



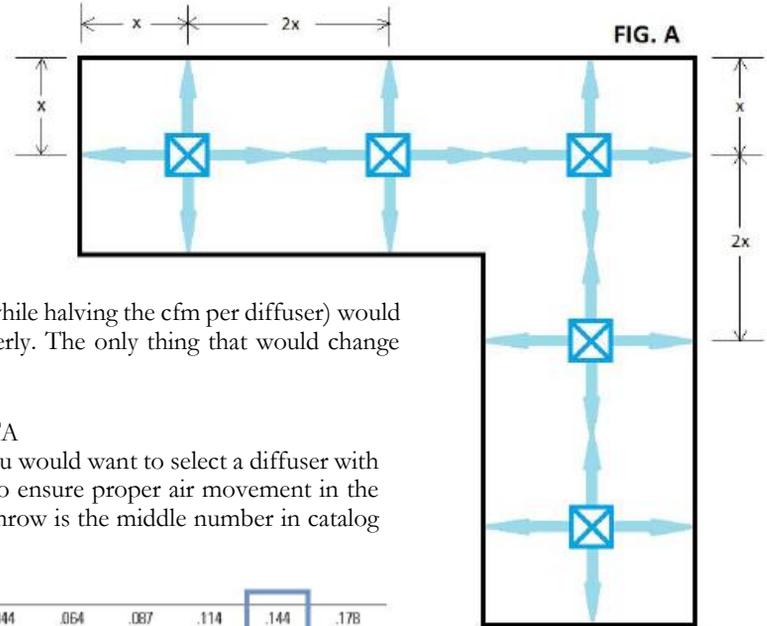
## PRICE Ceiling Diffuser Selection Guide

There are a wide variety of shapes and styles available in the Price diffuser product line. Selecting the correct diffuser to use in an application always involves aesthetics, but proper diffuser selection should be based mainly on performance. While a specific style of diffuser used on a previous project may be visually appealing, its throws may result in occupant discomfort if it is not the correct diffuser to use. Below is a short guide on selecting the proper diffuser for most commercial applications.

### STEP 1: DIFFUSER LAYOUT

The goal of correct diffuser placement is such that the distance between any two diffusers is twice the distance from any diffuser to the wall. This is to ensure that the throw will be the same in all directions (see Fig. A). Incidentally, dispersing or consolidating the diffuser layout (i.e.

doubling the number of diffusers in the space while halving the cfm per diffuser) would not change which diffuser models work properly. The only thing that would change would be the neck size of the diffuser.



### STEP 2: INTERPRETING CATALOG DATA

Assuming a standard ceiling height of 8'-10', you would want to select a diffuser with a throw equal to "x" (see Fig. A) at 100 fpm to ensure proper air movement in the space without drafting. Usually, the 100-fpm throw is the middle number in catalog performance tables (see below).

| Neck Size | Total Pressure, in. w.g. | .028   | .044   | .064   | .087   | .114    | .144    | .178    |
|-----------|--------------------------|--------|--------|--------|--------|---------|---------|---------|
|           | Flow Rate, cfm           | 491    | 614    | 736    | 859    | 982     | 1104    | 1227    |
| 15        | NC                       | —      | —      | 17     | 22     | 26      | 30      | 33      |
|           | Throw 150, 100, 50       | 4-5-11 | 4-7-13 | 5-8-14 | 6-9-15 | 7-11-16 | 8-12-17 | 9-13-18 |

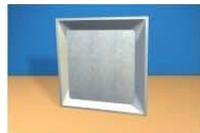
### STEP 3: DIFFUSER SELECTION

Generally speaking, in order to find the right diffuser, you must sift through performance tables until you find the right one. If the "x" dimension in Fig. A measured 12', the diffuser in the table above would be ideal if you needed 1100 cfm from each diffuser. Note: For ceiling heights over 10', add 1' to your throw for every foot the ceiling is above 10'. For example, if the ceiling in Fig. A was 14' high (and "x" = 12'), you'd need to find a diffuser with a throw of 16': (14'-10' + "x") = 16' @ 100 fpm. However, because diffuser type, cfm, and throw are all interconnected, one can calculate the cfm/ft<sup>2</sup> that works best for any diffuser. If you know the range of cfm/ft<sup>2</sup> of a particular diffuser, you will know instantly whether it will work.

1.5 cfm/ft<sup>2</sup> or greater

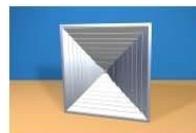


SCD



SPD

0.5 < cfm/ft<sup>2</sup> < 1.5



SMX

0.5 cfm/ft<sup>2</sup> or less



SMD

The diffusers above were selected as they are all commonly used and are among Price's best performing diffusers. They all work well in VAV applications and, if no other specific diffuser style is desired, these four would be the ones from which you should select. Note: cfm/ft<sup>2</sup> ranges are approximate.