

GENERAL PRODUCT OVERVIEW

PLENUM SLOT AND LIGHT TROFFER DIFFUSERS

The Plenum Slot Ceiling Diffusers and Light Troffer Diffusers have been developed for an extremely unobtrusive method of air distribution. Nailor offers various types of this very discreet, cost effective, air distribution product. The Plenum Slot Diffusers are for use in suspended ceiling grid systems and are offered in four distinctive performance styles. The Light Troffer Diffusers are available in many standard sizes and can be custom built to suit most types of air handling light fixtures.

PLENUM SLOT DIFFUSERS

The Nailor line of Plenum Slot Diffusers have been designed to integrate and blend with T-Bar suspended grid systems. They are available for Standard Lay-in T-Bar systems as well as the Narrow Regressed T-Bar systems. Four different styles are available in a wide range of sizes and capacities for an optimum combination of application flexibility, and performance requirements. All models are available with external foil back or internal insulation. Matching return air diffusers are available for all models.

ADJUSTABLE 'WIPER BLADE' PATTERN CONTROLLER SUPPLY AIR

This series features a friction pivoted, adjustable, extruded aluminum pattern controller in each slot. The pattern controller has a gasketed 'wiper blade' design. The direction of the airflow can be adjusted a full 180° from the face of the diffuser. This diffuser is available in 1 1/2" (38), 1" (25), and 3/4" (19) slot widths. Suffix 'I' adds internal insulation.

Standard Lay-in T-Bar –

Model Series 5700, 5700I

Narrow Regressed T-Bar –

Model Series 5700(I)-F, 5700(I)-F2

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Models 5710 and 5715-F

ADJUSTABLE 'ICE TONG' PATTERN CONTROLLER SUPPLY AIR

This series features a friction pivoted, adjustable, extruded aluminum pattern controller in each slot. The pattern controller has a gasketed 'ice tong' design. The direction of the airflow can be adjusted a full 180° from the face of the diffuser. This diffuser is available in 1 1/2" (38), 1" (25), 3/4" (19) and 1/2" (13) slot widths. Suffix 'I' adds internal insulation.

Standard Lay-in T-Bar –

Model Series 5800, 5800I

Narrow Regressed T-Bar –

Model Series 5800(I)-F, 5800(I)-F2

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Models 5810 and 5810-F2

CURVED BLADE 'FLIP FLOP' PATTERN CONTROLLER SUPPLY AIR

This series features a roll-formed curved blade pattern controller in each slot. Aerodynamically designed to produce a fixed horizontal discharge pattern, the controller is pivoted at either end and may be simply rotated with fingers from the face for either a left or right discharge direction. This diffuser is available with a 3/4" (19) slot width, and with a choice of 1, 2, 3 or 4 parallel slots. Suffix 'I' adds internal insulation.

Standard Lay-in T-Bar –

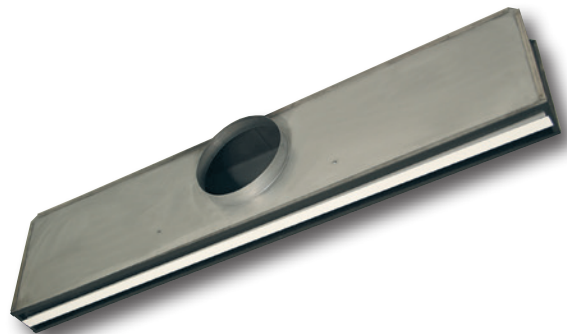
Model Series 5600, 5600I

Narrow Regressed T-Bar –

Model Series 5600(I)-F

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Model 5675

PLENUM SLOT AND LIGHT TROFFER DIFFUSERS

RETURN AIR PLENUMS FOR 5800, 5700 AND 5600 SERIES

This series of return air plenums are designed to match and complement their supply air counterpart. The plenums are for ductless return and include a light shield. Where required, extruded aluminum center tees will be used. Suffix 'I' adds internal insulation.

Model Series –

5700R(I), 5800R(I), 5600R(I)
 5700R(I)-F, 5800R(I)-F
 5700R(I)-F2, 5800R(I)-F2

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Models 5675R, 5810R-F and 5775R-F2

PLENUM SLOT AND LIGHT TROFFER DIFFUSERS



Model 59ND

**N SERIES
 PREMIUM PERFORMANCE
 SUPPLY AIR**

This supply diffuser has a 3/4" (19) slot that incorporates an extruded aluminum pattern controller for a fixed horizontal discharge pattern. This plenum is also available with a down-blow section that incorporates two hinged pattern controllers to provide a vertical discharge pattern in addition to the horizontal discharge pattern. Suffix 'I' adds internal insulation.

Horizontal Discharge –
 Models 59N, 59NI

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Horizontal/Vertical Discharge –
 Models 59ND, 59NDI

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**N SERIES
 PREMIUM PERFORMANCE
 SUPPLY/RETURN AIR**

The plenum slot diffusers in this series combines a return air plenum attached to the side of the N Series Horizontal Discharge plenum or the combination Horizontal/Vertical Discharge plenum diffuser offered in the same series. Suffix 'I' adds internal insulation.

Horizontal Discharge –
 Models 59NR, 59NRI

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Horizontal/Vertical Discharge –
 Models 59NDR, 59NDRI

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Model 59NDR

**BS SERIES
 PREMIUM PERFORMANCE
 ADJUSTABLE VERTICAL DISCHARGE**

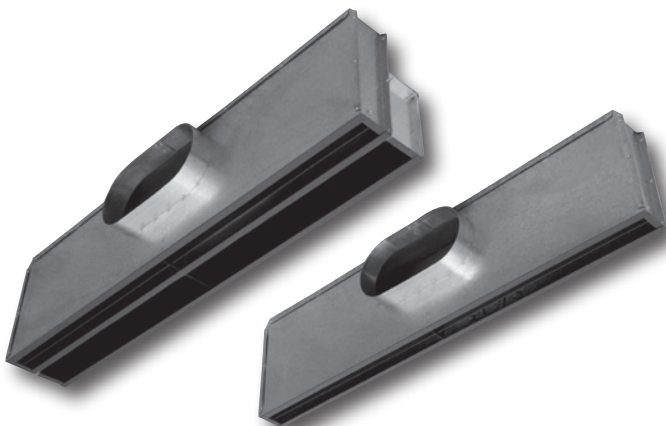
The plenum slot diffuser in this series provides premium performance in curtain wall applications. Available in both supply and supply/return models. Suffix 'I' adds internal insulation.

Model Series – Supply
 59BS(I)

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Model Series – Supply/Return
 59BSR(I)

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Models 59BSR and 59BS

ADJUSTABLE 'FLIP FLOP' PATTERN CONTROLLER

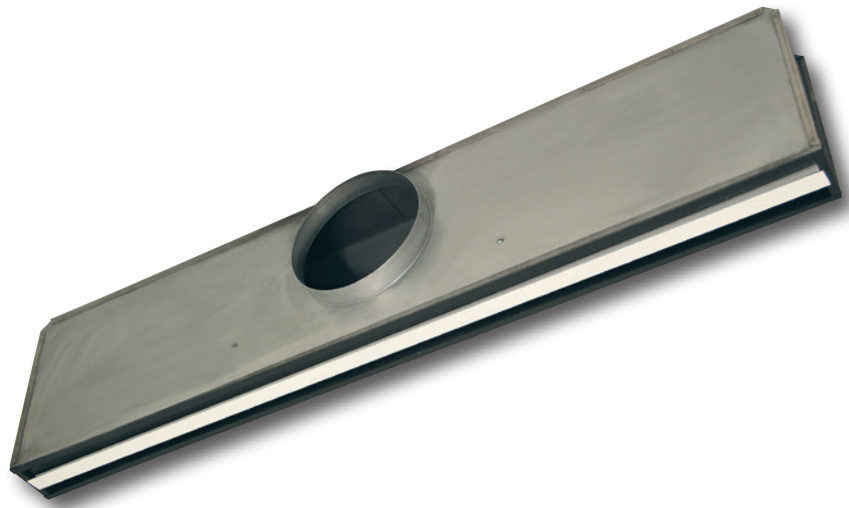
- FOR STANDARD LAY-IN T-BAR
- SUPPLY

Uninsulated Models:

- 5675 3/4" (19) Slot Width
- 5610 1" (25) Slot Width

Insulated Models:

- 5675I 3/4" (19) Slot Width
- 5610I 1" (25) Slot Width



Model Series 5600 Plenum Slot Ceiling Diffusers have been designed for standard Lay-in T-Bar ceiling grid applications. They integrate and blend with the suspended grid, so offering an extremely unobtrusive method of air distribution. Designed with the popular 3/4" (19) or 1" (25) slot spacing, the 5600 Series design offers high performance and extremely good value, where budgetary restraints are a consideration.

Model Series 5600 features a roll-formed curved blade pattern controller in each slot. Aerodynamically designed to produce a fixed horizontal discharge pattern, the controller is pivoted at either end and may be simply rotated with fingers from the diffuser face for either a left or right discharge direction.

In either horizontal discharge setting, the coanda effect is maximized and a tight blanket of air is projected across the ceiling. The horizontal pattern is maintained throughout a wide range of cataloged air volumes from maximum to minimum flow. Factory furnished center tees are dropped below the diffuser face to match the ceiling grid. Therefore, the 5600 Series provides excellent performance in variable air volume applications.

STANDARD FEATURES:

- Simple 'Flip Flop' pattern controller adjustment, from face of diffuser for left or right blow pattern.
- Available in 20", 24", 30", 36", 48" and 60" (500, 600, 750, 900, 1200 and 1500 mm) nominal lengths to suit both imperial and metric ceiling systems.
- Choice of 1, 2, 3 or 4 parallel slots.
- Standard unit is 11" (279) in height.

- Factory installed center T-Bars on multi-slot models are standard.
- Blades are shipped locked. They may be set for left or right airflow pattern after installation.

CONSTRUCTION MATERIAL:

Corrosion-resistant steel.

FINISH OPTIONS:

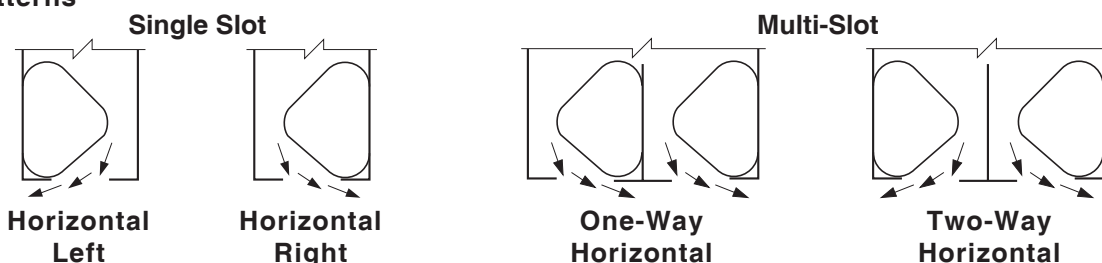
Black on pattern controllers and exposed surfaces. AW Appliance White on center T-Bars.

OPTIONS AND ACCESSORIES:

- Internal insulation (add suffix 'I' to model number).
- EIC Extended Inlet Collar (2.25" [57]) with bead.
- EQT Earthquake Tabs.
- For additional options and accessories, see page C61.

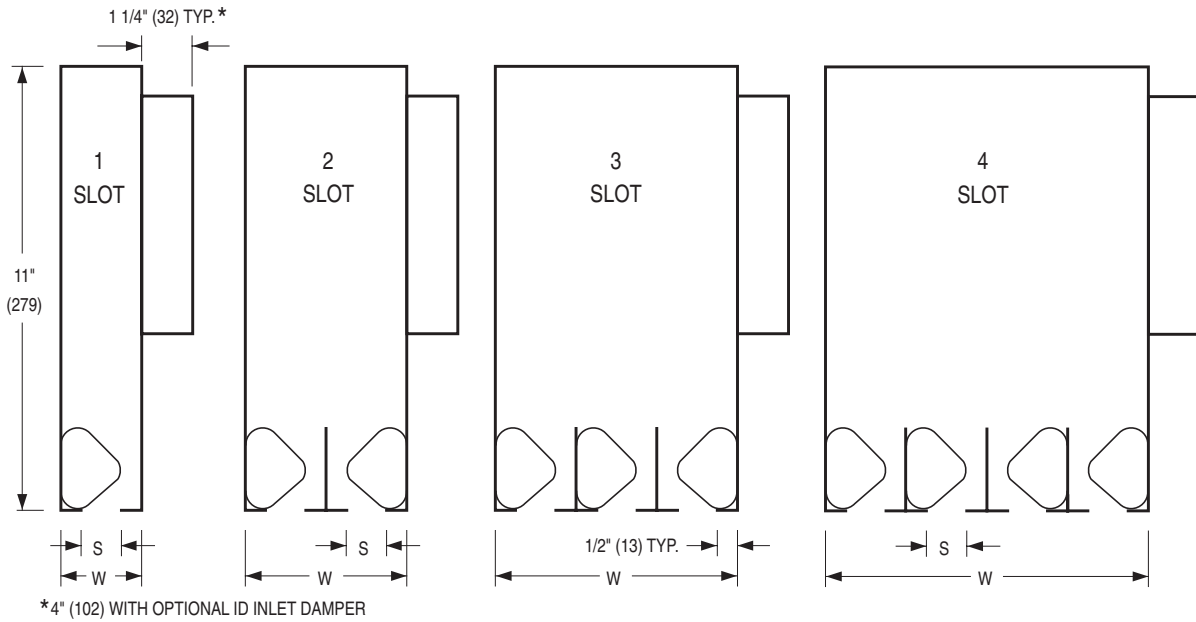
PLENUM SLOT AND LIGHT TROFFER DIFFUSERS

Air Patterns



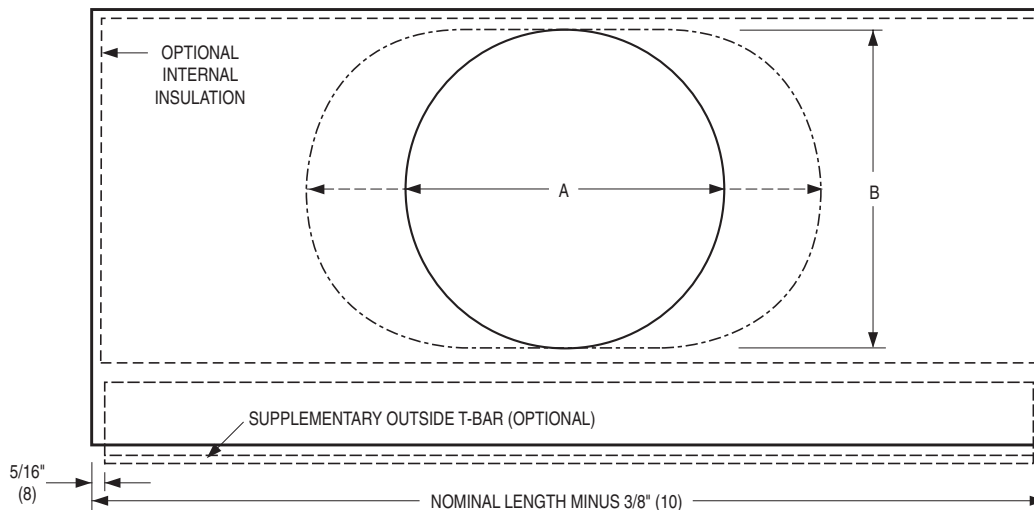
DIMENSIONAL DATA:

MODEL SERIES: 5600 • STANDARD LAY-IN T-BAR MODELS



		S Slot Width	
		3/4" (19)	1" (25)
W Width	1 Slot	1 3/4" (44)	2" (51)
	2 Slot	3 1/2" (89)	4" (102)
	3 Slot	5 1/4" (133)	6" (152)
	4 Slot	7" (178)	8" (203)

	Nominal Inlet Size			
	6" (152) Round	8" (203) Round	10" (254) Oval	12" (305) Oval
A	5 7/8" (149)	7 7/8" (200)	11" (279)	14 1/8" (359)
B	—	—	7 7/8" (200)	7 7/8" (200)



Nominal Length L	
Imperial Modules Inches (mm)	Metric Modules (mm)
20" (508)	500
24" (610)	600
30" (762)	750
36" (914)	900
48" (1219)	1200
60" (1524)	1500

ADJUSTABLE 'FLIP FLOP' PATTERN CONTROLLER

- FOR NARROW REGRESSED T-BAR
- SUPPLY

Straddle Mount Models:

5675(I)-F 3/4" (19) Slot Width

5610(I)-F 1" (25) Slot Width

- Suffix 'I' adds internal insulation



Model 5610-F

Model Series 5600-F Plenum Slot Ceiling Diffusers have been specially developed to integrate with and compliment 'Fineline®' type suspended ceiling grids, thus offering an extremely unobtrusive method of air distribution. Available in a wide range of sizes and capacities, the design offers the optimum combination of application flexibility, high performance and low cost.

This series features a 'Flip Flop' roll-formed curved blade pattern controller in each slot. Aerodynamically designed to produce a fixed horizontal discharge pattern, the controller is pivoted at either end and may be rotated with fingers from the diffuser face for either a left or right discharge direction. Either horizontal discharge setting, the coanda effect is maximized and a tight blanket of air is projected across the ceiling. The horizontal pattern is maintained throughout a wide range of cataloged air volumes from maximum to minimum flow.

The single slot units, for all models, are for installation alongside a main T-Bar runner. The 5600-F Series two slot units incorporate a center hat channel and are designed to straddle, longitudinally, along a main T-Bar runner.

STANDARD FEATURES:

- Simple 'Flip Flop' pattern controller adjustment, from face of diffuser for left or right blow pattern.
- Available in 24" or 48" (600 or 1200) nominal lengths to suit both imperial and metric ceiling systems.
- A cross notch is a recommended standard option on 48" (1200) long units which allows the plenum to be installed in a 24" x 24" (600 x 600) ceiling grid.
- Series 5600-F is available in a one or two slot configuration.

- The single slot units are for installation alongside a main runner.
- 5600-F two slot unit has a center hat channel that is designed to straddle a main T-Bar runner.

CONSTRUCTION MATERIAL:

Corrosion-resistant steel.

FINISH OPTIONS:

Black on pattern controllers and exposed surfaces. AW Appliance White on center T-Bars.

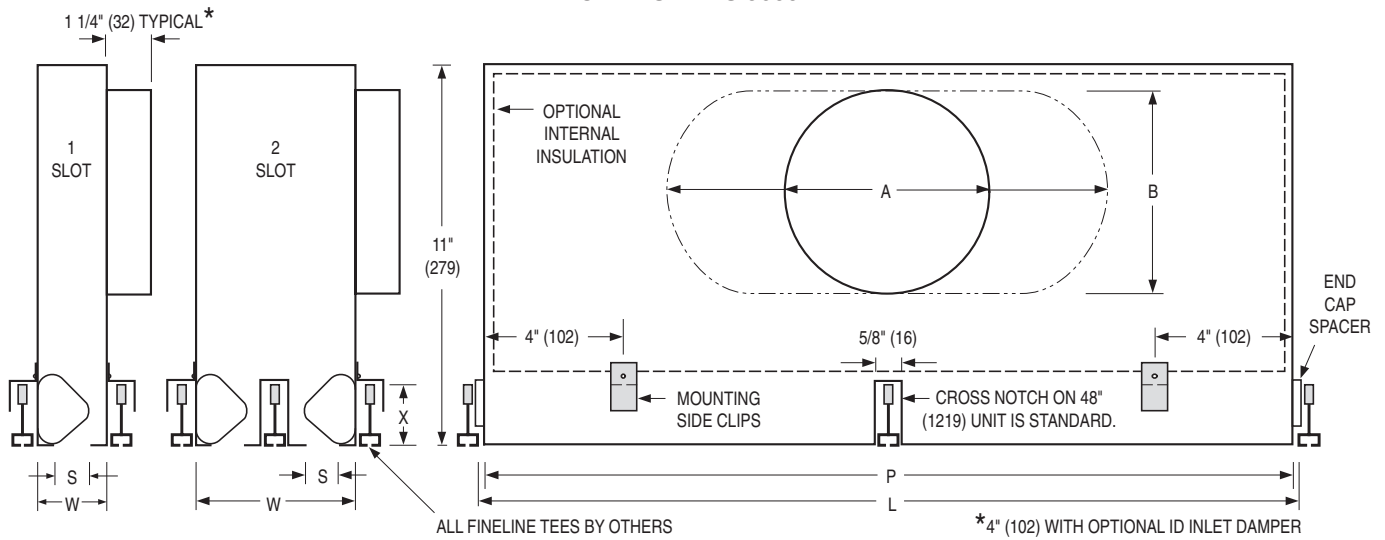
OPTIONS AND ACCESSORIES:

- Internal insulation (add suffix 'I' to model number).
- EIC Extended Inlet Collar (2.25" [57]) with bead.
- EQT Earthquake Tabs.
- For additional options and accessories, see page C61.

DIMENSIONAL DATA:

MODEL SERIES: 5600-F • NARROW REGRESSED T-BAR MODELS

MODEL SERIES 5600-F

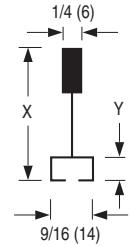


Imperial Ceiling Modules (in.)

Nominal Length	Overall Length L	Plenum Length P
24	23 3/4	23 3/8
48	47 3/4	47 3/8

Metric Ceiling Modules (mm)

Nominal Length	Overall Length L	Plenum Length P
600	594	584
1200	1194	1184



Model Series 5600-F

Model	S Slot Width	Width W	
		1 Slot	2 Slot
5675-F	3/4" (19)	1 3/4" (44)	4 1/8" (105)
5610-F	1" (25)	2" (51)	4 5/8" (117)

	Nominal Inlet Size			
	6" (152) Round	8" (203) Round	10" (254) Oval	12" (305) Oval
A	5 7/8" (149)	7 7/8" (200)	11" (279)	14 1/8" (359)
B	—	—	7 7/8" (200)	7 7/8" (200)

T-Bar Type (Manufacturer)		X	Y
A	Chicago Metallic Ultraline	1 3/4" (44)	5/16" (8)
C	Certainteed Smoothline	1 5/8" (41)	5/16" (8)
D	Donn Finline	1 25/32" (45)	5/16" (8)

C PLENUM SLOT AND LIGHT TROFFER DIFFUSERS

PERFORMANCE DATA • MODEL SERIES 5600

MODEL: 5675(I) • 3/4" (19) SLOT WIDTH

1 Slot • 24" (610) Long, 6" (152) Inlet • 48" (1219) Long, 8" (203) Inlet

Airflow, CFM/FT.	20	30	40	50	60	70
Static Pressure	.027	.059	.104	.153	.228	.307
Noise Criteria	20	23	27	30	33	35
Throw 1	3.3	6.3	8.0	9.5	10.7	11.7
Throw 2	11.5	15.0	19.0	21.0	23.0	24.5

2 Slot • 24" (610) Long, 8" (203) Inlet • 48" (1219) Long, 10" (254) Inlet

Airflow, CFM/FT.	40	60	80	100	120	140
Static Pressure	.028	.061	.115	.165	.240	.335
Noise Criteria	20	24	29	33	36	38
Throw 1	3.7	7.7	9.0	10.5	12.0	13.0
Throw 2	12.5	16.0	19.0	22.0	24.0	25.5

3 Slot • 24" (610) Long, 8" (203) Inlet • 48" (1219) Long, 10" (254) Inlet

Airflow, CFM/FT.	60	90	120	150	180	210
Static Pressure	.030	.064	.120	.184	.265	.350
Noise Criteria	21	25	30	35	39	42
Throw 1	4.5	9.0	10.2	11.5	13.0	14.0
Throw 2	12.7	17.0	20.0	23.0	25.2	27.5

4 Slot • 24" (610) Long, 10" (254) Inlet • 48" (1219) Long, 12" (305) Inlet

Airflow, CFM/FT.	80	120	160	200	240	280
Static Pressure	.034	.071	.134	.203	.292	.392
Noise Criteria	22	26	31	37	41	45
Throw 1	5.2	10.0	11.2	12.0	13.5	15.0
Throw 2	13.5	17.7	21.0	24.5	26.5	29.0

Performance Notes:

- Throws are given at 150 and 50 fpm terminal velocities under isothermal conditions.
Throw 1 is Throw @ 150 feet per minute terminal velocity at 9'-0" ceiling height.
Throw 2 is Throw @ 50 feet per minute terminal velocity at 9'-0" ceiling height.
- All Pressures are in inches w.g..
- Throw data is for one-way blow in opposite direction to inlet collar under isothermal conditions.
- Noise Criteria [NC] values based on a room absorption of 10 dB, re 10⁻¹² watts. Dash (-) in space denotes a Noise Criteria level less than 15.
- Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70 – 2006.

Number of Slots	Ak Factor per foot	
	Supply	Return
1	.031	.039
2	.059	.079
3	.083	.117
4	.108	.156

PLENUM SLOT AND LIGHT TROFFER DIFFUSERS

PERFORMANCE DATA • MODEL SERIES 5600

MODEL: 5610(I) • 1" (25) SLOT WIDTH

1 Slot • 24" (610) Long

6" Round Inlet	Airflow, CFM	50	75	95	120	140	165	185
	Total Pressure	.046	.093	.141	.216	.287	.390	.483
	Static Pressure	.042	.083	.125	.191	.252	.342	.423
	Noise Criteria	–	18	23	29	32	36	38
	Throw	6-11-20	11-16-25	14-19-28	17-22-31	19-24-33	21-26-35	23-27-37
8" Round Inlet	Airflow, CFM	50	80	105	135	160	190	215
	Total Pressure	.044	.102	.162	.248	.332	.446	.554
	Static Pressure	.043	.098	.156	.238	.318	.427	.529
	Noise Criteria	–	17	23	29	33	37	40
	Throw	4-8-16	9-13-22	12-17-25	15-19-29	17-21-31	19-23-33	20-25-35
10" Oval Inlet	Airflow, CFM	60	85	110	135	160	185	210
	Total Pressure	.056	.103	.162	.232	.314	.408	.513
	Static Pressure	.055	.101	.159	.228	.308	.400	.503
	Noise Criteria	–	15	22	27	31	35	38
	Throw	5-10-19	10-15-25	13-19-29	16-22-33	19-24-35	21-26-38	22-28-40

1 Slot • 48" (1219) Long

6" Round Inlet	Airflow, CFM	80	120	155	195	230	270	305
	Total Pressure	.040	.109	.175	.256	.334	.428	.516
	Static Pressure	.029	.084	.133	.190	.241	.300	.353
	Noise Criteria	–	17	24	30	35	39	43
	Throw	6-11-20	11-16-26	14-20-30	17-23-34	19-25-36	21-27-38	23-29-40
8" Round Inlet	Airflow, CFM	100	140	180	220	260	300	340
	Total Pressure	.043	.084	.138	.204	.283	.375	.479
	Static Pressure	.038	.074	.120	.178	.246	.326	.416
	Noise Criteria	–	15	22	28	32	36	40
	Throw	8-11-19	11-15-23	14-18-26	16-20-29	17-22-31	19-24-33	20-25-34
10" Oval Inlet	Airflow, CFM	100	145	190	235	280	325	370
	Total Pressure	.036	.076	.128	.191	.265	.350	.447
	Static Pressure	.034	.071	.119	.177	.246	.325	.414
	Noise Criteria	–	18	24	29	32	36	39
	Throw	3-6-14	6-10-19	9-14-23	11-16-26	13-19-28	15-20-30	16-22-32
12" Oval Inlet	Airflow, CFM	120	170	220	270	320	370	420
	Total Pressure	.049	.097	.160	.238	.331	.439	.562
	Static Pressure	.047	.093	.153	.228	.317	.421	.538
	Noise Criteria	–	20	26	31	35	39	42
	Throw	5-11-21	10-16-26	14-20-30	17-23-33	20-25-36	22-27-38	24-29-40

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..
3. Cataloged throws are for a one-way horizontal air pattern. For divided airflow, deduce the airflow in each direction according to the number of slots, with the total airflow apportioned between the slots. Look up throw for the airflow in each direction according to the number of slots in that direction.
4. Noise Criteria [NC] values based on a room absorption of 10 dB, re 10⁻¹² watts. Dash (–) in space denotes a Noise Criteria level less than 15.
5. Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70 – 2006.

Number of Slots	Ak Factor per foot	
	Supply	Return
1	.031	.039
2	.059	.079

PERFORMANCE DATA • MODEL SERIES 5600

MODEL: 5610(I) • 1" (25) SLOT WIDTH

2 Slot • 24" (610) Long

6" Round Inlet	Airflow, CFM	90	125	160	195	230	265	300
	Total Pressure	.051	.097	.156	.228	.313	.412	.524
	Static Pressure	.037	.069	.111	.161	.220	.288	.366
	Noise Criteria	–	21	27	32	36	40	43
	Throw	11-15-25	15-20-29	18-23-33	21-26-36	23-28-38	25-30-40	26-31-42
8" Round Inlet	Airflow, CFM	90	130	170	210	250	290	330
	Total Pressure	.041	.070	.111	.166	.233	.313	.405
	Static Pressure	.037	.061	.096	.142	.199	.267	.346
	Noise Criteria	–	19	25	30	35	38	41
	Throw	8-13-21	13-17-26	16-20-29	18-23-32	20-25-34	22-26-36	23-28-38
10" Oval Inlet	Airflow, CFM	100	145	190	235	280	325	370
	Total Pressure	.042	.071	.116	.178	.257	.353	.465
	Static Pressure	.040	.066	.107	.165	.238	.327	.432
	Noise Criteria	–	17	25	31	36	40	43
	Throw	10-15-24	14-20-29	18-23-33	21-26-36	23-28-39	25-30-41	27-32-43

2 Slot • 48" (1219) Long

6" Round Inlet	Airflow, CFM	150	185	220	255	290	325	360
	Total Pressure	.092	.133	.183	.242	.310	.387	.472
	Static Pressure	.053	.073	.098	.128	.162	.201	.244
	Noise Criteria	–	–	21	26	31	36	39
	Throw	7-10-16	8-12-18	10-13-19	11-14-21	12-16-22	13-17-23	13-17-24
8" Round Inlet	Airflow, CFM	160	220	280	340	400	460	520
	Total Pressure	.049	.089	.140	.201	.274	.357	.450
	Static Pressure	.035	.063	.097	.138	.186	.241	.303
	Noise Criteria	–	15	23	29	34	39	43
	Throw	9-14-20	13-18-25	15-20-29	18-22-31	19-24-34	21-26-36	22-27-38
10" Oval Inlet	Airflow, CFM	180	250	320	390	460	530	600
	Total Pressure	.042	.077	.126	.188	.263	.352	.454
	Static Pressure	.034	.062	.101	.151	.213	.285	.367
	Noise Criteria	–	16	24	30	35	39	43
	Throw	10-14-22	13-18-26	16-20-29	19-23-32	20-24-34	22-26-35	23-27-37
12" Oval Inlet	Airflow, CFM	200	285	370	455	540	625	710
	Total Pressure	.047	.098	.165	.247	.345	.460	.590
	Static Pressure	.042	.087	.146	.219	.306	.407	.522
	Noise Criteria	–	18	26	32	37	41	44
	Throw	9-14-22	13-18-27	16-21-31	18-24-33	20-25-36	22-27-38	23-28-40

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..
3. Cataloged throws are for a one-way horizontal air pattern. For divided airflow, deduce the airflow in each direction according to the number of slots, with the total airflow apportioned between the slots. Look up throw for the airflow in each direction according to the number of slots in that direction.
4. Noise Criteria [NC] values based on a room absorption of 10 dB, re 10⁻¹² watts. Dash (–) in space denotes a Noise Criteria level less than 15.
5. Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70 – 2006.

Number of Slots	Ak Factor per foot	
	Supply	Return
1	.031	.039
2	.059	.079

HOW TO SPECIFY

MODELS 5675(I) AND 5610(I)

'FLIP FLOP' SUPPLY AIR PLENUM SLOT DIFFUSERS

SUGGESTED SPECIFICATION:

Standard Lay-in T-Bar

Furnish and install **Nailor Models 5675(I)** (3/4" [19] slot) or **5610(I)** (1" [25] slot) **Plenum Slot Supply Diffusers** of the sizes and capacities as shown on the plans and air distribution schedules. The plenum shall be manufactured from corrosion-resistant steel and include a roll-formed, curved blade, 'flip flop' style pattern controller in each slot. The pattern deflector shall be adjustable from the face of the diffuser for a left or right blow pattern. The plenum shall have a side inlet with a neck not less than 1 1/4" (32) deep for connection to the duct. The diffuser shall be supplied in nominal standard lengths of 20", 24", 30", 36", 48" and 60" (500, 600, 750, 900, 1200 and 1500) and have one, two, three or four slots as specified. Multi-slot units shall include extruded aluminum center T-Bars. The pattern controllers and all exposed edges shall have a BK Black finish and the center T-Bars shall have an AW Appliance White finish. Models 5675I or 5610I shall be lined internally with insulation.

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

MODELS 5675(I)-F AND 5610(I)-F

'FLIP FLOP' SUPPLY AIR PLENUM SLOT DIFFUSERS FOR NARROW REGRESSED CEILING GRIDS

SUGGESTED SPECIFICATION:

Narrow Regressed T-Bar, Straddle Mount

Furnish and install **Nailor Models 5675(I)-F** (3/4" [19] slot) or **5610(I)-F** (1" [25] slot) **Plenum Slot Supply Diffusers for Narrow Regressed T-Bar** of the sizes and capacities as shown on the plans and air distribution schedules. The diffuser shall fit within a Narrow Regressed T-Bar ceiling system. The plenum shall be manufactured from corrosion-resistant steel and include a roll-formed, curved blade, 'flip flop' style pattern controller in each slot. The pattern deflector shall be adjustable from the face of the diffuser for a left or right blow pattern. The plenum shall have a side inlet with a neck not less than 1 1/4" (32) deep for connection to the duct. The diffuser shall be supplied in nominal standard lengths of 24" or 48" (600 or 1200) and have one or two as specified. Two slot models shall straddle the T-Bar lengthwise. The pattern controllers and all exposed edges shall have a BK Black finish and the center T-Bars shall have an AW Appliance White finish. Models 5675I-F or 5610I-F shall be lined internally with insulation.

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



PLENUM SLOT AND LIGHT TROFFER DIFFUSERS

RETURN AIR PLENUMS

- FOR STANDARD LAY-IN T-BAR
- COMPLIMENTS THE SUPPLY SERIES
- INCLUDES LIGHT BARRIERS

5700R Series:

- 5775R(I) 3/4" (19) Slot Width
- 5710R(I) 1" (25) Slot Width
- 5715R(I) 1 1/2" (38) Slot Width

5800R Series:

- 5850R(I) 1/2" (13) Slot Width
- 5875R(I) 3/4" (19) Slot Width
- 5810R(I) 1" (25) Slot Width

5600R Series:

- 5675R(I) 3/4" (19) Slot Width
- 5610R(I) 1" (25) Slot Width
- Suffix 'I' adds internal insulation



Models 5675R, 5775R

These models have been designed as a matching return to compliment their respective supply models. They return room air to the ceiling plenum and are designed for ductless return applications.

The design incorporates a light shield which blocks any stray light in the ceiling plenum, emitted from the rear of the light fixtures, from emerging through the face. At the same time, it prevents see-through in the opposite direction.

STANDARD FEATURES:

- Available in 20", 24", 30", 36", 48" and 60" (500, 600, 750, 900, 1200 and 1500 mm) nominal lengths to suit both imperial and metric ceiling systems.
- Choice of 1, 2, 3 or 4 parallel slots.
- Standard height is 7" (178) for 1 and 2 slot units and 11" (279) for 3 and 4 slot units.
- Factory installed center T-Bars on multi-slot models are standard. They are dropped slightly below the diffuser face to align flush with the ceiling grid.

- Series 5700R is available in 3 slot widths.
- Series 5800R is available in 3 slot widths.
- Series 5600R is available in 2 slot widths.

CONSTRUCTION MATERIAL:

Corrosion-resistant steel plenum casing, extruded aluminum center T-Bars.

FINISH OPTIONS:

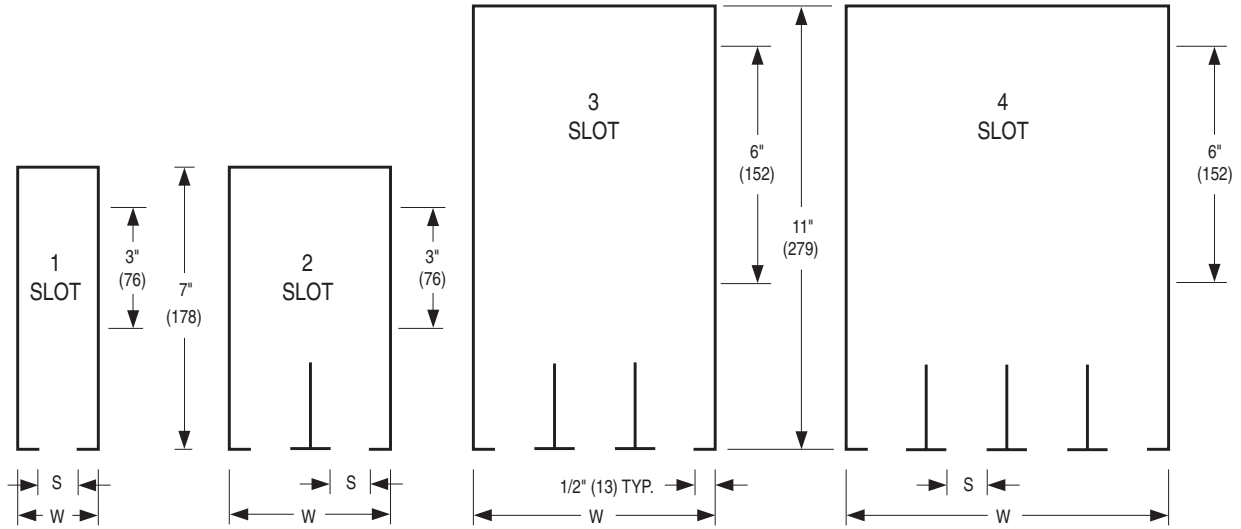
Black on exposed surfaces. AW Appliance White on center T-Bars.

OPTIONS AND ACCESSORIES:

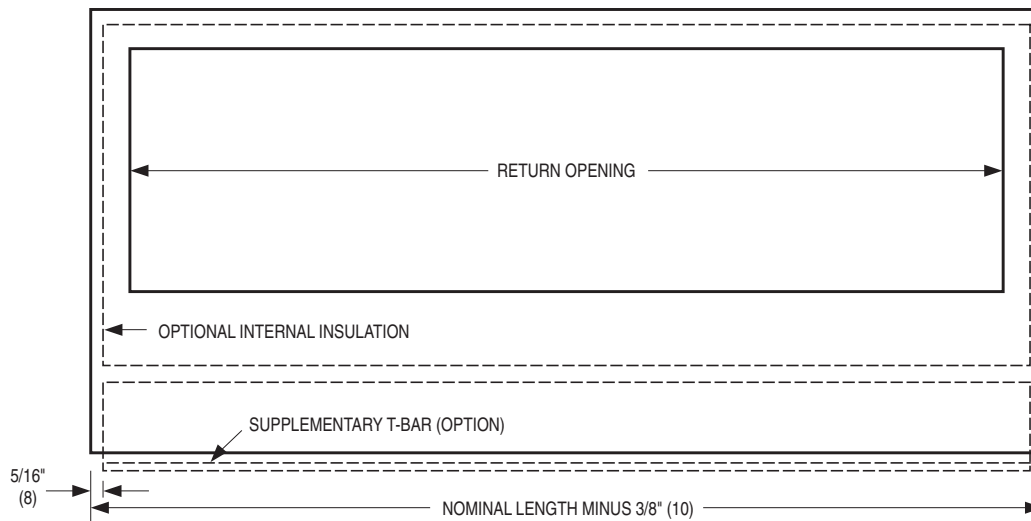
- Internal insulation (add suffix 'I' to model number).
- EQT Earthquake Tabs.
- For additional options and accessories, see page C61.

DIMENSIONAL DATA:

MODEL SERIES: 5700R, 5800R, 5600R • STANDARD LAY-IN T-BAR MODELS



		Models			
		5850R(I)	5775R(I)	5610R(I)	5715R(I)
S Slot Width		1/2" (13)	3/4" (19)	1" (25)	1 1/2" (38)
W Width	1 Slot	1 1/2" (38)	1 3/4" (44)	2" (51)	2 1/2" (64)
	2 Slot	3" (76)	3 1/2" (89)	4" (102)	5" (127)
	3 Slot	4 1/2" (115)	5 1/4" (133)	6" (152)	7 1/2" (191)
	4 Slot	6" (152)	7" (178)	8" (203)	10" (254)



Nominal Length L	
Imperial Modules Inches (mm)	Metric Modules (mm)
20" (508)	500
24" (610)	600
30" (762)	750
36" (914)	900
48" (1219)	1200
60" (1524)	1500

PERFORMANCE DATA • MODEL SERIES 5800R

MODEL: 5810R(I)

1" (25) Slot • 24" (610) Long

1 Slot	Airflow, CFM	40	60	80	100	120	140	160	180	200
	Negative Static Pressure	.010	.021	.038	.059	.085	.116	.152	.192	.238
	Noise Criteria	–	–	–	–	18	22	26	29	32
2 Slot	Airflow, CFM	80	120	160	200	240	280	320	360	400
	Negative Static Pressure	.010	.021	.038	.059	.085	.116	.152	.192	.238
	Noise Criteria	–	–	–	15	21	25	29	32	35
3 Slot	Airflow, CFM	120	180	240	300	360	420	480	540	600
	Negative Static Pressure	.010	.021	.038	.059	.085	.116	.152	.192	.238
	Noise Criteria	–	–	–	17	23	27	31	34	37
4 Slot	Airflow, CFM	160	240	320	400	480	560	640	720	800
	Negative Static Pressure	.010	.021	.038	.059	.085	.116	.152	.192	.238
	Noise Criteria	–	–	–	18	24	28	32	35	38

1" (25) Slot • 48" (1219) Long

1 Slot	Airflow, CFM	80	120	160	200	240	280	320	360	400
	Negative Static Pressure	.010	.021	.038	.059	.085	.116	.152	.192	.238
	Noise Criteria	–	–	–	–	18	22	26	29	32
2 Slot	Airflow, CFM	160	240	320	400	480	560	640	720	800
	Negative Static Pressure	.010	.021	.038	.059	.085	.116	.152	.192	.238
	Noise Criteria	–	–	–	15	21	25	29	32	35
3 Slot	Airflow, CFM	240	360	480	600	720	840	960	1080	1200
	Negative Static Pressure	.010	.021	.038	.059	.085	.116	.152	.192	.238
	Noise Criteria	–	–	–	17	23	27	31	34	37
4 Slot	Airflow, CFM	320	480	640	800	960	1120	1280	1440	1600
	Negative Static Pressure	.010	.021	.038	.059	.085	.116	.152	.192	.238
	Noise Criteria	–	–	–	18	24	28	32	35	38

PERFORMANCE DATA • MODEL SERIES 5600R

MODEL: 5675R(I)

3/4" (19) Slot • 24" (610) Long

1 Slot	Airflow, CFM	30	45	60	75	90	105	120	135	150
	Negative Static Pressure	.010	.021	.038	.059	.085	.116	.152	.192	.238
	Noise Criteria	–	–	–	–	18	22	26	29	32
2 Slot	Airflow, CFM	60	90	120	150	180	210	240	270	300
	Negative Static Pressure	.010	.021	.038	.059	.085	.116	.152	.192	.238
	Noise Criteria	–	–	–	15	21	25	29	32	35

3/4" (19) Slot • 48" (1219) Long

1 Slot	Airflow, CFM	60	90	120	150	180	210	240	270	300
	Negative Static Pressure	.010	.021	.038	.059	.085	.116	.152	.192	.238
	Noise Criteria	–	–	–	–	18	22	26	29	32
2 Slot	Airflow, CFM	120	180	240	300	360	420	480	540	600
	Negative Static Pressure	.010	.021	.038	.059	.085	.116	.152	.192	.238
	Noise Criteria	–	–	–	15	21	25	29	32	35

Performance Notes:

1. Neg. Static Pressures is in inches w.g..
2. Noise Criteria [NC] values based on 10 dB room absorption, re 10⁻¹² watts.
3. Dash (–) in space indicates an Noise Criteria level of less than 15.
4. Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70–2006.

PLENUM SLOT AND LIGHT TROFFER DIFFUSERS

Options and Accessories

MODEL SERIES: 5600, 5700, 5800 – SUPPLY AND 5600R, 5700R, 5800R – RETURN

PF SLOT DIFFUSER PLASTER FRAME

The PF Plaster Frame, for plenum slot diffusers enables the installation of Lay-in T-Bar style diffusers to be installed in drywall or plaster ceilings. Installation of the frame in the ceiling is by others.

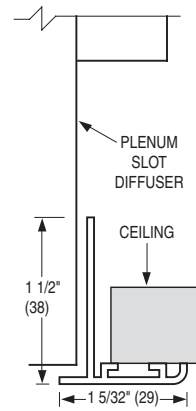
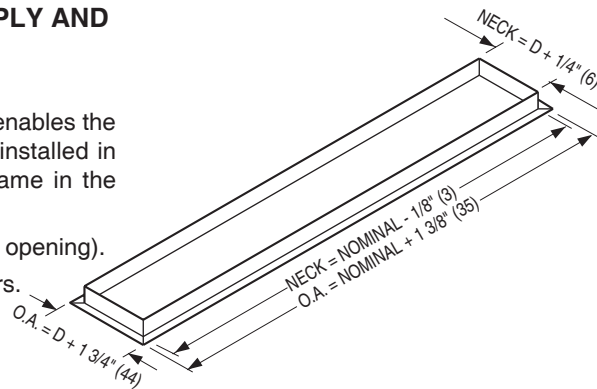
(Note: Diffuser will not fit through a plaster frame opening).

Material: Extruded aluminum with mitered corners.

Recommended Ceiling Opening dimensions:

Width = Diffuser Width (D) + 1/2" (13)

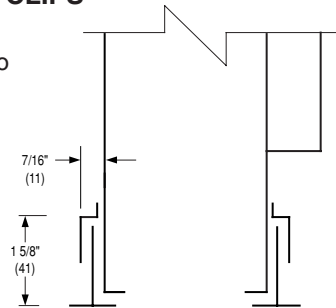
Length = Nominal Diffuser Length + 1/4" (6)



T-BAR MOUNTING CLIPS

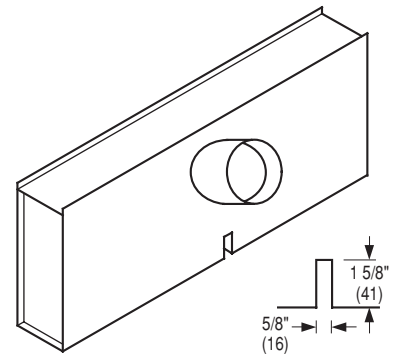
The factory installed mounting clips assist to reinforce and stabilize the plenum during and after installation.

- M1** One Side (2 supplied opposite inlet side)
- M2** Both sides (4 total supplied)



CN CROSS DAMPER

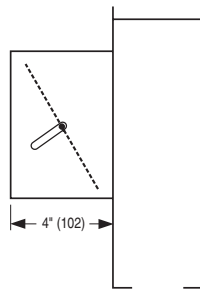
The CN Cross Notch option allows a 48" (1200) plenum unit to be installed in a 24" x 24" (600 x 600) ceiling grid. Available on both supply and return models.



ID INLET DAMPER

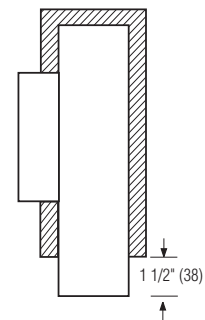
(Supply models only)

This single blade damper is an economical factory installed option that permits air balancing of the device at the plenum inlet. Ceiling access is required.



EX EXTERNAL FOIL BACK INSULATION

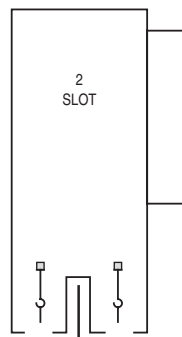
1/2" (13) thick fiberglass blanket with a reinforced aluminum foil scrim-kraft (FSK) facing that provides a vapor barrier. The insulation is wrapped around the outside of the plenum. It is an option on all non-insulated models.



ST STRADDLE T-BAR

The ST Straddle T-Bar option is a center channel that allows the plenum to straddle the T-Bar.

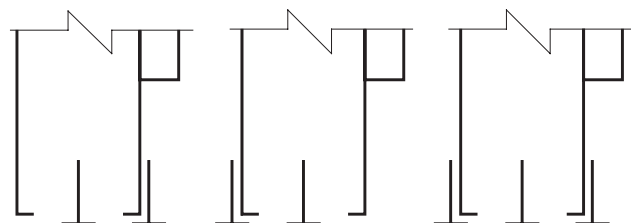
It is an option on both 2 or 4 slot units. (The T-Bar is supplied by others).



SUPPLEMENTARY T-BARS

- T1** One on inlet side
- T0** One opposite inlet side
- T2** Two on both sides

As standard, multiple slot plenums include factory installed center T-Bars. However, if required, supplementary T-Bars can be ordered as an optional accessory for either one side or both sides of the plenum.



PLENUM SLOT AND LIGHT TROFFER DIFFUSERS

HOW TO ORDER

MODEL SERIES: 5600, 5700 AND 5800

PLENUM SLOT DIFFUSERS

EXAMPLE: 5675I - 48 x 2 - 08 - ID - CN

1. Model Series

Supply

- 5675(I) "Flip Flop" Pattern Controller 3/4" (19) Slot Width
 - 5610(I) "Flip Flop" Pattern Controller 1" (25) Slot Width
 - 5775(I) "Wiper Blade" Pattern Controller 3/4" (19) Slot Width
 - 5710(I) "Wiper Blade" Pattern Controller 1" (25) Slot Width
 - 5715(I) "Wiper Blade" Pattern Controller 1 1/2" (38) Slot Width
 - 5850(I) "Ice Tong" Pattern Controller 1/2" (13) Slot Width
 - 5875(I) "Ice Tong" Pattern Controller 3/4" (19) Slot Width
 - 5810(I) "Ice Tong" Pattern Controller 1" (25) Slot Width
- (Add suffix "I" for optional internal insulation)

Return

- 5675R(I) "Flip Flop" Pattern Controller 3/4" (19) Slot Width
 - 5775R(I) "Wiper Blade" Pattern Controller 3/4" (19) Slot Width
 - 5710R(I) "Wiper Blade" Pattern Controller 1" (25) Slot Width
 - 5715R(I) "Wiper Blade" Pattern Controller 1 1/2" (38) Slot Width
 - 5850R(I) "Ice Tong" Pattern Controller 1/2" (13) Slot Width
 - 5875R(I) "Ice Tong" Pattern Controller 3/4" (19) Slot Width
 - 5810R(I) "Ice Tong" Pattern Controller 1" (25) Slot Width
- (Add suffix "I" for optional internal insulation)

2. Nominal Length

Imperial Sizes

inches (mm's)
20, 24, 30, 36, 48, 60
(508, 610, 762, 914, 1219, 1524)

Metric Sizes

(mm's)
500 , 600, 750, 900, 1200, 1500

3. Number of Slots

- 1 One
- 2 Two
- 3 Three
- 4 Four

4. Inlet Size (supply only)

- 04 4" (102) Round
- 05 5" (127) Round
- 06 6" (152) Round
- 07 7" (178) Round
- 08 8" (203) Round
- 09 9" (229) Oval
- 10 10" (254) Oval
- 12 12" (305) Oval

5. Options & Accessories:

(Default is 'None' unless noted otherwise)

- ID Inlet Damper (supply only)
- CN Cross Notch
- PF Plaster Frame
- ST Straddle T-Bar
(available with 2 slot and 4 slot models only)

Supplementary T-Bars

- T1 One (inlet side)
- T0 One (opposite inlet side)
- T2 Two (both sides)
- M1 Mounting Clips - one side (2)
- M2 Mounting Clips - both sides (4)
- EX External Foil Back Insulation R-4.2 (installed)
- EIC Extended Inlet Collar (2.25" [57]) with bead *
- EQT Earthquake Tabs

Internal Insulation

- ("I" models only)
- FGI 1/4" (6.35) Coated fiberglass (default)
- FFI 3/8" (9.53) Fiber-free foam

Notes:

1. **Model Series 5600** and **5800** are not available in a 1 1/2" (38) slot width.
2. If more than one accessory is desired, list in order.
3. Standard internal insulation ("I" suffix models) is 1/4" (6.35) coated fiberglass.
- 4.*Extended Inlet Collar option is available with 5600(I), 5700(I) and 5800(I) supply models only.

PLENUM SLOT AND LIGHT TROFFER DIFFUSERS

HOW TO ORDER

MODEL SERIES: 5700-F(2) AND 5800-F(2)

PLENUM SLOT DIFFUSERS FOR NARROW REGRESSED (FINELINE TYPE) CEILING GRIDS

EXAMPLE: 5775I-F - 48 x 2 - 08 - ID - CN - ST - M2 - D - -

1. Model Series

Supply

(Straddle Mount)

- 5675(I)-F "Flip Flop" Pattern Controller 3/4" (19) Slot Width
- 5610(I)-F "Flip Flop" Pattern Controller 1" (25) Slot Width
- 5775(I)-F "Wiper Blade" Pattern Controller 3/4" (19) Slot Width
- 5710(I)-F "Wiper Blade" Pattern Controller 1" (25) Slot Width
- 5715(I)-F "Wiper Blade" Pattern Controller 1 1/2" (38) Slot Width
- 5850(I)-F "Ice Tong" Pattern Controller 1/2" (13) Slot Width
- 5875(I)-F "Ice Tong" Pattern Controller 3/4" (19) Slot Width
- 5810(I)-F "Ice Tong" Pattern Controller 1" (25) Slot Width

(Add suffix "I" for optional internal insulation)

(Flat Face T-Bars)

- 5775(I)-F2 "Wiper Blade" Pattern Controller 3/4" (19) Slot Width
- 5710(I)-F2 "Wiper Blade" Pattern Controller 1" (25) Slot Width
- 5715(I)-F2 "Wiper Blade" Pattern Controller 1 1/2" (38) Slot Width
- 5850(I)-F2 "Ice Tong" Pattern Controller 1/2" (13) Slot Width
- 5875(I)-F2 "Ice Tong" Pattern Controller 3/4" (19) Slot Width
- 5810(I)-F2 "Ice Tong" Pattern Controller 1" (25) Slot Width

(Add suffix "I" for optional internal insulation)

Return

(Straddle Mount)

- 5775R(I)-F "Wiper Blade" Pattern Controller 3/4" (19) Slot Width
- 5710R(I)-F "Wiper Blade" Pattern Controller 1" (25) Slot Width
- 5715R(I)-F "Wiper Blade" Pattern Controller 1 1/2" (38) Slot Width
- 5850R(I)-F "Ice Tong" Pattern Controller 1/2" (13) Slot Width
- 5875R(I)-F "Ice Tong" Pattern Controller 3/4" (19) Slot Width
- 5810R(I)-F "Ice Tong" Pattern Controller 1" (25) Slot Width

(Add suffix "I" for optional internal insulation)

(Flat Face T-Bars)

- 5775R(I)-F2 "Wiper Blade" Pattern Controller 3/4" (19) Slot Width
- 5710R(I)-F2 "Wiper Blade" Pattern Controller 1" (25) Slot Width
- 5715R(I)-F2 "Wiper Blade" Pattern Controller 1 1/2" (38) Slot Width
- 5850R(I)-F2 "Ice Tong" Pattern Controller 1/2" (13) Slot Width
- 5875R(I)-F2 "Ice Tong" Pattern Controller 3/4" (19) Slot Width
- 5810R(I)-F2 "Ice Tong" Pattern Controller 1" (25) Slot Width

(Add suffix "I" for optional internal insulation)

2. Nominal Length

Imperial Sizes

- inches (mm's)
- 24, 48
- (610, 1219)

Metric Sizes

- (mm's)
- 600, 1200

3. Number of Slots

- 1 One
- 2 Two
- 3 Three
- 4 Four

4. Inlet Size (supply only)

- 04 4" (102) Round
- 05 5" (127) Round
- 06 6" (152) Round
- 07 7" (178) Round
- 08 8" (203) Round
- 09 9" (229) Oval
- 10 10" (254) Oval
- 12 12" (305) Oval

5. Cross Notch

- 00 None
- CN Cross Notch on 48" (1219 or 1200) unit (default)

6. Included Accessories

- ST Straddle T-Bar on -F two slot models only (default)
- M2 T-Bar Mounting Clips - (4) (default)

7. Specified T-Bar *

- A 1 3/4" (44) high
- C 1 5/8" (41) high
- D 1 25/32" (45) high

8. Optional Accessories:

(Default is 'None' unless noted otherwise)

- ID Inlet Damper (supply only)
- EX External Foil Back Insulation R-4.2 (installed)
- EIC Extended Inlet Collar (2.25" [57]) with bead **
- EQT Earthquake Tabs

Internal Insulation

- ("I" models only)
- FGI 1/4" (6.35) Coated fiberglass (default)
- FFI 3/8" (9.53) Fiber-free foam

Notes:

1. **Model Series 5700-F(2)** is not available with a 1/2" (13) slot width. **Model Series 5800-F(2)** is not available with a 1 1/2" (38) slot width.
2. -F models are available in a 1, or 2 slot configuration. -F2 models are available in a 1, 2, 3 or 4 slot configuration.
3. *Specified T-Bar: Type A Chicago Metallic Ultraline. Type C Certainteed Smoothline. Type D USG Donn Fineline.
4. Standard Internal Insulation ("I" suffix models) is 1/4" (6.35) coated fiberglass.
5. **Extended Inlet Collar option is available with 5600(I)-F, 5700(I)-F(2) and 5800(I)-F(2) supply models only.

PLENUM SLOT AND LIGHT TROFFER DIFFUSERS