

### COMPRESSOR DEFINITION

Designation	<b>EK 6210CD</b>
Nominal Voltage/Frequency	<b>115-127 V 60 Hz</b>
Engineering Number	<b>516400005</b>

### A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-744		
3 Nominal voltage and frequency	115-127 / 60	[ V / Hz ]	
4 Application type	Medium/High Back Perssure (Comercial Compressor R744)		
4.1 Evaporating temperature range	-20°C to 10°C	(-4°F to 50°F)	
5 Motor type	CSCR		
6 Starting torque	HST - Hight 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)	Fan	-	103 to 140 V
8.4 HBP (43°C Ambient temperature)	Fan	-	103 to 140 V
9 Maximum discharge pressure			
9.1 Operating	122.4	[kgf/cm <sup>2</sup> ] (1741 psig)	(120.0 bar)
9.2 Peak	122.4	[kgf/cm <sup>2</sup> ] (1741 psig)	(120.0 bar)
10 Maximum winding temperature	130	[ °C ]	

### B - MECHANICAL DATA

1 Commercial designation		[hp]
2 Displacement	1.75	[cm <sup>3</sup> ] (0.107 cu.in)
2.1 Bore [mm]	13.000	
2.2 Stroke [mm]	13.200	
3 Lubricant charge	150	[ml] (5.07 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ESTER / ISO68	
4 Weight (with oil charge)	13.88	[kg] (30.60 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	115-127 V 60 Hz 1 ~ (Single phase)	
2 Starting device type	PTC	
2.1 Starting device	8EA14D7/QPS2-A4R7MB4	
3 Start capacitor	189-227(220)	[µF(VAC minimum)]
4 Run capacitor	20(250)	[µF(VAC minimum)]
5 Motor protection	5TM 805SFBZZ-53	
6 Start winding resistance	2.60	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	1.20	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	33.50	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	5.70	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (60 Hz)	6.70	[A] - Measured according to UL 984
11 Approval boards certification	CE - UKCA - UL	

### D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @115V60Hz			ASHRAE32/HBP/R744 Fan		Evaporating temperature (Discharge Pressure)		7.2°C (44.96°F) 85 bar (86.68 kgf/cm <sup>2</sup> )		
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]	
4894	1233	1434	536	5.31	24.91	9.13	2.30	2.68	

TEST CONDITIONS: @115V60Hz			ASHRAE32/MBP/R744 Fan		Evaporating temperature (Discharge Pressure)		-10°C (14°F) 85 bar (86.68 kgf/cm <sup>2</sup> )		
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]	
2832	714	830	516	5.14	15.10	5.48	1.38	1.61	

### E - PERFORMANCE - CURVES

TEST CONDITIONS: @115V60Hz		ASHRAE32/R744 Fan					(Discharge Pressure 80 bar (81 kgf/cm <sup>2</sup> ))			
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]
-20	(- 4)	1956	493	573	464	4.63	10.44	4.21	1.06	1.24
-15	(+ 5)	2379	599	697	481	4.79	12.93	4.94	1.24	1.45
-10	(+14)	2857	720	837	495	4.92	15.83	5.77	1.45	1.69
-5	(+23)	3388	854	993	505	5.01	19.23	6.72	1.69	1.97
0	(+32)	3968	1000	1163	510	5.05	23.21	7.82	1.97	2.29
+5	(+41)	4596	1158	1347	508	5.04	27.85	9.08	2.29	2.66
+10	(+50)	5268	1328	1544	498	4.98	33.26	10.54	2.66	3.09

TEST CONDITIONS: @115V60Hz		ASHRAE32/R744 Fan					(Discharge Pressure 90 bar (91 kgf/cm <sup>2</sup> ))			
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]
-20	(- 4)	1906	480	558	490	4.90	9.54	3.89	0.98	1.14
-15	(+ 5)	2326	586	682	514	5.11	11.85	4.52	1.14	1.32
-10	(+14)	2802	706	821	534	5.30	14.55	5.22	1.32	1.53
-5	(+23)	3332	840	976	551	5.45	17.73	6.03	1.52	1.77
0	(+32)	3913	986	1147	562	5.55	21.46	6.95	1.75	2.04
+5	(+41)	4541	1144	1331	568	5.61	25.84	8.02	2.02	2.35
+10	(+50)	5215	1314	1528	566	5.60	30.95	9.25	2.33	2.71

### E - PERFORMANCE - CURVES

TEST CONDITIONS: @115V60Hz		ASHRAE32/R744 Fan			(Discharge Pressure 105 bar (107 kgf/cm <sup>2</sup> ))					
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]
-20	(- 4)	1836	463	538	528	5.25	8.98	3.50	0.88	1.03
-15	(+ 5)	2253	568	660	560	5.55	11.16	4.04	1.02	1.18
-10	(+14)	2728	688	799	590	5.81	13.69	4.62	1.16	1.35
-5	(+23)	3258	821	955	616	6.04	16.66	5.26	1.33	1.54
0	(+32)	3840	968	1125	638	6.23	20.16	5.99	1.51	1.75
+5	(+41)	4470	1127	1310	654	6.37	24.27	6.82	1.72	2.00
+10	(+50)	5147	1297	1508	663	6.46	29.07	7.77	1.96	2.28

TEST CONDITIONS: @115V60Hz		ASHRAE32/R744 Fan			(Discharge Pressure 120 bar (122 kgf/cm <sup>2</sup> ))					
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]
-20	(- 4)	1773	447	520	564	5.56	8.35	3.12	0.79	0.91
-15	(+ 5)	2189	552	641	604	5.92	10.56	3.65	0.92	1.07
-10	(+14)	2664	671	781	643	6.26	13.08	4.17	1.05	1.22
-5	(+23)	3194	805	936	679	6.57	16.00	4.72	1.19	1.38
0	(+32)	3778	952	1107	710	6.84	19.42	5.32	1.34	1.56
+5	(+41)	4412	1112	1293	737	7.06	23.42	5.98	1.51	1.75
+10	(+50)	5094	1284	1493	757	7.22	28.08	6.73	1.69	1.97

### F - EXTERNAL CHARACTERISTICS

1 Base plate	Universal		
2 Tray holder	No		
3 Connectors			
3.1 SUCTION	6.5 +0.12/-0.08	[mm]	(0.256" +0.005"/-0.003")
3.1.1 Material	Copper plated steel		
3.1.2 Shape	Straight		
3.2 DISCHARGE	6.5 +0.12/-0.08	[mm]	(0.256" +0.005"/-0.003")
3.2.1 Material	Copper plated steel		
3.2.2 Shape	Straight		
3.3 PROCESS	6.5 +0.12/-0.08	[mm]	(0.256" +0.005"/-0.003")
3.3.1 Material	Copper plated steel		
3.3.2 Shape	Straight		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		