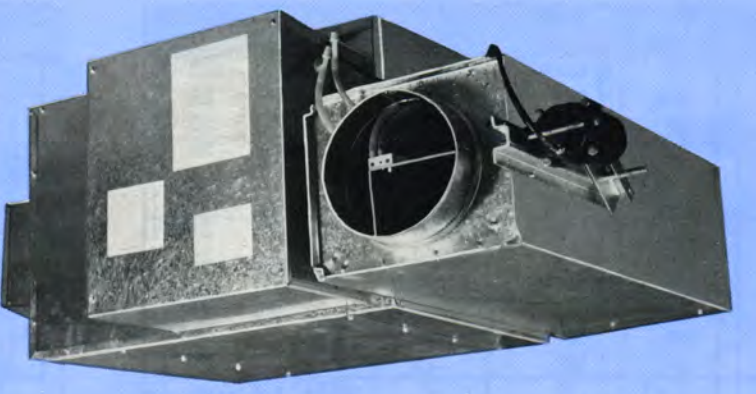
Fan Powered Units —Intermittent Volume

Model ASFB 1:1 Ratio w/o coil
Model ATFB 2:1 Ratio w/o coil

Model ASWB 1:1 Ratio w/Hot Water Coil
Model ATWB 2:1 Ratio w/Hot Water Coil

Model ASEB 1:1 Ratio w/Electric Coil
Model ATEB 2:1 Ratio w/Electric Coil



The Carnes intermittent fan terminal unit provides constant air volume to the space for reheat applications while retaining a variable air volume system during normal cooling operation.

The primary air control assembly operates independently as a standard throttling control valve for cooling loads. As cooling loads diminish, the secondary air supply fan is energized to induce warm ceiling plenum air. A wide variety of control sequences makes this fan powered unit compatible with the most energy efficient system design.

Typical Sequence of Operation

Central fan on — Day (occupied) operation.
When the central system fan is "on", the intermittent fan unit operates as a standard throttling control unit for cooling loads. As the cooling load diminishes and the control valve throttles to a minimum or closed position, the fan is energized by the P/E switch to draw in warm plenum air or hydronically or electrically reheated air.

Central fan off — Night (unoccupied) operation.
When the central system fan is "off", the primary air supply valve is closed. The unit fan is then turned on and off by the P/E switch on demands for heat and no heat respectively.

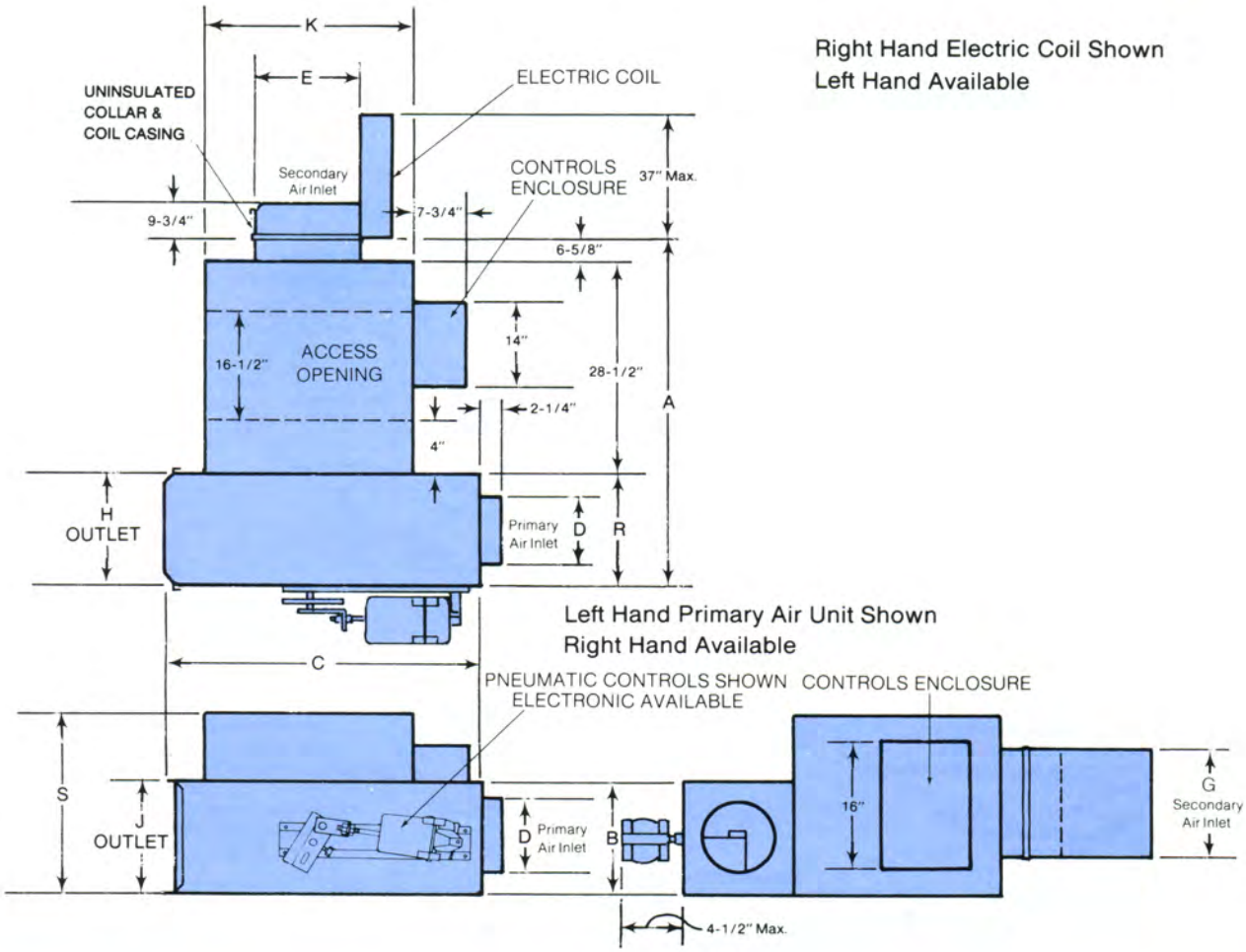
Features Include:

- Air flow capacities to 6000 CFM Primary Air and 3200 CFM Secondary Air.
- Two primary to secondary air ratio configurations are available.
- Access panel for internal components.
- Forward curved centrifugal type fan assemblies with SCR speed controlled permanent split capacitor type 115 or 277 volt fractional horsepower motors.
- Fan/motor assemblies are isolated from the casing using rubber isolators to minimize vibration trans mission.
- Field adjustable P/E and air flow switches.
- All units are equipped with pneumatic or electronic pressure independent controls.
- Insulation is 1½ lb. density fiberglass with surface treated to prevent erosion, meets NFPA 90A requirements.
- Optional one or two row hot water coils *(Models ASWB/ATWB).* Coil is attached to secondary air inlet.
- Optional one, two or three stage electric reheat coils *(Models ASEB/ATEB).* Coil is attached to secondary air inlet.
- Velocity sensor and calibration chart for measuring air flow through the primary air damper.
- Optional filter rack.
- Optional quick release access panel.
- Optional fire rated tubing.
- Optional coated insulation (hospital, laboratory, etc. applications).

Available Modules:

- Basic control unit—Models ASFB/ATFB.
- Basic control unit with hot water coil—Models ASWB/ATWB
- Basic control unit with or without electric coil—Models ASEB/ATEB.
- Discharge sound attenuator—Model AXAA. (See Section 5-Accessories.)
- Multi-Discharge adaptor—Model AXMA. (See Section 5-Accessories.)

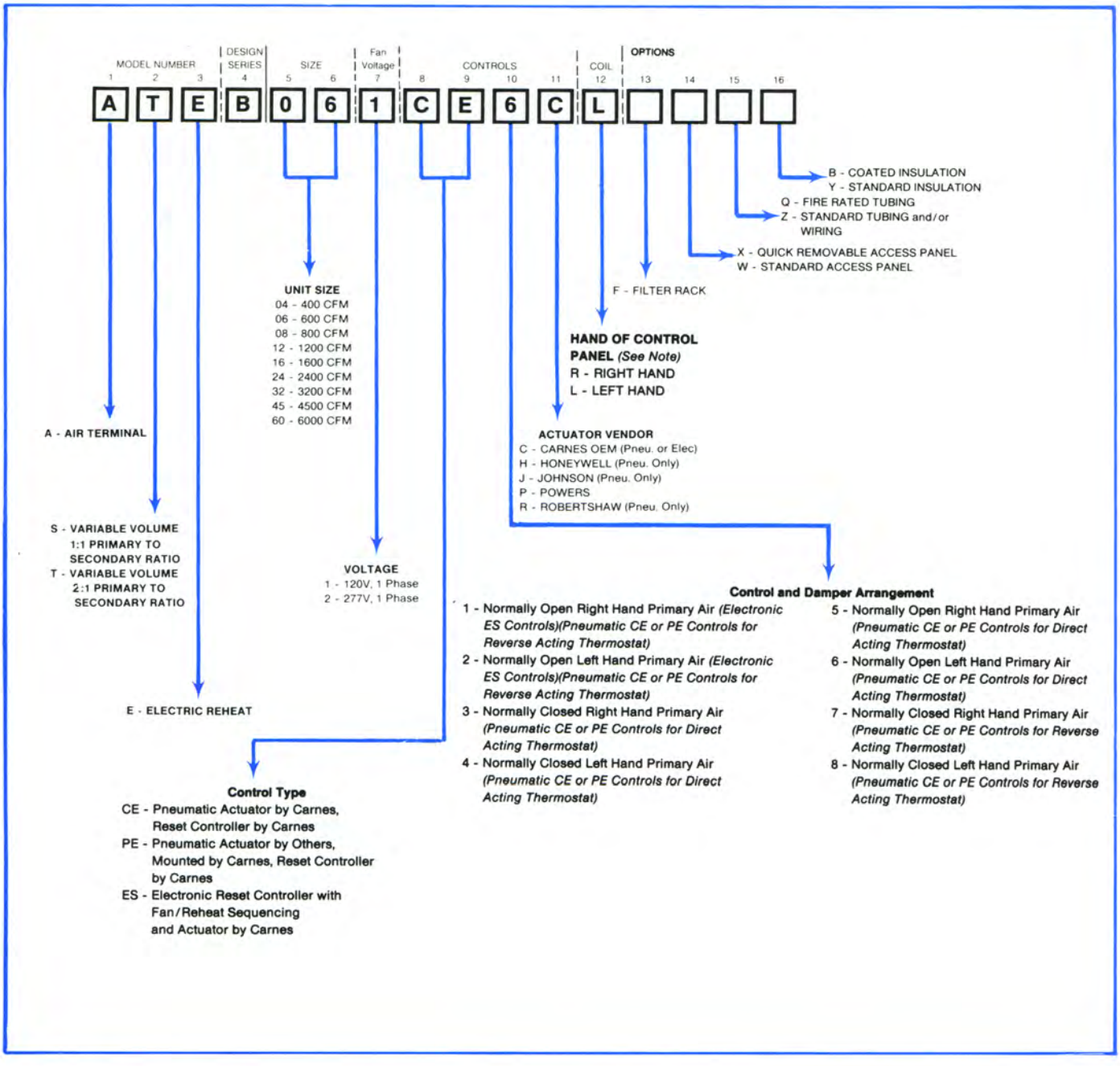
Dimensional Data—Models ASEB/ATEB-Intermittent Volume Fan Powered Unit with Electric Coil



DIMENSION IN INCHES																
Unit Type	Unit Size	Prim. Nom. CFM	Sec. Nom. CFM	Fan H.P.	A	B	C	D	Secondary Air Inlet E	Secondary Air Inlet G	S & Drive Outlet H	S & Drive Outlet J	K	L	R	S
ASEB 1:1 Ratio	04	400	400	1/8	45 1/8	8	27 1/2	6	10	8	10	8	19 1/2	5 7/8	10	18
	06	600	600	1/6	47 1/8	10	30 7/8	7	12	10	12	10	24	5 5/8	12	18
	08	800	800	1/4	47 1/8	10	33 5/8	8	14	12	12	10	26	5 1/2	12	18
	12	1200	1200	1/3	49 1/8	12	40	10	16	14	14	12	31	6 3/4	14	18
	16	1600	1600	1/2	51 1/8	14	41 1/2	12	18	16	16	14	33 1/2	6 1/8	16	18
	24	2400	2400	(2) 1/3	53 1/8	16	57 5/8	14	20	18	18	16	42	13 3/4	18	18
	32	3200	3200	(2) 1/2	55 1/8	18	59 7/8	16	24	18	20	18	46 1/2	12 1/4	20	20
ATEB 2:1 Ratio	08	800	400	1/8	45 1/8	10	29 3/8	8	10	8	12	10	19 1/2	8	12	18
	12	1200	600	1/6	49 1/8	12	33 5/8	10	12	10	14	12	24	7 3/4	14	18
	16	1600	800	1/4	51 1/8	14	36 3/8	12	14	12	16	14	26	8 1/2	16	18
	24	2400	1200	1/3	53 1/8	16	42 5/8	14	16	14	18	16	31	9 3/4	18	18
	32	3200	1600	1/2	55 1/8	18	45 1/2	16	18	16	20	18	33 1/2	10 1/8	20	18
	45	4500	2400	(2) 1/3	59 1/8	18	59 7/8	18 x 16	20	18	24	18	42	15 3/4	24	18
	60	6000	3200	(2) 1/2	67 1/8	18	59 7/8	24 x 16	24	18	32	18	46 1/2	12 1/4	32	20

See Section 4 for specific information on electric coils.

2 Model Numbering System—Models ASEB/ATEB-Control Unit



NOTES:
1. *Hand of primary air side of unit is determined by facing the unit in the direction of air flow into the unit.*
2. *Standard motor voltages for 1:1 unit type are 277 volts for sizes 04-32 and 115 volts for sizes 04-16. Standard motor voltages for 2:1 unit type are 277 volts for sizes 08-60 and 115 volts for sizes 08-32.*
3. *Filter not included with filter rack.*
4. *Model ES 24 volt control to be provided by the electric coil transformer.*
5. *Hand of the coil is selected by facing the outside of the coil control panel and determining the direction of the control panel overhang from the coil section.*