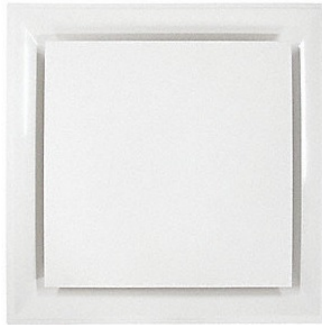




**Square Plaque Diffuser  
SPD**



### DESCRIPTION:

The Square Plaque Diffuser (SPD) has a flush appearance, making it ideal for architecturally-conscience commercial spaces, and provides industry-leading low pressure drop and sound generation with a 360° radial, horizontal air pattern for rapid mixing and optimal thermal comfort. The one-piece, aerodynamically optimized backpan maintains the horizontal air pattern even at low air volumes, making it a great choice for high turndown VAV applications. This versatile diffuser is easy to maintain, with little to no ceiling smudging and a tool-free removable face for quick access to dampers, accessories, and ductwork.

SPD : Square Plaque diffuser without damper, without insulated

SPD-D : Square Plaque diffuser with damper, without insulated

SPD-R6 : Square Plaque diffuser without damper, with insulated

SPD-DR6: Square Plaque diffuser with damper, with insulated

### CONSTRUCTION:

Metal Steel (SPD) - Standard

Aluminum (SPD-A) - Optional

### APPLICATION:

The SPD is compatible with a wide variety of ceiling systems, and is designed to deliver architectural appeal without sacrificing performance. The SPD is an excellent choice for VAV applications, providing a tight, horizontal airflow pattern, even at low air volumes.

### FINISHING:

- Powder coated in RAL9010 colour as standard. Other colours on request

### INSTALLATION:

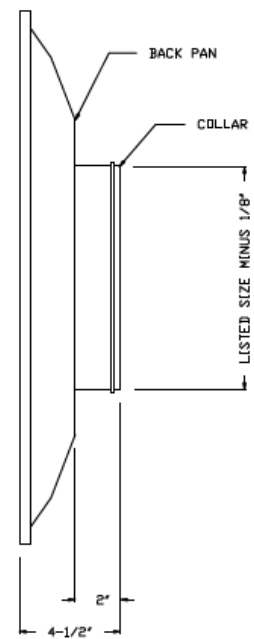
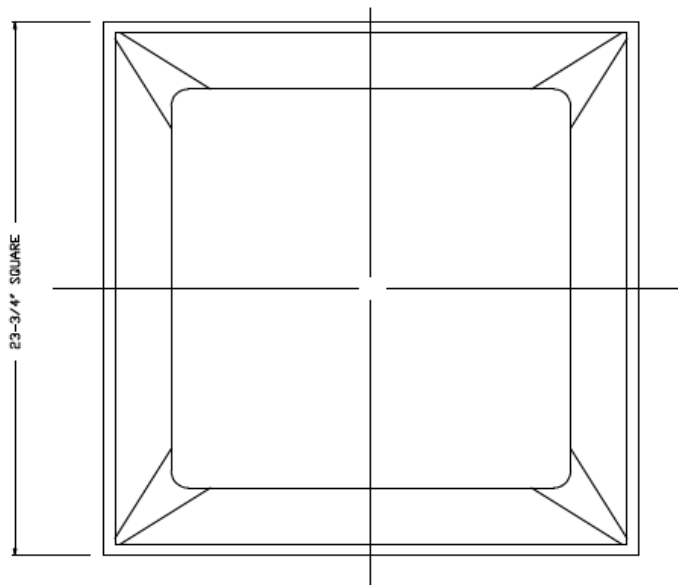
- 24" x 24" T-bar lay-in

### ACCESSORIES:

- D: Damper
- PB: Plenum Box

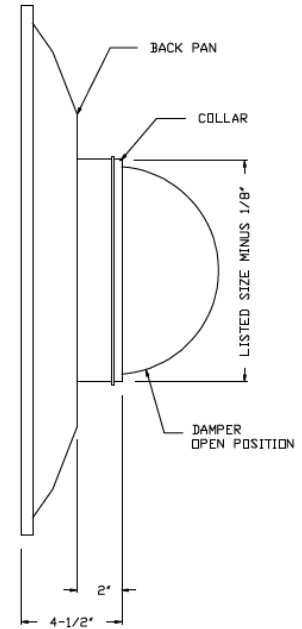
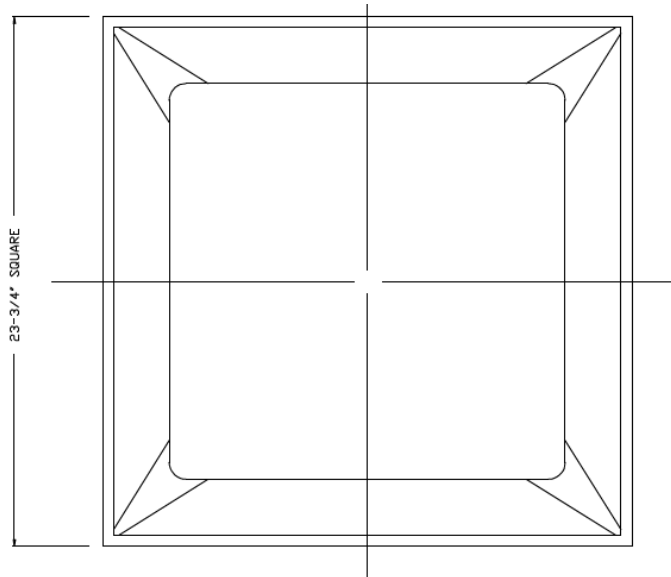
**STANDARD SIZES:**

| TYPE SPD - AVAILABLE SIZES (in) |                   |
|---------------------------------|-------------------|
|                                 | FRAME SIZE-MODULE |
| Diameter                        | 24" x 24"         |
| 6"                              | X                 |
| 8"                              | X                 |
| 10"                             | X                 |
| 12"                             | X                 |
| 14"                             | X                 |

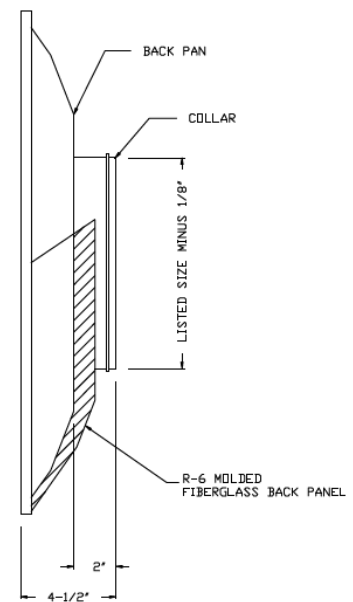
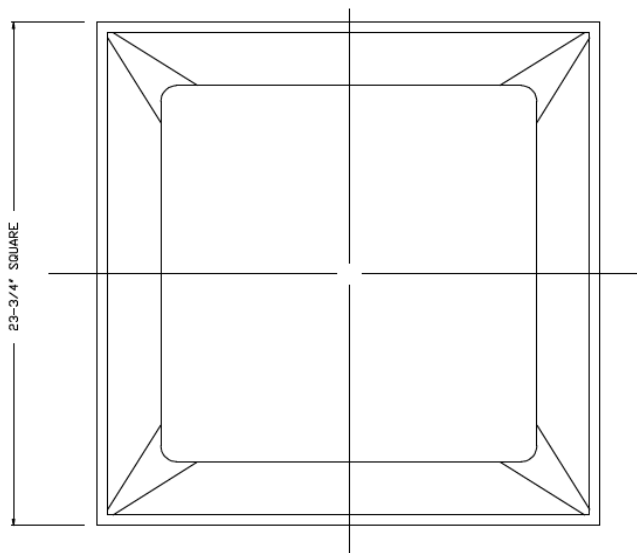
**TECHNICAL DRAWINGS:****SQUARE PLAQUE DIFFUSER WITHOUT DAMPER**



## SQUARE PLAQUE DIFFUSER WITH DAMPER

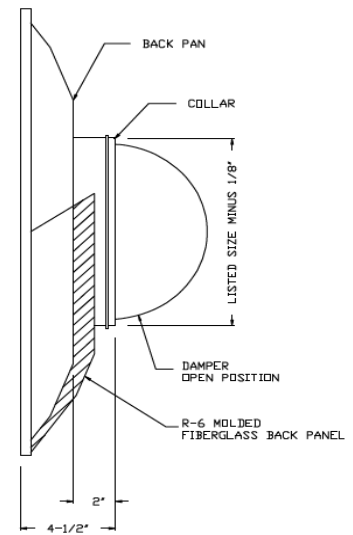
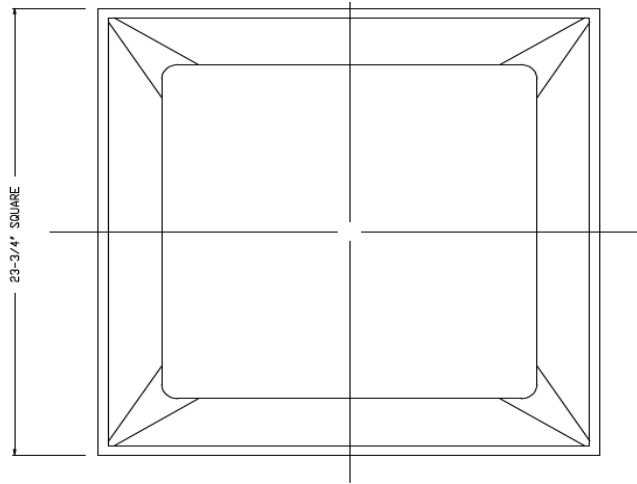


## SQUARE PLAQUE DIFFUSER WITH INSULATED





## SQUARE PLAQUE DIFFUSER WITH INSULATED, WITH DAMPER





### SQUARE CEILING PLAQUE DIFFUSER PERFORMANCE DATA:

Model SPD , SPD-D , SPD-R6 , SPD-DR6

| Panel Size | Neck Size | Area Ak           | Inlet Velocity | 400  | 500  | 600  | 700  | 800  | 900  | 1000 | 1200 |
|------------|-----------|-------------------|----------------|------|------|------|------|------|------|------|------|
| 24x24      | 6"        | .196<br><br>.077  | CFM            | 80   | 100  | 120  | 135  | 155  | 175  | 195  | 235  |
|            |           |                   | Ps T           | .003 | .004 | .006 | .006 | .008 | .011 | .014 | .021 |
|            |           |                   | hrow           | 4    | 6    | 7    | 8    | 8    | 9    | 9    | 10   |
|            |           |                   | NC             | <15  | <15  | <15  | <15  | 15   | 18   | 21   | 26   |
| 24x24      | 8"        | .349<br><br>.136  | CFM            | 140  | 175  | 210  | 245  | 280  | 315  | 350  | 420  |
|            |           |                   | Ps T           | .007 | .012 | .017 | .023 | .030 | .038 | .047 | .067 |
|            |           |                   | hrow           | 6    | 7    | 9    | 10   | 11   | 12   | 13   | 14   |
|            |           |                   | NC             | <15  | <15  | <15  | 17   | 21   | 25   | 28   | 34   |
| 24x24      | 10"       | .545<br><br>.213  | CFM            | 220  | 275  | 325  | 380  | 435  | 490  | 545  | 655  |
|            |           |                   | Ps             | .016 | .025 | .034 | .047 | .061 | .078 | .096 | .139 |
|            |           |                   | Throw          | 7    | 9    | 11   | 13   | 14   | 15   | 16   | 17   |
|            |           |                   | NC             | <15  | <15  | 15   | 21   | 26   | 30   | 33   | 37   |
| 24x24      | 12"       | .785<br><br>.307  | CFM            | 315  | 395  | 470  | 55   | 63   | 725  | 785  | 940  |
|            |           |                   | Ps             | .027 | .042 | .059 | .081 | .107 | .133 | .165 | .236 |
|            |           |                   | Throw          | 9    | 11   | 13   | 15   | 17   | 18   | 19   | 21   |
|            |           |                   | NC             | <15  | <15  | 17   | 22   | 27   | 30   | 33   | 38   |
| 24x24      | 14"       | 1.069<br><br>.418 | CFM            | 430  | 535  | 640  | 750  | 855  | 960  | 1070 | 1285 |
|            |           |                   | Ps             | .031 | .049 | .069 | .095 | .124 | .156 | .194 | .280 |
|            |           |                   | Throw          | 10   | 13   | 15   | 18   | 20   | 21   | 22   | 24   |
|            |           |                   | NC             | <15  | <15  | 20   | 25   | 30   | 33   | 36   | 40   |
| 24x24      | 15"       | 1.227<br><br>.479 | CFM            | 490  | 615  | 735  | 860  | 980  | 1105 | 1225 | 1475 |
|            |           |                   | Ps T           | .038 | .060 | .086 | .117 | .152 | .194 | .238 | .345 |
|            |           |                   | hrow           | 11   | 14   | 16   | 19   | 21   | 23   | 24   | 26   |
|            |           |                   | NC             | <15  | <15  | 20   | 27   | 32   | 35   | 37   | 41   |

#### Performance Notes

All Units have been tested in accordance with ANSI / ASHRAE 70-2006. Data in table is derived from such testing. Ps - Static pressure required to obtain listed cfm, units of inches water gauge (in. wg.).

NC - Calculated noise criteria using 10 dB per octave room attenuation (dimensional).

Throw - Non-isothermal horizontal throw, in feet, for a terminal velocity of 50 fpm.

Ak - Area Factors

Inlet Velocity = fpm (Feet Per Minute)



## ORDER CODE

| SPD | - | 1                                                 | 8"    | RAL9010 | T | 24" x 24"               |  |  |  |
|-----|---|---------------------------------------------------|-------|---------|---|-------------------------|--|--|--|
|     |   |                                                   | inlet |         |   |                         |  |  |  |
|     |   | SPD = 1<br>SPD-D = 2<br>SPD-R6 = 3<br>SPD-DR6 = 4 |       |         |   | Frame size<br>Outsize   |  |  |  |
|     |   |                                                   |       |         |   |                         |  |  |  |
|     |   |                                                   |       |         |   |                         |  |  |  |
|     |   |                                                   |       |         |   |                         |  |  |  |
|     |   |                                                   |       |         |   |                         |  |  |  |
| 6"  |   |                                                   |       |         |   | 00: Without Coating     |  |  |  |
| 8"  |   |                                                   |       |         |   |                         |  |  |  |
| 10" |   |                                                   |       |         |   |                         |  |  |  |
| 12" |   |                                                   |       |         |   |                         |  |  |  |
| 14" |   |                                                   |       |         |   | RAL----: Powder Coating |  |  |  |