

### Rating Conditions

18.3 °C Return Gas  
 0 K Subcooling  
 35 °C Ambient Air Over

50 Hz Operation

### MEDIUM TEMPERATURE

### ZBD29KQE-TFD

HFC-404A  
 COPELAND SCROLL®  
 TFD 380/420-3-50

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

	-23.0 (2.7)	-20.0 (3)	-15.0 (3.6)	-10.0 (4.3)	-5.0 (5.1)	0.0 (6)	5.0 (7)	7.0 (7.5)
60.0 (28.7) C P A M E %					5,700	6,800	8,100	8,680
					4,630	4,660	4,670	4,680
					7.8	7.8	7.8	7.8
					64	78	95	103
					1.2	1.5	1.7	1.9
					54.2	57.5	60.6	61.7
55.0 (25.7) C P A M E %				5,480	6,550	7,810	9,270	9,930
				3,980	4,030	4,070	4,090	4,100
				6.8	6.9	7.0	7.0	7.0
				55	66	80	97	105
				1.4	1.6	1.9	2.3	2.4
			57.1	60.1	63.0	65.5	66.2	
50.0 (23) C P A M E %		4,210	5,110	6,150	7,360	8,760	10,400	11,100
		3,280	3,410	3,500	3,550	3,580	3,610	3,630
		5.8	6.0	6.1	6.2	6.2	6.3	6.3
		37	46	56	68	82	99	107
		1.3	1.5	1.8	2.1	2.5	2.9	3.1
	57.1	59.7	62.6	65.3	67.7	69.2	69.5	
45.0 (20.4) C P A M E %	4,100	4,640	5,640	6,790	8,130	9,680	11,450	12,250
	2,820	2,920	3,030	3,100	3,150	3,180	3,220	3,240
	5.2	5.3	5.5	5.6	5.6	5.7	5.7	5.8
	34	38	47	57	69	84	101	109
	1.5	1.6	1.9	2.2	2.6	3.0	3.6	3.8
60.3	61.8	64.4	67.0	69.4	71.0	71.3	71.0	
40.0 (18.1) C P A M E %	4,460	5,040	6,140	7,400	8,860	10,550	12,500	13,350
	2,550	2,630	2,720	2,780	2,820	2,860	2,910	2,930
	4.8	4.9	5.1	5.1	5.2	5.2	5.3	5.3
	34	39	48	58	70	85	102	110
	1.8	1.9	2.3	2.7	3.1	3.7	4.3	4.6
63.9	65.3	67.8	70.1	71.9	72.5	71.4	70.3	
35.0 (16.1) C P A M E %	4,800	5,430	6,610	7,980	9,560	11,400	13,500	14,400
	2,330	2,390	2,470	2,520	2,550	2,590	2,640	2,670
	4.5	4.6	4.7	4.8	4.8	4.9	5.0	5.0
	35	39	48	59	71	86	103	111
	2.1	2.3	2.7	3.2	3.7	4.4	5.1	5.4
66.2	67.6	69.9	71.8	72.8	72.1	69.2	67.2	
25.0 (12.4) C P A M E %	5,440	6,150	7,490	9,050	10,850	12,950	15,300	
	1,975	2,010	2,050	2,070	2,100	2,130	2,200	
	4.1	4.1	4.2	4.2	4.2	4.3	4.4	
	35	40	49	60	72	87	105	
	2.8	3.1	3.7	4.4	5.2	6.1	7.0	
67.8	69.0	70.6	71.2	69.8	65.7	58.2		
15.0 (9.4) C P A M E %	6,030	6,810	8,290	10,000	12,000			
	1,620	1,630	1,625	1,625	1,630			
	3.7	3.7	3.7	3.7	3.7			
	36	40	49	60	73			
	3.7	4.2	5.1	6.2	7.4			
68.1	68.9	69.4	67.6	62.3				
10.0 (8.2) C P A M E %	6,320	7,130	8,670	10,450				
	1,400	1,390	1,365	1,350				
	3.4	3.4	3.3	3.3				
	36	41	50	60				
	4.5	5.1	6.3	7.8				
69.9	70.5	70.0	66.2					

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

20 °C Return Gas  
 0 K Subcooling  
 35 °C Ambient Air Over

50 Hz Operation

### MEDIUM TEMPERATURE

HFCs Require Use of Polyol Ester  
 Lubricant Approved on Form 93-11

### ZBD29KQE-TFD

HFC-134A  
 COPELAND SCROLL®  
 TFD 380/420-3-50

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

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

		-23.0(1.2)	-20.0(1.3)	-16.0(1.6)	-12.0(1.9)	-8.0(2.2)	-4.0(2.5)	0.0(2.9)	3.0(3.3)	7.0(3.7)
60.0 (16.8)	C				2,810	3,390	4,070	4,870	5,540	6,550
	P				2,570	2,610	2,640	2,660	2,660	2,650
	A				5.2	5.2	5.3	5.3	5.4	5.4
	M				21	26	31	38	43	52
	E				1.1	1.3	1.5	1.8	2.1	2.5
	%				45.0	49.0	53.2	57.4	60.6	65.1
55.0 (14.9)	C		2,030	2,490	3,020	3,660	4,390	5,250	5,970	7,050
	P		2,300	2,320	2,350	2,380	2,410	2,420	2,430	2,410
	A		4.7	4.8	4.9	5.0	5.0	5.1	5.1	5.1
	M		14	18	22	26	32	38	44	52
	E		0.9	1.1	1.3	1.5	1.8	2.2	2.5	2.9
	%		38.3	42.7	47.0	51.2	55.4	59.5	62.5	66.6
50.0 (13.2)	C	1,845	2,160	2,660	3,240	3,930	4,720	5,630	6,390	7,540
	P	2,090	2,090	2,100	2,130	2,150	2,180	2,190	2,200	2,180
	A	4.4	4.5	4.6	4.7	4.8	4.8	4.8	4.8	4.8
	M	12	15	18	22	27	32	39	44	53
	E	0.9	1.0	1.3	1.5	1.8	2.2	2.6	2.9	3.5
	%	36.5	40.2	45.0	49.5	53.8	57.8	61.6	64.3	67.8
45.0 (11.6)	C	1,960	2,310	2,840	3,470	4,200	5,040	6,000	6,810	8,010
	P	1,890	1,885	1,895	1,910	1,935	1,955	1,970	1,975	1,960
	A	4.2	4.3	4.4	4.5	4.5	4.6	4.6	4.6	4.6
	M	13	15	18	22	27	33	39	45	53
	E	1.0	1.2	1.5	1.8	2.2	2.6	3.0	3.5	4.1
	%	38.6	42.6	47.6	52.2	56.4	60.1	63.4	65.6	68.3
41.0 (10.4)	C	2,070	2,430	3,000	3,650	4,410	5,290	6,290	7,130	8,380
	P	1,735	1,725	1,730	1,750	1,770	1,790	1,805	1,810	1,800
	A	4.1	4.2	4.3	4.3	4.4	4.4	4.4	4.4	4.4
	M	13	15	19	23	28	33	40	45	53
	E	1.2	1.4	1.7	2.1	2.5	3.0	3.5	3.9	4.7
	%	40.7	44.8	49.9	54.4	58.3	61.6	64.4	66.1	67.9
36.0 (9.1)	C	2,210	2,600	3,190	3,880	4,680	5,600	6,640	7,520	8,810
	P	1,555	1,545	1,545	1,560	1,580	1,605	1,620	1,625	1,615
	A	3.9	4.0	4.1	4.2	4.2	4.2	4.3	4.3	4.2
	M	13	15	19	23	28	34	40	46	54
	E	1.4	1.7	2.1	2.5	3.0	3.5	4.1	4.6	5.5
	%	43.3	47.6	52.6	56.9	60.3	62.8	64.5	65.3	65.7
31.0 (7.9)	C	2,360	2,760	3,380	4,110	4,940	5,890	6,980	7,890	9,230
	P	1,400	1,385	1,385	1,400	1,420	1,445	1,465	1,475	1,470
	A	3.7	3.8	3.9	4.0	4.0	4.1	4.1	4.1	4.1
	M	13	16	19	23	28	34	40	46	54
	E	1.7	2.0	2.4	2.9	3.5	4.1	4.8	5.4	6.3
	%	45.8	50.0	54.8	58.4	61.0	62.4	62.8	62.4	60.9
26.0 (6.9)	C	2,520	2,930	3,580	4,320	5,190	6,170	7,300	8,230	
	P	1,270	1,260	1,260	1,275	1,300	1,325	1,350	1,360	
	A	3.6	3.7	3.8	3.8	3.9	3.9	4.0	4.0	
	M	14	16	20	24	28	34	40	46	
	E	2.0	2.3	2.8	3.4	4.0	4.7	5.4	6.1	
	%	47.5	51.4	55.5	58.3	59.6	59.6	58.3	56.5	
21.0 (5.9)	C	2,670	3,100	3,760	4,530	5,420	6,430	7,590		
	P	1,180	1,170	1,170	1,190	1,215	1,250	1,275		
	A	3.4	3.5	3.6	3.7	3.8	3.8	3.9		
	M	14	16	20	24	29	34	40		
	E	2.3	2.7	3.2	3.8	4.5	5.2	5.9		
	%	47.6	50.9	54.0	55.5	55.4	53.7	50.5		

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 @ 400 V

**ZBD29KQE-TFD**

HFC, R-404A, 50 Hz, 3 - Phase, 380/420 V

**Medium Temperature**

**Production Status:** Non U.S. model with restricted sales - Contact your Emerson Climate Technologies Representative.

Performance			Mechanical	
Evaporator Temp. (°C)	-7	7	Displacement (cm <sup>3</sup> /Rev):	65.55
Condensing Temp. (°C)	49	54	Displacement (m <sup>3</sup> /Hr):	
Return Gas Temp. (°C)	18	18	Overall Length (mm):	241.30
Liquid Temp. (°C)	49	54	Overall Width (mm):	241.30
Capacity (Watts)	7092	10140	Overall Height (mm):	478.54
Power (W):	3440	4040	Mounting Length (mm):	190.50
Current (Amps):	6.05	6.9	Mounting Width (mm):	190.50
EER(BTU/Wh):	11.98	14.53	Mounting Height (mm):	484.38
Mass Flow (lbs/hr):	64.38	107.10	Suction Size (mm),Type:	177.80 / 203.20 Stub
Sound Data @			Discharge Size (mm),Type:	25.40 / 50.80 Stub
Sound Power (dBA):	78 Avg	83 Max	Initial Oil Charge (ml):	1360.40
Vibration mils(peak-peak):	2.0 Avg	3.0 Max	Oil Recharge (ml):	1242.11
Record Date:	2010-02-12		Net Weight (kg):	32.70
			Internal Free Volume (cm <sup>3</sup> ):	4621.13
			Horse Power:	4.0
*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):	48.0						
LRA Low*(Amps):	43.0	No data available in table					
LRA Half Winding (Amps):							
MCC (Amps):	10.8						
Max Operating Current (Amps):	7.9						
RLA, MCC/1.4(use for contactor selection)(Amps):	7.7						
RLA, MCC/1.56(use for breaker & wire size selection)(Amps):	6.9						
RPM:	2900						
Box IP :	21						
UL File No:							
UL File Date:							

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

**Alternate Applications**

Refrigerant	Voltage	Phase	Frequency	Application
R-134a HFC	460	3	60	Medium Temperature
R-134a HFC	380/420	3	50	Medium Temperature
R-404A HFC	380/420	3	50	Medium Temperature
R-404A HFC	460	3	60	Medium Temperature
R-407A HFC	380/420	3	50	Medium Temperature
R-407F HFC	380/420	3	50	Medium Temperature