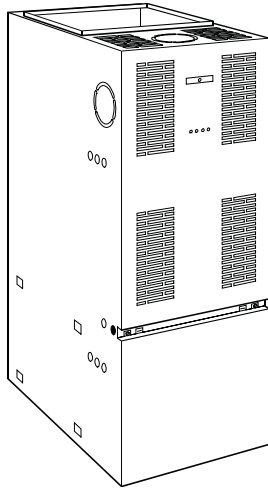


**CBMAAA
MULTIPOISE OIL FURNACE
INPUT RATES: 70,000 thru 154,000 BTUH
SERIES 130**

Product Data



A97247

THE LATEST IN OIL FURNACE TECHNOLOGY

The model CBMAAA combines high efficiency and quiet operation with oil heating technology. The CBMAAA is available in 2 sizes. Each size can be fired at 3 different rates by a simple nozzle and pump pressure change. The 154,000 Btuh input requires a burner head change. Unit CBMAAA105 covers input ranges from 70,000 to 105,000 Btuh. Unit CBMAAA120 covers input ranges from 119,000 to 154,000 Btuh. The furnace design is a multipoise style for upflow, downflow, and horizontal applications.

The components of the CBMAAA are the finest in the industry. The unit uses a Beckett oil burner with a “clean-cut” oil pump, and UTEC fan cycle timer.

The CBMAAA is a standard part of a quality-built home. This energy efficient furnace will provide years of quality service to home builders and homeowners alike.

As with our other furnaces, this model is designed to work as part of total home comfort system which includes elements for cooling, air cleaning, humidification, ventilation, and zoning.

This unit is not approved for use in mobile home installations.

CBMAAA FEATURES/BENEFITS

Beckett Oil Burner and UTEC Controls

- High quality Beckett oil burner allows safe and efficient combustion of oil.
- UTEC fan timer board provides reliable operation and easy connection of thermostat and accessory wiring.

Casing

- Made of 20-gauge, powder-painted steel for years of durability and attractiveness.
- Cabinet features a reversible door, ensuring ease of service access even in downflow applications.

Insulation and Soundproofing

- Unique silencer baffle, insulated walls and rubber blower mounts capture most combustion noise and vibration and make this unit one of the quietest on the market.

Combustion Products Venting

- Top or side flue outlet.
- Unit may be vented using Type L vent material and a factory-built metal or masonry chimney.
- Unit may also be sidewall vented with an approved power venter.

Adjustable Blower Speed

- 4-speed blower for precise airflow selection of heating or cooling operation.

Constant Low-Speed Blower Switch

- Allows continual low-speed air circulation through the home to maximize comfort while maintaining efficiency.
- Air is constantly filtered and stagnant air is avoided.
- This option can be controlled by the homeowner.

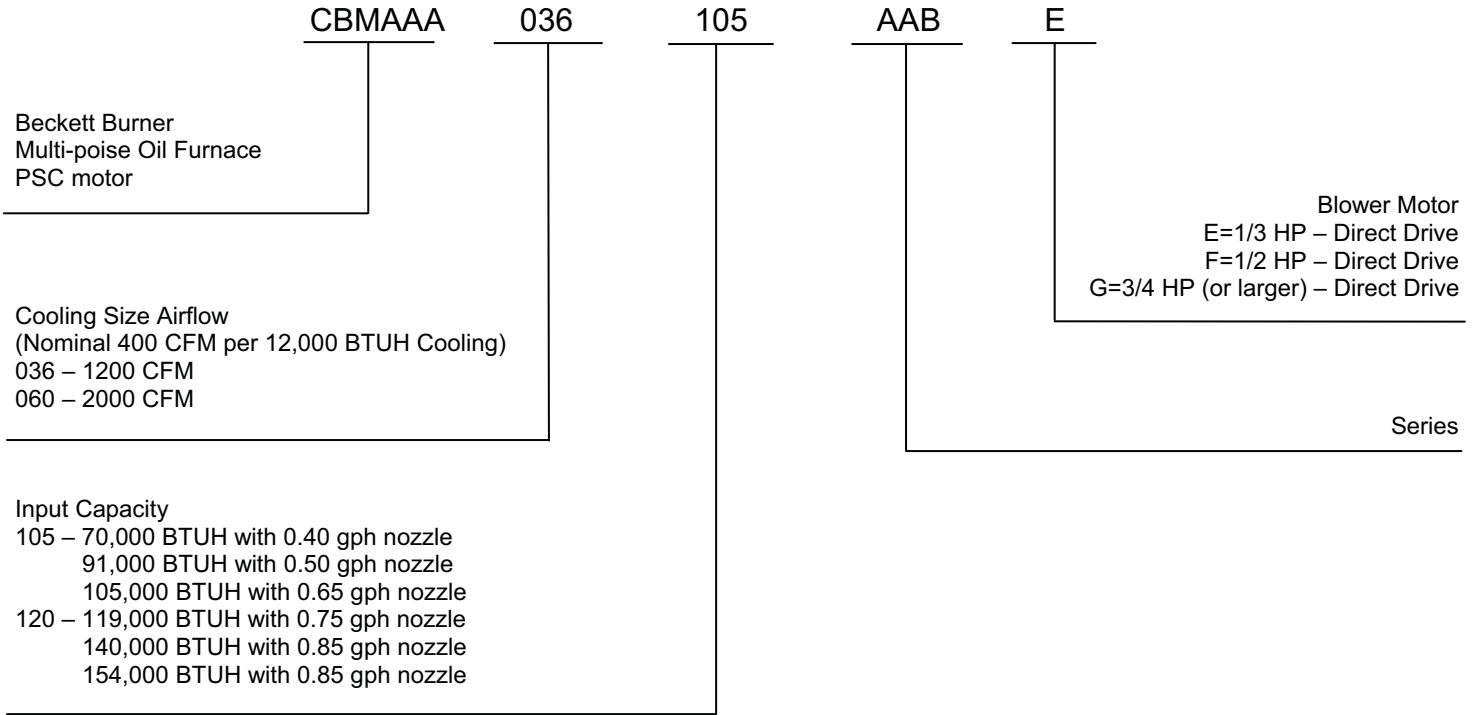
Combustion Chamber/Heat Exchanger

- Composed mainly of stainless and aluminized steel, the unique combination combustion chamber/heat exchanger resists corrosion, overheating, and deterioration.
- Heat transfer properties make it energy efficient.
- All seams are tightly welded for leak-free operation.

Certifications

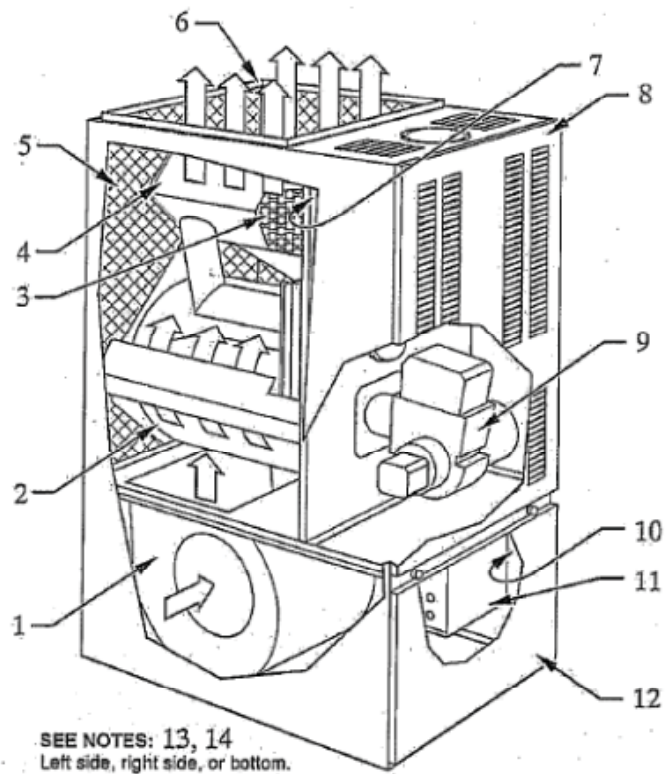
- CBMAAA unit is CSA certified.
- The efficiency is AHRI efficiency rating certified.

MODEL NUMBER NOMENCLATURE



Use of the AHRI Certified TM Mark indicates a manufacturer's participation in the program. For verification of certification for individual products, go to www.ahridirectory.org.

**Always Ask For
FACTORY
AUTHORIZED
PARTS**



A97244

1. Heavy-duty blower circulates air across the heat exchanger to transfer heat into the home.
2. Stainless steel combustion chamber/primary heat exchanger.
3. Unique silencer system reduces combustion noise.
4. Heat exchanger designed and shaped to efficiently transfer heat from furnace into the home.
5. Fully insulated internal walls to minimize heat loss and reduce sound.
6. Supply-air plenum.
7. High limit control to prevent overtemperature operation.
8. Reversible door provides easy access to burner and controls.
9. High-performance oil burner.
10. Manual switch to allow user control of constant low-speed blower operation.
11. Adjustable electronic fan timer control (inside) has low voltage electrical terminal strip for easy connection of thermostat, cooling control, electronic air cleaner, and humidifier.
12. Access door to blower.
13. Air filter (field supplied).
14. Return-air plenum.

CLEARANCE TO COMBUSTIBLES

| UNIT APPLICATION | | UPFLOW | DOWNFLOW | HORIZONTAL |
|------------------|--|--------|----------|------------|
| SIDES | Furnace | 0 | 2 | 2 |
| | Supply Plenum and Warm-Air Duct Within 6 Ft of Furnace | 1 | 2 | 1 |
| BACK | Furnace | 0 | 1 | 0 |
| TOP | Furnace Casing or Plenum | 2 | 2 | 2 |
| | Horizontal Warm-Air Duct Within 6 Ft of Furnace | 2 | 2 | 3 |
| BOTTOM | Furnace | 0 | 0* | 0* |
| FLUE PIPE | Horizontally or Below Pipe | 4 | 4 | 4 |
| | Vertically Above Pipe | 9 | 9 | 9 |
| FRONT | | 8 | 8 | 24 |

*For combustible floor, use approved accessory subbase.

NOTE: Adequate service clearance should be provided over and above these dimensions as required.

PHYSICAL DATA

| UNIT SIZE | CBMAAA105 | | | CBMAAA120 | | |
|--|----------------|----------------|----------------|----------------|----------------|-------------------|
| INPUT (BTUH) | 70,000 | 91,000 | 105,000 | 119,000 | 140,000 | 154,000 |
| HEATING CAPACITY (BTUH)* | 56,000 | 73,000 | 84,000 | 98,000 | 114,000 | 126,000 |
| NOZZLE | 0.50 - 70W | 0.55 - 70B | 0.65 - 70B | 0.75 - 70B | 0.85 - 70B | 0.85 - 70B |
| FIRING RATE (GPH) | 0.50 | 0.65 | 0.75 | 0.85 | 1.00 | 1.10 |
| AFUE% UPFLOW | 80.6 | 80.4 | 80.8 | 82.4 | 81.3 | 81.5 |
| OIL PUMP STAGES/PRESSURE (PSIG) | 1/100 | 1/140 | 1/130 | 1/130 | 1/140 | 1/170 |
| HEATING TEMP RISE _F | 55-85 | 55-85 | 55-85 | 55-85 | 55-85 | 55-85 |
| COOLING CFM @ 0.5-IN. WC STATIC PRESSURE | 1250 | 1250 | 1250 | 1865 | 1865 | 1865 |
| HEATING CFM @ 0.2-IN. WC STATIC PRESSURE | 840 | 1130 | 1425 | 1220 | 1535 | 1890 |
| RECOMMENDED HEATING BLOWER SPEED | Med-Low | Med-High | High | Med-Low | Med-High | High |
| SHIPPING WEIGHT (LB) | 235 | 235 | 235 | 260 | 260 | 260 |
| BURNER MODEL (3450 RPM) | BECKETT AFG-F3 | BECKETT AFG-F3 | BECKETT AFG-F3 | BECKETT AFG-F3 | BECKETT AFG-F3 | BECKETT AFG-F6 ** |

* Capacity and AFUE in accordance with U.S. Government DOE test procedures.

** Beckett AFG-F6 replacement burner firing head required - field supplied.

Shaded cells are as factory shipped.

PERFORMANCE DATA

| UNIT SIZE | CBMAAA105 | CBMAAA120 |
|--|-------------------|-------------|
| DIRECT-DRIVE MOTOR Hp (PSC) | 1/3 | 3/4 |
| MOTOR FULL LOAD AMPS | 6.2 | 9.5 |
| RPM (Nominal) - SPEEDS | 1075-4 | 1075-4 |
| BLOWER WHEEL DIAMETER X WIDTH (In.) | 10 x 10 | 12 x 10 |
| FILTER SIZE (In.) - (Disposable, Field Supplied) | 16 x 24 or 25 x 1 | 20 x 30 x 1 |

AIR DELIVERY -CFM (WITH FILTER)

| UNIT SIZE | BLOWER MOTOR HP | SPEED | EXTERNAL STATIC PRESSURE (In. wc) | | | | | | | |
|-----------|-----------------|----------|-----------------------------------|------|------|------|------|------|------|------|
| | | | 0.2 | 0.3 | 0.4 | 0.5 | 0.6 | 0.7 | 0.8 | 0.9 |
| CBMAAA105 | 1/3 PSC | High | 1425 | 1350 | 1305 | 1250 | 1170 | 1030 | 925 | 805 |
| | | Med-High | 1130 | 1045 | 1000 | 950 | 885 | 820 | 745 | 670 |
| | | Med-Low | 840 | 810 | 770 | 740 | 685 | 635 | 580 | 500 |
| | | Low | 725 | 730 | 740 | 745 | 730 | 715 | 690 | 665 |
| CBMAAA120 | 3/4 PSC | High | 2080 | 2040 | 1965 | 1865 | 1700 | 1575 | 1475 | 1335 |
| | | Med-High | 1890 | 1860 | 1770 | 1675 | 1550 | 1450 | 1330 | 1215 |
| | | Med-Low | 1555 | 1475 | 1395 | 1320 | 1210 | 1135 | 1050 | 940 |
| | | Low | 1220 | 1165 | 1080 | 1000 | 925 | 855 | 780 | 655 |

ELECTRICAL DATA

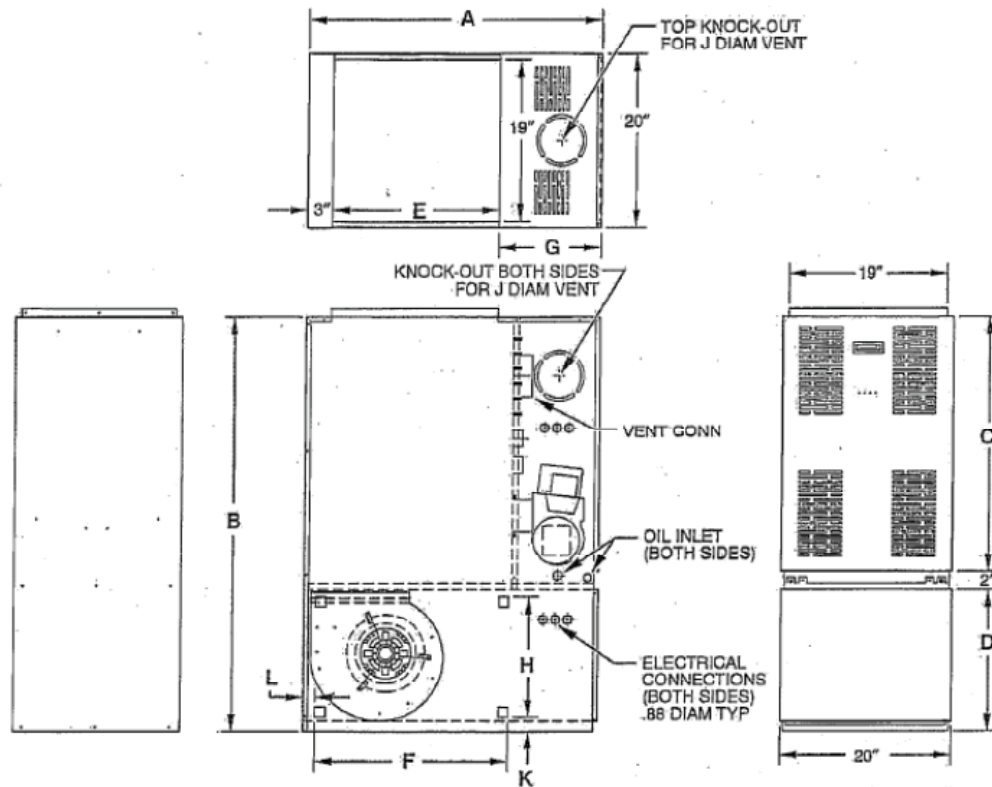
| UNIT SIZE | CBMAAA105 | CBMAAA120 |
|--|--------------|--------------|
| UNIT VOLTS-HERTZ - PHASE | 115 - 60 - 1 | 115 - 60 - 1 |
| OPERATING VOLTAGE RANGE (Min-Max)* | 104 - 132 | 104 - 132 |
| MAXIMUM UNIT AMPS | 12.2 | 15.7 |
| MINIMUM WIRE SIZE (AWG) | 14 | 12 |
| MAXIMUM WIRE LENGTH (Ft)** | 26 | 26 |
| MAXIMUM FUSE SIZE OR CKT BKR (Amps)*** | 15 | 20 |
| TRANSFORMER (24v) | 40va | 40va |
| EXTERNAL CONTROL POWER AVAILABLE | Heating | 40va |
| | Cooling | 30va |
| AIR CONDITIONING RELAY | Standard | Standard |

* Permissible limits of the voltage range at which the unit will operate satisfactorily.

** Length is a measured one way along wire path between unit and service panel for maximum 2% voltage drop.

*** Time-delay fuse type is recommended.

DIMENSIONS



A98037

DIMENSIONS (IN.)

| UNIT SIZE | A | B | C | D | E | F | G | H | J | K | L |
|-----------|--------|--------|--------|--------|----|----|----------|----|---|-------|-------|
| CBMAAA105 | 35 | 48-3/4 | 31-1/4 | 16-5/8 | 20 | 22 | 12 | 14 | 5 | 1-1/2 | 1-3/4 |
| CBMAAA120 | 39-1/2 | 53 | 33-1/4 | 18-3/4 | 24 | 28 | 12-19/32 | 16 | 6 | 1-5/8 | 1-1/2 |

ACCESSORIES

| FURNACE ACCESSORIES | |
|---------------------|---|
| KLASB0601DET | Downflow Subbase Kit - Required for combustible floors |
| KLASB0701DET | Horizontal Subbase Kit - Required for combustible floors |
| KLAV0101DET | Blocked Vent Shutoff Kit |
| KLADC0101DET | Downflow Conversion/Vent Guard - Required for downflow operation, Model CBMAAA105 |
| KLADC0201DET | Downflow Conversion/Vent Guard - Required for downflow operation, Model CBMAAA120 |