

ZR72KCE-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):	97.99
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)	17731	20955	Overall Height (mm):	450.85
Power (W):	5200	3600	Mounting Length (mm):	190.50
Current (Amps):	8.9	6.8	Mounting Width (mm):	190.50
EER(BTU/Wh):	19.88	33.64	Mounting Height (mm):	457.20
Mass Flow (lbs/hr):	111.51	115.92	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):	38.56
			Internal Free Volume (cm ³):	4063.98
			Horse Power:	6.0
			*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	No data available in table					
LRA Low*(Amps):	67.0						
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

ZR72KCE-TFD

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

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

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

		-20.0 (2.5)	-15.0 (3)	-10.0 (3.5)	-5.0 (4.2)	0.0 (5)	5.0 (5.8)	7.0 (6.2)	10.0 (6.8)	12.0 (7.2)
65.0 (27)	C						14,050	15,200	17,000	18,300
	P						6,650	6,650	6,650	6,650
	A						11.0	11.0	11.0	11.0
	M						99	106	118	126
	E						2.1	2.3	2.6	2.8
60.0 (24.3)	%						61.1	62.9	65.4	66.8
	C					12,400	15,200	16,400	18,300	19,600
	P					5,900	5,900	5,900	5,900	5,900
	A					9.9	9.9	9.9	9.9	10.0
	M					84	101	109	121	129
55.0 (21.8)	E					2.1	2.6	2.8	3.1	3.3
	%					60.8	65.7	67.2	69.1	70.1
	C				10,800	13,350	16,200	17,500	19,400	20,800
	P				5,250	5,250	5,250	5,250	5,250	5,300
	A				9.0	9.0	9.0	9.0	9.0	9.0
50.0 (19.4)	M				71	86	104	111	123	131
	E				2.1	2.6	3.1	3.3	3.7	4.0
	%				59.9	65.3	69.3	70.5	71.7	72.1
	C			9,300	11,600	14,250	17,200	18,500	20,500	22,000
	P			4,640	4,650	4,660	4,680	4,690	4,710	4,730
45.0 (17.3)	A				8.1	8.1	8.2	8.2	8.2	8.3
	M				59	73	88	105	113	124
	E				2.0	2.5	3.1	3.7	4.0	4.4
	%				58.4	64.3	68.9	71.9	72.6	73.0
	C		7,800	9,950	12,350	15,100	18,100	19,500	21,600	23,100
40.0 (15.3)	P		4,110	4,130	4,140	4,160	4,180	4,200	4,230	4,260
	A		7.4	7.4	7.4	7.5	7.5	7.5	7.6	7.6
	M		48	61	74	90	107	114	126	134
	E		1.9	2.4	3.0	3.6	4.3	4.6	5.1	5.4
	%		56.1	62.5	67.7	71.3	73.1	73.2	72.6	71.7
35.0 (13.5)	C	6,450	8,350	10,550	13,000	15,800	19,000	20,400	22,600	24,100
	P	3,620	3,660	3,680	3,700	3,720	3,760	3,780	3,810	3,840
	A	6.7	6.8	6.8	6.8	6.9	6.9	7.0	7.0	7.0
	M	39	50	62	76	91	108	115	127	135
	E	1.8	2.3	2.9	3.5	4.3	5.1	5.4	5.9	6.3
30.0 (11.9)	%	53.1	60.0	65.7	70.0	72.5	72.8	72.2	70.4	68.7
	C	6,900	8,850	11,100	13,650	16,600	19,900	21,300	23,500	25,100
	P	3,220	3,260	3,280	3,300	3,330	3,370	3,400	3,440	3,470
	A	6.2	6.3	6.3	6.3	6.4	6.4	6.5	6.5	6.5
	M	40	51	63	77	92	109	116	127	135
27.0 (11)	E	2.1	2.7	3.4	4.1	5.0	5.9	6.3	6.9	7.2
	%	56.8	63.1	68.1	71.3	72.4	70.8	69.4	66.2	63.5
	C	7,300	9,350	11,650	14,300	17,300	20,700	22,200	24,500	26,100
	P	2,870	2,900	2,920	2,950	2,980	3,020	3,050	3,100	3,130
	A	5.8	5.8	5.8	5.9	5.9	6.0	6.0	6.1	6.1
20.0 (7.2)	M	41	52	64	77	92	109	117	128	136
	E	2.6	3.2	4.0	4.9	5.8	6.8	7.3	7.9	8.3
	%	60.0	65.6	69.5	71.4	70.7	67.0	64.6	59.9	56.0
	C	7,550	9,600	11,950	14,650	17,700	21,200	22,700	25,100	26,700
	P	2,670	2,700	2,720	2,740	2,780	2,830	2,850	2,900	2,940
15.0 (5.2)	A	5.5	5.6	5.6	5.6	5.7	5.7	5.8	5.8	5.9
	M	41	52	64	78	93	110	117	129	137
	E	2.8	3.6	4.4	5.3	6.4	7.5	8.0	8.6	9.1
	%	61.7	66.7	70.0	70.9	69.0	63.8	60.7	54.9	50.3

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

ZR72KCE-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)								16,450	18,550	20,900	22,600	25,300
C								6,920	6,900	6,870	6,850	6,820
P								11.7	11.7	11.6	11.6	11.6
A								115	129	143	153	170
M								2.4	2.7	3.0	3.3	3.7
E								63.8	66.6	69.0	70.5	72.4
%												
60.0 (25.3)							14,600	17,850	20,100	22,600	24,300	27,100
C							6,130	6,120	6,100	6,080	6,060	6,030
P							10.6	10.5	10.5	10.5	10.4	10.4
A							98	118	131	145	156	172
M							2.4	2.9	3.3	3.7	4.0	4.5
E							63.2	67.8	70.1	72.1	73.2	74.4
%												
55.0 (22.5)						12,800	15,750	19,200	21,500	24,100	25,900	28,900
C						5,420	5,420	5,410	5,400	5,390	5,370	5,340
P						9.5	9.5	9.5	9.5	9.5	9.4	9.4
A						82	99	119	133	147	157	174
M						2.4	2.9	3.6	4.0	4.5	4.8	5.4
E						62.5	67.2	70.9	72.7	74.0	74.5	75.0
%												
49.0 (19.4)					10,350	13,950	17,050	20,700	23,200	25,900	27,800	30,900
C					4,650	4,680	4,690	4,690	4,680	4,660	4,640	4,610
P					8.5	8.5	8.5	8.5	8.5	8.5	8.4	8.4
A					64	84	101	121	134	149	159	175
M					2.2	3.0	3.6	4.4	5.0	5.6	6.0	6.7
E					60.3	67.0	70.6	73.1	74.0	74.3	74.2	73.4
%												
43.0 (16.7)				8,970	11,200	15,000	18,300	22,200	24,800	27,600	29,600	32,900
C				3,990	4,020	4,050	4,070	4,060	4,050	4,030	4,020	3,980
P				7.6	7.6	7.7	7.7	7.7	7.7	7.6	7.6	7.5
A				53	65	85	103	122	136	150	160	177
M				2.3	2.8	3.7	4.5	5.5	6.1	6.8	7.4	8.3
E				59.7	64.8	70.1	72.4	73.4	73.1	72.1	71.0	68.5
%												
38.0 (14.6)			7,200	9,560	11,900	15,900	19,300	23,300	26,100	29,000	31,200	34,600
C			3,500	3,540	3,570	3,610	3,620	3,610	3,590	3,570	3,550	3,500
P			6.9	7.0	7.0	7.1	7.1	7.1	7.1	7.0	7.0	6.9
A			41	54	66	86	104	123	137	151	162	178
M			2.1	2.7	3.3	4.4	5.3	6.5	7.3	8.1	8.8	9.9
E			56.7	63.3	67.5	71.4	72.4	71.7	70.2	67.9	65.7	61.5
%												
27.0 (10.8)		6,490	8,290	10,850	13,450	17,850	21,700	26,100				
C		2,680	2,710	2,740	2,770	2,780	2,770	2,740				
P		6.0	6.0	6.1	6.1	6.1	6.1	6.0				
A		35	44	56	68	89	106	126				
M		2.4	3.1	4.0	4.9	6.4	7.8	9.5				
E		58.6	63.9	68.2	70.1	69.6	66.5	60.5				
%												
21.0 (9.1)		7,090	8,980	11,700	14,400	19,100	23,100					
C		2,330	2,360	2,380	2,400	2,390	2,360					
P		5.6	5.6	5.7	5.7	5.6	5.6					
A		36	45	58	70	91	108					
M		3.0	3.8	4.9	6.0	8.0	9.8					
E		62.5	66.7	69.4	69.4	65.5	59.0					
%												
10.0 (6.4)		8,520	10,600	13,600	16,600							
C		1,785	1,780	1,770	1,745							
P		5.1	5.0	5.0	4.9							
A		40	49	62	75							
M		4.8	5.9	7.7	9.5							
E		69.7	71.1	69.1	63.8							
%												

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