

ZR36K3-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	45
Condensing Temp. (°F)	130.00	100
Return Gas Temp. (°F)	65.00	65
Liquid Temp. (°F)	115.00	85
Capacity (BTU/hr)	36900	43400
Power (W):	3250	2210
Current (Amps):	9.7	7.6
EER(BTU/Wh):	11.3	19.6
Mass Flow (lbs/hr):	540	560
Sound Data @		
Sound Power (dBA):	71 Avg	76 Max
Vibration mils(peak-peak):	2.0 Avg	3.0 Max
Record Date:	1995-02-10	
Mechanical		
Displacement (in^3/Rev):	3.02	
Displacement (ft^3/Hr):		
Overall Length (in):	9.70	
Overall Width (in):	9.70	
Overall Height (in):	15.20	
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):	42
Oil Recharge (oz):	38
Oil Type:	MIN
Net Weight (lbs):	60.1
Internal Free Volume (in^3):	161.0

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

Electrical	
LRA High* (Amps):	77
LRA Low*(Amps):	
LRA Half Winding (Amps):	
MCC (Amps):	16
Max Operating Current (Amps):	11.90
RLA, MCC/1.4(use for contactor selection)(Amps):	11.4
RLA, MCC/1.56(use for breaker & wire size selection)(Amps):	10.3
RPM:	3500
Box IP :	21
UL File No:	SA2337-19940614
UL File Date:	1994-06-14

*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

Service Parts

Service Parts				
Reference	Component	Quantity	Description	Comment
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

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-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	918-0043-07	Crankcase Heater Kit, 120V, 70W, Wrap Around, 48" Lead Length
Crankcase Heaters	918-0043-00	Crankcase Heater Kit, 240V, 70W, Wrap Around, 48" Lead Length
Crankcase Heaters	918-0043-01	Crankcase Heater Kit, 480V, 70W, Wrap Around, 48" Lead Length
Crankcase Heaters	918-0043-02	Crankcase Heater Kit, 575V, 70W, Wrap Around, 48" Lead Length
Crankcase Heaters	018-0096-01	Crankcase Heater, 120V, 40W, 21.75" Lead Length

Electrical Components

Electrical Components

Nomenclature

ZR36K3-TF5

Family Series

Z: Scroll

Application Range

R: A/C - R-22/407C/134a

Capacity

36K: Capacity Multiplier-1000

Oil Type

: --

Miscellaneous

Alternate Application				
Refrigerant	Freq	Phase	Voltage	Application
HCFC R-22	50	3 Ø	200/220 V	R1 AC
Nomenclature				
ZR36K3-TF5				

Bill-of-Materials

ZR36K3-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

230 - Common U.S. OEM Bill Of Materials

Suction Connection	Stub
Suction Size	3/4"
Discharge Connection	Stub
Discharge Size	1/2"
Electrical Connection	Flag Terminal
Mounting Assembly	Available
Sight Glass	
Crankcase Heater	
Schrader Valve	
Tandem Ready	
Module Voltage	
Reference Drawing	497-2546-01_058.pdf

260 - Common U.S. OEM Bill Of Materials

Suction Connection	Stub
Suction Size	3/4"
Discharge Connection	Stub
Discharge Size	1/2"
Electrical Connection	
Mounting Assembly	Not Available
Sight Glass	
Crankcase Heater	
Schrader Valve	
Tandem Ready	
Module Voltage	

Reference Drawing	
803 - Common U.S. Service Bill Of Materials	
Suction Connection	Stub
Suction Size	3/4"
Discharge Connection	Stub
Discharge Size	1/2"
Electrical Connection	
Mounting Assembly	Not Available
Sight Glass	
Crankcase Heater	
Schrader Valve	
Tandem Ready	
Module Voltage	
Reference Drawing	

806 - Common U.S. Service Bill Of Materials

Suction Connection	Stub
Suction Size	3/4"
Discharge Connection	Stub
Discharge Size	1/2"
Electrical Connection	
Mounting Assembly	Not Available
Sight Glass	
Crankcase Heater	
Schrader Valve	
Tandem Ready	
Module Voltage	
Reference Drawing	

830 - Common U.S. Service Bill Of Materials

Suction Connection	Stub
Suction Size	3/4"

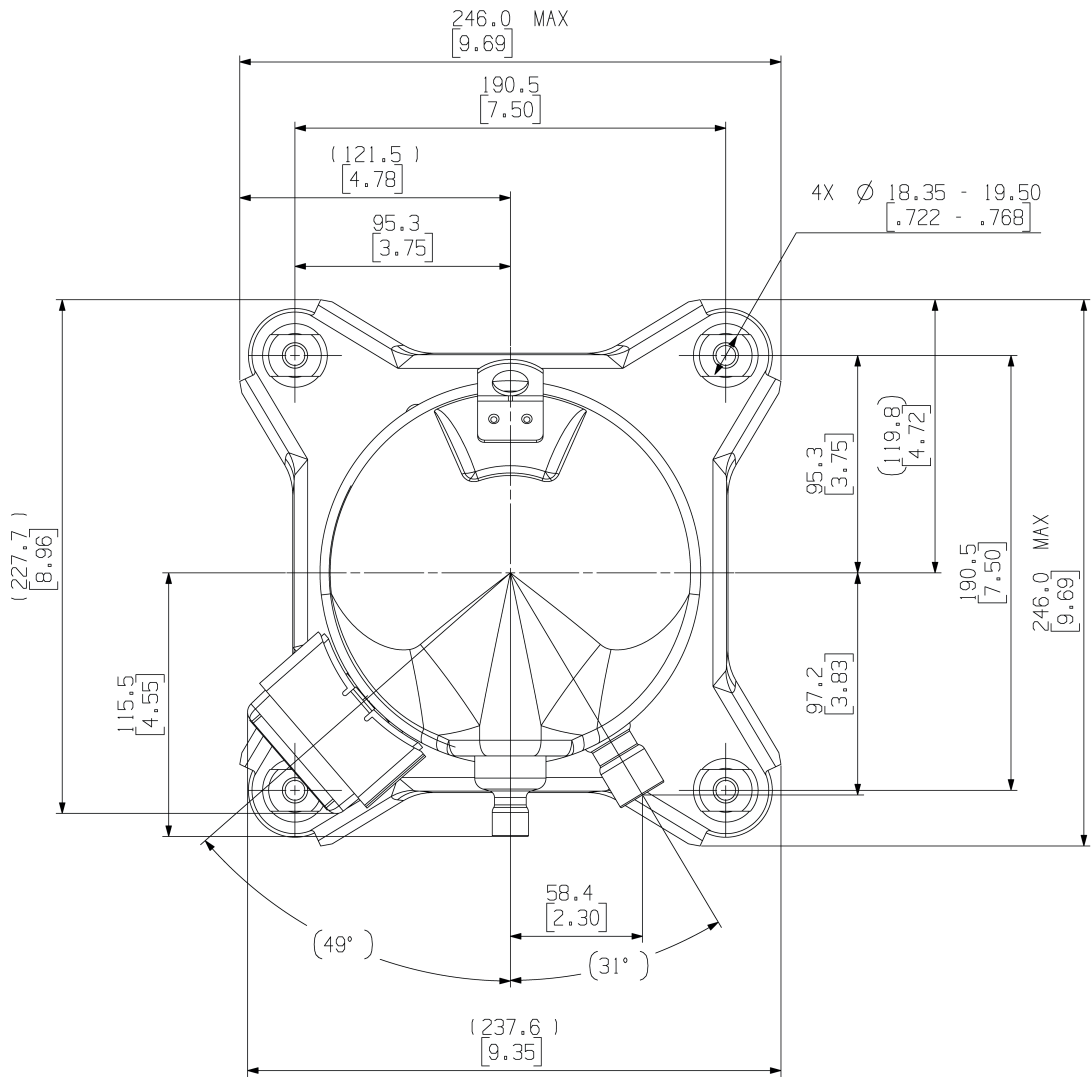
Discharge Connection	Stub
Discharge Size	1/2"
Electrical Connection	Molded Plug
Mounting Assembly	Available
Sight Glass	
Crankcase Heater	
Schrader Valve	
Tandem Ready	
Module Voltage	
Reference Drawing	

922 - Common U.S. Service Bill Of Materials

Suction Connection	Stub
Suction Size	3/4"
Discharge Connection	Stub
Discharge Size	1/2"
Electrical Connection	Flag Terminal
Mounting Assembly	Available
Sight Glass	
Crankcase Heater	
Schrader Valve	
Tandem Ready	
Module Voltage	
Reference Drawing	497-2546-01_058.pdf

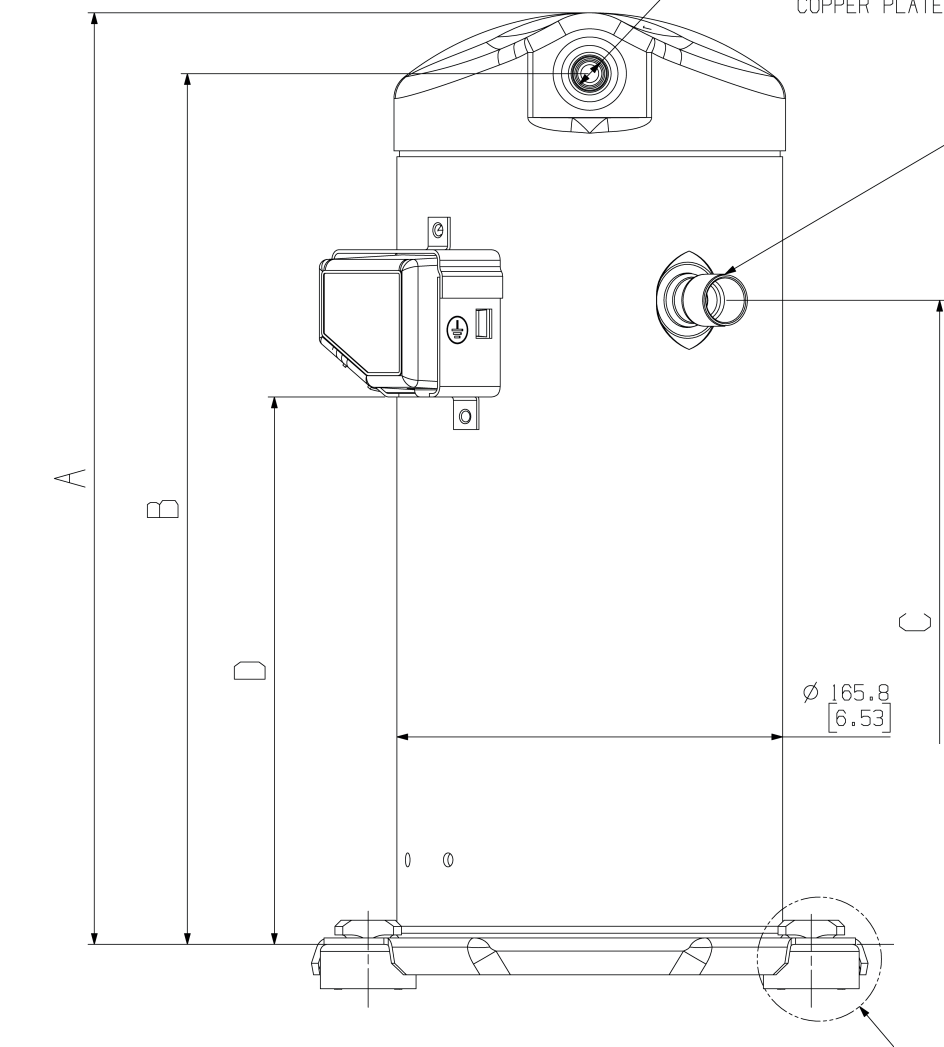
930 - Common U.S. Service Bill Of Materials

Suction Connection	Stub
Suction Size	3/4"
Discharge Connection	Stub
Discharge Size	1/2"
Electrical Connection	Flag Terminal
Mounting Assembly	Available

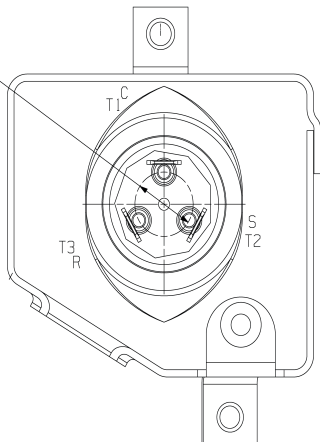


Ø 12.78 - 12.95
[0.503-0.510] I.D.
▽ 10.10 [0.398] MIN.
0.038 [0.0015] MIN THICK EXTERIOR AND
0.038 [0.0015] MIN THICK INTERIOR
COPPER PLATED STEEL DISCHARGE FITTING.

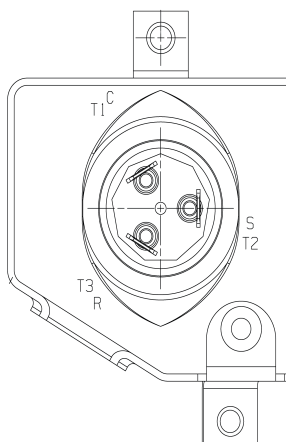
Ø 19.12-19.30
[0.753-0.761] I.D.
▽ 17.00 [0.669] MIN.
0.038 [0.0015] MIN THICK EXTERIOR AND
0.038 [0.0015] MIN THICK INTERIOR
COPPER PLATED STEEL SUCTION FITTING.



Ø 13.46 PIN CIRCLE
[.530]
MODELS: PFV, PFJ, TF5
Ø 17.45 PIN CIRCLE
[0.687]
MODELS: TFD, TFE, TF7



T1 BOX LAYOUT
STANDARD
SCALE 2:1



OPTIONAL VIEW
SCALE 2:1

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 SHOWN BELOW:

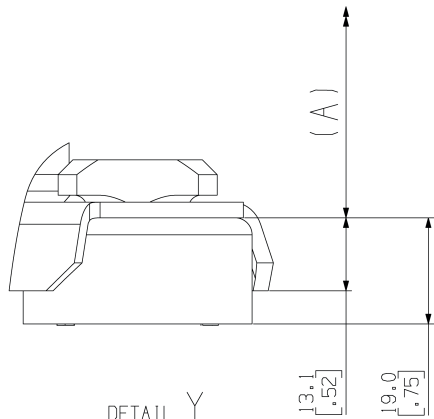
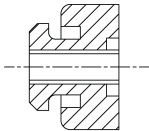
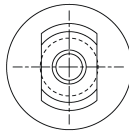
ALL FITTINGS : ± 3.0 [0.12]

2 MOUNTING KIT.

3. TUBE ENDS MUST BE PLUGGED.

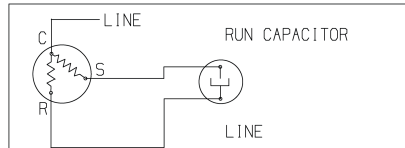
2

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



DETAIL Y
SCALE 2:1

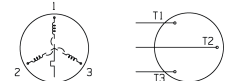
COMPRESSOR WIRING DIAGRAM SINGLE PHASE MOTOR WITH INTERNAL PROTECTION



USE COPPER CONDUCTORS ONLY. USE THIS
EQUIPMENT ON A GROUND SYSTEM ONLY. USE
MINIMUM 75° C WIRE FOR AMPACITY DETERMINATION.
INTERNAL MOTOR PROTECTION ALLOW THE TIME FOR
RESET. OVERCURRENT PROTECTION DEVICE RATING
AND TYPE MUST BE IN ACCORDANCE
WITH REGULATORY AGENCY END PRODUCT
APPROVALS-SEE SYSTEM NAMEPLATE

COMPRESSOR WIRING DIAGRAM THREE PHASE MOTOR WITH INTERNAL PROTECTION

USE COPPER CONDUCTORS ONLY. USE THIS
ON A GROUND SYSTEM ONLY. USE
MINIMUM 75° C WIRE FOR AMPACITY
DETERMINATION. INTERNAL MOTOR PROTECTION-
ALLOW TIME FOR RESET. PRIMARY SINGLE PHASE
FAILURE PROTECTION IS PROVIDED CRANKCASE
HEATER, WHEN APPLIED, MUST BE CONNECTED
ONLY TO ITS RATED VOLTAGE. OVERCURRENT
PROTECTION DEVICE RATING AND TYPE MUST BE
IN ACCORDANCE WITH REGULATORY AGENCY END
PRODUCT APPROVALS - SEE SYSTEM NAMEPLATE.
TO CORRECT IMPROPER MOTOR ROTATION,
SWITCH ANY TWO SUPPLY LINES.



MOTOR
WINDING CONNECTION

ECN308152	58	REMOVED ZR30K3E-PFV/TF5, ZR22K3/K3E-PFV	07-13-18	SZ	ZH	AW
ECN306209	57	REMOVED ZR30K3/K3E-TFD, TFE	11-09-17	SPC	PBM	JAS
ECN301014	56	ADD OPTIONAL VIEW	02-08-17	AZ	LG	AW
ECN008250	55	ADDED MODEL ZB19/21/26	03-24-14	LG	LB	VC
ECN005734	54	REMOVED ZR34KTE-TFD MODEL	01-17-14	EL	LG	WS
ECN007492	53	ADDED ZR36KCE-PFV MODEL	01-13-14	EL	LG	WS
ECN007793	52	REDRAWN WITH NX & ADDED ZR42K3-TF7	01-09-14	EL	LG	WS
32-0993-029	0	RELEASED	03-24-93	RB		
ENG NOTICE NO.	REV. NO.	REVISIONS	DATE	BY	CHKD	APPR

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MATERIAL SPECIFICATION		DRAWN BY	SUPERSEDES DWG. NO. / REV. NO.			
N/A		EL	497-2546-00/051			
		DATE	SCALE	DATE FORMAT:		
		01-09-14	3:4	MM-DD-YY		
TITLE		DRAWING NUMBER		SHEET 1 OF 1		100%
REF DWG-WELD COMP ASSM		497-2546-00		5		SIZE

EMERSON
Climate Technologies

Copeland
brand products

INTERPRET PER ASME
Y14.91-1994 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 (1 INCH)
TOLERANCES:
1-PLACE : 1
2-PLACE : 1
ANGULAR : N/A