

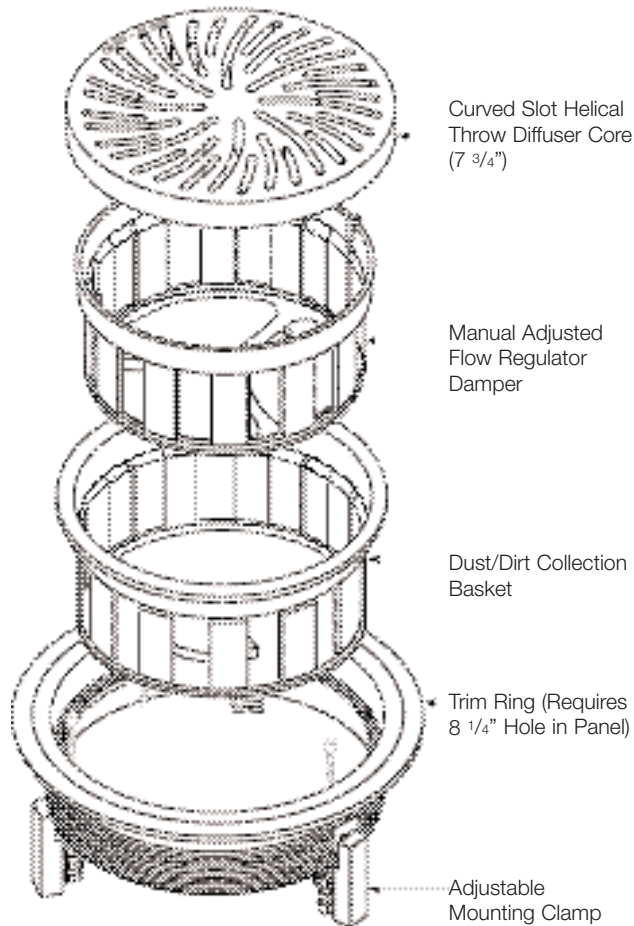
Flexible, Efficient and Controllable Underfloor Air Distribution

Swirl diffusers are modular devices that are designed to mount into an access floor and “plug” into the underfloor air handling space. Diffusers are installed within an access floor panel and can be relocated at any point on the floor plate. This device delivers conditioned air at floor level to the space and allows the occupant to manually control both the volume and direction of the air. The diffuser is constructed of a durable, high impact, polycarbonate material available in black or gray finish.

Delivering air from the floor offers added benefits, beyond rearrangement flexibility. Cool, clean air is delivered directly into the occupied zone of the space, so heat and pollutants are not continually circulated within the space as they are with an overhead system. The result is a space that has stratification of heat and pollutants, with concentrations in the lower levels of the space less than those at the upper levels of the space. Ventilation is accomplished through displacement as opposed to dilution.



Swirl Diffuser



The Benefits of Tate's Swirl Diffuser

Comfort Control

- Allows user to control air flow for individual comfort
- User may visually determine at a glance whether diffuser is opened or closed
- Air volume may be individually regulated by turning diffuser's discharge grille by hand

Easy to Relocate

- Easy to relocate to another area by simply swapping the floor panel with the one in the new location

Durable

- Constructed of durable, high impact, polycarbonate material

Easy to Install

- Unique adjustable mounting clamp design adapts to floor panel thickness and provides simple and secure installation

Easy to Maintain

- Dust/dirt collection basket catches anything that falls through grille and is removable for easy cleaning

General Information

- Low pressure drop core /damper assembly design
- Core design produces low velocity helical discharge air pattern
- Assembly achieves high induction rates of room air which optimizes circulation

Specifications

- Assembly to be high impact polycarbonate construction, shall comply with UL Standard 94-5V for flammability and shall be capable of withstanding without failure a static load of 800 lbs
- Trim ring shall incorporate three mounting clamps to secure assembly to panel. Clamps shall be adjustable by turning Phillips-head screws inside of trim ring
- Installed basket shall extend 4 1/4" below top surface of panel
- Diffuser core shall have visual open/closed indicator with built-in end stops
- Trim ring and core will be flush and will sit 1/8" above carpet/laminate surface and is rounded to 1/16" at edge

- Flow regulator shall be adjustable without removing diffuser core
- Dirt/dust collection basket shall be removable for cleaning
- NOTE: Diffusers are not designed to support rolling load traffic. This should be considered when establishing diffuser locations

Finish Options

- Standard finishes shall be Grey core and trim or Black core and trim. Damper and basket shall be black.

Performance Notes

1. Projection and Spread data were determined in a room with an 11' ceiling height and 10°F ΔT, between supply air and averaged occupied room temperature.
2. Vertical projection (throw) is the maximum height above the floor where terminal velocities of 150, 100 and 50 fpm were observed.
3. Noise Criteria (values) based on 10 dB room absorption, re 10-12 watts. Dash (-) in space denotes an NC value of less than 15.
4. Tests conducted with dirt basket/damper installed. Damper fully open. Ak = 0.104.
5. Data derived from independent tests conducted in accordance with ANSI/ASHRAE Standard 70-1991.

Airflow (CFM)	Plenum Pressure	Vertical Projection @ 150,100, & 50ft	Horizontal Spread ft. @ 50 fpm	NC
60	.035	1.1, 1.4, 2.9	2.1	-
70	.048	1.3, 1.7, 3.5	3.1	-
80	.063	1.4, 1.8, 3.7	3.4	-
90	.079	1.6, 2.1, 4.4	3.7	-
100	.098	2.0, 2.5, 5.0	4.0	15
110	.119	2.0, 2.6, 5.4	4.3	18
120	.141	2.1, 2.7, 5.6	4.5	20

Airflow (CFM)	Projection ft.	Spread ft.
-6	x 1.33	x 0.87
-8	x 1.11	x 0.94
-10	x 1.00	x 1.00
-12	x 0.96	x 1.06
-14	x 0.92	x 1.11
-16	x 0.91	x 1.16

