

Submittal Data: 24RLXFZH
Inverter Driven Heat Pump

24,000 BTU Multi-Zone System

Job Name: Martin Braun

Date: 4-27-15

Location: 265 Pleasant Ave, Peaks Island

Approval: _____

Engineer: n/a

Construction: _____

Submitted to: City of Portland

Unit #: _____

Submitted by: Joggin Energy

Drawing #: _____

Reference: n/a

General Features

- Refrigerant Type R410A
- Extra long piping allotment
- Wired and wireless remote controllers
- Automatic airflow adjustment
- Economizer operation
- Base pan heater
- 5- Years Parts, 7-Years Compressor Warranty (See Warranty Statement for details)
- 24 hr. Timer
- Low operating temperature

Model Information

Condenser..... AOU24RLXFZH
 Evaporator*1..... (ASU) / (ARU) / (AGU) / (AUU) 7,9,12RLF(1)
 Connectable indoor units..... 2 - 3
 Total capacity range..... 14,000 – 27,000 Btu/h
Electrical..... 208/230V AC 1ph-60Hz
 Available Voltage Range..... 208/230 +/- 10%
 Minimum Circuit Ampacity..... 25.1 A
 Max Fuse Size..... 30 A
 Max Starting Current..... 8.3 A

Input Power

Cooling..... (non-duct) 1.65 kW / (ducted) 1.81 kW / (mix) 1.74 kW
 Heating..... (non-duct) 1.81 kW / (ducted) 1.89 kW / (mix) 1.85 kW

Current

Cooling..... (non-duct) 7.2 A / (ducted) 7.9 A / (mix) 7.6 A
 Heating..... (non-duct) 7.9 A / (ducted) 8.3 A / (mix) 8.1 A

Capacity

Nominal Cooling..... 22,000 Btu/h
 Min-Max Cooling..... 6,100 – 27,000 Btu/h
 Nominal Heating..... 25,000 Btu/h
 Min-Max Heating..... 6,800 – 29,800 Btu/h

Compressor

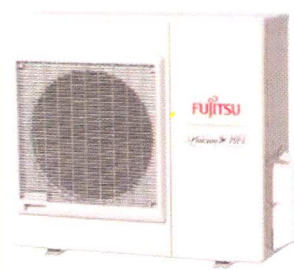
..... Rotary (inv x1)
 Motor Output..... 2,100 W
 Refrigerant..... R410a
 Charge..... 4 lbs. 14 oz
 Oil..... RB68

Fan Motor

(Condenser) Type: DC..... Propeller x1
 (Condenser) Motor Output..... 100 W
 (Evaporator) Type: DC..... (wall-mount) Cross flow
 (compact cassette) Turbo
 (ducted) Sirocco
 (floor) Cross flow x2
 (Evaporator) Motor Output..... (wall) 30W-42W (compact cassette) 54W (ducted) 80-81W
 (floor) 16W

Heat Exchanger

Dimensions
 (H x W x D) in. (mm)..... 31-7/16 x 35-7/16 x 1-7/16 (798x900x36.38)
 Fin Pitch..... 20 FPI
 Rows x Stages..... 2 x 38
 Pipe Type (Material)..... Copper
 Fin Type (Material)..... Aluminum



Operation Temperature Range

Cooling..... 14°F - 115°F (-10°C - 46°C)
 Heating..... -15°F - 75°F (-26°C - 24°C)

Efficiency

SEER*2..... (wall-mount) 20 (duct) 18 (mix) 19
 EER (cooling)..... (wall-mount) 13.3 Btu/W (duct) 12.1 Btu/W (mix) 12.7 Btu/W
 COP (heating)..... (wall-mount) 4.04 W/W (duct) 3.87 W/W (mix) 3.96 W/W
 HSPF (heating)..... (wall-mount) 10.3 (duct) 9 (mix) 9.7

Enclosure (Condenser)

Material..... Painted galvanized steel
 Color..... Beige (10 YR 7.5/1.0 NN)

Sound Pressure Level

Condenser..... 52 dB(A)

Dimensions

H x W x D
 Condenser
 Net in. (mm)..... 32-11/16 x 35-7/16 x 13 (830x900x330)
 Gross in. (mm)..... 38-3/16 x 41-5/16 x 17-1/2 (970x1,050x445)

Connection Pipe

Liquid..... 1/4" x3
 Gas..... 3/8" x2 + 1/2" x1
 Method (Liquid/Gas)..... Brazing
 Max Length (Pre-charge)..... 229ft. (70m) / (98 ft. {30m})
 Max Height Difference..... 49 ft. (15m)

Weight

Condenser..... 146 lbs. (66 kg)
 Evaporators..... (wall-mount) 19 lbs. - 31 lbs.
 (compact cassette) 33 lbs.
 (ducted) 37 lbs. - 49 lbs.
 (floor) 31 lbs.

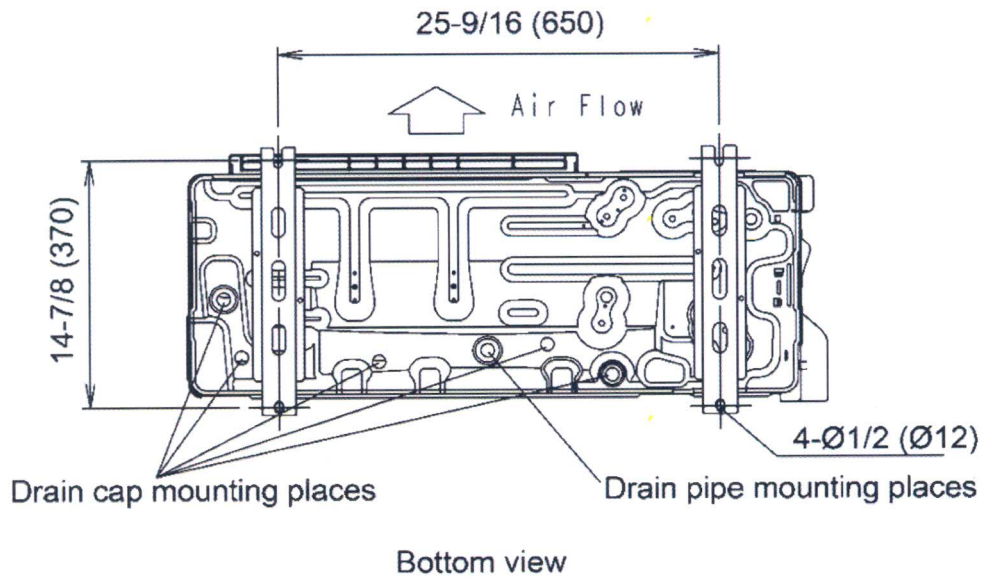
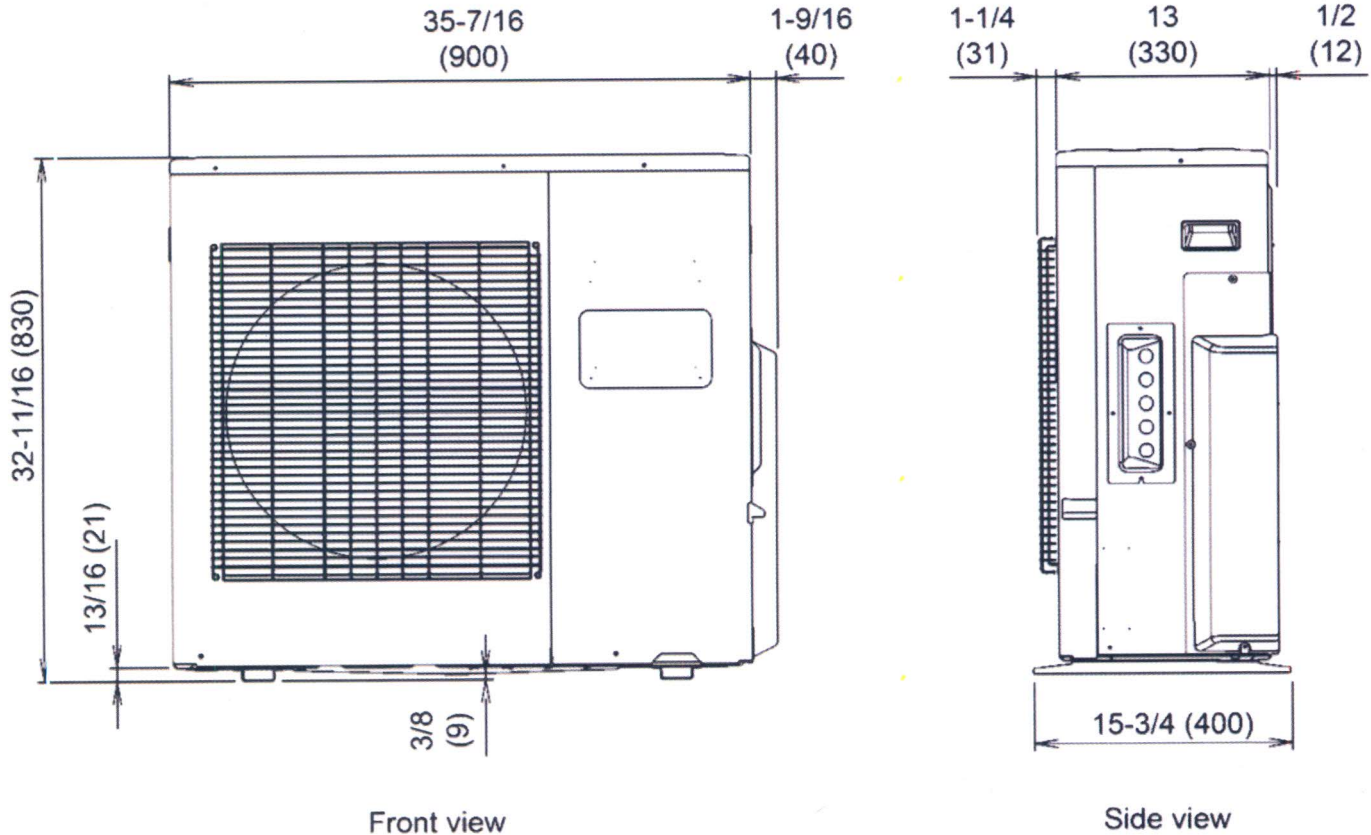
Accessories

Wired Remote Controller..... UTY-RVNUM
 Wired Remote Controller..... UTY-RNNUM
 Simple Remote Controller..... UTY-RSNUM

*1 Reference brochure for approved combinations. *2 Test conditions are based on AHRI 210/240
 Note: Specifications are based on the following conditions: Cooling: Indoor temperature of 80°F (26.7°C) DB/67°F
 (19.4°C) WB, and outdoor temperature of 95°F (35°C) DB/75°F (23.9°C) WB. Heating: Indoor temperature of 70°F
 (21.1°C) DB/59°F (15°C) WB, and outdoor temperature of 47°F (8.33°C) DB/43°F (6.11°C) WB. Pipe length: 24ft.
 7in (7.5m). Height difference: 0ft. (0m) (Outdoor unit – indoor unit)

Dimensions: 24RLXFZH

[Unit: in. (mm)]



**Submittal Data: 15RLS3H
Inverter Driven Heat Pump**

15,000 BTU Heat Pump System

Job Name: Martin Braun

Date: 4-22-15

Location: 265 Pleasant Ave, Peaks Island

Approval: _____

Engineer: n/a

Construction: _____

Submitted to: City of Portland

Unit #: _____

Submitted by: Doggen Energy

Drawing #: _____

Reference: n/a

General Features

- Refrigerant Type R410A
- Human Sensor
- Wired and wireless remote controllers
- Double swing automatic
- Automatic airflow adjustment
- Low noise mode
- Powerful mode
- 5- Years Parts, 7-Years Compressor Warranty (See Warranty Statement for details)
- Program timer
- Weekly time

Model Information

Outdoor..... AOU15RLS3H
Indoor..... ASU15RLS3

Electric..... 208/230V AC 1ph-60Hz
Available Voltage Range..... 208/230 +/- 10%
Minimum Circuit Ampacity..... 18.2 A
Max Fuse Size..... 20A
Max Starting Current..... 5.2 A

Input Power

Cooling..... 1.04 kW
Heating..... 1.15 kW

Running Current

Cooling..... 4.8 A
Heating..... 5.2 A

Capacity

Nominal Cooling..... 15,000 Btu
Min-Max Cooling..... 3,100-18,400 Btu/h
Nominal Heating..... 18,000 Btu/h
Min-Max Heating..... 3,100-23,900 Btu/h

Compressor

..... Rotary (inv x1)
Motor Output..... 1,000 W
Refrigerant..... R410a
Charge..... 3 lbs. 1 oz
Oil..... FREOL a68SZ

Fan Motor

(Condenser) Type: DC..... Propeller x 1
(Condenser) Motor Output..... 49 W
(Evaporator) Type: DC..... Cross flow fan x 1
(Evaporator) Motor Output..... 61 W

Heat Exchanger {Condenser (C) Evaporator (E)}

Dimensions (H x W x D)
Condenser..... 23-1/8 x 34-11/16 x 1-7/16 in. (588x881x36.4 mm)
Evaporator..... Main 15-1/8 x 28-3/8 x 1-3/16 in. (384x720x30) Sub 3-5/16 x 28-3/8 x 1/2 in. (84x720x13.3 mm) 4-15/16 x 28-3/8 x 1/2 in. (126x720x13.3 mm)
Fin Pitch..... 20 FPI (C) Main 21 FPI Sub 18 FPI (E)
Rows x Stages..... 2 x 28 (C) Main 3 x 24 Sub 1 x 10 (E)
Pipe Type (Material)..... Copper (C) Copper (E)
Fin Type (Material)..... Aluminum (C) Aluminum (E)

Note: Specifications are based on the following conditions
Cooling: Indoor temperature of 80°F (26.7°C) DB/67°F (19.44°C) WB, and outdoor temperature of 95°F (35°C) DB/75°F (23.9°C) WB.
Heating: Indoor temperature of 70°F (21.1°C) DB/59°F (15°C) WB, and outdoor temperature of 47°F (8.33°C) DB/43°F (6.11°C) WB.
Pipe length: 241' 7in (7.5m). Height difference: 0ft (0m) (Outdoor unit - indoor unit)



Operation Temperature Range

Cooling..... 14°F (-10°C) to 115°F (46°C)
Heating..... -15°F (-26°C) to 75°F (24°C)

Efficiency

SEER..... 25.3
EER (cooling)..... 4.09 kW/kW
COP (heating)..... 4.59 kW/kW / 15.7 Btu/hW
HSPF (heating)..... 13.4 Btu/hW

Enclosure (Condenser)

Material..... Painted galvanized steel
Color..... Beige (10 YR 7.5/1.0 NN)

Sound Pressure Level

Outdoor..... 49 dB(A)
Indoor..... 45 dB(A)

Dimensions

H x W x D
Outdoor in. (mm)..... 24-1/2 (620) x 31-1/8 (790) x 11-7/16 (290)
Indoor in. (mm)..... 11- 5/8 (295) x 37 (940) x 10-5/8 (270)

Connection Pipe

Liquid..... 1/4" / 6.35 mm Flare
Gas..... 1/2" / 12.7 mm Flare
Method (Liquid/Gas)..... Brazing
Max Length (Pre-charge)..... 66 ft.(20 m) / (49 ft. {15 m})
Max Height Difference..... 49 ft. (15 m)

Weight

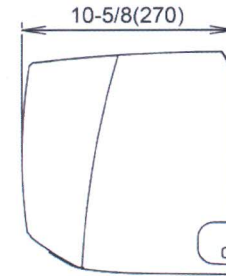
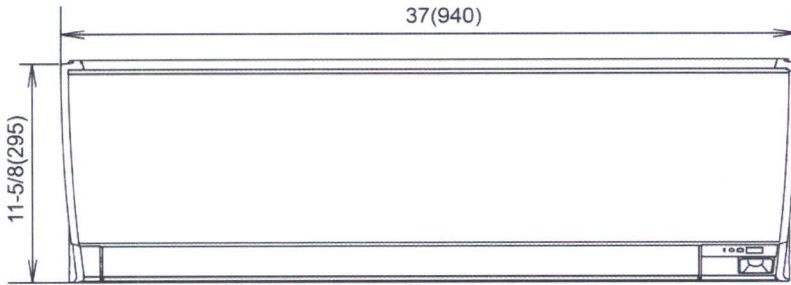
Outdoor..... 88 lbs (40 kg)
Indoor..... 31 lbs (14 kg)

Accessories

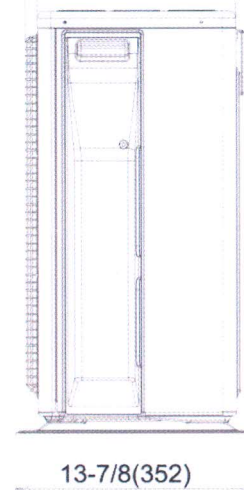
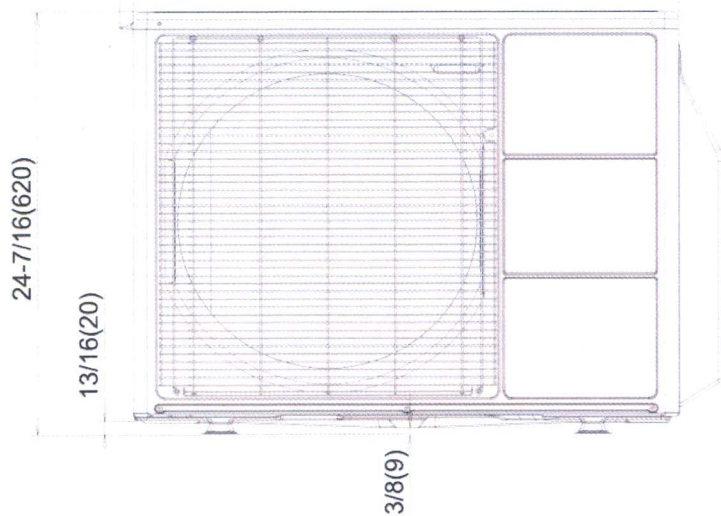
Wired Remote Controller..... UTY-RVNUM
Wired Remote Controller..... UTY-RNNUM
Simple Remote Controller..... UTY-RSNUM
Communication Kit..... UTY-TWBXF1
External Connection Kit..... UTY-XWZZ5

Dimensions: 15RLS3H

[Unit: in. (mm)]



3/4(19) 31-1/8(790) 2-5/8(67) 11/16(18) 11-5/16(288) 7/8(23)

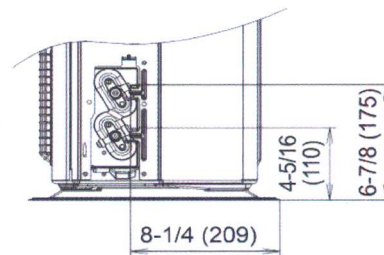
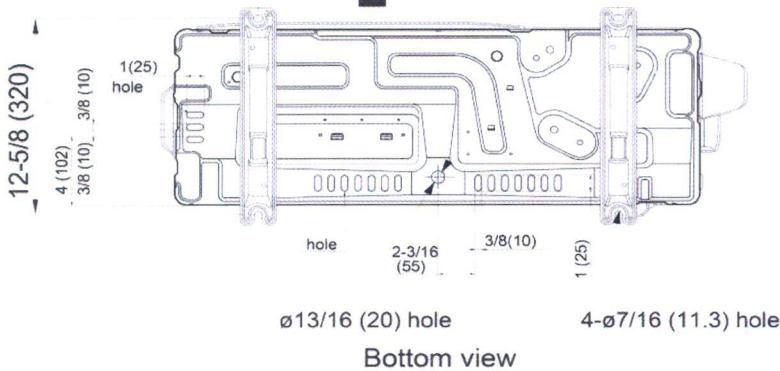


Front view

Side view

21-1/4 (540)

Air flow



Bottom view