

ZP90KCE-TF5

HFC, R-410A, 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	35
Condensing Temp. (°F)	130.00	120
Return Gas Temp. (°F)	65.00	55
Liquid Temp. (°F)	115.00	105
Capacity (BTU/hr)	90500	80000
Power (W):	8350	7450
Current (Amps):	26.3	24
EER(BTU/Wh):	10.8	10.8
Mass Flow (lbs/hr):	1340	1120
Sound Data @		
Sound Power (dBA):	77 Avg	82 Max
Vibration mils(peak-peak):	2.5 Avg	4.0 Max
Record Date:	2019-11-15	
Mechanical		
Displacement (in^3/Rev):	5.13	
Displacement (ft^3/Hr):		
Overall Length (in):	11.50	
Overall Width (in):	11.10	
Overall Height (in):	18.80	
Mounting Length (in):	7.50	
Mounting Width (in):	7.50	
Mounting Height (in):	19.50	

Suction Size (in),Type:	1 3 / 4 Rotalock
Discharge Size (in),Type:	1 1 / 4 Rotalock
Initial Oil Charge (oz):	89
Oil Recharge (oz):	81
Oil Type:	3MA
Net Weight (lbs):	127.0
Internal Free Volume (in^3):	639.0

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

Electrical

LRA High* (Amps):	195
LRA Low*(Amps):	
LRA Half Winding (Amps):	
MCC (Amps):	46
Max Operating Current (Amps):	36.00
RLA, MCC/1.4(use for contactor selection)(Amps):	32.9
RLA, MCC/1.56(use for breaker & wire size selection)(Amps):	29.5
RPM:	3500
Box IP :	21
UL File No:	SA2337-19960927
UL File Date:	1996-09-27
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) :

*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	200/220	3	50	Air Conditioning	

Service Parts

Service Parts				
Reference	Component	Quantity	Description	Comment
99	527-0116-00	1	SPACER-MOUNTING ASSM	
99	910-0715-00	1	VALVE-OIL ADJUSTMENT 1/4FL X M9	
99	918-0047-00	1	HEATER-CRANKCASE	120V 90W WRAP AROUND
99	918-0047-01	1	HEATER-CRANKCASE	240V 90W WRAP AROUND
99	918-0047-02	1	HEATER-CRANKCASE	480V, 90W, WRAP AROUND
99	998-0010-00	1	SIGHTGLASS KIT	

Accessories

Accessories		
Category	Part Number	Description
Miscellaneous	020-0028-02	1 1/4" - 12 discharge valve seal
Service Valves and Adapters	510-0330-01	1 1/8" suction valve (solder)
Miscellaneous	020-0028-03	1 3/4" - 12 valve seal
Service Valves and Adapters	510-0080-04	3/4" discharge valve (solder)
Service Valves and Adapters	510-0080-07	7/8" discharge valve (solder)

Category	Part Number	Description
(1) Variable Frequency Drive	EVH-322048-R21BEN	Copeland EVH VFD , 15 HP, 230 VAC, 3Ø, 48A, With DC link Choke & Add on EMI filter, Removeable LCD Display, IP21, BACnet/Modbus
(1) Variable Frequency Drive	EVH-322048-R21BDN	Copeland EVH VFD , 15 HP, 230 VAC, 3Ø, 48A, With DC link Choke (Standard EVH), Removeable LCD Display, IP21, BACnet/Modbus
(1) Variable Frequency Drive	EVH-322048-R54BDB	Copeland EVH VFD , 15 HP, 230 VAC, 3Ø, 48A, With DC link Choke (Standard EVH), Removeable LCD Display, IP54, BACnet/Modbus
(1) Variable Frequency Drive	EVH-322048-R54BDN	Copeland EVH VFD , 15 HP, 230 VAC, 3Ø, 48A, With DC link Choke (Standard EVH), Removeable LCD Display, IP54, BACnet/Modbus
(1) Variable Frequency Drive	EVH-322048-R54BEN	Copeland EVH VFD , 15.0 HP, 230 VAC, 3Ø, 48A, With DC link Choke & Add on EMI filter, Removeable LCD Display, IP54, BACnet/Modbus

Electrical Components

Electrical Components

Nomenclature

ZP90KCE-TF5
Family Series Z: Scroll
Application Range P: A/C - R-410A/B
Capacity 90K: 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 5: 60Hz (200/230-3) 50Hz (200/220-3)

Miscellaneous

Alternate Application				
Refrigerant	Freq	Phase	Voltage	Application
HFC R-410A	50	3 Ø	200/220 V	R1 AC
Nomenclature				
ZP90KCE-TF5				

Bill-of-Materials

ZP90KCE-TF5 - BILL OF MATERIALS	
<u>130 - Common U.S. OEM Bill Of Materials</u>	
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	
Module Voltage	
Reference Drawing	
<u>155 - Common U.S. OEM Bill Of Materials</u>	
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	

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	497-1675-00_009.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

422 - 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	Not Available
Sight Glass	
Crankcase Heater	
Schrader Valve	Available
Tandem Ready	Yes

Module Voltage

Reference Drawing	497-1675-12_009.pdf
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425 - 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	497-1675-06_009.pdf
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450 - 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	
Tandem Ready	Yes
Module Voltage	
Reference Drawing	

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	

461 - 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	497-1675-06_009.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	
Module Voltage	
Reference Drawing	

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	Available
Sight Glass	
Crankcase Heater	
Schrader Valve	Available

Tandem Ready
Module Voltage
Reference Drawing

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

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	
Reference Drawing	497-1675-07_009.pdf

