

HVAC Guide Specifications

Ductless Mini-Splits

Section 15700 – Mechanical HVAC

Size Range:

2.5 Tons to 3 Ton

Fujitsu Model Number:

30CLX and 36CLX wall mount Inverter mini Split

Part 1 – General

1-1 System Description:

The air-conditioning system shall be a Fujitsu General CLX series mini split system. The system shall consist of a wall mount indoor evaporator section (ASU Series) with wireless remote capable of accepting a wall mount corded remote option. The System model numbers include System 30CLX and System 36CLX. These systems include AOU series horizontal discharge, 208-230/1/60 condensing units with high Efficiency Inverter compressor.

1-2 Quality Assurance:

1. These units shall be listed by ETL and bear the ETL label.
2. Units shall be rated in accordance to ARI standard 210 and bear the ARI label
3. Units shall be manufactured in a facility that has met ISO 9002 and ISO 14001 international standards.
4. A full charge of R-410A for a 25' line set shall be provided in the condenser section.
5. A dry air holding charge will be provided in the evaporator section
6. System SEER shall meet or exceed 15 SEER

1-3 Handling and Storage:

1. The wireless remote shall be packaged inside the carton with the evaporator section
2. Wired remote if required shall be shipped as a separate accessory item
3. Unit shall be handled and stored according to manufacturers specifications.

Part 2 - Warranty:

2-1 The units shall have a manufacturers warranty on all parts for a period of two (2) years from date of installation. The compressor shall have a warranty of six (6) years from date of original equipment installation. If any should fail to function properly during this period, it shall be repaired or replaced at the discretion of the manufacturer. This warranty does not include labor.

2-2 Manufacture shall have more then nine (9) years performance experience in the US market.

Part 3 – Performance:

3-1 Each system shall perform in accordance to the ratings shown on the chart below. Performance shall be based on the following ARI standards:

Cooling - Indoor 80⁰ FDB, 67⁰ FWB; Outdoor 95⁰ FDB, 75⁰ FWB

System Model Number	Nominal Capacity BTU/h	SEER	Power Supply	Indoor Noise Level (db) H/M/L/Q*	Outdoor Noise Level (db)
System30CLX	30,700	15	208-230/60/1	47/41/36/32	53
System36CLX	33,100	15	208-230/60/1	49/41/36/32	54

*H/M/L/Q = High/Medium/Low/Quiet fan settings

Part 4 – Products:

4-1 Indoor Unit:

General:

The indoor unit shall be factory assembled, wired and run tested. Contained within the unit shall be all factory wiring, piping, control circuitry and fan motor. The unit shall have self diagnostic function, 3 minute time delay, an auto restart function and an emergency operation manual run switch. Indoor unit refrigeration piping shall be charged with a dry air holding charge instead of R-410A.

a.) Cabinet:

- The cabinet shall have a white finish smooth easy to clean surface with and indicator lights to verify functioning and trouble shooting
- Return air shall enter through the top of the cabinet
- There will be a factory supplied separate back plate (if applicable) for securely mounting the evaporator on the wall.

b.) Fan:

- Evaporator fan shall be direct drive DC motor
- Fan shall be dynamically balanced and run with permanently lubricated bearings
- A motorized air 4-way louver (up/down; left /right) shall provide automatic changes in air direction to provide a more uniform pattern of air distribution
- Indoor fan shall provide 4 (4) speeds, High, Medium, Low and Quiet

c.) Filter:

- Standard Factory installed air filter for the return air

d.) Coil:

- Evaporator shall be nonferrous construction with aluminum plate fins on copper tubing
- All tubing shall be factory brazed and leak checked prior to packaging at the factory

e.) Electrical:

- Power requirement shall be 208-230/60/1
- Indoor unit will not have and supplemental electric strip type heat

f.) Control:

- This unit shall have a wireless controller to perform input function necessary for operation of unit
- Unit will have a dry mode setting to help remove humidity
- Wireless handheld control shall have controls for temperature and time set, master control, air clean, auto swing louver, start/stop, fan and timer
- Temperature changes shall be from 60⁰F – 80⁰F in one (1) degree increments
- Microprocessor located in the indoor unit shall have the capability to sense return air temperature, coil temperature and process the commands from the remote to operate the outdoor unit as required. Unit shall be capable of automatic restart when power is returned after a power outage
- Control signal shall be sent between the indoor unit and outdoor unit on the same wiring delivering voltage to the indoor unit
- Indoor unit must be capable of accepting a field supplied wired controller for permanent mounting

4-2 Outdoor Unit:

General:

The outdoor unit is designed specifically for the matching indoor unit. The unit is equipped with circuit board that interfaces with the indoor unit. Unit will have a factory installed high efficiency inverter compressor. Condenser will have a factory pump down option. Unit is to be factory assembled, wired, piped and run tested prior to leaving the factory.

a.) Unit Cabinet:

- Cabinet will be constructed out of galvanized metal with a baked enamel finish.
- Fan guard will be louvered to prevent entrance of foreign objects

b.) Fan:

- Unit will have a direct drive propeller type fan
- Motor for fan will be DC voltage permanently lubricated and balanced prior to assembly
- Unit will have a horizontal discharge air flow

c.) Coil:

- Condenser coil shall be nonferrous construction with aluminum plate fin on copper tubing
- Refrigerant flow leaving the condenser coil shall be controlled by a metering device

d.) Compressor:

- Compressor shall be an inverter rotary type or scroll type mounted in such a way to prevent noise and vibration transmission outside the cabinet
- Unit will be precharged with R410A refrigerant to accommodate a 25' line set without the addition or removal for Freon
- Unit will be capable of a maximum 164' (98' max height diff) line set without the need to trap, change line sizes or add oil to the system

e.) Electrical:

- The unit electrical requirement shall be 208-230/60/1
- The outdoor unit shall be controlled by a microprocessor
- Control voltage to and from the indoor unit shall occur on the same wiring delivering power