



# Select 8

**Copeland**<sup>™</sup>  
brand products



**EMERSON**<sup>™</sup>



## Project Report

Project Details: New Project

Contact:

Author Name:

Refrigerant	R404A Dew Point
<b>High Side Properties:</b>	
Condensing Temperature, °C	45.00
Condensing Abs. Pressure, bar	20.47
Dew Point, °C	45.00
Bubble Point, °C	44.67
Saturated vapour enthalpy, kJ/kg	381.28
Specific volume of saturated vapour, dm <sup>3</sup> /kg	8.51
Liquid Temperature, °C	44.67
Liquid enthalpy, kJ/kg	267.93
<b>Low Side Properties:</b>	
Evaporating Temperature, °C	-10.00
Evaporating Abs. Pressure, bar	4.34
Dew Point, °C	-10.00
Bubble Point, °C	-10.59
With vapour at, °C	0.00
Specific volume, dm <sup>3</sup> /kg	47.99
Enthalpy, kJ/kg	369.46
<b>Operating Conditions:</b>	
Evaporating Temperature, °C	-10.00
Condensing Temperature, °C	45.00
Suction Superheat, K	10.00
Subcooling, K	0.00
Compressor Selected	ZBD29KCE-TFD

**PERFORMANCE AT SPECIFIED OPERATING POINT  
ZBD29KCE-TFD Data at 50Hz**

Cooling Capacity, kW	6.34
Power, kW	3.10
COP	2.04
Current at 400 V, A	5.28
Suction Mass Flow, g/s	62.50
Heat Rejection, kW	9.29
Isentropic Eff., %	65.76

**COMPRESSOR MECHANICAL AND PHYSICAL DATA**

Displacement @ 50 Hz, m <sup>3</sup> /h	11.4
Length/Width, mm	243/243
Height, mm	463
Net Weight, kg	29.9
Rotalock Suction, inch	1 1/4
Rotalock Discharge, inch	1
Oil Quantity, l	1.36
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	190 x 190 (19.0)
Sound Pressure @ 1m (MT), dBA	58
Sound Power (MT), dBA	69
Sound Power with Sound Shell (MT), dBA	59
Sound Conditions (MT, Temperatures:	-10 / 45 / 20 °C at 50 Hz
Evap./Cond./Suction at freq./speed)	
High Side PS gauge, bar	32
Low Side PS gauge, bar	22.6
Low Side TS Max., °C	50
Low Side TS Min., °C	-35
Refrigerant's GWP	3922
Refrigerant's classification	A1

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

Maximum Operating Current, A	10
Locked Rotor Current, A	48
Winding Resistance, ohm	3.88
Default Enclosure Class	IP 21 (IEC 34)

**ACCESSORIES INCLUDED**

Mounting Grommets	Standard
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**ACCESSORIES OPTIONAL**

Crankcase Heater	70 W External
Discharge Temperature Protection	Discharge line thermostat
Mounting Grommets	Hard Mounts for Paralleling
Solenoid valve	Standard
Oil Control System	ALCO Trax-Oil OM3
Sound Attenuation	Sound Shell (10dBA)
Valve Coil	220V
Valve Coil	24V AC
Solenoid Valve Kit	220 V Ac 12" lead Length
Solenoid Valve Kit	24 V Ac 12" lead Length
Digital Tubing Kit	220 V 0.3m Rotalock
Digital Tubing Kit	24 V 0.3m Rotalock
Digital Control Kit	EC2-552
Digital Control Kit	EC3-652
Digital Driver	EC3-D13

MODEL NUMBER	A	B	C	D	E	F	G
ZBD21KC/KCE	432.4	414.3	363.6	261.6	218.9	75.0	50.0
ZBD29KC/KCE	463.2	445.2	394.3	291.3	249.7	75.0	50.0

