

Rating Conditions

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

MEDIUM TEMPERATURE

Blue Area Restrictions: 11°C Max
 Superheat

ZB21KQE-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 %					4,250	5,100	6,100	6,500
					3,550	3,530	3,490	3,480
					5.9	5.9	5.8	5.8
					48	59	72	77
					1.2	1.5	1.7	1.9
					52.8	57.0	60.9	62.4
55.0 (25.7) C P A M E %				4,050	4,850	5,850	6,950	7,400
				3,170	3,160	3,140	3,110	3,100
				5.4	5.4	5.3	5.3	5.3
				40	49	60	73	79
				1.3	1.5	1.9	2.2	2.4
			52.9	57.1	61.0	64.3	65.5	
50.0 (23) C P A M E %			3,750	4,550	5,450	6,550	7,750	8,300
			2,830	2,820	2,810	2,790	2,770	2,750
			4.9	4.9	4.9	4.9	4.9	4.9
			34	41	50	61	74	80
			1.3	1.6	2.0	2.3	2.8	3.0
		52.8	57.3	61.3	64.7	67.3	68.1	
45.0 (20.4) C P A M E %	3,000	3,400	4,150	5,000	6,050	7,200	8,550	9,100
	2,510	2,520	2,510	2,510	2,500	2,480	2,460	2,450
	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
	24	28	35	42	51	62	75	81
	1.2	1.4	1.7	2.0	2.4	2.9	3.5	3.7
49.3	52.3	57.1	61.3	64.9	67.7	69.5	69.8	
40.0 (18.1) C P A M E %	3,250	3,700	4,500	5,500	6,600	7,850	9,300	9,900
	2,230	2,230	2,230	2,230	2,220	2,210	2,190	2,180
	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
	25	29	35	43	52	63	76	82
	1.5	1.7	2.0	2.5	3.0	3.6	4.2	4.5
53.3	56.3	60.9	64.8	67.9	69.8	70.4	70.1	
35.0 (16.1) C P A M E %	3,500	4,000	4,900	5,900	7,100	8,450	10,000	10,700
	1,990	1,990	1,990	1,980	1,980	1,970	1,950	1,950
	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
	25	29	36	44	53	64	77	83
	1.8	2.0	2.5	3.0	3.6	4.3	5.1	5.5
56.9	59.8	64.1	67.5	69.8	70.6	69.6	68.5	
25.0 (12.4) C P A M E %	4,000	4,550	5,550	6,700	8,050	9,600	11,400	
	1,570	1,570	1,570	1,570	1,570	1,570	1,560	
	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
	26	29	36	44	54	65	78	
	2.5	2.9	3.5	4.3	5.1	6.1	7.3	
62.5	64.9	68.0	69.5	69.2	66.5	61.0		
15.0 (9.4) C P A M E %	4,400	5,000	6,100	7,450	8,950			
	1,250	1,250	1,250	1,250	1,250			
	3.2	3.2	3.2	3.2	3.2			
	26	30	37	45	54			
	3.5	4.0	4.9	5.9	7.1			
64.7	66.0	66.6	64.9	60.2				
10.0 (8.2) C P A M E %	4,600	5,200	6,400	7,750				
	1,110	1,110	1,110	1,120				
	3.1	3.1	3.1	3.1				
	26	30	37	45				
	4.1	4.7	5.7	6.9				
64.1	64.5	63.3	59.2					

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 @ 400 V

ZB21KQE-TFD

HFC, R-404A, 50 Hz, 3 - Phase, 380/420 V . [Also Available with Variable Frequency Drives](#)

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 ³ /Rev):	49.49
Condensing Temp. (°C)	49	54	Displacement (m ³ /Hr):	
Return Gas Temp. (°C)	18	18	Overall Length (mm):	241.30
Liquid Temp. (°C)	49	54	Overall Width (mm):	241.30
Capacity (Watts)	5275	7561	Overall Height (mm):	404.62
Power (W):	2740	3060	Mounting Length (mm):	190.50
Current (Amps):	4.9	5.3	Mounting Width (mm):	190.50
EER(BTU/Wh):	11.21	14.44	Mounting Height (mm):	410.46
Mass Flow (lbs/hr):	47.75	80.01	Suction Size (mm),Type:	76.20 / 101.60 Stub
Sound Data @			Discharge Size (mm),Type:	25.40 / 50.80 Stub
Sound Power (dBA):	69 Avg	74 Max	Initial Oil Charge (ml):	1242.11
Vibration mils(peak-peak):	2.0 Avg	3.0 Max	Oil Recharge (ml):	1123.81
Record Date:	2006-08-23		Net Weight (kg):	27.22
			Internal Free Volume (cm ³):	2998.82
			Horse Power:	3.0
*Overall compressor height on Copeland Brand Product's specified mounting grommets.				

Electrical		Capacitors					
LRA High* (Amps):	40.0	Type	Part No	Low MFD	High MFD	Volts	User Description
LRA Low*(Amps):	36.0	No data available in table					
LRA Half Winding (Amps):							
MCC (Amps):	10.3						
Max Operating Current (Amps):	7.15						
RLA, MCC/1.4(use for contactor selection)(Amps):	7.4						
RLA, MCC/1.56(use for breaker & wire size selection)(Amps):	6.6						
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-404A HFC	460	3	60	Medium Temperature