



Selection Procedures

Selecting and ordering Valid Air high performance diffusers is quick and easy. To properly select a specific Valid Air diffuser model, please refer to the product order code pages that indicate the model designation, shape and size. Please use the following guidelines to determine the correct product order code.

1. Select the proper Valid Air model, shape and size diffuser.
2. Determine the desired inlet location for the duct connection. (See inlet location and throw pattern options pages 5-6)
 - *Top*: round inlet.
 - *Side*: round or flat oval inlet into the side of a wedge/square plenum.
 - *Standard Front Inlet or Back Inlet*: The standard front inlet is used for the duct connection for model VW, VL and VM for perimeter applications. If a duct connection to a perimeter diffuser comes from the interior space then the standard front inlet is used and the airflow throw pattern is directed back toward the interior space. The back inlet can be specified when the duct connection is in the same direction as the airflow throw pattern.

There are four plenum shapes:

- *Dome*: plenum constructed of molded fiberglass covered on both sides with aluminum foil.
 - *Wedge*: aluminum plenum with aerodynamic wedge shape for side inlet.
 - *Square*: square or rectangular shape aluminum plenum.
 - *Square/Wedge with FilterRack*: square, rectangular or wedge shape aluminum plenum with internal rack for filters and a hinged door on the side for easy filter removal.
3. Determine the appropriate throw pattern for your application. (See inlet location and throw pattern options pages 5-6)
 - *8-way*: 360° and 2-way throw pattern should be selected for use in the center of a room or area.
 - *5-way 180° and 1 way* throw patterns should be selected for use in perimeter areas to direct flow inwards.
 - *Vertical throw*: (downblow) dimple jet discharge air flow shall be directed down towards high heating loads.
 - *Dual pattern*: dimple jet discharge shall deliver 25% of the airflow vertically and 75% of the airflow horizontally, in each direction.
 4. Capacity is determined by matching the design CFM with the proper diffuser face dimensions, noise criteria and dimple jet capacities; high, medium or low. (See performance chart for all Valid Air Models, page 7 or the performance data for the specific model). The capacity selection procedure is critical to ensure the greatest outlet velocity at the highest acceptable noise criteria to maximize room air circulation.

5. Select the proper inlet diameter for the duct connection. Inlet collar manual balancing dampers may be ordered on selected models but are not recommended due to the potential for additional noise generated at the diffuser location.

To select an inlet collar manual balancing damper you must:

- A. Refer to the accessory order codes list and select the inlet diameter you wish to use.
- B. Substitute that order code for the existing inlet diameter order code.
(Example: Select 8" inlet collar manual balancing damper for duct board connection which is accessory order code B. Then, substitute order code B instead of order code "8" which is a standard 8" round inlet.)

See accessory order codes page 18. Manual branch duct balancing dampers should be requested with a separate model number as indicated.

Manual branch duct balancing dampers are recommended and should be located as far away from the diffuser as possible.

Optional Order Codes:

6. Filter racks are available to accommodate a number of different filter media. A special square or wedge shaped plenum is manufactured with a hinged access door and support area for a filter to slide directly into the plenum housing.
7. A number of filter combinations are available to meet the filtration requirements for your specific application. A maximum of two 1" inch filters can be stacked together to improve performance or accommodate different types of filtration solutions. (see UNI•GUARD™ product guide.) Replacement filters are also available, see accessory order code page 18.
8. Internal polymer foam insulation is available. For external insulation or other types of insulation please consult factory.
9. Standard plenum construction is made of aluminum or foil faced fiberglass. When ordering a Valid Air diffuser faceplate only, you must select order code "X", no plenum. Fire rated plenum (for 2' x 2' models only) includes a steel plenum, UL listed fire damper and insulation blanket.
10. Standard T-Bar dimensions are U.S. dimensions. Metric dimensions are also available.

After completing the product order codes for each Valid Air high performance diffuser please refer to the "Air Distribution Order Form" or call 1-800-231-1084.