
TECHNICAL SPECIFICATIONS

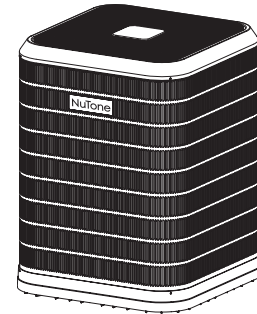
NuTone

FT4BF Series R-410A Extra High Efficiency Heat Pump 15+ SEER Residential System 2 - 5 Ton Capacity

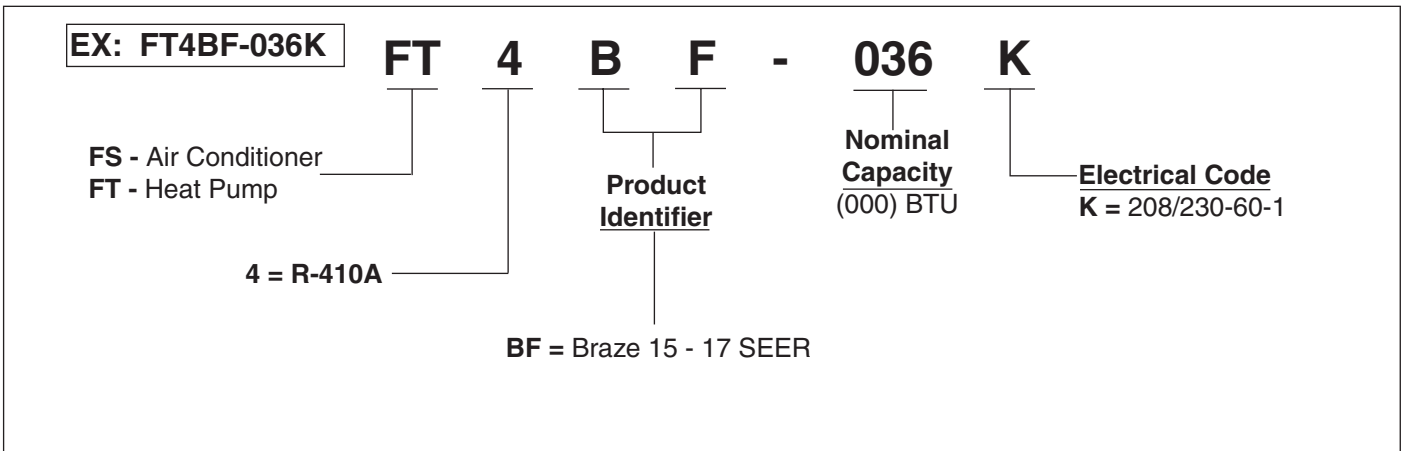
NuTone now offers the choice of a heat pump that uses a more efficient and environmentally friendly refrigerant designated R-410A. The FT4BF Series of NuTone heat pumps offers exceptional performance as well as environmental protection. These models, when matched with our variable speed air handlers or variable speed equipped gas furnaces, offer a line of high quality heat pump systems rated up to 15+ SEER and 8.5 HSPF.

FEATURES and BENEFITS

- **Warranty**
 - This product offers a 10-year all-parts warranty.
 - This product offers a 10 year Quality Pledge to replace the entire unit, if the unit's major component (heat exchanger or compressor) fails within the first 10 years of operation, to the original owner. All split system products must be installed with a matched indoor air handler or indoor coil to qualify.
 - Consumer product registration required for both 10 year All Parts Warranty and Quality Pledge within a limited period of time after the installation. See current warranty document or visit our consumer web site listed on the back of this document for warranty details.
- **R-410A Refrigerant** – Earth friendly non-ozone depleting refrigerant.
- **Comfort Alert™ Module** – Detects system and electrical problem conditions. A diagnostics key directs the service technician to the root cause of a problem.
- **Copeland Scroll UltraTech™ Compressor** – The Ultra Tech Compressor operates with 2 stages of heating and cooling capacities to provide superior comfort and efficiency. Copeland's proven and simple design equates to years of comfort and reliability for the homeowner with virtually silent operation.
- **Durable, Attractive Cabinet** – Designed using galvanized steel with a polyester urethane finish. The 950 hour salt spray finish is 1.5 mil thick and resists corrosion 50% better than comparable units.
- **Copper Tube / Aluminum Fin Coils** – Both indoor and outdoor coils are designed to optimize heat transfer, minimize size and cost, and increase durability and reliability.
- **Permanently Lubricated Motor** – A heavy duty PSC motor for long lasting reliability and quiet operation.
- **Requires no maintenance and is completely protected from rain and snow.**
- **Full Port Service Valves** – Full port brass ball valves provide low pressure drop and ease of service. The valves are actuated by 1/4 turn full open to full close.
- **Louvered Condenser Guard** – Durable metal guard protects the coil from yard hazards and extreme weather.
- **Removable Top Grille Assembly** – Allows ease of service from the top without disconnecting fan motor leads.
- **Compressor Sound Blanket** – Engineered to significantly reduce unwanted compressor noise.
- **Swept-Wing Fan Blade**
- **Low Pressure Switch** – Loss of charge protection ensures long compressor life. Auto-reset feature prevents nuisance service visits.
- **High Pressure Switch** – Protects against abnormally high system pressures. Auto-reset feature prevents nuisance service visits.
- **Liquid Line Filter Drier** – Included with unit, field installed.
- **One Piece Top/Orifice** – Designed for maximum airflow and quiet operation.
- **Common Suction Service Port** – This port allows the contractor to read the suction pressure in all modes of operation without removing any panels, saving time and increasing serviceability.
- **Five Minute Restart Time Delay** – When the unit shuts down, a five minute delay keeps the unit from restarting, eliminating the highest cause for compressor failure.
- **Suction Accumulator** – Protection from liquid flood back and future compressor failures.
- **Hot Gas Muffler** – Reduces compressor noise and vibration.
- **Easy Compressor and Control Access** – Designed to make servicing easier for the contractor, access panels are provided to all controls and the compressor from the side of the unit.

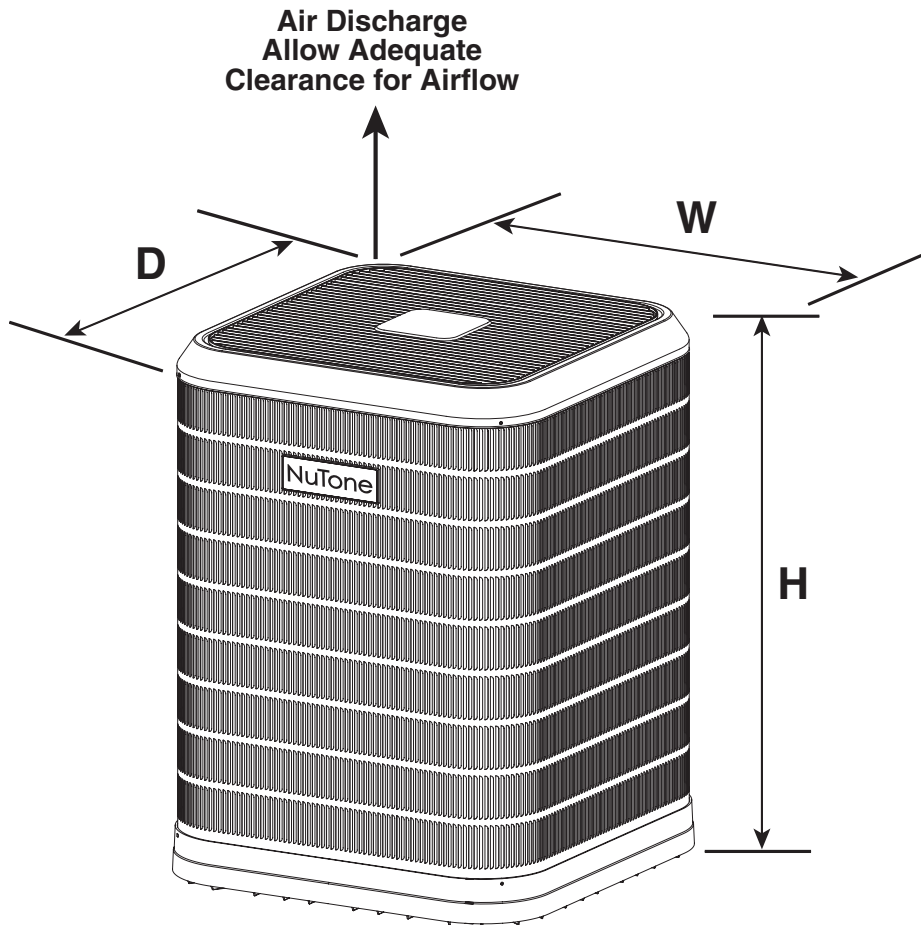


MODEL IDENTIFICATION CODES



DIMENSIONS HEAT PUMP OUTDOOR SECTION

| FT4BF | 024 | 036 | 048 | 060 |
|-------|--------|--------|--------|--------|
| H | 41 | 45 | 45 | 45 |
| W | 31 1/4 | 31 1/4 | 31 1/4 | 31 1/4 |
| D | 31 1/4 | 31 1/4 | 31 1/4 | 31 1/4 |



PHYSICAL AND ELECTRICAL SPECIFICATIONS / OUTDOOR UNITS

15+ SEER — R-410A Extra High Efficiency — Single Phase

| Model Number FT4BF | | 024 | 036 | 048 | 060 | |
|--|------------------------|-----------------|--------------|--------------|--------------|--------------|
| Electrical Data | Volts-Cycles-Phase (1) | | 208/230-60-1 | 208/230-60-1 | 208/230-60-1 | 208/230-60-1 |
| | Total Amps | | 11.3 | 17.9 | 22.4 | 26.9 |
| | Delay Fuse Max. (2) | | 20 | 35 | 45 | 50 |
| | Min. Circuit Ampacity | | 13.9 | 22.1 | 27.7 | 33.3 |
| Condenser Data | Coil | Area | 22.8 | 25.4 | 25.4 | 25.4 |
| | | Rows-FPI | 2-16 | 2-18 | 2-18 | 2-18 |
| | | Tube Dia | 3/8" O.D. | 3/8" O.D. | 3/8" O.D. | 3/8" O.D. |
| | Fan Motor | Type | PSC | PSC | PSC | PSC |
| | | Speeds | 1 | 2 | 2 | 2 |
| | | Amps | 1.0 | 1.3 | 1.3 | 1.3 |
| | | Lo/Hi Spd Watts | 200 | 187/250 | 187/250 | 187/250 |
| | | HP | 1/4 | 1/4 | 1/4 | 1/4 |
| | Fan Blade | Dia-# Blades | 24"- 2 | 24"- 2 | 24"- 2 | 24"- 2 |
| | | SCFM | 3600 | 4000 | 4000 | 4000 |
| | Compressor Data | RLA | 10.3 | 16.6 | 21.1 | 25.6 |
| | | LRA | 52 | 82 | 96 | 99 |
| Refrigerant suction line O.D.(all length of liquid line are 3/8" O.D.) | | 0-24 ft. | 3/4" | 7/8" (4) | 7/8" | 7/8" |
| | | 25-39 ft. | 7/8" | 1-1/8" (3) | 1-1/8" (3) | 1-1/8" (3) |
| | | 40-75 ft. | 7/8" | 1-1/8" (3) | 1-1/8" (3) | 1-1/8" (3) |
| Refrigerant charge (R-410A) in ounces for outdoor unit, indoor unit and 15' lineset. | | 208 | 272 | 272 | 272 | |
| Weight | | Net | 253 | 277 | 277 | 301 |
| Approximate (lbs.) | | Ship | 265 | 289 | 289 | 313 |

- (1) Operating voltage range: 187V minimum - 253 V maximum
- (2) HACR type circuit breakers may be used
- (3) Requires 1-1/8 to 7/8" reducer from unit to lineset.
- (4) Use of a 3/4" lineset will result in approximately 2% loss in capacity.

ACCESSORIES - Condensing Unit

Start Assist Kit - 912933

Provides additional starting torque for the compressor motor when operating with low line voltage or high operating temperatures.

| COPPER WIRE SIZE — AWG (1% Voltage Drop) | | | | |
|---|-----|-----|----|----------------------------|
| Supply Wire Length-Feet | | | | Supply Circuit Ampacity |
| 200 | 150 | 100 | 50 | |
| 6 | 8 | 10 | 14 | 15 |
| 4 | 6 | 8 | 12 | 20 |
| 4 | 6 | 8 | 10 | 25 |
| 4 | 4 | 6 | 10 | 30 |
| 3 | 4 | 6 | 8 | 35 |
| 3 | 4 | 6 | 8 | 40 |
| 2 | 3 | 4 | 6 | 45 |
| 2 | 3 | 4 | 6 | 50 |

Wire Size based on N.E.C. for 60° type copper conductors.

SYSTEM HEATING AND COOLING CAPACITIES

15+ SEER — Extra High Efficiency — Single Phase

| | | With this Coil | | | | | | | | |
|---------------------------|--------------------------|----------------------------|-----------------------------|------|------|----------------|-----------------|----------------------------|-----------------------------|------|
| Outdoor Unit Number FT4BF | Indoor Unit Number C4BA- | Cooling | | | | Indoor CFM | | Heating | | |
| | | Low Speed Capacity (Btu/h) | High Speed Capacity (Btu/h) | SEER | EER | Low Speed SCFM | High Speed SCFM | Low Speed Capacity (Btu/h) | High Speed Capacity (Btu/h) | HSPF |
| 024K | X24(C,U)-B+VSB | 18000 | 24000 | 15.2 | 13.0 | 640 | 840 | 18000 | 25000 | 8.2 |
| 036K | X36(C,U)-B+VSB | 24000 | 35000 | 15.0 | 12.8 | 800 | 1155 | 25000 | 37000 | 8.2 |
| 048K | X48(C,U)-C+VSB | 33000 | 46000 | 15.0 | 11.7 | 1100 | 1595 | 32000 | 43000 | 8.5 |
| 060K | X60(C,U)-C+VSB | 39000 | 56000 | 14.0 | 11.1 | 1170 | 1700 | 38000 | 56000 | 8.4 |

| | | With this Air Handler | | | | | | | | |
|---------------------------|--------------------------|----------------------------|-----------------------------|------|------|----------------|-----------------|----------------------------|-----------------------------|------|
| Outdoor Unit Number FT4BF | Indoor Unit Number B4VM- | Cooling | | | | Indoor CFM | | Heating | | |
| | | Low Speed Capacity (Btu/h) | High Speed Capacity (Btu/h) | SEER | EER | Low Speed SCFM | High Speed SCFM | Low Speed Capacity (Btu/h) | High Speed Capacity (Btu/h) | HSPF |
| 024K | X24KB | 18000 | 24000 | 15.2 | 13.0 | 640 | 840 | 18000 | 25000 | 8.2 |
| 036K | X36KB | 24000 | 35000 | 15.0 | 12.8 | 790 | 1140 | 25000 | 37000 | 8.2 |
| 048K | X48KC | 33000 | 46000 | 15.0 | 11.7 | 1070 | 1555 | 32000 | 43000 | 8.5 |
| 060K | X60KC | 39000 | 56000 | 14.0 | 11.1 | 1150 | 1665 | 38000 | 56000 | 8.4 |

Air handlers and coils used in tables are designed and manufactured by NORDYNE.

COMFORT ALERT™ DIAGNOSTIC MODULE

Green POWER LED Indicates Voltage Is Present At The Power Connection Of The Module

Pass Through Ports Detect Run/Start Current; Spade Connectors Detect Tstat Demand and Pilot Voltage; Microprocessor Monitors Behavior To Determine Faults

Yellow ALERT LED Flashes To Indicate Fault Code

Diagnostics Key Directs Service Tech To The Root Cause Of A Problem

Red TRIP LED Indicates If Compressor Is Tripped Or Has No Power

