

SW-2T Swirl Diffuser

■ Description

ASLI SW-2T series is a type of diffuser with fixed radially arranged air control blades. This unique type of slots provide high induction “vortex” air flow projecting horizontally from the face of diffuser. This swirling air flow produce a diffuse air distribution, with no stationary air jet resulting excellent uniformity of temperature in air conditioned space. SW-2T is suitable in area of high heat load where large quantities of cool air must be rapidly mixed with room air; areas which require high air change in a short time. The SW-2T series can also be use as a return and exhaust type device.

■ Materials

- Diffuser Face: 1.0mm thickness galvanized steel.
- Outer Frame: 1.0mm thickness galvanized steel.

■ Surface Finish

- Baked white powder coated as standard.

■ Features

- Diffuser face can be open without using any tools (option).
- Volume control damper is adjustable without removing ceiling panel.
- Swirl air pattern provides high induction ratio.
- High coanda effect reduces direct-throw of air on occupants.
- Standard sizes available for T-bar ceiling on metric or imperial size.

■ Standard Sizes

- SW-2T: 595mm X 595mm, 603mmX603mm (face size).
- SWR-2T: 565mm outer diameter.

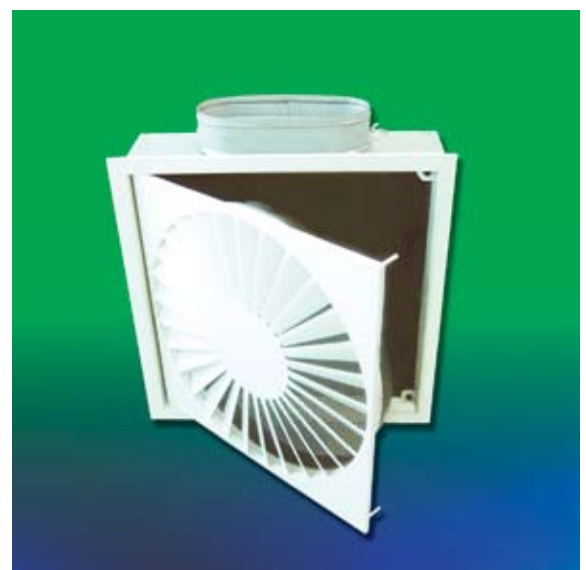
■ Accessories

- Plenum box, radial blade damper (C1) , perforated sheet (PS), round inlet adapter (D2), crown damper (C2).

■ SW-2T Models

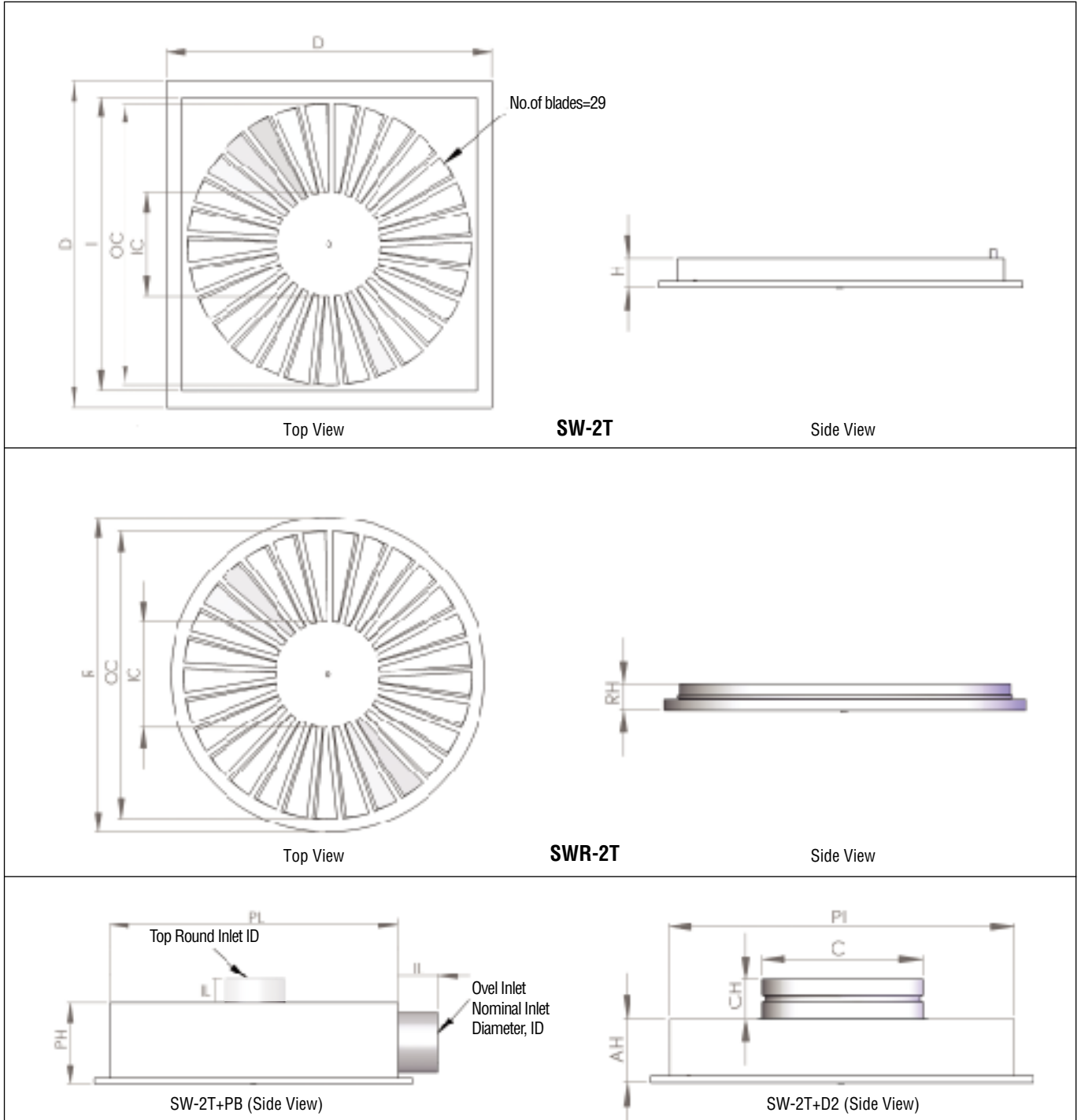
| Model Code | Description |
|-----------------|---|
| SW-2T | Square swirl diffuser |
| SW-2T + PB-S | SW-2T with plenum box side entry |
| SW-2T + PB-T | SW-2T with plenum box top entry |
| SW-2T + D2 + C1 | SW-2T with round inlet adapter and radial blade damper |
| SWR-2T | Round swirl diffuser |
| SWR-2T+ D2 | SWR-2T with round inlet adapter |
| SWR-2T+D2+C1 | SWR-2T with round inlet adapter and radial blade damper |

• Other models are available upon request



SW-2T Swirl Diffuser

SW-2T Construction Illustrations



SW-2T Physical Dimension Unit:mm

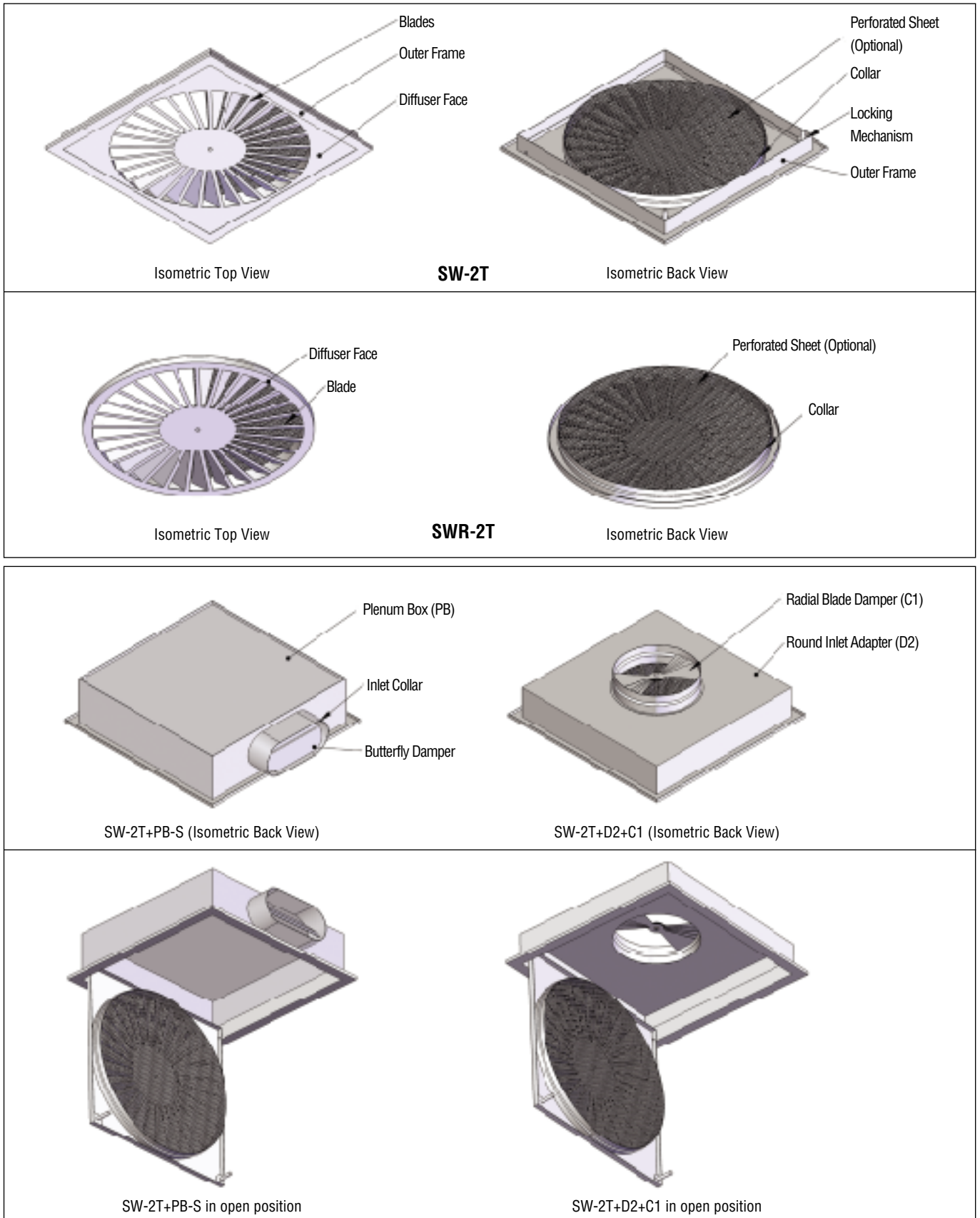
| D | I | OC | IC | R | H | RH | PH | PL | IL | AH | CH | C | ID |
|-----|-----|-----|-----|-----|----|----|------|-----|----|-----|----|-----|-----|
| 603 | 535 | 515 | 190 | 565 | 49 | 40 | 153 | 541 | 75 | 100 | 60 | 150 | 150 |
| 595 | | | | | | | 178* | | | | | 200 | 200 |
| | | | | | | | | | | | | 250 | 250 |
| | | | | | | | | | | | | 300 | 300 |

* PH = 178 when ID = 300

All stated specifications are updated at the printing date and subject to change without notice or obligation. The actual product might differ from pictures shown.

SW-2T Swirl Diffuser

SW-2T Construction Illustrations



SW-2T Swirl Diffuser

SW-2T Air Flow Performance Data

| Inlet Diameter (mm) | Collar Neck Vel. (m/s) | 1.5 | 2.0 | 2.5 | 3.0 | 3.5 | 4.0 | 4.5 | 5.0 | 5.5 | 6.0 |
|---------------------|------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| | Vel. Press (mmAq) | 0.2 | 0.3 | 0.4 | 0.6 | 0.8 | 1.0 | 1.3 | 1.6 | 1.9 | 2.3 |
| 150 | CMH | 97 | 129 | 161 | 194 | 223 | 254 | 286 | 318 | 350 | 382 |
| | Tot. Press (mmAq) | 0.3 | 0.6 | 0.9 | 1.2 | 1.7 | 2.2 | 2.7 | 3.2 | 3.9 | 4.8 |
| | NC | - | - | - | - | - | - | 23 | 26 | 30 | 33 |
| | Throw (m) | 0.6 ~ 1.2 | 0.9 ~ 1.5 | 0.9 ~ 1.8 | 1.2 ~ 1.8 | 1.5 ~ 2.1 | 1.5 ~ 2.1 | 1.5 ~ 2.4 | 1.8 ~ 2.4 | 1.8 ~ 2.7 | 1.8 ~ 2.7 |
| 200 | CMH | 172 | 230 | 287 | 344 | 396 | 452 | 509 | 565 | 622 | 679 |
| | Tot. Press (mmAq) | 0.4 | 0.7 | 1.2 | 1.7 | 2.3 | 3.0 | 3.7 | 4.8 | 5.5 | 6.5 |
| | NC | - | - | - | 21 | 27 | 31 | 35 | 38 | 40 | 41 |
| | Throw (m) | 0.6 ~ 1.2 | 0.9 ~ 1.5 | 0.9 ~ 2.1 | 1.2 ~ 2.1 | 1.5 ~ 2.4 | 1.5 ~ 2.7 | 1.8 ~ 2.7 | 2.1 ~ 3.0 | 2.1 ~ 3.0 | 2.1 ~ 3.4 |
| 250 | CMH | 269 | 359 | 449 | 538 | 619 | 707 | 795 | 884 | 972 | 1060 |
| | Tot. Press (mmAq) | 0.6 | 1.1 | 1.7 | 2.9 | 3.9 | 4.9 | 6.1 | 7.6 | 9.1 | 10.8 |
| | NC | - | - | 21 | 28 | 34 | 36 | 40 | 42 | 44 | 46 |
| | Throw (m) | 0.9 ~ 1.8 | 1.2 ~ 2.4 | 1.5 ~ 2.7 | 1.8 ~ 3.0 | 2.1 ~ 3.4 | 2.4 ~ 3.7 | 2.7 ~ 4.0 | 2.7 ~ 4.0 | 3.0 ~ 4.3 | 3.0 ~ 4.3 |
| 300 | CMH | 388 | 517 | 646 | 775 | 891 | 1018 | 1145 | 1272 | 1400 | 1527 |
| | Tot. Press (mmAq) | 1.3 | 2.3 | 3.5 | 5.1 | 6.8 | 9.0 | 11.3 | 14.1 | 17.0 | 21.4 |
| | NC | - | 24 | 30 | 38 | 41 | 44 | 47 | 49 | 51 | 54 |
| | Throw (m) | 1.2 ~ 2.4 | 1.5 ~ 3.0 | 1.8 ~ 3.4 | 2.4 ~ 4.0 | 2.7 ~ 4.3 | 3.0 ~ 4.6 | 3.4 ~ 4.6 | 3.7 ~ 4.9 | 3.7 ~ 5.2 | 3.9 ~ 5.5 |

- Throw is based on terminal velocities of 0.5m/s and 0.25m/s respectively.
- Throw is based on isothermal condition.
- NC value is based on room absorption of 10dB, re 10⁻¹² watts.
- Dash (-) in space indicates NC value less than 20.
- The above performance data is applicable for SW-2T + D2 and SWR-2T + D2.
- Apply the following factor for C1 and PB.

| | C1 | PB |
|------------|-------|--------|
| Tot. Press | X 1.2 | X 1.2 |
| NC | + 2 | + 2 |
| Throw | X 0.9 | X 0.85 |

SW-2T Suggested Specification

SW-2T Swirl Diffuser shall have a removable one piece stamped face of 1.0mm thickness galvanized steel containing a circular round pattern of blades. The diffuser face shall contain 29 pieces of blades. The interior of the face shall contain a steel collar bordering the ends of the blades. The steel collar shall be securely welded to the rear of the diffuser face. The diffuser face shall be removable without using any tools from the diffuser face. The diffuser face shall contain two steel rods at the corner to be slotted into the round rubber sleeve at the frame when the diffuser face is closed. The diffuser face shall rotate in one axis and remain attached to the frame when the diffuser face is fully open. The diffuser shall come with round perforated sheet at the steel collar. The diffuser shall be epoxy coated and furnished to architectural requirement.

SW-2T Order Code

| Model | Casing | Accessories |
|--------|-----------------|--------------------------|
| SW-2T | Plenum Box (PB) | Radial Blade Damper (C1) |
| SWR-2T | Adapter (D2) | Perforated Sheet (PS) |

Example: SW-2T + D2 + C1 + PS