

2P54K5E-TF5

HFC, R-410A, 60Hz, 3- Phase, 200/230 V

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

Evap(°F)/Cond(°F)	45 / 130	50 / 100
RG(°F)/Liq(°F)	65 / 115	70 / 85
Capacity (Btu/hr)	54300	73600
Power (Watts):	5070	3400
Current (Amps):	14.40	10.45
EER (Btu/Wh):	10.70	21.70
Mass Flow (lbs/hr):	799	905
Sound Power (dBA):	71 Avg	76 Max
Vibration (mils(peak- Record Date:	2.0 Avg 2012-12-10	3.0 Max

Mechanical

Number of Cylinders:0	Displ(in^3/Rev):	3.12
Bore Size(in): 0.00	Displ(ft^3/hr):	379.17
Stroke(in): 0.00		
Overall Length (in): 9.56	Mounting Length (in):	7.50
Overall Width (in): 9.56	Mounting Width (in):	7.50
Overall Height (in): 16.94	Mounting Height (in):	17.17 *
Suction Size (in):	7/8 Stub	
Discharge Size (in):	1/2 Stub	
Oil Recharge (oz):	38	
Initial Oil Charge (oz):	42	
Net Weight (lbs):	71.6	
Internal Free Volume (in^3):	190.8	
Horse Power:		
*Overall compressor height on Copeland Brand Product's specified mounting grommets.		

Electrical

LRA-High*:	110.0	MCC (Amps):	24.4	UL File No:	SA-2337
LRA-Half Winding:		RPM:		UL File Date:	17-Dec-2003
LRA Low*:		Max Operating Current:	20.0		
RLA(=MCC/1.4;use for contactor selection):		17.4			
RLA(=MCC/1.56;use for breaker & wire size		15.6			
*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-410A HFC	50	3	200/220	Air Conditioning

RATING CONDITIONS

20 °F Superheat
15 °F Subcooling
95 °F Ambient Air Over

60 Hz Operation

AIR CONDITIONING

Bold Area Restrictions: 3-Phase Compressors
Only

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HFC-410A
COPELAND SCROLL®
TF5 200/230-3-60

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

-10(36) 0(48) 10(62) 20(78) 30(97) 40(118) 45(130) 50(142) 55(155)

Condensing Temperature °F (Sat Dew Pt Pressure, psig)	150 (611)	C							39800	44400	49300	54600
		P							6790	6730	6670	6630
		A							18.5	18.35	18.2	18.1
		M							695	768	845	927
		E							5.8	6.6	7.4	8.3
		%							59.3	62.1	64.6	66.8
	145 (575)	C						42300	47000	52100	57500	
		P						6310	6260	6220	6180	
		A						17.35	17.25	17.1	17	
		M						704	776	853	935	
140 (540)		E						6.7	7.5	8.4	9.3	
		%						62	64.7	67	68.8	
		C				35800	44600	49500	54700	60300		
		P				5970	5870	5830	5790	5760		
		A				16.55	16.3	16.2	16.1	16.05		
		M				580	712	784	861	943		
		E				6	7.6	8.5	9.4	10.4		
		%				58.7	64.5	67	69.1	70.7		
	130 (475)	C				31600	39800	49100	54300	59800	65800	
		P				5250	5170	5100	5070	5050	5030	
120 (417)		A				14.85	14.65	14.45	14.4	14.35	14.3	
		M				481	596	727	799	875	957	
		E				6	7.7	9.6	10.7	11.8	13.1	
		%				57.7	64	69.1	71	72.5	73.4	
		C		27400	34800	43400	53200	58700	64600	70900		
		P		4610	4550	4490	4450	4430	4410	4400		
		A		13.3	13.15	13.05	12.9	12.85	12.85	12.8		
		M		395	495	609	739	810	887	968		
		E		6	7.7	9.7	12	13.3	14.7	16.1		
		%		56.3	63.1	68.6	72.5	73.7	74.4	74.4		
110 (364)		C		23200	30000	37800	46800	57200	63000	69200	75900	
		P		4040	4010	3960	3920	3890	3880	3870	3870	
		A		11.95	11.85	11.8	11.7	11.6	11.55	11.55	11.55	
		M		321	407	506	619	749	820	897	978	
		E		5.8	7.5	9.6	11.9	14.7	16.3	17.9	19.6	
		%		54.5	61.6	67.5	71.9	74.5	74.8	74.5	73.4	
	100 (316)	C	19250	25400	32400	40500	49900	60900	67000	73600	80700	
		P	3530	3520	3500	3470	3430	3410	3400	3400	3400	
		A	10.75	10.75	10.7	10.6	10.55	10.5	10.45	10.45	10.45	
		M	257	332	417	515	627	757	829	905	987	
90 (273)		E	5.5	7.2	9.3	11.7	14.6	17.9	19.7	21.7	23.8	
		%	52.2	59.5	65.8	70.6	73.7	74.5	73.8	72.3	69.9	
		C	21100	27400	34600	43100	52900	64500	71000	77900	85400	
		P	3090	3090	3070	3040	3010	2990	2980	2980	2980	
		A	9.75	9.75	9.7	9.65	9.6	9.5	9.5	9.5	9.5	
		M	266	340	424	521	634	764	836	912	995	
		E	6.8	8.8	11.3	14.2	17.6	21.6	23.8	26.2	28.7	
		%	56.9	63.4	68.6	72.2	73.7	72.3	70.3	67.3	63.2	
	80 (235)	C	22900	29200	36700	45500	55800	68000	74800	82100	90000	
		P	2720	2710	2690	2670	2630	2610	2600	2590	2580	
80 (235)		A	8.9	8.9	8.85	8.8	8.75	8.65	8.65	8.6	8.6	
		M	273	345	429	526	639	769	841	919	1000	
		E	8.4	10.8	13.6	17.1	21.2	26.1	28.8	31.8	34.8	
		%	60.4	65.9	70	72.2	71.7	67.7	64.1	59.3	53.1	

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

C:Capacity(Btu/hr), P:Power(Watts), A:Current(Amps), M:Mass Flow(lbs/hr), E:EER(Btu/Watt-hr), %:Isentropic Efficiency(%)

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Electrical Components

Internal Protector				
Part No:	071-0501-67	Usage Description		
<u>Vendor Part Number</u>		<u>Vendor Name</u>		
34HM407		T. I.		

Internal Protector				
Part No:	071-0613-16	Usage Description	ALTERNATE MOTOR	
<u>Vendor Part Number</u>		<u>Vendor Name</u>		
34HM415		T. I.		

Stator		546-2090-07	Usage Description	
Resistance:	+/-7%	Line to Line:	0.68	Line to Wye: 0.00

Stator		546-2112-01	Usage Description	ALTERNATE MOTOR
Resistance:	+/-7%	Line to Line:	0.86	Line to Wye: 0.00

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Service Parts

<u>Reference</u>	<u>Component</u>	<u>Quantity</u>	<u>Description</u>	<u>Comment</u>
2	527-0116-00	1	SPACER-MOUNTING ASSM	
99	529-0060-24	1	POWER CABLE-MOLDED PLUG	
1	918-0041-00	1	HEATER-CRANKCASE	240V 40W WRAP AROUND
1	918-0041-01	1	HEATER-CRANKCASE	120V 40W WRAP AROUND

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Accessories

<u>PartNumber</u>	<u>Description</u>
018-0095-00	Crankcase Heater, 240V, 70W, 21" Lead Length
018-0095-01	Crankcase Heater, 480V, 70W, 21" Lead Length
018-0095-02	Crankcase Heater, 575V, 70W, 21" Lead Length
018-0095-03	Crankcase Heater, 240V, 70W, 32" Lead Length
018-0095-04	Crankcase Heater, 240V, 70W, 48" Lead Length
018-0095-05	Crankcase Heater, 480V, 70W, 48" Lead Length
018-0095-06	Crankcase Heater, 575V, 70W, 48" Lead Length
018-0095-07	Crankcase Heater, 120V, 70W, 48" Lead Length
018-0095-08	Crankcase Heater, 400V, 70W, 48" Lead Length
018-0095-09	Crankcase Heater, 277V, 70W, 21" Lead Length
018-0096-00	Crankcase Heater, 240V, 40W, 21.75" Lead Length
018-0096-01	Crankcase Heater, 120V, 40W, 21.75" Lead Length
018-0096-02	Crankcase Heater, 480V, 40W, 21.75" Lead Length
018-0096-03	Crankcase Heater, 575V, 40W, 21.75" Lead Length
018-0096-04	Crankcase Heater, 240V, 40W, 48.25" Lead Length
018-0096-05	Crankcase Heater, 480V, 40W, 48.25" Lead Length
018-0096-06	Crankcase Heater, 240V, 40W, 31.75" Lead Length
543-0010-01	Comfort Alert (Fixed Speed Two Wire)
543-0012-00	Comfort Alert (Fixed Speed Heat Pump)
543-0024-01	Digital Compressor Controller
543-0032-00	Comfort Alert (Fixed Speed L Terminal)
543-0033-01	Comfort Alert (Two Stage UT)
543-0033-02	Comfort Alert (Two Stage UT with power savings)
543-0038-01	Commercial Comfort Alert (Two Stage)
543-0038-02	Commercial Comfort Alert (Single Stage)
543-0067-00	Comfort Alert (Fixed Speed Geothermal)
543-0069-01	Comfort Alert (Two Stage Geothermal)

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<u>PartNumber</u>	<u>Description</u>
543-0071-00	Commercial Comfort Alert (Two Stage Modified)
543-0120-00	SecureStart™
571-0066-00	CoreSense™ Diagnostics Module (2 wire)
571-0066-01	CoreSense Diagnostics (Fixed Speed AC)
571-0067-00	CoreSense™ Diagnostics Module (3 wire)
571-0067-01	CoreSense Diagnostics (Fixed Speed HP)
571-0072-00	CoreSense Diagnostics (Two Stage UT)
014-0036-17	Start Capacitor, 175-216uF, 330V, All models.
014-0036-19	Start Capacitor, 88-106uF, 330V, For use on ZP16-31K5E-PFV Compressors.
014-0037-36	Run Capacitor, 45uF, 370V, For use on ZP29-31K5E-PFV Compressors.
014-0037-38	Run Capacitor, 80uF, 370V, For use on ZP54K5E-PFV Compressors.
014-0037-51	Run Capacitor, 70uF, 370V, For use on ZP42-51K5E-PFV Compressors.
040-0166-37	Potential Relay, 170-180 PU Volts, 40-90 DO Volts, 332 Coil Volts
527-0116-00	Spacer Mounting Kit, 30-35 Durometer, 1.45" OD, 0.44" ID, 0.75" Height
529-0060-04	Molded Plug Kit, 10 GA Wire, 42" Length, Black / Yellow / Red