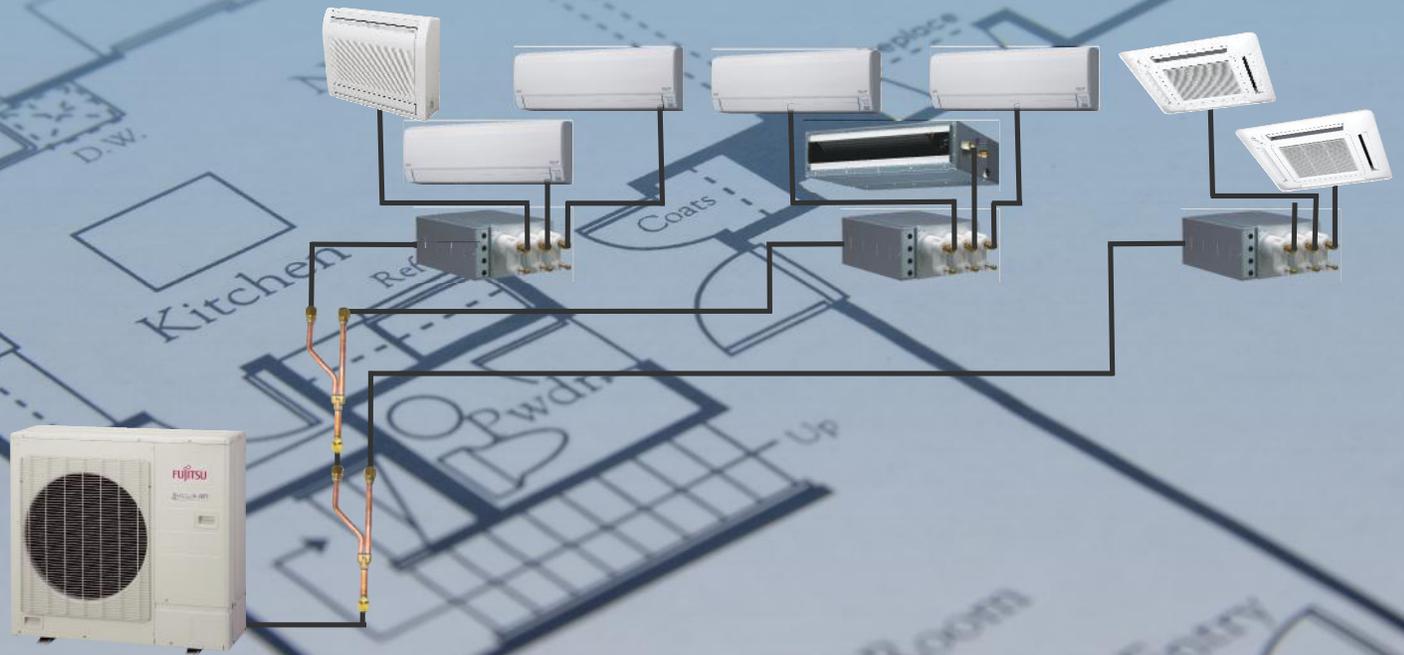# FUJITSU

Halcyon HFI
Hybrid Flex Inverter

Hybrid Flex Inverter Systems
48,000 BTU 8-Zone Mix & Match Flexibility
AOU48RLXFZ1

MULTI ZONE
MINI-SPLIT SYSTEMS

Revolutionary Halcyon HFI systems are changing the way we define comfort

flex
48,000 BTUs

- Operate as few as one indoor unit or all indoor units

- Choose from 4 indoor unit styles - wall mount including new RLF1 models and Designer Series RLS2 models, slim duct, compact cassette, and floor mount

- Create over 56,000 combinations based on indoor type and BTU

- Connect 2 to 8 indoor units

- Connect 39,000 to 62,000 BTU

- 80 to 130% connectable capacity

- Branch boxes and separation tubes required

7 Year Compressor / 5 Year Parts WARRANTY

INVERTER

Refrigerant R410A

What is a Hybrid?

The blending of a complex VRF system with the simplicity of a multi-zone system to create a new hybrid solution that shares the best of both systems.

Why Flex?

The ability to create the right combinations, the right quantity (up to 8-zones), the right style indoor units, and the right capacity. It's the right choice for your home or business.

Why Inverter?

An Inverter is a system that controls the rotational speed (not just an ON/OFF signal) of an electric motor by adjusting the frequency and voltage of the electrical power supplied to the motor. The inverter constantly regulates the compressor speed to its optimum energy usage, producing higher refrigerant performance with less power consumption.

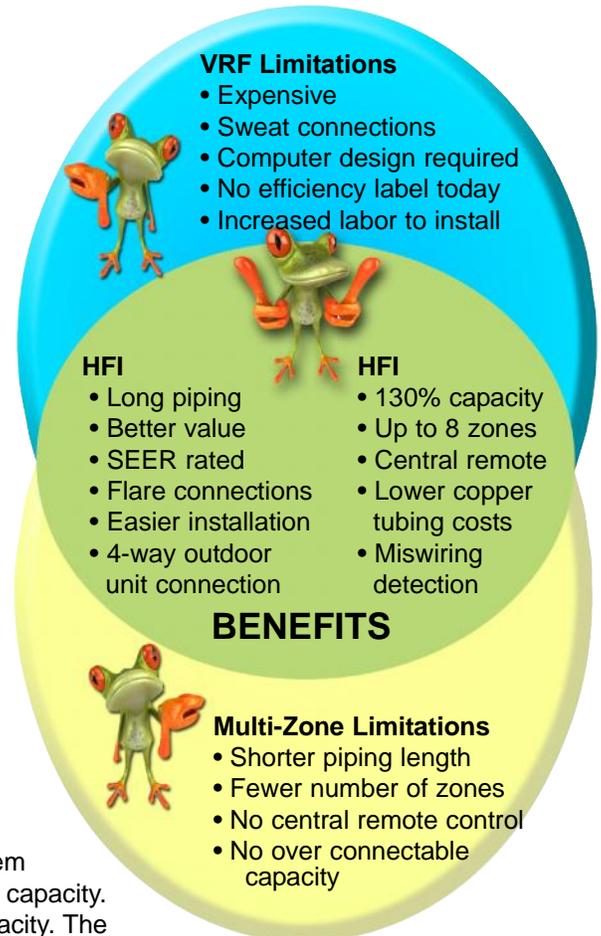## 130% Connectable Capacity (AOU48RLXFZ1 Only)

The HFI system is rated at 48,000 BTUs but you can connect up to 130%, or 62,000 BTUs of rated indoor unit capacity to the AOU48RLXFZ1. Connectable capacity allows you to connect indoor units that can exceed outdoor unit capacity. However, if you connect indoor units that exceed 100% of the outdoor unit's capacity there are limitations.

If all indoor units are cooling or heating at the same time, the system will limit their capacity so that their total matches the outdoor unit's capacity. When a zone meets a desired set temperature it requires less capacity. The unused capacity is then distributed to the remaining indoor units, increasing their capacity.

For Example: The load on a small 2-story office building with a business downstairs and worker apartments upstairs is 62,000 BTUs (38,000 BTUs downstairs and 24,000 BTUs upstairs) but the workers aren't upstairs and downstairs at the same time, therefore not all units will be running simultaneously allowing 100% heating or cooling to occupied spaces.

VRF Limitations
- Expensive
- Sweat connections
- Computer design required
- No efficiency label today
- Increased labor to install

HFI
- Long piping
- Better value
- SEER rated
- Flare connections
- Easier installation
- 4-way outdoor unit connection

HFI
- 130% capacity
- Up to 8 zones
- Central remote
- Lower copper tubing costs
- Miswiring detection

BENEFITS

Multi-Zone Limitations
- Shorter piping length
- Fewer number of zones
- No central remote control
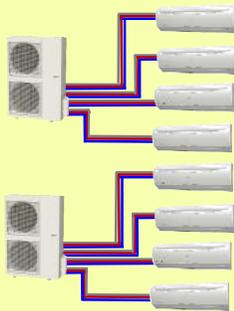- No over connectable capacity

HFI vs. Multi vs. VRF

AHRI defines VRF as having three main features: (1) a variable speed compressor, (2) a computerized control individual zoning system and (3) optimized refrigerant path of installation.

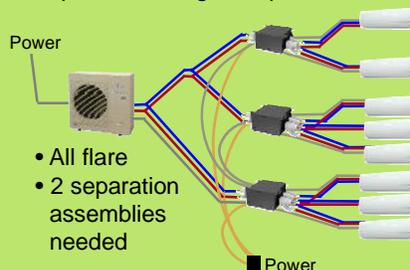**TYPICAL INVERTER MULTI-ZONE**
- Variable speed compressor
- Computerized zone control
- With the expansion valves mounted in the outdoor unit, it does not have an optimized refrigerant path.

- 2 outdoor units needed
- No separation tube assemblies needed
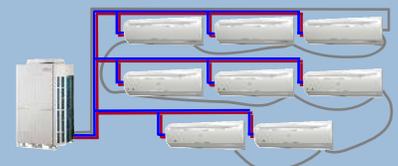
Halcyon Hybrid Flex Inverter
- Variable speed compressor
- Computerized zone control
- Remotes expansion valves from the outdoor unit to mid-stream in the refrigerant piping, creating a semi-optimized refrigerant path.

Power

- All flare
- 2 separation assemblies needed

Power

TYPICAL INVERTER VRF SYSTEM
- Variable speed compressor
- Computerized zone control
- Expansion valves are mounted either within or near the indoor unit, and engineered piping maximizes compressor efficiency to create an optimized refrigerant path.

- All sweat connections
- 7 separation assemblies needed

Individual Zoning: Personalized Whole Home Comfort

Halcyon HFI Systems are some of today's most advanced forms of heating and air conditioning. Multi-zone outdoor units can operate from 2 to 8 indoor units simultaneously. Fujitsu's HFI Systems are super quiet as well as highly energy efficient. Choose from 4 indoor unit styles.

Wall Mounted

They mount high on a wall, out of sight and do not require ductwork, increasing energy efficiency.
- Quiet operation
- Easy maintenance
- High delivered efficiency means lower utility bills

Slim Duct

Mounted in a ceiling or in a framed enclosure below a ceiling. They use minimal ductwork and remain very energy efficient.
- Concealed and out of sight
- Look of central air with the efficiency of a mini-split
- Less ducts = higher efficiency

Compact Cassette

Cassettes are extremely discreet, with only the grille showing in the ceiling. They use the latest fan technology to distribute the conditioned air evenly.
- Wired remote control (wireless is optional)
- Powerful turbo fan operation
- Fits into a standard 2' x 2' ceiling grid

Floor Mounted

Floor mount systems are ideal for residential radiator replacements or any room with limited upper wall space, like a kitchen or sunroom.
- Compact size fits easily under a standard window
- Features twin airflow for improved heat delivery
- Designer wireless remote control

Mix and Match Flexibility

flex
48,000 BTUs

*The ability to create the right combinations,
the right quantity (up to 8-zones),
the right style indoor units,
and the right capacity.*

*It's the RIGHT choice
for your home or business.*

AOU48RLXFZ1

Wall Mounts

ASU7, 9, 12RLF1

ASU9, 12RLS2

ASU15RLS2

ASU18RLF

ASU24RLF

Slim Ducts

ARU7, 9, 12RLF

ARU18RLF

ARU24RLF

Floor Mounts

AGU9, 12RLF

AGU15RLF

Separation Tubes, Branch Boxes

UTP-SX248A

UTP-PU03A, UTP-PU03B

Compact Cassettes

AUU7, 9, 12RLF

AUU18RLF

Halcyon HFI
Hybrid Flex Inverter

Wall Mounted 7, 9, 12, 18 and 24,000 BTUs

ASU7RLF1, ASU9RLF1, ASU9RLS2, ASU12RLF1, ASU12RLS2, ASU15RLS2, ASU18RLF, ASU24RLF

NEW!

ASU7, 9, 12RLF1   **ASU18, 24RLF**   **ASU9, 12, 15RLS2**

	ASU7RLF1	ASU9RLF1	ASU12RLF1	ASU18RLF	ASU24RLF	Designer Series		
						ASU9RLS2	ASU12RLS2	ASU15RLS2
	Heat Pump NEW!	Heat Pump NEW!	Heat Pump NEW!	Heat Pump	Heat Pump	Heat Pump*	Heat Pump*	Heat Pump*
Nominal Cooling *BTU/h*	7,000	9,000	12,000	18,000	24,000	9,000	12,000	14,000
Nominal Heating *BTU/h*	8,100	10,200	13,500	20,000	27,000	10,200	13,500	16,300
Voltage/Frequency/Phase	208-230/60/1	208-230/60/1	208-230/60/1	208-230/60/1	208-230/60/1	208-230/60/1	208-230/60/1	208-230/60/1
Air Circ. *C.F.M. (m³/h)*: Hi	Clg 330 (560) Htg 330 (560)	Clg 353 (600) Htg 353 (600)	Clg 388 (660) Htg 388 (660)	Clg 542 (920) Htg 542 (920)	Clg 659 (1,120) Htg 647 (1,100)	Clg 353 (600) Htg 353 (600)	Clg 388 (660) Htg 388 (660)	Clg 418 (710) Htg 418 (710)
Medium	Clg 294 (500) Htg 294 (500)	Clg 306 (520) Htg 306 (520)	Clg 330 (560) Htg 330 (560)	Clg 436 (740) Htg 436 (740)	Clg 530 (900) Htg 530 (900)	Clg 324 (550) Htg 324 (550)	Clg 353 (600) Htg 353 (600)	Clg 377 (640) Htg 377 (640)
Low	Clg 253 (430) Htg 253 (430)	Clg 253 (430) Htg 253 (430)	Clg 265 (450) Htg 277 (470)	Clg 365 (620) Htg 365 (620)	Clg 436 (740) Htg 436 (740)	Clg 277 (470) Htg 277 (470)	Clg 312 (530) Htg 312 (530)	Clg 336 (570) Htg 347 (590)
Quiet	Clg 182 (310) Htg 194 (330)	Clg 182 (310) Htg 194 (330)	Clg 182 (310) Htg 194 (330)	Clg 324 (550) Htg 324 (550)	Clg 365 (620) Htg 365 (620)	Clg 194 (330) Htg 194 (330)	Clg 194 (330) Htg 194 (330)	Clg 230 (390) Htg 253 (430)
Noise Level *dB(A)* (Clg/Htg): Hi	36/36	37/37	40/40	43/44	49/48	36/36	37/37	41/41
Medium	32/32	33/33	36/36	37/37	42/42	32/32	34/34	36/36
Low	29/29	29/29	30/31	33/33	37/37	28/28	31/31	33/34
Quiet	21/22	21/22	21/22	31/31	33/33	21/21	21/21	25/27
Running Current *Rated (A)*: Cooling	0.13	0.15	0.19	0.32	0.53	0.14	0.17	0.20
Heating	0.13	0.15	0.19	0.32	0.53	0.14	0.17	0.20
Power Use *Rated (w)*: Clg	15	17	22	41	69	16	19	23
Htg	15	17	22	41	69	16	19	23
Fan Speeds Stage	4+auto	4+auto	4+auto	4+auto	4+auto	4+auto	4+auto	4+auto
Air Direction: Horizontal	Manual	Manual	Manual	Auto	Auto	Manual	Manual	Manual
Vertical	Auto	Auto	Auto	Auto	Auto	Auto	Auto	Auto
Primary Air Filter	Washable	Washable	Washable	Washable	Washable	Washable	Washable	Washable
Ion Deodorizing Filter	Disposable	Disposable	Disposable	Disposable	Disposable	Disposable	Disposable	Disposable
Apple-Catechin Filter	Disposable	Disposable	Disposable	Disposable	Disposable	Disposable	Disposable	Disposable
Connection Method	Flare	Flare	Flare	Flare	Flare	Flare	Flare	Flare
Conn. Pipe Diameter *Inch*	suc 3/8 dis 1/4	suc 3/8 dis 1/4	suc 3/8 dis 1/4	suc 1/2 dis 1/4	suc 5/8 dis 1/4	suc 3/8 dis 1/4	suc 3/8 dis 1/4	suc 1/2 dis 1/4
Net Weight *lbs. (kg)*	19 (8.5)	19 (8.5)	19 (8.5)	31 (14)	31 (14)	21 (9.5)	21 (9.5)	21 (9.5)
Dims: Height *Inch (mm)*	10-1/2 (268)	10-1/2 (268)	10-1/2 (268)	12-5/8 (320)	12-5/8 (320)	11-1/8 (282) 13-1/4^ (337^)	11-1/8 (282) 13-1/4^ (337^)	11-1/8 (282) 13-1/4^ (337^)
Width *Inch (mm)*	33-1/16 (840)	33-1/16 (840)	33-1/16 (840)	39-1/4 (998)	39-1/4 (998)	34-1/4 (870)	34-1/4 (870)	34-1/4 (870)
Depth *Inch (mm)*	8 (203)	8 (203)	8 (203)	9 (228)	9 (228)	7-1/4 (185)	7-1/4 (185)	7-1/4 (185)
Refrigerant	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A

* ESP feature not compatible in multi-zone configurations. ^Height when front panel is open.

Standard Features

- Wireless Remote Control*
- Apple Catechin Filter
- Ion Deodorizing Filter
- Sleep Timer
- 24-Hour Timer
- Dry Mode
- Auto Louver: 4-Way**
- Auto Mode
- Minimum Heat Mode
- Auto Restart/Reset
- Power Diffuser**

Built In Filtration

Long-life+ Ion Deodorization Filter
The filter deodorizes by powerfully decomposing absorbed odors using the oxidizing and reducing effects of ions generated by the ultra-fine-particle ceramic.

Apple-Catechin Filter
Dust, mold spores and micro-organisms are absorbed onto the filter by static electricity and growth is inhibited and deactivated.

+ The filter can be used for approximately 3 years if it is washed with water when dirty to restore it's surface action.

* Features vary by model and therefore standard wireless remote controls should be used with the models they are associated with.
** Feature of models ASU18, 24RLF only.

Slim Duct 7, 9, 12, 18 and 24,000 BTUs
ARU7RLF, ARU9RLF, ARU12RLF, ARU18RLF, ARU24RLF

flex
48,000 BTUs

ARU7, 9, 12RLF **ARU18RLF** **ARU24RLF**

	ARU7RLF Heat Pump NEW!	ARU9RLF Heat Pump	ARU12RLF Heat Pump	ARU18RLF Heat Pump	ARU24RLF Heat Pump
Nominal Cooling *BTU/h*	7,000	9,000	12,000	18,000	24,000
Nominal Heating *BTU/h*	8,100	10,200	13,500	20,000	27,000
Voltage/Frequency/Phase	208-230/60/1	208-230/60/1	208-230/60/1	208-230/60/1	208-230/60/1
Recommended Static Pressure *In. W. C.*	0 ~ 0.36	0 ~ 0.36	0 ~ 0.36	0 ~ 0.36	0 ~ 0.20
Air Circ. *C.F.M. (m³/h)* Clg/Htg: Hi	323 (550)	353 (600)	383 (650)	554 (940)	783 (1,330)
Medium	288 (490)	324 (550)	353 (600)	518 (880)	730 (1,240)
Low	276 (470)	294 (500)	324 (550)	483 (820)	648 (1,100)
Quiet	259 (440)	265 (450)	283 (480)	442 (750)	607 (1,030)
Noise Level *dB(A)* (Clg/Htg): Hi	28/28	28/28	29/29	32/33	33/35
Medium	26/26	27/26	28/28	31/32	32/34
Low	25/25	26/25	27/27	30/31	30/32
Quiet	24/24	25/24	26/24	29/29	29/29
Running Current *Rated (A)*: Cooling	0.30	0.30	0.35	0.44	0.66
Heating	0.30	0.30	0.35	0.44	0.66
Power Use *Rated (W)*: Cooling	33	49	58	73	111
Heating	33	49	58	73	111
Fan Speeds *Stage*	4 + Auto	4 + Auto	4 + Auto	4 + Auto	4 + Auto
Air Filter	Washable	Washable	Washable	Washable	Washable
Connection Method	Flare	Flare	Flare	Flare	Flare
Conn. Pipe Diameter *Inch*	suc 3/8 dis 1/4	suc 3/8 dis 1/4	suc 3/8 dis 1/4	suc 1/2 dis 1/4	suc 5/8 dis 1/4
Net Weight *lbs. (kg)*	37 (17)	41 (19)	41 (19)	50 (23)	59 (27)
Dimensions: Height *Inch (mm)*	7-25/32 (198)	7-25/32 (198)	7-25/32 (198)	7-25/32 (198)	7-25/32 (198)
Width *Inch (mm)*	27-9/16 (700)	27-9/16 (700)	27-9/16 (700)	35-7/16 (900)	43-5/16 (1,100)
Depth *Inch (mm)*	24-13/32 (620)	24-13/32 (620)	24-13/32 (620)	24-13/32 (620)	24-13/32 (620)
Supply Duct Flange Dimensions: Height *Inch (mm)*	5-15/16 (151)	5-15/16 (151)	5-15/16 (151)	5-15/16 (151)	5-15/16 (151)
Width *Inch (mm)*	25-19/32 (650)	25-19/32 (650)	25-19/32 (650)	33-15/32 (850)	41-11/32 (1,050)
Depth *Inch (mm)*	3/4 (19)	3/4 (19)	3/4 (19)	3/4 (19)	3/4 (19)
Return Duct Dimensions: Height *Inch (mm)*	6 (152)	6 (152)	6 (152)	6 (152)	6 (152)
Width *Inch (mm)*	22 (559)	22 (559)	22 (559)	30 (762)	37-3/4 (959)
Depth *Inch (mm)*	3/4 (19) (Flat)	3/4 (19) (Flat)	3/4 (19) (Flat)	3/4 (19) (Flat)	3/4 (19) (Flat)
Refrigerant	R410A	R410A	R410A	R410A	R410A

Slim Duct

Adaptable when ceiling cavity is small and there is no slope for drain.

Traditional

13"   Drain Pump

Slim Duct

9.4"

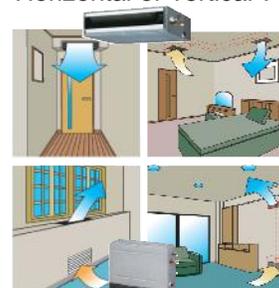## Flexible Installation

Horizontal or vertical*.

*Internal drain pump will not operate when the unit is mounted in a vertical configuration.

Standard Features
- Dry Mode
- Weekly Timer
- Sleep Timer*
- 24-Hour Timer*
- Minimum Heat Mode*
- Auto Mode
- Quiet Mode
- Auto Restart/Reset
- Auto Changeover
- Condensate Pump
- Fresh Air Intake

*Available only with optional wireless remote control.

Field Supplied Filters

Filters are sized to keep velocities and static pressure loss low. This will insure sufficient static pressure is available for ductwork, fittings and supply and return grilles. Alternative filter sizes with equivalent face areas can be used.
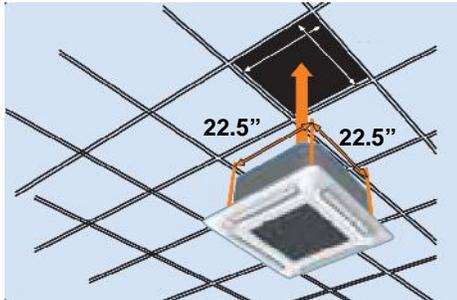
	ARU 7RLF	ARU 9RLF	ARU 12RLF	ARU 18RLF	ARU 24RLF
CFM	323	353	383	554	785
Typical Filter Size	12 x 20	12 x 20	12 x 20	14 x 25	18 x 30
Velocity, FPM	194	212	230	228	209
Unit External SP, in. W.C.	0.36	0.36	0.36	0.36	0.20
1" Fiberglass Filter					
SP Loss, in. W.C.	0.04	0.04	0.05	0.04	0.04
Available Static Pressure	0.32	0.32	0.31	0.32	0.16
1" MERV 8 Pleated Filter					
SP Loss, in. W.C.	0.10	0.12	0.14	0.14	0.12
Available Static Pressure	0.26	0.24	0.22	0.22	0.08
2" MERV 8 Pleated Filter					
SP Loss, in. W.C.	0.06	0.07	0.08	0.08	0.07
Available Static Pressure	0.30	0.29	0.28	0.28	0.13

Halcyon HFI
Hybrid Flex Inverter

Compact Cassettes 7, 9, 12, and 18,000 BTUs

AUU7RLF, AUU9RLF, AUU12RLF, AUU18RLF
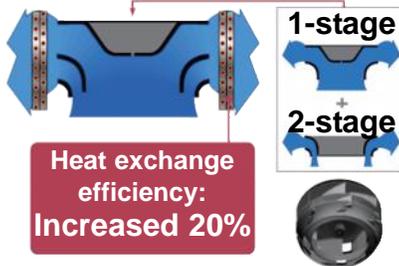
Easy Installation

Fits into a standard ceiling tile*.
Compact cassette and compact duct models can be networked.

22.5"   **22.5"**

*Dimensions of outer grille are 27-9/16" x 27-9/16" and may overlap adjacent tiles.

2-Stage Turbo Fan

Air distribution is evenly spread across the heat exchanger by the new 2 stage turbo fan which produces two separate airflow streams.

1-stage

2-stage

Heat exchange efficiency: Increased 20%

Standard Features

- Sleep Timer
- Dry Mode
- Auto Louver: Up/ Down
- Quiet Mode
- Auto Restart/Reset
- Auto Changeover
- Remote Temperature Sensor
- High Ceiling Mode
- Condensate Pump
- 2-Stage Turbo Fan
- Minimum Heat Mode+
- Fresh Air Intake**

	AUU7RLF Heat Pump NEW!	AUU9RLF Heat Pump	AUU12RLF Heat Pump	AUU18RLF Heat Pump
Nominal Cooling *BTU/h*	7,000	9,000	12,000	18,000
Nominal Heating *BTU/h*	8,100	10,200	13,500	20,000
Voltage/Frequency/Phase	208-230/60/1	208-230/60/1	208-230/60/1	208-230/60/1
Air Circ. *C.F.M. (m³/h)*: Hi	318 (540) Clg or Htg	318 (540) Clg or Htg	359 (610) Clg or Htg	441 (750) Clg 471 (800) Htg
Medium	288 (490) Clg or Htg	288 (490) Clg or Htg	312 (530) Clg or Htg	359 (610) Clg 418 (710) Htg
Low	259 (440) Clg or Htg	259 (440) Clg or Htg	277 (470) Clg or Htg	306 (520) Clg 353 (600) Htg
Quiet	230 (390) Clg or Htg	230 (390) Clg or Htg	241 (410) Clg or Htg	241 (410) Clg 265 (450) Htg
Noise Level *dB(A) Clg/Htg*: Hi	33/34	33/34	37/37	42/44
Medium	31/32	31/32	33/33	37/40
Low	29/29	29/29	31/31	33/37
Quiet	27/27	27/27	28/28	29/30
Running Current *Rated (A)*: Cooling	0.15	0.15	0.19	0.30
Heating	0.15	0.15	0.19	0.30
Power Use *Rated/Max (W)*: Clg	18	18	23	39
Heating	18	18	23	39
Fan Speeds *Stage*	4+auto	4+auto	4+auto	4+auto
Air Direction: Vertical	Automatic	Automatic	Automatic	Automatic
Air Filter	Washable	Washable	Washable	Washable
Front Grille	UTG-CCGF*	UTG-CCGF*	UTG-CCGF*	UTG-CCGF*
Connection Method	Flare	Flare	Flare	Flare
Conn. Pipe Diameter *Inch*	suc 3/8 dis 1/4	suc 3/8 dis 1/4	suc 3/8 dis 1/4	suc 1/2 dis 1/4
Net Weight *lbs. (kg)*	33 (15)	33 (15)	33 (15)	33 (15)
Chassis Dim: Height *Inch (mm)*	9-11/16 (245)	9-11/16 (245)	9-11/16 (245)	9-11/16 (245)
Width *Inch (mm)*	22-7/16 (570)	22-7/16 (570)	22-7/16 (570)	22-7/16 (570)
Depth *Inch (mm)*	22-7/16 (570)	22-7/16 (570)	22-7/16 (570)	22-7/16 (570)
Grille Dim: Height *Inch (mm)*	1-15/16 (49)	1-15/16 (49)	1-15/16 (49)	1-15/16 (49)
Width *Inch (mm)*	27-9/16 (700)	27-9/16 (700)	27-9/16 (700)	27-9/16 (700)
Depth *Inch (mm)*	27-9/16 (700)	27-9/16 (700)	27-9/16 (700)	27-9/16 (700)
Refrigerant	R410A	R410A	R410A	R410A

+ Available only with optional wireless remote control.

**Requires Fujitsu's Optional Fresh Air Kit part #UTZ-VXAA. Allows for a 4-inch flex duct connection and a field supplied duct booster fan. Fresh air maximum is 10% of unit High fan CFM. See UTZ-VXAA Design and Technical Manual for fan static pressure requirements at Fresh Air Kit. Add hood, filter and duct losses for fan total static pressure requirements. Will add 4" to the height of the indoor unit.

* Compact Cassette Grille UTG-CCGF sold separately. Must order one with each compact cassette.

Fresh Air Kit
UTZ-VXAA
Mixes room air then passes through the heat exchanger.

Floor Mounted 9, 12, and 15,000 BTUs

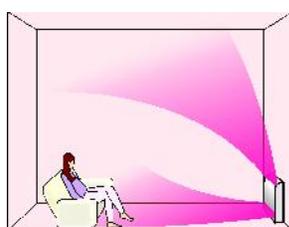## AGU9RLF, AGU12RLF, AGU15RLF

flex
48,000 BTUs

At less than 24" high and 30" wide, floor mount models fit easily under a standard window and can replace a radiator twice its size while producing more capacity.
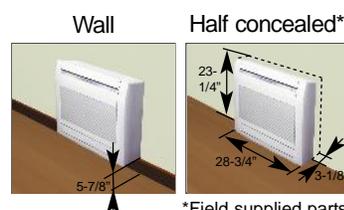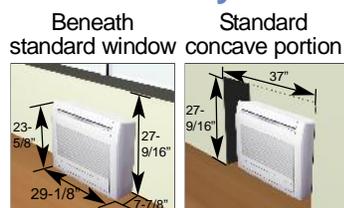
2-Fan and Wide Airflow

Having both upper and lower airflow quickly warms or cools the entire room. Floor mount can be set in "Upward Airflow Only" when occupants wish not to have feet warmed or cooled.

Flexible and Easy Installation

Beneath standard window
23-5/8" 27-9/16"
29-1/8" 7-7/8"

Standard concave portion
37"
27-9/16"

Wall

Half concealed*
23-1/4"
28-3/4" 3-1/8"
5-7/8"

*Field supplied parts required

Standard Features

- Wireless Remote Control
- Apple Catechin Filter
- Ion Deodorizing Filter
- Sleep Timer
- 24-Hour Timer
- Auto Louver: Up/Down
- Auto Mode
- Minimum Heat Mode
- Economy Mode
- Auto Restart/Reset
- Auto Changeover
- Powerful Mode

Designer wireless remote control

	AGU9RLF Heat Pump NEW!	AGU12RLF Heat Pump NEW!	AGU15RLF Heat Pump NEW!
Nominal Cooling *BTU/h*	9,000	12,000	14,200
Nominal Heating *BTU/h*	12,000	16,000	18,000
Voltage/Frequency/Phase	208-230/60/1	208-230/60/1	208-230/60/1
Air Circ. *C.F.M. (m³/h)*: Hi	312 (530)	353 (600)	383 (650)
Medium	259 (440)	288 (490)	306 (520)
Low	212 (360)	224 (380)	235 (400)
Quiet	159 (270)	159 (270)	159 (270)
Noise Level *dB(A)Clg/Htg*: Hi	39/39	42/42	44/44
Medium	34/34	36/38	38/39
Low	28/28	30/32	31/33
Quiet	22/22	22/22	22/22
Running Current *Rated (A)*: Cooling	0.15	0.18	0.20
Heating	0.15	0.18	0.20
Power Use *Rated (W)*: Cooling	16	18	23
Heating	16	18	23
Fan Speeds *Stage*	4+Auto	4+Auto	4+Auto
Air Direction: *Horizontal*	Manual	Manual	Manual
Vertical	Auto	Auto	Auto
Air Filter	Washable	Washable	Washable
Apple Catechin Filter	Yes	Yes	Yes
Ion Deodorizing Filter	Yes	Yes	Yes
Connection Method	Flare	Flare	Flare
Conn. Pipe Diameter *Inch*	Suc. 3/8 Dis. 1/4	Suc. 3/8 Dis. 1/4	Suc. 1/2 Dis. 1/4
Net Weight *lbs. (kg)*	31 (14)	31 (14)	31 (14)
Dimensions: Height *Inch*	23-5/8	23-5/8	23-5/8
mm	600	600	600
Width *Inch*	29-1/8	29-1/8	29-1/8
mm	740	740	740
Depth *Inch*	7-7/8	7-7/8	7-7/8
mm	200	200	200
Refrigerant	R410A	R410A	R410A

Halcyon **HFI**
Hybrid Flex Inverter

Flex-Zone Outdoor Unit 48,000 BTUs

AOU48RLXFZ1

- Connect 2 to 8 indoor units
- 80 to 130% connectable capacity
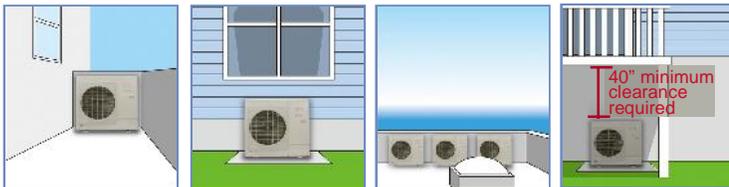- Connect 39,000 to 62,000 BTU

2 Indoor Units
18k BTU/h + 24 k BTU/h = 42k BTU/h ··OK
12k BTU/h + 24 k BTU/h = 36k BTU/h ··Not Allowed (below 80%)

8 Indoor Units
7k BTU/h × 8 units = 56k BTU ··OK
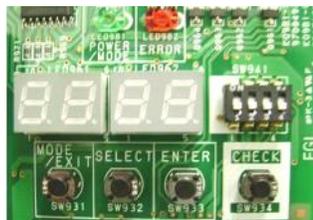9k BTU/h × 8 units = 72k BTU ··Not Allowed (over 130%)

	AOU48RLXFZ1 Heat Pump
Connectable Indoor Unit *Number*	2 to 8
Connectable Indoor Unit *Capacity*	80 to 130% Nominal (39,000 - 62,000 BTU)
Connectable Branch Box *Number*	1 to 3
Nominal Cooling *BTU/h*	48,000
Max Cooling *BTU/h*	51,100
Nominal Heating *BTU/h*	54,000
Low Temp. Heating 17°F *BTU/h*	40,000
Max Heating *BTU/h*	57,000
Clg. Operating Range °F(°C)	23-115 (-5-46)
Htg. Operating Range °F(°C)	5-75 (-15-24)
Input Power: Cooling Rated kW*	5.52 / 5.19 / 5.35
Input Power: Heating Rated kW*	5.02 / 4.89 / 4.96
Voltage/Frequency/Phase	208-230/60/1
Current: Clg Outdoor Max. *(A)*	24.5 / 23.0 / 23.7
Current: Htg Outdoor Max. *(A)*	22.3 / 21.7 / 22.0
Recommended Fuse Size *(A)*	40
Outdoor Fan Speed *RPM (Clg/Htg)*	890/910
Fan: Type x Quantity	Propeller x 1
Fan Motor Output W	111
Sound Pressure Level Cooling *dB(A)*	56
Sound Pressure Level Heating *dB(A)*	58
Max. Pipe Length Total *Ft (m)*	377 (115)
Max. Pipe Length Between Box & Farthest Indoor Unit *Ft (m)*	49 (15)
Max. Pipe Height Difference Between Outdoor Unit & Branch Box *Ft (m)*	98 (30)
Max. Pipe Height Difference Between Indoor Units *Ft (m)*	98 (30)
Max. Pipe Height Difference Between Outdoor Unit & Farthest Indoor *Ft (m)*	98 (30)
Connection Method	Flare
Conn. Pipe Diameter *Inch*	3/8 (Liq.) 5/8 (Suc.)
Net Weight *lbs. (kg)*	216 (98)
Dimensions: Height *Inch*	36
mm	914
Width *Inch*	38-1/4
mm	970
Depth *Inch*	14-5/8
mm	370
Refrigerant	R410A

*Ducted / Non-Ducted / Mixed

Compact Size

The compact size of outdoor unit AOU48RLXFZ1 allows for many installation opportunities.

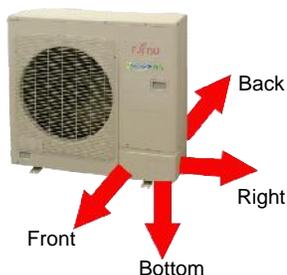40" minimum clearance required

Self Diagnostic Feature

This printed circuit board provides three modes of diagnostics - setting, monitoring and function mode, as well as error codes. It also provides a pre-commissioning check function. Setting mode allows optional functions to be selected. Monitoring mode provides temperature for each thermistor, compressor operation and other functions. Function mode provides cooling test run, heating test run and pump down operation.

Piping Flexibility

Contractors can choose the best direction for piping from the outdoor unit.

Back
Right
Front
Bottom

DC Twin Rotary Compressor

A high performance, low noise, large capacity DC twin rotary compressor is used. Includes Quiet Mode for night operation.

	SEER	HSPF	EER**
Ducted	14.7	9.3	8.7
Non-Ducted	17.0	9.8	9.25
Mixed	15.8	9.5	8.97

**Cooling

Optional Accessories

Central Remote Controller
UTY-DMMUM

Controls up to 8 individual indoor units. Set temperatures on timers to best meet individuals' needs. Includes a large backlit LCD and 4-way navigation pad. Remote connects in daisy chain to branch boxes.

Wired Remote Controller*
UTY-RNNUM^

Its unique lock function and sleek design provides full feature access to property managers, building owners, and facility maintenance, as well as providing basic comfort features to tenants, employees, and teachers.

Simple Remote Controller
UTY-RSNUM*

Suitable when only basic operations are required for hotels, offices and other places where there is frequent arrival and departure of occupants.

Wireless Remote Controller
UTY-LNHUM

For spaces where there is just no place to mount the wired remote.

Dry Contact Wire Kit*
UTY-XWZX / UTY-XWZXZ5

Turns system on or off using a normally closed circuit, for example in home automation or BMS integration of only On/Off operation, occupancy sensor or key card switch or lead-lag control of other heating/cooling.

Interface Kit
UTY-TWBXF1**

Required to connect the ASU9RLS2, ASU12RLS2 and ASU15RLS2 to Wired Remote UTY-RNNUM, Dry Contact Wire Kit UTY-XWZXZ5, and Simple Remote Control UTY-RSNUM.

Interface Kit
UTY-XCBXZ2**

Required to connect ASU7RLF1, 9RLF1, 12RLF1 to Wired Remote UTY-RNNUM, Dry Contact Wire Kit UTY-XWZX, and Simple Remote Control UTY-RSNUM.

High Humidity Insulation Kit
UTZ-KXGC

Additional insulation for compact cassette units, which may be needed when they are installed in high humidity areas.

Fresh Air Intake Kit
UTZ-VXAA

Mixes room air then passes it through a heat exchanger.

Air Outlet Shutter Plate
UTR-YDZB

In a 3-way air flow configuration an Air Outlet Shutter Plate kit is required.

Receiver Unit
UTY-LRHUM

Includes a wireless remote control.

Remote Sensor
UTY-XSZX

Wall mounted temperature sensor for slim duct models.

Slim Duct Connector Kit
UTD-ECS5A

Comes with 5 sets of wires. Can be used to turn unit on/off, wire in float switch, AUX heater, turn on an external device (Fan), or show if the unit is running.

Outdoor Unit Input/Output Connector
UTY-XWZXZ3

Gives the ability to limit the noise of the unit*, stop the outdoor unit, limit power consumption*, control the operating mode (Htg/Clg), or use output status to see if the compressor is running. You will need to order a kit for each option. *Will reduce capacity.

Outdoor Unit Base Heater Connector
UTY-XWZXZ4

Used to hook up an AUX base pan heater to the outdoor unit. Heater will stop ice from forming in the outdoor unit. Base heater will operate when outdoor temperature is below 36°F. Heater is field supply. Heaters greater than 25W can't be fed directly from the board, but have to be powered from another source.

Compatibility:

- 🔴 **Small Wall Mount** 7, 9, 12k BTU / RLF1 Series
- 🟠 **Designer Wall Mount** 9, 12, 15k BTU / RLS2 Series
- 🟢 **Large Wall Mount** 18, 24k BTU
- 🔵 **Compact Cassette** 7, 9, 12, 18k BTU
- ⚫ **Slim Duct** 7, 9, 12, 18, 24k BTU
- 🟡 **Floor Mount** 9, 12, 15k BTU

^ Minimum Heat, Sleep Timer functions will be lost when the wired remote controller is installed.
* Wall mounted ASU7, 9, and 12RLF1 require accessory interface kit (Part UTY-XCBXZ2) in order to connect this device to them. Wall mounted ASU9, 12, and 15RLS2 require accessory interface kit (Part UTY-TWBXF1) in order to connect this device to them.
** Internal thermosensor function in Wired Remote UTY-RNNUM is disabled when using this interface kit.

Allowable Combinations

AOU48RLXFZ1 offers over 250 combinations of systems based on BTU/h. When both indoor type and BTU/h are considered, there are over 56,000 combinations of systems! For a full listing of combinations, please visit:
www.fujitsugeneral.com/combinations.pdf.

Branch Boxes
UTP-PU03A, UTP-PU03B

flex
48,000 BTUs

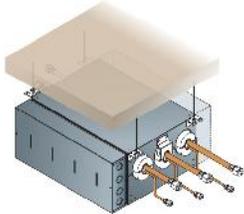|	UTP-PU03A Primary	UTP-PU03B Secondary
Connectable Indoor Unit	1 ~ 3	1 ~ 3
Max. Combination *BTU/h*	62,000 Nom.*	62,000 Nom.*
Min. Combination *BTU/h*	7,000 Nom.*	7,000 Nom.*
Clg. Operating Range °F(°C)	25-115 (-5-46)	25-115 (-5-46)
Htg. Operating Range °F(°C)	5-75 (-15-24)	5-75 (-15-24)
%RH	80 or less	80 or less
Voltage/Frequency/Phase	208-230/60/1	208-230/60/1
Maximum Current Ampacity *(A)*	15	15
Running Current *Rated (A)*: Cooling	0.050	0.050
Heating	0.050	0.050
Power Use *Rated (W)*: Cooling	10	10
Heating	10	10

*As long as the total system nominal capacity is between 39,000 and 62,000 BTUs.

	UTP-PU03A Primary	UTP-PU03B Secondary
Dimensions: Gross (Flare to Flare):		
Height x Width x Depth *Inch*	7-5/8 x 33 x 14-5/8	7-5/8 x 33 x 14-5/8
Height x Width x Depth *mm*	195 x 838 x 370	195 x 838 x 370
Dimensions: Net (Metal Box Only):		
Height x Width x Depth *Inch*	7-5/8 x 17 x 14-5/8	7-5/8 x 17 x 14-5/8
Height x Width x Depth *mm*	195 x 433 x 370	195 x 433 x 370
Net Weight *lbs. (kg)*	20 (9)	20 (9)
Conn. Pipe Diameter - Main *Inch*	(3/8 Liq. x 5/8 Suc.)	(3/8 Liq. x 5/8 Suc.)
Conn. Pipe Diameter - Branch *Inch*	(1/4 Liq. x 1/2 Suc.) 3 pair	(1/4 Liq. x 1/2 Suc.) 3 pair
Connection Method	Flare	Flare
Connection Adapter Included *Inch*	(1/2MF x 3/8FF) x 3 (1/2MF x 5/8FF) x 3 No adapter needed for 18k BTU	(1/2MF x 3/8FF) x 3 (1/2MF x 5/8FF) x 3 No adapter needed for 18k BTU

Warning: Branch boxes are not weather tight enclosures and cannot be mounted outdoors or in damp environments exceeding 80% relative humidity, unless using the Branch Box Outdoor Enclosure, Part #UTP-PX-A. See Page 39 for more information.
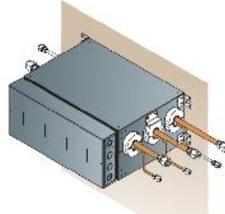
Allowed Branch Box Mounting Direction
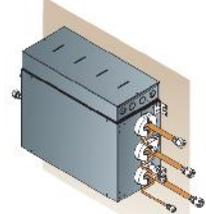
Threaded Rod Mount

By reversing the electrical box position you *can* orient the inlet and outlet pipes into a left hand or right hand configuration.
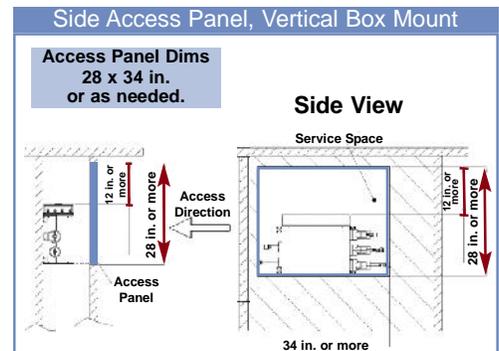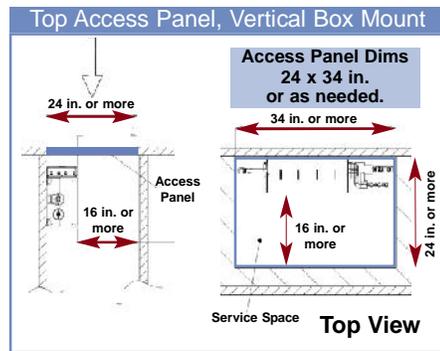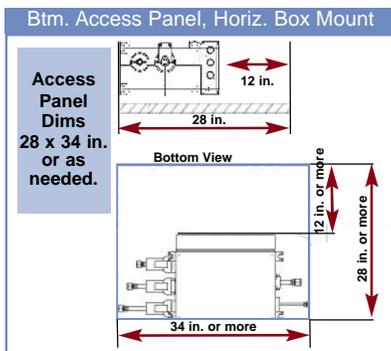
Horizontal Wall Mount

By reversing the electrical box position you *can* orient the inlet and outlet pipes into a left hand or right hand configuration.

Vertical Wall Mount

You *cannot* reverse the electrical box position when mounting the branch box vertically.

Clearances

Btm. Access Panel, Horiz. Box Mount

Access Panel Dims 28 x 34 in. or as needed.

12 in.
28 in.
Bottom View
12 in. or more
28 in. or more
34 in. or more

Top Access Panel, Vertical Box Mount

Access Panel Dims 24 x 34 in. or as needed.

24 in. or more
34 in. or more
16 in. or more
16 in. or more
24 in. or more
Access Panel
Service Space
Top View

Side Access Panel, Vertical Box Mount

Access Panel Dims 28 x 34 in. or as needed.

Side View

Service Space
12 in. or more
28 in. or more
12 in. or more
28 in. or more
Access Direction
Access Panel
34 in. or more

Dimensions *In (mm)*

1 (25)
4-3/4 (120)
5-13/16 (148)
2-15/16 (75)
3-3/4 (95)

33 (838)
6-1/16 (154)
17-1/16 (433)
9-7/8 (251)

Unit A
Unit B
Unit C
3-11/32 (85)
7-5/8 (195)
3-3/4 (95)
3-3/4 (95)
1-5/8 (42)
1-5/8 (66)
13 (304)
2-1/4 (57)

Branch Box Outdoor Enclosure

UTP-PX-A

flex
48,000 BTUs

The Branch Box Outdoor Enclosure is used to mount the indoor style Branch Box outdoors. The Branch Box Outdoor Enclosure is a painted metal cover to match the condensing unit. When Branch Box Outdoor Enclosure is not required, see Installation Manual for indoor mounting instructions.

Allowed Mounting Positions

Dimensions in. (mm)	
Net (HxWxD)	8-11/16 x 32 x 17-7/8 (220 x 813 x 454)
Gross (HxWxD)	3-15/16 x 33-11/16 x 20-5/16 (100 x 880 x 515)
Weight lbs. (kg)	
Net Branch Box cover only	22 (10)
Net Branch Box + Cover	44.1(20)
Gross	30.9 (14)

Dimensions *In (mm)*

Foot (Accessory)

8-11/16 (220)

9-3/4 (248)

20-1/4 (515)

Knock Out Hole For Wiring

Control Box

Knock Out Hole For Piping

10-1/16 (256)

1-9/16 (39)

17-7/8 (454)

8-7/16 (469)

32 (813)

1-7/16 (36)

3-15/16 (100)

5/8 (16)

Separation Tube Assembly Kit

UTP-SX248A

Size	Liquid *Inch*	3/8 x 3/8 x 3/8
	Suction *Inch*	5/8 x 5/8 x 5/8

+/- 10° of 90° vertical

+/- 10° of 0° horizontal

360° rotation on its vertical axis

360° rotation on its vertical axis

Wiring

flex
48,000 BTUs

Outdoor Unit

208-230 Power Supply
Main Breaker

40 amp disconnect

40 amp HVACR Breaker

15 amp HVACR Breaker

Power Supply 2 Wire + Ground*

Ground

Ground

Junction Box

High Voltage Communication 3 Wire + Ground

UTY-DMMUM

Central Remote Control 18 - 20 AWG

Power and Communication 3 Wire + Ground

Branch Box UTP-PU03A

Branch Box UTP-PU03B

Branch Box UTP-PU03B

🔵 = 3PST
🟢 = 2PST
Optional Disconnect Switch (or where code requires)

*Alternate Branch Box Power Configurations (Not Shown):
Each Branch Box may be powered from a separate 15A dedicated HVACR breaker or from a single 15A dedicated HVACR breaker using a daisy chain to connect to secondary branch boxes.
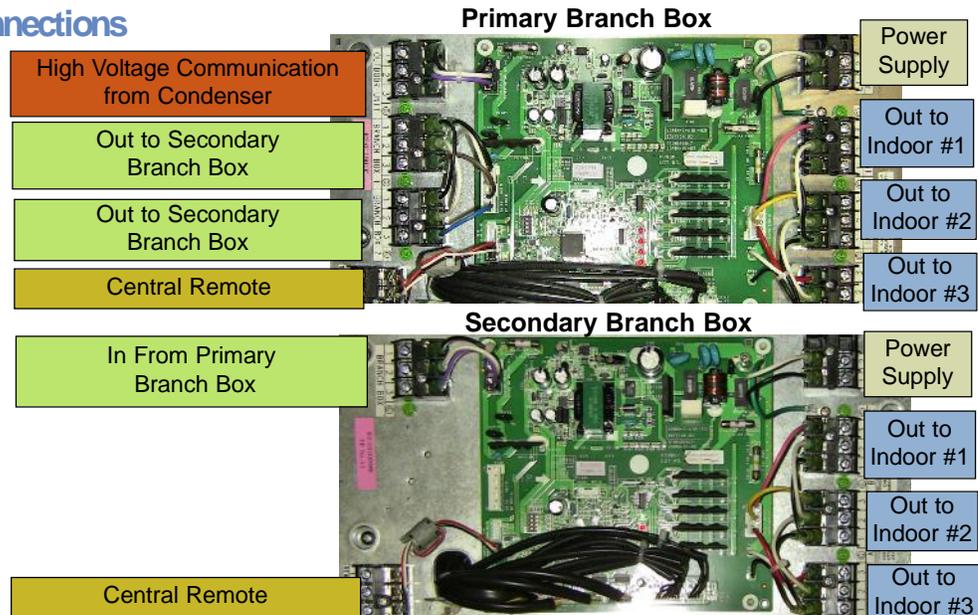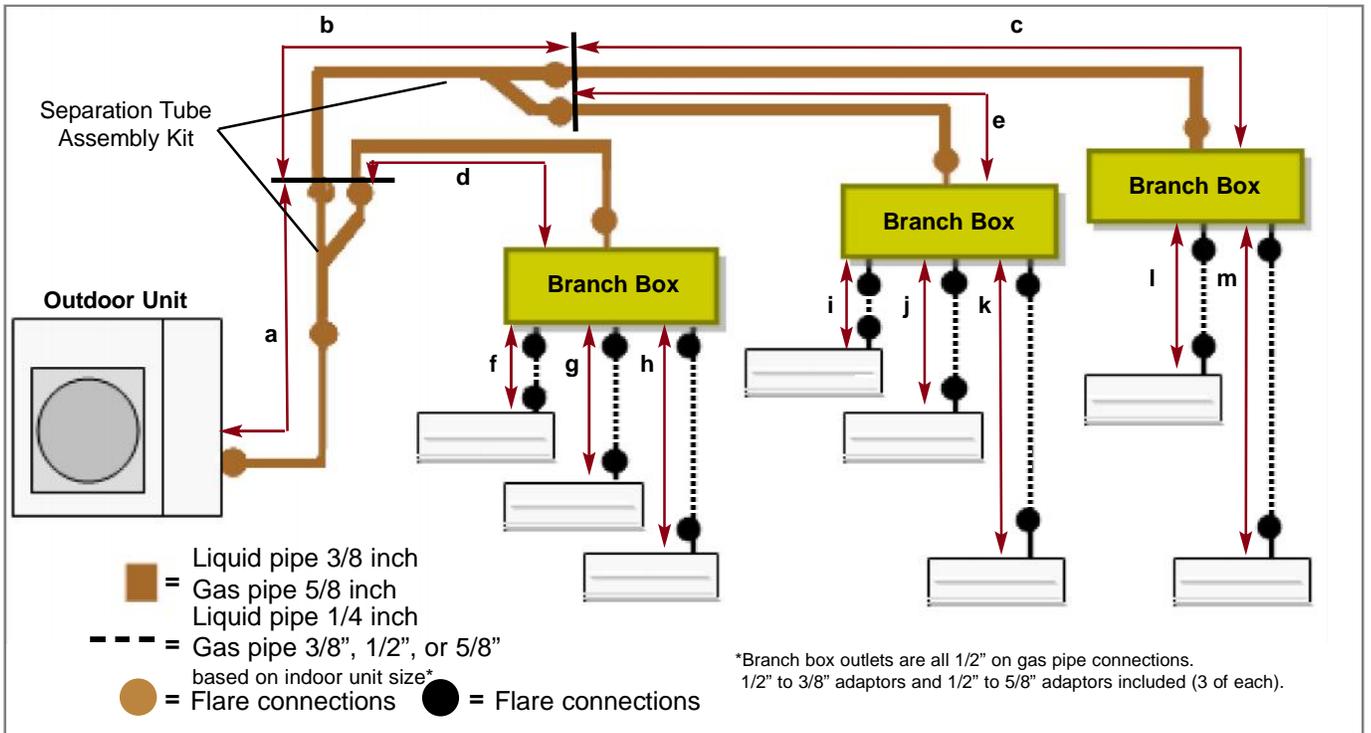
Branch Box Terminal Connections

Miswiring Detection

Errors Detected For...
- Miswired terminals
- Incorrect indoor unit
- Less than 2 or more than 8 indoor units
- Less than 39,000 or more than 62,000 BTUs

Primary Branch Box

High Voltage Communication from Condenser

Out to Secondary Branch Box

Out to Secondary Branch Box

Central Remote

Power Supply

Out to Indoor #1

Out to Indoor #2

Out to Indoor #3

Secondary Branch Box

In From Primary Branch Box

Central Remote

Power Supply

Out to Indoor #1

Out to Indoor #2

Out to Indoor #3

Piping

Separation Tube Assembly Kit

Outdoor Unit

Branch Box

Branch Box

Branch Box

a b c d e f g h i j k l m

Liquid pipe 3/8 inch
= Gas pipe 5/8 inch
Liquid pipe 1/4 inch
- - - = Gas pipe 3/8", 1/2", or 5/8"
based on indoor unit size*
= Flare connections   = Flare connections

*Branch box outlets are all 1/2" on gas pipe connections.
1/2" to 3/8" adaptors and 1/2" to 5/8" adaptors included (3 of each).

		Liquid pipe	Adaptor	Gas pipe
Branch Box to Indoor	7,000 BTU	1/4 inch	included	3/8 inch
	9,000 BTU		included	
	12,000 BTU		included	
	18,000 BTU		n/a	1/2 inch
	24,000 BTU		included	5/8 inch

Calculate Refrigerant Charge **Factory Charge 7.6 lb (3.45 kg)** **Unit pre-charged to 0 feet**	Pipe Diameter	Location	Additional Refrig.
	3/8"	Outdoor to Branch Box	0.624 oz./ft. or 58g/meter
	1/4"	Branch Box to Indoor Unit	0.224 oz./ft. or 21g/meter
	(Total length of 3/8" liquid line × 0.624 oz./ft. or 58g/meter) + (Total length of 1/4" liquid line × 0.224 oz./ft. or 21g/meter)		
	(a+b+c+d+e) × 0.624 oz./ft. or 58g/meter + (f+g+h+i+j+k+l+m) × 0.224 oz./ft. or 21g/meter = additional refrigerant		

Total Pipe Length 377' max.*

16' min.

Actual pipe length **230' max.***

1' min.

17' min.

Height difference between branch boxes

Branch Box

49' max.

Max. piping length between outdoor unit and farthest branch box **180' max.**

Height difference between outdoor and indoor units **98' max.**

Branch Box

Pipe length between branch box and farthest indoor unit **49' max.**

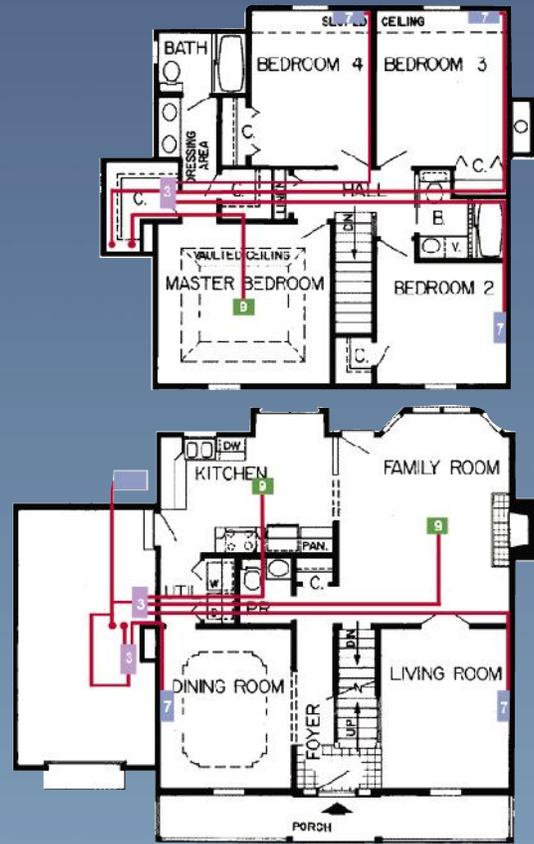Height difference between indoor and indoor units **49' max.**

* Distance between outdoor unit & farthest indoor unit.
** Total liquid pipe or total gas pipe.

Examples

Residential 1-story home

Church/School

KEY:
- 24,000 BTU
- 9,000 BTU
- 7,000 BTU
- BRANCH BOX

Central Remote Features

- Efficient Mode
- Central Control
- Monitor Up To 8 Zones
- LCD Display
- 4-way Navigation Pad

Residential 2-story home

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