

ZP122KCE-TFD

HFC, R-410A, 60 Hz, 3 - Phase, 460 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	35
Condensing Temp. (°F)	130.00	120
Return Gas Temp. (°F)	65.00	55
Liquid Temp. (°F)	115.00	105
Capacity (BTU/hr)	124000	110500
Power (W):	11000	9700
Current (Amps):	16.9	15.4
EER(BTU/Wh):	11.3	11.4
Mass Flow (lbs/hr):	1800	1520
Sound Data @		
Sound Power (dBA):	76 Avg	81 Max
Vibration mils(peak-peak):	3.0 Avg	4.5 Max
Record Date:	2017-11-07	
Mechanical		
Displacement (in^3/Rev):	6.85	
Displacement (ft^3/Hr):		
Overall Length (in):	11.70	
Overall Width (in):	10.30	
Overall Height (in):	22.00	
Mounting Length (in):	7.50	
Mounting Width (in):	7.50	
Mounting Height (in):	22.70	

Suction Size (in),Type:	1 3 / 4 Rotalock
Discharge Size (in),Type:	1 1 / 4 Rotalock
Initial Oil Charge (oz):	85
Oil Recharge (oz):	81
Oil Type:	3MA
Net Weight (lbs):	107.6
Internal Free Volume (in^3):	440.0

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

Electrical

LRA High* (Amps):	140
LRA Low*(Amps):	
LRA Half Winding (Amps):	
MCC (Amps):	25
Max Operating Current (Amps):	21.60
RLA, MCC/1.4(use for contactor selection)(Amps):	17.9
RLA, MCC/1.56(use for breaker & wire size selection)(Amps):	16.0
RPM:	3500
Box IP :	56
UL File No:	SA2337-20120620
UL File Date:	2012-06-20
European Pressure Equipment Directive (PED):	
Fluid Group**:	FG 2
PS Low / High Side (BAR):	29.5 / 45.0
TS Min (°C):	-35 / -35
TS Max (°C):	50 / 150
Volume (L) :	1.2 / 7.2

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

**Fluid Group 1 comprises dangerous fluids defined as: Explosive, extremely flammable, high flammable, very toxic, toxic, oxidizing.

Fluid Group 2 is for non-dangerous fluids defined as: non-explosive, non-toxic, non-flammable.

Capacitors

Type	Part No	Low MFD	High MFD	Volts	User Description
No data available in table					
Alternate Applications					
Refrigerant	Voltage	Phase	Frequency	Application	
R-410A HFC	380/420	3	50	Air Conditioning (400v)	
R-410A HFC	380/420	3	50	Air Conditioning	

Service Parts

Service Parts				
Reference	Component	Quantity	Description	Comment
99	527-0221-00	1	SPACER-MOUNTING ASSM	
99	529-0099-00	1	POWER CABLE-MOLDED PLUG	
99	910-0715-00	1	VALVE-OIL ADJUSTMENT 1/4FL X M9	
99	918-0043-00	1	HEATER-CRANKCASE	240V 70W WRAP AROUND
99	918-0043-01	1	HEATER-CRANKCASE	480V 70W WRAP AROUND
99	921-0227-00	1	CONNECTOR BLOCK KIT	
99	998-0010-00	1	SIGHTGLASS KIT	
99	998-0034-02	1	SERV ADAPTOR KIT 7/8 STUB	DISCHARGE SWEAT TO ROTALOCK
99	998-0034-03	1	ADAP KIT 11/8"SWT / 13/4 RL	SUCTION SWEAT TO ROTALOCK
99	998-0034-08	1	ADPTR 11/4-12 TO 7/8 ID	DISCHARGE ROTALOCK TO SWEAT

Accessories

Accessories

Category	Part Number	Description
(1) Variable Frequency Drive	EVH-344023-R21BEN	Copeland EVH VFD , 15 HP, 400 VAC, 3Ø, 23A, With DC link Choke & Add on EMI filter, Removeable LCD Display, IP21, BACnet/Modbus
(1) Variable Frequency Drive	EVH-344023-R54BEN	Copeland EVH VFD , 15 HP, 400 VAC, 3Ø, 23A, With DC link Choke & Add on EMI filter, Removeable LCD Display, IP54, BACnet/Modbus
(1) Variable Frequency Drive	EVH-344023-R21BDN	Copeland EVH VFD , 15 HP, 400 VAC, 3Ø, 23A, With DC link Choke (Standard EVH), Removeable LCD Display, IP21, BACnet/Modbus
(1) Variable Frequency Drive	EVH-344023-R54BDN	Copeland EVH VFD , 15 HP, 400 VAC, 3Ø, 23A, With DC link Choke (Standard EVH), Removeable LCD Display, IP54, BACnet/Modbus
(1) Variable Frequency Drive	EVH-344023-R21BDB	Copeland EVH VFD , 15.0 HP, 400 VAC, 3Ø, 23A, With DC link Choke (Standard EVH), Removeable LCD Display, IP21, BACnet/Modbus
(1) Variable Frequency Drive	EVH-344023-R54BDB	Copeland EVH VFD , 15.0 HP, 400 VAC, 3Ø, 23A, With DC link Choke (Standard EVH), Removeable LCD Display, IP54, BACnet/Modbus
(1) Variable Frequency Drive	EVM-344023-N20MNN	Copeland EVM VFD , HP, VAC, 3Ø, 23A, IP20, Modbus RTU Only
(1) Variable Frequency Drive	EVM-344023-N20MFN	Copeland EVM VFD , HP, VAC, 3Ø, 23A, IP20, Modbus RTU Only
(1) Variable Frequency Drive	EVM-344023-E20ENN	Copeland EVM VFD , 15 HP, 400 VAC, 3Ø, 23A, No EMI filter, No Choke (Standard EVM), Seven Segment Embedded Display, IP20, Ethernet/BACnet/Modbus
(1) Variable Frequency Drive	EVM-344023-E20EFN	Copeland EVM VFD , 15 HP, 400 VAC, 3Ø, 23A, With add on EMI filter, Seven Segment Embedded Display, IP20, Ethernet/BACnet/Modbus

Electrical Components

Electrical Components

Nomenclature

ZP122KCE-TFD
Family Series
Z: Scroll

Application Range

P: A/C - R-410A/B

Capacity

122K: Capacity Multiplier-1000

Model Variation

C: Model Variation

Oil Type

E: Polyol Ester

Motor Type

T: 3 Phase

Motor Protection

F: Internal Inherent Protection

Voltage

D: 60Hz (460-3) 50Hz (380/420-3)

Miscellaneous

Alternate Application				
Refrigerant	Freq	Phase	Voltage	Application
HFC R-410A	50	3 Ø	380/420 V	R1 A4
HFC R-410A	50	3 Ø	380/420 V	R1 AC
Nomenclature				
ZP122KCE-TFD				

Bill-of-Materials

ZP122KCE-TFD - BILL OF MATERIALS	
155 - Common U.S. OEM Bill Of Materials	
Suction Connection	Stub
Suction Size	1 1/8"
Discharge Connection	Stub
Discharge Size	7/8"
Electrical Connection	Molded Plug
Mounting Assembly	Not Available
Sight Glass	

Crankcase Heater	
Schrader Valve	Available
Tandem Ready	
Module Voltage	
Reference Drawing	497-3096-00_004.pdf

165 - Common U.S. OEM Bill Of Materials

Suction Connection	Rotalock
Suction Size	1 3/4"
Discharge Connection	Rotalock
Discharge Size	1 1/4"
Electrical Connection	
Mounting Assembly	Not Available
Sight Glass	
Crankcase Heater	
Schrader Valve	
Tandem Ready	
Module Voltage	
Reference Drawing	497-1744-01_007.pdf

250 - Common U.S. OEM Bill Of Materials

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

Reference Drawing [497-1744-02_007.pdf](#)

265 - Common U.S. OEM Bill Of Materials

Suction Connection	Rotalock
Suction Size	1 3/4"
Discharge Connection	Rotalock
Discharge Size	1 1/4"
Electrical Connection	Terminal Block
Mounting Assembly	Available
Sight Glass	
Crankcase Heater	
Schrader Valve	
Tandem Ready	
Module Voltage	

Reference Drawing [497-1744-03_007.pdf](#)

412 - Common U.S. OEM Bill Of Materials

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

Reference Drawing [497-1744-05_007.pdf](#)

414 - Common U.S. OEM Bill Of Materials

Suction Connection	Stub
Suction Size	1 1/8"

Discharge Connection	Stub
Discharge Size	7/8"
Electrical Connection	Terminal Block
Mounting Assembly	Not Available
Sight Glass	
Crankcase Heater	
Schrader Valve	Available
Tandem Ready	Yes
Module Voltage	
Reference Drawing	497-3096-03_003.pdf

415 - Common U.S. OEM Bill Of Materials

Suction Connection	Stub
Suction Size	1 1/8"
Discharge Connection	Stub
Discharge Size	7/8"
Electrical Connection	
Mounting Assembly	Not Available
Sight Glass	
Crankcase Heater	
Schrader Valve	
Tandem Ready	
Module Voltage	
Reference Drawing	497-1744-06_007.pdf

418 - Common U.S. OEM Bill Of Materials

Suction Connection	Stub
Suction Size	1 1/8"
Discharge Connection	Stub
Discharge Size	7/8"
Electrical Connection	Terminal Block
Mounting Assembly	Not Available

Sight Glass	
Crankcase Heater	
Schrader Valve	Available
Tandem Ready	Yes
Module Voltage	
Reference Drawing	497-3103-01_000.pdf

421 - Common U.S. OEM Bill Of Materials

Suction Connection	Stub
Suction Size	1 1/8"
Discharge Connection	Stub
Discharge Size	7/8"
Electrical Connection	Terminal Block
Mounting Assembly	Not Available
Sight Glass	
Crankcase Heater	
Schrader Valve	Available
Tandem Ready	Yes
Module Voltage	
Reference Drawing	497-3096-02_003.pdf

422 - Common U.S. OEM Bill Of Materials

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

Module Voltage

Reference Drawing	497-3096-00_004.pdf
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423 - Common U.S. OEM Bill Of Materials

Suction Connection	Stub
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Suction Size	1 1/8"
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Discharge Connection	Stub
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Discharge Size	7/8"
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Electrical Connection	Terminal Block
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Mounting Assembly	Not Available
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Sight Glass

Crankcase Heater

Schrader Valve

Tandem Ready	Yes
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Module Voltage

Reference Drawing	497-1328-00_006.pdf
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424 - Common U.S. OEM Bill Of Materials

Suction Connection	Stub
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Suction Size	1 1/8"
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Discharge Connection	Stub
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Discharge Size	7/8"
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Electrical Connection	Terminal Block
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Mounting Assembly	Not Available
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Sight Glass

Crankcase Heater

Schrader Valve

Tandem Ready	Yes
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Module Voltage

Reference Drawing	497-1328-00_006.pdf
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425 - Common U.S. OEM Bill Of Materials

Suction Connection	Stub
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Suction Size	1 1/8"
Discharge Connection	Stub
Discharge Size	7/8"
Electrical Connection	Terminal Block
Mounting Assembly	Not Available
Sight Glass	
Crankcase Heater	
Schrader Valve	Available
Tandem Ready	Yes
Module Voltage	
Reference Drawing	497-3096-04_003.pdf

449 - Common U.S. OEM Bill Of Materials

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

450 - Common U.S. OEM Bill Of Materials

Suction Connection	Stub
Suction Size	1 1/8"
Discharge Connection	Stub
Discharge Size	7/8"
Electrical Connection	Terminal Block

Mounting Assembly	Not Available
Sight Glass	
Crankcase Heater	
Schrader Valve	Available
Tandem Ready	Yes
Module Voltage	
Reference Drawing	497-3096-02_003.pdf

451 - Common U.S. OEM Bill Of Materials

Suction Connection	Stub
Suction Size	1 1/8"
Discharge Connection	Stub
Discharge Size	7/8"
Electrical Connection	
Mounting Assembly	Not Available
Sight Glass	
Crankcase Heater	
Schrader Valve	
Tandem Ready	
Module Voltage	
Reference Drawing	497-1744-04_007.pdf

455 - Common U.S. OEM Bill Of Materials

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

Tandem Ready	Yes
Module Voltage	
Reference Drawing	497-3096-00_004.pdf

457 - Common U.S. OEM Bill Of Materials

Suction Connection	Stub
Suction Size	1 1/8"
Discharge Connection	Stub
Discharge Size	7/8"
Electrical Connection	
Mounting Assembly	Not Available
Sight Glass	
Crankcase Heater	
Schrader Valve	
Tandem Ready	
Module Voltage	
Reference Drawing	497-1744-04_007.pdf

465 - Common U.S. OEM Bill Of Materials

Suction Connection	Rotalock
Suction Size	1 3/4"
Discharge Connection	Rotalock
Discharge Size	1 1/4"
Electrical Connection	Terminal Block
Mounting Assembly	Available
Sight Glass	
Crankcase Heater	
Schrader Valve	Available
Tandem Ready	Yes
Module Voltage	
Reference Drawing	497-3096-01_003.pdf

477 - Common U.S. OEM Bill Of Materials

Suction Connection	Stub
Suction Size	1 1/8"
Discharge Connection	Stub
Discharge Size	7/8"
Electrical Connection	Terminal Block
Mounting Assembly	Not Available
Sight Glass	
Crankcase Heater	
Schrader Valve	Available
Tandem Ready	Yes
Module Voltage	
Reference Drawing	497-3103-00_000.pdf

478 - Common U.S. OEM Bill Of Materials

Suction Connection	Stub
Suction Size	1 1/8"
Discharge Connection	Stub
Discharge Size	7/8"
Electrical Connection	Terminal Block
Mounting Assembly	Not Available
Sight Glass	
Crankcase Heater	
Schrader Valve	
Tandem Ready	Yes
Module Voltage	
Reference Drawing	497-1997-00_003.pdf

484 - Common U.S. OEM Bill Of Materials

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

Electrical Connection	Molded Plug
Mounting Assembly	Not Available
Sight Glass	
Crankcase Heater	
Schrader Valve	Available
Tandem Ready	Yes
Module Voltage	
Reference Drawing	497-3096-03_003.pdf

491 - Common U.S. OEM Bill Of Materials

Suction Connection	Stub
Suction Size	1 1/8"
Discharge Connection	Stub
Discharge Size	7/8"
Electrical Connection	Molded Plug
Mounting Assembly	Not Available
Sight Glass	
Crankcase Heater	
Schrader Valve	Available
Tandem Ready	Yes
Module Voltage	
Reference Drawing	497-3096-00_004.pdf

492 - Common U.S. OEM Bill Of Materials

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

Schrader Valve	Available
Tandem Ready	Yes
Module Voltage	
Reference Drawing	497-3096-00_004.pdf

4C5 - Common U.S. OEM Bill Of Materials

Suction Connection	Stub
Suction Size	1 1/8"
Discharge Connection	Stub
Discharge Size	7/8"
Electrical Connection	Terminal Block
Mounting Assembly	Not Available
Sight Glass	
Crankcase Heater	
Schrader Valve	Available
Tandem Ready	Yes
Module Voltage	
Reference Drawing	497-3096-00_004.pdf

4U1 - Common U.S. OEM Bill Of Materials

Suction Connection	Stub
Suction Size	1 1/8"
Discharge Connection	Stub
Discharge Size	7/8"
Electrical Connection	Molded Plug
Mounting Assembly	Not Available
Sight Glass	
Crankcase Heater	
Schrader Valve	Available
Tandem Ready	Yes
Module Voltage	
Reference Drawing	497-3096-05_003.pdf

855 - Common U.S. Service Bill Of Materials

Suction Connection	Stub
Suction Size	1 1/8"
Discharge Connection	Stub
Discharge Size	7/8"
Electrical Connection	Molded Plug
Mounting Assembly	Not Available
Sight Glass	
Crankcase Heater	
Schrader Valve	Available
Tandem Ready	
Module Voltage	
Reference Drawing	497-3096-00_004.pdf

884 - Common U.S. Service Bill Of Materials

Suction Connection	Stub
Suction Size	1 1/8"
Discharge Connection	Stub
Discharge Size	7/8"
Electrical Connection	Molded Plug
Mounting Assembly	Not Available
Sight Glass	
Crankcase Heater	
Schrader Valve	Available
Tandem Ready	Yes
Module Voltage	
Reference Drawing	497-1744-06_007.pdf

8U1 - Common U.S. Service Bill Of Materials

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

Discharge Size	7/8"
Electrical Connection	Molded Plug
Mounting Assembly	Available
Sight Glass	
Crankcase Heater	
Schrader Valve	Available
Tandem Ready	Yes
Module Voltage	
Reference Drawing	497-3096-05_003.pdf

8U5 - Common U.S. Service Bill Of Materials

Suction Connection	Stub
Suction Size	1 1/8"
Discharge Connection	Stub
Discharge Size	7/8"
Electrical Connection	Molded Plug
Mounting Assembly	Available
Sight Glass	
Crankcase Heater	
Schrader Valve	
Tandem Ready	Yes
Module Voltage	
Reference Drawing	497-3096-05_003.pdf

915 - Common U.S. Service Bill Of Materials

Suction Connection	Stub
Suction Size	1 1/8"
Discharge Connection	Stub
Discharge Size	7/8"
Electrical Connection	
Mounting Assembly	Not Available
Sight Glass	

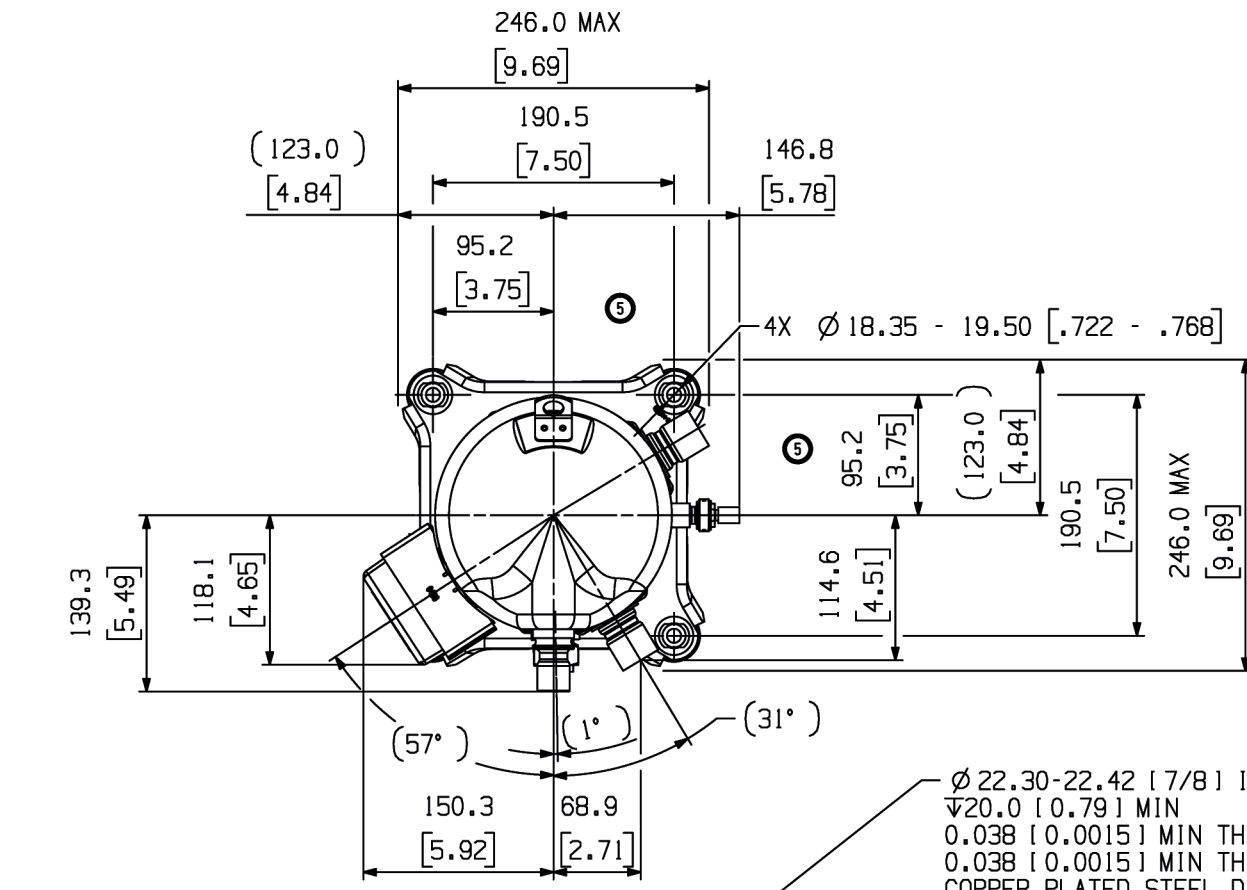
Crankcase Heater	
Schrader Valve	
Tandem Ready	
Module Voltage	
Reference Drawing	497-1744-06_007.pdf

950 - Common U.S. Service Bill Of Materials

Suction Connection	Stub
Suction Size	1 1/8"
Discharge Connection	Stub
Discharge Size	7/8"
Electrical Connection	Terminal Block
Mounting Assembly	Available
Sight Glass	
Crankcase Heater	
Schrader Valve	Available
Tandem Ready	
Module Voltage	
Reference Drawing	497-3096-00_004.pdf

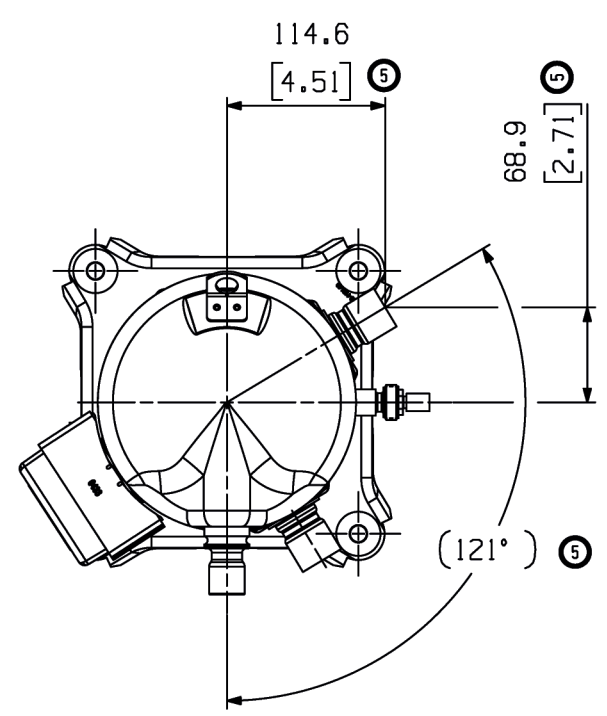
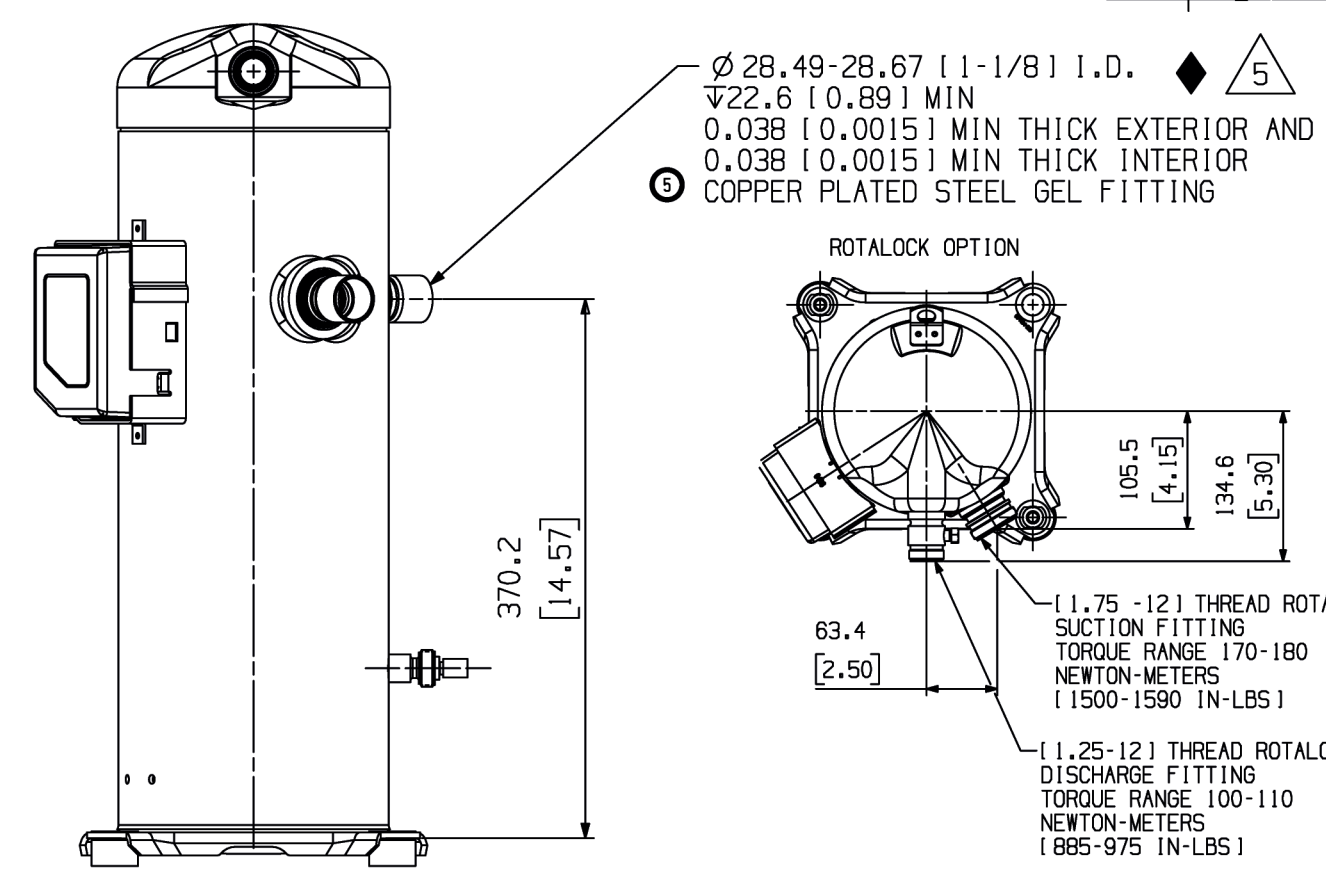
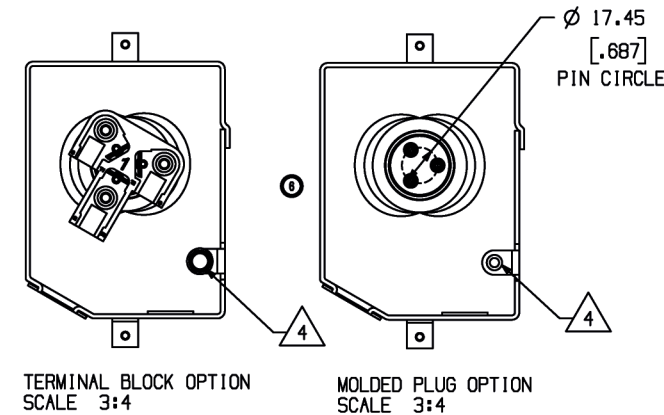
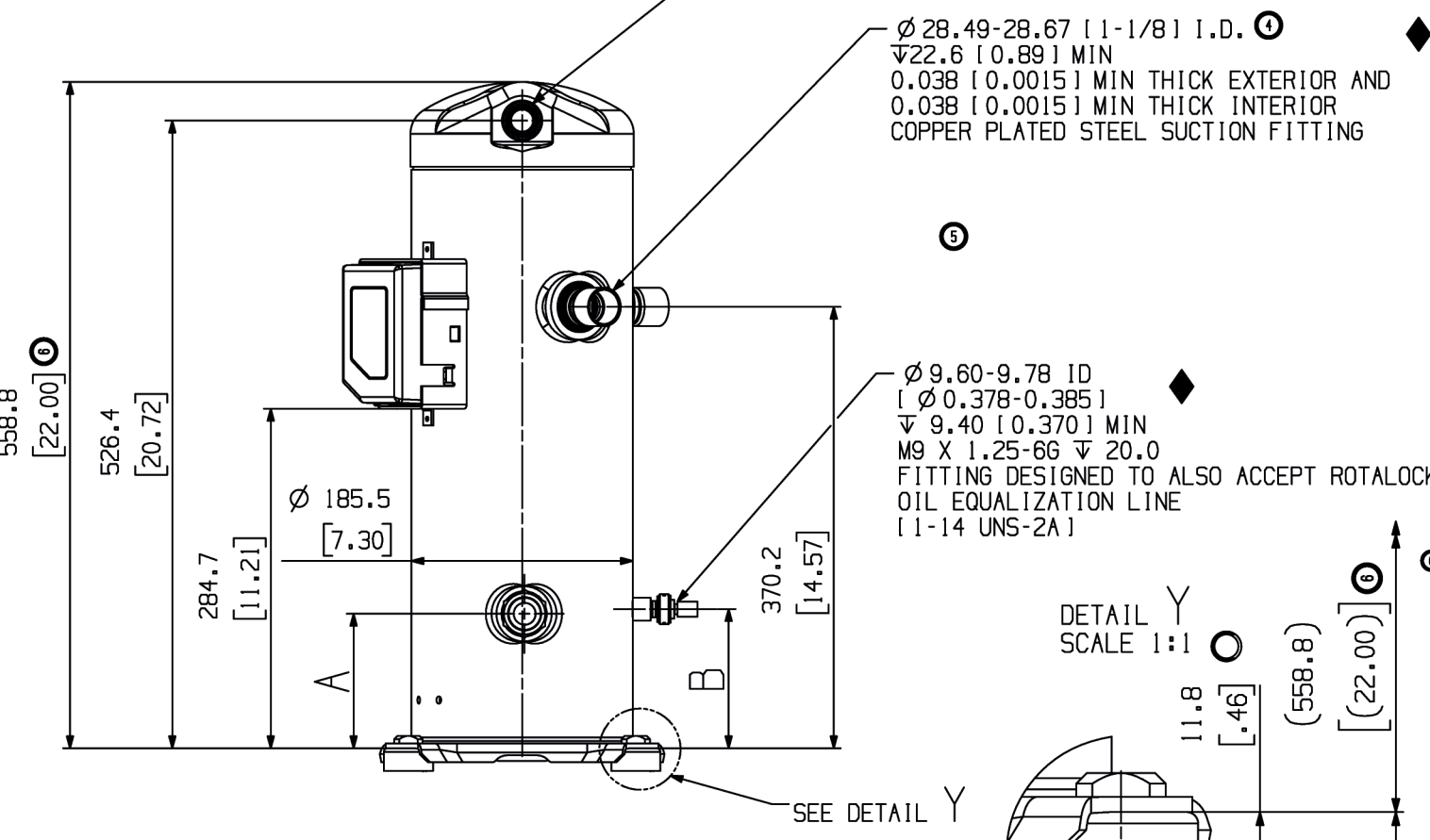
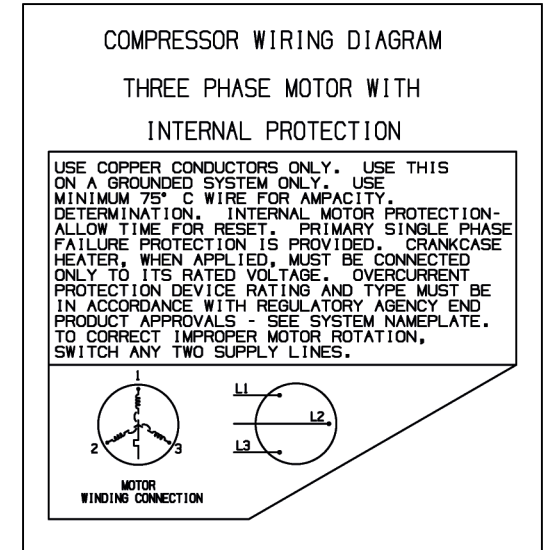
965 - Common U.S. Service Bill Of Materials

Suction Connection	Rotalock
Suction Size	1 3/4"
Discharge Connection	Rotalock
Discharge Size	1 1/4"
Electrical Connection	Terminal Block
Mounting Assembly	Available
Sight Glass	
Crankcase Heater	
Schrader Valve	Available
Tandem Ready	
Module Voltage	



NOTES:

- 1 ALL TOLERANCES ± 1.5 [0.06] UNLESS OTHERWISE SPECIFIED DUE TO ACCUMULATED ASSEMBLY TOLERANCES THE LISTED COMPONENTS MAY VARY FROM THE MOUNTING HOLES AS TABULATED.
- 2 ALL FITTINGS: ± 3.0 [0.12]
- 3 MOUNTING KIT.
- 4 TUBE ENDS MUST BE PLUGGED.
- 5 GROUNDING SCREW AND WASHER PER BOM.
- 6 GAS EQUALIZATION FITTING FOR TANDEM READY ONLY



 EMERSON™ Climate Technologies	INTERPRET PER ASME Y14.5M-1994 AND EMERSON CLIMATE TECHNOLOGIES, INC. DESIGN STANDARDS DS2002		DO NOT SCALE DRAWING		THIRD ANGLE PROJECTION				
	CRITICAL PRODUCT CHARACTERISTICS								
	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE MILLIMETER OR (INCH)								
	TOLERANCES: 1-PLACE ± N/A 2-PLACE ± N/A ANGULAR ± N/A								
 Copeland™ brand products	ENG NOTICE NO.		REV.NO.	REVISIONS		DATE	BY	CHKD	APPR
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	MATERIAL SPECIFICATION			DRAWN BY JXD		SUPERSEDES DWG. NO. / REV. NO. 497-1744-00/000			
N/A			DATE 10-22-14		SCALE 0.35:1		DATE FORMAT: MM-DD-YY		
TITLE			DRAWING NUMBER		SHEET 3 OF 3				DW
REF DWG-WELD COMP ASSM			497-1744-00						4