

### COMPRESSOR DEFINITION

Designation	T 2155GK-
Nominal Voltage/Frequency	208-230 V 60 Hz
Engineering Number	936BD61

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

### B - MECHANICAL DATA

1 Commercial designation	1/2+	[hp]
2 Displacement	14.50	[cm <sup>3</sup> ] (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)	16.9	[kg] (37.26 lb.)
5 Nitrogen charge	0.2 to 0.3	[kgf/cm <sup>2</sup> ] (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	Current Relay	
2.1 Starting device	MTRPH-0072	
3 Start capacitor	88-108(330)	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	T0590/20	
6 Start winding resistance	9.00	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	2.30	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	30.00	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	4.10	[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: @200V50Hz			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	476	3.43	13.58	4.21	1.06	1.23

### E - PERFORMANCE - CURVES

TEST CONDITIONS: @200V50Hz			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)	807	203	237	268	2.56	5.42	2.99	0.75	0.88
-35	(-31)	1230	310	360	340	2.84	8.29	3.64	0.92	1.07
-30	(-22)	1734	437	508	410	3.12	11.73	4.25	1.07	1.25
-25	(-13)	2323	585	681	477	3.42	15.78	4.86	1.22	1.42
-20	(- 4)	2999	756	879	543	3.73	20.48	5.49	1.38	1.61
-15	(+ 5)	3766	949	1104	605	4.07	25.88	6.19	1.56	1.81
-10	(+14)	4627	1166	1356	665	4.43	32.01	7.00	1.76	2.05

TEST CONDITIONS: @200V50Hz			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)	522	132	153	207	2.31	3.50	2.49	0.63	0.73
-35	(-31)	949	239	278	292	2.64	6.39	3.25	0.82	0.95
-30	(-22)	1457	367	427	377	2.99	9.84	3.90	0.98	1.14
-25	(-13)	2048	516	600	460	3.35	13.88	4.48	1.13	1.31
-20	(- 4)	2725	687	799	541	3.74	18.57	5.04	1.27	1.48
-15	(+ 5)	3492	880	1023	621	4.15	23.95	5.60	1.41	1.64
-10	(+14)	4352	1097	1275	700	4.59	30.05	6.21	1.57	1.82

TEST CONDITIONS: @200V50Hz			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)	237	60	69	148	2.07	1.58	1.69	0.42	0.49
-35	(-31)	668	168	196	246	2.45	4.49	2.62	0.66	0.77
-30	(-22)	1179	297	345	345	2.86	7.94	3.38	0.85	0.99
-25	(-13)	1772	447	519	443	3.28	11.99	4.02	1.01	1.18
-20	(- 4)	2450	618	718	540	3.74	16.67	4.57	1.15	1.34
-15	(+ 5)	3218	811	943	637	4.22	22.02	5.06	1.28	1.48
-10	(+14)	4076	1027	1194	733	4.74	28.09	5.55	1.40	1.63

### E - PERFORMANCE - CURVES

TEST CONDITIONS: @200V60Hz		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)	945	238	277	314	2.61	6.35	2.98	0.75	0.87
-35	(-31)	1439	363	422	398	2.89	9.71	3.65	0.92	1.07
-30	(-22)	2029	511	595	479	3.19	13.73	4.26	1.07	1.25
-25	(-13)	2718	685	796	558	3.49	18.47	4.86	1.22	1.42
-20	(- 4)	3509	884	1028	635	3.81	23.96	5.49	1.38	1.61
-15	(+ 5)	4407	1110	1291	708	4.15	30.28	6.19	1.56	1.81
-10	(+14)	5414	1364	1586	778	4.52	37.45	7.00	1.76	2.05

TEST CONDITIONS: @200V60Hz		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)	611	154	179	242	2.35	4.10	2.49	0.63	0.73
-35	(-31)	1111	280	325	342	2.70	7.48	3.25	0.82	0.95
-30	(-22)	1704	430	499	440	3.05	11.51	3.90	0.98	1.14
-25	(-13)	2396	604	702	538	3.42	16.24	4.48	1.13	1.31
-20	(- 4)	3188	803	934	633	3.81	21.73	5.04	1.27	1.48
-15	(+ 5)	4086	1030	1197	727	4.23	28.02	5.60	1.41	1.64
-10	(+14)	5092	1283	1492	818	4.68	35.16	6.21	1.57	1.82

TEST CONDITIONS: @200V60Hz		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)	277	70	81	173	2.10	1.85	1.69	0.43	0.49
-35	(-31)	782	197	229	288	2.50	5.26	2.62	0.66	0.77
-30	(-22)	1380	348	404	403	2.92	9.30	3.39	0.85	0.99
-25	(-13)	2073	523	608	518	3.35	14.03	4.02	1.01	1.18
-20	(- 4)	2867	723	840	632	3.81	19.50	4.57	1.15	1.34
-15	(+ 5)	3765	949	1103	745	4.30	25.77	5.06	1.28	1.48
-10	(+14)	4770	1202	1398	857	4.83	32.87	5.55	1.40	1.63

### 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		