

Models ACF w/o Coil
ACW w/Hot Water Coil
ACE w/Electric Coil

The **Carnes** constant volume fan terminal unit provides constant air volume to the space while retaining the advantages of a variable air volume system.

The primary air control assembly operates in the same manner as a standard throttling control valve when cooling loads are high. As cooling loads diminish the integral blower(s) induces warm ceiling plenum air to maintain constant air volume.



Other Features Include:

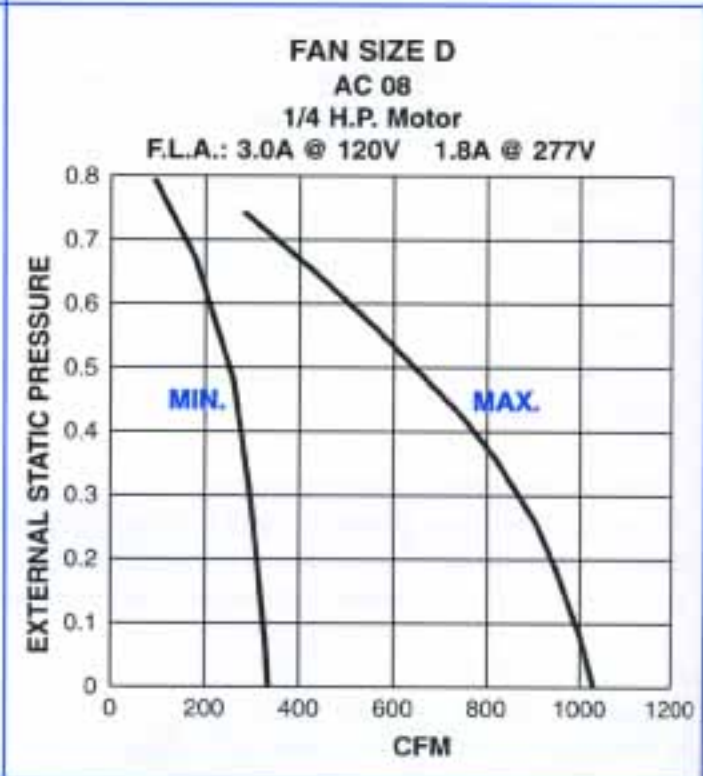
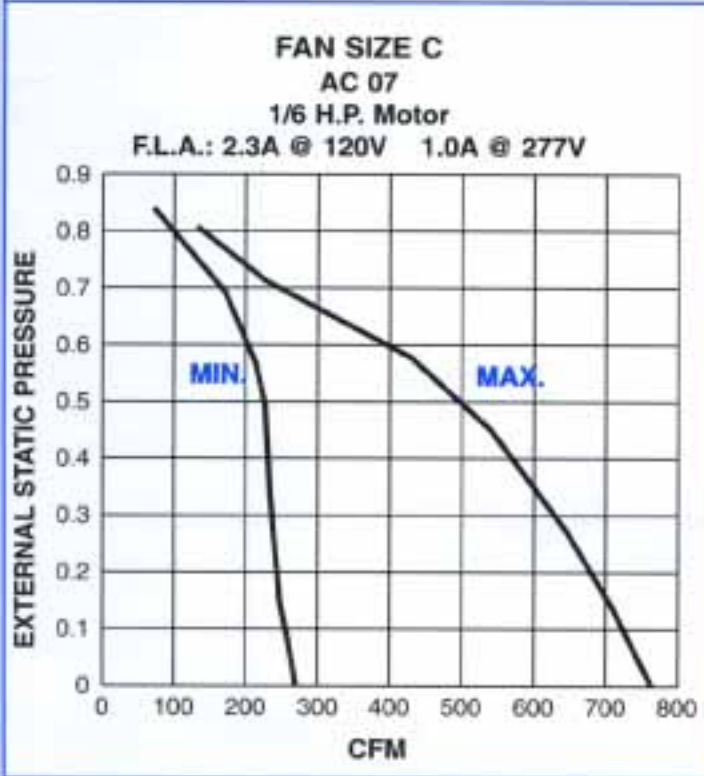
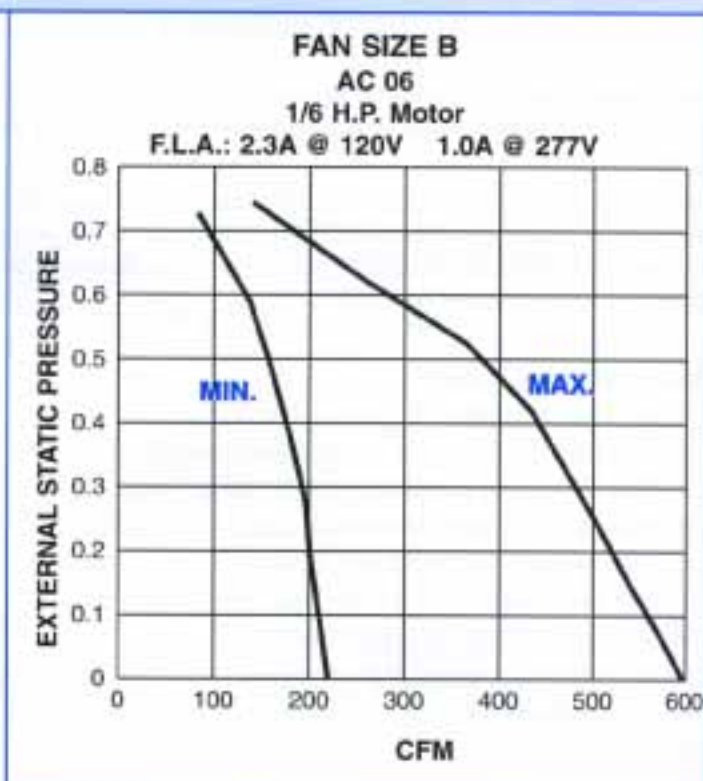
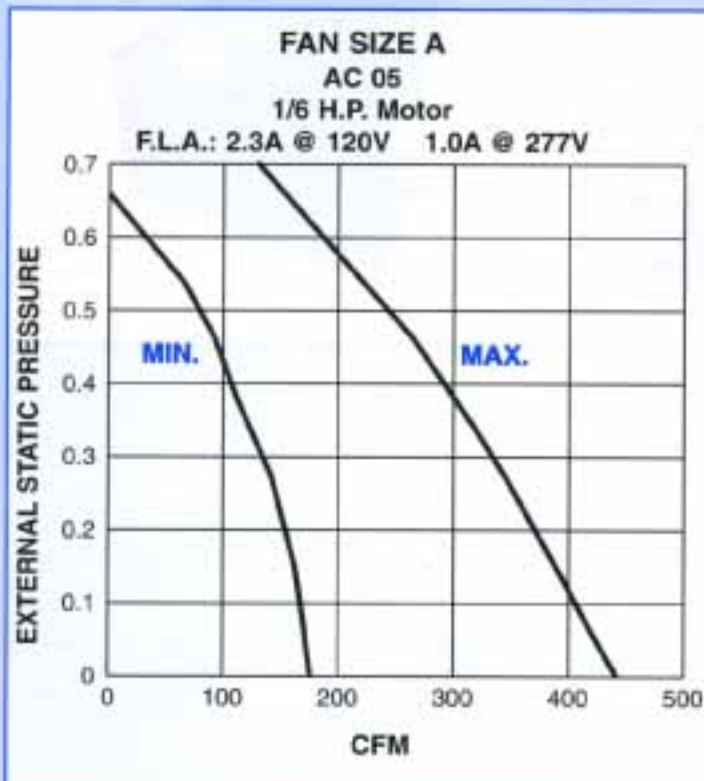
- Air flow capacities to 3700 CFM.
- Durable 22 gauge galvanized steel casing construction.
- Bottom access panel for internal components.
- Flange or slip and drive discharge connections.
- Forward curved centrifugal type fan assemblies with thermally protected, permanent split capacitor type 115 or 277 volt, single phase, fractional horsepower motors.
- Adjustable SCR fan speed control.
- Fan/motor assemblies are isolated from the casing using rubber isolators to minimize vibration transmission.
- Low leakage primary air damper design.
- Secondary air filter rack.
- Performance data based on tests conducted in accordance with ARI Standard 880-94.
- Air flow switch.
- All units are equipped with pressure independent pneumatic or electronic controls.
- Field adjustable P/E switch with pneumatic controls.
- Averaging type velocity sensor and calibration chart for measuring air flow through the primary air damper.
- Insulation is 1" thick, 1-1/2 lb. dual density fiberglass with surface treated to prevent air erosion, UL listed and meets NFPA 90A requirements.
- Damper controls and fan controls are located in one enclosure.
- ARI listed.
- Optional ETL listing.
- Optional secondary air sound baffle. Sound baffle is factory attached to secondary air inlet. (Contact Carnes)
- Optional one or two row hot water coils (Model ACW). Coil is factory attached to the unit discharge.
- Optional one, two or three stage electric reheat coils (Model ACE). Coil is factory attached to unit discharge or shipped separately for field mounting.
- Optional secondary air filters, Class I (re-usable) or Class II (throw away).
- Optional non-fused or fused fan disconnect switch.
- Optional foil coated insulation (Hospital, Laboratory, etc. applications).

Available Modules:

- Basic control unit — **Model ACF.**
- Basic control unit with hot water coil — **Model ACW.**
- Basic control unit with electric coil — **Model ACE.**

FAN CURVES

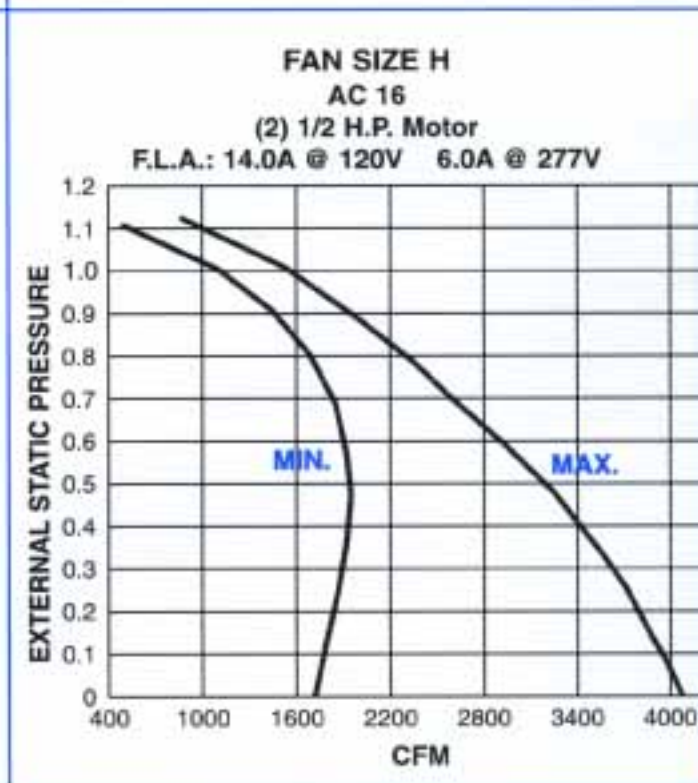
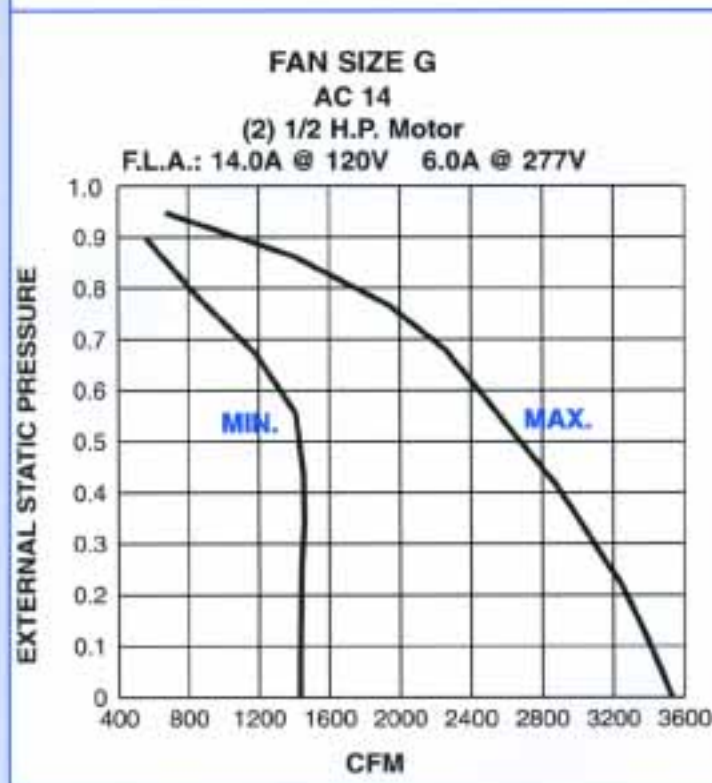
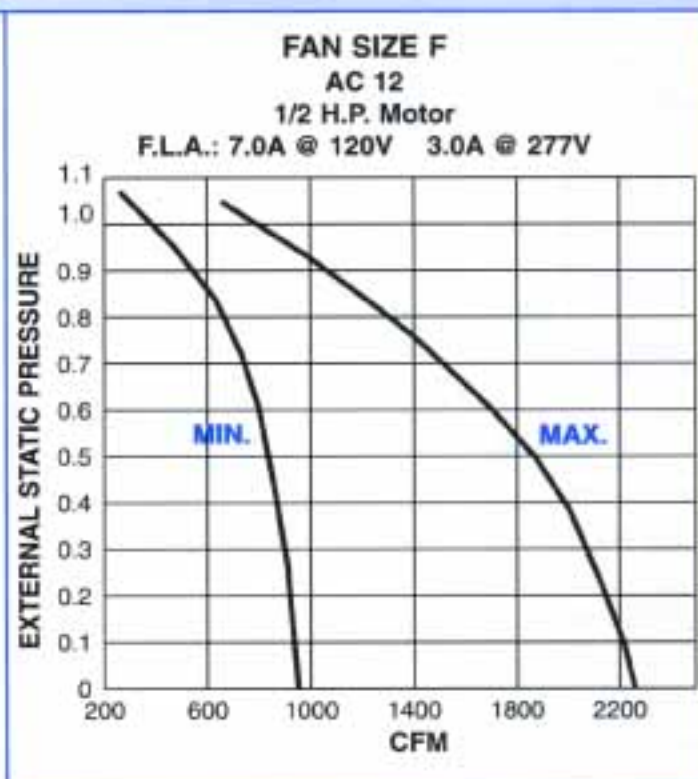
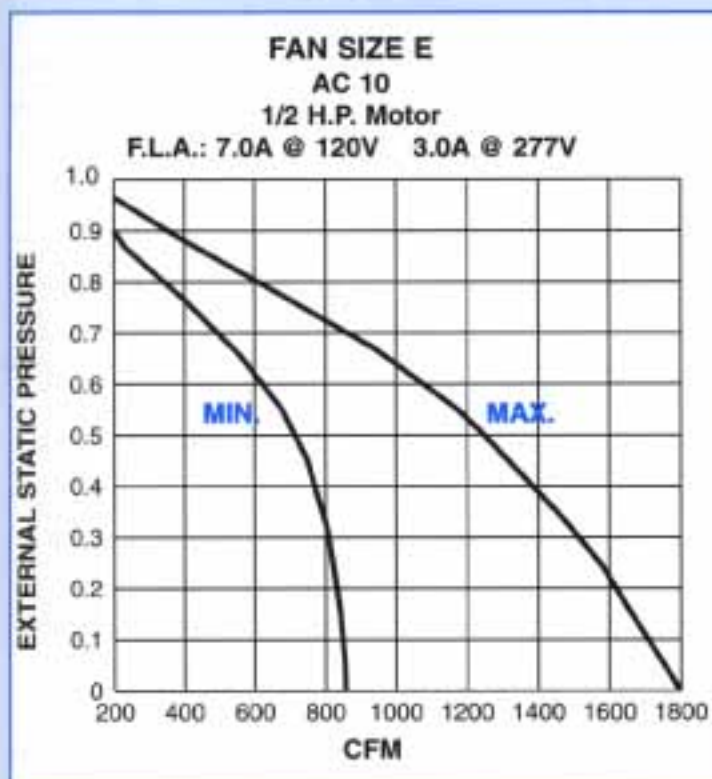
CFM vs EXTERNAL STATIC PRESSURE



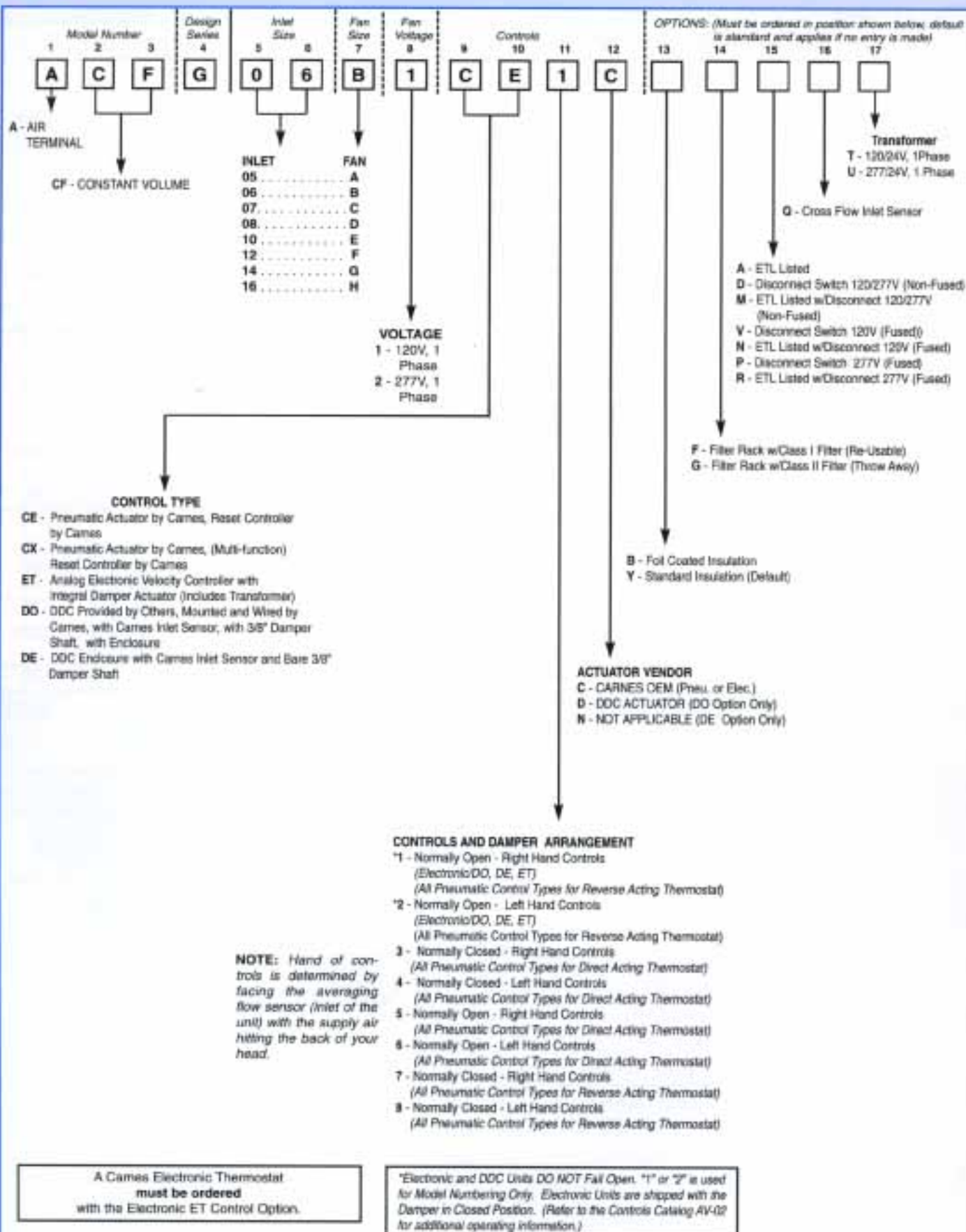
- NOTES:**
1. External static pressure (ESP) consists of downstream ductwork, coils, flex duct, etc.
 2. Pressure drops due to heating coils are treated as external static pressure (Refer to coil sections of this catalog for additional information).
 3. F. L. A. = Full Load Amps of motor.
 4. For proper operation, the downstream ESP must be at least 0.20" W. G.

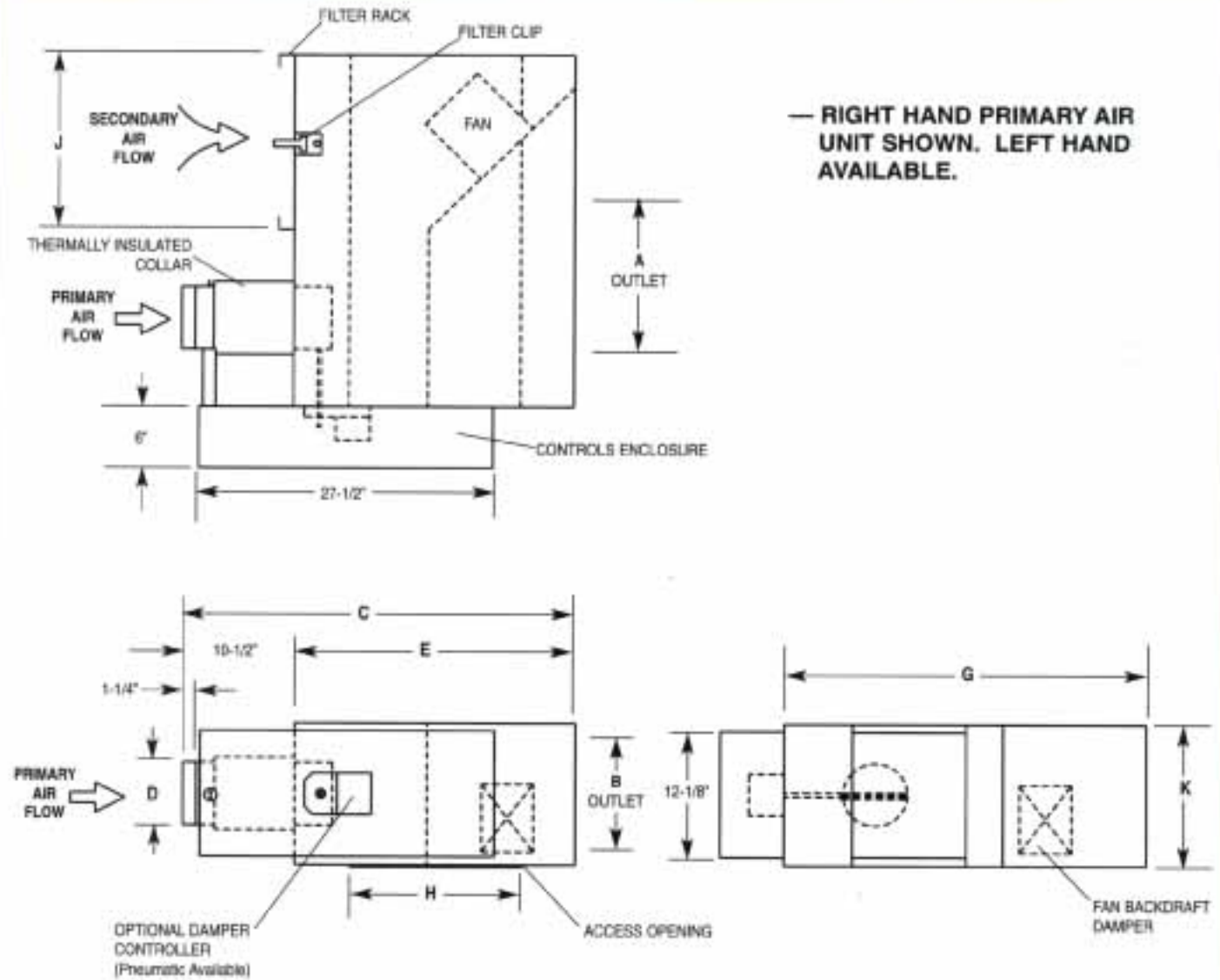
FAN CURVES

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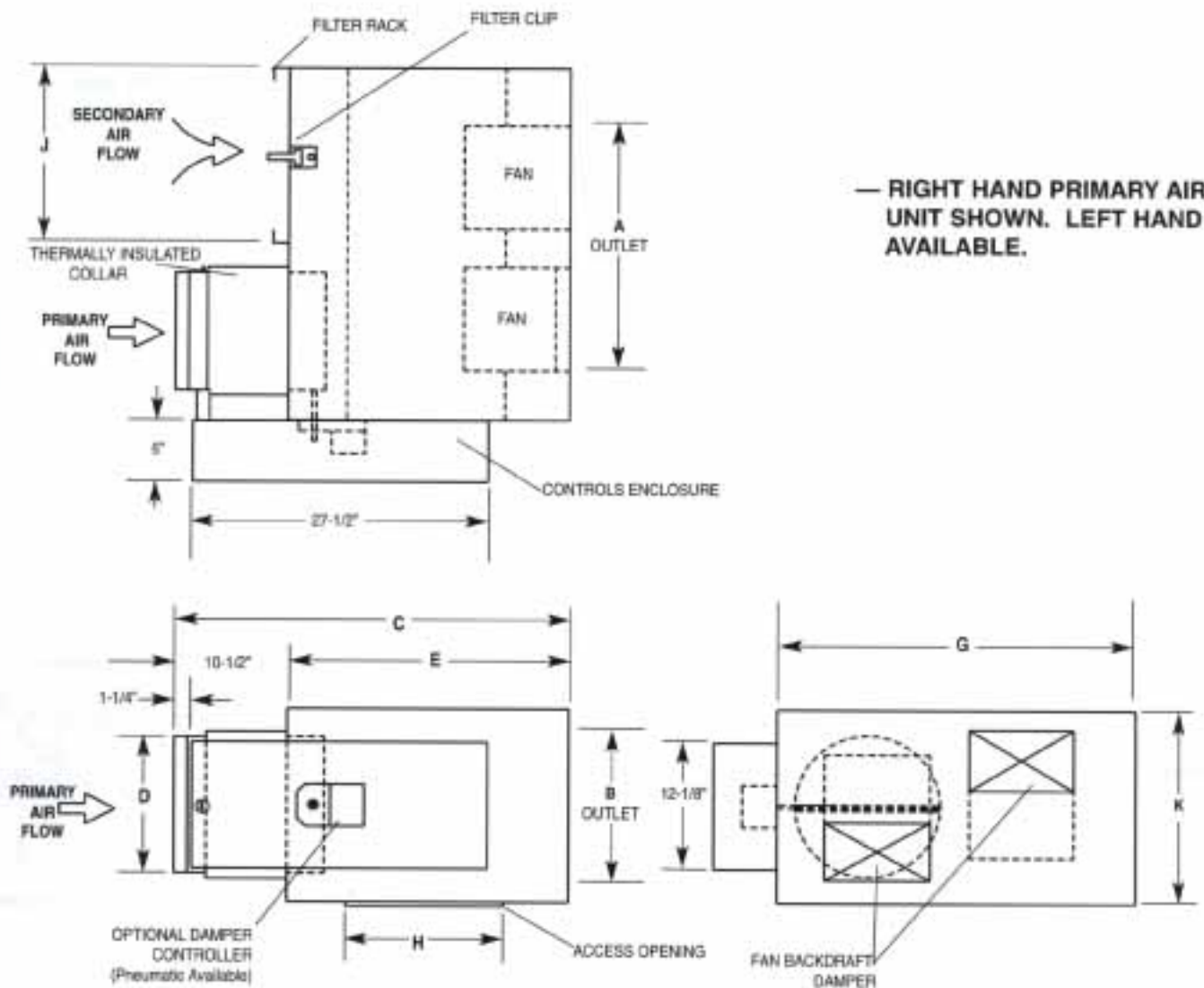




DIMENSIONS LISTED IN INCHES

| Fan Size | Inlet Size | Primary Nominal CFM | Secondary Nominal CFM @ .25" E.S.P. | Fan H.P. | *Outlet | | C | D | E | G | H | J | K |
|----------|------------|---------------------|-------------------------------------|----------|---------|--------|----------|--------|---------|--------|----------|--------|--------|
| | | | | | A | B | | | | | | | |
| A | 05 | 350 | 300 | 1/6 | 14 | 12 | 36-11/16 | 4-7/8 | 26-3/16 | 33-3/4 | 17-13/16 | 17-1/4 | 14 |
| B | 06 | 500 | 450 | 1/6 | | | | 5-7/8 | | | | | |
| C | 07 | 700 | 650 | 1/6 | | | | 6-7/8 | | | | | |
| D | 08 | 1000 | 900 | 1/4 | | | | 7-7/8 | | | | | |
| E | 10 | 1500 | 1600 | 1/2 | 9-7/8 | 15-1/2 | 44 | 11-7/8 | 33-1/2 | 44 | 21-1/8 | 21-1/2 | 17-1/2 |
| F | 12 | 2300 | 2100 | 1/2 | | | | | | | | | |

*Outlet dimensions refers to the actual opening. Unit has 3/4" outlet flange.



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| | | | | | A | B | | | | | | | |
| G | 14 | 3100 | 3150 | 1/2 (2) | 29 | 16 | 40-1/2 | 13-7/8 | 30 | 50 | 19-3/4 | 27-1/2 | 17-1/2 |
| H | 16 | 4200 | 3700 | 1/2 (2) | 31-1/2 | 16 | | 15-7/8 | | | | | |

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