

### COMPRESSOR DEFINITION

Designation	<b>T 6220E</b>
Nominal Voltage/Frequency	<b>208-230 V 60 Hz</b>
Engineering Number	<b>116SD70</b>

### A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-22		
3 Nominal voltage and frequency	208-230 / 60	[ V / Hz ]	
4 Application type	High Back Pressure (Commercial Compressors)		
4.1 Evaporating temperature range	-15°C to 10°C	(5°F to 50°F)	
5 Motor type	CSCR		
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)	21.7	[kgf/cm <sup>2</sup> ] (309 psig)	/ °C - °F
9.2 Peak (gauge)	24.2	[kgf/cm <sup>2</sup> ] (344 psig)	/ °C - °F
10 Maximum winding temperature	130	[ °C ]	

### B - MECHANICAL DATA

1 Commercial designation	1-	[hp]
2 Displacement	17.39	[cm <sup>3</sup> ] (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	ALQUILB / ISO46	
4 Weight (with oil charge)	15.46	[kg] (34.08 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	Voltage Relay	
2.1 Starting device	3ARR3B6V3	
3 Start capacitor	43-53(330)	[μF(VAC minimum)]
4 Run capacitor	15(450)	[μF(VAC minimum)]
5 Motor protection	T0748/C9	
6 Start winding resistance	6.00	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	2.15	[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)	-	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (60 Hz)	5.90	[A] - Measured according to UL 984
11 Approval boards certification	UL	

### D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @200V50Hz			ASHRAEHBP46 Fan		Evaporating temperature (Condensing temperature		7.2°C (44.96°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]
7691	1938	2254	1003	5.53	47.50	7.67	1.93	2.25

### E - PERFORMANCE - CURVES

TEST CONDITIONS: @200V50Hz			ASHRAE46 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]
-15	(+ 5)	3271	824	958	524	2.85	17.16	6.26	1.58	1.83
-10	(+14)	4560	1149	1336	609	3.35	24.05	7.47	1.88	2.19
-5	(+23)	5887	1484	1725	688	3.80	31.20	8.55	2.15	2.50
0	(+32)	7253	1828	2125	763	4.21	38.65	9.52	2.40	2.79
+5	(+41)	8658	2182	2537	833	4.58	46.43	10.41	2.62	3.05
+10	(+50)	10101	2545	2960	898	4.90	54.57	11.24	2.83	3.29

TEST CONDITIONS: @200V50Hz			ASHRAE46 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]
-15	(+ 5)	3031	764	888	559	3.12	17.02	5.42	1.37	1.59
-10	(+14)	4118	1038	1207	652	3.63	23.20	6.31	1.59	1.85
-5	(+23)	5277	1330	1546	740	4.10	29.86	7.14	1.80	2.09
0	(+32)	6508	1640	1907	823	4.54	37.05	7.92	2.00	2.32
+5	(+41)	7810	1968	2289	899	4.95	44.80	8.68	2.19	2.54
+10	(+50)	9185	2315	2691	970	5.32	53.13	9.46	2.39	2.77

TEST CONDITIONS: @200V50Hz			ASHRAE46 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]
-15	(+ 5)	2791	703	818	595	3.40	16.84	4.68	1.18	1.37
-10	(+14)	3676	926	1077	698	3.92	22.29	5.28	1.33	1.55
-5	(+23)	4667	1176	1367	795	4.42	28.45	5.88	1.48	1.72
0	(+32)	5762	1452	1688	885	4.89	35.36	6.50	1.64	1.90
+5	(+41)	6962	1755	2040	968	5.34	43.05	7.17	1.81	2.10
+10	(+50)	8268	2084	2423	1045	5.76	51.56	7.93	2.00	2.32

### E - PERFORMANCE - CURVES

TEST CONDITIONS:		ASHRAE46			(Condensing temperature 35°C (+95°F))					
@200V60Hz		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]
-15	(+ 5)	3827	964	1121	633	2.91	20.08	6.06	1.53	1.78
-10	(+14)	5335	1344	1563	727	3.42	28.14	7.32	1.84	2.14
-5	(+23)	6888	1736	2018	815	3.88	36.50	8.44	2.13	2.47
0	(+32)	8487	2139	2487	898	4.30	45.22	9.46	2.38	2.77
+5	(+41)	10130	2553	2968	975	4.67	54.32	10.40	2.62	3.05
+10	(+50)	11818	2978	3463	1048	5.00	63.85	11.27	2.84	3.30

TEST CONDITIONS:		ASHRAE46			(Condensing temperature 45°C (+113°F))					
@200V60Hz		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]
-15	(+ 5)	3546	894	1039	676	3.18	19.91	5.24	1.32	1.54
-10	(+14)	4818	1214	1412	779	3.70	27.14	6.18	1.56	1.81
-5	(+23)	6174	1556	1809	877	4.19	34.94	7.05	1.78	2.07
0	(+32)	7614	1919	2231	968	4.64	43.35	7.87	1.98	2.31
+5	(+41)	9138	2303	2678	1053	5.05	52.41	8.68	2.19	2.54
+10	(+50)	10746	2708	3149	1132	5.43	62.16	9.49	2.39	2.78

TEST CONDITIONS:		ASHRAE46			(Condensing temperature 55°C (+131°F))					
@200V60Hz		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]
-15	(+ 5)	3265	823	957	721	3.47	19.70	4.52	1.14	1.33
-10	(+14)	4301	1084	1260	834	4.00	26.08	5.17	1.30	1.51
-5	(+23)	5460	1376	1600	941	4.51	33.29	5.81	1.46	1.70
0	(+32)	6741	1699	1975	1041	4.99	41.37	6.47	1.63	1.89
+5	(+41)	8146	2053	2387	1134	5.45	50.37	7.17	1.81	2.10
+10	(+50)	9674	2438	2835	1220	5.88	60.32	7.94	2.00	2.33

### 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		