

## "TWISTER" HIGH INDUCTION STAMPED FACE

The "Twister" diffuser is engineered to optimize air distribution effectiveness. This next generation diffuser has a high induction, 360° swirl pattern for a superior coanda effect. It is available for a 2' x 2' (600 x 600) ceiling module with a choice of five round neck sizes.

### Steel Construction – High Induction

Fixed Pattern      Model TWR "Twister" Swirl Pattern      **Page D101**



Model TWR



Models UNI, 5000CTD, UNI-PD

## ARCHITECTURAL SQUARE

Designed with the architect in mind, the diffusers in this series are fashioned to blend in with most ceiling types in order to create the ultimate in aesthetic looks. Nailor has accomplished this while still offering a variety of diffuser designs that provide flexibility in both style, selection and engineering performance.

### Flat Panel

Steel Construction –	Model UNI	<b>Page D104</b>
Aluminum Construction –	Model AUNI	<b>Page D104</b>
Steel with Ceiling Tile –	Model UNI-RC	<b>Page D106</b>

### Downblast –

Steel Fixed Perforated –	Model UNI-PD	<b>Page D115</b>
Steel Adjustable –	Model UNI-AD	<b>Page D118</b>
Steel Round Plaque Face –	Model UNI-RP	<b>Page D121</b>

### Ceiling Tile Slot –

Supply	Model Series 5000CTD	<b>Page D128</b>
Return	Model Series 5000RCTD	<b>Page D128</b>

### Plaque Face

Steel Construction –	Model UNI2	<b>Page D112</b>
Aluminum Construction –	Model AUNI2	<b>Page D112</b>
Steel Construction –	Model 6600	<b>Page D134</b>

### Plaque Face with Perimeter Slots

Steel Construction –	Model 66UNI	<b>Page D139</b>
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## ROUND

Nailor's round diffusers are available in steel or aluminum construction, with adjustable or fixed patterns. Included in this series of diffusers is a 'Plaque' style for architectural ceilings and a 'Downblast' type for high ceiling areas.

### Adjustable Horizontal Pattern

Steel Construction –	Model RNR	<b>Page D143</b>
Aluminum Construction –	Model ARNR	<b>Page D143</b>

### Adjustable Horizontal to Vertical Pattern

Steel Construction –	Model RNRA1	<b>Page D146</b>
Aluminum Construction –	Model ARNRA1	<b>Page D146</b>

### Fully Adjustable Horizontal/Vertical Pattern

Aluminum Construction –	Model 6300R	<b>Page D148</b>
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### Plaque Face Horizontal Pattern

Steel Construction –	Model RUNI	<b>Page D150</b>
Aluminum Construction –	Model ARUNI	<b>Page D150</b>

### Downblast Adjustable Horizontal/Vertical Pattern

Steel Construction –	Model RDB	<b>Page D152</b>
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Models RUNI, RNR, RDB

## "TWISTER" STAMPED CEILING SWIRL DIFFUSERS

- HIGH PERFORMANCE
- HIGH INDUCTION
- ROUND NECK

### Model:

TWR Steel



Model TWR

Model Series TWR "Twister" Stamped Square Ceiling Diffuser is a high performance ceiling diffuser that is ideal for VAV applications. The name "Twister" is given to this diffuser because of its tight horizontal 360° swirl air pattern. The contemporary architectural radial vane design produces an unmatched high induction swirl pattern engineered to optimize occupant comfort by minimizing stratification over a wide range of air volumes. The "Twister's" superior coanda effect air pattern eliminates dumping and is ideal for VAV applications.

The diffuser features the popular 2' x 2' (600 x 600) module size and is available with frame/border styles to suit all ceiling systems. The round neck design includes a full 1 1/4" (32) high collar for an easy, secure connection.

### STANDARD FEATURES:

- Constructed from heavy gauge corrosion-resistant steel.
- Stamped face design allows for uniformity of the radial vanes.
- Superior coanda effect air pattern, eliminates dumping and is ideal for VAV applications.
- 24" x 24" (600 x 600) ceiling module size available with frame/border types to suit all ceiling systems.
- Engineered 'swirl' air diffusion pattern.

- Designed for 60 – 750 cfm; available in five neck sizes 6" – 14" (152 – 356).
- High neck collars for solid connection.
- Removable plug for screwdriver adjustment of the optional damper from below the face.

### CONSTRUCTION MATERIAL:

Heavy gauge, corrosion-resistant steel.

### FINISH OPTIONS:

AW Appliance White finish is standard. Other finishes are available.

### OPTIONS & ACCESSORIES:

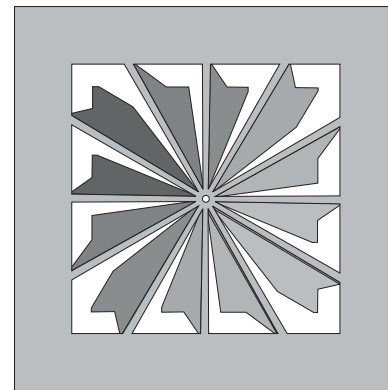
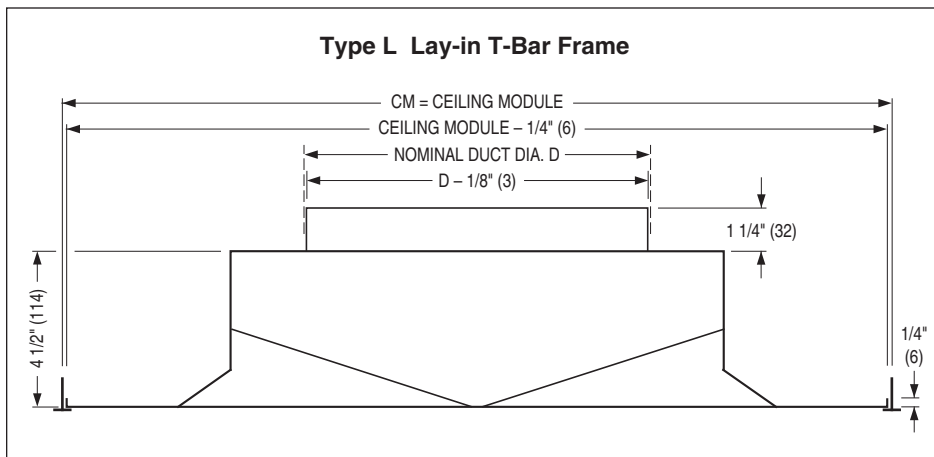
- 4250 Radial Sliding Blade Damper 6" – 14" (152 – 356).
- 4275 Radial Opposed Blade Damper 5" – 24" (127 – 610).
- 4675 Butterfly Damper 6" – 14" (152 – 356).

EQT Earthquake Tabs

For additional options and accessories; see page D255.

## DIMENSIONAL DATA AND FRAME TYPES:

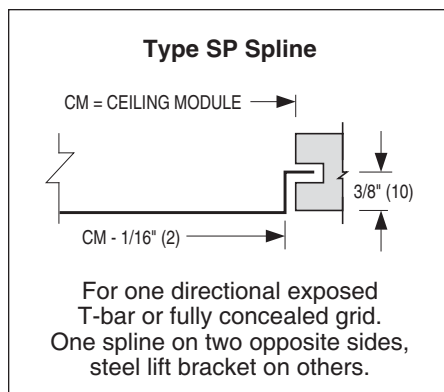
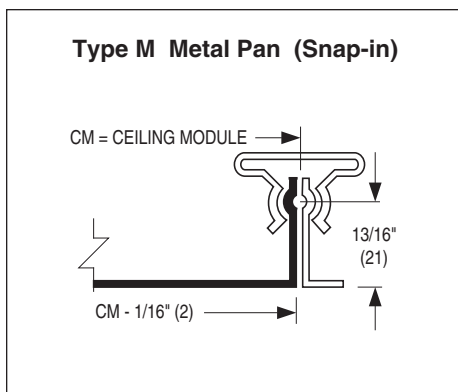
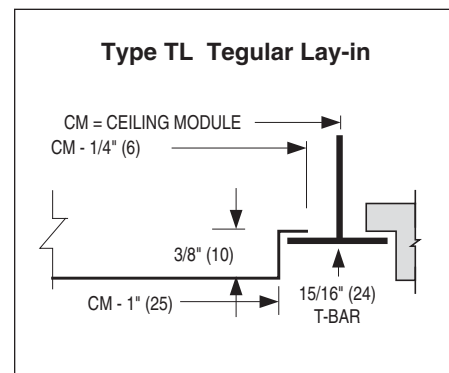
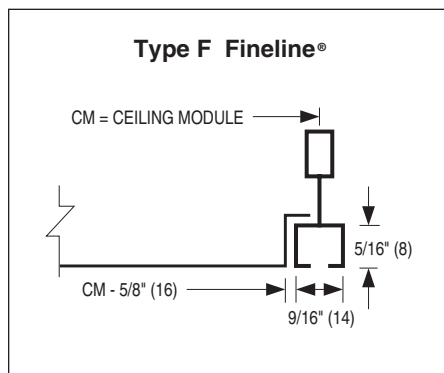
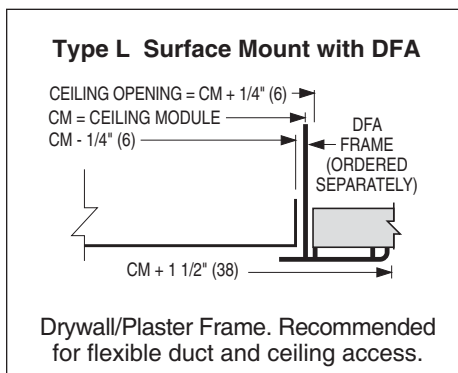
### MODEL TWR



**FACE VIEW**

D

CEILING DIFFUSERS



### Dimensional Data

Ceiling Module CM		Nominal Duct Size D	
Imperial Modules (in.)	Metric Modules (mm)	Imperial Units (in.)	Metric Units (mm)
24 x 24	600 x 600	6, 8, 10, 12, 14	152, 203, 254, 305, 356

## PERFORMANCE DATA:

### Model "TWR" Twister • 24 x 24 (600 x 600) Face Size

Nominal Neck Size	Neck Velocity, FPM	300	400	500	600	700	800	900	1000	1200	1400	1600
	Velocity Pressure	.006	.010	.016	.023	.031	.040	.051	.063	.090	.122	.160
6" Dia.	Total Pressure	.006	.011	.018	.025	.034	.044	.056	.069	.098	.133	.174
	Airflow, CFM	60	80	100	120	140	160	180	200	235	275	315
	Throw	1-1-2	1-1-2	1-2-3	1-2-4	1-2-5	2-3-6	2-3-7	2-3-8	3-4-9	3-6-10	3-7-11
	Noise Criteria	—	—	—	—	—	—	—	15	23	32	34
8" Dia.	Total Pressure	.011	.016	.026	.036	.049	.063	.080	.097	.144	.186	.250
	Airflow, CFM	105	140	175	210	245	280	315	350	420	490	560
	Throw	1-2-3	1-2-4	2-3-5	2-3-7	3-4-8	3-4-9	3-5-9	4-5-10	4-7-11	5-8-12	6-9-12
	Noise Criteria	—	—	—	—	—	—	16	22	28	34	37
10" Dia.	Total Pressure	.013	.023	.035	.050	.067	.087	.108	.132	.197	.244	.309
	Airflow, CFM	165	220	270	330	380	435	490	545	655	765	870
	Throw	2-3-6	2-3-7	3-4-8	3-5-8	4-6-9	4-6-10	5-6-11	5-7-13	6-7-14	7-8-15	8-11-16
	Noise Criteria	—	—	—	—	—	16	20	23	30	38	45
12" Dia.	Total Pressure	.017	.029	.043	.062	.084	.108	.134	.163	.251	.300	.377
	Airflow, CFM	235	315	390	470	550	630	705	785	990	1100	1255
	Throw	2-4-7	3-4-9	3-5-10	4-6-11	5-7-13	5-8-13	6-8-14	7-9-14	8-11-16	10-13-18	12-15-19
	Noise Criteria	—	—	—	—	16	20	24	27	34	40	47
14" Dia.	Total Pressure	.022	.033	.053	.073	.099	.125	.158	.192	.272	.367	.472
	Airflow, CFM	320	425	530	635	745	850	955	1060	1270	1490	1695
	Throw	2-3-9	3-6-11	5-7-13	6-9-14	7-10-15	8-11-16	9-12-17	10-13-17	11-14-19	12-15-21	13-16-21
	Noise Criteria	—	—	16	22	25	27	32	34	39	44	47

#### Performance Notes:

1. Throws are given at 150, 100 and 50 fpm terminal velocities under isothermal conditions.
2. All pressures are in inches w.g.. To obtain static pressure, subtract the velocity pressure from the total pressure.
3. Noise Criteria (NC) values are based upon 10dB room absorption, re 10<sup>-12</sup> watts. Dash (—) in space indicates an Noise Criteria of less than 15.
4. Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70 – 2006.

#### Balancing:

It is recommended that a commercially available 'Flow Hood' is used for field balancing. The airflow meter directly reads average flow rate with great accuracy at all volumes. It is a much faster and more accurate alternative to time consuming multiple velocity readings, eliminating the use of Ak factors and the calculations required to convert the average velocity into airflow.

Neck Size Diameter in Inches	Nominal Overall Face Size	Ak Factor
6	24 x 24	0.181
8	24 x 24	0.264
10	24 x 24	0.330
12	24 x 24	0.458
14	24 x 24	0.521

## HOW TO ORDER

### STAMPED SQUARE CEILING DIFFUSERS

#### MODEL SERIES RNS, ARNS, UNI, AUNI AND TWR

EXAMPLE: RNS - 08 - 24 x 24 - L - AW - -

**1. Models**

**Louvered Face**

- RNS Steel, Fixed, 4 Cone
- RNS3 Steel, Fixed, 3 Cone
- RNS2 Steel, Fixed, 2 Cone
- RNSA1 Steel, Adjustable, Sliding Type
- RNSA2 Steel, Adjustable, Rotating Type

- ARNS Aluminum, Fixed
- ARNS3 Aluminum, Fixed, 3 Cone, Non-removable
- ARNSA Aluminum, Adjustable

**Architectural**

- UNI Steel, Concealed Bracketry
- UNI2 Steel, Corner Posts
- UNI-RP Steel, Round Plaque
- AUNI Aluminum, Concealed Bracketry
- AUNI2 Aluminum, Four Corner Posts

**Downblast**

- UNI-AD Adjustable
- UNI-PD Fixed, Perforated

**High Induction**

- TWR Twister

**2. Neck Size (inches)**

- 04, 05, 06, 07, 08, 10, 12, 14, 15

**3. Ceiling Module Size**

**Imperial (inches)**

- 12 x 12, 20 x 20, 24 x 12, 24 x 24 (default), 30 x 30, 48 x 24

**Metric (mm)**

- 300 x 300, 500 x 500, 600 x 300, 600 x 600, 750 x 750, 1200 x 600

**4. Frame Type**

- L Lay-in T-Bar/Surface Mount
- S Surface Mount
- PL Panel Lay-in T-Bar
- SP Spline
- M Metal Pan
- F Fineline®
- TL Tegular Lay-in

**5. Finish**

- AW Appliance White (default)
- AL Aluminum
- BK Black
- BW British White
- MI Mill
- PC Prime Coat Paint
- PPA Paint Prepared Aluminum
- SP Special Custom Color

**OPTIONS & ACCESSORIES:**

(Default is none unless noted otherwise)

**6. MRI Option (AUNI2 only)\***

- MRI MRI Compatible (100% Aluminum)

**7. Damper**

- 4250 Radial Sliding, 6" - 14"
- 4275 Radial Opposed Blade, 5" - 24"
- 4675 Butterfly, 6" - 14"

**8. Quadrant Blanks**

- QB3 3-way blow
- QB2 2-way opposite blow
- QC2 2-way corner blow
- QB1 1-way blow

**9. External Insulation**

- EX Foil-back (installed), R-4.2
- EXB Foil-back (loose), R-4.2
- MIB Molded Insulation Blanket R-6.0

**10. Extended Inlet Collar \*\***

- EIC Extended Inlet Collar (2.25") with bead

**11. Earthquake Tabs**

- EQT Earthquake Tabs

**OTHER OPTIONS & ACCESSORIES:**

**Ceiling Tile Option:**

- (UNI, AUNI only)
- RC Retaining Channel only
- RCCF Retaining Channel + Tile Cut & Fitted

**Air Balancing Devices**

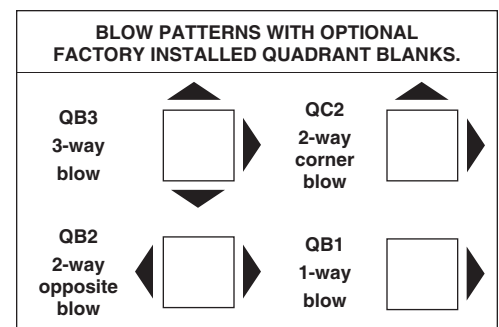
- (order separately)
- EGR Equalizing Grid
- DEGR Damper/Equalizing Grid

**Notes:**

1. Consult price pages as to limitations of module, frame type, neck size and accessories combinations.
2. Face size 20" x 20" (500 x 500) is available only in Frame Type L.
3. MIB Molded Insulation Blanket is not available on Models RNSA1, RNSA2, and ARNSA.
4. Butterfly damper (4675) is not compatible with Model RNSA.
5. PPA Finish is available on Aluminum models only.
6. \*Dampers are not available on Model AUNI2 when MRI option is selected.
7. \*\*Extended Inlet Collar is available for steel models RNS, RNS3, UNI and UNI2 only.

D  
CEILING DIFFUSERS

NOMINAL ROUND NECK (DUCT) SIZE	FACE SIZE	CEILING MODULE
4, 5, 6, 7, 8	12 x 12	12 x 12 20 x 20 24 x 12 24 x 24
6, 8, 10	20 x 20	20 x 20
6, 8, 10, 12, 14, 15	24 x 24	24 x 24 30 x 30 48 x 24



## HOW TO SPECIFY

### SUGGESTED SPECIFICATION:

#### RNS3 and ARNS3 – Steel or Aluminum Construction

Furnish and install **Nailor Model** (select one) **RNS3** (steel) or **ARNS3** (aluminum) **Stamped Square Ceiling Diffusers** of the sizes and capacities as shown on the plans and air distribution schedules. Model RNS3 shall be manufactured from corrosion-resistant steel and have three die-formed concentric cones in all sizes. Model ARNS3 shall be manufactured from aluminum with corrosion-resistant steel bracketry. The inner cone assembly is to be non-removable. The diffuser shall have a removable plug for screwdriver adjustment of the optional damper without removing the inner core. The finish shall be AW Appliance White (optional finishes are available).

The manufacturer shall provide published performance data for the diffuser, which shall be tested in accordance with ANSI/ASHRAE Standard 70-2006.

### SUGGESTED SPECIFICATION:

#### RNS2 – Steel Construction

Furnish and install **Nailor Model RNS2 Stamped Square Ceiling Diffusers** of the sizes and capacities as shown on the plans and air distribution schedules. The diffuser shall be manufactured from corrosion-resistant steel and incorporate two die-formed concentric cones. The diffuser shall have a removable plug for screwdriver adjustment of the optional damper without removing the inner core. The finish shall be AW Appliance White (optional finishes are available).

The manufacturer shall provide published performance data for the diffuser, which shall be tested in accordance with ANSI/ASHRAE Standard 70-2006.

### SUGGESTED SPECIFICATION:

#### TWR 'Twister' – Steel Construction

Furnish and install **Nailor Model TWR 'Twister' Ceiling Swirl Diffusers** of the sizes and capacities as shown on the plans and air distribution schedules. The diffuser shall be manufactured from heavy gauge corrosion-resistant steel. Radial induction vanes shall be one-piece stamped construction. The diffuser is to be sizes to suit a 24" x 24" (600 x 600) ceiling suspension system. The round duct connection collar shall be an integral part of the diffuser assembly and be not less than 1 1/4" (32) high. The diffuser shall have a removable plug for screwdriver adjustment of the optional damper without removing the inner core. The finish shall be AW Appliance White (optional finishes are available).

The manufacturer shall provide published performance data for the diffuser, which shall be tested in accordance with ANSI/ASHRAE Standard 70-2006.

### SUGGESTED SPECIFICATION:

#### UNI – Steel Construction

Furnish and install **Nailor Model UNI Square Architectural Ceiling Diffusers** of the sizes and capacities as shown on the plans and air distribution schedules. The diffuser shall have a corrosion-resistant steel, stamped outer cone. The inner core shall have a plaque style face. The face shall be double skinned with a hemmed edge. The inner core assembly is to be removable using a spring clip arrangement that permits quick, easy installation and removal. The finish shall be AW Appliance White (optional finishes are available).

The manufacturer shall provide published performance data for the diffuser, which shall be tested in accordance with ANSI/ASHRAE Standard 70-2006.

#### AUNI – Aluminum Construction

Furnish and install **Nailor Model AUNI Square Architectural Ceiling Diffusers** of the sizes and capacities as shown on the plans and air distribution schedules. The diffuser shall have a heavy gauge aluminum, stamped outer cone. The inner core shall have a plaque style face. The face shall be double skinned with a hemmed edge. The inner core assembly is to be removable using a spring clip arrangement that permits quick, easy installation and removal. The finish shall be AW Appliance White (optional finishes are available).

The manufacturer shall provide published performance data for the diffuser, which shall be tested in accordance with ANSI/ASHRAE Standard 70-2006.



## PRODUCT OVERVIEW OPTIONS AND ACCESSORIES FOR CEILING DIFFUSERS

### MOUNTING FRAMES

- Surface mount adapter frames for plaster and sheet rock ceilings are available in steel and aluminum. They simplify installation, save time and allow ceiling plenum access.

### OPTIONS

- A selection of optional items that are available on ceiling diffusers.

### FINISHES

- Selection of standard and non-standard finishes to choose from.
- Baked enamel paint in custom colors to suit architect.

### AIR BALANCING DEVICES

- Dampers for round and square necks.
- Equalizing grids.
- Volume extractors.

Effective air balancing of an HVAC System requires the correct selection, specification and installation of the right product to suit the system design.

Nailor offers a comprehensive range of models and options to cover all applications.

Nailor balancing devices are:

- Easy to select and specify. Many items can be ordered or specified as diffuser accessories.
- Designed to offer a smooth, accurate and predictable response during adjustment for precise air metering.
- Designed to provide quick access and adjustment.
- Engineered with attention to optimizing airflow, in order to minimize noise, turbulence and pressure drop.

**Model DFA**  
Drywall/Plaster Frame  
Surface Mount  
Ceiling Adapter



**Model 4275**  
Radial Opposed  
Blade Damper



**Model 4250**  
Radial Sliding Blade Damper



**Model 4675**  
Butterfly Damper



**Model OBD**  
Opposed Blade Damper  
Steel, Neck Mount



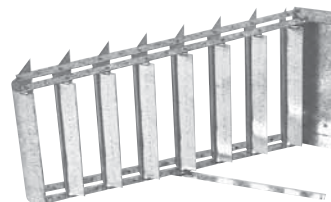
**Model OBDD**  
Opposed Blade Damper  
Steel, Duct Mount



**Model EGR**  
Equalizing Grid



**Model DEGR**  
Damper with Equalizing Grid



**Model EX-1**  
Volume Extractor

## Mounting Frames

### DFS (Steel), DFA (Aluminum) Drywall/Plaster Frame

The DF Series are for mounting in finished drywall or plaster ceilings to accept any standard lay-in type grille, register, diffuser or other ceiling component. Installation of the air outlet is as simple as inserting them in a standard lay-in T-Bar type ceiling system.

The DF Series simplifies and reduces installation time compared with surface mount type diffusers. This is especially true where flexible duct is utilized.

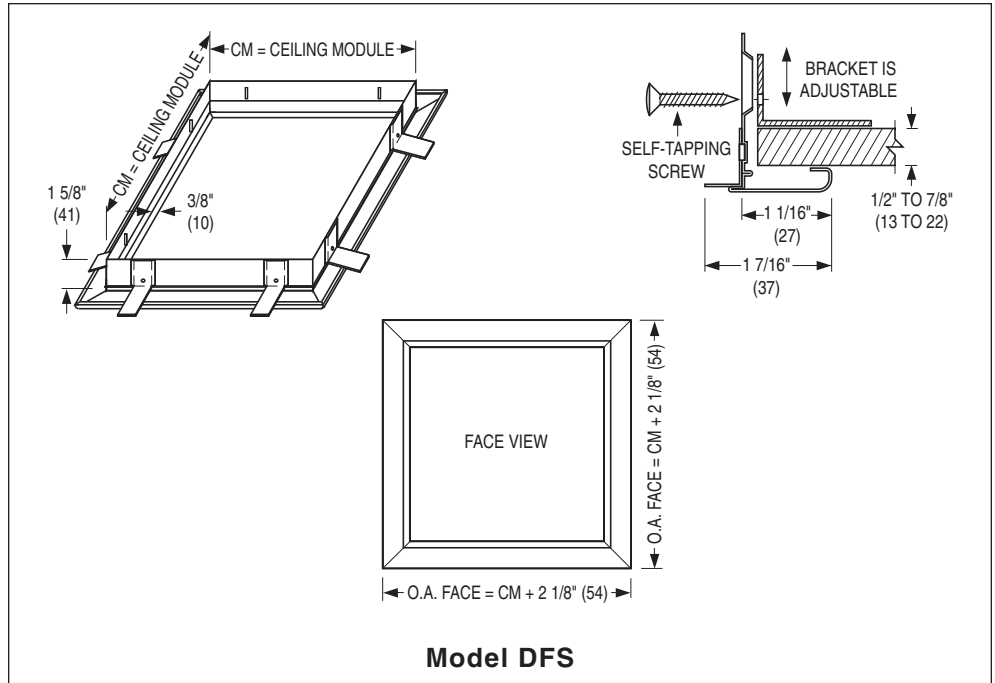
A major benefit is that the DF Series allows access to the ceiling plenum space above for maintenance purposes without the need for separate access doors. The finished appearance is professional and aesthetically pleasing.

**Standard Finish:** AW Appliance White. Other finishes are available.

**Model DFS** is installed quickly and easily using adjustable fastening angle brackets which adapt to various ceiling thicknesses. Frames are roll-formed corrosion-resistant steel with staked and mitered corners.

IMPERIAL MODULES		METRIC MODULES
Imperial Units (inches)	S.I. Units (mm)	S.I. Units (mm)
12 x 12	305 x 305	300 x 300
16 x 16	406 x 406	400 x 400
20 x 20	508 x 508	500 x 500
24 x 12	610 x 305	600 x 300
24 x 24	610 x 610	600 x 600

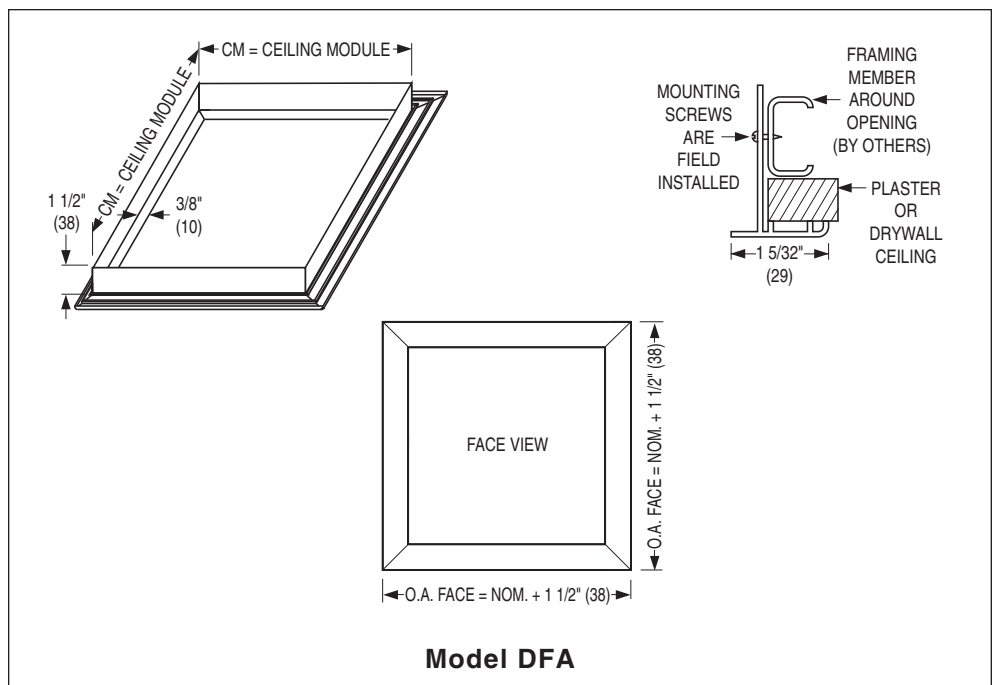
Ceiling opening = CM + 1/4" (6)



**Model DFA** requires framing of the ceiling opening with 'C' channel or wood studs for attachment with mounting screws (by others).

IMPERIAL MODULES		METRIC MODULES
Imperial Units (inches)	S.I. Units (mm)	S.I. Units (mm)
12 x 12	305 x 305	300 x 300
16 x 16	406 x 406	400 x 400
20 x 20	508 x 508	500 x 500
24 x 12	610 x 305	600 x 300
24 x 24	610 x 610	600 x 600
36 x 24	914 x 610	900 x 600
48 x 12	1219 x 305	1200 x 300
48 x 24	1219 x 1219	1200 x 600
60 x 12	1524 x 305	1500 x 300

Ceiling opening = CM + 1/4" (6)





## Options and Finishes

### OPTIONS:

#### EQT Earthquake Tabs

Earthquake (seismic) retaining safety tabs are available; factory installed on diffusers when required by local building code that units be independently restrained and safety wired to supporting structure.

#### SC Safety Chain

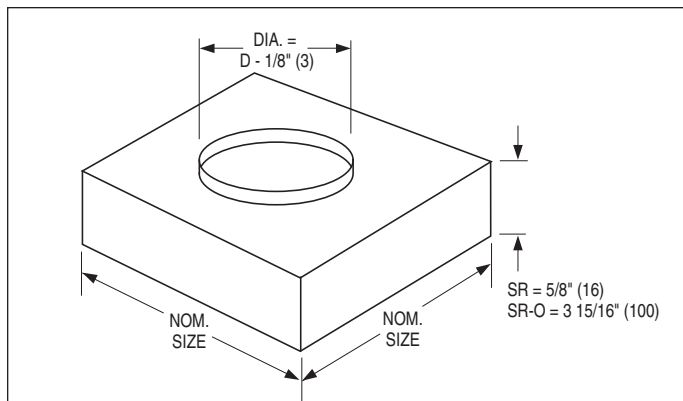
An optional safety chain is available on all of Nailor's round ceiling diffusers.

#### GK Foam Gaskets

Foam gasket is available on a selection of surface mount diffusers.

#### SR Square to Round Transition Collar

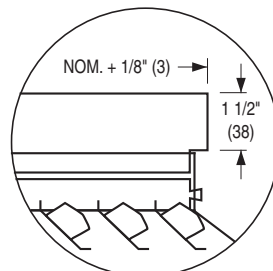
Transition collars are for use on Nailor square neck diffusers where a round duct connection is required. Round necks are sized for flexible or hard duct connection. SR's are shipped loose for field installation and are supplied with barbed S clips.



Square Neck Size (inches)	Round Neck Size D (inches)
6 x 6	4, 5, 6
8 x 8	4, 5, 6, 7, 8
9 x 9	6, 7, 8, 9
10 x 10	6, 7, 8, 9, 10
12 x 12	6, 8, 9, 10, 12
14 x 14	6, 8, 9, 10, 12, 14
15 x 15	6, 8, 10, 12, 14, 15
16 x 16	6, 8, 10, 12, 14, 15, 16
18 x 18	6, 8, 10, 12, 14, 15, 16, 18
20 x 20	6, 8, 10, 12, 14, 15, 16, 18, 20
21 x 21	6, 8, 10, 12, 14, 15, 16, 18, 20
22 x 22	6, 8, 10, 12, 14, 16, 18, 20
24 x 24	6, 8, 10, 12, 14, 15, 16, 18, 20, 24

#### ONA Offset Neck Adaptor

Fits outside duct (if a damper is required; order separately for remote mount. See Model OBDD).



### EXTERNAL FOIL BACK INSULATION

#### EX External Insulation Blanket - Factory Installed

An optional 1 1/2" thick foil back insulation is available installed on a majority of Nailor ceiling diffusers. The insulation has an R value of 4.2.

#### EXB External Insulation Blanket - Ships Loose

This insulation is the same as above but is shipped loose for field installation.

#### MIB Molded Insulation Blanket - Factory Installed

The molded insulation is available as an option on various 24" x 24" square diffusers. The insulation has an R value of 6.0.

### FINISHES:

#### AW Appliance White (standard)

A white finish that is currently the industry standard. Closely matches standard finishes supplied by the majority of T-Bar ceiling system manufacturers. (No additional cost).

#### AL Aluminum

Contains suspended metal particles to give the appearance of a silver grey metallic or anodized finish. (No additional cost).

#### BW British White

Matches most white ceiling tiles. (No additional cost)

#### BK Black

This black has a matte finish. (Additional cost)

#### BA Black Interior/Appliance White Face

Optional on perforated diffusers. AW Appliance White is applied on the perforated face and BK Black is applied on the interior of the backpan for a discreet appearance. (No additional cost)

#### SP Special

The Nailor range of diffusers are available in any color for special architectural consideration. Custom colors are individually mixed to match customer supplied samples. (Additional cost)

### ALSO AVAILABLE:

#### MI Mill Finish

(No additional cost).

#### PPA Paint Prepared Aluminum (Washed only)

Aluminum models only. (No additional cost).

#### PC Prime Coat Paint

(Additional cost).

## Air Balancing Devices

### Radial Opposed Blade Damper

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.

Available with an optional operator arm. **Model 4275-OA** allows damper adjustment on the **UNI Diffusers** without removing the inner cone assembly.

**Model 4275**

	Nominal size (inches)							Nominal Size (mm)								
	5	6	8	10	12	14	15	16	127	152	203	254	305	356	381	406
<b>A</b>	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>B</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
<b>C</b>	1 5/8			2 1/2				41				64				

### Radial Sliding Blade Damper

The **Model 4250** is a neck mounted radial sliding blade damper used in round neck diffuser applications to provide fine volume control. Gang operated radial blades slide at right angles to the duct with minimal protrusion above the diffuser neck; allowing the damper to work effectively in flexible duct applications.

Available in sizes 6", 8", 10", 12" and 14" (152, 203, 254, 305 and 356).

**Model 4250**

### Butterfly Damper

The **Model 4675 Butterfly Damper** is an economical damper for volume balancing in round neck diffusers. Adjustable friction pivots hold the blades at the required setting. Adjusted from the face of the diffuser.

Not recommended for use with flexible duct.

**Model 4675**

	Nominal Size (inches)					Nominal size (mm)				
	6	8	10	12	14	152	203	254	305	356
<b>A</b>	5 7/8	7 7/8	9 7/8	11 7/8	13 7/8	149	200	251	302	352
<b>B</b>	2 1/2	3 1/2	4 1/2	5 1/2	6 1/2	64	89	114	140	165

D

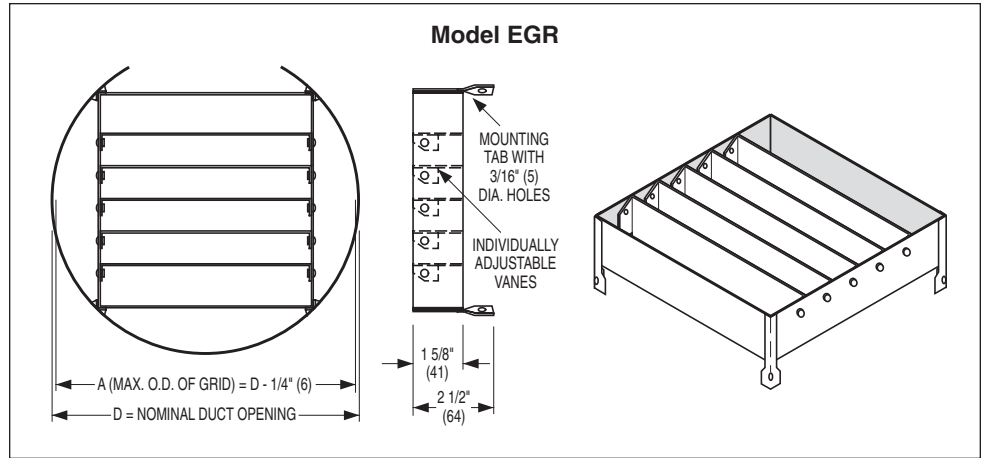
CEILING DIFFUSERS

**Air Balancing and Directional Control Devices**

**Equalizing Grid for Round Necks**

The **Model EGR** is a duct mounted grid that equalizes the airflow into the branch duct or diffuser neck and provides directional control. They are shipped loose for field installation. The individually adjusted vanes are friction pivoted to hold the desired setting.

Recommended method of installation is flush with the take-off collar and with the vanes perpendicular to the direction of the approaching airflow.

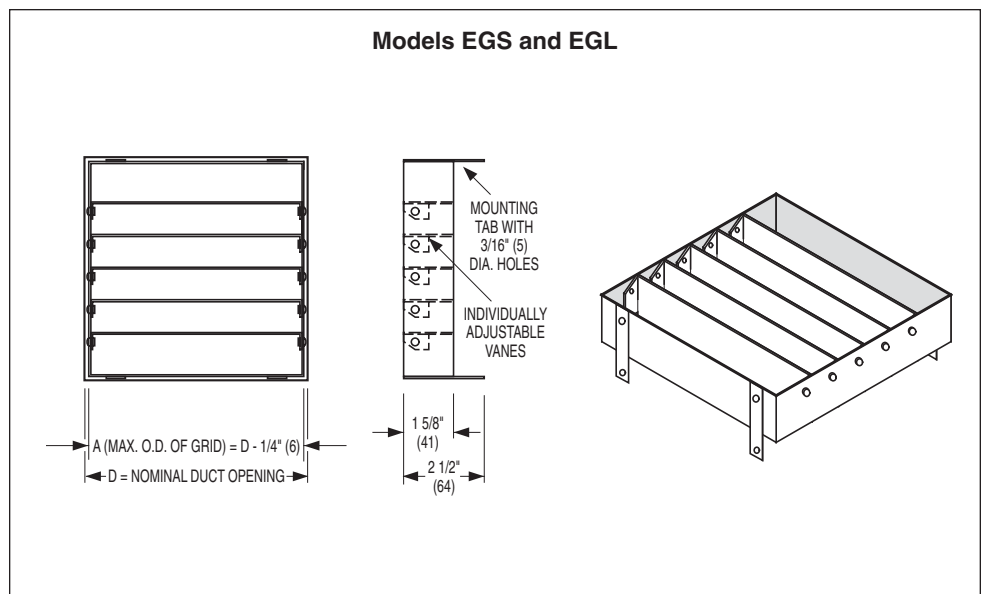


**Equalizing Grid for Square and Rectangular Necks**

The **Models EGS and EGL** are duct mounted grids that equalize the airflow into the branch duct or diffuser neck and provide directional control. They are shipped loose for field installation. The individually adjusted vanes are friction pivoted to hold the desired setting.

Recommended method of installation is flush with the take-off collar and with the vanes perpendicular to the direction of the approaching airflow.

The suffix 'S' or 'L' indicates blades are parallel to the short or long dimension.



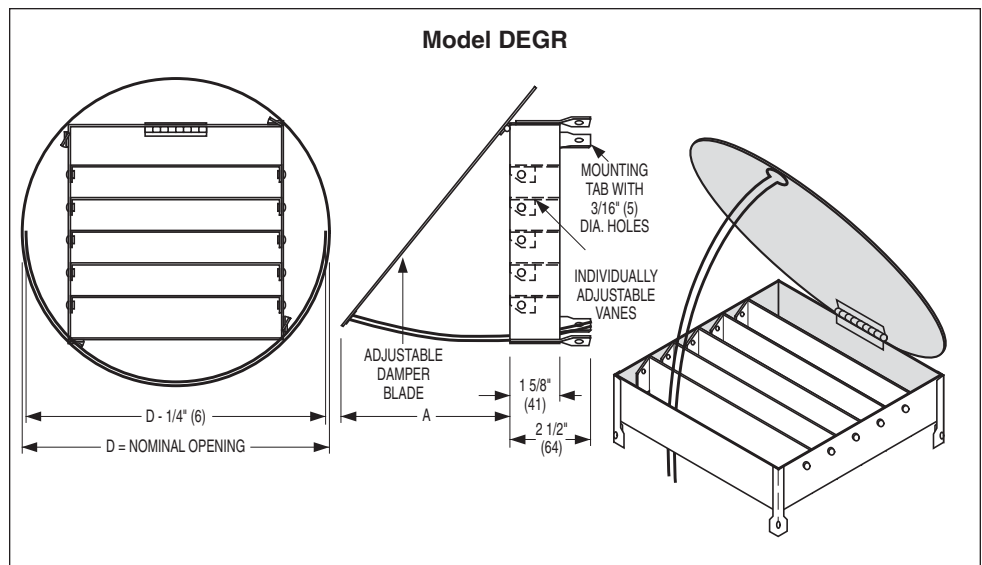
**Damper with Equalizing Grid for Round Necks**

The **Model DEGR** is a duct mounted combination damper with equalizing grid.

It performs as a volume extractor with dampering to near shut-off as well as equalizing the airflow into the branch duct or diffuser neck and providing directional control.

The individual adjustable vanes are friction pivoted to hold the desired setting.

Damper blade may be adjusted to any angle and locked in position with adjusting wires under screw heads.



**Air Balancing and Directional Control Devices**

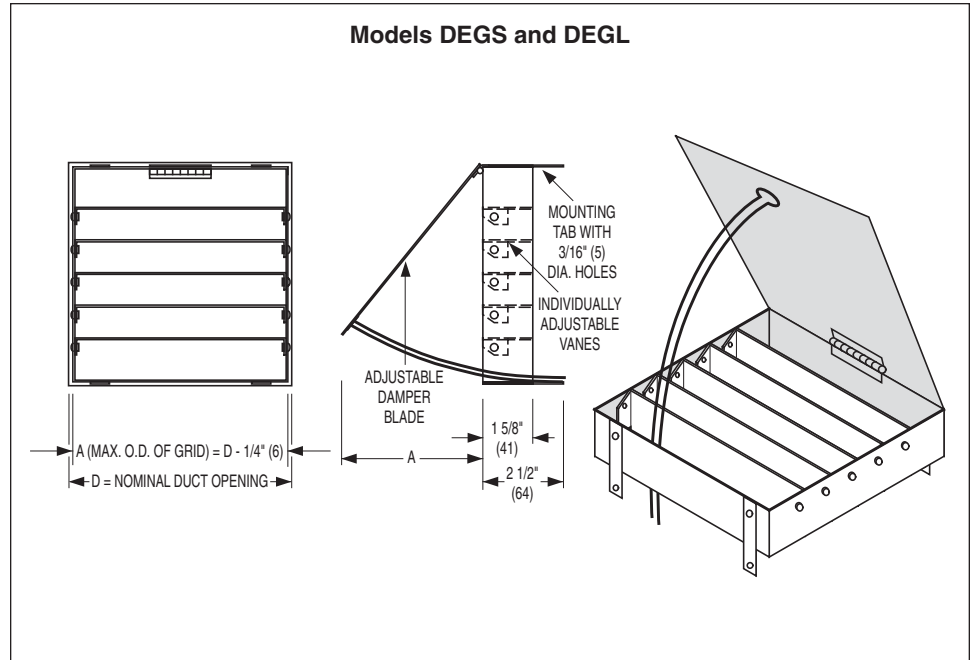
**Damper with Equalizing Grid for Square and Rectangular Necks**

The **Models DEGS** and **DEGL** are duct mounted combination dampers with equalizing grids. They perform as a volume extractor with dampering to near shut-off as well as equalizing the airflow into the branch duct or diffuser neck and providing directional control.

The individual adjustable vanes are friction pivoted to hold the desired setting.

Damper blade may be adjusted to any angle and locked in position with adjusting wires under screw heads.

The suffix 'S' or 'L' indicates blades are parallel to the short or long dimension.



**D**  
**CEILING DIFFUSERS**

## Volume Extractors

### MODEL SERIES

**EX** Blades on 2" centers

**EXD** Blades on 1" centers

The **Model Series EX Volume Extractors** uniformly divert air from the main duct into the branch take-off and across the face of a grille or diffuser. Gang-operated parallel blades available on 2" (51) or 1" (25) centers pivot from full open to full closed with blades overlapping for shut-off. The curved blade design improves airflow by reducing turbulence, thereby reducing noise and pressure drop.

Specify or order: Length x Width. (Length is first dimension. Blades are parallel to width, second dimension).

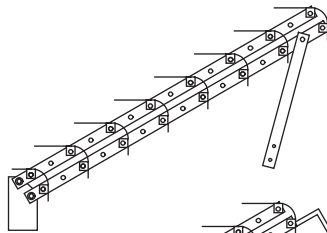
### FEATURES:

- Material: Galvanized steel.
- Minimum size: 6" x 4" (152 x 102).
- Maximum size: 36" x 36" (914 x 914).

### Operator Types

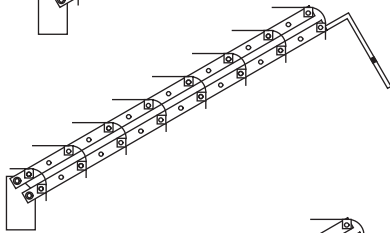
#### EX/EXD-1

Standard unit with adjusting strap.



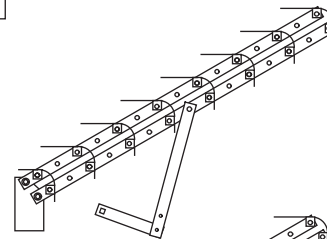
#### EX/EXD-1-R

Rod operator for external operation.



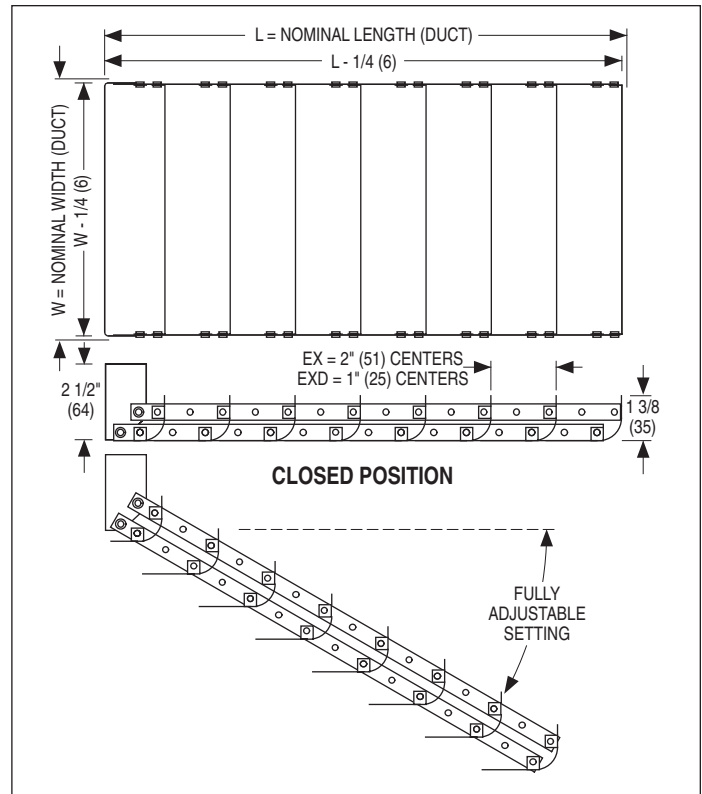
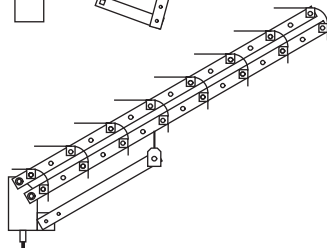
#### EX/EXD-2

Linkage with 7/16" (11) square hole (2 per unit). Remote operator (eg. Young Regulator #1) by others.



#### EX/EXD-3

Screw gear operator. Adjusts with 3/16" (5) wrench (by others).



### Optional Accessories

#### RLD

Locking device for Models **EX/EXD-1-R**.

