

ZR310KCE-TWD

HFC, R-407C, 50 Hz, 3 - Phase, 380/420 V [. Also Available with Variable Frequency Drives](#)

Air Conditioning

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):	410.50
Condensing Temp. (°C)	54	38	Displacement (m ³ /Hr):	
Return Gas Temp. (°C)	18	18	Overall Length (mm):	447.04
Liquid Temp. (°C)	46	29	Overall Width (mm):	390.40
Capacity (Watts)	72682	89973	Overall Height (mm):	723.90
Power (W):	22300	15700	Mounting Length (mm):	266.70
Current (Amps):	37.9	29.5	Mounting Width (mm):	266.70
EER(BTU/Wh):	18.86	33.30	Mounting Height (mm):	734.06
Mass Flow (lbs/hr):	454.85	481.31	Suction Size (mm),Type:	381.00 / 203.20 Stub
Sound Data @			Discharge Size (mm),Type:	330.20 / 203.20 Stub
Sound Power (dBA):	85 Avg	90 Max	Initial Oil Charge (ml):	6802.02
Vibration mils(peak-peak):	3.7 Avg	5.0 Max	Oil Recharge (ml):	6506.28
Record Date:	2005-07-15		Net Weight (kg):	160.12
			Internal Free Volume (cm ³):	33986.64
			Horse Power:	26.0
			*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):	272.0						
LRA Low*(Amps):		No data available in table					
LRA Half Winding (Amps):							
MCC (Amps):	61						
Max Operating Current (Amps):	52.0						
RLA, MCC/1.4(use for contactor selection)(Amps):	43.6						
RLA, MCC/1.56(use for breaker & wire size selection)(Amps):	39.1						
RPM:	2900						
Box IP :	56						
UL File No:	SA-2337						
UL File Date:	2000-11-28						

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

Alternate Applications

Rating Conditions

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

50 Hz Operation

NULL
NULL

ZR310KCE-TWD

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

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

	-23.0 (1.9)	-20.0 (2.1)	-10.0 (3.2)	-5.0 (3.9)	0.0 (4.6)	2.0 (4.9)	7.0 (5.8)	15.0 (7.6)	20.0 (8.8)
68.0 (30.4)					41,500 31,300 49.8 317 1.3 50.1	46,000 31,200 49.8 346 1.5 52.6	57,500 31,000 49.7 424 1.9 58.5	79,500 30,900 49.7 570 2.6 65.9	
60.0 (25.3)				39,000 25,700 42.0 269 1.5 51.8	49,000 25,500 42.1 334 1.9 58.2	53,500 25,500 42.1 363 2.1 60.6	66,000 25,500 42.1 440 2.6 65.6	90,500 25,700 42.2 587 3.5 70.8	108,500 25,900 42.5 692 4.2 71.8
54.0 (21.9)			34,000 22,100 37.3 224 1.5 51.2	43,500 22,000 37.4 281 2.0 58.0	54,000 22,000 37.5 345 2.5 63.8	59,000 22,000 37.5 374 2.7 65.8	72,500 22,100 37.6 452 3.3 69.9	98,500 22,500 37.9 598 4.4 72.6	117,500 22,800 38.3 703 5.2 71.7
49.0 (19.4)			37,500 19,500 34.1 233 1.9 56.5	47,000 19,400 34.2 289 2.4 62.7	58,500 19,500 34.3 354 3.0 67.8	63,500 19,600 34.4 382 3.3 69.4	78,000 19,700 34.5 460 3.9 72.2	105,000 20,200 35.0 606 5.2 72.4	125,000 20,600 35.4 712 6.1 69.4
40.0 (15.4)		26,100 15,600 29.2 155 1.7 51.3	43,000 15,700 29.7 246 2.7 64.3	53,500 15,800 29.8 303 3.4 69.0	66,000 16,000 30.0 368 4.1 71.8	72,000 16,100 30.1 396 4.5 72.4	87,000 16,400 30.3 474 5.3 72.2	116,500 17,000 31.0 620 6.9 66.5	138,000 17,400 31.6 726 7.9 59.1
30.0 (11.8)	26,200 12,200 25.5 143 2.1 55.7	30,500 12,300 25.7 166 2.5 59.6	49,000 12,700 26.2 258 3.9 68.6	61,000 12,900 26.4 315 4.7 70.2	74,500 13,200 26.7 380 5.7 69.5	80,500 13,300 26.8 409 6.1 68.4	97,000 13,700 27.2 487 7.1 63.7	129,000 14,300 28.1 633 9.0 49.6	
25.0 (10.2)	28,300 11,000 24.2 148 2.6 58.8	33,000 11,100 24.4 171 3.0 62.0	52,000 11,500 24.9 263 4.5 68.1	64,000 11,800 25.1 321 5.4 67.8	78,500 12,100 25.4 386 6.5 64.8	84,500 12,200 25.5 415 6.9 62.8	102,000 12,600 26.0 493 8.1 55.4		
20.0 (8.8)	30,500 9,950 23.0 152 3.1 60.5	35,000 10,100 23.2 175 3.5 62.9	55,000 10,600 23.7 268 5.2 65.6	67,500 10,900 23.9 325 6.2 63.1	82,500 11,200 24.2 391 7.4 57.6	89,000 11,300 24.4 420 7.9 54.5			
10.0 (6.4)	34,000 8,300 20.7 158 4.1 59.0	39,500 8,500 20.8 181 4.6 59.5	60,500 9,050 21.4 275 6.7 54.0	74,000 9,350 21.7 333 7.9 46.4					

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 @ 400 V