

ZP31K5E-PFV

HFC, R-410A, 60 Hz, 1 - Phase, 208/230 V

Air Conditioning

Production Status: Available for sale to all U.S. customers. Please check with your local Emerson Climate Technologies Representative for international availability.

Summary

Performance		
Evaporator Temp. (°F)	45	50
Condensing Temp. (°F)	130	100
Return Gas Temp. (°F)	65	70
Liquid Temp. (°F)	115	85
Capacity (BTU/hr)	31100	42500
Power (W):	3070	2020
Current (Amps):	13.5	9.1
EER(BTU/Wh):	10.1	21.1
Mass Flow (lbs/hr):	459	525
Sound Data @ 45 / 130		
Sound Power (dBA):	68 Avg	73 Max
Vibration mils(peak-peak):	2.0 Avg	3.0 Max
Record Date:	2017-03-01	
Mechanical		
Displacement (in^3/Rev):	1.80	
Displacement (ft^3/Hr):		
Overall Length (in):	9.56	
Overall Width (in):	9.56	
Overall Height (in):	15.27	
Mounting Length (in):	7.50	
Mounting Width (in):	7.50	

Mounting Height (in):	16.02
Suction Size (in),Type:	3 / 4 Stub
Discharge Size (in),Type:	1 / 2 Stub
Initial Oil Charge (oz):	25
Oil Recharge (oz):	21
Net Weight (lbs):	49.6
Internal Free Volume (in^3):	119.4

Horse Power:

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

Electrical

LRA High* (Amps):	79.0
LRA Low*(Amps):	
LRA Half Winding (Amps):	
MCC (Amps):	26
Max Operating Current (Amps):	17.8
RLA, MCC/1.4(use for contactor selection)(Amps):	18.6
RLA, MCC/1.56(use for breaker & wire size selection)(Amps):	16.7
RPM:	3500
Box IP :	21
UL File No:	SA-2337
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
Run Capacitor	014-0064-25	45.0	0.0	370	
Start Capacitor	014-0061-27	88.0	106.0	330	OPTIONAL

Alternate Applications

Refrigerant	Voltage	Phase	Frequency	Application
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No data available in table

Service Parts

Service Parts				
Reference	Component	Quantity	Description	Comment
1	918-0052-00	1	CRANKCASE HEATER KIT	240V 40W WRAP AROUND
1	918-0052-01	1	CRANKCASE HEATER KIT	120V 40W WRAP AROUND
2	527-0044-15	1	SPACER - MOUNTING ASSM	
5	914-0037-36	1	RUN CAP KIT	
7	998-0510-38	1	VLV KIT 3/4"SWT/1 1/4-12UNC	SUCTION ROTALOCK
7	998-0510-98	1	VLV KIT 1/2"SWT/1-14UNC	DISCHARGE ROTALOCK
99	529-0060-24	1	POWER CABLE-MOLDED PLUG	
99	998-0034-01	1	ADAP KIT 3/4"SWT / 1 1/4 RL	SWEAT TO ROTALOCK ADAPTER KIT SUCTION
99	998-0034-07	1	ADAP KIT 1 1/4 RL / 3/4"SWT	ROTALOCK TO SWEAT ADAPTER KIT SUCTION
99	998-0034-15	1	SERV ADAPTOR KIT 1/2 STUB	SWEAT TO ROTALOCK ADAPTER KIT DISCHARGE

Accessories

Accessories		
Category	Part Number	Description
CoreSense	571-0066-00	CoreSense™ Diagnostics Module (2 wire)
CoreSense	571-0066-01	CoreSense Diagnostics (Fixed Speed AC)
CoreSense	571-0067-00	CoreSense™ Diagnostics Module (3 wire)
CoreSense	571-0067-01	CoreSense Diagnostics (Fixed Speed HP)
CoreSense	571-0072-00	CoreSense Diagnostics (Two Stage UT)
Crankcase Heaters	018-0094-00	Crankcase Heater, 240V, 40W
Crankcase Heaters	018-0094-01	Crankcase Heater, 120V, 40W
Crankcase Heaters	018-0094-02	Crankcase Heater
Crankcase Heaters	018-0094-03	Crankcase Heater, 480V, 40W, 21.25" Lead Length
Crankcase Heaters	018-0094-04	Crankcase Heater, 575V, 40W, 21.25" Lead Length

Electrical Components

Electrical Components	
Part No: 071-0512-39	
Usage Description: Internal Protector	
<u>Vendor Part Number</u>	
15HM2457	
<u>Vendor Name</u>	
SENSATA	
Part No: 071-0642-02	Stator
Usage Description: Internal Protector	Part No: 546-5016-03
<u>Vendor Part Number</u>	Usage Description: Stator
UP14IY3105C	Resistance: +/-7%
<u>Vendor Name</u>	Start Wdg: 1.66
UBUKATA	Run Wdg: 0.89
Stator	Stator
Part No: 546-5127-06	Part No: 846-5016-03
Usage Description: Stator	Usage Description: Stator
Resistance: +/-7%	Resistance: +/-7%
Start Wdg: 1.66	Start Wdg: 1.66
Run Wdg: 0.89	Run Wdg: 0.89
Stator	Potential
Part No: 846-5127-06	Part No: 040-0166-37
Usage Description: Stator	Usage Description: Potential Relay
Resistance: +/-7%	<u>Vendor Part Number</u>
Start Wdg: 1.66	RVA2AE6D-946
Run Wdg: 0.89	<u>Vendor Name</u>
	ELECTRICA
Start Capacitor	Run Capacitor
Part No: 014-0061-27	Part No: 014-0064-25
Low MFD: 88.0	Low MFD: 45.0
Type:Start Capacitor	Type:Run Capacitor
High MFD: 106.0	High MFD: 0.0
Usage Description: Start Capacitor	Usage Description: Run Capacitor
Volts: 330	Volts: 370

Nomenclature

ZP31K5E-PFV
Family Series
Z: Scroll
Application Range
P: A/C - R-410A/B
Capacity
31K: Capacity Multiplier-1000
Oil Type
E: Polyol Ester
Motor Type
P: 1 Phase/Capacitor Run, Permanent Split Capacitor
Motor Protection
F: Internal Inherent Protection
Voltage
V: 60Hz (208/230-1) 50Hz (-)

Miscellaneous

Alternate Application				
Refrigerant	Freq	Phase	Voltage	Application
No data available in table				
Nomenclature				
ZP31K5E-PFV				
Date	Data Group	Field	Old Data	New Data
22-Apr-2005	Status	Status	P	A
04-Mar-2007	Sound	Sound Ave	66	68
04-Mar-2007	Sound	Sound Max	71	73
22-Apr-2005	Sound	Sound Stop	56	60
22-Apr-2005	Sound	Sound Stop Max	64	69
01-Oct-2008	RatingRefNo	RatingRefNo	05-540	08-1128
22-Apr-2005	RatingRefNo	RatingRefNo	04-556	05-540
30-Sep-2008	Rating	PubCode		Y
15-Apr-2004	Rating	PubCode		O

Date	Data Group	Field	Old Data	New Data
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