ZR16M3E-TWD

HCFC, R-22, 60 Hz, 3 - Phase, 460 V , Also Available with Variable Frequency Drives

Air Conditioning

Production Status: This compressor and/or application of this compressor is not available to U.S. OEM customers. A field replacement is currently available through a U.S. Emerson Climate Technologies Wholesaler. Please check with your local Emerson Climate Technologies Representative for international availability.

Summary

Performance		
Evaporator Temp. (°F)	45	45
Condensing Temp. (°F)	130	100
Return Gas Temp. (°F)	65	65
Liquid Temp. (°F)	115	85
Capacity (BTU/hr)	154000	181000
Power (W):	13500	9950
Current (Amps):	19.15	14.85
EER(BTU/Wh):	11.4	18.2
Mass Flow (lbs/hr):	2260	2340
Sound Data @		
Sound Power (dBA):	83 Avg	88 Max
Vibration mils(peak-peak):	2.5 Avg	3.5 Max
Record Date:	2007-12-04	

Mechanical	
Displacement (in^3/Rev):	12.47
Displacement (ft^3/Hr):	
Overall Length (in):	12.57
Overall Width (in):	14.06
Overall Height (in):	21.47
Mounting Length (in):	8.65
Mounting Width (in):	8.65

Mounting Height (in):	21.70
Suction Size (in),Type:	1 3 / 8 Stub
Discharge Size (in),Type:	7 / 8 Stub
Initial Oil Charge (oz):	140
Oil Recharge (oz):	137
Net Weight (lbs):	227.0
Internal Free Volume (in^3):	1059
Horse Power:	13.0

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

Electrical

LRA High* (Amps):	158
LRA Low*(Amps):	
LRA Half Winding (Amps):	
MCC (Amps):	38.1
Max Operating Current (Amps):	27.0
RLA, MCC/1.4(use for contactor selection)(Amps):	27.2
RLA, MCC/1.56(use for breaker & wire size selection)(Amps):	24.4
RPM:	3500
Box IP :	54
UL File No:	SA-9747
UL File Date:	1994-07-12

*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-134a HFC	460	3	60	Air Conditioning
R-134a HFC	380/420	3	50	Air Conditioning
R-22 HCFC	380/420	3	50	Air Conditioning

Refrigerant	Voltage	Phase	Frequency	Application
R-407C HFC	460	3	60	Air Conditioning

Service Parts

Service Parts

Reference	Component	Quantity	Description	Comment
1	918-0019-01	1	HEATER-CRANKCASE GROUP	120V 70W WRAP AROUND
1	918-0019-04	1	CRANKCASE HEATER 240V 70W	240V 70W WRAP AROUND
1	918-0019-08	1	CRANKCASE HEATER 480V 70W	480V 70W WRAP AROUND
1	918-0019-09	1	CRANKCASE HEATER 575 60W	575V 70W WRAP AROUND
2	527-0159-00	1	SOFT MOUNT KIT	
7	998-7015-00	1	HEATER JUNCTION BOX KIT-GLACIER/SPECTER	
9	998-0510-90	1	VLV KIT 7/8"SWT / 11/4-12UNC	DISCHARGE
11	998-0010-00	1	SIGHTGLASS KIT	
12	998-0520-00	1	KIT 120/240 V MODULE	120/240 VOLTS
12	998-0520-04	1	MODULE KIT 24 VOLT	24 VOLTS

Accessories

Accessories

Category	Part Number	Description
(1) Variable Frequency Drive	EVM-344031-E20ENN	EVM, 3Ø, 380-480v, Output 380-480v@31A, Pro, IP20, Standard, No Options, Frame 3
(1) Variable Frequency Drive	EVM-344031-N20MNN	EVM, 3Ø, 380-480v, Output 380-480v@31A, Basic, IP20, Standard, No Options, Frame 3

Category	Part Number	Description
(1) Variable Frequency Drive	EVM-344031-N20MFN	EVM, 3Ø, 380-480v, Output 380-480v@31A, Basic, IP20, With add on EMI filter, No Options, Frame 3
(1) Variable Frequency Drive	EVM-344031-E20EFN	EVM, 3Ø, 380-480v, Output 380-480v@31A, Pro, IP20, With add on EMI filter, No Options, Frame 3
(1) Variable Frequency Drive	EVH-344031-R21BDN	EVH, 3Ø, 380-480v, Output 380-480v@31A, LCD Keypad, IP21, With 5% DC Link Choke, No Options, Frame 2
(1) Variable Frequency Drive	EVH-344031-R21BEN	EVH, 3Ø, 380-480v, Output 380-480v@31A, LCD Keypad, IP21, With 5% DC Link Choke + EMI Filter, No Options, Frame 2
(1) Variable Frequency Drive	EVH-344031-R54BDN	EVH, 3Ø, 380-480v, Output 380-480v@31A, LCD Keypad, IP54, With 5% DC Link Choke, No Options, Frame 2
(1) Variable Frequency Drive	EVH-344031-R54BEN	EVH, 3Ø, 380-480v, Output 380-480v@31A, LCD Keypad, IP54, With 5% DC Link Choke + EMI Filter, No Options, Frame 2
(1) Variable Frequency	EVH-344031-R21BDB	EVH, 3Ø, 380-480v, Output 380-480v@31A, LCD Keypad, IP21, With 5% DC Link Choke, With Bypass, Frame H2S

Electrical Components

Electrical Components

Part No: 071-0684-00

Usage Description: Modular Protector

Vendor Part Number

22A620

Vendor Name

KRIWAN

Part No: 071-0684-01

Usage Description: Modular Protector

Vendor Part Number

31A620

Vendor Name

KRIWAN

Part No: 071-0685-00

Usage Description: Modular Protector

Vendor Part Number

22A650 S21

Vendor Name

KRIWAN

Stator

Part No: 046-1216-05

Usage Description: Stator

Resistance: +/-7%

Start Wdg: 0.83

Run Wdg: 0.00

Nomenclature

ZR16M3E-TWD

Family Series

Z: Scroll

Application Range

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

Capacity

16: Capacity

Oil Type

E: Polyol Ester

Motor Type

T: 3 Phase

Motor Protection

W: External Electronic Protection

Voltage

D: 60Hz (460-3) 50Hz (380/420-3)

Miscellaneous

Alternate Application

Refrigerant	Freq	Phase	Voltage	Application
HCFC R-22	50	3 Ø	380/420 V	R1 AC
HFC R-134a	60	3 Ø	460 V	R1 AC
HFC R-134a	50	3 Ø	380/420 V	R1 AC
HFC R-407C	60	3 Ø	460 V	R1 AC
HFC R-407C	50	3 Ø	380/420 V	R1 AC

Nomenclature

ZR16M3E-TWD

Date	Data Group	Field	Old Data	New Data
25-Jun-2003	Sound	Discharge Pulse Max	3	0
25-Jun-2003	Sound	Sound Max	87	88
25-Jun-2003	Sound	Sound Start	0	86
25-Jun-2003	Sound	Sound Start Max	0	94
25-Jun-2003	Sound	Sound Stop	0	79
25-Jun-2003	Sound	Sound Stop Max	0	87
25-Jun-2003	RatingRefNo	RatingRefNo	02-649	03-750
04-Dec-2007	Rating	PubCode	Y	W
25-Jun-2003	Rating	PubCode		Y
29-Jul-2004	Mech	CFH		1515.332632