



Hybrid Flex Inverter System

48,000 BTU 8-Zone Mix & Match Flexibility

Mini-Split Air Conditioners and Heat Pumps



Wall Mounted



Slim Duct



Compact Cassette

For over 35 years, Fujitsu has been making the hottest places cool and the coolest places more comfortable.



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.

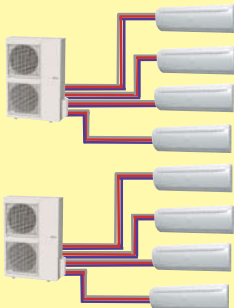
For Example: The load on a small 2-story office building with a business downstairs and worker apartments upstairs is 62,000 BTUs (38,000 BTUs downstairs and 24,000 BTUs upstairs) but the workers aren't upstairs and downstairs at the same time, therefore not all units will be running simultaneously allowing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

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

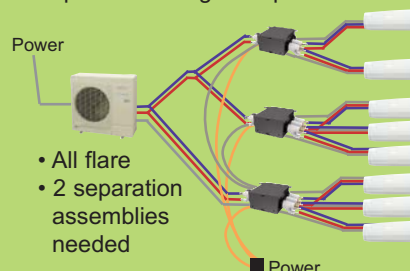
- Variable speed compressor
- Computerized zone control
- With the expansion valves mounted in the outdoor unit, it does not have an optimized refrigerant path.



- 2 outdoor units needed
- No separation tube assemblies needed

Halcyon Hybrid Flex Inverter

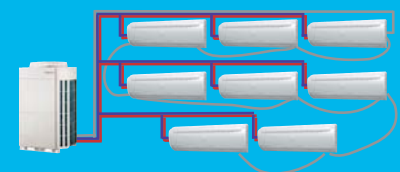
- Variable speed compressor
- Computerized zone control
- Remotes expansion valves from the outdoor unit to mid-stream in the refrigerant piping, creating a semi-optimized refrigerant path.



- All flare
- 2 separation assemblies needed

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

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

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%)

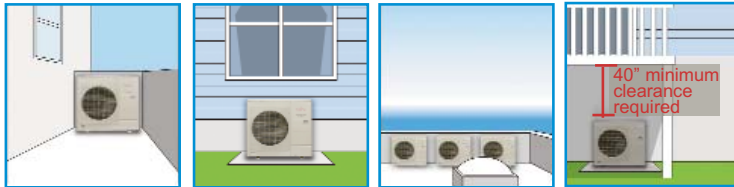
AOU48RLXFZ1 Heat Pump

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.



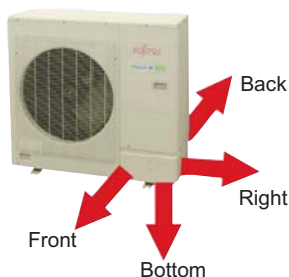
Self Diagnostic Feature

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.



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



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

ASU7RLF, ASU9RLF, ASU12RLF, ASU18RLF, ASU24RLF



ASU7, 9, 12RLF



ASU9, 12, 15RLS2[^]



ASU18, 24RLF

	ASU7RLF	ASU9RLF	ASU9RLS2	ASU12RLF	ASU12RLS2	ASU15RLS2	ASU18RLF	ASU24RLF
	Heat Pump	Heat Pump	Heat Pump [^]	Heat Pump	Heat Pump [^]	Heat Pump [^]	Heat Pump	Heat Pump
Nominal Cooling BTU/h*	7,000	9,000	9,000	12,000	12,000	14,500	18,000	24,000
Nominal Heating BTU/h*	8,100	10,200	12,000	13,500	16,000	18,000	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	208-230/60/1	208-230/60/1	208-230/60/1
Air Circ. C.F.M. (m ³ /h): Hi	Clg 330 (560) Htg 330 (560)	Clg 353 (600) Htg 353 (600)	Clg 500 (850) Htg 500 (850)	Clg 388 (660) Htg 388 (660)	Clg 500 (850) Htg 500 (850)	Clg 530 (900) Htg 530 (900)	Clg 542 (920) Htg 542 (920)	Clg 659 (1,120) Htg 647 (1,100)
	Clg 294 (500) Htg 294 (500)	Clg 306 (520) Htg 306 (520)	Clg 394 (670) Htg 394 (670)	Clg 330 (560) Htg 330 (560)	Clg 394 (670) Htg 394 (670)	Clg 436 (740) Htg 436 (740)	Clg 436 (740) Htg 436 (740)	Clg 530 (900) Htg 530 (900)
	Clg 253 (430) Htg 253 (430)	Clg 253 (430) Htg 253 (430)	Clg 324 (550) Htg 324 (550)	Clg 265 (450) Htg 277 (470)	Clg 324 (550) Htg 324 (550)	Clg 336 (570) Htg 336 (570)	Clg 365 (620) Htg 365 (620)	Clg 436 (740) Htg 436 (740)
	Clg 200 (340) Htg 206 (350)	Clg 200 (340) Htg 206 (350)	Clg 174 (300) Htg 174 (300)	Clg 200 (340) Htg 206 (350)	Clg 194 (330) Htg 194 (330)	Clg 229 (390) Htg 229 (390)	Clg 324 (550) Htg 324 (550)	Clg 365 (620) Htg 365 (620)
Noise Level								
dB(A) (Clg/Htg): Hi	36/36	37/37	43/43	40/40	43/43	45/45	43/44	49/48
Medium	32/32	33/33	37/38	36/36	37/38	40/40	37/37	42/42
Low	29/29	29/29	32/32	30/31	32/32	33/34	33/33	37/37
Quiet	25/25	25/25	21/21	25/25	21/21	25/27	31/31	33/33
Running Current								
Rated (A): Cooling	0.13	0.15	0.14	0.19	0.17	0.20	0.32	0.53
Heating	0.13	0.15	0.14	0.19	0.17	0.20	0.32	0.53
Power Use Rated (w): Clg	15	17	56	22	87	121	41	69
Htg	15	17	80	22	120	135	41	69
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	Manual	Manual	Manual	Auto	Auto
	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 3/8 dis 1/4	suc 3/8 dis 1/4	suc 1/2 dis 1/4	suc 1/2 dis 1/4	suc 5/8 dis 1/4
Net Weight lbs. (kg)	18 (8)	18 (8)	21 (9.5)	18 (8)	21 (9.5)	21 (9.5)	31 (14)	31 (14)
Dims: Height Inch (mm)	11-1/16 (280)	11-1/16 (280)	11-1/8 (282) 13-1/4" (337")	11-1/16 (280)	11-1/8 (282) 13-1/4" (337")	11-1/8 (282) 13-1/4" (337")	12-5/8 (320)	12-5/8 (320)
	Width Inch (mm)	31-1/16 (790)	34-1/4 (870)	31-1/16 (790)	34-1/4 (870)	34-1/4 (870)	39-1/4 (998)	39-1/4 (998)
	Depth Inch (mm)	8 (203)	7-1/4 (185)	8 (203)	7-1/4 (185)	7-1/4 (185)	9 (228)	9 (228)
Refrigerant	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A

[^]Compatible only with outdoor unit AOU48RLXFZ1. *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.

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



Apple-Catechin Filter

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

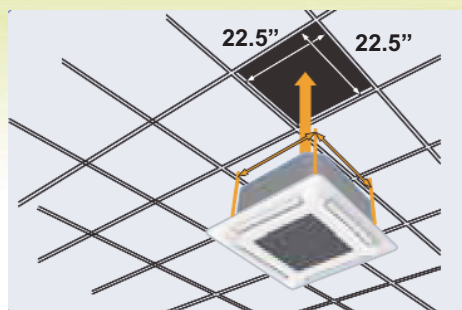
Compact Cassettes 9, 12, and 18,000 BTUs

AUU9RLF, AUU12RLF, AUU18RLF



Easy Installation

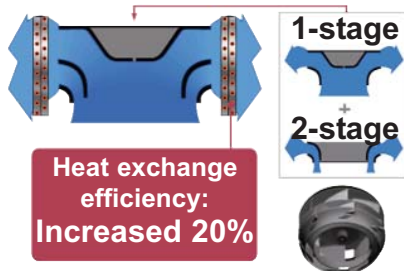
Fits into a standard ceiling tile*.
Compact cassette and slim duct models can be networked.



*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.



Standard Features

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



+ 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. Requires a field supplied duct booster fan capable of 60 CFM at .2"W.C. or 90 CFM at .4"W.C. For fan static pressure requirements, see installation manual. 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.

	AUU9RLF Heat Pump	AUU12RLF Heat Pump	AUU18RLF Heat Pump
Nominal Cooling BTU/h	9,000	12,000	18,000
Nominal Heating BTU/h	10,200	13,500	20,000
Voltage/Frequency/Phase	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	359 (610) Clg or Htg	441 (750) Clg 471 (800) Htg
Medium	288 (490) Clg or Htg	312 (530) Clg or Htg	359 (610) Clg 418 (710) Htg
Low	259 (440) Clg or Htg	277 (470) Clg or Htg	306 (520) Clg 353 (600) Htg
Quiet	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	37/37	42/44
Medium	31/32	33/33	37/40
Low	29/29	31/31	33/37
Quiet	27/27	28/28	29/30
Running Current Rated (A): Cooling	0.15	0.19	0.30
Heating	0.15	0.19	0.30
Power Use Rated/Max (W): Clg	18	23	39
Heating	18	23	39
Fan Speeds Stage	4+auto	4+auto	4+auto
Air Direction: Vertical	Automatic	Automatic	Automatic
Air Filter	Washable	Washable	Washable
Front Grille	UTG-CCGF*	UTG-CCGF*	UTG-CCGF*
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)	33 (15)	33 (15)	33 (15)
Chassis Dim: Height Inch (mm)	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)
Depth Inch (mm)	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)
Width Inch (mm)	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)
Refrigerant	R410A	R410A	R410A



Fresh Air Kit** UTZ-VXAA

Mixes room air then passes through the heat exchanger.

Slim Duct 9, 12, 18 and 24,000 BTUs

ARU9RLF, ARU12RLF, ARU18RLF, ARU24RLF



ARU9, 12RLF



ARU18RLF



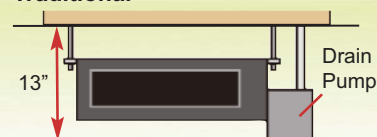
ARU24RLF

	ARU9RLF	ARU12RLF	ARU18RLF	ARU24RLF
	Heat Pump	Heat Pump	Heat Pump	Heat Pump
Nominal Cooling BTU/h	9,000	12,000	18,000	24,000
Nominal Heating BTU/h	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
Static Pressure In. W. C.	0 ~ 0.36	0 ~ 0.36	0 ~ 0.36	0 ~ 0.20
Air Circ. C.F.M. (m³/h) Clg/Htg: Hi	353 (600)	383 (650)	554 (940)	783 (1,330)
Medium	324 (550)	353 (600)	518 (880)	730 (1,240)
Low	294 (500)	324 (550)	483 (820)	648 (1,100)
Quiet	265 (450)	283 (480)	442 (750)	607 (1,030)
Noise Level dB(A) (Clg/Htg): Hi	28/28	29/29	32/33	33/35
Medium	27/26	28/28	31/32	32/34
Low	26/25	27/27	30/31	30/32
Quiet	25/24	26/24	29/29	29/29
Running Current Rated (A): Cooling	0.30	0.35	0.44	0.66
Heating	0.30	0.35	0.44	0.66
Power Use Rated (W): Cooling	49	58	73	111
Heating	49	58	73	111
Fan Speeds Stage	4 + Auto	4 + Auto	4 + Auto	4 + Auto
Air Filter	Washable	Washable	Washable	Washable
Connection Method	Flare	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	suc 5/8 dis 1/4
Net Weight lbs. (kg)	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)
Width Inch (mm)	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)
Supply Duct Flange	5-15/16 (151)	5-15/16 (151)	5-15/16 (151)	5-15/16 (151)
Dimensions: Height Inch (mm)	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)	33-15/32 (850)	41-11/32 (1,050)
Depth Inch (mm)	3/4 (19)	3/4 (19)	3/4 (19)	3/4 (19)
Return Duct Flange	6-27/32 (174)	6-27/32 (174)	6-27/32 (174)	6-27/32 (174)
Dimensions: Height Inch (mm)	6-27/32 (174)	6-27/32 (174)	6-27/32 (174)	6-27/32 (174)
Width Inch (mm)	22-19/32 (574)	22-19/32 (574)	30-15/32 (774)	38-11/32 (974)
Depth Inch (mm)	3/4 (19) (Flat)	3/4 (19) (Flat)	3/4 (19) (Flat)	3/4 (19) (Flat)
Refrigerant	R410A	R410A	R410A	R410A

Slim Duct

Built-in drain pump allows for installation of slim duct unit in smaller spaces than traditional units.

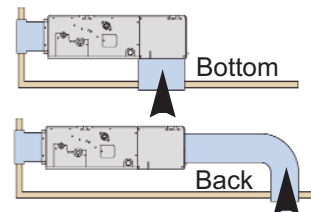
Traditional



Slim Duct



Return Air-intake Choices

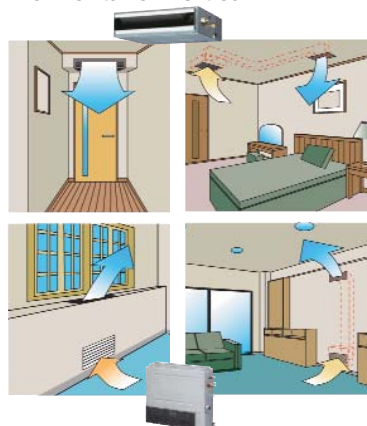


Standard Features

- Wired Remote Control
- Dry Mode
- Weekly Timer
- Auto Mode
- Quiet Mode
- Auto Restart/Reset
- Condensate Pump
- Fresh Air Intake

Flexible Installation

Horizontal or vertical.



Branch Boxes

UTP-PU03A, UTP-PU03B



UTP-PU03A



UTP-PU03B

	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 <i>Rated</i> (A): Cooling	0.050	0.050
Heating	0.050	0.050
Power Use <i>Rated</i> (W): Cooling	10	10
Heating	10	10

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

Dimensions: Gross (Flare to Flare):

Height x Width x Depth *Inch*

Height x Width x Depth *mm*

Dimensions: Net (Metal Box Only):

Height x Width x Depth *Inch*

Height x Width x Depth *mm*

Net Weight *lbs. (kg)*

Conn. Pipe Diameter - Main *Inch*

Conn. Pipe Diameter - Branch *Inch*

Connection Method

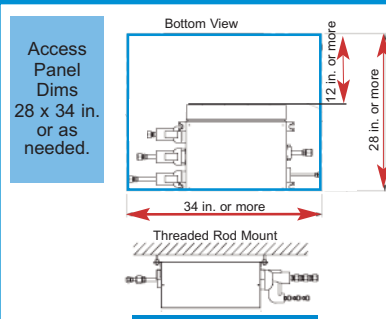
Connection Adapter Included *Inch*

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

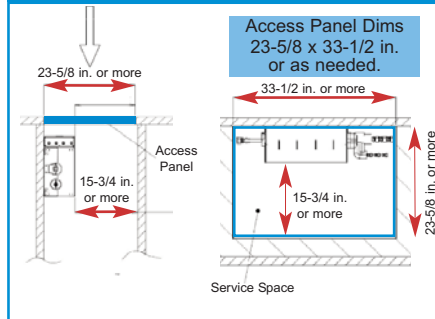
Warning: Branch boxes are not weather tight enclosures and cannot be mounted outdoors or in damp environments exceeding 80% relative humidity, unless using the Branch Box Outdoor Enclosure, Part #UTP-PX-A. See Page 8 for more information.

Clearances

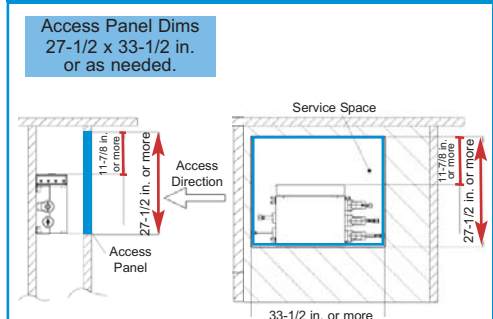
Btm. Access Panel, Horiz. Box Mount



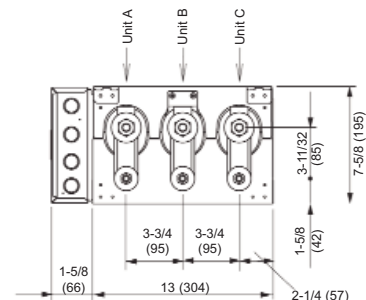
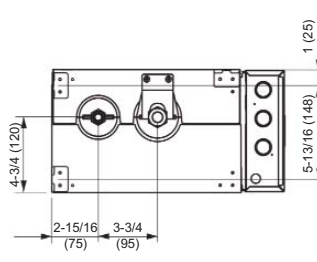
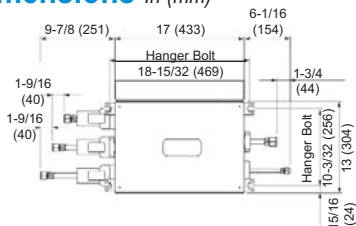
Top Access Panel, Vertical Box Mount



Side Access Panel, Vertical Box Mount



Dimensions *In (mm)*

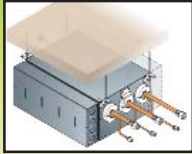


Branch Boxes *(continued)*

UTP-PU03A, UTP-PU03B

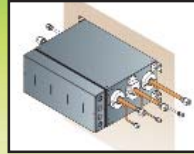
Allowed Branch Box Mounting Direction

Threaded Rod Mount



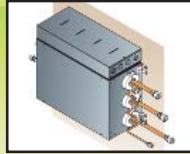
By reversing the electrical box position you can orient the inlet and outlet pipes into a left hand or right hand configuration.

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

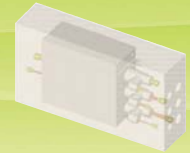


You cannot reverse the electrical box position when mounting the branch box vertically.

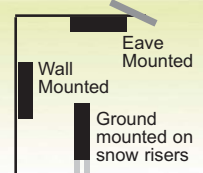
Branch Box Outdoor Enclosure

Model UTP-PX-A

The Branch Box Enclosure, used to mount the indoor style Branch Box outdoors, 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.

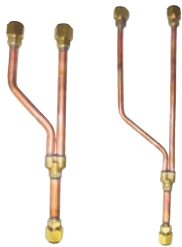


Allowed Mounting Positions

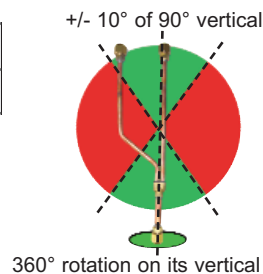


Separation Tube Assembly Kit

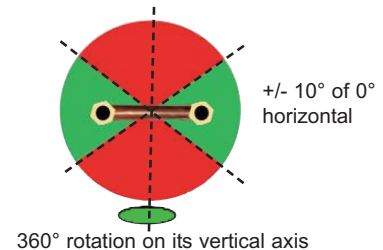
UTP-SX248A



Size	Liquid <i>Inch</i>	3/8 x 3/8 x 3/8
	Suction <i>Inch</i>	5/8 x 5/8 x 5/8



360° rotation on its vertical axis



360° rotation on its vertical axis

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 9,000 combinations of systems! For a full listing of combinations, please visit: www.fujitsugeneral.com/combinations.pdf.

Accessory Compatibility

		9RLS2	12RLS2	15RLS2	RLF: Small Wall (7, 9, 12k BTU)	RLF: Large Wall (18, 24k BTU)	AUU: Cassette	ARU: Slim Duct	AOU48RLXFZ1
UTY-XWZX	Dry Contact Wire Kit				•^	•	•		
UTY-XWZXZ5	Dry Contact Wire Kit	•	•	•					
UTD-ECS5A	Slim Duct Connector Kit							•	
K9R410A55	R410A Swivel Adapter	•	•	•	•	•	•	•	
UTY-DMMUM	Central Remote Control								•
UTY-RNNUM	Wired Remote Control	•	•	•	•^	•			
UTY-RSNUM	Simple Remote Control	•	•	•	•^	•	•	•	
UTY-LRHUM	Receiver Unit							•	
UTY-LNHUM	Wireless Remote Control						•		

		9RLS2	12RLS2	15RLS2	RLF: Small Wall (7, 9, 12k BTU)	RLF: Large Wall (18, 24k BTU)	AUU: Cassette	ARU: Slim Duct	AOU48RLXFZ1
UTY-XCBXZ1	Interface Kit^				•				
UTY-TWBXF	Interface Kit^	•	•	•					
UTR-YDZB	Air Outlet Shutter Plate							•	
UTY-XSZX	Remote Sensor							•	
UTZ-VXAA	Fresh Air Intake Kit							•	
K3PST	3-Pole Single Throw Safety Switch	•	•	•	•	•	•	•	
UTZ-KXGC	High Humidity Insulation Kit							•	
UTY-XWZXZ3	Outdoor Unit Input/Output Connector								•
UTY-XWZXZ4	Outdoor Unit Base Heater Connector								•

^ Wall mounted ASU7, 9, and 12RLF require accessory interface kit #UTY-XCBXZ1 in order to connect these devices to them.

+ Wall mounted ASU9, 12, and 15RLS2 require accessory interface kit #UTY-TWBXF in order to connect these devices to them.

Optional Accessories

Central Remote Control #UTY-DMMUM

This remote controls up to 8 individual indoor units on a Hybrid Flex Inverter (HFI) system. Set temperatures on timers to best meet individuals' needs. The sleek design includes a large backlit LCD and 4-way navigation pad. Remote connects in daisy chain to branch boxes.



Simple Remote Control* #UTY-RSNUM

Suitable when only basic operations are required for hotels, offices and other places where there is frequent arrival and departure of occupants. To be used with all HFI indoor models.



Wireless Remote Controller #UTY-LNHUM

For spaces where there is just no place to mount the wired remote. For use only with HFI compact cassettes.



Interface Kit #UTY-XCBXZ1

Required to connect ASU7RLF, 9RLF and 12RLF to Wired Remote # UTY-RNNUM, Dry Contact Wire Kit # UTY-XWZX, and Simple Remote Control # UTY-RSNUM.



Interface Kit** #UTY-TWBXF

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.

High Humidity Insulation Kit for Compact Cassettes #UTZ-KXGC

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



* Wall mounted ASU7, 9, and 12RLF require accessory interface kit (Part UTY-XCBXZ1) in order to connect this device to them. Wall mounted ASU9, 12, and 15RLS2 require accessory interface kit (Part UTY-TWBXF) in order to connect this device to them.

** Internal thermosensor function in Wired Remote UTY-RNNUM is disabled when using this interface kit.

Wired Remote Control for Wall Mounts* #UTY-RNNUM

The wired remote controller with 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.



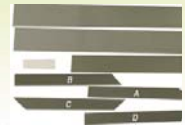
Receiver Unit #UTY-LRHUM

Includes a wireless remote control. For use on slim duct Halcyon HFI indoor units



Air Outlet Shutter Plate for Compact Cassettes #UTR-YDZB

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



Dry Contact Wire Kit* #UTY-XWZX and 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.



- UTD-ECS5A Slim Duct Connector Kit
- UTY-XWZXZ3 Outdoor Unit Input/Output Connector
- UTY-XWZXZ4 Outdoor Unit Base Heater Connector

Remote Sensor #UTY-XSZX

Wall mounted temperature sensor for slim duct models.



Fresh Air Intake Kit for Compact Cassettes #UTZ-VXAA

Mixes room air then passes it through a heat exchanger. Allows for a 4-inch flex duct connection. Requires a field supplied duct booster fan capable of 60 CFM at .2"W.C. or 90 CFM at .4"W.C. For fan static pressure requirements, see installation manual.



Field Supplied Filters Used With Slim Duct Units

Although Slim Duct units come with factory filters, when return ductwork is used field supplied filters are more practical to use. They can be installed at the unit or for more convenient servicing, in filter grilles. The chart to the right provides guidelines for determining filter sizes.

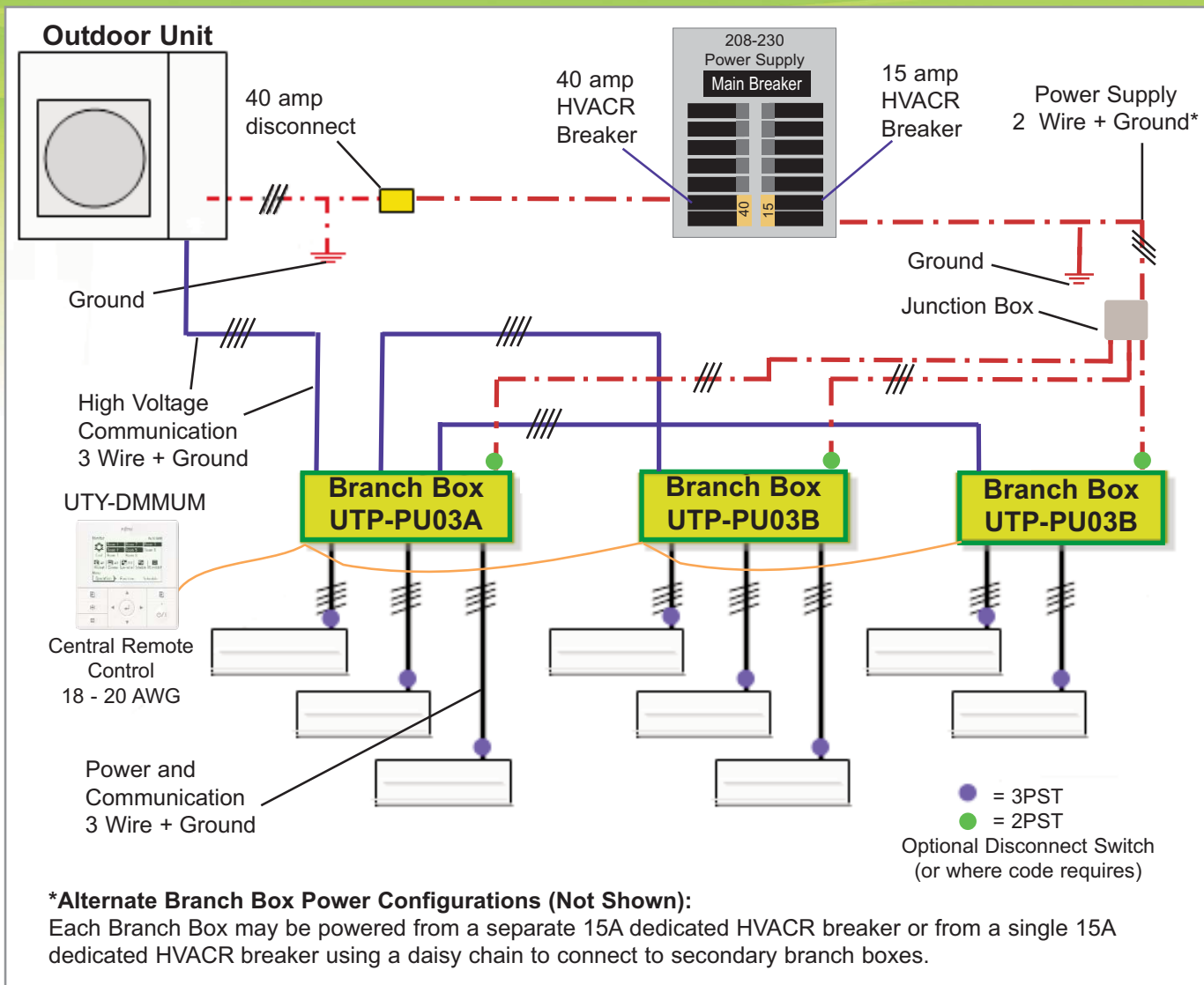
The chart includes CFM, external static pressure capability and a typical filter size for each model. Filters are sized to keep velocities and static pressure loss low. This will insure sufficient static pressure is available for ductwork, fittings and supply and return grilles. Alternative filter sizes with equivalent face areas can be used. After deducting filter loss, available static pressure values are shown.



A fiberglass filter is shown in blue to the left. A MERV pleated filter is shown in white.

	ARU 9RLF	ARU 12RLF	ARU 18RLF	ARU 24RLF
CFM	353	353	547	806
Typical Filter Size	12 x 20	12 x 20	14 x 25	18 x 30
Velocity, FPM	212	212	225	215
Unit External SP, in. W.C.	0.36	0.36	0.36	0.20
1" Fiberglass Filter				
SP Loss, in. W.C.	0.04	0.04	0.04	0.04
Available Static Pressure	0.32	0.32	0.32	0.16
1" MERV 8 Pleated Filter				
SP Loss, in. W.C.	0.12	0.12	0.14	0.13
Available Static Pressure	0.24	0.24	0.22	0.07
2" MERV 8 Pleated Filter				
SP Loss, in. W.C.	0.07	0.07	0.08	0.07
Available Static Pressure	0.29	0.29	0.28	0.13

Wiring

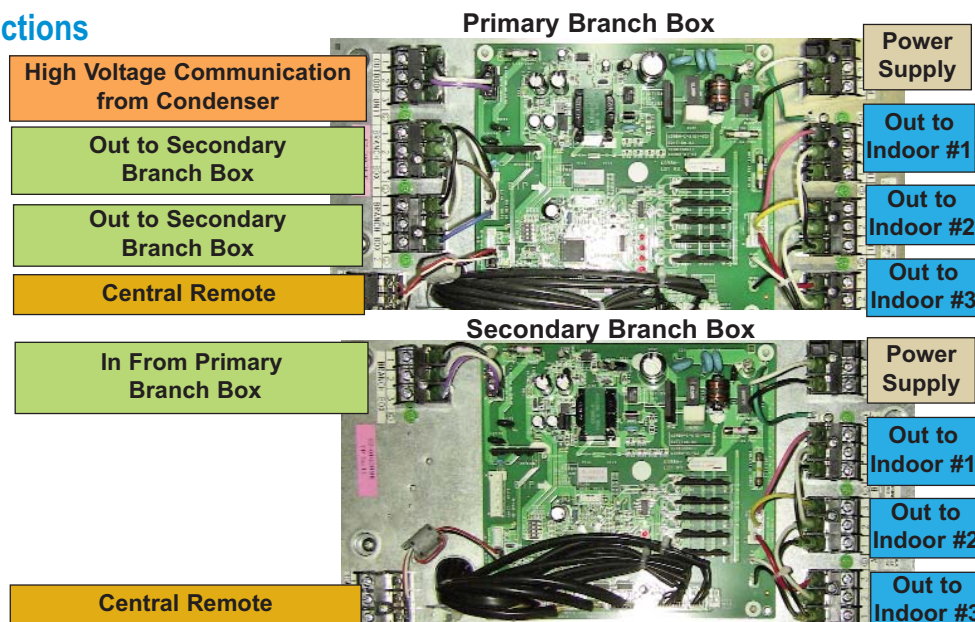


Branch Box Terminal Connections

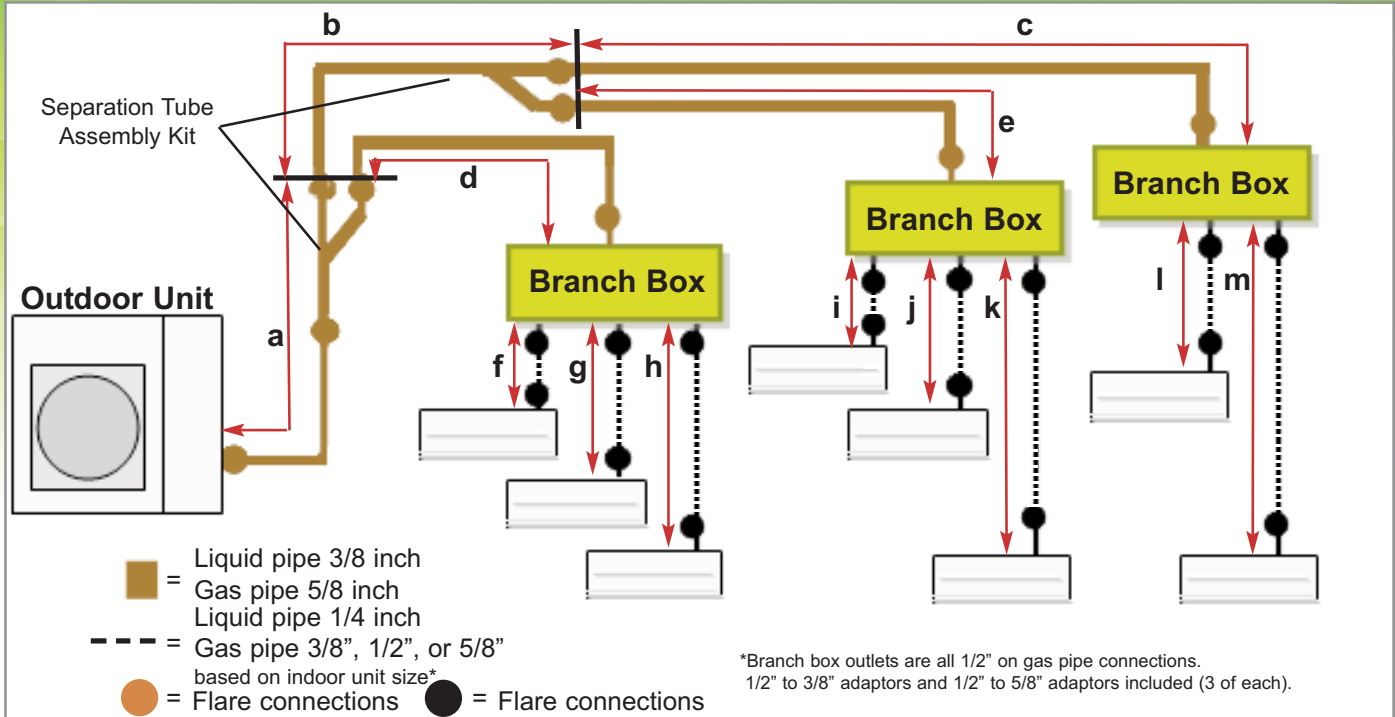
Miswiring Detection

Errors Detected For...

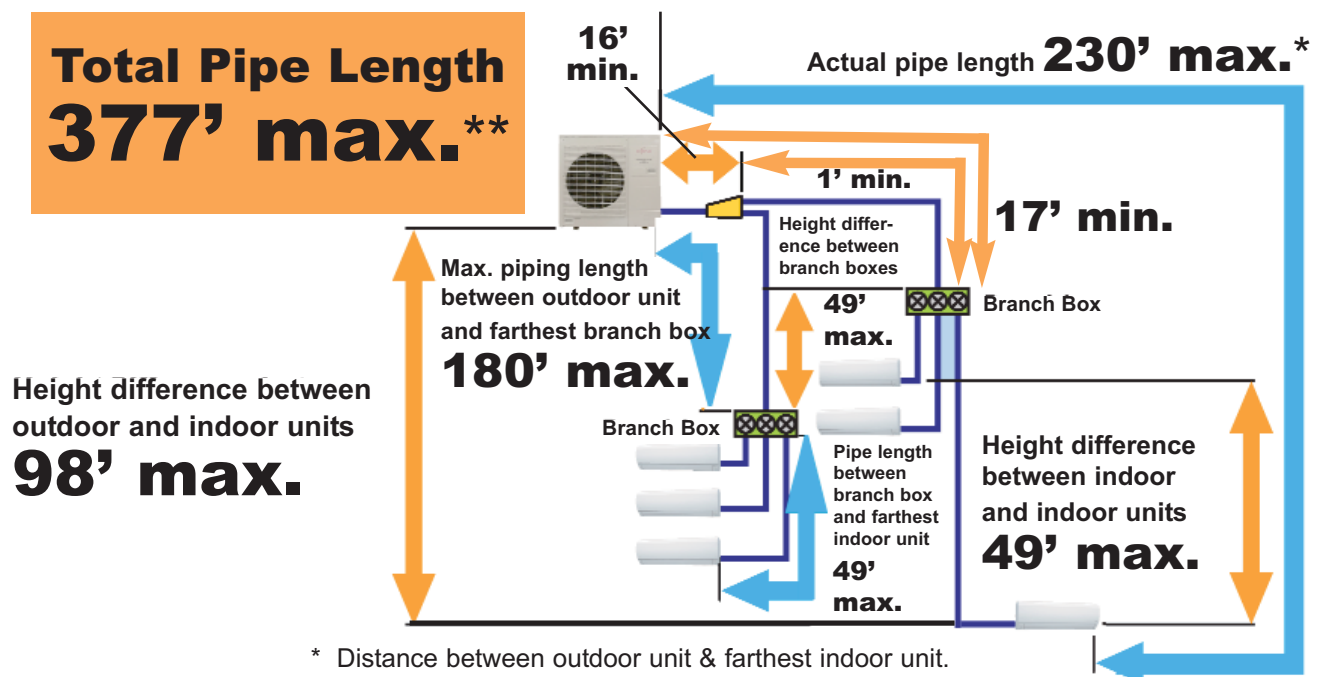
- Miswired terminals
- Incorrect indoor unit
- Less than 2 or more than 8 indoor units
- Less than 39,000 or more than 62,000 BTUs



Piping



		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			

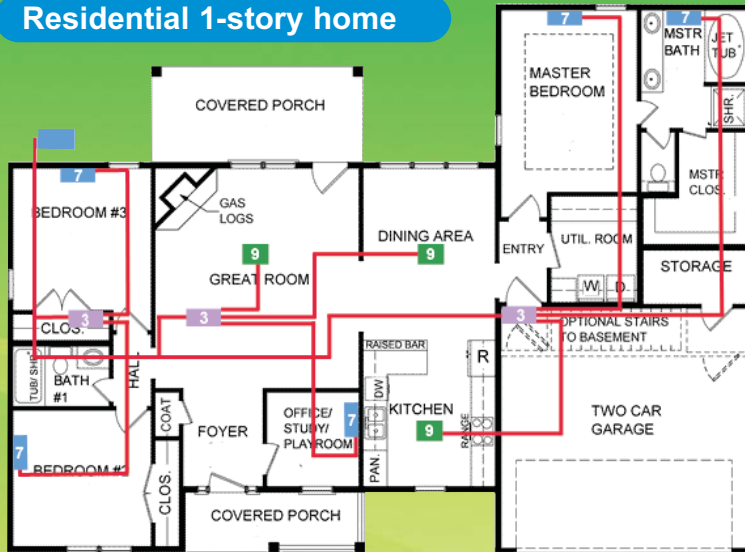


* Distance between outdoor unit & farthest indoor unit.

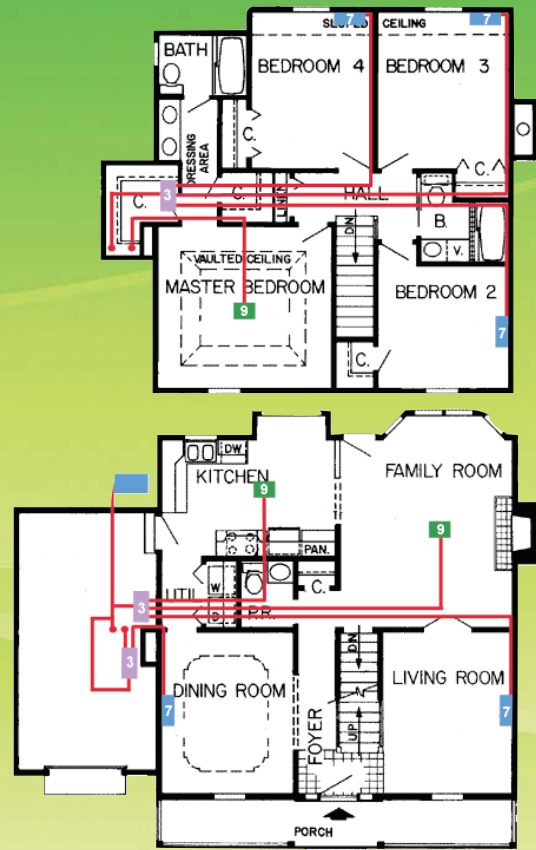
** Total liquid pipe or total gas pipe.

Examples

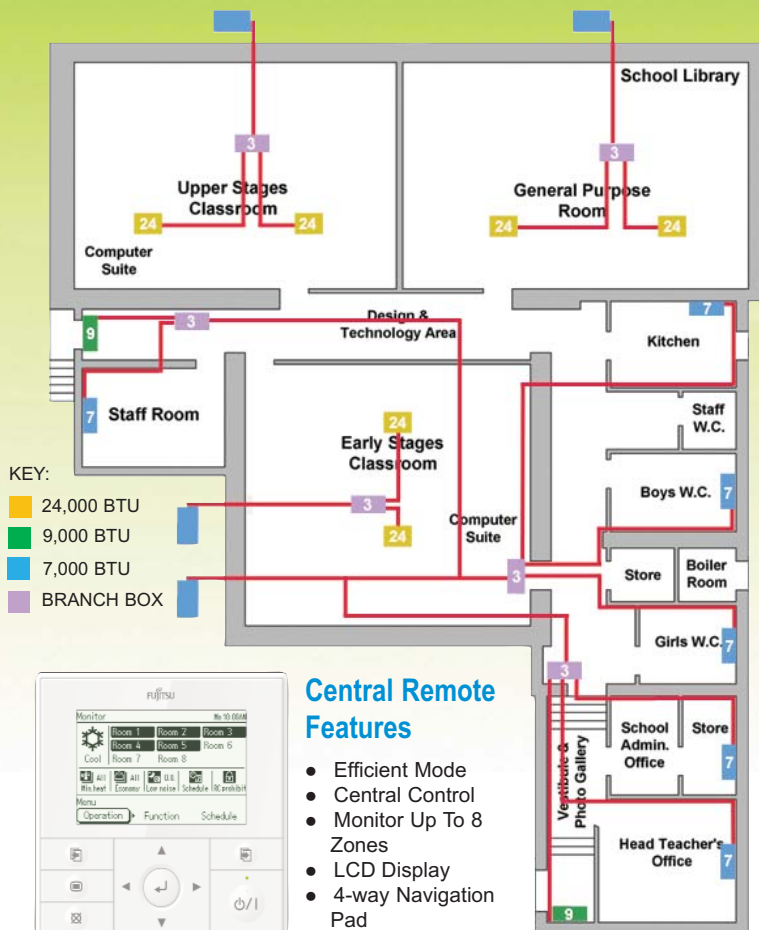
Residential 1-story home



Residential 2-story home



Church/School



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