

ZR68KCE-TFD

HCFC, R-22, 50 Hz, 3 - Phase, 380/420 V [. Also Available with Variable Frequency Drives](#)

Air Conditioning

Production Status: Available for sale to all U.S. customers. Please check with your local Emerson Climate Technologies Representative for international availability.

Performance			Mechanical	
Evaporator Temp. (°C)	7	7	Displacement (cm ³ /Rev):	93.08
Condensing Temp. (°C)	54	38	Displacement (m ³ /Hr):	
Return Gas Temp. (°C)	18	18	Overall Length (mm):	246.13
Liquid Temp. (°C)	46	29	Overall Width (mm):	246.13
Capacity (Watts)	16852	19929	Overall Height (mm):	450.85
Power (W):	4960	3430	Mounting Length (mm):	190.50
Current (Amps):	8.6	6.6	Mounting Width (mm):	190.50
EER(BTU/Wh):	19.71	33.64	Mounting Height (mm):	457.20
Mass Flow (lbs/hr):	106.47	110.25	Suction Size (mm),Type:	177.80 / 203.20 Stub
Sound Data @			Discharge Size (mm),Type:	25.40 / 50.80 Stub
Sound Power (dBA):	72 Avg	77 Max	Initial Oil Charge (ml):	1774.44
Vibration mils(peak-peak):	2.0 Avg	3.0 Max	Oil Recharge (ml):	1656.14
Record Date:	2014-02-26		Net Weight (kg):	39.01
			Internal Free Volume (cm ³):	5932.09
			Horse Power:	5.5
			*Overall compressor height on Copeland Brand Product's specified mounting grommets.	

Electrical		Capacitors					
		Type	Part No	Low MFD	High MFD	Volts	User Description
LRA High* (Amps):	74.0						
LRA Low*(Amps):	67.0	No data available in table					
LRA Half Winding (Amps):							
MCC (Amps):	14						
Max Operating Current (Amps):	12.1						
RLA, MCC/1.4(use for contactor selection)(Amps):	10.0						
RLA, MCC/1.56(use for breaker & wire size selection)(Amps):	9.0						
RPM:	2900						
Box IP :	21						
UL File No:	SA-2337						
UL File Date:	1993-07-26						

*Low and High refer to the low and high nominal voltage ranges for which the motor is approved.

Rating Conditions

11.1 K Superheat
8.3 K Subcooling
35 °C Ambient Air Over

50 Hz Operation

AIR CONDITIONING

ZR68KCE-TFD

HFC-22
COPELAND SCROLL®
TFD 380/420-3-50

Condensing Temperature °C
(Sat. Dew Pt. Pressure, bar)

Evaporating Temperature °C (Sat. Dew Pt. Pressure, bar)

		-29.0 (1.7)	-23.0 (2.2)	-18.0 (2.6)	-12.0 (3.3)	-7.0 (3.9)	0.0 (5)	5.0 (5.8)	10.0 (6.8)	13.0 (7.4)	16.0 (8.1)	18.0 (8.6)	21.0 (9.4)
65.0 (27)	C								16,100	18,100	20,200	21,700	24,100
	P								6,250	6,250	6,300	6,300	6,300
	A								10.4	10.4	10.4	10.5	10.5
	M								112	124	138	147	162
	E								2.6	2.9	3.2	3.5	3.8
60.0 (24.3)	%								65.6	67.9	69.8	70.7	71.6
	C							14,350	17,400	19,400	21,600	23,200	25,600
	P							5,600	5,600	5,600	5,650	5,650	5,700
	A							9.5	9.5	9.5	9.5	9.6	9.6
	M								96	115	127	141	150
55.0 (21.8)	E							2.6	3.1	3.5	3.8	4.1	4.5
	%							65.2	69.2	70.9	72.1	72.5	72.6
	C						12,600	15,400	18,600	20,700	22,900	24,500	27,100
	P						5,000	5,000	5,000	5,050	5,050	5,050	5,100
	A						8.7	8.7	8.7	8.7	8.8	8.8	8.8
49.0 (19)	M							81	98	117	129	143	152
	E							2.5	3.1	3.7	4.1	4.5	4.8
	%						64.2	68.7	71.7	72.7	73.1	72.9	72.0
	C					10,100	13,600	16,500	19,800	22,000	24,400	26,000	28,700
	P					4,400	4,380	4,380	4,400	4,420	4,440	4,460	4,490
43.0 (16.5)	A					7.8	7.8	7.8	7.9	7.9	7.9	8.0	8.0
	M					63	84	100	119	131	144	154	168
	E					2.3	3.1	3.8	4.5	5.0	5.5	5.8	6.4
	%					60.9	68.2	71.6	73.1	73.0	72.2	71.2	68.9
	C				8,650	10,900	14,550	17,600	21,000	23,300	25,700	27,500	30,000
38.0 (14.6)	P				3,840	3,820	3,820	3,830	3,860	3,880	3,910	3,930	3,960
	A				7.1	7.0	7.1	7.1	7.2	7.2	7.2	7.3	7.3
	M				52	65	85	102	120	133	146	155	169
	E				2.3	2.9	3.8	4.6	5.4	6.0	6.6	7.0	7.6
	%				58.9	65.0	70.8	72.6	72.2	70.9	68.6	66.6	62.6
27.0 (11)	C			6,800	9,200	11,500	15,200	18,400	21,900	24,300	26,800	28,600	31,500
	P			3,420	3,400	3,400	3,410	3,440	3,470	3,500	3,530	3,550	3,590
	A			6.5	6.5	6.5	6.6	6.6	6.7	6.7	6.7	6.7	6.8
	M			40	54	66	86	103	121	133	147	156	170
	E			2.0	2.7	3.4	4.5	5.4	6.3	7.0	7.6	8.1	8.8
21.0 (9.4)	%			53.8	62.3	67.5	71.6	71.8	69.5	66.8	63.0	59.9	54.4
	C		5,900	7,750	10,300	12,750	16,800	20,200	24,000				
	P		2,580	2,590	2,610	2,630	2,690	2,740	2,790				
	A		5.5	5.5	5.6	5.6	5.7	5.7	5.8				
	M		33	42	55	68	88	105	123				
10.0 (6.8)	E		2.3	3.0	4.0	4.9	6.3	7.4	8.6				
	%		54.4	61.6	67.3	69.3	67.6	62.8	54.7				
	C		6,400	8,300	10,950	13,500	17,700	21,300					
	P		2,190	2,220	2,260	2,310	2,380	2,450					
	A		5.1	5.1	5.2	5.2	5.3	5.3					
10.0 (6.8)	M		34	44	57	69	90	106					
	E		2.9	3.8	4.9	5.9	7.5	8.7					
	%		59.5	65.0	68.0	67.3	61.1	52.5					
	C		7,550	9,600	12,450	15,200							
	P		1,610	1,680	1,770	1,850							
10.0 (6.8)	A		4.5	4.6	4.6	4.7							
	M		38	47	60	73							
	E		4.7	5.7	7.0	8.2							
	%		68.4	68.1	63.1	55.0							

C: Capacity (W), P: Power (W), A: Current (Amps), M: Mass Flow (gm/s), E: COP, %: Isentropic Efficiency (%)

Nominal Performance Values (±5%) based on 72 hours run-in. Subject to change without notice. Current @ 380 V

Rating Conditions

11.1 K Superheat
8.3 K Subcooling
35 °C Ambient Air Over

50 Hz Operation

AIR CONDITIONING

ZR68KCE-TFD

HFC-407C - Dew Pt.
COPELAND SCROLL®
TFD 380/420-3-50

Condensing Temperature °C
(Sat. Dew Pt. Pressure, bar)

Evaporating Temperature °C (Sat. Dew Pt. Pressure, bar)

	-29.0 (1.5)	-23.0 (1.9)	-18.0 (2.3)	-12.0 (3)	-7.0 (3.6)	0.0 (4.6)	5.0 (5.5)	10.0 (6.4)	13.0 (7.1)	16.0 (7.8)	18.0 (8.3)	21.0 (9.1)
65.0 (28.4) C P A M E %								15,700	17,550	19,550	20,900	23,200
								6,410	6,430	6,450	6,470	6,490
								10.7	10.7	10.7	10.7	10.7
								110	122	134	142	156
								2.5	2.7	3.0	3.2	3.6
							65.7	67.5	68.8	69.3	69.8	
60.0 (25.3) C P A M E %							13,950	16,900	18,900	21,000	22,400	24,700
							5,670	5,710	5,730	5,750	5,760	5,780
							9.7	9.7	9.7	9.8	9.8	9.8
							93	111	123	135	144	157
							2.5	3.0	3.3	3.7	3.9	4.3
						65.5	68.8	70.1	70.9	71.1	70.9	
55.0 (22.5) C P A M E %						12,200	15,000	18,100	20,100	22,300	23,800	26,200
						5,010	5,050	5,090	5,100	5,120	5,140	5,160
						8.8	8.9	8.9	8.9	8.9	8.9	8.9
						78	95	112	124	136	145	158
						2.4	3.0	3.6	3.9	4.4	4.6	5.1
					64.5	68.5	71.1	71.9	72.0	71.7	70.6	
49.0 (19.4) C P A M E %					9,760	13,250	16,150	19,450	21,600	23,900	25,500	28,000
					4,320	4,370	4,410	4,440	4,460	4,480	4,490	4,510
					7.9	8.0	8.0	8.1	8.1	8.1	8.1	8.1
					60	80	96	113	125	137	145	158
					2.3	3.0	3.7	4.4	4.8	5.3	5.7	6.2
				61.4	68.0	71.1	72.4	72.3	71.3	70.2	67.8	
43.0 (16.7) C P A M E %				8,340	10,550	14,200	17,250	20,700	22,900	25,300	27,000	29,600
				3,740	3,780	3,820	3,850	3,880	3,900	3,920	3,940	3,960
				7.2	7.3	7.3	7.4	7.4	7.4	7.4	7.4	7.4
				49	61	81	97	114	126	138	146	159
				2.2	2.8	3.7	4.5	5.3	5.9	6.5	6.9	7.5
			59.5	64.8	70.2	72.0	71.7	70.3	68.0	65.8	61.8	
38.0 (14.6) C P A M E %			6,590	8,860	11,150	14,950	18,150	21,700	24,000	26,500	28,200	30,900
			3,290	3,340	3,380	3,420	3,450	3,480	3,500	3,530	3,540	3,570
			6.7	6.8	6.8	6.9	6.9	6.9	6.9	6.9	6.9	6.9
			38	50	62	81	97	115	126	138	146	159
			2.0	2.7	3.3	4.4	5.3	6.2	6.9	7.5	8.0	8.7
		55.2	62.2	66.9	70.9	71.2	69.0	66.3	62.6	59.4	53.8	
27.0 (10.8) C P A M E %		5,810	7,480	9,960	12,450	16,550	19,900	23,700				
		2,520	2,560	2,600	2,630	2,670	2,710	2,750				
		5.9	6.0	6.0	6.1	6.1	6.1	6.2				
		31	39	51	63	82	98	115				
		2.3	2.9	3.8	4.7	6.2	7.4	8.6				
	55.6	60.8	65.9	68.1	67.1	62.7	54.8					
21.0 (9.1) C P A M E %		6,220	7,960	10,550	13,100	17,300	20,800					
		2,170	2,210	2,240	2,270	2,320	2,360					
		5.6	5.7	5.7	5.7	5.8	5.8					
		32	40	52	63	82	98					
		2.9	3.6	4.7	5.8	7.5	8.8					
	58.9	63.2	66.3	66.4	61.3	53.2						
10.0 (6.4) C P A M E %		6,980	8,800	11,500	14,150							
		1,545	1,575	1,615	1,650							
		5.2	5.2	5.2	5.3							
		33	41	52	64							
		4.5	5.6	7.1	8.6							
	66.0	66.8	63.9	57.4								

C: Capacity (W), P: Power (W), A: Current (Amps), M: Mass Flow (gm/s), E: COP, %: Isentropic Efficiency (%)

Nominal Performance Values (±5%) based on 72 hours run-in. Subject to change without notice. Current @ 380 V