



Nailor Square Ceiling Diffusers: What are the Differences?

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[HTTP://WWW.TECHNICALAIR.COM/NAILOR](http://www.technicalair.com/nailor)

Overview



- When selecting square ceiling diffusers, many of the options available can seem quite similar outside of appearances.
- The differences, however, can vary from performance and noise to throw patterns and specialized applications
 - All of which can affect the overall comfort in the space.



Nailor RNS



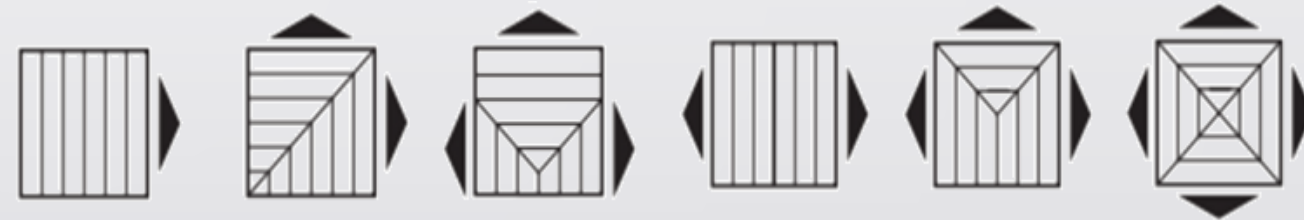
- [The Nailor RNS](#) includes three configurations ranging from 2 to 4 cones.
 - the standard 4-cone stamped (RNS) is similar to the 3-cone (RNS3) and 2-cone (RNS2) diffusers
- If selecting for high inlet pressures, the 2-cone RNS2 is a better option at the cost of higher NC.
 - Besides outliers like this, performance is nearly indistinguishable.
- These increase in price with more cones
- Mainly selected based on architectural preference and cost difference.

Nailor 6000 Series



- [6200, 6400, and 6500](#)
[Series Pattern Diffusers](#)

- Look like round neck diffusers from beneath
- Designed around providing maximum performance with high airflows
- Features angled vanes instead of cones
 - Affords less obstruction to the supply air
 - These vanes generate longer throw distances
 - Results in cross-shaped throw pattern in the basic 4-way configuration
- Highly customizable
- Comes in a wide array of vane and throw pattern arrangements.



Nailor UNI & UNI2 Diffusers



- Minimalist design and construction
- Uses concealed bracketry and nearly flushed flat plaque face
 - Clean look that blends in nicely with the rest of ceiling
- Uses a square metal plaque to distribute air
- Performance of UNIs is similar to the RNSs at the most popular 8" and 10" neck sizes
 - throw is markedly better at larger sizes (see performance data below)



RNS 12"	Total Pressure	.026	.039	.057	.075	.097	.127	.150	.245	.310	.410
	Airflow, CFM	315	390	470	550	630	705	785	990	1100	1255
	Throw	2-3-7	3-4-9	3-5-10	4-6-13	5-7-13	5-8-15	5-8-16	7-9-18	9-11-18	10-12-19
	Noise Criteria	—	13	18	21	24	29	32	37	41	44

UNI2 12"	Total Pressure	.040	.063	.090	.123	.161	.203	.251	.361	.492	.643
	Airflow, CFM	315	390	470	550	630	705	785	940	1100	1255
	Throw	4-5-10	4-7-13	5-8-14	7-9-16	8-11-17	8-12-17	10-14-19	11-15-20	14-17-23	16-18-25
	Noise Criteria	—	—	13	19	24	28	32	38	44	49

Nailor UNI2



- New model and roughly 20% less expensive than the UNI
 - Offers additional frame type options such as tegular lay-in or spline frames
- Features plaque bracketry closer to the edges of the diffuser
 - allows for specialized versions
- Utilizing the extra space in the diffuser, an induction chamber can be built inside, resulting in the **UNI2-HI**
 - This model promotes higher room induction and mixing by channeling the air through the added basket
- While most baskets in the industry provide 4-way throw, Nailor baskets deliver 360-degree throw due to their octagonal design
- The **UNI2-HH** is built with added foam insulation to prevent condensation in high humidity environments

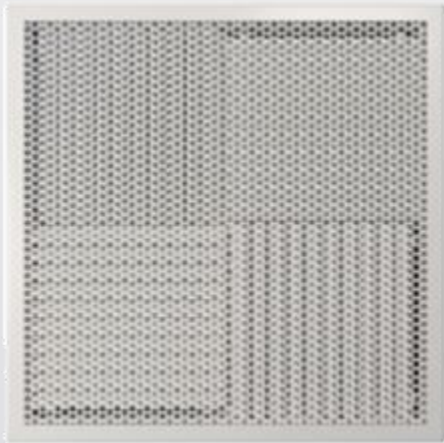
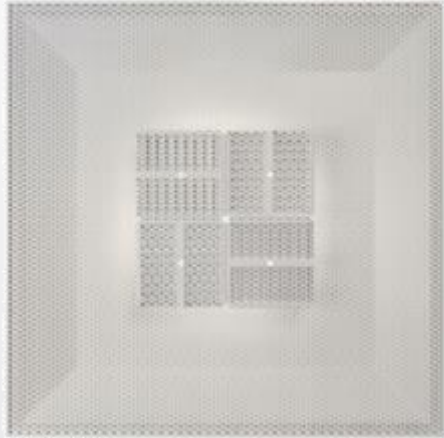
Nailor UNI2-VAV



- Adds a controlled actuator for regulating the supply air into the room.
- Variable air volume (VAV) functionality can be achieved in a localized area without the need to install a full-fledged VAV system.
- More info can be found in our [UNI2-VAV article](#).



Nailor Perforated Diffusers

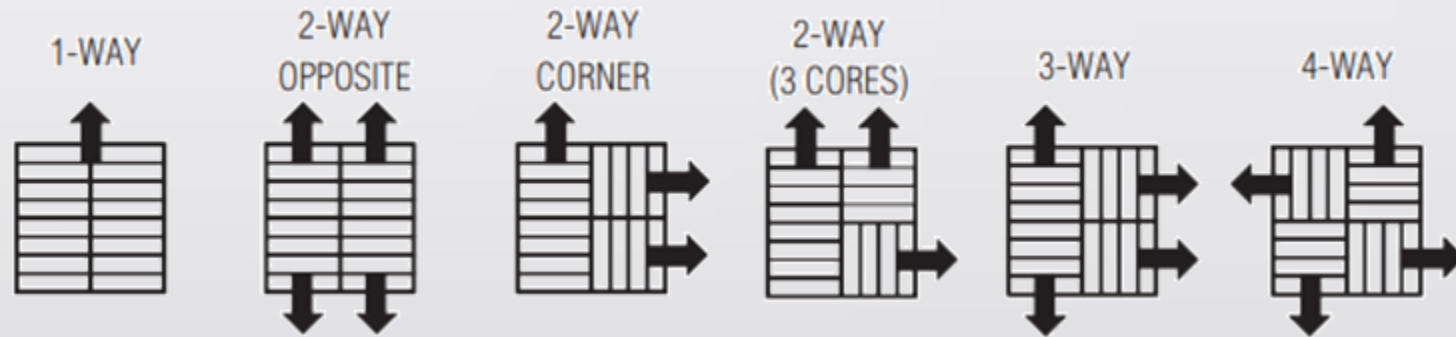


- Supply and return models both feature a perforated face,
 - Allows for integration into the ceiling grid to create a flushed, flat appearance.
- Models 4310, 4320, 4330, 4340, and 4350 series offer a range of throw pattern options,
 - Circular or square patterns to modular controllers.

Nailor 700 Series



- [\(7200 and 7500 series\)](#)
[Modular Core Diffusers](#)
- Designed for customizable throw direction after installation
- Feature four spring-loaded pattern controllers
 - Easily removed and adjusted to provide any discharge pattern in the four directions.





Contact the Experts

- Learn more about Nailor Industries, Inc. entire air handling/ air distribution line by going to <http://www.technicalair.com/nailor>
- Contact the Technical Air Systems' Sales Engineering Team at **973-285-0333** or by email at solutions@technicalair.com
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