

HFC, R-404A, Mid Point, 60 Hz, 3 - Phase, V

Low Temperature

**Production Status:** This model is obsolete and is no longer in production for both OEM and service replacement. Please contact Customer Service about possible replacement models.

**Performance**

Evap(°F)/Cond(°F)	<u>  </u>	<u>  </u>
RG(°F)/Liq(°F)	<u>  </u>	<u>  </u>
Capacity (Btu/hr):		
Power (Watts):		
Current (Amps):		
EER (Btu/Wh):		
Mass Flow (lbs/hr):		
Sound Power(dBA):	0 Ave 0 Max	
Vibration (mils(peak-peak)):	0.0 Ave 0.0 Max	
Record Date:	2003-09-19	

**Mechanical**

Number of Cylinders:	Displ (in <sup>3</sup> /Rev):
Bore Size (in):	Displ (ft <sup>3</sup> /hr):
Stroke (in):	
Overall Length (in):	Mounting Length (in):
Overall Width (in):	Mounting Width(in):
Overall Height (in):	Mounting Height (in): *
Suction Size (in):	
Discharge Size (in):	
Initial Oil Charge (oz):	
Oil Recharge (oz):	
Net Weight (lbs):	
Internal Free Volume (in <sup>3</sup> ):	
HorsePower	
* Overall compressor height on Copeland Brand Product's specified mounting grommets.	

**Electrical**

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

**Alternate Applications**

<u>Refrigerant</u>	<u>Frequency(Hz)</u>	<u>Phase</u>	<u>Voltage</u>	<u>Application</u>

**RATING CONDITIONS**

65 °F Return Gas  
 0 °F Subcooling  
 95 °F Ambient Air Over

**60 Hz Operation**

**LOW**

**TEMPERATURE**

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

**3DA3-060E-TFC**

COPELAMETIC® HFC-404A

DISCUS® COMPRESSOR

TFC 208/230-3-60

**Condensing Temperature °F**

**(Sat Dew Pt Pressure, psig)**

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

	130	-40 (4.5)	-35 (7.1)	-30 (9.9)	-25 (13)	-20 (16)	-15 (20)	-10 (24)	-5 (28)	0 (33)
<b>130 (354)</b>	<b>C</b>	10100	13300	16500	20000	23600	27500	31500	35900	40600
	<b>P</b>	3620	4240	4830	5400	5950	6500	7000	7500	8000
	<b>A</b>	14.5	15.7	16.9	18.1	19.3	20.5	21.7	22.9	24.1
	<b>M</b>	225	293	366	443	525	615	710	810	920
	<b>E</b>	2.8	3.1	3.4	3.7	4	4.2	4.5	4.8	5.1
	<b>%</b>	61.9	65.3	67.6	69.1	70.2	71	71.6	72	72.1
<b>120 (310)</b>	<b>C</b>	13500	16600	19900	23400	27200	31300	35800	40500	45700
	<b>P</b>	3950	4480	4980	5450	5950	6400	6850	7300	7700
	<b>A</b>	15.1	16.1	17.1	18.2	19.2	20.3	21.3	22.4	23.4
	<b>M</b>	268	331	399	472	550	635	730	830	940
	<b>E</b>	3.4	3.7	4	4.3	4.6	4.9	5.2	5.6	5.9
	<b>%</b>	64.5	66.5	68	69.1	70	70.7	71.3	71.6	71.8
<b>110 (271)</b>	<b>C</b>	16200	19300	22700	26400	30500	34900	39700	44900	50500
	<b>P</b>	4100	4550	4980	5400	5800	6200	6600	6950	7350
	<b>A</b>	15.4	16.2	17.1	18	18.9	19.8	20.7	21.6	22.6
	<b>M</b>	298	357	421	492	570	655	745	850	960
	<b>E</b>	4	4.2	4.6	4.9	5.3	5.6	6	6.5	6.9
	<b>%</b>	65.7	67	68.1	69	69.9	70.6	71.1	71.5	71.7
<b>105 (252)</b>	<b>C</b>	17400	20500	24000	27800	32000	36600	41600	47100	53000
	<b>P</b>	4120	4540	4930	5300	5700	6050	6400	6800	7150
	<b>A</b>	15.4	16.2	17	17.9	18.7	19.5	20.4	21.2	22.1
	<b>M</b>	309	366	429	499	575	660	755	855	970
	<b>E</b>	4.2	4.5	4.9	5.2	5.6	6	6.5	7	7.4
	<b>%</b>	66	67.1	68.1	69	69.8	70.5	71.1	71.5	71.6
<b>100 (235)</b>	<b>C</b>	18500	21700	25200	29100	33500	38300	43500	49300	55500
	<b>P</b>	4120	4500	4870	5250	5600	5900	6250	6600	6900
	<b>A</b>	15.4	16.1	16.9	17.7	18.4	19.2	20	20.8	21.6
	<b>M</b>	318	374	436	505	580	665	760	865	980
	<b>E</b>	4.5	4.8	5.2	5.6	6	6.5	7	7.5	8
	<b>%</b>	66.1	67.1	68	68.9	69.8	70.5	71.1	71.4	71.5
<b>90 (203)</b>	<b>C</b>	20500	23800	27600	31800	36500	41700	47500	54000	61000
	<b>P</b>	4050	4380	4700	5000	5300	5600	5900	6250	6550
	<b>A</b>	15.3	15.9	16.6	17.2	17.9	18.6	19.3	20	20.7
	<b>M</b>	331	386	448	515	595	680	780	885	1000
	<b>E</b>	5.1	5.4	5.9	6.3	6.9	7.4	8	8.7	9.3
	<b>%</b>	66.1	66.9	67.8	68.8	69.6	70.3	70.9	71.1	71
<b>80 (174)</b>	<b>C</b>	22400	26000	30000	34600	39700	45500	52000	59000	66500
	<b>P</b>	3950	4230	4520	4790	5050	5350	5650	5900	6200
	<b>A</b>	15.1	15.6	16.2	16.8	17.4	18	18.6	19.2	19.8
	<b>M</b>	342	397	459	530	610	700	800	910	1030
	<b>E</b>	5.7	6.1	6.6	7.2	7.8	8.5	9.2	10	10.7
	<b>%</b>	65.8	66.6	67.5	68.4	69.2	69.8	70.1	70.1	69.7
<b>70 (148)</b>	<b>C</b>	24600	28400	32800	37800	43400	49700	57000	64500	73000
	<b>P</b>	3860	4110	4370	4630	4890	5150	5400	5700	6000
	<b>A</b>	14.9	15.4	15.9	16.5	17	17.5	18.1	18.6	19.2
	<b>M</b>	355	410	474	550	630	725	830	945	1080
	<b>E</b>	6.4	6.9	7.5	8.2	8.9	9.7	10.5	11.3	12.2
	<b>%</b>	65	65.7	66.5	67.4	68	68.4	68.4	67.9	67

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

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

# 3DA3-060E-TFC

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The information on this page should not be used for the selection of service parts. Please use the "Service Parts" tab for replacement part information.

## Accessories

<b>PartNumber</b>	<b>Description</b>
023-0039-01	Coil, 120v, Alco - Demand cooling valve (Unloader Valve)
023-0039-02	Coil, 240v, Alco - Demand cooling valve (Unloader Valve)
023-0042-01	Solenoid Coil 120v, 50/60 Hz, Parker - Demand cooling valve
023-0042-02	Solenoid Coil 240v, 50/60 Hz, Parker - Demand cooling valve
024-0200-00	Fan Guard - Top, for Head Cooling Fan
030-0187-00	Heater Sleeve, well style - Order well separately
083-0118-00	Fan Blade - for Head Cooling Fan
085-0109-00	Temperature Probe-Standard 41" - Demand Cooling
085-0109-01	Temperature Probe-10 ft cable - Demand Cooling
085-0110-00	Control Module 120v 50/60 Hz - Demand Cooling
085-0110-01	Control Module 240v 50/60 Hz - Demand Cooling
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.
510-0351-01	Demand Cooling Valve 60 Hz Alco
510-0351-02	Demand Cooling Valve 50 Hz Alco
510-0352-02	Demand Cooling Valve & Coil 120v, 60 Hz, Alco
510-0352-03	Demand Cooling Valve & Coil 240v, 60 Hz, Alco
510-0352-08	Demand Cooling Valve & Coil 240v, 50 Hz, Alco
510-0352-10	Demand Cooling Valve & Coil 120v, 50 Hz, Alco
585-1066-02	Sentronic Oil Pressure Control - Kit includes Sentronic oil pressure control, screws to mount control, oil pressure sensor, and sensor gaskets. Control mounting brackets are supplied on service replacement compressors.
918-0009-00	Crankcase Heater, 120v, 65w, bolt on. For usage on specific Copeland Copelametic & Discus Compressor except deep sump models. Includes crankcase heater, and reference drawings.
918-0009-01	Crankcase Heater, 240v, 65w, bolt on. For usage on specific Copeland Copelametic, & Discus Compressor except deep sump models. Includes crankcase heater, and reference drawings.
918-0009-02	Crankcase Heater, 480v, 65w, bolt on. For usage on specific Copeland Copelametic, & Discus Compressor except deep sump models. Includes crankcase heater, and reference drawings.
918-0009-03	Crankcase Heater, 600v, 65w, bolt on. For usage on specific Copeland Copelametic, & Discus Compressor except deep sump models. Includes crankcase heater, and reference drawings.
918-0009-04	Crankcase Heater, 12v, 65w, bolt on. For usage on specific Copeland Copelametic & Discus Compressors except deep sump models. Includes crankcase heater, and reference drawing.
998-0017-45	Kit-VP Replaces 998-0017-15 - Used on 3DK3-1200 & 120E, 3DT3-1500 & 150E, 3DT3-1000-Converts 3DF3-075x to 3DK3-075x, 3DS3-075x to 3DT3-075x, 3DF3-090x to 3DK3-090x, 3DS3-100x to 3DT3-100x, 3DF3-120x, & 3DS3-150x to 3DT3-150x
998-0017-46	Kit-Valve Plate Replaces 998-0017-16 - Used on 3DH3-0900 & 090E, 3DR3-1000 & 100E - Laser Reed Models converts 3DF3-090x to 3DG3-090x, & 3DJ3-100x to 3DR3-100x
998-0017-47	Kit-Valve Plate Replaces 998-0017-17 - Used on 3DH3-0600 & 060E, 3DJ3-0750 & 075E - LASER REED converts 3DA3-060x to 3DH3-060x, & 3DB3-075x to 3DJ3-075x
998-0017-48	Kit-Valve Plate Replaces 998-0017-18 - Used on 3DP3-1000 & 100E - LASER REED MODELS converts from 3DB3-075x to 3DP3-075x, & 3DB3-100x to 3DP3-100x
998-0017-49	Kit-Valve Plate Replaces 998-0017-19 - Used on 3DE3-0750 & 075E - LASER REED MODELS converts from 3DA3-075x to 3DEe-075x
998-0017-50	Kit-Valve Plate Replaces 998-0017-20 - Used on 3DE3-0500 - LASER REED converts 3DA3-050x to 3DE3-050x

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PartNumber	Description
998-0161-01	Sentronic Oil Control - Control only, supplied with 44" cable as standard
998-0162-00	Kit includes sensor, gaskets, and cable.
998-0283-02	Standard Sentronic cable is 44" long. The extension cable is 12 ft long and must be wired into the control. Kit 998-0283-02 includes instructions.
998-0326-02	Unloader Valve & Coil 120v
998-0326-03	Unloader Valve & Coil 240v
998-0550-00	Fan Motor Blade & Guard Assembly 230v, Does not include mounting bracket. Must be ordered separately
998-0550-01	Fan Motor Blade & Guard Assembly 460v, Does not include mounting bracket. Must be ordered separately
998-0550-02	Fan Motor Blade & Guard Assembly 115v, Does not include mounting bracket. Must be ordered separately
998-0550-03	Fan Motor 230v. Includes fan motor mounted to bottom guard
998-0550-04	Fan Motor 460v. Includes fan motor mounted to bottom guard
998-0550-05	Fan Motor 115v. Includes fan motor mounted to bottom guard
998-0574-08	Fan Mounting Kit. Vertical fan mount on top of compressor head 9D & 9R(2-5/8 head height - 9R**-XXX5 models & 3DA, 3DB, 3DF, 3DS)
998-0574-10	Fan Mounting Kit. Vertical fan mount on top of compressor head 3D moduload models (3DE, 3DG, 3DH, 3DJ, 3DK, 3DP, 3DR, 3DT)
998-0683-01	Shipping Plate, Gasket, and Bolt (Suction all 2) (Discharge all 3D, 4D, 4R, 6D, 6R & 9R) (Suction) (Suction 5, 6, 7 1/2, 9, & 10 12 HP)
998-0683-02	Shipping Plate, Gasket, and Bolt (Suction 6R, 10, 15 & 20 HP)
998-0700-09	Control Mounting Bracket Kit
998-1000-13	Demand Cooling Kit 120v / 60Hz
998-1000-23	Demand Cooling Kit 240v / 60Hz
998-1001-13	Demand Cooling Kit 120v / 50Hz
998-1001-23	Demand Cooling Kit 240v / 50Hz
998-2017-40	Converts 3DFxA120E to 3DKHA120E, & 3DSxA150E to 3DTHA150E
998-2017-41	Converts 3DF3A090E to 3DGHA090E, & 3DS3A100E to 3DRHA100E
998-2017-42	Converts 3DAxA060E to 3DHHA060E, & 3DBxA075E to 3DJHA075E
998-2017-43	Converts 3DB3A100E to 3DPHA100E
998-2017-44	Converts 3DAxA075E to 3DEHA075E
998-2017-45	Converts 3DF3A0750 to 3DK3A0750 and 3DF3A0900 to 3DK3A0900 and 3DF3A1200 to 3DK3A1200 and 3DS3A1000 to 3DT3A1000 and 3DS3A1500 to 3DT3A1500
998-2017-46	Converts 3DF3A0900 to 3DG3A0900 and 3DS3A1000 to 3DR3A1000
998-2017-47	Converts 3DA3A0600 to 3DH3A0600 and 3DB3A0750 to 3DJ3A0750
998-2017-48	Converts 3DB3A1000 to 3DP3A1000
998-2017-49	Converts 3DA3A0750 to 3DE3A0750 and 3DS3A07500 to 3DT3A07500
998-2017-50	Converts 3D3A0500 to 3DE3a0500
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.