



# Select 8

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



**EMERSON**<sup>™</sup>



## Project Report

Refrigerant	R407C Dew Point
<b>High Side Properties:</b>	
Condensing Temperature, °C	45.00
Abs. Condensing Pressure, bar	17.51
Dew Point, °C	45.00
Bubble Point, °C	40.10
Saturated vapour enthalpy, kJ/kg	425.00
Specific volume of saturated vapour, dm <sup>3</sup> /kg	12.70
Liquid Temperature, °C	40.10
Liquid enthalpy, kJ/kg	260.00
<b>Low Side Properties:</b>	
Evaporating Temperature, °C	-10.00
Evaporating Abs. Pressure, bar	3.20
Dew Point, °C	-10.00
Bubble Point, °C	-16.50
With vapour at, °C	0.00
Specific volume, dm <sup>3</sup> /kg	76.00
Enthalpy, kJ/kg	413.00
<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	ZR310KCE-TWD

**PERFORMANCE AT SPECIFIED OPERATING POINT**  
**ZR310KCE-TWD Data at 50 Hz**

Cooling Capacity, kW	36.60
Power, kW	17.65
COP	2.08
Current at 400 V, A	31.97
Suction Mass Flow, g/s	241.00
Heating Capacity, kW	53.40
Isentropic Eff., %	60.10

**COMPRESSOR MECHANICAL AND PHYSICAL DATA**

Displacement @ 50 Hz, m <sup>3</sup> /h	71.4
Length/Width, mm	447/390
Height, mm	724
Net Weight, kg	160
Gross Weight, kg	188
Rotalock Suction, inch	2 1/4 x 12 UN
Rotalock Discharge, inch	1 3/4 x 12 UN
Stub Suction, inch	1 5/8
Stub Discharge, inch	1 3/8
Oil Quantity, l	6.8
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	266.7 x 266.7 (22.6)
Sound Pressure @ 1m (HT), dBA	74
Sound Power (HT), dBA	85
Sound Conditions (HT, Temperatures:	7 / 54 / 18 °C at 50 Hz
Evap./Cond./Suction at freq./speed)	
PED Category	2
Max. Internal Free Volume, l	34.0
High Side PS gauge, bar	32
Low Side PS gauge, bar	20
Low Side TS Max., °C	52
Low Side TS Min., °C	-35
Refrigerant's GWP	1774
Refrigerant's classification	A1

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

Maximum Operating Current, A	52
Locked Rotor Current, A	272
Winding Resistance, ohm	0.51
Default Enclosure Class	IP 54 (IEC 34)

**ACCESSORIES INCLUDED**

Enclosure Class	IP 54
Discharge Temperature Protection	Internal Thermistor
Discharge Temperature Protection	PTC in Scroll Discharge Port
Oil Charge	
Mounting Grommets	Standard
Oil Service Valve	Schraeder Valve
Check Valve	Discharge Low Leak Check Valve

**ACCESSORIES OPTIONAL**

Mounting Grommets	Rubber Grommet For Parallel Operation
Oil Control System	ALCO Trax-Oil OM3
Mounting Grommets	Rubber Grommet For Single Operation
Crankcase Heater	102 W External
Adapter Kit	R1"3/4 - B1"3/8 For TPTL for Parallel Operation

ZH125,150KCE  
ZP295,385KCE  
ZR310,380KCE

