



# Select 8

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



**EMERSON**<sup>™</sup>



## Project Report

Refrigerant	R449A Dew Point
<b>High Side Properties:</b>	
Condensing Temperature, °C	45.00
Abs. Condensing Pressure, bar	18.75
Dew Point, °C	45.00
Bubble Point, °C	40.50
Saturated vapour enthalpy, kJ/kg	413.00
Specific volume of saturated vapour, dm <sup>3</sup> /kg	11.30
Liquid Temperature, °C	40.50
Liquid enthalpy, kJ/kg	261.00
<b>Low Side Properties:</b>	
Evaporating Temperature, °C	-10.00
Evaporating Abs. Pressure, bar	3.58
Dew Point, °C	-10.00
Bubble Point, °C	-15.80
With vapour at, °C	0.00
Specific volume, dm <sup>3</sup> /kg	66.40
Enthalpy, kJ/kg	402.00
<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	ZBD30KCE-TFD

**PERFORMANCE AT SPECIFIED OPERATING POINT**  
**ZBD30KCE-TFD Data at 50 Hz**

Cooling Capacity, kW	6.38
Power, kW	2.90
COP	2.20
Current at 400 V, A	5.15
Suction Mass Flow, g/s	45.40
Heating Capacity, kW	9.13
Isentropic Eff., %	64.97

**COMPRESSOR MECHANICAL AND PHYSICAL DATA**

Displacement @ 50 Hz, m <sup>3</sup> /h	11.7
Length/Width, mm	241/246
Height, mm	481
Net Weight, kg	36.7
Rotalock Suction, inch	1 1/4
Rotalock Discharge, inch	1
Oil Quantity, l	1.89
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 (8.5)
Sound Pressure @ 1m (MT), dBA	59
Sound Power (MT), dBA	70
Sound Power with Sound Shell (MT), dBA	60
Sound Conditions (MT, Temperatures:	-10 / 45 / 20 °C at 50 Hz
Evap./Cond./Suction at freq./speed)	
PED Category	1
Max. Low Side Internal Free Volume, l	6.3
Max. High Side Internal Free Volume, l	0.5
Max. Internal Free Volume, l	6.80
High Side PS gauge, bar	32
Low Side PS gauge, bar	21
Refrigerant's GWP	1397
Refrigerant's classification	A1

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

Maximum Operating Current, A	7.9
Locked Rotor Current, A	51.5
Winding Resistance, ohm	3.64
Default Enclosure Class	IP 21 (IEC 34)

**ACCESSORIES INCLUDED**

Discharge Temperature Protection	NTC sensor
Mounting Grommets	Standard

**ACCESSORIES OPTIONAL**

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

# ZBD 30,38,45 KCE ZBD 28 KCB

