

ZR61KCE-TF5

HFC, R-407C, 60 Hz, 3 - Phase, 200/230 V , [Also Available with Variable Frequency Drives](#)

Air Conditioning

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)	45.00	45
Condensing Temp. (°F)	130.00	100
Return Gas Temp. (°F)	65.00	65
Liquid Temp. (°F)	115.00	85
Capacity (BTU/hr)	60000	71700
Power (W):	5460	3850
Current (Amps):	16.6	13.2
EER(BTU/Wh):	11	18.65
Mass Flow (lbs/hr):	867	886
Sound Data @		
Sound Power (dBA):	74 Avg	79 Max
Vibration mils(peak-peak):	2.0 Avg	3.0 Max
Record Date:	2015-12-16	
Mechanical		
Displacement (in^3/Rev):	5.04	
Displacement (ft^3/Hr):		
Overall Length (in):	9.70	
Overall Width (in):	9.80	
Overall Height (in):	17.20	
Mounting Length (in):	7.50	
Mounting Width (in):	7.50	
Mounting Height (in):	18.00	

Suction Size (in),Type:	1 1 / 4 Rotalock
Discharge Size (in),Type:	1 Rotalock
Initial Oil Charge (oz):	66
Oil Recharge (oz):	62
Oil Type:	3MA
Net Weight (lbs):	78.0
Internal Free Volume (in^3):	272.0

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

Electrical	
LRA High* (Amps):	128
LRA Low*(Amps):	
LRA Half Winding (Amps):	
MCC (Amps):	29
Max Operating Current (Amps):	25.00
RLA, MCC/1.4(use for contactor selection)(Amps):	20.7
RLA, MCC/1.56(use for breaker & wire size selection)(Amps):	18.6
RPM:	3500
Box IP :	21
UL File No:	SA2337-19930726
UL File Date:	1993-07-26

*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-134a HFC	200/220	3	50	Air Conditioning
R-134a HFC	200/230	3	60	Air Conditioning
R-407C HFC	200/220	3	50	Air Conditioning

Service Parts

Service Parts				
Reference	Component	Quantity	Description	Comment
99	005-1213-00	1	COVER-TERMINAL BOX	
99	020-0964-00	1	GASKET - TERMINAL BOX	
99	062-0389-00	1	BOX-TERMINAL	
99	527-0116-00	1	SPACER-MOUNTING ASSM	
99	918-0043-00	1	HEATER-CRANKCASE	240V 70W WRAP AROUND
99	918-0043-01	1	HEATER-CRANKCASE	480V 70W WRAP AROUND
99	998-0034-02	1	SERV ADAPTOR KIT 7/8 STUB	SUCTION SWEAT TO ROTALOCK
99	998-0034-08	1	ADPTR 11/4-12 TO 7/8 ID	SUCTION ROTALOCK TO SWEAT
99	998-0034-15	1	SERV ADAPTOR KIT 1/2 STUB	DISCHARGE SWEAT TO ROTALOCK
99	998-0034-18	1	ADAPTER 1-14 TO 1/2 ID	DISCHARGE ROTALOCK TO SWEAT

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.
(1) Variable Frequency Drive	EVH-322025-R21BEN	Copeland EVH VFD , 7.5 HP, 230 VAC, 3Ø, 25A, With DC link Choke & Add on EMI filter, Removeable LCD Display, IP21, BACnet/Modbus
(1) Variable Frequency Drive	EVH-322025-R54BEN	Copeland EVH VFD , 7.5 HP, 230 VAC, 3Ø, 25A, With DC link Choke & Add on EMI filter, Removeable LCD Display, IP54, BACnet/Modbus
(1) Variable Frequency Drive	EVH-322025-R21BDB	Copeland EVH VFD , 7.5 HP, 230 VAC, 3Ø, 25A, With DC link Choke (Standard EVH), Removeable LCD Display, IP21, BACnet/Modbus

Category	Part Number	Description
(1) Variable Frequency Drive	EVH-322025-R21BDN	Copeland EVH VFD , 7.5 HP, 230 VAC, 3Ø, 25A, With DC link Choke (Standard EVH), Removeable LCD Display, IP21, BACnet/Modbus
(1) Variable Frequency Drive	EVH-322025-R54BDB	Copeland EVH VFD , 7.5 HP, 230 VAC, 3Ø, 25A, With DC link Choke (Standard EVH), Removeable LCD Display, IP54, BACnet/Modbus
(1) Variable Frequency Drive	EVH-322025-R54BDN	Copeland EVH VFD , 7.5 HP, 230 VAC, 3Ø, 25A, With DC link Choke (Standard EVH), Removeable LCD Display, IP54, BACnet/Modbus
(1) Variable Frequency Drive	EVM-322025-N20MNN	Copeland EVM VFD , HP, VAC, 3Ø, 25A, IP20, Modbus RTU Only
(1) Variable Frequency Drive	EVM-322025-E20ENN	Copeland EVM VFD , 7.5 HP, 230 VAC, 3Ø, 25A, No EMI filter, No Choke (Standard EVM), Seven Segment Embedded Display, IP20, Ethernet/BACnet/Modbus
(1) Variable Frequency Drive	EVM-322025-N20MFN	Copeland EVM VFD , 7.5 HP, 230 VAC, 3Ø, 25A, With add on EMI filter, No Display, IP20, Modbus RTU Only

Electrical Components

Electrical Components

Nomenclature

ZR61KCE-TF5
Family Series
Z: Scroll
Application Range
R: A/C - R-22/407C/134a
Capacity
61K: Capacity Multiplier-1000
Model Variation
C: Model Variation
Oil Type
E: Polyol Ester

Miscellaneous

Alternate Application				
Refrigerant	Freq	Phase	Voltage	Application
HFC R-134a	50	3 Ø	200/220 V	R1 AC
HFC R-134a	60	3 Ø	200/230 V	R1 AC
HFC R-407C	50	3 Ø	200/220 V	R1 AC
Nomenclature				
ZR61KCE-TF5				

Bill-of-Materials

ZR61KCE-TF5 - BILL OF MATERIALS	
<u>130 - Common U.S. OEM Bill Of Materials</u>	
Suction Connection	Stub
Suction Size	7/8"
Discharge Connection	Stub
Discharge Size	1/2"
Electrical Connection	Molded Plug
Mounting Assembly	Available
Sight Glass	
Crankcase Heater	
Schrader Valve	
Tandem Ready	
Module Voltage	
Reference Drawing	497-2612-00.pdf
<u>160 - Common U.S. OEM Bill Of Materials</u>	
Suction Connection	Rotalock
Suction Size	1 1/4"
Discharge Connection	Rotalock
Discharge Size	1"
Electrical Connection	Molded Plug

Mounting Assembly	Not Available
Sight Glass	
Crankcase Heater	
Schrader Valve	
Tandem Ready	
Module Voltage	
Reference Drawing	497-2613-00.pdf

230 - Common U.S. OEM Bill Of Materials

Suction Connection	Stub
Suction Size	7/8"
Discharge Connection	Stub
Discharge Size	1/2"
Electrical Connection	Terminal Block
Mounting Assembly	Available
Sight Glass	
Crankcase Heater	
Schrader Valve	
Tandem Ready	
Module Voltage	
Reference Drawing	497-2562-00_051.pdf

250 - Common U.S. OEM Bill Of Materials

Suction Connection	Stub
Suction Size	7/8"
Discharge Connection	Stub
Discharge Size	1/2"
Electrical Connection	Terminal Block
Mounting Assembly	Available
Sight Glass	
Crankcase Heater	
Schrader Valve	

Tandem Ready	
Module Voltage	
Reference Drawing	497-2562-00_051.pdf

260 - Common U.S. OEM Bill Of Materials

Suction Connection	Rotalock
Suction Size	1 1/4"
Discharge Connection	Rotalock
Discharge Size	1"
Electrical Connection	Terminal Block
Mounting Assembly	Not Available
Sight Glass	
Crankcase Heater	
Schrader Valve	
Tandem Ready	
Module Voltage	
Reference Drawing	497-2593-00.pdf

265 - Common U.S. OEM Bill Of Materials

Suction Connection	Rotalock
Suction Size	1 1/4"
Discharge Connection	Rotalock
Discharge Size	1"
Electrical Connection	Terminal Block
Mounting Assembly	Available
Sight Glass	
Crankcase Heater	
Schrader Valve	
Tandem Ready	
Module Voltage	
Reference Drawing	497-2593-00.pdf

420 - Common U.S. OEM Bill Of Materials

Suction Connection	Stub
Suction Size	7/8"
Discharge Connection	Stub
Discharge Size	1/2"
Electrical Connection	Terminal Block
Mounting Assembly	Not Available
Sight Glass	
Crankcase Heater	
Schrader Valve	
Tandem Ready	Yes
Module Voltage	
Reference Drawing	497-3785-00.pdf

421 - Common U.S. OEM Bill Of Materials

Suction Connection	Stub
Suction Size	7/8"
Discharge Connection	Stub
Discharge Size	1/2"
Electrical Connection	Terminal Block
Mounting Assembly	Not Available
Sight Glass	
Crankcase Heater	
Schrader Valve	
Tandem Ready	Yes
Module Voltage	
Reference Drawing	497-3785-00.pdf

422 - Common U.S. OEM Bill Of Materials

Suction Connection	Stub
Suction Size	7/8"
Discharge Connection	Stub
Discharge Size	1/2"

Electrical Connection	Terminal Block
Mounting Assembly	Not Available
Sight Glass	
Crankcase Heater	
Schrader Valve	
Tandem Ready	Yes
Module Voltage	
Reference Drawing	497-3785-00.pdf

450 - Common U.S. OEM Bill Of Materials

Suction Connection	Stub
Suction Size	7/8"
Discharge Connection	Stub
Discharge Size	1/2"
Electrical Connection	Terminal Block
Mounting Assembly	Not Available
Sight Glass	
Crankcase Heater	
Schrader Valve	
Tandem Ready	Yes
Module Voltage	
Reference Drawing	497-3785-00.pdf

800 - Common U.S. Service Bill Of Materials

Suction Connection	Stub
Suction Size	7/8"
Discharge Connection	Stub
Discharge Size	1/2"
Electrical Connection	Molded Plug
Mounting Assembly	Not Available
Sight Glass	
Crankcase Heater	

Schrader Valve	
Tandem Ready	
Module Voltage	
Reference Drawing	497-2612-00.pdf

803 - Common U.S. Service Bill Of Materials

Suction Connection	Stub
Suction Size	7/8"
Discharge Connection	Stub
Discharge Size	1/2"
Electrical Connection	Molded Plug
Mounting Assembly	Not Available
Sight Glass	
Crankcase Heater	
Schrader Valve	
Tandem Ready	
Module Voltage	
Reference Drawing	497-2612-00.pdf

806 - Common U.S. Service Bill Of Materials

Suction Connection	Stub
Suction Size	7/8"
Discharge Connection	Stub
Discharge Size	1/2"
Electrical Connection	Molded Plug
Mounting Assembly	Not Available
Sight Glass	
Crankcase Heater	
Schrader Valve	
Tandem Ready	
Module Voltage	
Reference Drawing	497-2613-00.pdf

822 - Common U.S. Service Bill Of Materials

Suction Connection	Stub
Suction Size	7/8"
Discharge Connection	Stub
Discharge Size	1/2"
Electrical Connection	Screw Terminal
Mounting Assembly	Available
Sight Glass	
Crankcase Heater	
Schrader Valve	
Tandem Ready	
Module Voltage	
Reference Drawing	497-3785-00.pdf

830 - Common U.S. Service Bill Of Materials

Suction Connection	Stub
Suction Size	7/8"
Discharge Connection	Stub
Discharge Size	1/2"
Electrical Connection	Molded Plug
Mounting Assembly	Available
Sight Glass	
Crankcase Heater	
Schrader Valve	
Tandem Ready	
Module Voltage	
Reference Drawing	497-2612-00.pdf

860 - Common U.S. Service Bill Of Materials

Suction Connection	Rotalock
Suction Size	1 1/4"
Discharge Connection	Rotalock

Discharge Size	1"
Electrical Connection	Molded Plug
Mounting Assembly	Not Available
Sight Glass	
Crankcase Heater	
Schrader Valve	
Tandem Ready	
Module Voltage	
Reference Drawing	497-2613-00.pdf

922 - Common U.S. Service Bill Of Materials

Suction Connection	Stub
Suction Size	7/8"
Discharge Connection	Stub
Discharge Size	1/2"
Electrical Connection	Screw Terminal
Mounting Assembly	Available
Sight Glass	
Crankcase Heater	
Schrader Valve	
Tandem Ready	
Module Voltage	
Reference Drawing	497-2562-00_051.pdf

923 - Common U.S. Service Bill Of Materials

Suction Connection	Rotalock
Suction Size	1 1/4"
Discharge Connection	Rotalock
Discharge Size	1"
Electrical Connection	Screw Terminal
Mounting Assembly	Available
Sight Glass	

Crankcase Heater	
Schrader Valve	
Tandem Ready	
Module Voltage	
Reference Drawing	497-2593-00.pdf

930 - Common U.S. Service Bill Of Materials

Suction Connection	Stub
Suction Size	7/8"
Discharge Connection	Stub
Discharge Size	1/2"
Electrical Connection	Terminal Block
Mounting Assembly	Available
Sight Glass	
Crankcase Heater	
Schrader Valve	
Tandem Ready	
Module Voltage	
Reference Drawing	497-2562-00_051.pdf

950 - Common U.S. Service Bill Of Materials

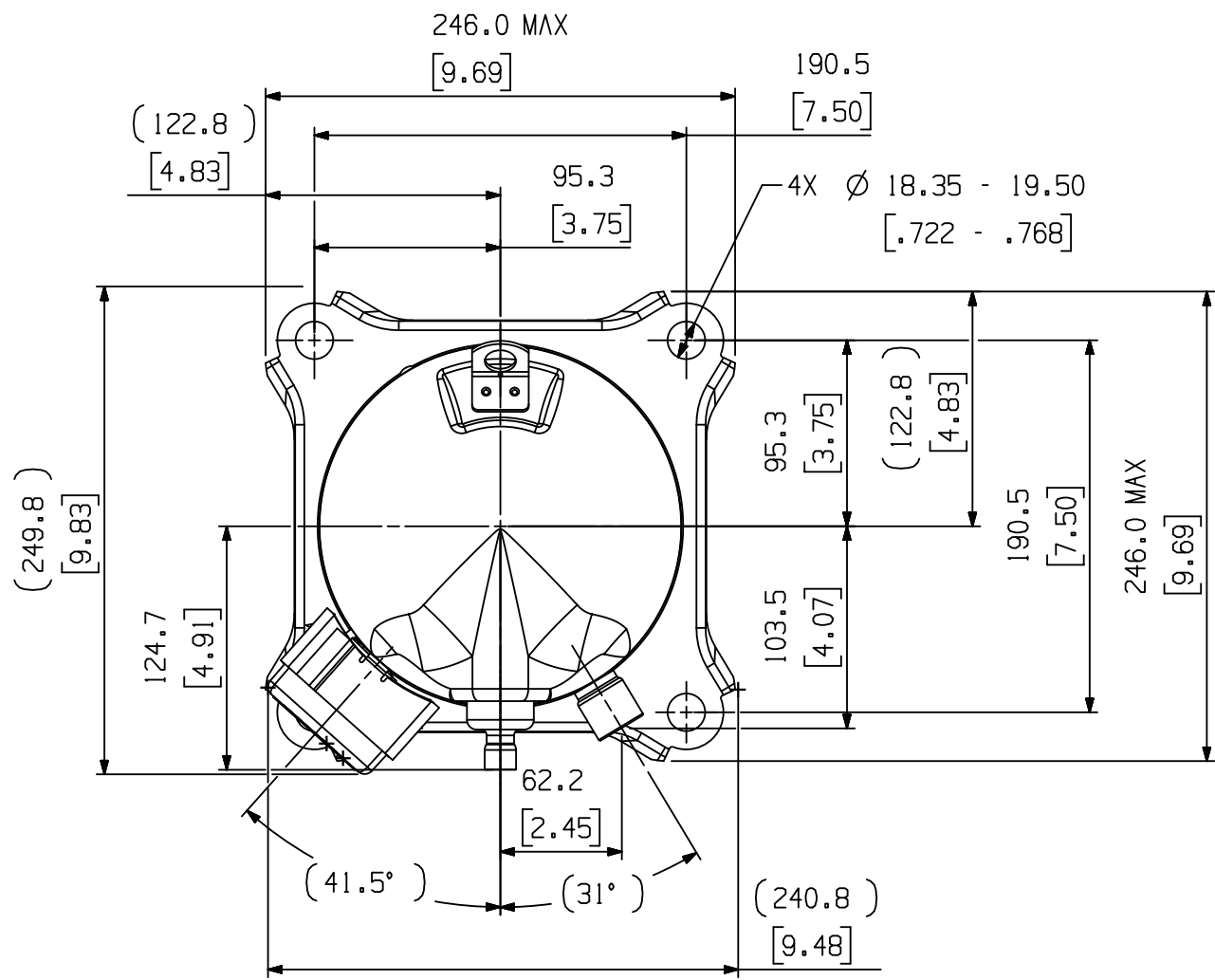
Suction Connection	Stub
Suction Size	7/8"
Discharge Connection	Stub
Discharge Size	1/2"
Electrical Connection	Terminal Block
Mounting Assembly	Available
Sight Glass	
Crankcase Heater	
Schrader Valve	
Tandem Ready	
Module Voltage	

Reference Drawing

[497-2562-00_051.pdf](#)

960 - Common U.S. Service Bill Of Materials

Suction Connection	Rotalock
Suction Size	1 1/4"
Discharge Connection	Rotalock
Discharge Size	1"
Electrical Connection	
Mounting Assembly	Not Available
Sight Glass	
Crankcase Heater	
Schrader Valve	
Tandem Ready	
Module Voltage	
Reference Drawing	497-2593-00.pdf



NOTES:

1 ALL TOLERANCES ± 1.50 [0.060] UNLESS OTHERWISE SPECIFIED.

DUE TO ACCUMULATED ASSEMBLY TOLERANCES THE LISTED COMPONENTS MAY VARY FROM THE MOUNTING HOLES AS SHOWN BELOW:

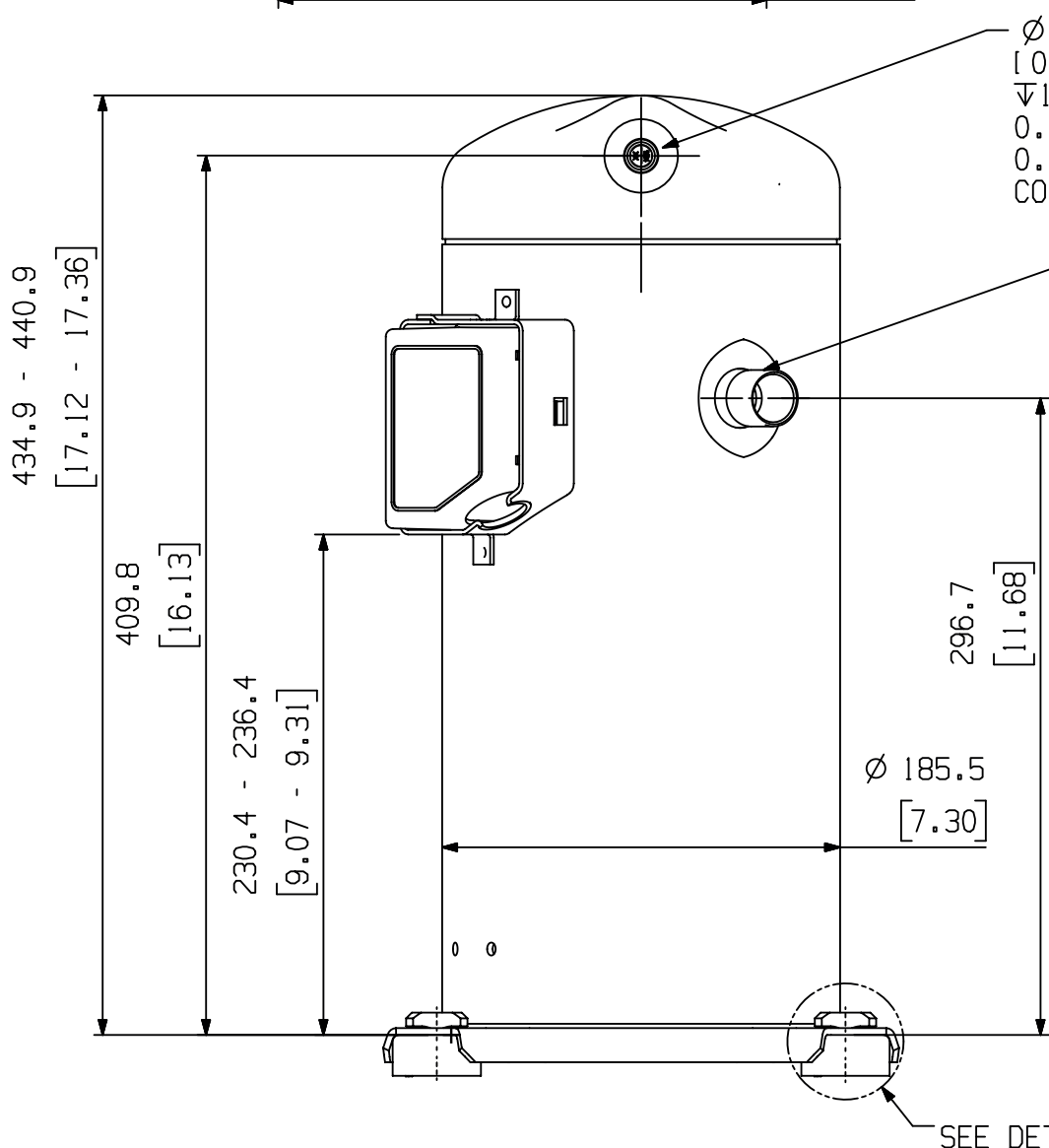
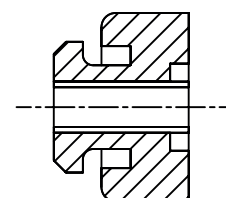
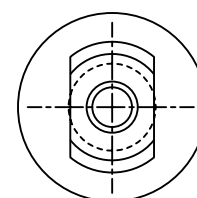
2 ALL FITTINGS : ± 3.0 [0.12]

2 MOUNTING KIT.

3. TUBE ENDS MUST BE PLUGGED.

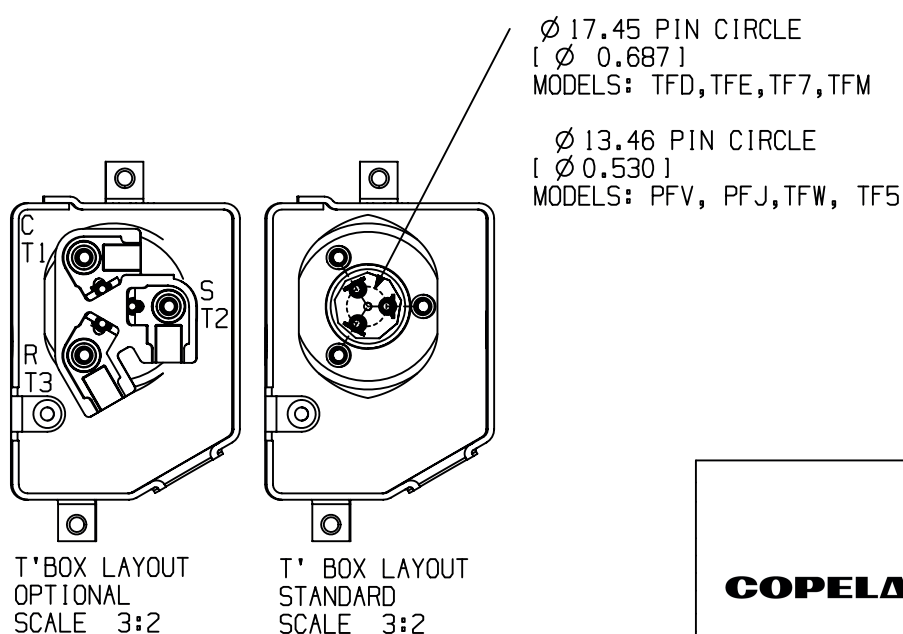
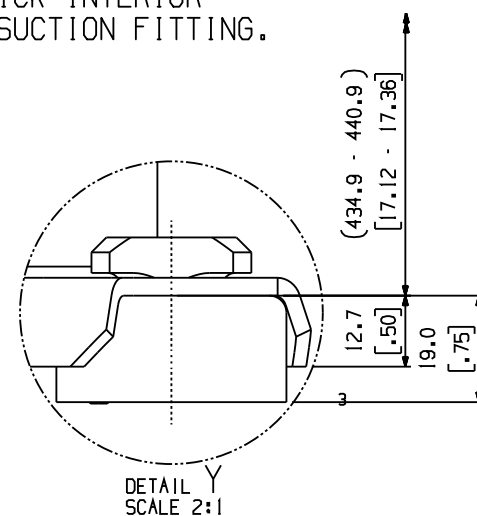
2

GROMMET DUROMETER	4 FOOT KIT
35-45	527-0116-00



Ø 12.78-12.95 I.D. [0.504-0.509]
 $\nabla 10.1$ [0.398] MIN,
 0.038 [0.0015] MIN THICK EXTERIOR AND
 0.038 [0.0015] MIN THICK INTERIOR
 COPPER PLATED STEEL DISCHARGE FITTING

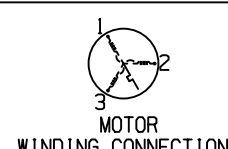
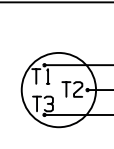
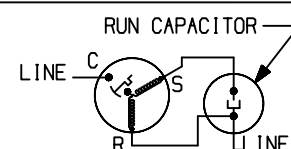
Ø 22.30-22.48 I.D. [0.878-0.885]
 $\nabla 19.9$ [0.78] MIN,
 0.06 [0.002] MIN THICK EXTERIOR AND
 0.038 [0.0015] MIN THICK INTERIOR
 COPPER PLATED STEEL SUCTION FITTING.



USE COPPER CONDUCTORS ONLY. USE MINIMUM 75° C WIRE FOR AMPACITY DETERMINATION. INTERNAL MOTOR PROTECTION - ALLOW TIME FOR RESET. OVERCURRENT PROTECTION DEVICE RATING AND TYPE MUST BE IN ACCORDANCE WITH REGULATORY AGENCY END PRODUCT APPROVALS - SEE SYSTEM NAMEPLATE. CRANKCASE HEATER, WHEN APPLIED, MUST BE CONNECTED ONLY TO ITS RATED VOLTAGE. TO CORRECT IMPROPER ROTATION OF THREE PHASE MODELS, SWITCH ANY TWO SUPPLY LINES. REFER TO THE APPLICABLE SYSTEM WIRING DIAGRAM.

COMPRESSOR WIRING DIAGRAM
 SINGLE PHASE MOTOR WITH
 INTERNAL PROTECTION

COMPRESSOR WIRING DIAGRAM
 THREE PHASE MOTOR WITH
 INTERNAL PROTECTION



ECN325547	51	CORRECTED TITLE BLOCK	10-10-23		
ECN325210	50	UPDATED TITLE BLOCK	08-30-23		
ECN102442	49	REDRAWN AND ADD ZR72KCE-TFM	11-19-15	AZ	L
32-0294-039	0	RELEASED	02-17-94	DC	G
ENG NOTICE NO.	REV.NO.	REVISIONS	DATE	BY	Q-
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N/A		AZ	497-2652-00 /	048	
		DATE	SCALE	DATE FORMAT	
		11-19-15	3:4	MM-DD-YY	

COPELAND

INTERPRET PER ASME
 Y14.5M-1994 AND
 COPELAND DESIGN
 STANDARDS DS2002

DO NOT SCALE DRAWING

CRITICAL PRODUCT
 CHARACTERISTICS

UNLESS OTHERWISE SPECIFIED
 DIMENSIONS ARE MILLIMETER OR (INCH)

1 PLACE : $\triangle$
 2 PLACE : $\triangle$
 ANGULAR : N/A