

ZR28K5E-TF5

HCFC, R-22, 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	50
Condensing Temp. (°F)	130.00	100
Return Gas Temp. (°F)	65.00	70
Liquid Temp. (°F)	115.00	85
Capacity (BTU/hr)	28400	36900
Power (W):	2590	1755
Current (Amps):	8	6.3
EER(BTU/Wh):	11	21
Mass Flow (lbs/hr):	417	472
Sound Data @ 45 / 130		
Sound Power (dBA):	68 Avg	73 Max
Vibration mils(peak-peak):	2.0 Avg	3.0 Max
Record Date:	2015-10-12	
Mechanical		
Displacement (in^3/Rev):	2.36	
Displacement (ft^3/Hr):		
Overall Length (in):	9.70	
Overall Width (in):	9.70	
Overall Height (in):	15.30	
Mounting Length (in):	7.50	
Mounting Width (in):	7.50	
Mounting Height (in):	16.00	

Suction Size (in),Type:	3 / 4 Stub
Discharge Size (in),Type:	1 / 2 Stub
Initial Oil Charge (oz):	25
Oil Recharge (oz):	19
Oil Type:	3MA
Net Weight (lbs):	49.6
Internal Free Volume (in^3):	118.0

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

Electrical	
LRA High* (Amps):	73
LRA Low*(Amps):	
LRA Half Winding (Amps):	
MCC (Amps):	15.5
Max Operating Current (Amps):	11.00
RLA, MCC/1.4(use for contactor selection)(Amps):	11.1
RLA, MCC/1.56(use for breaker & wire size selection)(Amps):	9.9
RPM:	3500
Box IP :	21
UL File No:	SA2337-20031216
UL File Date:	2003-12-16

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

Service Parts

Service Parts				
Reference	Component	Quantity	Description	Comment
99	527-0044-15	1	SPACER - MOUNTING ASSM	
99	529-0060-24	1	POWER CABLE-MOLDED PLUG	
99	918-0052-00	1	CRANKCASE HEATER KIT	240V 40W WRAP AROUND
99	918-0052-01	1	CRANKCASE HEATER KIT	120V 40W WRAP AROUND

Accessories

Accessories		
Category	Part Number	Description
(1) Variable Frequency Drive	EVH-322012-R21BEN	Copeland EVH VFD , 4 HP, 230 VAC, 3Ø, 12A, With DC link Choke & Add on EMI filter, Removeable LCD Display, IP21, BACnet/Modbus
(1) Variable Frequency Drive	EVH-322012-R54BEN	Copeland EVH VFD , 4 HP, 230 VAC, 3Ø, 12A, With DC link Choke & Add on EMI filter, Removeable LCD Display, IP54, BACnet/Modbus
(1) Variable Frequency Drive	EVH-322012-R21BDN	Copeland EVH VFD , 4 HP, 230 VAC, 3Ø, 12A, With DC link Choke (Standard EVH), Removeable LCD Display, IP21, BACnet/Modbus
(1) Variable Frequency Drive	EVH-322012-R54BDN	Copeland EVH VFD , 4.0 HP, 230 VAC, 3Ø, 12A, With DC link Choke (Standard EVH), Removeable LCD Display, IP54, BACnet/Modbus
Crankcase Heaters	018-0094-01	Crankcase Heater, 120V, 40W
Crankcase Heaters	018-0094-01	Crankcase Heater, 120V, 40W
Crankcase Heaters	018-0094-00	Crankcase Heater, 240V, 40W
Crankcase Heaters	018-0094-00	Crankcase Heater, 240V, 40W
Crankcase Heaters	018-0094-03	Crankcase Heater, 480V, 40W, 21.25" Lead Length

Category	Part Number	Description
Crankcase Heaters	018-0094-04	Crankcase Heater, 575V, 40W, 21.25" Lead Length

Electrical Components

Electrical Components

Nomenclature

ZR28K5E-TF5
Family Series
Z: Scroll
Application Range
R: A/C - R-22/407C/134a
Capacity
28K: Capacity Multiplier-1000
Oil Type
E: Polyol Ester

Miscellaneous

Alternate Application				
Refrigerant	Freq	Phase	Voltage	Application
HCFC R-22	50	3 Ø	200/220 V	R1 AC
HFC R-407C	50	3 Ø	200/220 V	R1 AC
HFC R-407C	60	3 Ø	200/230 V	R1 AC
Nomenclature				
ZR28K5E-TF5				

Bill-of-Materials

ZR28K5E-TF5 - BILL OF MATERIALS

130 - Common U.S. OEM Bill Of Materials

Suction Connection	Stub
Suction Size	3/4"
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	497-2868-00.pdf

800 - Common U.S. Service Bill Of Materials

Suction Connection	Stub
Suction Size	3/4"
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	497-2868-00.pdf

803 - Common U.S. Service Bill Of Materials

Suction Connection	Stub
Suction Size	3/4"
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	497-2868-00.pdf

806 - Common U.S. Service Bill Of Materials

Suction Connection	Stub
Suction Size	3/4"
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	497-1039-00.pdf

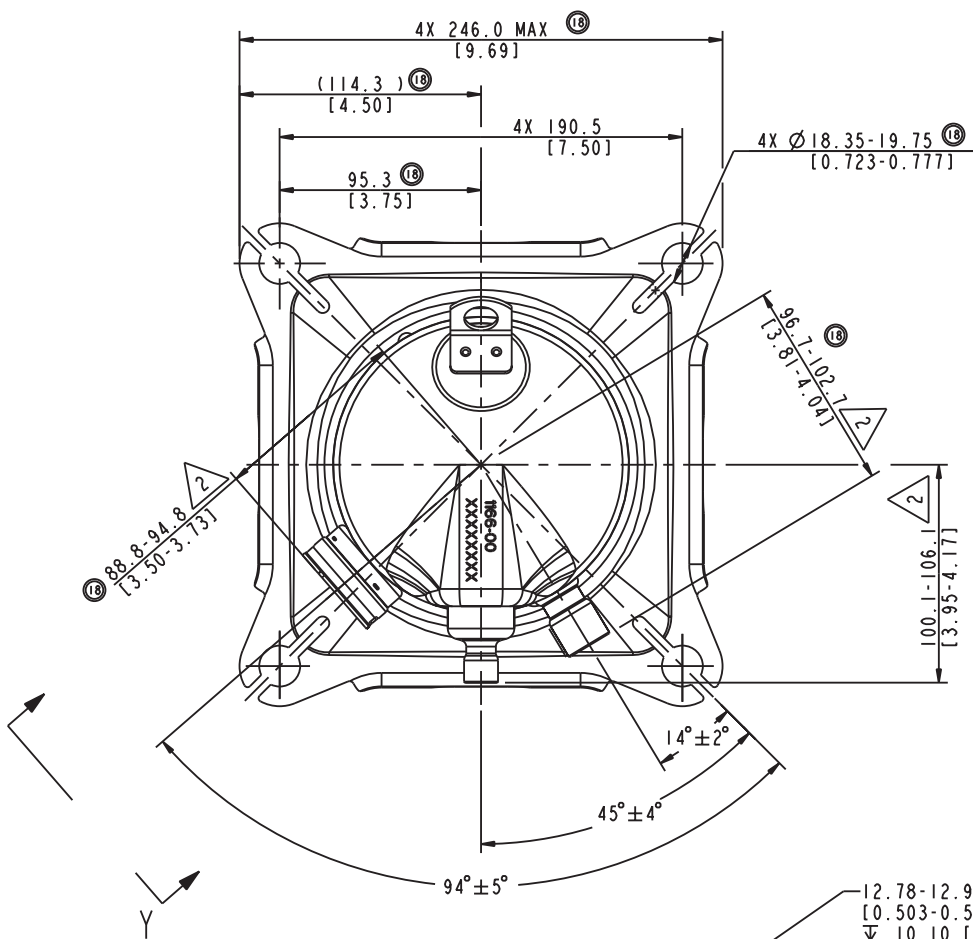
830 - Common U.S. Service Bill Of Materials

Suction Connection	Stub
Suction Size	3/4"
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	497-2868-00.pdf

833 - Common U.S. Service Bill Of Materials

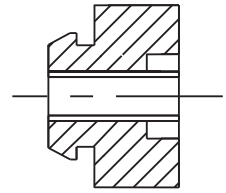
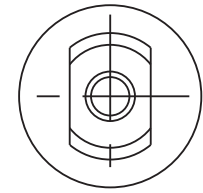
Suction Connection	Stub
Suction Size	3/4"
Discharge Connection	Stub
Discharge Size	1/2"
Electrical Connection	Molded Plug
Mounting Assembly	Not Available
Sight Glass	
Crankcase Heater	
Schrader Valve	
Tandem Ready	
Module Voltage	
Reference Drawing	497-2868-00.pdf



NOTES:

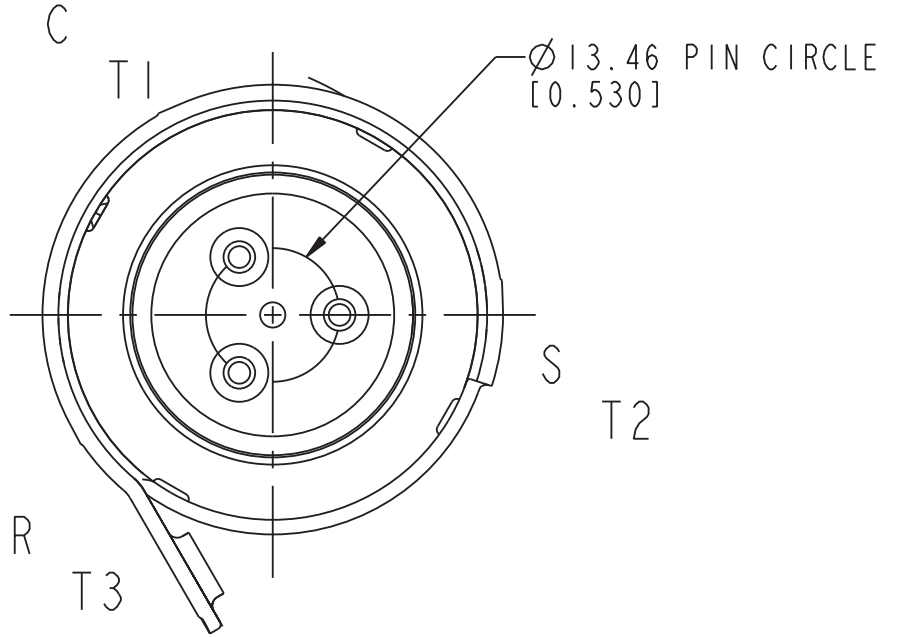
- 1 ALL TOLERANCES ±1.50 [0.060] UNLESS OTHERWISE SPECIFIED.
- 2 THE SUCTION TUBE, DISCHARGE TUBE, AND CIRCLE FENCE RADIAL DIMENSIONS ARE TO BE GAUGED FROM THE CENTER OF THE MOUNTING HOLE PATTERN.
3. TUBE ENDS MUST BE PLUGGED.
4. MOUNTING KIT:

GROMMET DUROMETER	4 FOOT KIT
30-35	527-0044-15

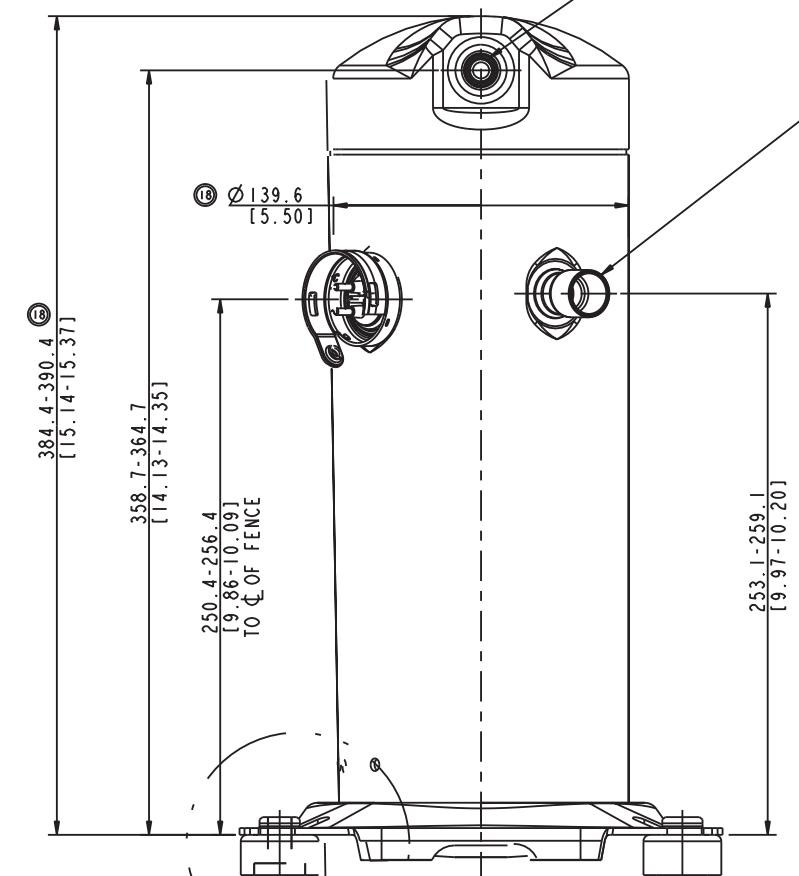


12.78-12.95 I.D. [0.503-0.510]
 ∇ 10.10 [0.398] MIN, 0.038 [0.0015] MIN THICK EXTERIOR AND 0.038 [0.0015] MIN THICK INTERIOR COPPER PLATED STEEL DISCHARGE FITTING.

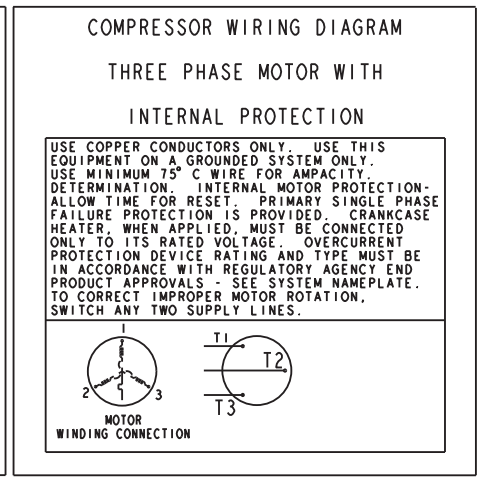
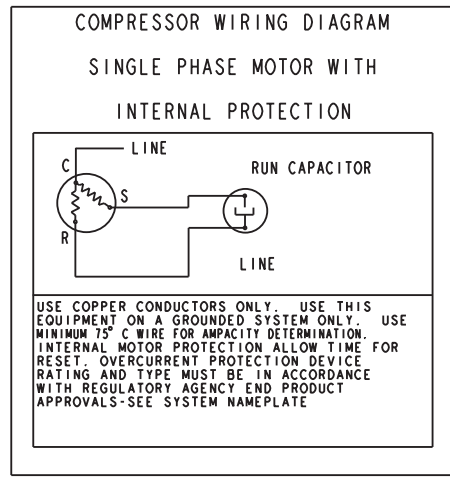
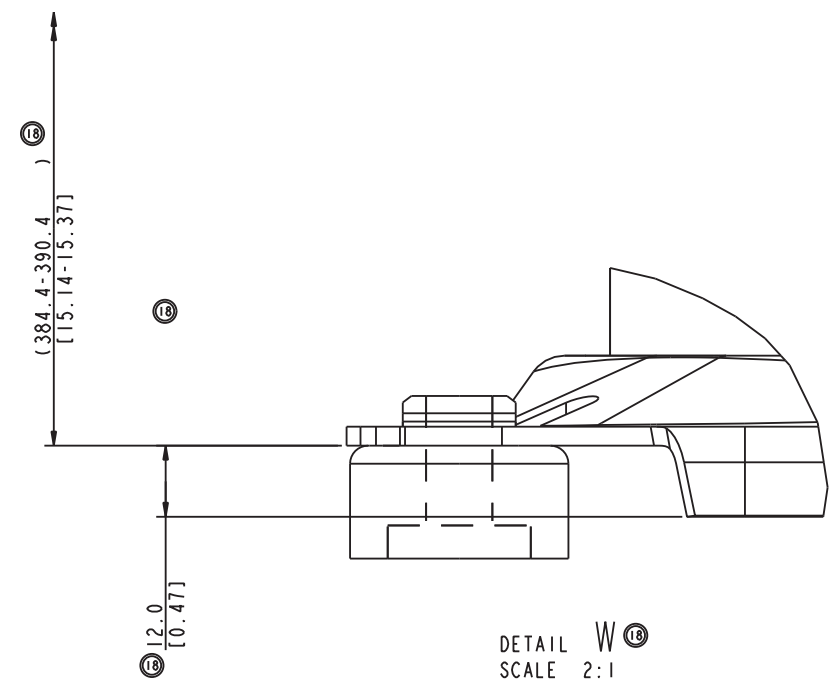
19.12-19.30 I.D. [0.753-0.759]
 ∇ 16.00 [0.630] MIN, 0.038 [0.0015] MIN THICK EXTERIOR AND 0.038 [0.0015] MIN THICK INTERIOR COPPER PLATED STEEL SUCTION FITTING



VIEW Y-Y
 SCALE 2:1



SEE DETAIL W



INTERPRET PER ASME Y14.5M-1994 AND EMERSON CLIMATE TECHNOLOGIES, INC. DESIGN STANDARDS_DS2002 DO NOT SCALE DRAWING

CRITICAL PRODUCT CHARACTERISTIC

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE MILLIMETER OR (INCH)

TOLERANCES:
 1-PLACE ±
 2-PLACE ±
 ANGULAR ±

THIRD ANGLE PROJECTION

ENG NOTICE NO. 24 (53 FR)

REV. NO. 1

REVISIONS

DATE 04-26-10

BY CHRD APPR

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MATERIAL SPECIFICATION NA

TITLE REF DWG-WELD COMP ASSM

SUPPLIES DWG. NO. / REV. NO. 497-2868-00 / 07

SCALE 3:4

DATE FORMAT: MM-DD-YY

DRAWING NUMBER 497-2868-00

SHEET 1 OF 1

DWG 5