

# ZP20K5E-PFV

HFC, R-410A, 60 Hz, 1 - Phase, 208/230 V [Also Available with Variable Frequency Drives](#)

Air Conditioning

**Production Status:** Available for sale to all U.S. customers. Please check with your local 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)	20000	27300
Power (W):	2040	1330
Current (Amps):	8.95	5.95
EER(BTU/Wh):	9.8	20.6
Mass Flow (lbs/hr):	295	336
Sound Data @ 45 / 130		
Sound Power (dBA):	66 Avg	71 Max
Vibration mils(peak-peak):	2.0 Avg	3.0 Max
Record Date:	2020-10-20	
Mechanical		
Displacement (in <sup>3</sup> /Rev):	1.18	
Displacement (ft <sup>3</sup> /Hr):		
Overall Length (in):	9.69	
Overall Width (in):	9.69	
Overall Height (in):	15.27	
Mounting Length (in):	7.50	
Mounting Width (in):	7.50	

<b>Mounting Height (in):</b>	16.02
<b>Suction Size (in),Type:</b>	3 / 4 Stub
<b>Discharge Size (in),Type:</b>	1 / 2 Stub
<b>Initial Oil Charge (oz):</b>	25
<b>Oil Recharge (oz):</b>	21
<b>Net Weight (lbs):</b>	47.4
<b>Internal Free Volume (in^3):</b>	129.6

**Horse Power:**

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

<b>LRA High* (Amps):</b>	58.3
<b>LRA Low*(Amps):</b>	
<b>LRA Half Winding (Amps):</b>	
<b>MCC (Amps):</b>	21
<b>Max Operating Current (Amps):</b>	11.5
<b>RLA, MCC/1.4(use for contactor selection)(Amps):</b>	15.0
<b>RLA, MCC/1.56(use for breaker &amp; wire size selection)(Amps):</b>	13.5
<b>RPM:</b>	3500
<b>Box IP :</b>	21
<b>UL File No:</b>	SA-2337
<b>UL File Date:</b>	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	014-0064-07	35.0	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	
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
13	914-0037-11	1	RUN CAP KIT W/CLAMP	
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
(1) Variable Frequency Drive	EVM-322017- E20ENN	EVM, 3Ø, 200-240v, Output 200-240v@17A, Pro, IP20, Standard, No Options, Frame 2
(1) Variable Frequency Drive	EVH-322017- R54BDB	EVH, 3Ø, 200-240v, Output 200-240v@17A, LCD Keypad, IP54, With 5% DC Link Choke, With Bypass, Frame H3X
(1) Variable Frequency Drive	EVH-322017- R54BEN	EVH, 3Ø, 200-240v, Output 200-240v@17A, LCD Keypad, IP54, With 5% DC Link Choke + EMI Filter, No Options, Frame 2
(1) Variable Frequency Drive	EVH-322017- R54BDN	EVH, 3Ø, 200-240v, Output 200-240v@17A, LCD Keypad, IP54, With 5% DC Link Choke, No Options, Frame 2
(1) Variable Frequency Drive	EVH-322017- R21BEN	EVH, 3Ø, 200-240v, Output 200-240v@17A, LCD Keypad, IP21, With 5% DC Link Choke + EMI Filter, No Options, Frame 2
(1) Variable Frequency Drive	EVH-322017- R21BDN	EVH, 3Ø, 200-240v, Output 200-240v@17A, LCD Keypad, IP21, With 5% DC Link Choke, No Options, Frame 2

Category	Part Number	Description
(1) Variable Frequency Drive	EVH-322017-R21BDB	EVH, 3Ø, 200-240v, Output 200-240v@17A, LCD Keypad, IP21, With 5% DC Link Choke, With Bypass, Frame H2S
(1) Variable Frequency Drive	EVM-322017-E20EFN	EVM, 3Ø, 200-240v, Output 200-240v@17A, Pro, IP20, With add on EMI filter, No Options, Frame 2
(1) Variable Frequency Drive	EVM-322017-N20MFN	EVM, 3Ø, 200-240v, Output 200-240v@17A, Basic, IP20, With add on EMI filter, No Options. Frame 2

## Electrical Components

Electrical Components	
Part No: 071-0512-41	
Usage Description: Internal Protector	
<u>Vendor Part Number</u>	
15HM2458-102	
<u>Vendor Name</u>	
SENSATA	
Part No: 071-0642-04	
Usage Description: Internal Protector	
<u>Vendor Part Number</u>	
UP14HY5245	
<u>Vendor Name</u>	
UBUKATA	
Part No: 071-0642-14	<b>Stator</b>
Usage Description: Internal Protector	Part No: 546-5016-02
<u>Vendor Part Number</u>	Usage Description: Stator
UP14IY524	Resistance: +/-7%
<u>Vendor Name</u>	Start Wdg: 1.64
UBUKATA	Run Wdg: 1.30
<b>Stator</b>	<b>Stator</b>
Part No: 546-5127-01	Part No: 546-5127-02
Usage Description: Stator	Usage Description: Stator
Resistance: +/-7%	Resistance: +/-7%
Start Wdg: 1.64	Start Wdg: 1.64
Run Wdg: 1.30	Run Wdg: 1.30
<b>Stator</b>	<b>Stator</b>
Part No: 546-5131-02	Part No: 846-5016-02
Usage Description: Stator	Usage Description: Stator

Resistance: +/-7%

Start Wdg: 1.83

Run Wdg: 1.50

### Stator

Part No: 846-5016-63

Usage Description: Stator

Resistance: +/-7%

Start Wdg: 1.64

Run Wdg: 1.30

### Stator

Part No: 846-5127-02

Usage Description: Stator

Resistance: +/-7%

Start Wdg: 1.64

Run Wdg: 1.30

### Start Capacitor

Part No: 014-0061-27

Low MFD: 88.0

Type:Start Capacitor

High MFD: 106.0

Usage Description: Start Capacitor

Volts: 330

Resistance: +/-7%

Start Wdg: 1.64

Run Wdg: 1.30

### Stator

Part No: 846-5127-01

Usage Description: Stator

Resistance: +/-7%

Start Wdg: 1.64

Run Wdg: 1.30

### Potential

Part No: 040-0166-37

Usage Description: Potential Relay

Vendor Part Number

RVA2AE6D-946

Vendor Name

ELECTRICA

### Run Capacitor

Part No: 014-0064-07

Low MFD: 35.0

Type:Run Capacitor

High MFD: 0.0

Usage Description: Run Capacitor

Volts: 370

## Nomenclature

ZP20K5E-PFV

### Family Series

**Z:** Scroll

### Application Range

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

### Capacity

**20K:** 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
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No data available in table

## Nomenclature

[ZP20K5E-PFV](#)

Date	Data Group	Field	Old Data	New Data
27-May-2005	Status	Status	P	A
14-Jun-2005	Sound	Sound Max	69	71
27-May-2005	Sound	Sound Max	71	69
27-May-2005	Sound	Sound Stop	60	56
27-May-2005	Sound	Sound Stop Max	69	64
05-May-2005	Sound	Sound Stop	56	60
05-May-2005	Sound	Sound Stop Max	64	69
30-Apr-2006	RatingRefNo	RatingRefNo	04-522	06-383
27-May-2005	RatingRefNo	RatingRefNo	04-552	04-522
26-May-2005	Rating	PubCode		Y