



Date: Mar 10, 2024

Job: AWIC 14X14 FREEZER SINGLE PHASE

Customer: AWIC 14X14 FREEZER SINGLE PHASE

Customer Details: -

General Contractor: -

Submitted By: -



14X14 FREEZER - Box Load Calculation

General Requirements

Room Temperature: **-5 °F** Ambient Temperature: **95 °F** Design Run-time: **18 Hrs** Required Capacity: **14,091 BTUH**

Area Load

Section	Material	Thickness	X - Factor	Surface Temp	Dim. 1	Dim. 2	Load
Wall 1	Polyurethane	4 in	0.1	95 °F	14 ft	8 ft	9,408 BTU
Wall 2	Polyurethane	4 in	0.1	95 °F	14 ft	8 ft	9,408 BTU
Wall 3	Polyurethane	4 in	0.1	95 °F	14 ft	8 ft	9,408 BTU
Wall 4	Polyurethane	4 in	0.1	95 °F	14 ft	8 ft	9,408 BTU
Ceiling	Polyurethane	4 in	0.1	110 °F	14 ft	14 ft	18,933.6 BTU
Floor	Polyurethane	4 in	0.1	65 °F	14 ft	14 ft	11,524.8 BTU
Total Area Load:							68,090.4 BTU

Product Load - Auto Usage Selected

Total Product Load: **30,105.6 BTU**

Air Change Load

Dry Bulb: 87.6 °F	Wet Bulb: 71.7 °F	
Door Type 1: Man	Number of Door Type 1: 1	Door Usage: Average
Door Type 1: Curtains: None	Door Type 1 Curtain Efficiency: 0%	Total Door Type 1 Load: 16,800 BTU
		Total Air Change Load: 82,720 BTU

Miscellaneous Load

People Load: 33,600 BTU	Lighting Load: 16,064.2 BTU	Motor Load: 0 BTU
Other Load: 0 BTU	Total Misc. Load: 49,664.2 BTU	

Load Calculation Summary

Total Design Load: **230,580.2 BTU** Safety Factor: **10%** Total Required Load: **253,638.2 BTU**

14X14 FREEZER - System Design Summary

General Requirements

Room Temperature: -5 °F	Ambient Temperature: 95 °F	Design Run-time: 18 Hrs	Required Capacity: 14091 BTUH
Design TD: 10 °F	Refrigerant: R-448A	Altitude: 0 FT	

Selected Equipment

Line Item	Quantity	Type	Tag	Description
1.0	1	System	14X14 FREEZER	R-448A - Refrigeration Equipment Match 1
1.1	1	Condensing Unit	CDU-1	RFO400L4SDB
1.2	1	Unit Cooler	UC-1	RL6E121DDA

System Balance

Balanced Capacity: 14,738.7 BTUH	Evap. T.D.: 10.2 °F	Line Loss: 2 °F	Suction Temp: -17.2 °F	Calc. Run-Time: 17.2 Hrs
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14X14 FREEZER - CDU-1 - Product Information**General Data**

Model Line: NEXT-GEN MINI-CON	Model Number: RFO400L4SDB	Flooded: Yes
Refrigerant: R-448A	Voltage: 208-230/1/60	Compressor Type: SCROLL

Performance Data

Ambient Temp: 95 °F	Suction Temp: -17 °F	Capacity: 14,220 BTUH
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Electrical Data

Compressor RLA: 22.4	Compressor LRA: 129	Total Condenser Fan FLA: 3.1
MCA: 44.1	MOPD: 60	

Physical Data

Number of Compressors: 1	Compressor Model: ZF13K4E	Compressor HP: 4
Number of Condenser Fans: 1	Approx. Ship Weight: 352 lbs	Sound Data: 73 dBA
Liquid Line: 1/2 in.	Suction Line: 1 1/8 in.	
Pump Down Capacity (%): 90	Pump Down Capacity: 29.4 lbs	

Option Data

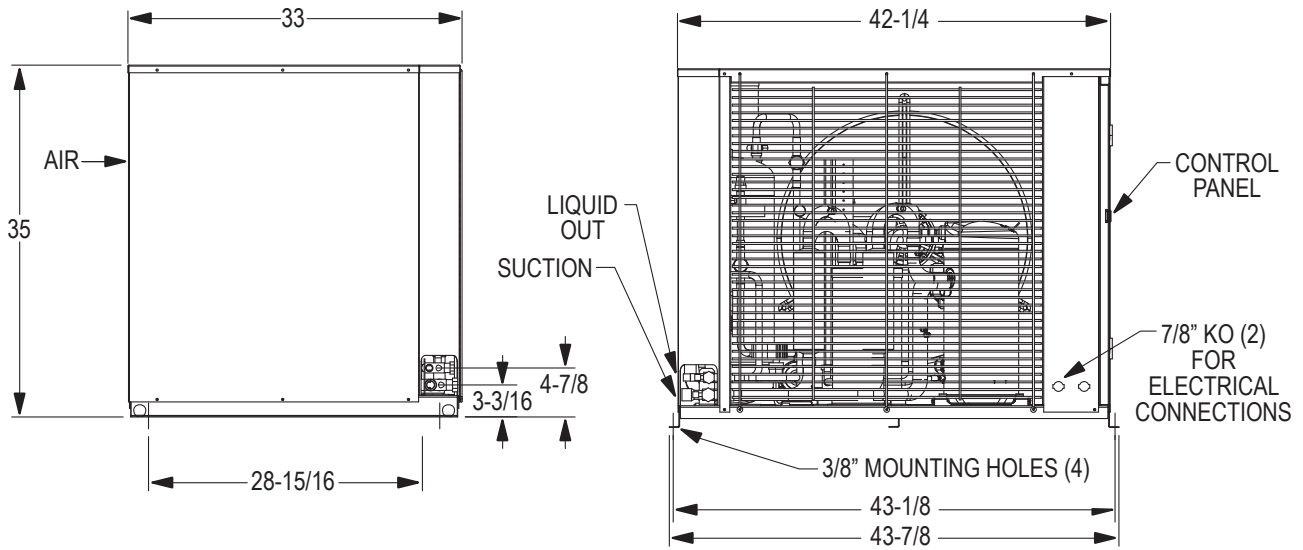
Mounted Option	ADD/MODIFY DEFROST KIT: ED5
Mounted Option	LIQUID LINE WITH COMPONENTS: SEALED FILTER & SIGHT GLASS
Mounted Option	STANDARD RECEIVER
Mounted Option	FIXED HIGH/ADJUSTABLE LOW PRESSURE CONTROL

Compliance Data

AWEF: **3.15**

Notes

Dimensional Drawing



Standard Features

- All-weather Galvanized steel painted housing
- Generously sized high efficiency condenser, enhanced copper tubes/aluminum fins
- Integral Liquid Subcooling Circuit provides subcooled liquid to the expansion device
- Crankcase heater
- Large electrical panel with hinged/removable door
- Color coded point-to-point wiring
- Quick access to shut off valves from exterior
- UL/cUL certified for use with multiple refrigerants
- UL/cUL listed for outdoor use
- Flooded models include flooded head pressure control
- Non flooded models include mild ambient fan cycle control

Certifications



14X14 FREEZER - UC-1 - Product Information**General Data**

Model Line: NEXT-GEN ALL-TEMP	Model Number: RL6E121DDA	Motors: DUAL SPEED EC MOTOR
Unit Voltage: 208-230/1/60	Defrost Type: ELECTRIC DEFROST	Refrigerant: R-448A
Fins Per Inch: 6	Number of Fans: 3	

Performance Data

Suction Temp: -15 °F	T.D: 10.2 °F	Capacity: 14,738.7 BTUH	CFM: 2355
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Electrical Data

Motor Voltage: 208-230/1/60	Total Unit Fan Motor Amps: 1.5	
Heater Voltage: 208-230/1/60	Heater Amps: 14.3	Heater Watts: 3300
MCA: 15	MOPD: 20	

Physical Data

Liquid Line: 3/8 in.	Suction Line: 1-1/8 in.	Approx. Ship Weight: 78 lbs
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Option Data

Mounted Option	EcoNet Control Package
Mounted Option	Fixed Defrost Control / Fan Delay Switch

Compliance Data

AWEF: **4.15**

Notes

