

# CS33K6E-TF5

HFC, R-404A, 60Hz, 3- Phase, 200/230 V  
Extended Medium Temp



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

## Performance

Evap(°F)/Cond(°F)	20 / 120	-10 / 120
RG(°F)/Liq(°F)	40.0 / 120.0	40.0 / 120.0
Capacity (Btu/hr)	30800	12100
Power (Watts):	4960	3030
Current (Amps):	14.80	10.50
EER (Btu/Wh):	6.20	4.00
Mass Flow (lbs/hr):	735	275
Sound Power (dBA):	0 Avg	0 Max
Vibration (mils(peak-peak)):	0.0 Avg	0.0 Max
Record Date:	2010-09-14	

## Mechanical

Number of Cylinders:	2	Displ(in <sup>3</sup> /Rev):	6.22
Bore Size(in):	1.96	Displ(ft <sup>3</sup> /hr):	756.06
Stroke(in):	1.03		
Overall Length (in):	10.23	Mounting Length (in):	7.50
Overall Width (in):	9.65	Mounting Width (in):	7.50
Overall Height (in):	14.81	Mounting Height (in):	15.19 *
Suction Size (in):		7/8 Stub	
Discharge Size (in):		1/2 Stub	
Oil Recharge (oz):		43	
Initial Oil Charge (oz):		45	
Net Weight (lbs):		79	
Internal Free Volume (in <sup>3</sup> ):			
Horse Power:			
*Overall compressor height on Copeland Brand Product's specified mounting grommets.			

## Electrical

LRA-High*:	102.0	MCC (Amps):	26.2	UL File No:	
LRA-Half Winding:		RPM:	3500	UL File Date:	28-Dec-1984
LRA Low*:		Max Operating Current:	21.0		
RLA(=MCC/1.4;use for contactor selection):			18.7		
RLA(=MCC/1.56;use for breaker & wire size selection):			16.8		
*Low and High refer to the low and high nominal voltage ranges for which the motor is approved.					

## Alternate Applications

Refrigerant	Freq (Hz)	Phase	Voltage	Application
R-404A HFC	50	3	200/220	
R-404A HFC	50	3	200/220	
R-507 HFC	50	3	200/220	
R-507 HFC	60	3	200/230	

### Rating Conditions

40 °F Return Gas  
 0 F Subcooling  
 95 °F Ambient Air Over

60 Hz Operation

### EXTENDED MEDIUM TEMPERATURE

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

Refer AE-1298 for restrictions

### CS33K6E-TF5

COPELAWELD® HFC-404A

COMPRESSOR

TF5 200/230-3-60

Condensing Temperature °F  
 (Sat. Dew Pt. Pressure, psig)

Evaporating Temperature °F (Sat. Dew Pt. Pressure, psig)

	-25.0 (13)	-15.0 (20)	-10.0 (24)	-5.0 (28)	0.0 (33)	5.0 (38)	10.0 (43)	15.0 (49)	20.0 (55)	25.0 (62)	30.0 (69)
140.0 (402) C P A M E %			8,570	9,970	11,800	13,900	16,300	18,700	21,300	23,800	26,100
			2,940	3,300	3,680	4,080	4,470	4,840	5,200	5,500	5,750
			10.3	11.1	11.9	12.8	13.7	14.5	15.4	16.1	16.7
			246	289	344	410	484	565	650	735	820
			2.9	3.0	3.2	3.4	3.6	3.9	4.1	4.3	4.6
			58.8	57.8	57.9	58.5	58.9	59.2	59.1	58.7	58.0
130.0 (354) C P A M E %		8,760	10,200	12,100	14,400	17,000	19,900	22,900	26,000	29,000	31,900
		2,700	3,010	3,350	3,710	4,080	4,440	4,780	5,100	5,350	5,550
		9.8	10.5	11.2	12.0	12.8	13.6	14.4	15.1	15.8	16.3
		220	256	306	368	439	520	600	690	780	870
		3.2	3.4	3.6	3.9	4.2	4.5	4.8	5.1	5.4	5.7
		57.6	56.8	57.2	58.1	59.0	59.6	59.8	59.8	59.4	58.7
120.0 (310) C P A M E %	8,310	10,200	12,100	14,400	17,200	20,400	23,800	27,300	30,800	34,400	37,800
	2,300	2,740	3,030	3,350	3,690	4,030	4,370	4,680	4,960	5,200	5,350
	9.1	9.9	10.5	11.2	11.9	12.7	13.4	14.1	14.8	15.3	15.7
	186	230	273	329	396	471	555	640	730	825	920
	3.6	3.7	4.0	4.3	4.7	5.1	5.4	5.8	6.2	6.6	7.1
	61.2	56.3	56.8	57.9	59.0	59.9	60.4	60.6	60.3	59.9	59.2
110.0 (270) C P A M E %	9,100	11,900	14,200	17,000	20,300	23,900	27,800	31,800	35,800	39,900	43,800
	2,310	2,730	3,010	3,320	3,640	3,960	4,270	4,550	4,790	4,990	5,100
	9.2	9.9	10.5	11.1	11.8	12.5	13.2	13.8	14.4	14.8	15.2
	186	244	294	355	425	505	590	680	775	870	965
	3.9	4.3	4.7	5.1	5.6	6.0	6.5	7.0	7.5	8.0	8.6
	57.7	56.5	57.7	59.0	60.0	60.7	61.0	60.9	60.5	59.9	59.1
100.0 (235) C P A M E %	10,100	13,800	16,500	19,800	23,500	27,600	31,900	36,300	40,900	45,400	49,800
	2,300	2,700	2,970	3,260	3,560	3,860	4,140	4,390	4,600	4,760	4,850
	9.1	9.8	10.4	11.0	11.6	12.2	12.9	13.4	13.9	14.3	14.5
	192	262	316	381	455	535	625	715	810	910	1,010
	4.4	5.1	5.6	6.1	6.6	7.2	7.7	8.3	8.9	9.5	10.3
	56.4	57.3	58.7	59.9	60.7	61.1	61.0	60.6	59.9	59.1	58.1
90.0 (202) C P A M E %	11,400	15,800	19,000	22,700	26,900	31,300	36,100	41,000	45,900	51,000	55,500
	2,260	2,650	2,900	3,180	3,460	3,740	3,990	4,220	4,400	4,520	4,570
	9.0	9.7	10.2	10.8	11.4	12.0	12.5	13.0	13.4	13.7	13.9
	201	281	338	406	483	565	655	750	850	945	1,050
	5.1	6.0	6.5	7.1	7.8	8.4	9.0	9.7	10.4	11.3	12.2
	56.2	58.1	59.4	60.3	60.7	60.7	60.2	59.4	58.4	57.2	56.0
80.0 (173) C P A M E %	12,800	18,000	21,600	25,700	30,200	35,100	40,200	45,600	51,000	56,500	61,500
	2,210	2,590	2,830	3,090	3,350	3,610	3,840	4,040	4,190	4,270	4,280
	8.9	9.6	10.1	10.6	11.2	11.7	12.2	12.6	13.0	13.2	13.2
	212	299	360	430	510	595	685	780	880	980	1,080
	5.8	7.0	7.6	8.3	9.0	9.7	10.5	11.3	12.2	13.2	14.4
	56.2	58.5	59.4	59.8	59.8	59.2	58.3	57.0	55.6	54.1	52.5
70.0 (147) C P A M E %	14,300	20,300	24,200	28,700	33,600	38,800	44,400	50,000	56,000	61,500	67,500
	2,150	2,520	2,750	3,000	3,250	3,480	3,690	3,860	3,980	4,030	4,000
	8.8	9.5	9.9	10.4	11.0	11.4	11.9	12.3	12.5	12.7	12.6
	223	317	381	453	535	620	710	810	905	1,010	1,110
	6.7	8.0	8.8	9.6	10.3	11.2	12.0	13.0	14.0	15.3	16.8
	56.0	57.9	58.3	58.2	57.5	56.4	55.0	53.2	51.3	49.2	47.1

C: Capacity (Btu/hr), P: Power (W), A: Current (Amps), M: Mass Flow (lb/hr), E: EER (Btu/Wh), %: Isentropic Efficiency (%)

Nominal Performance Values (±5%) based on 72 hours run-in. Subject to change without notice. Current @ 230 V

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## Service Parts

<u>Reference</u>	<u>Component</u>	<u>Quantity</u>	<u>Description</u>	<u>Comment</u>
6	032-0463-00	1	RETAINER-HEATER	
1	527-0044-00	1	SPACER-MOUNTING ASSM	
99	918-0088-00	1	HEATER-CRANKCASE KIT	40/49W 240/265V FLEXIBLE

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### Accessories

<u>Category</u>	<u>PartNumber</u>	<u>Description</u>
Crankcase Heaters	018-0088-00	Crankcase Heater, 240/265V, 40W, EHP Flexible
	018-0088-01	Crankcase Heater, 480/575V, 45/57W, EHP Flexible
	018-0088-06	Crankcase Heater, 120V, 40W, EHP Flexible
	018-0099-00	Crankcase Heater, 240V, 60W, SS Rigid w/conduit box
	018-0099-01	Crankcase Heater, 480V, 60W, SS Rigid w/conduit box
Electrical Components	085-0160-00	3 Phase Voltage Monitor. For use with all Copeland 3 Phase Compressors. Consult model family nomenclature for electrical definition in the model number.
Miscellaneous	998-AB52-01	Akylbenzene Oil. Approved for use with specific Copeland Semi Hermetic After Market Compressors. Consult model family nomenclatures for oil identifier in the model number.
	998-E022-01	Polyol Ester Oil. Approved for use with specific Copeland Hermetic & Semi Hermetic models. Consult specific model family nomenclatures for oil identifier in the model number.
Mounting	527-0044-00	Spacer Mounting Assembly, CI13/16-PFZ ONLY, ALL CR47/53KQ, 60 Hz

**Common U.S. OEM Bill Of Materials**

	Suction Connection	Suction Size	Discharge Connection	Discharge Size	Electrical Connection	Mounting Assembly	Sight Glass	Crankcase Heater	Schraeder Valve	Tandem Ready	Module Voltage
23S	Rotalock	1 1/4"		1/2"	SCREW	-	-	-	-	-	-
24S	Rotalock	1 1/4"		1/2"		Yes	-	-	-	-	-
256		7/8"		1/2"	SCREW	-	-	-	-	-	-
270	Stub	3/4"		1/2"	SCREW	-	-	Yes	-	-	-
274	Stub	3/4"		1/2"	SCREW	-	-	Yes	-	-	-
276		3/4"		1/2"	SCREW	-	-	Yes	-	-	-
278		7/8"		1/2"	SCREW	-	-	Yes	-	-	-
28R	Rotalock	1 1/4"		1/2"	SCREW	-	-	Yes	-	-	-

**Common U.S. Service Bill Of Materials**

	Suction Connection	Suction Size	Discharge Connection	Discharge Size	Electrical Connection	Mounting Assembly	Sight Glass	Crankcase Heater	Schraeder Valve	Tandem Ready	Module Voltage
956		7/8"		1/2"	SCREW	-	-	-	-	-	-
970	Stub	3/4"		1/2"	SCREW	Yes	-	Yes	-	-	-
978		7/8"		1/2"	SCREW	Yes	-	Yes	-	-	-

\* Note: For all other Bill Of Material descriptions (Including International and Customer Specific Bills of Materials) contact your sales representative or the Application Engineering Department.