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brand products



EMERSON[™]



Project Report

Refrigerant	R407C Dew Point
High Side Properties:	
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 ³ /kg	12.70
Liquid Temperature, °C	40.10
Liquid enthalpy, kJ/kg	260.00
Low Side Properties:	
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 ³ /kg	76.00
Enthalpy, kJ/kg	413.00
Operating Conditions:	
Evaporating Temperature, °C	-10.00
Condensing Temperature, °C	45.00
Suction Superheat, K	10.00
Subcooling, K	0.00
Compressor Selected	ZR81KCE-TFD

PERFORMANCE AT SPECIFIED OPERATING POINT
ZR81KCE-TFD Data at 50 Hz

Cooling Capacity, kW	9.33
Power, kW	4.62
COP	2.02
Current at 400 V, A	9.27
Suction Mass Flow, g/s	61.30
Heating Capacity, kW	13.70
Isentropic Eff., %	58.49

COMPRESSOR MECHANICAL AND PHYSICAL DATA

Displacement @ 50 Hz, m ³ /h	18.8
Length/Width, mm	246/246
Height, mm	456
Net Weight, kg	39
Gross Weight, kg	45
Rotalock Suction, inch	1 1/4
Rotalock Discharge, inch	1 1/4
Stub Suction, inch	7/8
Stub Discharge, inch	3/4
Oil Quantity, l	1.77
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 (HT), dBA	61
Sound Power (HT), dBA	72
Sound Power with Sound Shell (HT), dBA	67
Sound Conditions (HT, Temperatures:	7 / 54 / 18 °C at 50 Hz
Evap./Cond./Suction at freq./speed)	
PED Category	1
Max. Internal Free Volume, l	4.20
High Side PS gauge, bar	29.5
Low Side PS gauge, bar	20
Low Side TS Max., °C	50
Refrigerant's GWP	1774
Refrigerant's classification	A1

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

Maximum Operating Current, A	15
Locked Rotor Current, A	101
Winding Resistance, ohm	1.79
Default Enclosure Class	IP 21 (IEC 34)

ACCESSORIES INCLUDED

Discharge Temperature Protection	Internal Thermodisk
Mounting Grommets	Standard

ACCESSORIES OPTIONAL

Crankcase Heater	70 W External
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MODEL NUMBER
ZR81KC/KCE-TFD, TFE, TF5, TF7

