

2DL3R78KE-TFD

HFO, R-448A, 60 Hz, 3 - Phase, 460 V , [Also Available with Variable Frequency Drives](#)

Medium Temp, Low Condensing

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

Summary

Performance		
Evaporator Temp. (°F)	20.00	0
Condensing Temp. (°F)	120.00	110
Return Gas Temp. (°F)	65.00	65
Liquid Temp. (°F)	120.00	110
Capacity (BTU/hr)	52300	34800
Power (W):	6140	4760
Current (Amps):	10.3	8.9
EER(BTU/Wh):	8.5	7.3
Mass Flow (lbs/hr):	802	495
Sound Data @		
Sound Power (dBA):	0 Avg	0 Max
Vibration mils(peak-peak):	0.0 Avg	5.9 Max
Record Date:	2015-02-11	
Mechanical		
Displacement (in^3/Rev):	16.59	
Displacement (ft^3/Hr):		
Overall Length (in):	23.60	
Overall Width (in):	15.40	
Overall Height (in):	18.60	
Mounting Length (in):	11.60	
Mounting Width (in):	11.00	
Mounting Height (in):	20.10	

Suction Size (in),Type:	1 3 / 8 Stub
Discharge Size (in),Type:	1 1 / 8 Stub
Initial Oil Charge (oz):	80
Oil Recharge (oz):	72
Oil Type:	POE
Net Weight (lbs):	325.0

Internal Free Volume (in^3):

*Overall compressor height on Copeland Brand Product's specified mounting grommets.

Electrical

LRA High* (Amps):	85
LRA Low*(Amps):	
LRA Half Winding (Amps):	
MCC (Amps):	19.4
Max Operating Current (Amps):	
RLA, MCC/1.4(use for contactor selection)(Amps):	13.9
RLA, MCC/1.56(use for breaker & wire size selection)(Amps):	12.4
RPM:	1750
Box IP :	
UL File No:	
UL File Date:	

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

Capacitors

Type	Part No	Low MFD	High MFD	Volts	User Description
No data available in table					

Alternate Applications

Refrigerant	Voltage	Phase	Frequency	Application
R-22 HCFC	460	3	60	Air Conditioning
R-22 HCFC	380/420	3	50	Air Conditioning
R-22 HCFC	380/420	3	50	Medium Temp, Low Condensing

Refrigerant	Voltage	Phase	Frequency	Application
R-22 HCFC	460	3	60	Medium Temp, Low Condensing
R-404A HFC	460	3	60	Medium Temp, Low Condensing
R-404A HFC	380/420	3	50	Medium Temp, Low Condensing
R-407A HFC	460	3	60	Air Conditioning
R-407A HFC	380/420	3	50	Air Conditioning
R-407A HFC	380/420	3	50	Medium Temp, Low Condensing
R-407A HFC	460	3	60	Medium Temp, Low Condensing

Accessories

Accessories		
Category	Part Number	Description
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.
Digital Components	023-0039-01	Coil, 120V, Alco - Demand cooling valve (Unloader Valve)
Digital Components	023-0039-02	Coil, 240V, Alco - Demand cooling valve (Unloader Valve)
Demand Cooling	085-0110-00	Control Module 120V 50/60 Hz - Demand Cooling
Demand Cooling	085-0110-01	Control Module 240V 50/60 Hz - Demand Cooling
Mounting	998-0700-09	Control Mounting Bracket Kit
(1) Variable Frequency Drive	EVH-344016-R21BEN	Copeland EVH VFD , 10 HP, 400 VAC, 3Ø, 16A, With DC link Choke & Add on EMI filter, Removeable LCD Display, IP21, BACnet/Modbus
(1) Variable Frequency Drive	EVH-344016-R21BDN	Copeland EVH VFD , 10 HP, 400 VAC, 3Ø, 16A, With DC link Choke (Standard EVH), Removeable LCD Display, IP21, BACnet/Modbus

Category	Part Number	Description
(1) Variable Frequency Drive	EVH-344016-R54BDN	Copeland EVH VFD , 10 HP, 400 VAC, 3Ø, 16A, With DC link Choke (Standard EVH), Removeable LCD Display, IP54, BACnet/Modbus

Electrical Components

Electrical Components

Nomenclature

2DL3R78KE-TFD

FAMILY

2D: 2 Cylinders Discus

DISPLACEMENT

L: Standard Valve Plate

MODEL VARIATIONS

3: Standard (Discus II)

PRIMARY APPLICATION RANGE

R: ARI High Temp, Rated @ 45/130

NOMINAL CAPACITY AT RATING CONDITION

78: Capacity

CAPACITY MULTIPLIER

K: 1000*Capacity

OIL TYPE

E: POE Oil

COMPRESSOR MOTOR TYPE

T: GENERAL : 3 LEAD SINGLE VOLTAGE, 6 LEAD PART WINDING (575 VOLT), 9 LEAD DUAL VOLTAGE

COMPRESSOR MOTOR PROTECTION

F: INTERNAL INHERENT PROTECTION-ONE PROTECTOR USE WITH CONTACTOR

ELECTRICAL CODES

D: 460-60hz-3ph 380/400-50hz-3ph

Miscellaneous

Alternate Application				
Refrigerant	Freq	Phase	Voltage	Application
CFC R-502	60	3 Ø	460 V	R2 MT

Refrigerant	Freq	Phase	Voltage	Application
CFC R-502	50	3 Ø	380/420 V	R2 MT
HCFC R-22	60	3 Ø	460 V	R1 AC
HCFC R-22	60	3 Ø	460 V	R2 MD
HCFC R-22	50	3 Ø	380/420 V	R1 AC
HCFC R-22	50	3 Ø	380/420 V	R2 MD
HFC R-407A	60	3 Ø	460 V	R1 AC
HFC R-407A	60	3 Ø	460 V	R2 MD
HFC R-407A	50	3 Ø	380/420 V	R1 AC
HFC R-407A	50	3 Ø	380/420 V	R2 MD
Nomenclature				
2DL3R78KE-TFD				

Bill-of-Materials

2DL3R78KE-TFD - BILL OF MATERIALS

200 - Common U.S. OEM Bill Of Materials

Suction Connection	Stub
Suction Size	1 3/8"
Discharge Connection	Stub
Discharge Size	1 1/8"
Electrical Connection	Terminal Block
Mounting Assembly	Available
Sight Glass	
Crankcase Heater	
Schrader Valve	
Tandem Ready	
Module Voltage	
Reference Drawing	497-0184-00-01.v01.pdf

201 - Common U.S. OEM Bill Of Materials

Suction Connection	Sweat
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Suction Size	1 3/8"
Discharge Connection	Sweat
Discharge Size	7/8"
Electrical Connection	Terminal Block
Mounting Assembly	Available
Sight Glass	
Crankcase Heater	
Schrader Valve	
Tandem Ready	
Module Voltage	
Reference Drawing	

210 - Common U.S. OEM Bill Of Materials

Suction Connection	Sweat
Suction Size	1 3/8"
Discharge Connection	Sweat
Discharge Size	7/8"
Electrical Connection	
Mounting Assembly	Not Available
Sight Glass	
Crankcase Heater	
Schrader Valve	
Tandem Ready	
Module Voltage	
Reference Drawing	

800 - Common U.S. Service Bill Of Materials

Suction Connection	Sweat
Suction Size	1 3/8"
Discharge Connection	Sweat
Discharge Size	7/8"
Electrical Connection	

Mounting Assembly	Not Available
Sight Glass	
Crankcase Heater	
Schrader Valve	
Tandem Ready	
Module Voltage	
Reference Drawing	

8R0 - Common U.S. Service Bill Of Materials

Suction Connection	Sweat
Suction Size	1 3/8"
Discharge Connection	Sweat
Discharge Size	7/8"
Electrical Connection	
Mounting Assembly	Not Available
Sight Glass	
Crankcase Heater	
Schrader Valve	
Tandem Ready	
Module Voltage	
Reference Drawing	

8S0 - Common U.S. Service Bill Of Materials

Suction Connection	Sweat
Suction Size	1 3/8"
Discharge Connection	Sweat
Discharge Size	7/8"
Electrical Connection	
Mounting Assembly	Not Available
Sight Glass	
Crankcase Heater	
Schrader Valve	

Tandem Ready
Module Voltage
Reference Drawing

C00 - Common U.S. OEM Bill Of Materials

Suction Connection	Sweat
Suction Size	1 3/8"
Discharge Connection	Sweat
Discharge Size	7/8"
Electrical Connection	Terminal Block
Mounting Assembly	Available
Sight Glass	
Crankcase Heater	
Schrader Valve	
Tandem Ready	
Module Voltage	
Reference Drawing	497-1319-00_004.pdf

C01 - Common U.S. OEM Bill Of Materials

Suction Connection	Sweat
Suction Size	1 3/8"
Discharge Connection	Sweat
Discharge Size	7/8"
Electrical Connection	
Mounting Assembly	Not Available
Sight Glass	
Crankcase Heater	
Schrader Valve	
Tandem Ready	
Module Voltage	
Reference Drawing	

C40 - Common U.S. OEM Bill Of Materials

Suction Connection	Sweat
Suction Size	1 3/8"
Discharge Connection	Sweat
Discharge Size	7/8"
Electrical Connection	Terminal Block
Mounting Assembly	Available
Sight Glass	
Crankcase Heater	
Schrader Valve	
Tandem Ready	
Module Voltage	
Reference Drawing	497-1319-00_004.pdf

C57 - Common U.S. OEM Bill Of Materials

Suction Connection	Sweat
Suction Size	1 3/8"
Discharge Connection	Sweat
Discharge Size	7/8"
Electrical Connection	Terminal Block
Mounting Assembly	Available
Sight Glass	
Crankcase Heater	
Schrader Valve	
Tandem Ready	
Module Voltage	
Reference Drawing	