

RTD

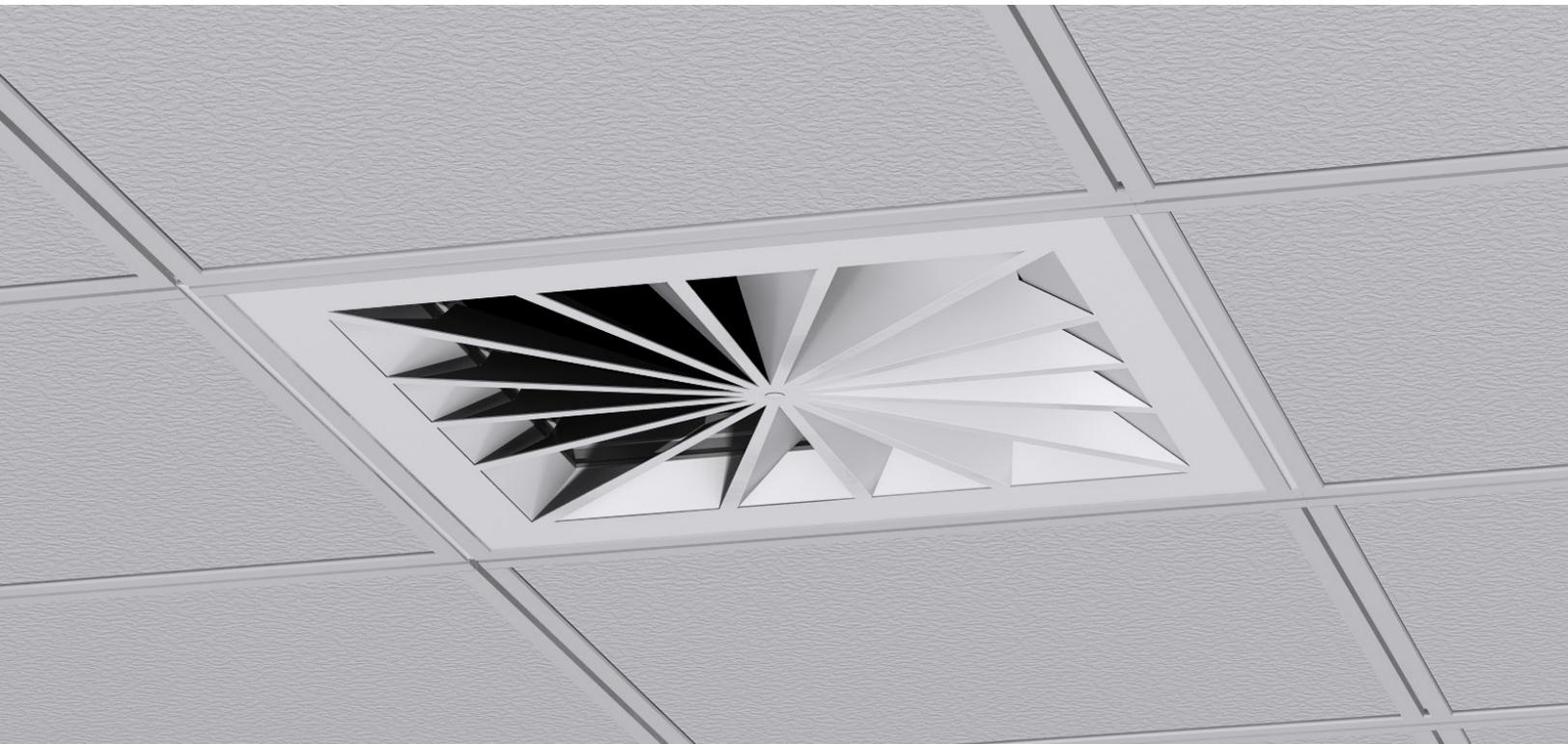
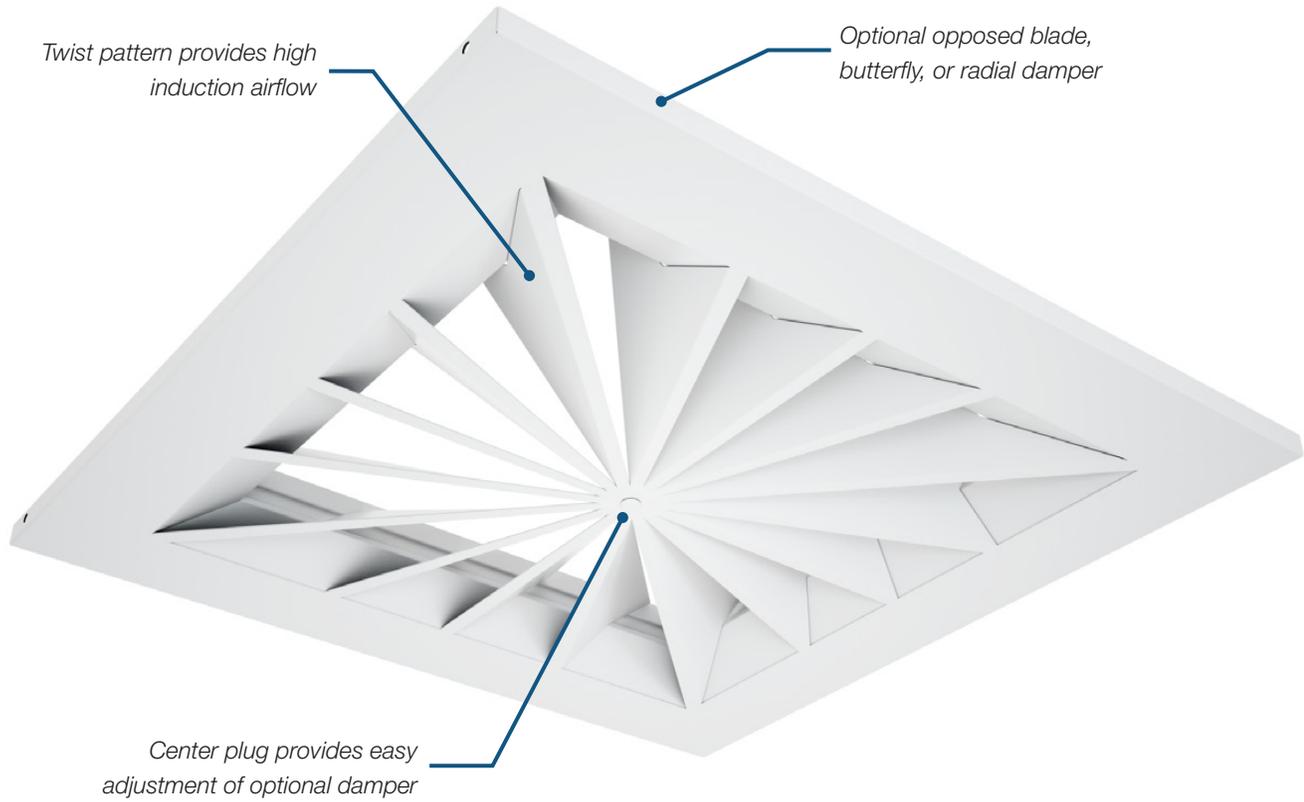
RADIAL TWIST DIFFUSER



RTD

Radial Twist Diffuser

The Radial Twist Diffuser (RTD) is the most efficient, quiet and economical high induction radial twist diffuser available on the market. The radial design allows the RTD to combine excellent air mixing capabilities with low sound and pressure drop.



HIGH INDUCTION AIRFLOW

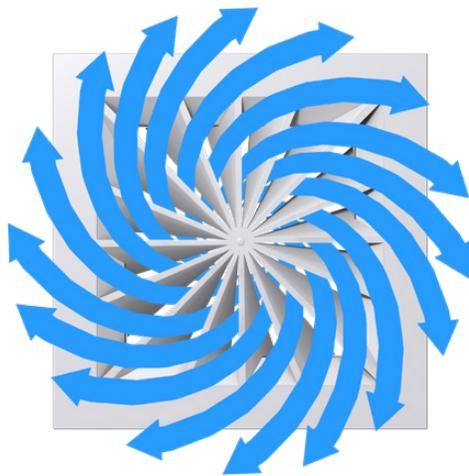
- + The RTD provides a high induction supply air vortex that rapidly mixes with room air, producing excellent uniformity of temperature in the conditioned space.
- + The engineered twist pattern controllers provide low pressure drop, sound generation and short throws, making it ideal for applications with high airflow requirements.

IDEAL FOR VAV APPLICATIONS

- + RTD is extremely effective at mixing supply and room air over a wide range of airflows, making it an ideal choice for VAV applications with high turndown ratios.

EASY MAINTENANCE

- + A removable plug in the center of the diffuser face provides easy access for adjustment of an optional damper.



RTD vortex air pattern

TYPICAL APPLICATIONS

The RTD provides superior comfort through high room air entrainment rates, creating a highly desirable, draft-free thermal environment. Used for both heating and VAV cooling applications with high turndown ratios, the RTD provides a tight horizontal air pattern even at low airflows. Common applications include office spaces, schools and laboratories.

CONSTRUCTION

- + Material
 - Steel
 - Aluminum
- + Mounting style
 - T-bar lay-in
- + Size
 - 24 in. x 24 in.
- + Options
 - Opposed blade damper (VCR7)
 - Round butterfly damper (VCR8)
 - Radial damper (VCR9)

PERFORMANCE DATA

24 in. x 24 in. Module

Inlet Size	Neck Velocity (fpm) Velocity Pressure (in. w.g.)	200 0.002	300 0.006	400 0.010	500 0.016	600 0.022	700 0.031	800 0.040	900 0.040	1000 0.062	1200 0.090
6	Total Pressure (in. w.g.)	0.003	0.007	0.012	0.019	0.028	0.038	0.049	0.062	0.077	0.110
	Flow Rate (cfm)	39	59	79	98	118	137	157	177	196	236
	Sound (NC)	-	-	-	-	-	-	-	-	16	21
	Throw (ft.)	0-1-1	1-1-2	1-1-2	1-1-3	1-2-3	1-2-4	2-2-5	2-3-5	2-3-6	2-3-7
8	Total Pressure (in. w.g.)	0.003	0.007	0.012	0.019	0.028	0.038	0.049	0.062	0.077	0.110
	Flow Rate (cfm)	70	105	140	174	209	244	279	314	349	419
	Sound (NC)	-	-	-	-	-	-	-	18	21	26
	Throw (ft.)	1-1-2	1-2-3	1-2-4	2-3-5	2-3-6	2-4-7	3-4-8	3-5-9	3-5-10	4-6-12
10	Total Pressure (in. w.g.)	0.003	0.007	0.013	0.021	0.030	0.041	0.053	0.067	0.083	0.119
	Flow Rate (cfm)	109	164	218	273	327	382	436	491	545	654
	Sound (NC)	-	-	-	-	-	-	18	22	25	30
	Throw (ft.)	1-2-3	2-2-5	2-3-6	3-4-8	3-5-9	4-5-11	4-6-12	5-7-13	5-8-13	6-9-15
12	Total Pressure (in. w.g.)	0.005	0.011	0.020	0.031	0.044	0.060	0.078	0.099	0.122	0.176
	Flow Rate (cfm)	157	236	314	393	471	550	628	707	785	942
	Sound (NC)	-	-	-	-	-	18	22	25	28	34
	Throw (ft.)	2-2-5	2-3-7	3-5-9	4-6-11	5-7-12	5-8-13	6-9-14	7-10-15	8-11-16	9-12-17
14	Total Pressure (in. w.g.)	0.007	0.015	0.027	0.043	0.061	0.084	0.109	0.138	0.171	0.246
	Flow Rate (cfm)	214	321	427	534	641	748	855	962	1068	1282
	Sound (NC)	-	-	-	-	16	21	25	28	31	37
	Throw (ft.)	2-3-6	3-5-9	4-6-12	5-8-13	6-9-14	7-11-16	8-12-17	9-12-18	10-13-19	12-14-20

Performance Notes:

1. Tested in accordance with ASHRAE Standard 70 – 2006 "Method of Testing for Rating the Performance of Air Outlets and Inlets."
2. Air flow is in cfm.
3. All pressures are in in. w.g.
4. Throw values are measured in feet for terminal velocities of 150 fpm (minimum), 100 fpm (middle) and 50 fpm (maximum)
5. Throw data is based on supply air and room air being at isothermal conditions.
6. NC values are based on room absorption of 10 dB re 10⁻¹² Watts and one diffuser.
7. Blanks "-" indicate an NC level below 15.



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