



The Carnes Model AVGA is basically the AVBA by-pass control valve. A slot diffuser and balancing damper are integral with the unit eliminating the cost of ducting to one diffuser. The slot diffuser is generally accepted as the best diffuser choice for VAV applications.

This unit provides variable air volume to individual zones while by-passing the unneeded air to the ceiling plenum for recirculation.

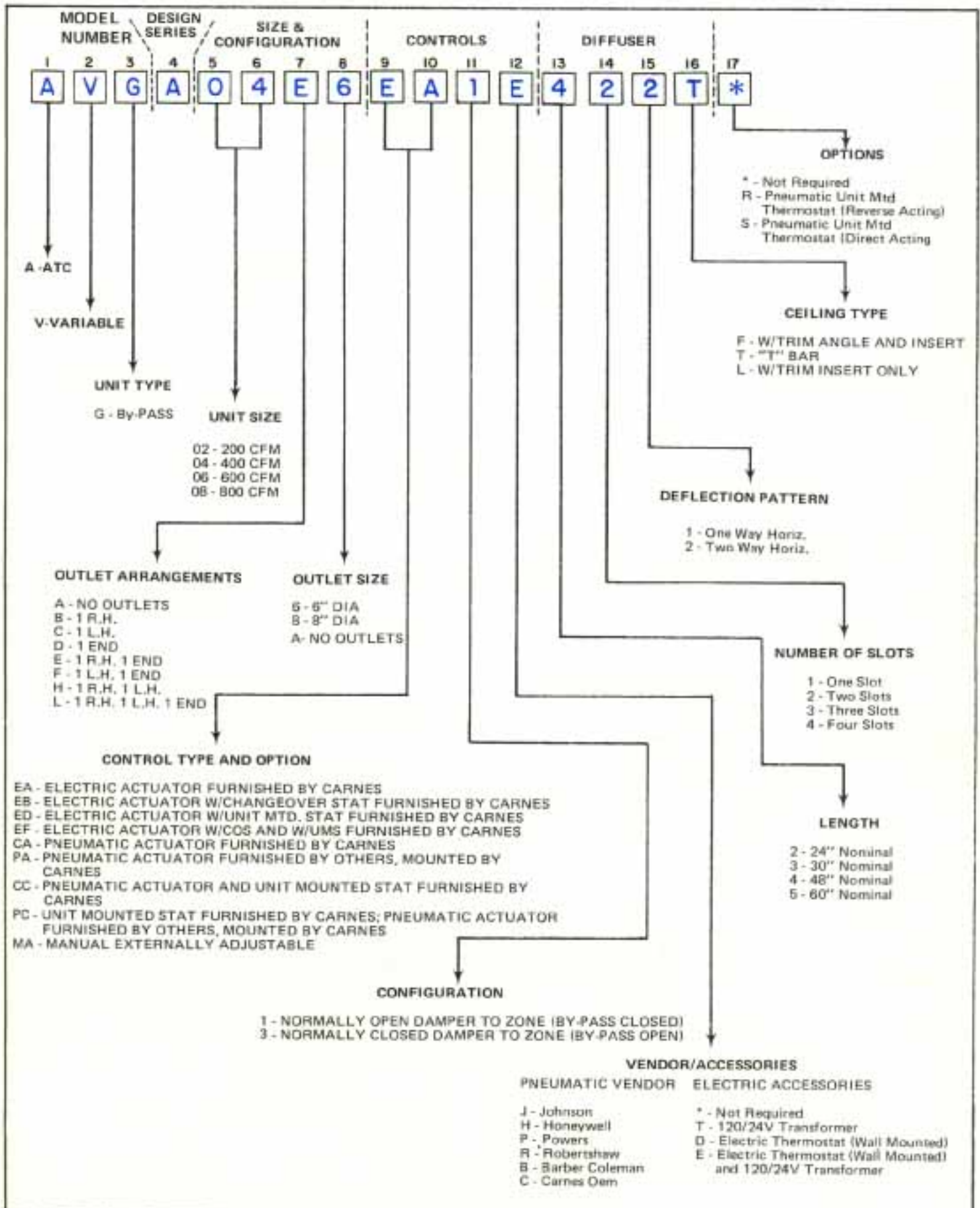
Although zone air volumes in small buildings may vary greatly, the cost of fan controls many times cannot be justified. Zone variable air volumes are realized with the by-pass unit while the supply fan delivers a constant CFM.

The AVGA is compatible with reverse or direct acting pneumatic or electric thermostats. Zone thermostats directly controlling the by-pass damper assures that only the air that is needed is delivered to the zone.

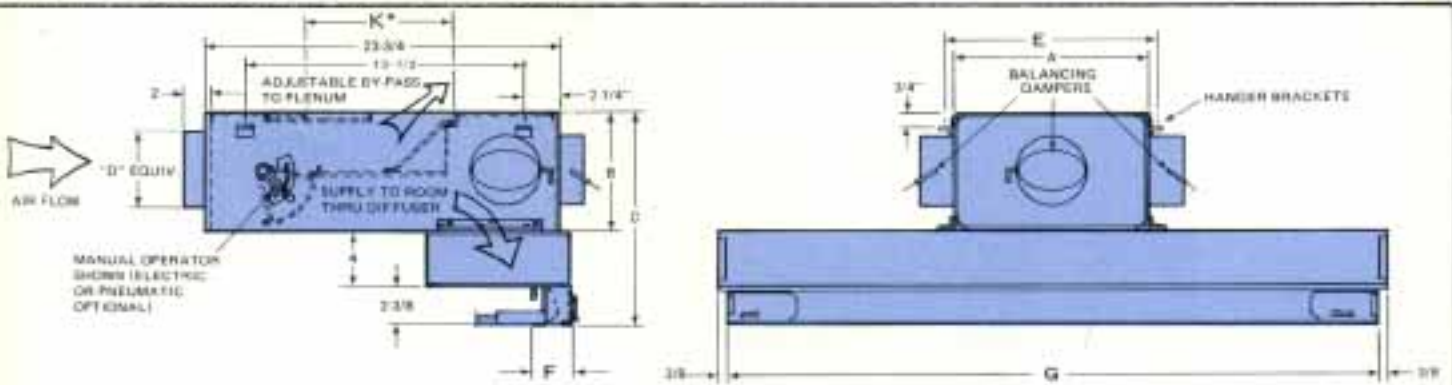
**Other features include:**

- Air flow capacities to 800 CFM.
- Pneumatic, electric, or manual damper control
- Thermally and acoustically insulated casing.
- Slot diffuser – Choice of 1-4 slots; choice of 2-5 foot lengths; choice of 1 or 2 way throw
- Suitable for T-bar and flush ceilings.
- As an option, unit mounted pneumatic or electric aspirating thermostat with adjustable set point through diffuser slots.
- Multi-discharge units have round or elliptical outlet connections with integral balancing dampers.
- Air flow sensor at inlet of unit.
- Hanger brackets for easy mounting characteristics.

# Model Numbering System—AVGA - By-Pass Externally Powered 6



1-WAY BLOW INTEGRAL SLOT DIFFUSER



| Unit Size | CFM | A  | B  | C      | D  | E  | K     | Diffuser | Nominal CFM | F      | G       | OUTLET ARRANGEMENT TOP VIEW |        |        |        |                    |
|-----------|-----|----|----|--------|----|----|-------|----------|-------------|--------|---------|-----------------------------|--------|--------|--------|--------------------|
|           |     |    |    |        |    |    |       |          |             |        |         | [B]                         | [E]    | [L]    | [A]    |                    |
| 02        | 200 | 13 | 8  | 14-3/8 | 5  | 14 | 5-3/8 | 211      | 100         | 2      | 23-1/16 | Unit Size                   | [C]    | [F]    | [A]    | No Outlet          |
| 04        | 400 | 13 | 8  | 14-3/8 | 7  | 14 | 5-3/8 | 221      | 200         | 3-9/16 | 23-1/16 |                             |        |        |        |                    |
| 06        | 600 | 14 | 10 | 16-3/8 | 9  | 15 | 6-3/8 | 311      | 125         | 2      | 29-1/16 | Unit Size                   | [D]    | [H]    | [A]    | No Outlet          |
|           |     |    |    |        |    |    |       | 321      | 250         | 3-9/16 | 29-1/16 |                             |        |        |        |                    |
| 08        | 800 | 17 | 10 | 16-3/8 | 10 | 18 | 6-3/8 | 411      | 200         | 2      | 47-1/16 | Unit Size                   | [D]    | [H]    | [A]    | No Outlet          |
|           |     |    |    |        |    |    |       | 421      | 400         | 3-9/16 | 47-1/16 |                             |        |        |        |                    |
|           |     |    |    |        |    |    |       | 431      | 600         | 5-5/32 | 47-1/16 | 02                          | 6      | 6      | 6      | OUTLET SIZE INCHES |
|           |     |    |    |        |    |    |       | 511      | 250         | 2      | 59-1/16 | 04                          | 6      | 6      | 6      |                    |
|           |     |    |    |        |    |    |       | 521      | 400         | 3-9/16 | 59-1/16 | 06                          | 6 or 8 | 6 or 8 | 6 or 8 |                    |
|           |     |    |    |        |    |    |       | 531      | 600         | 5-5/32 | 59-1/16 | 08                          | 6 or 8 | 6 or 8 | 6 or 8 |                    |

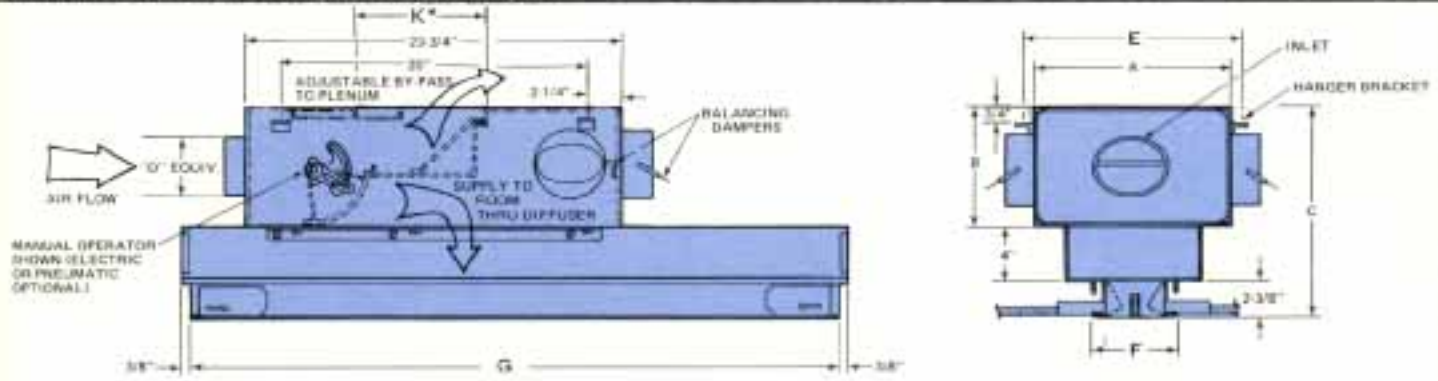
● Indicates Elliptical  
 \*By-Pass Opening = K x A

NOTE:

THREE SLOT DIFFUSERS  
 AVAILABLE ONLY WITH SIZES 06 AND 08

6 Indicates 6" Round  
 8 Indicates 8" Round

2-WAY BLOW INTEGRAL SLOT DIFFUSER



| Unit Size | CFM | A  | B  | C      | D  | E  | K     | Diffuser | Nominal CFM | F       | G       | OUTLET ARRANGEMENT TOP VIEW |        |        |        |                    |
|-----------|-----|----|----|--------|----|----|-------|----------|-------------|---------|---------|-----------------------------|--------|--------|--------|--------------------|
|           |     |    |    |        |    |    |       |          |             |         |         | [B]                         | [E]    | [L]    | [A]    |                    |
| 02        | 200 | 13 | 8  | 14-3/8 | 5  | 14 | 5-3/8 | 222      | 200         | 4-5/32  | 23-1/16 | Unit Size                   | [C]    | [F]    | [A]    | No Outlet          |
| 04        | 400 | 13 | 8  | 14-3/8 | 7  | 14 | 5-3/8 | 232      | 300         | 5-3/4   | 23-1/16 |                             |        |        |        |                    |
| 06        | 600 | 14 | 10 | 16-3/8 | 9  | 15 | 6-3/8 | 322      | 250         | 4-5/32  | 29-1/16 | Unit Size                   | [D]    | [H]    | [A]    | No Outlet          |
|           |     |    |    |        |    |    |       | 332      | 400         | 5-3/4   | 29-1/16 |                             |        |        |        |                    |
| 08        | 800 | 17 | 10 | 16-3/8 | 10 | 18 | 6-3/8 | 342      | 500         | 7-11/32 | 29-1/16 | Unit Size                   | [D]    | [H]    | [A]    | No Outlet          |
|           |     |    |    |        |    |    |       | 422      | 400         | 4-5/32  | 47-1/16 |                             |        |        |        |                    |
|           |     |    |    |        |    |    |       | 432      | 600         | 5-3/4   | 47-1/16 | 02                          | 6      | 6      | 6      | OUTLET SIZE INCHES |
|           |     |    |    |        |    |    |       | 442      | 800         | 7-11/32 | 47-1/16 | 04                          | 6      | 6      | 6      |                    |
|           |     |    |    |        |    |    |       | 522      | 500         | 4-5/32  | 59-1/16 | 06                          | 6 or 8 | 6 or 8 | 6 or 8 |                    |
|           |     |    |    |        |    |    |       | 532      | 600         | 5-3/4   | 59-1/16 | 08                          | 6 or 8 | 6 or 8 | 6 or 8 |                    |
|           |     |    |    |        |    |    |       | 542      | 800         | 7-11/32 | 59-1/16 |                             |        |        |        |                    |

● Indicates Elliptical  
 \*By-Pass Opening = K x A

NOTE:

THREE AND FOUR SLOT DIFFUSERS  
 AVAILABLE ONLY WITH SIZES 06 AND 08

6 Indicates 6" Round  
 8 Indicates 8" Round