



# Ceiling Mounted SWIRL Plate Diffuser

## Model : WBD-SSWD

*Make the Change - shape the future*



### INTRODUCTION

The WB-SSWD range-For that Swirling *induced air pattern*  
 The WB-SSWD square Swirl plate diffuser answers to both *architectural* appeal and *engineering* performance criteria.  
 It's clean crisp and unobstructive face design is intended to blend with most ceiling system, giving it that ultra modern look !

Swirling, horizontal discharge of the supply air at a high induction rate guarantees swift temperature equalisation and fast reduction of the flow velocity. Up to 30 room air changes per hour are attainable at supply air temperatures between +10K and -10K. Hence also making it very suitable for VAV applications.

The other main feature of this product is the constant cooling of the entire face hence reducing condensation. So versatile you can even throw in a pneumatic actuator-for those who desires the intelligent building concept.

### CONSTRUCTION

Constructed of steel or aluminum and finished with epoxy polyester powder coats.

Comes standard in 600x600 face size with different collar sizes for different air volumes.

### OPTIONS

Comes standard with fan damper at top collar.  
 Box with or without insulation

- Model with uninsulated Plenum box                      **SSWD-ADR/F**
- Model with insulated Plenum box                        **SSWD-PB/F**
- Model with Pneumatic actuator                            **SSWD-PA**
- Model for return application                                **SSWD**

### PERFORMANCE DATA

| Neck Velocity            |     | 2         | 2.5       | 3         | 3.5       | 4         | 4.5       | 5         | 6         | 7         | 8         |
|--------------------------|-----|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 600x 600<br>neck 150 dia | PD  | 2.12      | 3.38      | 4.86      | 6.77      | 8.67      | 11.21     | 13.75     | 19.67     | 26.86     | 35.11     |
|                          | CMH | 132.52    | 166.50    | 200.48    | 232.76    | 266.74    | 299.02    | 333.00    | 399.27    | 465.53    | 533.49    |
|                          | NC  |           |           |           |           |           | 19        | 22        | 29        | 34        | 38        |
|                          | T   | 0   1   1 | 0   1   1 | 1   1   2 | 1   1   2 | 1   1   2 | 1   1   2 | 1   1   2 | 1   1   2 | 1   2   2 | 1   2   3 |
| 600x 600<br>neck 200 dia | PD  | 3.81      | 6.13      | 8.88      | 12.06     | 15.65     | 19.67     | 24.32     | 35.11     | 47.80     | 62.40     |
|                          | CMH | 237.86    | 297.33    | 355.09    | 414.56    | 474.02    | 533.49    | 592.95    | 711.88    | 830.81    | 948.04    |
|                          | NC  |           |           |           |           |           | 19        | 23        | 27        | 33        | 43        |
|                          | T   | 1   1   2 | 1   1   2 | 1   1   2 | 1   1   2 | 1   2   3 | 1   2   3 | 1   2   3 | 1   2   3 | 2   2   3 | 2   2   4 |
| 600x 600<br>neck 250 dia | PD  | 6.13      | 9.52      | 13.75     | 18.61     | 24.32     | 30.88     | 38.07     | 54.78     | 74.66     | 97.51     |
|                          | CMH | 370.38    | 463.83    | 555.57    | 649.02    | 740.76    | 834.21    | 925.96    | 1111.15   | 1296.34   | 1430.56   |
|                          | NC  |           |           |           | 18        | 22        | 26        | 30        | 36        | 41        | 46        |
|                          | T   | 1   1   2 | 1   1   2 | 1   2   3 | 1   2   3 | 1   2   3 | 2   2   4 | 2   2   4 | 2   2   4 | 2   3   4 | 2   3   4 |
| 600x 600<br>neck 300 dia | PD  | 8.67      | 13.75     | 19.67     | 26.86     | 35.11     | 44.42     | 54.78     | 78.89     | 107.45    | 140.45    |
|                          | CMH | 533.49    | 667.71    | 800.23    | 934.45    | 1066.97   | 1201.19   | 1333.72   | 1600.46   | 1867.20   | 2133.94   |
|                          | NC  |           |           | 15        | 21        | 25        | 29        | 33        | 39        | 44        | 49        |
|                          | T   | 1   1   2 | 1   2   3 | 1   2   3 | 2   2   4 | 2   2   4 | 2   3   4 | 2   3   4 | 2   3   5 | 2   3   5 | 3   4   5 |

**Performance notes** All pressures in Pa. All T are throws in meters for radius of diffusion with terminal velocities of 0.75,0.5 & 0.25m/s  
 Drop or vertical throw is calculated as 3.333 of horizontal throw to the same terminal velocity.

Throw & drop values are based on supply air and room air at isothermal conditions. For exposed duct without ceiling T=Tx0.7 .

NC values are based on a room absorption of 10dB re 10<sup>-12</sup> watts and one diffuser.

Units are tested in accordance to ADC Test Code 1062:GRD-84