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Copeland[™]
brand products



EMERSON



Project Report

Refrigerant	R404A Dew Point
High Side Properties:	
Condensing Temperature, °C	45.00
Abs. Condensing Pressure, bar	20.47
Dew Point, °C	45.00
Bubble Point, °C	44.70
Saturated vapour enthalpy, kJ/kg	381.00
Specific volume of saturated vapour, dm ³ /kg	8.50
Liquid Temperature, °C	44.70
Liquid enthalpy, kJ/kg	268.00
Low Side Properties:	
Evaporating Temperature, °C	-10.00
Evaporating Abs. Pressure, bar	4.34
Dew Point, °C	-10.00
Bubble Point, °C	-10.60
With vapour at, °C	0.00
Specific volume, dm ³ /kg	48.00
Enthalpy, kJ/kg	369.00
Operating Conditions:	
Evaporating Temperature, °C	-10.00
Condensing Temperature, °C	45.00
Suction Superheat, K	10.00
Subcooling, K	0.00
Compressor Selected	ZF40K4E-TWD

**PERFORMANCE AT SPECIFIED OPERATING POINT
ZF40K4E-TWD Data at 50 Hz**

Cooling Capacity, kW	20.30
Power, kW	10.20
COP	1.99
Current at 400 V, A	17.92
Suction Mass Flow, g/s	199.50
Heating Capacity, kW	29.90
Isentropic Eff., %	64.04

COMPRESSOR MECHANICAL AND PHYSICAL DATA

Displacement @ 50 Hz, m ³ /h	35.6
Length/Width, mm	316/368
Height, mm	532
Net Weight, kg	103
Gross Weight, kg	110
Rotalock Suction, inch	1 3/4
Rotalock Discharge, inch	1 1/4
Stub Injection, inch	1/4
Oil Quantity, l	4.14
Oil type (original charge)	POE RL32-3MAF
Oil type (approved oils)	POE RL32-3MAF, POE MOBIL EAL Arctic 22 CC
Base mounting (hole dia), mm	220 x 220 (22.4)
Sound Pressure @ 1m (LT), dBA	72
Sound Power (LT), dBA	83
Sound Power with Sound Shell (LT), dBA	72
Sound Conditions (LT, Temperatures: Evap./Cond./Suction at freq./speed)	-35 / 40 / 20 °C at 50 Hz
PED Category	2
Max. Internal Free Volume, l	20.2
High Side PS gauge, bar	32
Low Side PS gauge, bar	22.6
Refrigerant's GWP	3922
Refrigerant's classification	A1

COMPRESSOR ELECTRICAL DATA (380-420 V / 3~ / 50 Hz)

Maximum Operating Current, A	25.1
Locked Rotor Current, A	167
Winding Resistance, ohm	0.83
Default Enclosure Class	IP 54 (IEC 34)

ACCESSORIES INCLUDED

Discharge Temperature Protection	Internal Thermistor
Mounting Grommets	Standard

ACCESSORIES OPTIONAL

Sound Attenuation	Sound Shell (10dBA)
Rotalock valves	suction and discharge
Crankcase Heater	49 W External
Oil Control System	ALCO Trax-Oil OM3
Liquid Injection	Capillary Tube
Mounting Grommets	Hard Mounts for Paralleling

MODEL NO.	A	B	C	D	E	F
ZF24 - ZF33	524.80	484.30	305.60	88.40	54.50	358.80
ZS56 - ZS75	524.80	484.30	305.60	88.40	54.50	OMIT
ZF40	532.40	491.90	305.60	88.40	54.50	366.40
ZS92/ZB92	532.40	491.89	305.60	88.40	54.50	OMIT
ZF24/33KV	524.80	484.30	305.60	88.40	54.50	358.80
ZB56/75	524.80	484.30	305.60	88.40	54.50	OMIT
ZF40KV	532.40	491.90	305.60	88.40	54.50	366.40

