

SQUARE DIFFUSERS



Rev. 6

3 CONE DIFFUSERS

Square Ceiling Supply Diffusers

PRODUCT MODELS

Steel Construction

- DF3** – Fixed horizontal pattern
- DF3D** – Fixed horizontal pattern with 2" high neck
- DF3I** – Insulated (-R6 standard) - Pre-scored for collars
- DA3** – Adjustable horizontal air pattern
- DA3D** – Adjustable horizontal pattern with 2" high neck

Aluminum Construction

- ADF3** – Aluminum version of DF3
- ADF3D** – Aluminum version with 2" high neck
- ADF3I** – Aluminum insulated - Pre-scored for collars
- ADA3** – Aluminum adjustable horizontal pattern
- ADA3D** – Aluminum adjustable pattern with 2" high neck

The Airvector® 3-cone diffusers series is a complete line of square 3-cone ceiling supply diffusers designed for efficient, quiet, and uniform air distribution in HVAC applications. Available in painted steel or aluminum construction, the 3-cone diffusers series allows designers to select the ideal solution based on performance, weight, or corrosion-resistance requirements.

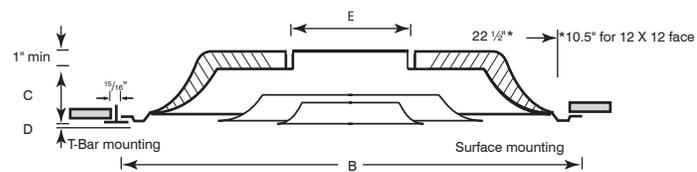
Its round-neck-to-square-face geometry delivers a true 360° horizontal air pattern, similar to a round diffuser, while maintaining a clean architectural ceiling appearance. High induction rates ensure rapid temperature and velocity equalization above the occupied zone, enabling cooling differentials of 30° and greater with low air motion and sound levels typically between NC 25 and 35.

The 3-cone diffusers series performs efficiently from 6 to 30 air changes per hour (based on a 10 ft ceiling height) and is available with fixed or adjustable horizontal patterns, insulated configurations, and multiple neck options to suit a wide range of ceiling and airflow conditions.

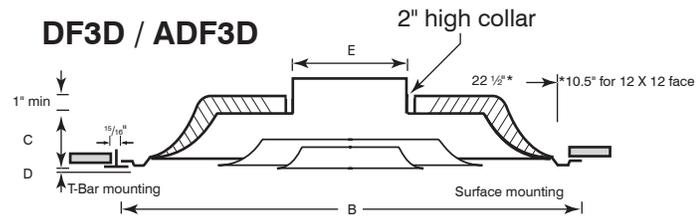


DF3

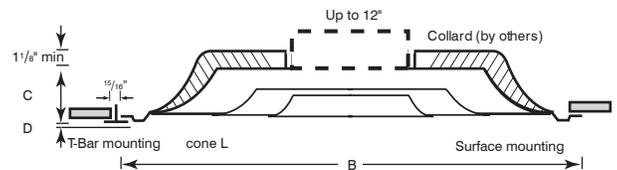
DF3 / ADF3



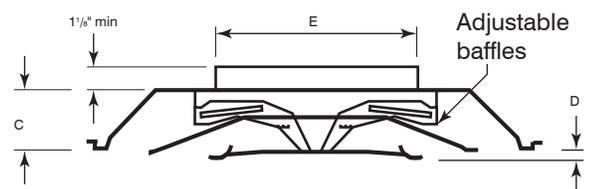
DF3D / ADF3D



DF3I / ADF3I



DA3 / ADA3



SQUARE DIFFUSERS

DF3/ADF3 - DA3/ADA3 SERIES 3 CONE DIFFUSERS

HOW TO ORDER DF3/ADF3 - DA3/DAD3 SERIES

Enhanced Airflow for Large-Volume Applications

KEY FEATURES (ALL MODELS)

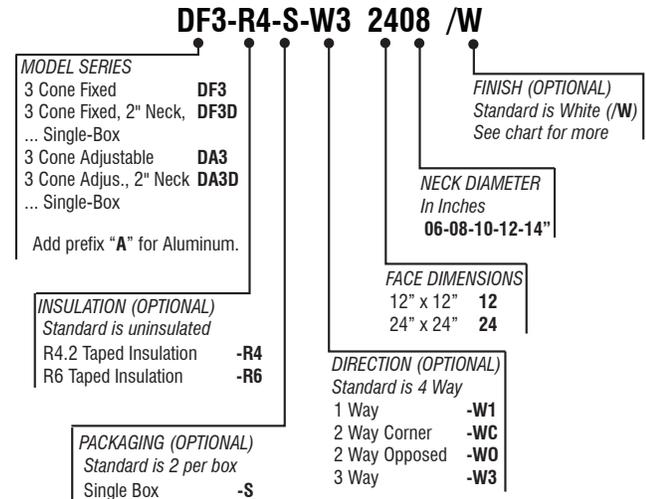
- **High Induction Air Distribution**
3-cone design ensures rapid air mixing and uniform temperature distribution.
- **360° Horizontal Air Pattern**
Even air diffusion across the ceiling plane for consistent coverage.
- **Quiet Operation**
Engineered for low sound levels in comfort-driven environments.
- **Steel or Aluminum Heavy-Gauge Construction**
Available in painted steel or aluminum to meet performance or corrosion-resistance requirements.
- **Universal Ceiling Compatibility**
One standard model suits both T-bar and drywall installations using rigid ducts; compatible with Airvector **PF** Easy Install Frame.
- **Service-Friendly Design**
Tool-free removable core allows easy access to duct and damper.

OPTIONS & ACCESSORIES

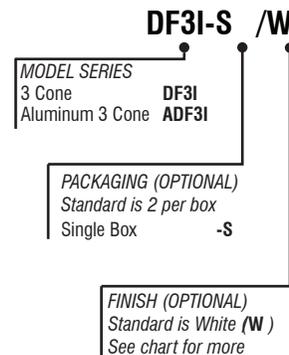
- Standard white powder-coated finish; custom colors available.
- Optional **-R4** or **-R6** insulation (**-R6** standard on **DF3I** / **ADF3I**)
- Compatible **N4** / **N5** opposed blade dampers, adjustable from the face.
- **PF** Easy Install Frame for drywall ceilings.
- Single-box packaging.

Listed Size	Neck Dia.	Nominal Face Size	Overall Face Size "B"	Drywall Ceiling Opening
1206*	6	12 x 12	11 ³ / ₄ x 11 ³ / ₄	10 ¹ / ₂ x 10 ¹ / ₂
1208*	8	12 x 12	23 ³ / ₄ x 23 ³ / ₄	10 ¹ / ₂ x 10 ¹ / ₂
2406	6	24 x 24	23 ³ / ₄ x 23 ³ / ₄	22 ¹ / ₂ x 22 ¹ / ₂
2408	8	24 x 24	23 ³ / ₄ x 23 ³ / ₄	22 ¹ / ₂ x 22 ¹ / ₂
2410	10	24 x 24	23 ³ / ₄ x 23 ³ / ₄	22 ¹ / ₂ x 22 ¹ / ₂
2412	12	24 x 24	23 ³ / ₄ x 23 ³ / ₄	22 ¹ / ₂ x 22 ¹ / ₂
2414*	14	24 x 24	23 ³ / ₄ x 23 ³ / ₄	22 ¹ / ₂ x 22 ¹ / ₂

* Only available with DF3/ADF3 and DA3/ADA3



HOW TO ORDER DF3I/AISOI



DF3, DF3D, DF3I, DA3, DA3D (steel)
ADF3, ADF3D, ADF3I, ADA3, ADA3D (aluminum)
3-Cone Diffusers

12" x 12" face

SIZE (inches)	Neck Velocity (fpm)	400	500	600	700	800	1000	1200	1400	1600
	Velocity Pressure (in H ₂ O)	.010	.016	.022	.031	.041	.062	.090	.122	.160
6	CFM	78	98	118	137	157	196	235	274	313
	Total Pressure	.02	.03	.04	.06	.07	.10	.16	.22	.29
	NC	< 20	< 20	< 20	< 20	< 20	25	29	34	40
	Throw (ft)	2-3-6	3-4-7	4-5-9	4-5-10	5-6-11	6-8-12	7-9-13	8-10-15	9-11-16
8	CFM	140	175	209	244	279	349	419	489	559
	Total Pressure	.03	.04	.06	.07	.09	.14	.20	.28	.38
	NC	< 20	< 20	< 20	< 20	< 20	29	35	41	45
	Throw (ft)	2-4-7	3-5-9	4-7-10	5-8-11	6-9-12	7-10-14	8-12-17	10-12-18	11-14-20

24" x 24" face

SIZE (inches)	Neck Velocity (fpm)	400	500	600	700	800	1000	1200	1400	1600
	Velocity Pressure (in H ₂ O)	.010	.016	.022	.031	.041	.062	.090	.122	.160
6	CFM	78	98	118	137	157	196	235	274	313
	Total Pressure	.02	.03	.04	.05	.07	.10	.14	.19	.24
	NC	< 20	< 20	< 20	< 20	< 20	22	28	32	36
	Throw (ft)	1-2-4	1-3-4	2-3-5	2-3-6	3-4-7	4-6-8	5-7-10	6-9-11	7-9-12
8	CFM	140	175	209	244	279	349	419	489	559
	Total Pressure	.02	.03	.04	.05	.08	.10	.15	.20	.25
	NC	< 20	< 20	< 20	< 20	< 20	26	31	36	41
	Throw (ft)	2-3-5	2-3-7	3-4-8	3-5-8	4-6-9	5-7-11	6-9-13	7-10-14	8-11-17
10	CFM	218	273	327	382	436	545	654	763	872
	Total Pressure	.02	.03	.04	.05	.08	.12	.17	.24	.30
	NC	< 20	< 20	< 20	< 20	22	29	34	38	43
	Throw (ft)	3-4-6	4-5-8	4-6-10	5-7-12	6-8-14	7-9-15	8-11-16	9-12-17	10-13-19
12	CFM	314	393	471	550	628	785	941	1099	1246
	Total Pressure	.02	.04	.05	.07	.09	.14	.20	.27	.36
	NC	< 20	< 20	< 20	20	23	39	36	41	46
	Throw (ft)	4-5-9	5-6-10	6-7-11	6-8-13	7-9-15	8-11-18	10-13-21	12-16-22	13-18-21
14	CFM	492>	615	738	861	984	1230	1476	1722	1968
	Total Pressure	.03	.04	.06	.08	.10	.18	.23	.30	.40
	NC	< 20	< 20	< 20	21	25	33	38	43	48
	Throw (ft)	4-6-10	5-6-11	6-8-14	7-10-16	8-11-18	10-14-20	12-16-22	14-19-24	15-20-26

NC Value based on 10 db room attenuation.

Throw Values are based on isothermal air and terminal velocities of 150 fpm, 100 fpm & 75 fpm respectively.
 Total Pressure the sum of static pressure plus velocity pressure and is given in inches w.g.