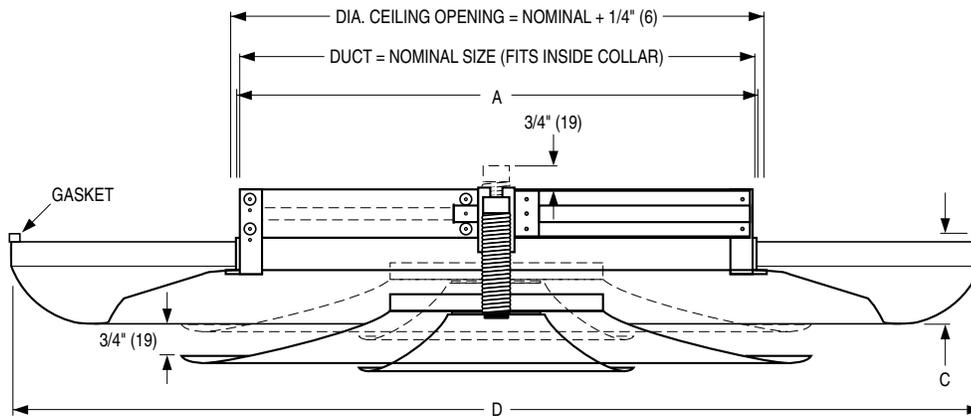




**ROUND CEILING DIFFUSERS**  
**SPUN ALUMINUM CONSTRUCTION**  
**MODEL: 6300R**



**Dimensional Data**

Listed Size	Imperial Units (inches)			Metric Units (mm)		
	A	C	D	A	C	D
6	6 1/8	3/4	12 1/8	156	19	308
8	8 1/8	1	15 1/2	206	25	394
10	10 1/8	1 1/4	18 7/8	257	32	479
12	12 1/8	1 3/8	22 1/4	308	35	565
14	14 1/8	1 9/16	25 5/8	359	40	651
16	16 1/8	1 3/4	29	410	44	737
18	18 1/8	1 15/16	32 3/8	460	49	822
20	20 1/8	2 1/8	35 3/4	511	54	908
24	24 1/8	2 1/2	42 1/2	613	64	1080

**Notes:**

- 1/4" (6) oversize duct fits outside collar, if desired.
- A = Inside diameter of diffuser neck.
- C = Projection of diffuser outer cone below ceiling.
- D = Overall diameter of diffuser.

**DESCRIPTION:**

1. Material: Spun aluminum construction.
2. The Nailor 6300 Series Round Ceiling Diffusers are available in a comprehensive range of sizes with a capacity ranging from 50 to 5000 cfm (24 – 2360 l/s). They are suitable for both cooling and heating applications. They offer the same balanced appearance where different sizes are used in the same zone. They feature a 360 degree air diffusion pattern and provide excellent performance in Variable Air Volume Systems.
3. Designed for both heating and cooling applications.
4. Excellent for variable air volume applications.
5. Standard finish: AW Appliance White.

**ACCESSORIES (OPTIONAL):**

- AL Aluminum finish.
- 4275 Radial Opposed Blade Damper (round).
- EGR Equalizing Grid.
- SC Safety Chain.
- SP Special finish \_\_\_\_\_.

**Model 6300R – Continuous Rotary Adjustment**

**Model 6300R** provides 3/4" (19) adjustability through utilization of a threaded mechanism. The "UP" position of the core provides vertical throw and the "DOWN" position provides horizontal throw. The core is easily adjusted. An optional round opposed blade damper is screwdriver-operated through the face of the unit. The **Model 6300R** has a fully adjustable core to guide vertical or horizontal projection of the air.

**SCHEDULE TYPE:**

**PROJECT:**

**ENGINEER:**

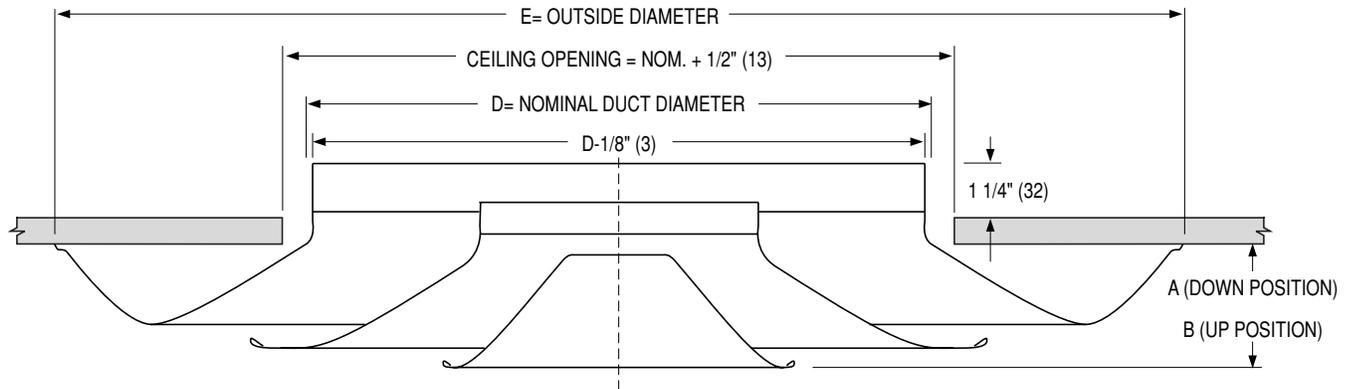
**CONTRACTOR:**

Dimensions are in inches (mm).

DATE	B SERIES	SUPERSEDES	DRAWING NO.
2 - 12 - 19	6300	3 - 10 - 16	6300-1



**ROUND CEILING DIFFUSERS**  
 SPUN ALUMINUM CONSTRUCTION • ADJUSTABLE  
 HORIZONTAL DISCHARGE PATTERN  
**MODEL: ARNR**



**DESCRIPTION:**

1. Material: Aluminum with corrosion-resistant steel neck bracketry.
2. The Nailor ARNR series round ceiling diffusers feature three concentric cones in all sizes to offer a balanced appearance where different sizes are used in the same area.
3. The diffusers deliver the air in a true 360° radial horizontal pattern and provide excellent performance in variable air volume systems.
4. A spring clip arrangement permits quick, easy installation and removal of the inner cone assembly.
5. Discharge settings are easily field set by sliding the inner cone assembly up or down. The core is securely retained by a spring loaded friction arrangement.
6. Adjustable horizontal discharge settings allow the diffusers to accommodate different flow conditions. Position A (cones down) provides maximum capacity at minimum NC levels while position B (cones up) provides higher induction and more air movement.
7. Designed for both heating and cooling applications.
8. An optional round opposed blade damper is screwdriver-operated through the face of the unit.
9. Standard finish is AW appliance white.

**OPTIONS:**

- SC Safety chain
- GK Foam gasket
- EQ Earthquake tabs

Finish

- SP Special. Specify \_\_\_\_\_.

**Dimensional Data**

Listed Size	Imperial Units (inches)			Metric Units (mm)		
	A	B	E	A	B	E
6	1 3/4	1 1/8	11 5/8	44	29	295
8	2 1/8	1 1/2	14 3/8	54	38	365
10	2 7/8	2 1/8	17 15/16	73	54	456
12	3 1/8	2 3/8	21 5/8	79	60	549
14	3 3/8	2 5/8	25 1/4	86	67	641
16	4	3 1/4	29	102	83	737
18	4 3/4	3 7/8	33 1/2	121	98	851
20	5 7/8	4 7/8	37 1/4	149	124	946
24	7 3/4	6 5/8	43 7/8	197	168	1114

**SCHEDULE TYPE:**

**PROJECT:**

**ENGINEER:**

**CONTRACTOR:**

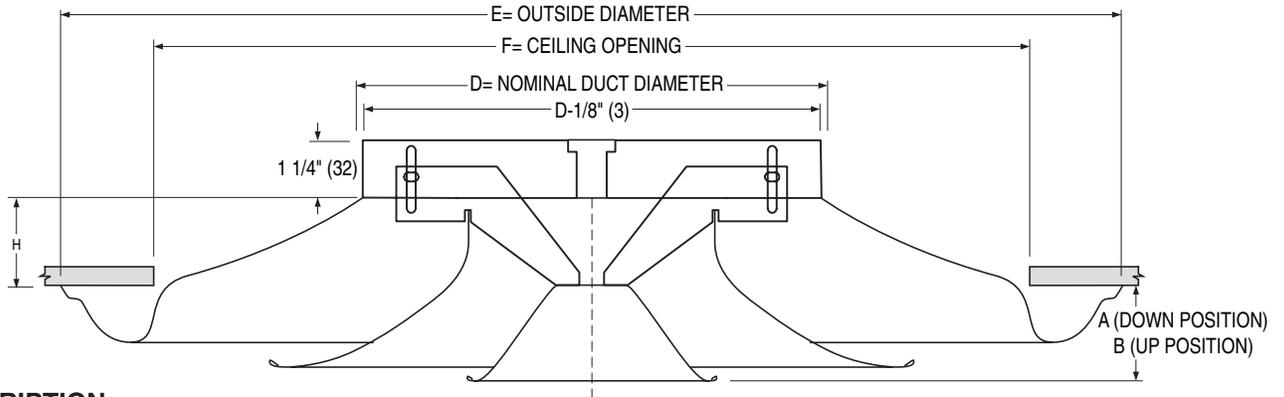
Dimensions are in inches (mm).

DATE	B SERIES	SUPERSEDES	DRAWING NO.
11 - 5 - 18	RNR	10 - 24 - 05	ARNR-1



# ROUND CEILING DIFFUSER

SPUN ALUMINUM CONSTRUCTION • ADJUSTABLE HORIZONTAL TO VERTICAL DISCHARGE PATTERN  
**MODEL: ARNRA1**



**DESCRIPTION:**

1. Material: Aluminum construction with corrosion-resistant steel neck bracketry.
2. The Nailor ARNRA1 round ceiling diffuser features three concentric cones in all sizes to offer a balanced appearance where different sizes are used in the same area.
3. Designed for both heating and cooling applications. The air discharge pattern is fully adjustable between horizontal and vertical. In the fully open (down) setting, capacity is maximized and throw is horizontal. In the fully closed (up) setting, air projects vertically down from the diffuser.
4. The diffusers deliver the air in a true 360° radial that provides excellent performance in variable air volume systems.
5. Discharge settings are easily field set by sliding the inner cone assembly up or down. The core is securely retained by a spring loaded friction arrangement.
6. Adjustable discharge settings allow the diffusers to accommodate different flow conditions.
7. A spring clip arrangement permits quick, easy installation and removal of the inner cone assembly.
8. An optional round opposed blade damper is screwdriver-operated through the face of the unit.
9. Designed for exposed duct or hard ceiling applications.
10. Standard finish is AW appliance white.

**Dimensional Data**

Listed Size	Imperial Units (inches)					Metric Units (mm)				
	A	B	E	F	H	A	B	E	F	H
6	1 3/4	3/4	14 1/8	12	7/8	44	19	359	305	22
8	2	1	18 3/4	16	1 1/4	51	25	476	406	32
10	2 1/2	1 1/4	22 7/8	20	1 1/2	64	32	581	508	38
12	3 1/4	1 3/4	27 3/8	24	1 7/8	83	44	695	610	48
14	3 3/4	1 3/4	32	28	1 7/8	95	44	813	711	48
16	4	2	36 1/4	32	2 1/8	102	51	921	813	54

**OPTIONS:**

- SC Safety chain
  - GK Foam gasket
  - EQ Earthquake tabs
- Finish
- SP Special. Specify \_\_\_\_\_ .

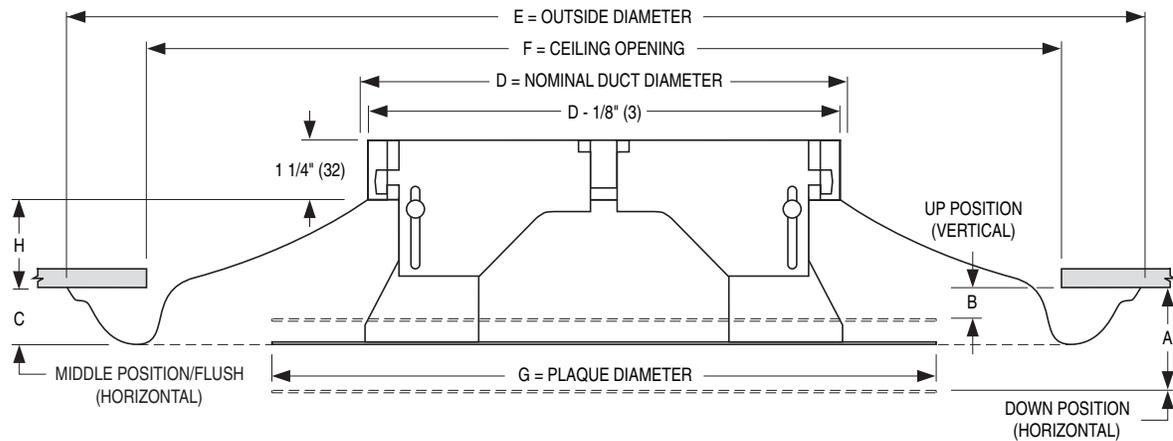
<b>SCHEDULE TYPE:</b>	
<b>PROJECT:</b>	
<b>ENGINEER:</b>	
<b>CONTRACTOR:</b>	

Dimensions are in inches (mm).

DATE	B SERIES	SUPERSEDES	DRAWING NO.
7 - 20 - 09	RNR	NEW	ARNRA1



**ARCHITECTURAL CEILING DIFFUSERS**  
**ROUND PLAQUE • ALUMINUM**  
**ADJUSTABLE HORIZONTAL TO VERTICAL DISCHARGE**  
**MODEL: ARUNI**



**Dimensional Data**

Listed Size	Imperial Units (inches)							Metric Units (mm)						
	A	B	C	E	F	G	H	A	B	C	E	F	G	H
6	1 3/4	1/4	3/4	14 1/8	12	9	7/8	44	6	19	359	305	229	22
8	2	1/2	1	18 3/4	16	12	1 1/4	51	13	25	476	406	305	32
10	2 1/4	11/16	1 3/16	22 3/4	20	15	1 1/2	57	17	30	581	508	381	38
12	2 3/4	15/16	1 11/16	27 3/8	24	18	1 7/8	70	24	43	695	610	457	48
14	3	1	1 3/4	32	28	21	1 7/8	76	25	44	813	711	533	48
16	3 3/8	1	2	36 1/4	32	24	2 1/8	86	25	51	921	813	610	54

**DESCRIPTION:**

- Material: Aluminum outer cone with corrosion-resistant steel neck bracketry. Aluminum face.
- The Nailor ARUNI, round ceiling diffusers have been especially designed to provide the appearance required for architectural excellence as well as high engineering performance. The smooth heavy duty face plaque is 1/8" (0.125) thick aluminum for strength and lightness. These diffusers are suitable for both architectural ceilings and exposed duct applications.
- Designed for both heating and cooling applications. The air discharge pattern is fully adjustable between horizontal and vertical. In the fully open (down) setting, capacity is maximized and throw is horizontal. In the fully closed (up) setting, air projects vertically down from the diffuser.
- The diffusers deliver the air in a true 360° radial horizontal pattern and provide excellent performance in variable air volume systems.
- A spring clip arrangement permits quick, easy installation and removal of the inner cone assembly.
- Discharge setting is simply adjusted by sliding the inner face plaque assembly up or down. The core is securely retained by a spring loaded friction arrangement. There are no screws to reposition.

- Designed for both heating and cooling applications.
- An optional duct mounted round opposed blade damper is screwdriver-operated.
- Standard finish is AW appliance white.

**OPTIONS:**

- SC Safety chain
- GK Foam gasket
- EQT Earthquake tabs

**Finish:**

- SP Special. Specify \_\_\_\_\_.

**SCHEDULE TYPE**

**PROJECT**

**ENGINEER**

**CONTRACTOR**

Dimensions are in inches (mm).

**DATE**

**B SERIES**

**SUPERSEDES**

**DRAWING NO.**

1 - 21 - 10

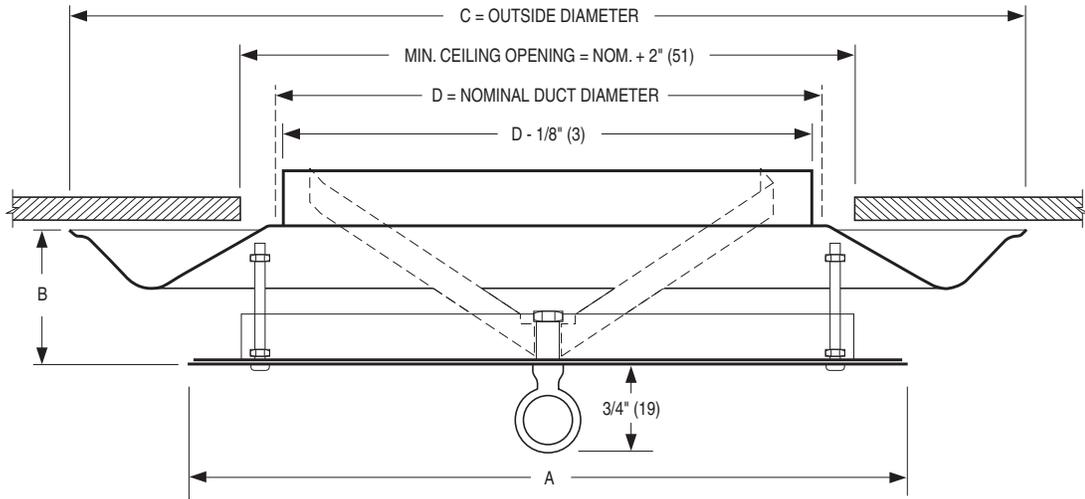
UNI

9 - 14 - 09

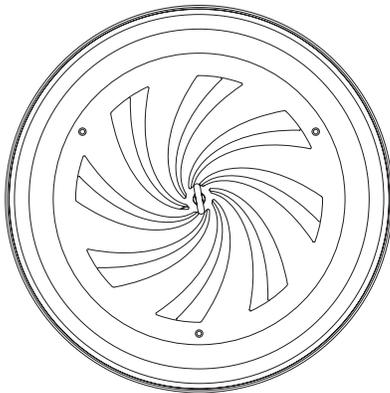
ARUNI-1



**ROUND DOWNBLAST DIFFUSER**  
**STEEL • HEAVY DUTY • ADJUSTABLE**  
**VERTICAL TO HORIZONTAL DISCHARGE PATTERN**  
**MODEL: RDB**



**Face View**



**Dimensional Data**

Listed Size D	Imperial Units (inches)			Metric Units (mm)		
	A	B	C	A	B	C
8	11 11/16	2 1/4	14 3/8	297	57	365
10	14	2 9/16	17 15/16	356	65	456
12	16 1/4	3	21 5/8	413	76	549
14	18 5/8	3 3/8	25 1/4	473	86	641
16	20 7/8	4	29	530	102	737
18	23 1/4	4 1/2	33 1/2	591	114	851
20	25 1/2	5 7/16	37 1/4	648	138	946
24	30 3/16	6 1/2	43 7/8	767	165	1114

**DESCRIPTION:**

1. Material: Heavy gauge corrosion resistant steel.
2. The Nailor RDB heavy duty round downblast ceiling diffusers have been designed for industrial and commercial applications. Unique contemporary design features a "Fibonacci spiral" adjustable aperture.
3. Especially suitable for theaters, auditoriums, factories, warehouses, convention halls, coliseums, shopping malls and other applications where ceilings are high and conditions variable.
4. The discharge pattern can be adjusted from full horizontal to full vertical. At the full vertical setting, the diffuser forces approximately 75% of the air in a long downward projection. This results in effective spot cooling or heating from high mounting locations.
5. Uniform 360° discharge pattern in the horizontal mode with excellent performance in VAV applications.
6. Ring operator can be adjustable with a pole.
7. An optional round opposed blade damper is screwdriver operated and adjusted through the aperture or by removing the inner core of the diffuser.
8. Standard finish is AW Appliance White.

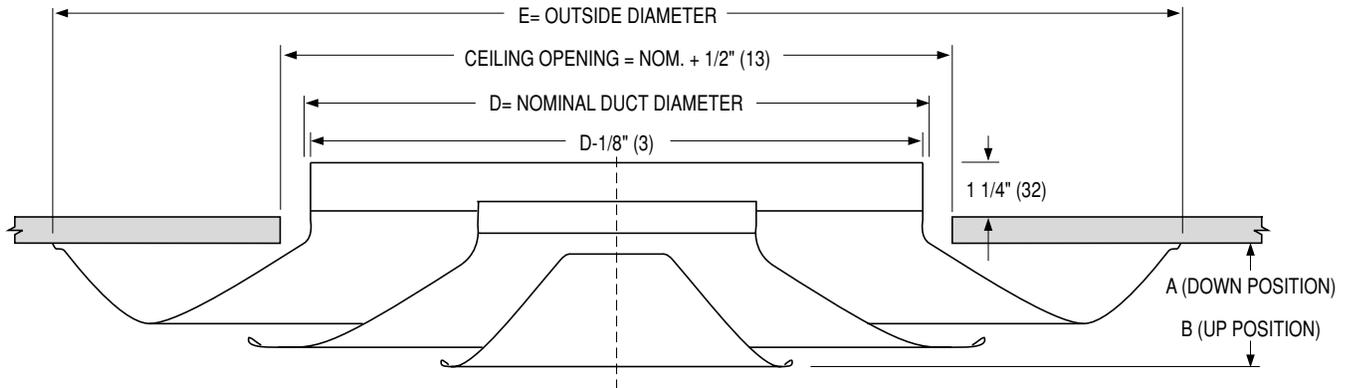
**OPTIONS:**

- GK Foam gasket
  - EQ Earthquake Tabs
- Finish:
- SP Special. Specify \_\_\_\_\_.

<b>SCHEDULE TYPE:</b>		Dimensions are in inches (mm).			
<b>PROJECT:</b>					
<b>ENGINEER:</b>	<b>DATE</b>	<b>B SERIES</b>	<b>SUPERSEDES</b>	<b>DRAWING NO.</b>	
<b>CONTRACTOR:</b>	1 - 9 - 04	RBD	12 - 8 - 03	RDB-1	



**ROUND CEILING DIFFUSERS**  
 SPUN STEEL CONSTRUCTION • ADJUSTABLE  
 HORIZONTAL DISCHARGE PATTERN  
**MODEL: RNR**



**DESCRIPTION:**

1. Material: Corrosion-resistant steel.
2. The Nailor RNR series round ceiling diffusers feature three concentric cones in all sizes to offer a balanced appearance where different sizes are used in the same area.
3. The diffusers deliver the air in a true 360° radial horizontal pattern and provide excellent performance in variable air volume systems.
4. A spring clip arrangement permits quick, easy installation and removal of the inner cone assembly.
5. Discharge settings are easily field set by sliding the inner cone assembly up or down. The core is securely retained by a spring loaded friction arrangement.
6. Adjustable horizontal discharge settings allow the diffusers to accommodate different flow conditions. Position A (cones down) provides maximum capacity at minimum NC levels while position B (cones up) provides higher induction and more air movement.
7. Designed for both heating and cooling applications.
8. An optional round opposed blade damper is screwdriver-operated through the face of the unit.
9. Standard finish is AW appliance white.

**OPTIONS:**

- SC Safety chain
- GK Foam gasket
- EQ Earthquake tabs

Finish

- SP Special. Specify \_\_\_\_\_ .

**Dimensional Data**

Listed Size	Imperial Units (inches)			Metric Units (mm)		
	A	B	E	A	B	E
6	1 3/4	1 1/8	11 5/8	44	29	295
8	2 1/8	1 1/2	14 3/8	54	38	365
10	2 7/8	2 1/8	17 15/16	73	54	456
12	3 1/8	2 3/8	21 5/8	79	60	549
14	3 3/8	2 5/8	25 1/4	86	67	641
16	4	3 1/4	29	102	83	737
18	4 3/4	3 7/8	33 1/2	121	98	851
20	5 7/8	4 7/8	37 1/4	149	124	946
24	7 3/4	6 5/8	43 7/8	197	168	1114

**SCHEDULE TYPE:**

**PROJECT:**

**ENGINEER:**

**CONTRACTOR:**

Dimensions are in inches (mm).

**DATE**

**B SERIES**

**SUPERSEDES**

**DRAWING NO.**

8 - 30 - 05

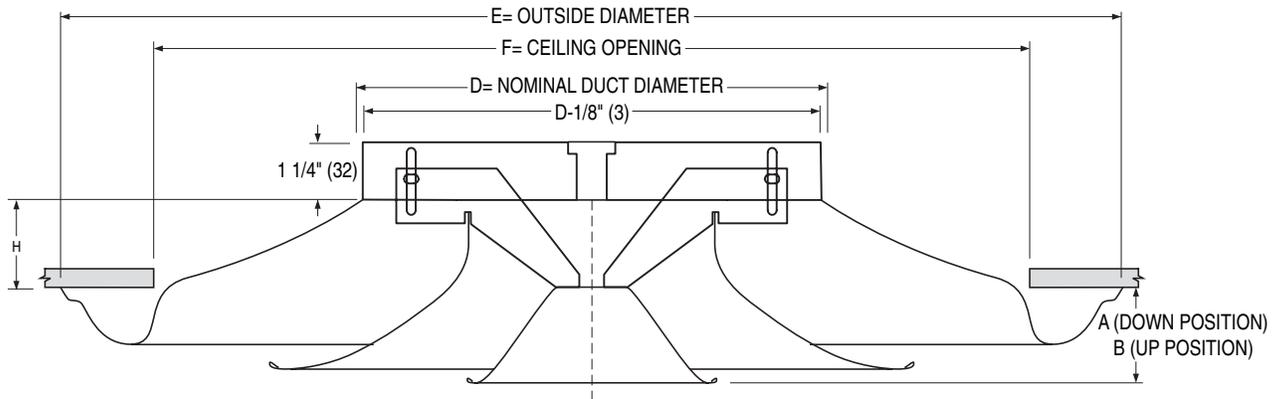
RNR

19 - 9 - 00R

RNR-1



**ROUND CEILING DIFFUSER**  
 SPUN STEEL CONSTRUCTION • ADJUSTABLE  
 HORIZONTAL TO VERTICAL DISCHARGE PATTERN  
**MODEL: RNRA1**



**DESCRIPTION:**

1. Material: Corrosion-resistant steel.
2. The Nailor RNRA1 round ceiling diffuser features three concentric cones in all sizes to offer a balanced appearance where different sizes are used in the same area.
3. Designed for both heating and cooling applications. The air discharge pattern is fully adjustable between horizontal and vertical. In the fully open (down) setting, capacity is maximized and throw is horizontal. In the fully closed (up) setting, air projects vertically down from the diffuser.
4. The diffusers deliver the air in a true 360° radial that provides excellent performance in variable air volume systems.
5. Discharge settings are easily field set by sliding the inner cone assembly up or down. The core is securely retained by a spring loaded friction arrangement.
6. Adjustable discharge settings allow the diffusers to accommodate different flow conditions.
7. A spring clip arrangement permits quick, easy installation and removal of the inner cone assembly.
8. An optional round opposed blade damper is screwdriver-operated through the face of the unit.
9. Designed for exposed duct or hard ceiling applications.
10. Standard finish is AW appliance white.

**Dimensional Data**

Listed Size	Imperial Units (inches)					Metric Units (mm)				
	A	B	E	F	H	A	B	E	F	H
6	1 3/4	3/4	14 1/8	12	7/8	44	19	359	305	22
8	2	1	18 3/4	16	1 1/4	51	25	476	406	32
10	2 1/2	1 1/4	22 7/8	20	1 1/2	64	32	581	508	38
12	3 1/4	1 3/4	27 3/8	24	1 7/8	83	44	695	610	48
14	3 3/4	1 3/4	32	28	1 7/8	95	44	813	711	48
16	4	2	36 1/4	32	2 1/8	102	51	921	813	54

**OPTIONS:**

- SC Safety chain
- GK Foam gasket
- EQ Earthquake tabs

Finish

- SP Special. Specify \_\_\_\_\_ .

**SCHEDULE TYPE:**

**PROJECT:**

**ENGINEER:**

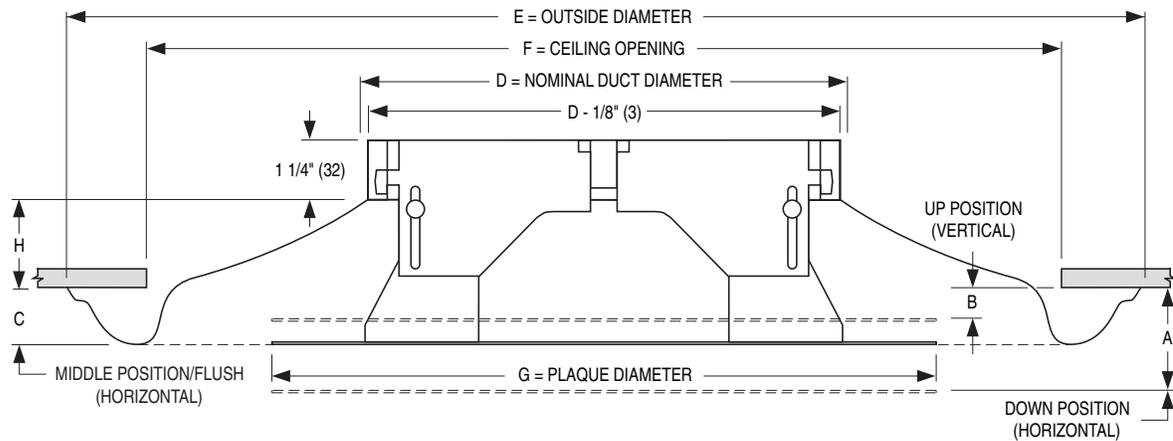
**CONTRACTOR:**

Dimensions are in inches (mm).

DATE	B SERIES	SUPERSEDES	DRAWING NO.
5 - 22 - 08	RNR	4 - 14 - 08	RNRA1



**ARCHITECTURAL CEILING DIFFUSERS**  
**ROUND PLAQUE • STEEL**  
**ADJUSTABLE HORIZONTAL TO VERTICAL DISCHARGE**  
**MODEL: RUNI**



**Dimensional Data**

Listed Size	Imperial Units (inches)							Metric Units (mm)						
	A	B	C	E	F	G	H	A	B	C	E	F	G	H
6	1 3/4	1/4	3/4	14 1/8	12	9	7/8	44	6	19	359	305	229	22
8	2	1/2	1	18 3/4	16	12	1 1/4	51	13	25	476	406	305	32
10	2 1/4	11/16	1 3/16	22 3/4	20	15	1 1/2	57	17	30	581	508	381	38
12	2 3/4	15/16	1 11/16	27 3/8	24	18	1 7/8	70	24	43	695	610	457	48
14	3	1	1 3/4	32	28	21	1 7/8	76	25	44	813	711	533	48
16	3 3/8	1	2	36 1/4	32	24	2 1/8	86	25	51	921	813	610	54

**DESCRIPTION:**

- Material: Corrosion-resistant steel outer cone and bracketry. Aluminum face.
- The Nailor RUNI, round ceiling diffusers have been especially designed to provide the appearance required for architectural excellence as well as high engineering performance. The smooth heavy duty face plaque is 1/8" (0.125) thick aluminum for strength and lightness. These diffusers are suitable for both architectural ceilings and exposed duct applications.
- Designed for both heating and cooling applications. The air discharge pattern is fully adjustable between horizontal and vertical. In the fully open (down) setting, capacity is maximized and throw is horizontal. In the fully closed (up) setting, air projects vertically down from the diffuser.
- The diffusers deliver the air in a true 360° radial horizontal pattern and provide excellent performance in variable air volume systems.
- A spring clip arrangement permits quick, easy installation and removal of the inner cone assembly.
- Discharge setting is simply adjusted by sliding the inner face plaque assembly up or down. The core is securely retained by a spring loaded friction arrangement. There are no screws to reposition.
- Designed for both heating and cooling applications.
- An optional duct mounted round opposed blade damper is screwdriver-operated.
- Standard finish is AW appliance white.

**OPTIONS:**

- SC Safety chain
- GK Foam gasket
- EQT Earthquake tabs

**Finish:**

- SP Special. Specify \_\_\_\_\_.

**SCHEDULE TYPE**

**PROJECT**

**ENGINEER**

**CONTRACTOR**

Dimensions are in inches (mm).

**DATE**

**B SERIES**

**SUPERSEDES**

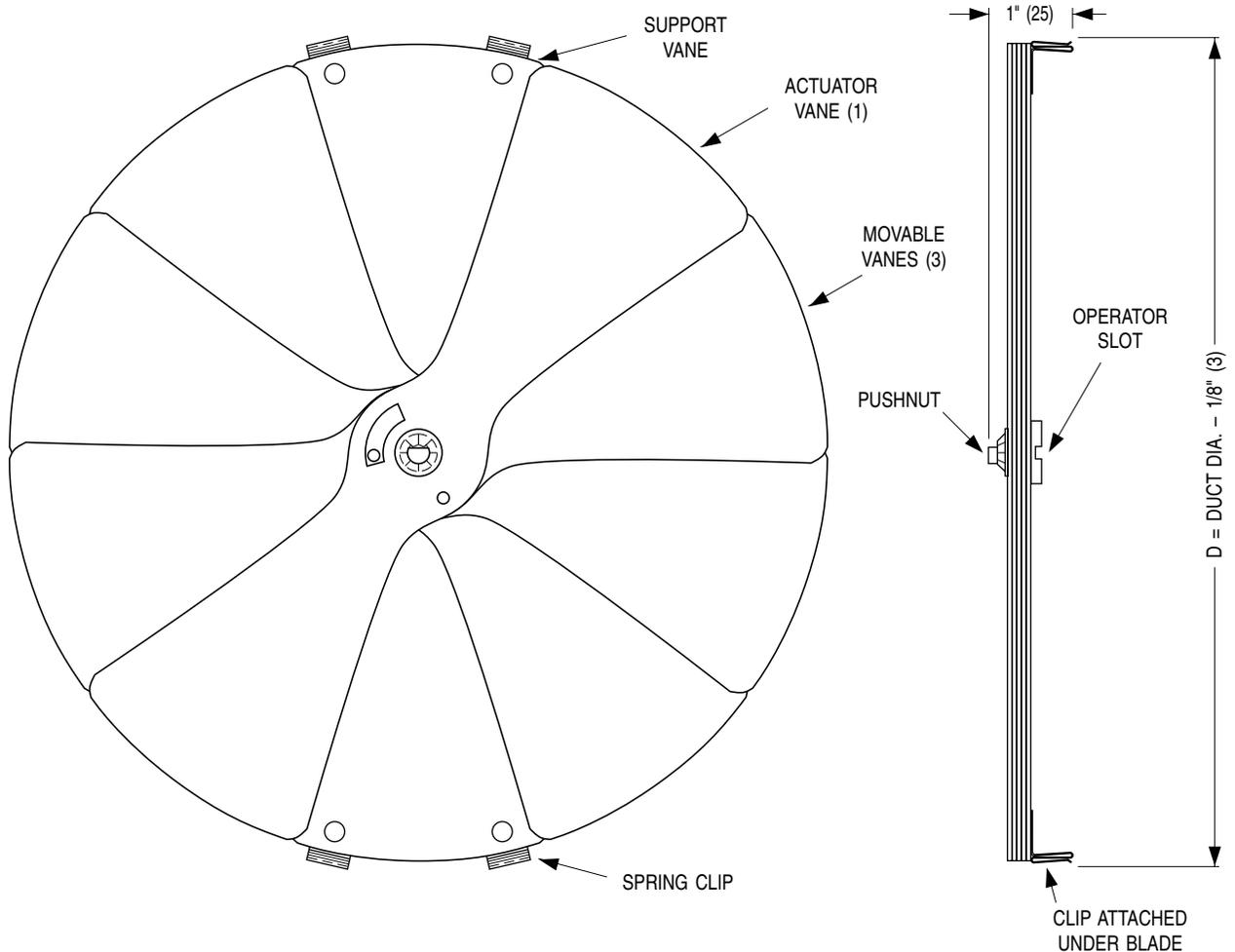
**DRAWING NO.**

1 - 21 - 10

UNI

9 - 14 - 09

RUNI-1


**DESCRIPTION:**

1. Material: Heavy gauge corrosion-resistant steel.
2. The Nailor Model 4250 is a neck mounted, radial sliding blade damper used in round neck diffuser applications to provide fine volume control.
3. Dampers have gang operated radial blades. Blades slide at right angles to the duct with protrusion above the diffuser neck, allowing the damper to work effectively in flexible duct applications.
4. The 4250 is neck mounted with steel barb clips providing secure attachment.
5. Adjustments are made at the screwdriver operator slot.
6. Available Sizes: 6", 8", 10", 12" and 14" (152, 203, 254, 305 and 356) dia..

**SCHEDULE TYPE:**
**PROJECT:**
**ENGINEER:**
**CONTRACTOR:**

Dimensions are in inches (mm).

**DATE**
**B SERIES**
**SUPERSEDES**
**DRAWING NO.**

10 - 24 - 01

ACC.DIF.

25 - 8 - 99R

ABD-4250



# AIR BALANCING DEVICE RADIAL OPPOSED BLADE DAMPER STEEL • FOR ROUND NECK DIFFUSERS MODEL: 4275 (5" - 16" DIA.)

## DESCRIPTION:

A unique method of controlling volume through a diffuser providing premium design quality and performance. The multi-blade perimeter design offers true radial flow at any setting.

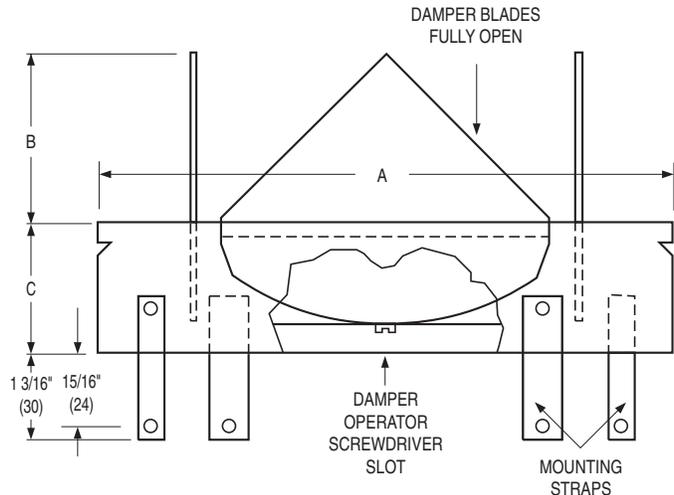
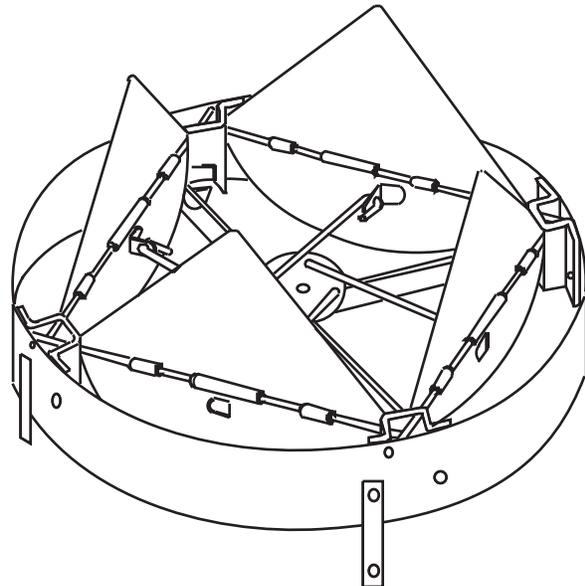
A screwdriver slot, accessible through the diffuser, requires only a half turn to adjust from fully closed to fully open. The damper is designed to fit directly on the neck of the diffuser. Simple convenient and accurate installation and operation.

## OPERATION:

Size 5 through 8 are friction type. Use screwdriver and turn operator to adjust damper setting.

Size 10 through 16 use a detent mechanism to positively hold damper setting. Using screwdriver, lift up and turn operator to desired damper setting.

1. Material: Corrosion-resistant steel construction.
2. Damper mounts directly to diffuser collar.
3. Standard Finish: Mill.



	Nominal Size (inches)								Nominal Size (mm)							
	5	6	8	10	12	14	15	16	127	152	203	254	305	356	381	406
A	4 7/8	5 7/8	7 7/8	9 7/8	11 7/8	13 7/8	14 7/8	15 7/8	124	149	200	251	302	352	378	403
B	1 1/8	1 5/8	2 1/2	2 1/4	2 7/8	3 3/8	3 3/4	4 3/8	29	41	64	57	73	86	95	111
C	1 5/8				2 1/2				41				64			

SCHEDULE TYPE:

PROJECT:

ENGINEER:

CONTRACTOR:

Dimensions are in inches (mm).

DATE

B SERIES

SUPERSEDES

DRAWING NO.

8 - 29 - 05

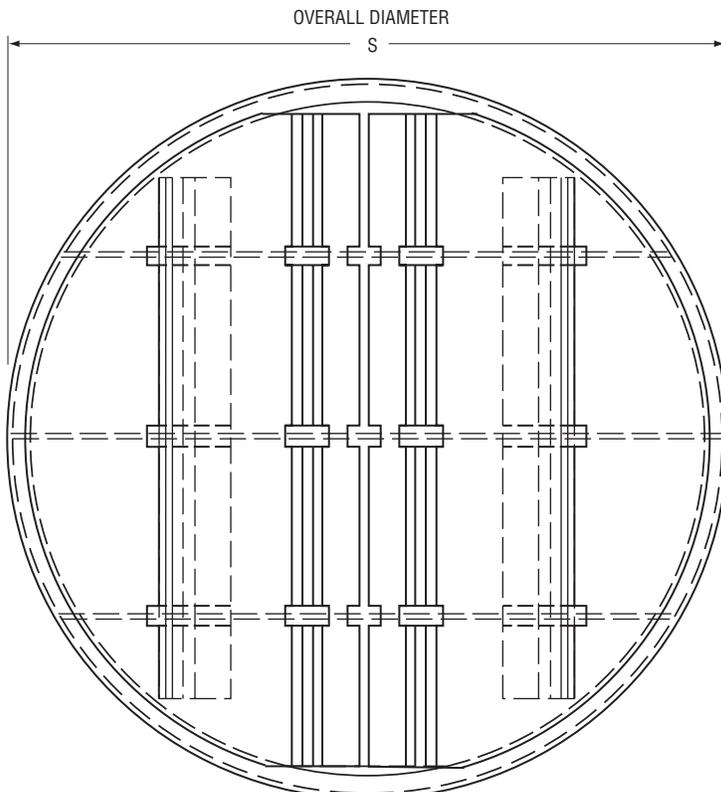
ABD

3 - 1 - 02

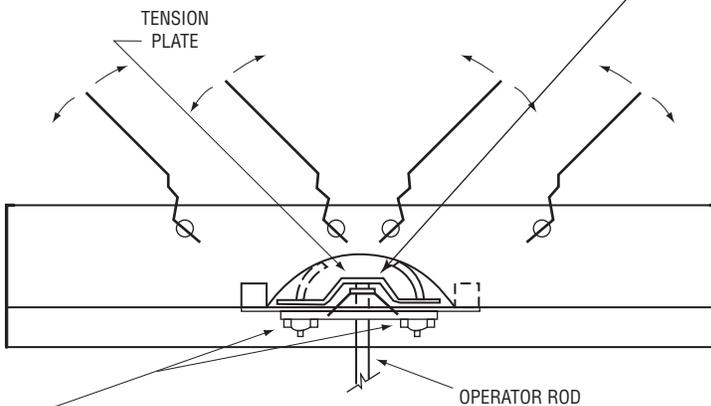
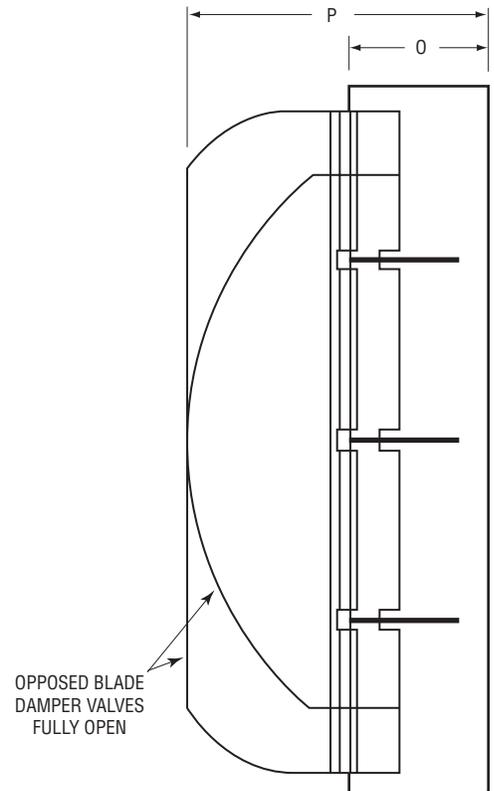
ABD-4275-1



**AIR BALANCING DEVICE  
RADIAL OPPOSED BLADE DAMPER  
STEEL • FOR ROUND NECK DIFFUSERS  
MODEL: 4275 (18" DIA.)**



**TOP VIEW  
VALVES CLOSED**



LOCK NUTS:  
LOOSEN BEFORE ADJUSTING DAMPER.  
TIGHTEN AFTER ADJUSTING DAMPER TO PROVIDE POSITIVE LOCK.

**CROSS SECTION WITH VALVES PARTLY OPEN  
SHOWING OPPOSED BLADE OPERATION.**

IF OPERATOR IS TO BE REMOVED AFTER SETTING DAMPER, DO NOT DRIVE INTO TENSION PLATE AS THIS LOCKS ROD IN PLACE FOR PERMANENT INSTALLATION.

**DESCRIPTION:**

1. Material: Steel construction.
2. Screw or rivet to duct.
3. Opposed blade operation.
4. Finish: Black.

List Dia.	Imperial Modules			Metric Modules		
	Imperial Units (inches)			SI Units (mm)		
	S	O	P	S	O	P
18"	17 7/8	1 3/4	4 3/4	454	44	121

**SCHEDULE TYPE:**

**PROJECT:**

**ENGINEER:**

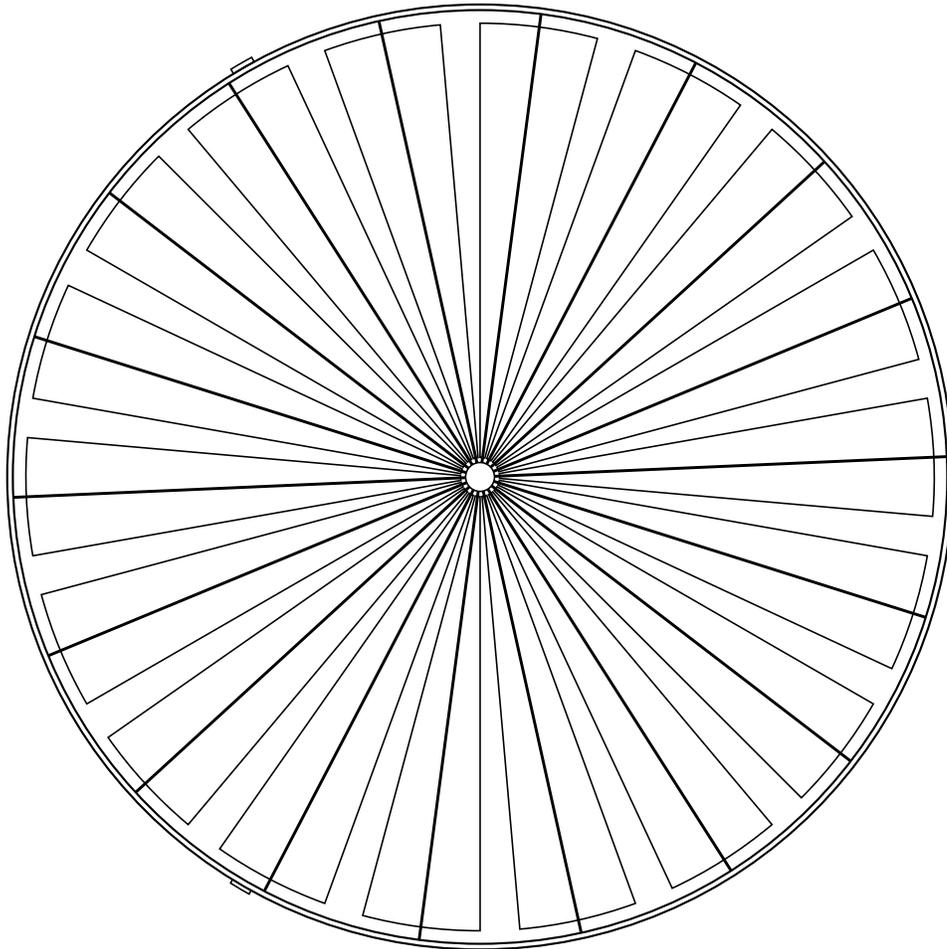
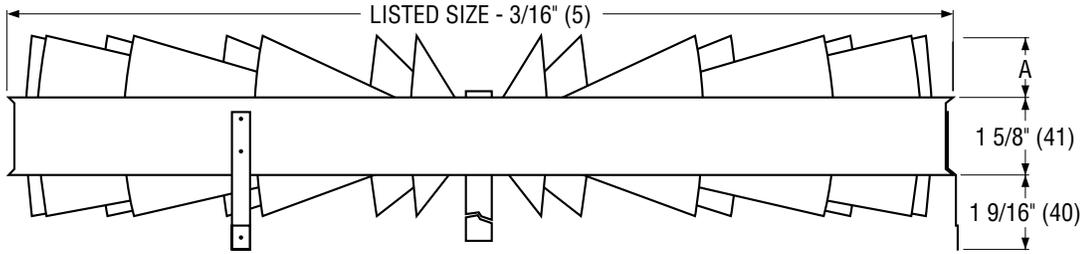
**CONTRACTOR:**

Dimensions are in inches (mm).

DATE	B SERIES	SUPERSEDES	DRAWING NO.
11 - 26 - 07	4200	8 - 30 - 05	ABD-4275-3



**AIR BALANCING DEVICE  
RADIAL OPPOSED BLADE DAMPER  
STEEL • FOR ROUND NECK DIFFUSERS  
MODEL: 4275 (20" AND 24")**



**DESCRIPTION:**

1. Material: Steel.
2. Opposed blade design features blades that pivot radially; working in unison to control volume and distribute the air evenly over the diffuser neck, which minimizes the need for control grids.
3. Adjustments are made through the diffuser face with a key.
4. Finish: Black.

Listed Size	Dimension A	
	inches	mm
20	3/4	19
24	1 1/4	32

<b>SCHEDULE TYPE:</b>	
<b>PROJECT:</b>	
<b>ENGINEER:</b>	
<b>CONTRACTOR:</b>	

Dimensions are in inches (mm).

DATE	B SERIES	SUPERSEDES	DRAWING NO.
11 - 26 - 07	4200	8 - 25 - 02	ABD-4275-4

Nailor offers a selection of standard colors and finishes available on our grilles, registers and diffusers. For painted finishes, our state-of-the-art paint systems provide environmentally friendly finishing solutions with uniform coverage and coating thickness. The result is an exceptionally durable finish that resists scratching, corrosion and general wear. Additional facilities for special requirements, as well as a selection of anodized or brushed finishes, complete our ability to provide unmatched beauty and durability for any application.

**NAILOR POWDER COAT PROPERTIES**

FILM THICKNESS	2.0 to 3.0 mils
HARDNESS	2 H
IMPACT RESISTANCE	Direct: 160 inch - lbs. Reverse 160 inch - lbs.
SALT SPRAY	1000 hours

**ELECTROCOATING PROPERTIES**

FILM THICKNESS	.8 to 1.2 mils
HARDNESS	HB TO H
IMPACT RESISTANCE	80 inch - lbs
SALT SPRAY	100 hours


**POWDER COAT**

Nailor's powder coat is a high-tech thermosetting polyester powder coating with superior physical properties that provide excellent color and gloss retention. The finish offers extreme durability and hardness that resists scratching, chipping and general wear. Surface preparation includes degreasing and a chemical cleaning followed by a clean rinse before a final powder coat finish is applied and baked. The environmentally friendly Nailor powder coat system assures uniform coverage and color consistency resulting in a long lasting superior finish. Colors, including simulated anodizing, which is far more economical than color anodizing, can be selected from Nailor's standard color chart or non-standard colors and can be matched from sample chips provided to Nailor.

**ELECTROCOATING**

E-Coat is an environmentally friendly coating that provides complete coverage and a wide range of performance properties, formulated to meet corrosion, durability and other performance specifications. Electrocoating is a highly automated process in which paint is electrically deposited onto a metal foundation. Film build thickness is uniform and overall application efficiencies are in excess of 90%. Paint is consistent on all part-to-part surfaces, preventing sags, runs or drips. E-Coat offers flexibility, better first yield pass and quicker production times compared to other forms of paint applications. Electrocoating is an excellent solution that offers superior properties and uniform finish.

**CLEAR ANODIZING** (Aluminum products only)

Clear anodizing is a clear oxide coating that exemplifies an aluminum surface's natural oxide coating producing a hard, scratch resistant surface that is resistant to general wear and mild chemicals. The process provides a natural looking, virtually maintenance free finish that will endure for many years.

**COLOR ANODIZING** (Aluminum products only)

Color anodizing is an electrolytic process where, after standard anodizing procedures, colored metallic pigments penetrate the oxide surface pores producing a corrosion resistant, colorfast finish. The process results in a natural metallic appearance that requires little maintenance.

**BRUSHED AND CLEAR COAT**

Available on specific aluminum products (consult applicable product page for availability). Surface is brushed to achieve a scratch finish texture before being degreased and chemically cleaned. A clear lacquer coating is then applied to provide a durable protective finish.

**#4 BRUSHED SATIN POLISHED** (Stainless Steel products only)

Surface is polished to ASTM A480 #4 standard to achieve a bright durable finish that is resistant to mild chemicals and corrosion. A final coating is not required due to the inherent anti-corrosion properties of the stainless steel.

**PRIME COAT**

Prime coat provides a stable base for painting in the field. Surface pretreatment includes degreasing and a chemical cleaning before an alkyd prime coat is applied. After a thorough cleaning for dust, etc. that can contaminate the final finish and cause premature flaking or peeling, finish coat should be field applied as soon as possible.

**PAINT PREPARED ALUMINUM** (Aluminum products only)

Allows for field applied paint. Surface preparation includes degreasing and a chemical cleaning followed by a clean rinse. Finish coat should be field applied as soon as possible.

**MILL FINISH**

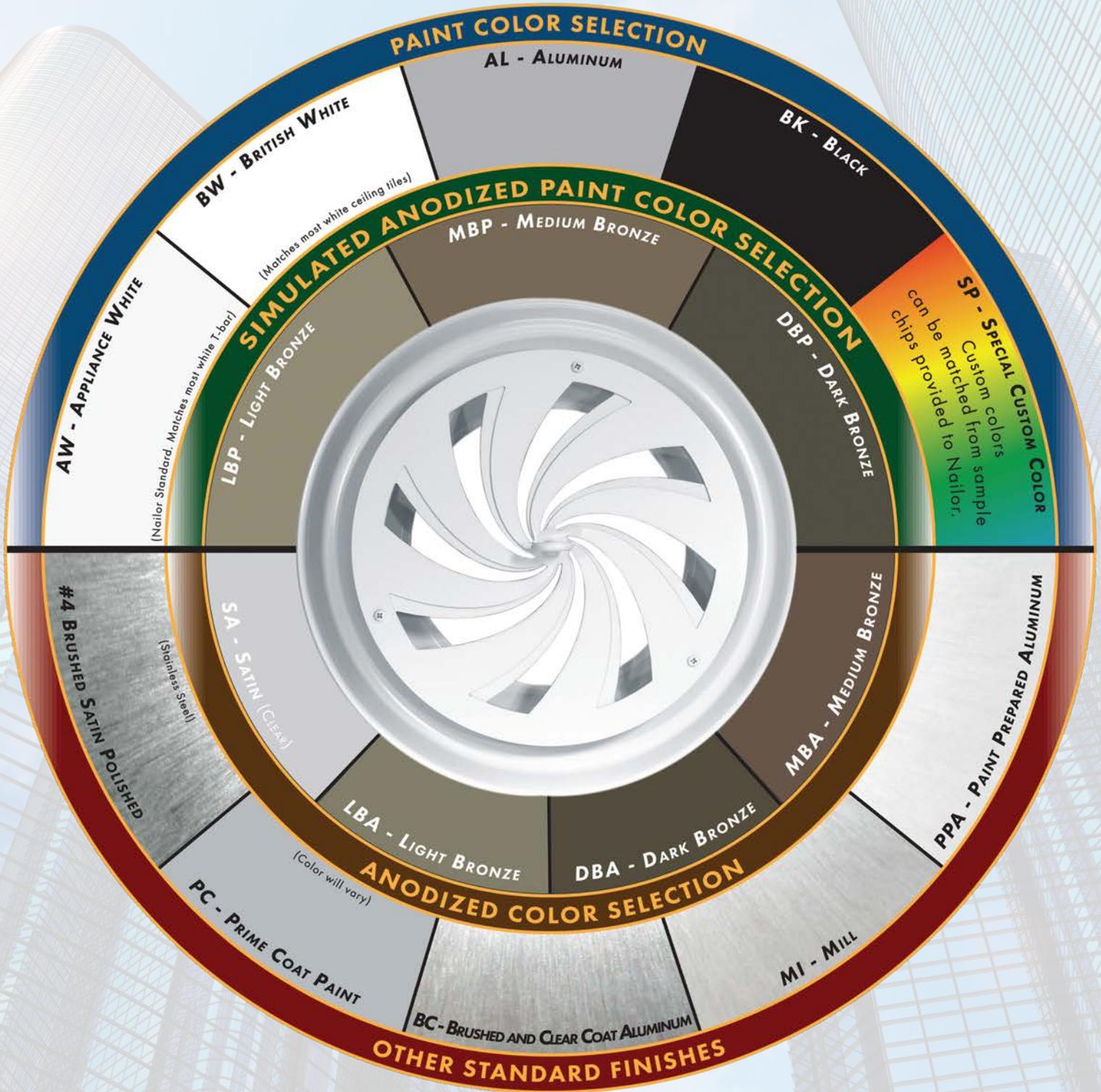
Surface is left untreated and requires cleaning, degreasing, etc. in the field before final finish can be applied if required.



**Nailor**<sup>®</sup>  
Industries Inc.

## STANDARD AND OPTIONAL FINISHES FOR GRILLES AND DIFFUSERS

The following standard colors and finishes are available on applicable Nailor air distribution products. Consult individual product pages for availability



The pictured finishes have been represented as best as possible within printing limitations. However, actual finish may vary. Contact your Nailor representative for a color chip sample on the material specified for a more accurate representation.

**DBK** - Black (for registers ordered with factory mounted dampers) - **BA** - Perforated Diffusers (4300 series only) Appliance White (AW) face with black back pan and pattern controllers.

"Complete Air Control and Distribution Solutions."

WGDSOF2015

[www.nailor.com](http://www.nailor.com)

## PERFORMANCE DATA:

### MODEL 6300R • IMPERIAL UNITS

Nominal Neck Size	Neck Velocity, FPM	400	500	600	700	800	900	1000	1200	1400	1600
	Velocity Pressure	.010	.016	.023	.031	.040	.051	.063	.090	.122	.160
6" Dia.	Total Pressure	.024	.037	.056	.071	.092	.112	.138	.197	.272	.345
	Airflow, CFM	80	100	120	140	160	180	200	235	275	315
	Radius of Diffusion, ft.	2-5	3-5	4-6	4-7	5-7	6-8	6-9	6-9	7-10	7-10
	Noise Criteria	—	—	12	17	21	25	28	34	39	41
8" Dia.	Total Pressure	.033	.049	.068	.095	.122	.155	.192	.270	.362	.470
	Airflow, CFM	140	175	210	245	280	315	350	420	490	560
	Radius of Diffusion, ft.	3-7	4-8	5-8	6-9	7-10	8-10	9-11	8-12	9-13	10-14
	Noise Criteria	—	—	14	19	23	27	30	36	41	44
10" Dia.	Total Pressure	.041	.062	.098	.121	.157	.200	.245	.350	.477	.610
	Airflow, CFM	220	270	330	380	435	490	545	655	765	870
	Radius of Diffusion, ft.	4-9	5-10	7-11	8-11	9-12	9-13	10-14	11-15	11-16	12-17
	Noise Criteria	—	10	16	21	25	29	32	38	43	46
12" Dia.	Total Pressure	.043	.066	.093	.127	.165	.206	.249	.355	.482	.620
	Airflow, CFM	315	390	470	550	630	705	785	940	1100	1255
	Radius of Diffusion, ft.	5-10	7-12	8-13	9-14	10-15	11-16	12-16	13-18	14-19	15-21
	Noise Criteria	—	12	18	23	27	31	34	40	45	48
16" Dia.	Total Pressure	.043	.060	.093	.127	.153	.206	.252	.350	.482	.580
	Airflow, CFM	560	700	840	980	1120	1260	1400	1680	1960	2240
	Radius of Diffusion, ft.	6-12	7-13	9-15	10-16	12-17	13-18	13-18	14-20	16-22	18-24
	Noise Criteria	—	16	22	27	31	35	38	44	49	52
18" Dia.	Total Pressure	.044	.068	.097	.130	.167	.214	.253	.370	.492	.630
	Airflow, CFM	710	885	1060	1240	1420	1590	1770	2120	2480	2830
	Radius of Diffusion, ft.	7-16	10-18	12-19	14-21	16-22	17-23	18-24	19-27	21-29	22-31
	Noise Criteria	—	17	23	28	32	36	39	45	50	53
20" Dia.	Total Pressure	.045	.069	.099	.135	.170	.215	.262	.375	.512	.645
	Airflow, CFM	875	1100	1310	1530	1750	1970	2190	2610	3060	3500
	Radius of Diffusion, ft.	8-18	11-19	14-21	15-23	17-24	18-26	19-27	21-30	23-32	24-34
	Noise Criteria	10	18	24	29	33	37	40	46	51	54
24" Dia.	Total Pressure	.043	.066	.095	.131	.170	.215	.267	.360	.407	.660
	Airflow, CFM	1260	1570	1880	2200	2510	2820	3140	3770	4400	5020
	Radius of Diffusion, ft.	10-21	13-23	16-25	18-28	21-29	22-31	25-36	25-36	28-39	29-42
	Noise Criteria	12	19	25	30	34	38	41	47	52	55

D  
CEILING DIFFUSERS

#### Performance Notes:

1. All pressures are in inches w.g.. To obtain static pressure, subtract the velocity pressure from the total pressure.
2. Radius of diffusion values are given at 100 and 50 fpm terminal velocities under isothermal conditions.
3. Performance data as shown is for the diffuser only, with the cones in the "down" position. Performance for the cones in the "up" position can be approximated by multiplying the total pressures by 1.6, adding 5 Noise Criteria to the sound levels, and multiplying the radius of diffusion by .90.

4. Noise Criteria (NC) values are based upon 10 dB room absorption, re 10<sup>-12</sup> watts. Dash (—) in space indicates an Noise Criteria of less than 10.

5. Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70 – 2023.

Neck Size Dia. in Inches	Ak Factor
6	0.120
8	0.200
10	0.310
12	0.440
14	0.570
16	0.785
18	0.990
20	1.220
24	1.770

## PERFORMANCE DATA:

### MODEL RDB • IMPERIAL UNITS

Nominal Neck Size	Neck Velocity, FPM	400	500	600	700	800	900	1000	1200	1400	1600
	Velocity Pressure	.010	.016	.022	.031	.040	.050	.062	.090	.122	.160
8" Dia.	Total Pressure, Horizontal	.027	.042	.062	.073	.115	.140	.175	.258	.335	.421
	Total Pressure, Vertical	.014	.024	.035	.049	.053	.071	.088	.122	.176	.235
	Airflow, CFM	140	175	209	244	279	314	349	419	489	559
	Noise Criteria, Horizontal	—	—	—	21	23	25	31	33	37	39
	Noise Criteria, Vertical	—	—	—	—	—	—	20	22	28	31
	Throw, Horizontal	0-1-2	1-2-4	1-2-5	1-2-7	1-3-9	2-4-10	2-4-11	3-5-12	4-6-13	6-7-15
	Throw, Vertical	8	10	16	19	24	31	34	37	43	48
10" Dia.	Total Pressure, Horizontal	.036	.056	.082	.111	.145	.185	.230	.335	.462	.570
	Total Pressure, Vertical	.016	.026	.037	.051	.066	.083	.103	.149	.204	.265
	Airflow, CFM	218	273	327	382	436	491	545	654	764	873
	Noise Criteria, Horizontal	—	—	—	—	21	23	27	33	39	41
	Noise Criteria, Vertical	—	—	—	—	—	—	20	25	32	35
	Throw, Horizontal	0-1-3	1-2-5	1-2-7	1-3-8	2-4-10	2-4-11	3-5-12	4-7-13	6-8-15	7-10-16
	Throw, Vertical	12	13	22	26	29	34	37	40	48	50
12" Dia.	Total Pressure, Horizontal	.047	.073	.107	.149	.195	.245	.307	.445	.612	.800
	Total Pressure, Vertical	.018	.029	.042	.058	.076	.095	.118	.170	.232	.305
	Airflow, CFM	314	393	471	550	628	707	785	942	1100	1257
	Noise Criteria, Horizontal	—	—	—	33	27	31	35	39	43	46
	Noise Criteria, Vertical	—	—	—	—	—	22	25	28	33	37
	Throw, Horizontal	3-6-	4-7-13	5-8-15	6-10-17	7-11-18	8-12-19	9-13-20	12-16-22	15-18-23	18-20-25
	Throw, Vertical	15	17	28	36	46	50	55	60	67	75
14" Dia.	Total Pressure, Horizontal	.039	.062	.090	.127	.165	.209	.262	.380	.542	.700
	Total Pressure, Vertical	.016	.027	.038	.054	.070	.088	.111	.162	.224	.295
	Airflow, CFM	428	535	641	748	855	962	1069	1283	1497	1710
	Noise Criteria, Horizontal	—	—	—	—	22	25	29	37	46	52
	Noise Criteria, Vertical	—	—	—	—	—	—	22	29	35	38
	Throw, Horizontal	1-6-12	2-7-14	3-8-16	4-10-17	5-11-18	7-12-19	8-13-20	11-16-22	15-18-23	19-21-25
	Throw, Vertical	21	25	31	39	48	53	57	63	70	89
16" Dia.	Total Pressure, Horizontal	.053	.069	.110	.181	.232	.292	.367	.535	.737	.965
	Total Pressure, Vertical	.020	.032	.045	.061	.083	.104	.132	.189	.261	.342
	Airflow, CFM	559	698	838	977	1117	1257	1396	1676	1955	2234
	Noise Criteria, Horizontal	—	—	—	22	25	31	37	42	46	52
	Noise Criteria, Vertical	—	—	—	—	—	22	27	35	39	41
	Throw, Horizontal	6-10-18	7-11-20	7-13-21	8-16-22	9-17-24	11-19-25	13-20-26	14-21-27	15-22-28	16-23-29
	Throw, Vertical	25	27	34	41	50	55	59	67	85	94
18" Dia.	Total Pressure, Horizontal	.071	.114	.162	.226	.300	.375	.472	.690	.942	1.230
	Total Pressure, Vertical	.023	.037	.053	.073	.096	.120	.150	.217	.298	.390
	Airflow, CFM	707	884	1060	1237	1414	1590	1767	2121	2474	2827
	Noise Criteria, Horizontal	—	—	22	34	37	41	44	52	57	62
	Noise Criteria, Vertical	—	—	—	—	—	24	27	33	37	41
	Throw, Horizontal	8-13-21	10-14-22	11-16-23	12-17-24	14-18-25	15-19-26	16-20-27	18-22-28	21-23-29	23-25-30
	Throw, Vertical	29	34	39	44	55	57	63	74	85	100
20" Dia.	Total Pressure, Horizontal	.074	.116	.162	.221	.289	.365	.442	.630	.862	1.12
	Total Pressure, Vertical	.022	.035	.05	.069	.09	.115	.142	.206	.284	.373
	Airflow, CFM	873	1091	1309	1527	1745	1963	2182	2618	3054	3491
	Noise Criteria, Horizontal	—	25	31	34	38	42	45	53	58	62
	Noise Criteria, Vertical	—	—	—	—	23	27	31	36	42	46
	Throw, Horizontal	10-14-20	12-16-23	14-19-26	16-21-29	18-23-31	20-25-32	22-27-34	25-30-37	29-34-39	32-37-41
	Throw, Vertical	36	42	48	53	58	63	69	81	90	105
24" Dia.	Total Pressure, Horizontal	.047	.073	.104	.141	.182	.229	.281	.400	.540	.700
	Total Pressure, Vertical	.010	.016	.022	.030	.040	.050	.062	.090	.122	.159
	Airflow, CFM	1257	1571	1885	2199	2513	2827	3142	3770	4398	5027
	Noise Criteria, Horizontal	25	30	34	36	42	47	53	62	70	73
	Noise Criteria, Vertical	—	—	—	24	27	33	38	44	47	51
	Throw, Horizontal	12-16-22	14-19-26	17-21-30	18-23-32	20-25-33	23-27-36	25-31-37	29-35-40	33-38-42	34-40-47
	Throw, Vertical	43	47	50	58	64	69	87	95	99	113

D  
CEILING DIFFUSERS

#### Performance Notes:

- All pressures are in inches w.g.. To obtain static pressure, subtract the velocity pressure from the total pressure.
- Horizontal throws are given at 150, 100 and 50 fpm terminal velocities under isothermal conditions with the face fully closed.
- Vertical throw (projection) is given at 50 fpm terminal velocity under isothermal conditions with the face fully open. For non-isothermal conditions, use the following correction factors:

ΔT Temperature Differential	Correction Factor
20°F Cooling Isothermal	x 1.40
10°F Heating	x 0.83
20°F Heating	x 0.58
30°F Heating	x 0.53
40°F Heating	x 0.43

- Noise Criteria (NC) values are based upon 10 dB room absorption, re 10<sup>-12</sup> watts. Dash (—) in space indicates an Noise

Criteria of less than 20. Values shown are for the horizontal discharge pattern (center closed) and vertical discharge pattern (center fully open).  
5. Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70 – 2023.

Nominal Neck Size Dia. in Inches	Ak Factor
6	0.13
8	0.25
10	0.51
12	0.56
14	1.08
18	1.36
20	1.60

## PERFORMANCE DATA:

### MODELS RNR AND ARNR • IMPERIAL UNITS

Nominal Neck Size	Neck Velocity, FPM	400	500	600	700	800	900	1000	1100	1200
	Velocity Pressure	.010	.016	.022	.031	.040	.050	.062	.075	.090
6" Dia.	Total Pressure, Position A	.024	.038	.055	.074	.097	.123	.152	.184	.219
	Total Pressure, Position B	.039	.061	.088	.119	.156	.197	.243	.294	.350
	Airflow, CFM	79	98	118	137	157	177	196	216	236
	Noise Criteria, Position A	—	—	15	20	24	28	31	34	37
	Noise Criteria, Position B	—	16	21	26	30	34	37	40	43
	Throw, Position A	2-2-4	2-3-5	2-4-5	3-4-6	3-4-7	3-5-8	4-5-8	4-6-9	4-6-10
	Throw, Position B	3-3-5	3-4-6	3-5-6	4-5-7	4-5-8	4-6-9	5-6-9	5-7-10	5-7-12
8" Dia.	Total Pressure, Position A	.031	.048	.069	.094	.123	.156	.193	.233	.278
	Total Pressure, Position B	.049	.077	.111	.151	.198	.250	.309	.374	.445
	Airflow, CFM	140	175	209	244	279	314	349	384	419
	Noise Criteria, Position A	—	—	18	23	27	31	34	37	40
	Noise Criteria, Position B	—	19	24	29	33	37	40	43	46
	Throw, Position A	2-3-6	3-4-7	3-5-8	3-5-9	4-6-10	4-7-11	5-8-12	5-9-13	6-9-14
	Throw, Position B	3-4-7	4-5-8	4-6-9	4-6-10	5-7-12	5-8-13	6-9-14	6-10-15	7-10-16
10" Dia.	Total Pressure, Position A	.026	.040	.058	.079	.103	.130	.161	.194	.231
	Total Pressure, Position B	.041	.064	.093	.126	.165	.209	.257	.311	.371
	Airflow, CFM	218	273	327	382	436	491	545	600	654
	Noise Criteria, Position A	—	—	17	22	26	30	33	36	39
	Noise Criteria, Position B	—	18	23	28	32	36	39	42	45
	Throw, Position A	3-4-7	3-5-8	4-5-9	4-6-10	4-7-12	5-8-13	5-9-14	6-10-16	7-11-17
	Throw, Position B	4-5-9	4-6-10	5-6-11	5-7-12	5-9-14	6-10-15	6-11-16	7-12-18	8-13-19
12" Dia.	Total Pressure, Position A	.025	.039	.056	.076	.100	.126	.156	.189	.225
	Total Pressure, Position B	.040	.063	.090	.123	.160	.203	.250	.303	.360
	Airflow, CFM	314	393	471	550	628	707	785	864	942
	Noise Criteria, Position A	—	—	16	21	25	29	32	35	38
	Noise Criteria, Position B	—	17	22	27	31	35	38	41	44
	Throw, Position A	3-5-9	4-6-10	4-7-11	5-8-13	5-8-14	6-10-16	7-11-18	8-12-19	9-13-21
	Throw, Position B	4-6-10	5-7-12	5-8-13	6-9-15	6-10-17	7-12-18	8-13-21	9-14-22	10-15-24
14" Dia.	Total Pressure, Position A	.034	.053	.077	.105	.137	.173	.214	.259	.308
	Total Pressure, Position B	.055	.086	.123	.168	.219	.278	.343	.415	.494
	Airflow, CFM	428	535	641	748	855	962	1069	1176	1283
	Noise Criteria, Position A	—	16	22	27	31	35	38	41	44
	Noise Criteria, Position B	—	22	27	32	36	40	43	46	49
	Throw, Position A	4-6-10	4-7-12	5-8-14	6-9-16	7-10-18	8-12-20	9-13-22	10-15-24	10-16-26
	Throw, Position B	5-7-11	5-8-14	6-9-16	7-10-18	8-11-20	9-13-22	10-15-25	11-17-27	12-18-30
16" Dia.	Total Pressure, Position A	.031	.049	.071	.096	.125	.159	.196	.237	.282
	Total Pressure, Position B	.050	.079	.113	.154	.201	.254	.314	.380	.452
	Airflow, CFM	559	698	838	977	1117	1257	1396	1536	1676
	Noise Criteria, Position A	—	15	21	25	29	33	36	39	42
	Noise Criteria, Position B	—	19	24	29	33	37	40	43	46
	Throw, Position A	4-7-12	5-8-14	6-9-16	7-11-18	8-12-20	9-13-22	10-14-24	11-16-26	12-17-28
	Throw, Position B	5-7-13	6-9-16	7-10-18	8-12-20	9-13-22	10-14-24	11-15-26	12-18-29	13-19-31
18" Dia.	Total Pressure, Position A	.028	.045	.064	.087	.114	.144	.178	.215	.256
	Total Pressure, Position B	.046	.071	.103	.140	.183	.231	.286	.346	.411
	Airflow, CFM	707	884	1060	1237	1414	1590	1767	1944	2121
	Noise Criteria, Position A	—	—	19	24	28	32	35	38	41
	Noise Criteria, Position B	—	17	22	27	31	35	38	41	44
	Throw, Position A	5-7-13	6-9-16	7-11-18	8-12-20	9-14-23	10-15-25	12-17-27	13-18-29	14-20-31
	Throw, Position B	6-8-15	7-10-18	8-12-20	9-13-22	10-15-25	11-17-29	13-19-30	14-20-32	15-21-34
20" Dia.	Total Pressure, Position A	.028	.044	.063	.086	.112	.142	.175	.212	.252
	Total Pressure, Position B	.045	.070	.101	.138	.180	.228	.281	.340	.405
	Airflow, CFM	873	1091	1309	1527	1745	1963	2182	2400	2618
	Noise Criteria, Position A	—	—	20	25	29	33	36	39	42
	Noise Criteria, Position B	—	18	23	28	32	36	39	42	45
	Throw, Position A	5-9-15	7-10-18	8-12-20	9-14-23	10-15-26	12-17-28	13-19-30	14-21-33	15-23-35
	Throw, Position B	6-10-17	8-11-20	9-13-22	10-15-25	11-16-28	13-18-30	14-20-32	15-22-35	16-25-38

For performance notes, see D145.

## PERFORMANCE DATA:

### MODELS RNR AND ARNR • IMPERIAL UNITS

Nominal Neck Size	Neck Velocity, FPM	400	500	600	700	800	900	1000	1100	1200
24" Dia.	Velocity Pressure	.010	.016	.022	.031	.040	.050	.062	.075	.090
	Total Pressure, Position A	.025	.039	.056	.076	.099	.125	.154	.187	.222
	Total Pressure, Position B	.040	.062	.089	.121	.158	.200	.247	.299	.356
	Airflow, CFM	1257	1571	1885	2199	2513	2827	3142	3456	3770
	Noise Criteria, Position A	—	15	21	26	30	34	37	40	43
	Noise Criteria, Position B	—	19	24	29	33	37	40	43	46
	Throw, Position A	6-10-18	8-12-20	9-14-24	10-16-27	11-17-29	13-20-33	15-22-36	17-25-39	18-27-42
	Throw, Position B	7-11-19	9-13-22	10-16-26	11-18-29	12-19-31	14-22-35	16-24-39	18-27-42	20-30-46

#### Performance Notes:

- All pressures are in inches w.g..
- Horizontal throws are given at 150, 100 and 50 fpm terminal velocities under isothermal conditions.
- Performance data as shown is for ceiling mounted diffusers. For exposed duct mounting, multiply the throw values by 0.70.
- Noise Criteria (NC) values are based on 10 dB room absorption, re 10<sup>-12</sup> watts. Dash (—) in spaces indicates an Noise Criteria level of less than 15.
- Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70 – 2023.

Neck Size Dia. in Inches	Ak Factor	
	Position A (Cones Down)	Position B (Cones Down)
6	0.114	0.097
8	0.163	0.126
10	0.316	0.245
12	0.478	0.323
14	0.536	0.420
16	0.758	0.594
18	0.998	0.761
20	1.254	0.987
24	2.058	1.625

## PERFORMANCE DATA:

### MODELS RNRA1 AND ARNRA1 • IMPERIAL UNITS

Nominal Neck Size	Neck Velocity, FPM	400	500	600	700	800	900	1000	1100	1200	1400
	Velocity Pressure	.010	.016	.022	.031	.040	.050	.062	.075	.090	.122
6" Dia.	Total Pressure, Horizontal	.017	.030	.041	.058	.076	.096	.125	.149	.181	.246
	Total Pressure, Vertical	.025	.044	.064	.089	.123	.158	.200	.245	.294	.400
	Airflow, CFM	79	98	118	137	157	177	196	216	236	275
	Noise Criteria, Horizontal	—	—	—	—	15	22	31	35	39	44
	Noise Criteria, Vertical	—	—	—	15	26	33	38	42	44	49
	Throw, Horizontal	2-4-9	3-5-10	3-6-11	4-6-12	5-7-14	5-8-14	6-9-15	7-10-16	8-11-17	9-13-19
	Throw, Vertical	1-1-1	1-1-2	1-2-3	2-3-4	2-3-5	3-4-6	3-5-7	4-6-9	5-8-11	5-9-12
8" Dia.	Total Pressure, Horizontal	.016	.026	.038	.053	.070	.090	.112	.136	.162	.225
	Total Pressure, Vertical	.034	.057	.081	.116	.150	.194	.242	.291	.347	.472
	Airflow, CFM	140	175	209	244	279	314	349	384	419	489
	Noise Criteria, Horizontal	—	—	15	18	23	30	35	39	41	46
	Noise Criteria, Vertical	—	—	18	24	29	33	36	39	42	47
	Throw, Horizontal	2-5-10	3-6-11	4-7-12	4-8-13	5-9-14	6-9-15	7-10-16	8-11-16	9-12-17	11-14-18
	Throw, Vertical	10-17-24	12-19-27	14-20-29	16-22-32	17-24-34	19-25-36	21-27-38	22-28-40	24-29-42	27-32-45
10" Dia.	Total Pressure, Horizontal	.016	.027	.041	.056	.073	.093	.117	.142	.237	.272
	Total Pressure, Vertical	.029	.049	.075	.126	.145	.168	.210	.276	.330	.449
	Airflow, CFM	218	273	327	382	436	491	545	600	654	764
	Noise Criteria, Horizontal	—	—	15	18	23	29	33	37	41	46
	Noise Criteria, Vertical	—	—	16	23	26	31	35	38	40	45
	Throw, Horizontal	3-5-11	4-16-13	5-7-14	5-9-16	6-10-17	7-11-18	8-12-19	9-13-20	10-14-22	11-16-24
	Throw, Vertical	18-21-30	20-24-34	21-26-37	23-28-40	25-30-43	26-32-45	28-34-48	29-35-50	30-37-52	33-40-56
12" Dia.	Total Pressure, Horizontal	.015	.025	.037	.053	.069	.089	.109	.138	.163	.232
	Total Pressure, Vertical	.029	.048	.071	.101	.127	.162	.206	.254	.306	.417
	Airflow, CFM	314	393	471	550	628	707	785	864	942	1100
	Noise Criteria, Horizontal	—	—	—	15	20	24	28	33	36	42
	Noise Criteria, Vertical	—	—	15	20	25	30	34	38	40	46
	Throw, Horizontal	3-7-13	4-8-15	6-9-16	7-10-17	8-12-19	9-13-20	10-14-21	11-15-22	12-16-23	14-18-25
	Throw, Vertical	18-23-32	21-25-35	23-27-38	24-30-41	26-32-44	27-33-47	29-35-49	30-37-51	32-38-54	34-41-58
14" Dia.	Total Pressure, Horizontal	.019	.031	.044	.061	.077	.104	.129	.156	.190	.259
	Total Pressure, Vertical	.038	.058	.086	.116	.156	.193	.237	.279	.342	.465
	Airflow, CFM	428	535	641	748	855	962	1069	1176	1283	1497
	Noise Criteria, Horizontal	—	—	—	15	21	25	30	33	36	42
	Noise Criteria, Vertical	—	—	—	17	25	30	34	37	40	46
	Throw, Horizontal	4-8-15	5-10-16	7-11-18	8-12-19	9-13-20	10-15-21	11-16-22	13-17-23	14-18-24	16-20-26
	Throw, Vertical	20-25-35	23-28-39	25-30-43	27-33-46	29-35-49	30-37-52	32-39-55	34-41-58	35-43-60	38-46-65
16" Dia.	Total Pressure, Horizontal	.023	.040	.057	.079	.109	.137	.173	.212	.251	.358
	Total Pressure, Vertical	.047	.078	.103	.149	.195	.246	.308	.370	.450	.612
	Airflow, CFM	559	698	838	977	1117	1257	1396	1536	1676	1955
	Noise Criteria, Horizontal	—	—	—	16	23	28	32	35	38	44
	Noise Criteria, Vertical	—	—	19	25	30	34	38	41	44	50
	Throw, Horizontal	7-10-15	8-12-17	9-13-18	10-14-20	11-15-21	12-16-22	13-17-23	14-17-25	15-18-26	17-20-28
	Throw, Vertical	26-32-44	29-35-49	32-38-54	34-41-58	36-44-62	38-47-65	40-49-69	42-52-72	44-54-75	48-58-81

D

CEILING DIFFUSERS

#### Performance Notes:

- All pressures are in inches w.g.. To obtain static pressure, subtract the velocity pressure from the total pressure.
- Horizontal throws are given at 150, 100 and 50 fpm terminal velocities under isothermal conditions for a ceiling mounted diffuser (inner cones in fully down position A). For exposed duct mounting, multiply the throw values by 0.70.
- Vertical throws are given at 150, 100 and 50 fpm under isothermal conditions (inner cones in fully up position B). For non-isothermal conditions, use the following correction factors:

ΔT Temperature Differential	Correction Factor
20°F Cooling	x 1.40
Isothermal	x 1.00
10°F Heating	x 0.83
20°F Heating	x 0.58
30°F Heating	x 0.53
40°F Heating	x 0.43

4. Noise Criteria (NC) values are based upon 10 dB room absorption, re 10<sup>-12</sup> watts. Dash (—) in space indicates an Noise Criteria of less than 15.

5. Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70 – 2023.

Neck Size Dia. in Inches	Ak Factor	
	Position A (Cones Down)	Position B (Cones Up)
6	0.14	0.11
8	0.25	0.19
10	0.45	0.29
12	0.61	0.59
14	0.85	0.57
16	0.89	0.68

## PERFORMANCE DATA:

### MODELS RUNI AND ARUNI

Nominal Neck Size	Neck Velocity, FPM	400	500	600	700	800	900	1000	1200	1400	1600
	Velocity Pressure	.010	.016	.022	.031	.040	.050	.062	.090	.122	.160
6" Dia.	Total Pressure, Horizontal	0.017	0.026	0.038	0.051	0.067	0.085	0.105	0.151	0.206	0.269
	Total Pressure, Vertical	0.034	0.053	0.076	0.104	0.135	0.171	0.211	0.304	0.414	0.541
	Airflow, CFM	80	100	120	140	160	180	200	235	275	315
	Noise Criteria, Horizontal	—	—	—	—	—	16	18	26	31	34
	Noise Criteria, Vertical	—	—	—	—	—	19	22	29	34	37
	Throw, Horizontal	2-3-6	2-3-7	3-4-9	3-5-10	4-6-11	4-6-12	5-7-12	5-8-13	6-10-14	7-11-15
	Throw, Vertical	8-12-23	10-15-25	12-18-26	14-21-27	16-23-28	18-24-29	20-25-30	23-26-31	24-27-32	25-28-33
8" Dia.	Total Pressure, Horizontal	0.017	0.026	0.038	0.051	0.067	0.085	0.105	0.151	0.206	0.269
	Total Pressure, Vertical	0.038	0.059	0.085	0.116	0.151	0.191	0.236	0.340	0.463	0.605
	Airflow, CFM	140	175	209	244	279	314	349	419	489	558
	Noise Criteria, Horizontal	—	—	—	—	—	16	20	28	32	35
	Noise Criteria, Vertical	—	—	—	—	15	21	28	31	36	42
	Throw, Horizontal	3-5-11	4-6-13	5-7-14	5-8-16	6-9-17	7-10-18	8-12-19	9-14-22	11-16-24	12-18-26
	Throw, Vertical	15-22-31	18-24-34	20-27-37	22-29-40	24-31-43	26-32-46	28-34-48	31-37-53	34-40-57	38-43-61
10" Dia.	Total Pressure, Horizontal	0.017	0.027	0.039	0.053	0.070	0.088	0.109	0.157	0.214	0.279
	Total Pressure, Vertical	0.033	0.051	0.073	0.100	0.131	0.165	0.204	0.294	0.400	0.522
	Airflow, CFM	218	273	327	382	436	491	545	654	764	873
	Noise Criteria, Horizontal	—	—	—	—	—	16	21	28	32	35
	Noise Criteria, Vertical	—	—	—	—	19	23	28	32	38	43
	Throw, Horizontal	3-5-11	4-6-13	5-7-14	5-8-16	6-9-17	7-10-18	8-12-20	9-14-22	11-16-24	12-19-27
	Throw, Vertical	15-22-31	18-25-35	20-27-38	22-29-41	24-31-44	26-33-47	28-35-49	32-38-54	36-41-58	39-44-62
12" Dia.	Total Pressure, Horizontal	0.019	0.030	0.044	0.059	0.078	0.098	0.121	0.175	0.238	0.311
	Total Pressure, Vertical	0.042	0.065	0.094	0.128	0.167	0.211	0.261	0.375	0.511	0.667
	Airflow, CFM	314	393	471	550	628	707	785	942	1100	1257
	Noise Criteria, Horizontal	—	—	—	—	15	18	21	29	34	39
	Noise Criteria, Vertical	—	—	—	—	18	24	29	29	40	45
	Throw, Horizontal	4-6-14	5-7-16	6-9-17	7-10-19	8-12-20	9-13-21	10-15-22	12-17-24	14-20-26	16-23-28
	Throw, Vertical	23-28-39	25-31-43	28-34-47	30-36-51	32-39-55	34-41-58	36-43-61	39-47-67	42-51-72	45-55-77
14" Dia.	Total Pressure, Horizontal	0.021	0.033	0.047	0.064	0.084	0.106	0.131	0.189	0.257	0.336
	Total Pressure, Vertical	0.042	0.066	0.095	0.129	0.168	0.213	0.263	0.378	0.515	0.673
	Airflow, CFM	428	535	641	748	855	962	1069	1283	1497	1710
	Noise Criteria, Horizontal	—	—	—	—	—	19	22	31	35	41
	Noise Criteria, Vertical	—	—	—	19	21	28	31	39	44	49
	Throw, Horizontal	4-7-16	5-8-19	7-10-20	8-11-22	9-13-24	10-15-26	11-16-27	13-20-30	15-23-33	17-26-35
	Throw, Vertical	24-29-41	26-32-45	29-35-50	31-38-54	33-41-57	35-43-61	37-45-64	41-50-70	44-54-75	47-57-81
16" Dia.	Total Pressure, Horizontal	0.021	0.033	0.048	0.065	0.085	0.107	0.132	0.191	0.259	0.339
	Total Pressure, Vertical	0.045	0.071	0.102	0.139	0.181	0.229	0.283	0.408	0.555	0.725
	Airflow, CFM	559	698	838	977	1117	1257	1396	1676	1955	2234
	Noise Criteria, Horizontal	—	—	—	—	18	22	25	33	37	41
	Noise Criteria, Vertical	—	—	19	21	24	30	33	40	45	50
	Throw, Horizontal	5-7-16	6-9-19	7-11-22	8-12-25	9-14-27	11-16-30	12-18-32	14-21-36	17-25-41	19-28-45
	Throw, Vertical	25-31-43	28-34-48	31-38-53	33-40-57	35-43-61	38-46-64	40-48-68	43-53-74	47-57-80	50-61-86

D  
CEILING DIFFUSERS

#### Performance Notes:

- All pressures are in inches w.g.. To obtain static pressure, subtract the velocity pressure from the total pressure.
- Horizontal throws are given at 150, 100 and 50 fpm terminal velocities under isothermal conditions for a ceiling mounted diffuser (inner plaque in fully down position A). For exposed duct mounting, multiply the throw values by 0.70.
- Vertical throws are given at 150, 100 and 50 fpm under isothermal conditions (inner plaque in fully up position B). For non-isothermal conditions, use the following

#### correction factors:

ΔT Temperature Differential	Correction Factor
20°F Cooling	x 1.40
Isothermal	x 1.00
10°F Heating	x 0.83
20°F Heating	x 0.58
30°F Heating	x 0.53
40°F Heating	x 0.43

4. Noise Criteria (NC) values are based upon 10 dB room absorption, re 10<sup>-12</sup> watts. Dash (—) in space indicates an Noise Criteria of less than 15.

5. Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70 – 2023.

Neck Size Dia. in Inches	Ak Factor
	Position A (Cone Down)
6	0.12
8	0.21
10	0.33
12	0.51
14	0.70
16	0.88