



Refrigerant	R449A Dew Point
<b>High Side Properties:</b>	
Condensing Temperature, °C	45.00
Abs. Condensing Pressure, bar	18.86
Dew Point, °C	45.00
Bubble Point, °C	40.70
Saturated vapour enthalpy, kJ/kg	414.00
Specific volume of saturated vapour, dm <sup>3</sup> /kg	11.30
<b>Low Side Properties:</b>	
Evaporating Temperature, °C	-35.00
Evaporating Abs. Pressure, bar	1.29
Dew Point, °C	-35.00
Bubble Point, °C	-40.70
With vapour at, °C	20.00
Specific volume, dm <sup>3</sup> /kg	213.00
Enthalpy, kJ/kg	425.00
<b>Operating Conditions:</b>	
Evaporating Temperature, °C	-35.00
Condensing Temperature, °C	45.00
Suction Return Temperature, °C	20.00
Subcooling, K	0.00
Compressor Selected	ZF13K4E-TFD

**PERFORMANCE AT SPECIFIED OPERATING POINT  
ZF13K4E-TFD Data at 50 Hz**

Cooling Capacity, kW	2.29
Power, kW	2.35
COP	0.97
Current at 400 V, A	4.41
Suction Mass Flow, g/s	14.05
Heating Capacity, kW	4.52

**COMPRESSOR MECHANICAL AND PHYSICAL DATA**

Displacement @ 50 Hz, m <sup>3</sup> /h	11.7
Length/Width, mm	246/251
Height, mm	442
Net Weight, kg	38
Gross Weight, kg	41
Rotalock Suction, inch	1 1/4
Rotalock Discharge, inch	1
Oil Quantity, l	1.9
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 (LT), dBA	65
Sound Power (LT), dBA	76
Sound Conditions (LT, Temperatures: Evap./Cond./Suction at freq./speed)	-35 / 40 / 20 °C at 50 Hz
PED Category	1
Max. Internal Free Volume, l	6.10
High Side PS gauge, bar	28.8
Low Side PS gauge, bar	21
Low Side TS Max., °C	50
Refrigerant's GWP	1397
Refrigerant's classification	A1

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

Maximum Operating Current, A	8
Locked Rotor Current, A	51.5
Winding Resistance, ohm	3.64
Default Enclosure Class	IP 21 (IEC 34)

**ACCESSORIES INCLUDED**

Discharge Temperature Protection	Discharge line thermostat
Mounting Grommets	Standard

***ACCESSORIES OPTIONAL***

Crankcase Heater	70 W External
Current Sensing Relay	External
Liquid Injection	DTC Valve
Oil Control System	ALCO Trax-Oil OM3
Sound Attenuation	Sound Shell (10dBA)
Rotalock valves	suction and discharge

MODEL NUMBER	A±3.0	B±3.0	E	F	G <sub>-</sub>	H
ZF13K4 / K4E ZF15K4 / K4E ZF18K4 / K4E	442.0	409.6	79.5	340.9	47.5	120.2
ZS30K4 / K4E ZS38K4 / K4E ZS45K4 / K4E	437.7	409.6	79.5	OMIT	47.5	OMIT
ZB30KC / KCE ZB38KC / KCE ZB42KC / KCE ZB45KC / KCE						

LIQUID INJECTION FITTING  
[11/16-16 UN-2A THREADS]  
[0.25 ID]

25.4 [1.00-14] THREAD  
ROTALOCK SPUD  
DISCHARGE

31.75 [1.250-12] THREAD  
ROTALOCK SPUD  
SUCTION

