

# 3DS3F46KE-TFC

HCFC, R-22, 60Hz, 3- Phase, 208/230 V

Low Temperature



**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)      | -25 / 105  | -40 / 105 |
| RG(°F)/Liq(°F)         | 65 / 105   | 65 / 105  |
| Capacity (Btu/hr)      | 37500      | 21200     |
| Power (Watts):         | 7450       | 5950      |
| Current (Amps):        | 24.35      | 21.05     |
| EER (Btu/Wh):          | 5.00       | 3.60      |
| Mass Flow (lbs/hr):    | 500        | 283       |
| Sound Power (dBA):     | 0 Avg      | 0 Max     |
| Vibration (mils(peak-) | 0.0 Avg    | 0.0 Max   |
| Record Date:           | 2007-06-08 |           |

## Mechanical

|   |             |                              |         |
|---|-------------|------------------------------|---------|
| Number of Cylinders:  | 3           | Displ(in <sup>3</sup> /Rev): | 35.01   |
| Bore Size(in):  | 2.44        | Displ(ft <sup>3</sup> /hr):  | 2127.41 |
| Stroke(in):   | 2.50        |                              |         |
| Overall Length (in):  | 27.30       | Mounting Length (in):        | 15.00   |
| Overall Width (in):   | 14.92       | Mounting Width (in):         | 12.00   |
| Overall Height (in):  | 19.18       | Mounting Height (in):        | 20.93 * |
| Suction Size (in):  | 1 3/8 Sweat |                              |         |
| Discharge Size (in):  | 1 1/8 Sweat |                              |         |
| Oil Recharge (oz):  | 115         |                              |         |
| Initial Oil Charge (oz):  | 125         |                              |         |
| Net Weight (lbs):   | 385         |                              |         |
| Internal Free Volume (in <sup>3</sup> ):  | 7           |                              |         |
| Horse Power:  | 7           |                              |         |
| *Overall compressor height on Copeland Brand Product's specified mounting grommets. |             |                              |         |

## Electrical

|   |       |                        |      |               |             |
|---|-------|------------------------|------|---------------|-------------|
| LRA-High*:  | 215.0 | MCC (Amps):            | 49.2 | UL File No:   | SA-2337     |
| LRA-Half Winding:   |       | RPM:                   |      | UL File Date: | 26-Jul-1985 |
| LRA Low*:   |       | Max Operating Current: |      |               |             |
| RLA(=MCC/1.4;use for contactor selection):  |       | 35.1                   |      |               |             |
| RLA(=MCC/1.56;use for breaker & wire size)  |       | 31.5                   |      |               |             |
| *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-12 CFC    | 50        | 3     | 200/220 |                          |
| R-12 CFC    | 50        | 3     | 200/220 |                          |
| R-502 CFC   | 50        | 3     | 200/220 |                          |
| R-134a HFC  | 50        | 3     | 200/220 |                          |
| R-407C HFC  | 50        | 3     | 200/220 |                          |
| R-12 CFC    | 60        | 3     | 208/230 |                          |
| R-12 CFC    | 60        | 3     | 208/230 |                          |
| R-502 CFC   | 60        | 3     | 208/230 |                          |
| R-134a HFC  | 60        | 3     | 208/230 |                          |
| R-407A HFC  | 50        | 3     | 200/220 | Low Temp, Low Condensing |
| R-407F HFC  | 50        | 3     | 200/220 | Low Temp, Low Condensing |

## Alternate Applications

| <u>Refrigerant</u> | <u>Freq (Hz)</u> | <u>Phase</u> | <u>Voltage</u> | <u>Application</u>       |
|--------------------|------------------|--------------|----------------|--------------------------|
| R-22 HCFC          | 50               | 3            | 200/220        | Low Temperature          |
| R-407C HFC         | 60               | 3            | 208/230        | Low Temp, Low Condensing |
| R-407C HFC         | 60               | 3            | 208/230        | Low Temperature          |
| R-407A HFC         | 60               | 3            | 208/230        | Low Temp, Low Condensing |
| R-407F HFC         | 60               | 3            | 208/230        | Low Temp, Low Condensing |
| R-404A HFC         | 50               | 3            | 200/220        | Low Temp, Low Condensing |
| R-507 HFC          | 50               | 3            | 200/220        | Low Temp, Low Condensing |
| R-404A HFC         | 60               | 3            | 208/230        | Low Temp, Low Condensing |
| R-507 HFC          | 60               | 3            | 208/230        | Low Temp, Low Condensing |
| R-134a HFC         | 50               | 3            | 200/220        | High Temperature         |
| R-134a HFC         | 60               | 3            | 208/230        | High Temperature         |

# 3DS3F46KE-TFC

HCFC, R-22, 60Hz, 3- Phase, 208/230 V  
Low Temperature



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

## Service Parts

| <u>Reference</u> | <u>Component</u> | <u>Quantity</u> | <u>Description</u>       | <u>Comment</u>                   |
|------------------|------------------|-----------------|--------------------------|----------------------------------|
| 65               | 003-0107-00      | 1               | PLATE-RESTRICTOR         |                                  |
| 31               | 003-0770-00      | 1               | PLATE-BOTTOM             |                                  |
| 10               | 005-0650-03      | 1               | COVER-STATOR             |                                  |
| 13               | 020-0012-09      | 1               | GASKET-SERVICE VALVE     | SUCTION                          |
| 64               | 020-0012-09      | 2               | GASKET-SERVICE VALVE     | GASKET REQUIRED ON BOTH SIDES OF |
| 35               | 020-0028-03      | 1               | SEAL-ROTALOCK FITTING    | DISCHARGE                        |
| 15               | 020-0146-00      | 1               | GASKET-TERM MTG PLATE    |                                  |
| 61               | 020-0297-13      | 1               | GASKET-SENTRONIC SENSOR  |                                  |
| 36               | 020-0678-00      | 1               | GASKET-CLOSURE PLATE     |                                  |
| 7                | 020-0681-02      | 1               | GASKET-BOTTOM PLATE      |                                  |
| 9                | 020-0709-00      | 1               | GASKET-STATOR COVER      |                                  |
| 1                | 020-0730-00      | 1               | GASKET-CYLINDER HEAD     |                                  |
| 4                | 020-0749-00      | 1               | GASKET-HOUSING COVER     |                                  |
| 25               | 020-0844-04      | 1               | SEAL-SIGHT GLASS         |                                  |
| 99               | 020-1204-00      | 1               | GASKET-OIL PUMP          |                                  |
| 52               | 030-0187-00      | 1               | SLEEVE-HEATER            |                                  |
| 17               | 062-0205-00      | 1               | BOX-TERMINAL             |                                  |
| 44               | 080-0026-00      | 1               | BLOCK-TERMINAL           |                                  |
| 19               | 503-0804-00      | 1               | PLATE-TERMINAL GROUP     |                                  |
| 20               | 505-0281-08      | 1               | COVER-TERMINAL ASSM      |                                  |
| 33               | 510-0142-00      | 1               | VALVE-OIL CHECK ASSM     |                                  |
| 24               | 510-0191-00      | 1               | VALVE-SCHRADER TEE       | INSTALLED IN OIL PUMP            |
| 41               | 527-0045-00      | 1               | SPACER-MOUNTING ASSM     |                                  |
| 75               | 585-1076-02      | 1               | CONTOILPRO               | COMPLETE SENTRONIC 3 KIT         |
| 90               | 910-0069-00      | 1               | 24 VOLT COIL KIT         | CORESENSE DIAG W/ DEMAND COOLING |
| 69               | 910-0351-02      | 1               | DEMAND COOLING VALVE KIT | CORESENSE DIAG W/ DEMAND COOLING |
| 69               | 910-0352-02      | 1               | DEMAND COOL VLV & COIL   | COIL VOLTAGE 120V/60HZ           |

Scott Kohler  
07/01/2013

| <u>Reference</u> | <u>Component</u> | <u>Quantity</u> | <u>Description</u>       | <u>Comment</u>                    |
|------------------|------------------|-----------------|--------------------------|-----------------------------------|
| 69               | 910-0352-03      | 1               | DEMAND COOL VLV & COIL   | COIL VOLTAGE 240V/60HZ            |
| 69               | 910-0352-08      | 1               | DEMAND COOL VLV & COIL   | COIL VOLTAGE 240V/50HZ            |
| 69               | 910-0352-10      | 1               | DEMAND COOL VLV & COIL   | COIL VOLTAGE 120V/50HZ            |
| 84               | 917-0001-00      | 1               | NYOGEL 760G SERVICE KIT  | FOR CORESENSE DIAGNOSTICS MODELS  |
| 30               | 918-0028-00      | 1               | HEATER-CC--100W/120V     |                                   |
| 30               | 918-0028-01      | 1               | HEATER-CC--100W/240V     |                                   |
| 30               | 918-0028-11      | 1               | HEATER-CRANKCASE         | 2D/3D CORESENSE DIAGN. 240V APPL. |
| 72               | 920-0981-03      | 1               | V-PLATE GASKET KIT       |                                   |
| 88               | 923-0073-00      | 1               | COIL-CONTACTOR           | 3D/4D/6D CORESENSE DIAGN 24V APPL |
| 99               | 929-0071-00      | 1               | HARNESS-OIL PRESSURE     | FOR CORESENSE DIAGNOSTICS MODELS  |
| 49               | 929-0097-00      | 1               | WIRING HARNESS KIT       | 2D/3D CORESENSE PROT MODELS ONLY  |
| 85               | 943-0013-02      | 1               | MODULE-CONTROL           | FOR CORESENSE DIAGNOSTICS MODELS  |
| 86               | 943-0062-02      | 1               | MODULE-SENSOR            | FOR CORESENSE DIAGNOSTICS MODELS  |
| 87               | 943-0064-00      | 1               | CURRENT SENSOR           | FOR CORESENSE DIAGNOSTICS MODELS  |
| 75               | 943-0128-00      | 1               | MODULE KIT               | CORESENSE PROTECTION ONLY         |
| 17               | 962-0437-00      | 1               | BOX-TERMINAL KIT         | CORESENSE PROTECTION ONLY         |
| 32               | 974-0297-00      | 1               | BRACKET KIT              | 3D CORESENSE PROTECTION MODELS    |
| 49               | 976-0003-00      | 1               | CONDUIT-WIRE ASSM        | 2D/3D CORESENSE DIAGN. MODELS     |
| 83               | 980-0074-00      | 1               | ISD 2.1 UPGRADE KIT      | FOR CORESENSE DIAGNOSTICS MODELS  |
| 99               | 985-0109-07      | 1               | SENSOR-TEMP PROBE GROUP  | FOR CORESENSE DIAGNOSTICS MODELS  |
| 81               | 985-0109-50      | 1               | TEMPERATURE PROBE KIT    | OPTIONAL: CORESENSE PROTECT. ONLY |
| 42               | 985-0125-00      | 1               | CONTROL-HI PRESS         | FOR CORESENSE DIAGNOSTICS MODELS  |
| 42               | 985-0125-02      | 1               | CONTROL-LOW PRESSURE     | FOR CORESENSE DIAGNOSTICS MODELS  |
| 42               | 985-0183-01      | 1               | CONTROL LOPRESS OUT/IN   | FOR CORESENSE DIAGNOSTICS MODELS  |
| 8                | 998-0002-02      | 1               | SIGHT GLASS KIT          |                                   |
| 6                | 998-0008-33      | 1               | OIL PUMP KIT             | WITH VALVES BOLTS GASKETS &       |
| 46               | 998-0036-00      | 1               | ROTALOCK ADAPTER KIT     | ADAPTER USED TO MOUNT A ROTALOCK  |
| 75               | 998-0105-01      | 1               | MODULE-PROTECTION        | REPL FOR SENTRONIC+/3             |
| 77               | 998-0162-01      | 1               | APD SENSOR KIT           | CORESENSE PROTECTION ONLY         |
| 21               | 998-0429-00      | 1               | PROTECTOR & GASKET KIT   |                                   |
| 26               | 998-0510-02      | 1               | SERV VALVE KIT 1 1/8 SWT | ROTALOCK DISCHARGE                |
| 14               | 998-0510-11      | 1               | SERV VALVE KIT 1 3/8 SWT | 2 BOLT SUCTION                    |
| 29               | 998-0513-03      | 1               | OIL SCREEN KIT           |                                   |

| <u>Reference</u> | <u>Component</u> | <u>Quantity</u> | <u>Description</u>      | <u>Comment</u>              |
|------------------|------------------|-----------------|-------------------------|-----------------------------|
| 62               | 998-0513-04      | 1               | SUCTION SCREEN KIT      |                             |
| 32               | 998-0700-02      | 1               | BRACKET KIT             |                             |
| 70               | 998-1000-13      | 1               | DEMAND COOL KIT         |                             |
| 71               | 998-1000-23      | 1               | DEMAND COOLING KIT      |                             |
| 70               | 998-1001-13      | 1               | DEMAND COOL 120V/50 HZ  |                             |
| 71               | 998-1001-23      | 1               | DEMAND COOL 240V/ 50 HZ |                             |
| 40               | 998-1669-04      | 1               | GASKET SET              |                             |
| 3                | 998-2661-43      | 1               | VALVE PLATE KIT         |                             |
| 27               | 998-5100-02      | 1               | SUCT & DISCH VALVE KIT  | WITH VALVES BOLTS & GASKETS |

# 3DS3F46KE-TFC

HCFC, R-22, 60Hz, 3- Phase, 208/230 V  
Low Temperature



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

## Accessories

| <u>PartNumber</u> | <u>Description</u>   |
|-------------------|--|
| 902-0317-00       | 3D DISCUS DIGITAL CYLINDER HEAD  |
| 910-0111-00       | DISCUS DIGITAL SOLENOID VALVE  |
| 923-0084-00       | DISCUS DIGITAL 24V COIL  |
| 923-0084-01       | DISCUS DIGITAL 120V COIL   |
| 923-0084-02       | DISCUS DIGITAL 240V COIL   |
| 943-0086-00       | IDCM MODULE KIT; FOR NON-ISD DD APPLICATIONS ONLY  |
| 980-3000-00       | 3D DISCUS DIGITAL MT UPGRADE KIT; TO CONVERT A REG 3D INTO DD MODEL  |
| 980-3000-01       | 3D DISCUS DIGITAL LT UPGRADE KIT; TO CONVERT A REG 3D INTO DD MODEL  |
| 980-3000-10       | 3D DD MT UPGRADE KIT W/ISD; FOR 3D ISD MODELS ONLY; TO CONVERT A REG 3D INTO DD MODEL  |
| 980-3000-11       | 3D DD LT UPGRADE KIT W/ISD; FOR 3D ISD MODELS ONLY; TO CONVERT A REG 3D INTO DD MODEL  |
| 985-0109-07       | DISCUS DIGITAL TEMP SENSOR PROBE   |
| 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)                               |
| 998-6661-30       | 3D DISCUS DIGITAL VALVE PLATE KIT MED TEMP   |
| 998-6661-31       | 3D DISCUS DIGITAL VALVE PLATE KIT LOW TEMP   |
| 998-6669-00       | 3D DISCUS DIGITAL GASKET SET   |
| 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. |

Scott Kohler  
07/01/2013

| <u>PartNumber</u> | <u>Description</u>   |
|-------------------|--|
| 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       | Moduloal Kit: 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. Does not include unloader valve & coil-purchase separately.    |
| 998-0017-46       | Moduloal Kit: Used on 3DH3-0900 & 090E, 3DR3-1000 & 100E- Converts 3DF3-090x to 3DG3-090x, & 3DJ3-100x to 3DR3-100x. Does not include unloader valve & coil-must be purchased separately.                                  |
| 998-0017-47       | Moduloal Kit: 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 Does not include unloader valve and coil-Purchase separately        |
| 998-0017-48       | Moduloal Kit: Replaces 998-0017-18 - Used on 3DP3-1000 & 100E - LASER REED MODELS converts from 3DB3-075x to 3DP3-075x, & 3DB3-100x to 3DP3-100x. Does not include unloader valve and coil-Purchase separately             |
| 998-0017-49       | Moduloal Kit: Replaces 998-0017-19 - Used on 3DE3-0750 & 075E - LASER REED MODELS converts from 3DA3-075x to 3DEe-075x. Does not include unloader valve and coil. Unloader valve and coil must be purchased separately.    |
| 998-0017-50       | Moduloal Kit: Replaces 998-0017-20 - Used on 3DE3-0500 - LASER REED converts 3DA3-050x to 3DE3-050x. Does not include unloader valve and coil. Unloader valve and coil must be purchased separately.                       |
| 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 moduloal models (3DE, 3DG, 3DH, 3DJ, 3DK, 3DP, 3DR, 3DT)   |

| <u>PartNumber</u> | <u>Description</u>   |
|-------------------|--|
| 998-0683-01       | Shipping Plate, Gasket, and Bolt (Suction all 2) (Discharge all 3D, 4D, 4R, 6D, 6R & 9R) (Suction) (Suction 5, 6, 71/2, 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       | Moduloal Kit: Converts 3DFxA120E to 3DKHA120E, & 3DSxA150E to 3DTHA150E. Does not include unloader valve and coil. Unloader valve and coil must be purchased separately.   |
| 998-2017-41       | Moduloal Kit: Converts 3DF3A090E to 3DGHA090E, & 3DS3A100E to 3DRHA100E. Does not include unloader valve and coil. Unloader valve and coil must be purchased separately.   |
| 998-2017-42       | Moduloal Kit: Converts 3DAXA060E to 3DHHA060E, & 3DBxA075E to 3DJHA075E. Does not include unloader valve and coil. Unloader valve and coil must be purchased separately.   |
| 998-2017-43       | Moduloal Kit: Converts 3DB3A100E to 3DPHA100E. Does not include unloader valve and coil. Unloader valve and coil must be purchased separately.   |
| 998-2017-44       | Moduloal Kit: Converts 3DAXA075E to 3DEHA075E. Does not include unloader valve and coil. Unloader valve and coil must be purchased separately.   |
| 998-2017-45       | Moduloal Kit: Converts 3DF3A0750 to 3DK3A0750 and 3DF3A0900 to 3DK3A0900 and 3DF3A1200 to 3DK3A1200 and 3DS3A1000 to 3DT3A1000 and 3DS3A1500 to 3DT3A1500. Does not include unloader valve and coil-must be purchased separately |
| 998-2017-46       | Moduloal Kit: Converts 3DF3A0900 to 3DG3A0900 and 3DS3A1000 to 3DR3A1000. Does not include unloader valve and coil. Unloader valve and coil must be purchased separately.  |
| 998-2017-47       | Moduloal Kit: Converts 3DA3A0600 to 3DH3A0600 and 3DB3A0750 to 3DJ3A0750. Does not include unloader valve and coil. Unloader valve and coil must be purchased separately.  |
| 998-2017-48       | Moduloal Kit: Converts 3DB3A1000 to 3DP3A1000. Does not include unloader valve and coil. Unloader valve and coil must be purchased separately.   |
| 998-2017-49       | Moduloal Kit: Converts 3DA3A0750 to 3DE3A0750 and 3DS3A07500 to 3DT3A07500. Does not include unloader valve and coil. Unloader valve and coil must be purchased separately.  |
| 998-2017-50       | Moduloal Kit: Converts 3D3A0500 to 3DE3a0500. Does not include unloader valve and coil. Unloader valve and coil must be purchased separately.  |
| 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.   |

**RATING CONDITIONS**

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

60 Hz Operation

# LOW TEMPERATURE

Use only with Demand Cooling® Refer to AE 4-1287

**3DS3F46KE-TFC**

COPELAMETIC® HCFC-22  
 DISCUS® COMPRESSOR  
 TFC 208/230-3-60

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

-40(0.5) -35(2.6) -30(4.9) -25(7.4) -20(10) -15(13) -10(16) -5(20) 0(24)

| Condensing Temperature °F (Sat Dew Pt Pressure, psig) |   | Evaporating Temperature °F (Sat Dew Pt Pressure, psig) |          |          |          |         |         |         |        |       |
|---|---|--|----------|----------|----------|---------|---------|---------|--------|-------|
|   |   | -40(0.5)   | -35(2.6) | -30(4.9) | -25(7.4) | -20(10) | -15(13) | -10(16) | -5(20) | 0(24) |
| 130 (297)   | C | 14600  | 18300    | 22600    | 27500    | 33100   | 39300   | 46300   | 54000  | 63000 |
|   | P | 6400   | 6950     | 7500     | 8100     | 8750    | 9400    | 10100   | 10800  | 11600 |
|   | A | 22.1   | 23.2     | 24.5     | 25.8     | 27.4    | 29      | 30.7    | 32.5   | 34.4  |
|   | M | 218  | 273      | 338      | 412      | 497     | 590     | 700     | 820    | 950   |
|   | E | 2.3  | 2.6      | 3        | 3.4      | 3.8     | 4.2     | 4.6     | 5      | 5.4   |
|   | % | 43.5   | 47.8     | 51.6     | 55.1     | 58.1    | 60.7    | 62.9    | 64.6   | 65.9  |
| 120 (260)   | C | 17400  | 21700    | 26400    | 31800    | 37800   | 44500   | 52000   | 60000  | 69000 |
|   | P | 6250   | 6750     | 7300     | 7850     | 8450    | 9050    | 9700    | 10400  | 11000 |
|   | A | 21.7   | 22.8     | 24       | 25.3     | 26.7    | 28.2    | 29.7    | 31.4   | 33.1  |
|   | M | 248  | 308      | 376      | 453      | 540     | 635     | 745     | 865    | 995   |
|   | E | 2.8  | 3.2      | 3.6      | 4        | 4.5     | 4.9     | 5.3     | 5.8    | 6.3   |
|   | % | 48.4   | 52.4     | 55.9     | 58.9     | 61.4    | 63.6    | 65.3    | 66.6   | 67.6  |
| 110 (226)   | C | 20000  | 24700    | 29900    | 35700    | 42100   | 49100   | 57000   | 65500  | 75000 |
|   | P | 6050   | 6550     | 7050     | 7600     | 8150    | 8700    | 9300    | 9900   | 10500 |
|   | A | 21.3   | 22.3     | 23.5     | 24.7     | 26      | 27.3    | 28.7    | 30.2   | 31.7  |
|   | M | 272  | 335      | 406      | 486      | 575     | 670     | 780     | 900    | 1030  |
|   | E | 3.3  | 3.8      | 4.2      | 4.7      | 5.2     | 5.6     | 6.1     | 6.6    | 7.2   |
|   | % | 51.9   | 55.7     | 58.8     | 61.5     | 63.6    | 65.3    | 66.7    | 67.7   | 68.3  |
| 105 (211)   | C | 21200  | 26100    | 31500    | 37500    | 44100   | 51500   | 59500   | 68000  | 77500 |
|   | P | 5950   | 6450     | 6950     | 7450     | 8000    | 8550    | 9100    | 9650   | 10200 |
|   | A | 21   | 22.1     | 23.2     | 24.4     | 25.6    | 26.9    | 28.2    | 29.6   | 31    |
|   | M | 283  | 348      | 420      | 500      | 590     | 690     | 795     | 915    | 1050  |
|   | E | 3.6  | 4.1      | 4.5      | 5        | 5.5     | 6       | 6.5     | 7.1    | 7.6   |
|   | % | 53.3   | 57       | 60       | 62.4     | 64.4    | 65.9    | 67.1    | 67.9   | 68.3  |
| 100 (196)   | C | 22500  | 27600    | 33200    | 39300    | 46100   | 53500   | 61500   | 70500  | 80500 |
|   | P | 5850   | 6350     | 6800     | 7350     | 7850    | 8350    | 8850    | 9400   | 9900  |
|   | A | 20.8   | 21.8     | 22.9     | 24       | 25.2    | 26.4    | 27.7    | 29     | 30.2  |
|   | M | 293  | 359      | 433      | 515      | 605     | 700     | 810     | 930    | 1060  |
|   | E | 3.9  | 4.4      | 4.9      | 5.4      | 5.9     | 6.4     | 7       | 7.5    | 8.1   |
|   | % | 54.6   | 58.1     | 60.9     | 63.2     | 65      | 66.4    | 67.3    | 68     | 68.3  |
| 90 (168)  | C | 25100  | 30600    | 36500    | 43000    | 50000   | 58000   | 66500   | 75500  | 85500 |
|   | P | 5600   | 6100     | 6550     | 7000     | 7500    | 7950    | 8400    | 8850   | 9300  |
|   | A | 20.3   | 21.3     | 22.3     | 23.4     | 24.4    | 25.5    | 26.6    | 27.7   | 28.8  |
|   | M | 314  | 383      | 458      | 540      | 630     | 730     | 840     | 955    | 1080  |
|   | E | 4.5  | 5        | 5.6      | 6.1      | 6.7     | 7.3     | 7.9     | 8.5    | 9.2   |
|   | % | 57.2   | 60.3     | 62.7     | 64.5     | 65.9    | 66.8    | 67.4    | 67.7   | 67.7  |
| 80 (144)  | C | 28100  | 33900    | 40200    | 47000    | 54500   | 62500   | 71000   | 80500  | 90500 |
|   | P | 5350   | 5800     | 6250     | 6700     | 7100    | 7550    | 7950    | 8300   | 8650  |
|   | A | 19.8   | 20.7     | 21.7     | 22.6     | 23.6    | 24.5    | 25.5    | 26.4   | 27.2  |
|   | M | 338  | 409      | 485      | 570      | 660     | 755     | 865     | 980    | 1110  |
|   | E | 5.3  | 5.8      | 6.4      | 7        | 7.6     | 8.3     | 9       | 9.7    | 10.5  |
|   | % | 60.2   | 62.7     | 64.5     | 65.7     | 66.6    | 67      | 67.2    | 67     | 66.6  |
| 70 (121)  | C | 31700  | 37800    | 44300    | 51500    | 59000   | 67000   | 76000   | 86000  | 96000 |
|   | P | 5050   | 5500     | 5950     | 6350     | 6750    | 7100    | 7400    | 7750   | 8000  |
|   | A | 19.2   | 20.1     | 21       | 21.9     | 22.7    | 23.5    | 24.3    | 25     | 25.6  |
|   | M | 368  | 440      | 520      | 600      | 690     | 790     | 895     | 1010   | 1130  |
|   | E | 6.2  | 6.8      | 7.5      | 8.1      | 8.8     | 9.5     | 10.3    | 11.1   | 12    |
|   | % | 64   | 65.6     | 66.6     | 67.1     | 67.2    | 67.1    | 66.7    | 66     | 65.1  |

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(%)**

**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 |
|-----|--------------------|--------------|----------------------|----------------|-----------------------|-------------------|-------------|------------------|-----------------|--------------|----------------|
| 201 | Sweat              | 1 1/8"       | Sweat                | 1 3/8"         |                       | -                 | Yes         | -                | -               | -            | -              |
| 251 | Sweat              | 1 1/8"       | Sweat                | 1 3/8"         |                       | -                 | Yes         | -                | -               | -            | -              |
| 288 | Sweat              | 1 3/8"       | Sweat                | 1 3/8"         |                       | Yes               | 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 |
|-----|--------------------|--------------|----------------------|----------------|-----------------------|-------------------|-------------|------------------|-----------------|--------------|----------------|
| 800 |                    |              |                      |                |                       | -                 | Yes         | -                | -               | -            | -              |
| 8R0 |                    |              |                      |                |                       | -                 | -           | -                | -               | -            | -              |
| 8S0 |                    |              |                      |                |                       | -                 | -           | -                | -               | -            | -              |

\* 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.