	398	6.84	8.59	3.21	0.81	0.94
-25	(-13)	1805	455	529	498	7.43	12.22	3.64	0.92	1.07
-20	(- 4)	2448	617	717	593	8.08	16.65	4.13	1.04	1.21
-15	(+ 5)	3227	813	946	684	8.81	22.08	4.71	1.19	1.38
-10	(+14)	4165	1050	1220	770	9.61	28.70	5.40	1.36	1.58

E - PERFORMANCE - CURVES

TEST CONDITIONS:		ASHRAE32			(Condensing temperature 35°C (+95°F))					
@100V60Hz		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)	1163	293	341	402	6.69	7.82	2.84	0.72	0.83
-35	(-31)	1501	378	440	462	7.07	10.12	3.31	0.83	0.97
-30	(-22)	1979	499	580	525	7.45	13.38	3.82	0.96	1.12
-25	(-13)	2626	662	769	592	7.83	17.84	4.43	1.12	1.30
-20	(- 4)	3470	875	1017	663	8.23	23.71	5.17	1.30	1.52
-15	(+ 5)	4540	1144	1330	737	8.64	31.21	6.10	1.54	1.79
-10	(+14)	5864	1478	1718	814	9.08	40.56	7.27	1.83	2.13

TEST CONDITIONS:		ASHRAE32			(Condensing temperature 45°C (+113°F))					
@100V60Hz		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)	724	183	212	309	6.31	4.86	2.29	0.58	0.67
-35	(-31)	1164	293	341	402	6.75	7.84	2.91	0.73	0.85
-30	(-22)	1696	427	497	495	7.21	11.45	3.47	0.88	1.02
-25	(-13)	2350	592	689	587	7.71	15.93	4.04	1.02	1.18
-20	(- 4)	3153	795	924	678	8.24	21.49	4.65	1.17	1.36
-15	(+ 5)	4133	1042	1211	769	8.82	28.35	5.35	1.35	1.57
-10	(+14)	5320	1341	1559	859	9.45	36.73	6.19	1.56	1.81

TEST CONDITIONS:		ASHRAE32			(Condensing temperature 55°C (+131°F))					
@100V60Hz		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)	298	75	87	220	5.95	1.98	1.47	0.37	0.43
-35	(-31)	840	212	246	345	6.44	5.65	2.31	0.58	0.68
-30	(-22)	1427	360	418	466	6.98	9.62	3.01	0.76	0.88
-25	(-13)	2088	526	612	582	7.58	14.13	3.61	0.91	1.06
-20	(- 4)	2850	718	835	693	8.24	19.38	4.16	1.05	1.22
-15	(+ 5)	3742	943	1096	800	8.99	25.60	4.70	1.18	1.38
-10	(+14)	4792	1208	1404	901	9.81	33.02	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	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	9.6 +0.07/+0.00	[mm]	(0.378" +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		