

Nailor
Industries Inc.

PLENUM SLOT & LIGHT TROFFER DIFFUSERS

Contents

Page No.

Product Overview

C3

Plenum Slot Diffusers

Adjustable 'Wiper Blade' Pattern Controller

5700 Series - Supply - Lay-in T-Bar C6

5700-F Series - Supply - Narrow Regressed T-Bar C8

5700R Series - Return - Lay-in T-Bar C36

5700R-F Series - Return - Narrow Regressed T-Bar C38

Adjustable 'Ice Tong' Pattern Controller

5800 Series - Supply - Lay-in T-Bar C16

5800-F Series - Supply - Narrow Regressed T-Bar C18

5800R Series - Return - Lay-in T-Bar C36

5800R-F Series - Return - Narrow Regressed T-Bar C38

Curved Blade 'Flip-Flop' Pattern Controller

5600 Series - Supply - Lay-in T-Bar C32

5600R Series - Return - Lay-in T-Bar C36

N Series

59N Series - Supply and Supply/Return C45

Options and Accessories for Plenum Slot Diffusers

C53

Light Troffer Diffusers

Single Side and Double Side

5410 Series - Supply - Single Side C55

5420 Series - Supply - Double Side C55

5400R Series - Return C55

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.

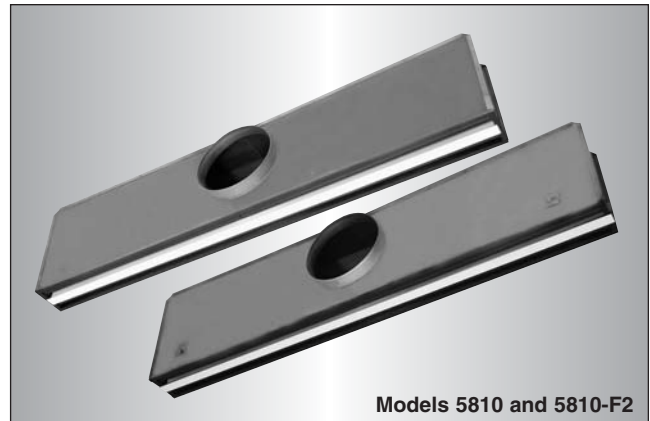
Plenum Slot Diffusers

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.

Supply Air



Models 5710 and 5715-F



Models 5810 and 5810-F2

Adjustable 'Wiper Blade' Pattern Controller

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", 1", 3/4" and 1/2" slot widths. Suffix 'I' adds internal insulation.

Standard Lay-in T-Bar –

Model Series 5700, 5700I

See page C6

Narrow Regressed T-Bar –

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

See page C8

Adjustable 'Ice Tong' Pattern Controller

This series features a controller that is an 'ice tong' shape. Adjusting the pattern controllers can change the direction of the airflow a full 180°. The controller may also be used for volume control. This diffuser is available in 1", 3/4" and 1/2" slot widths, and with a choice of 1, 2, 3 or 4 parallel slots. Suffix 'I' adds internal insulation.

Standard Lay-in T-Bar –

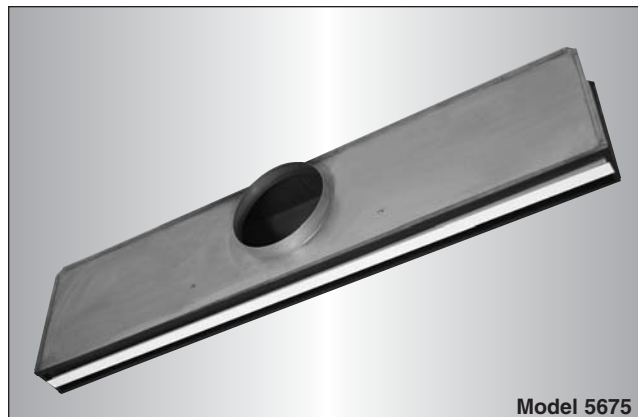
Model Series 5800, 5800I

See page C16

Narrow Regressed T-Bar –

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

See page C18



Model 5675

Curved Blade 'Flip Flop' Pattern Controller

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" 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

See page C32

N Series – Premium Performance, Supply

This supply diffuser has a 3/4" 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 –

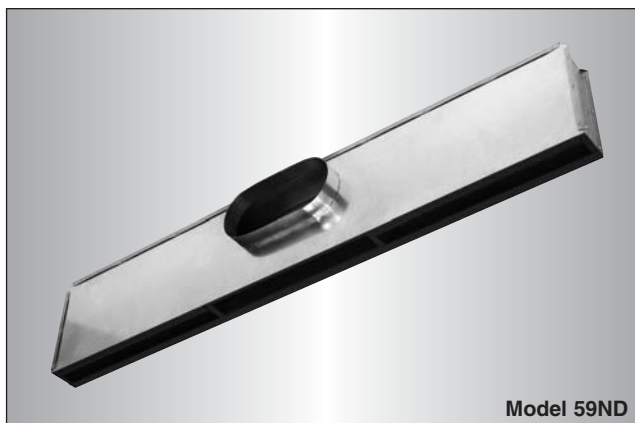
Models 59N, 59NI

See page C45

Horizontal/Vertical Discharge –

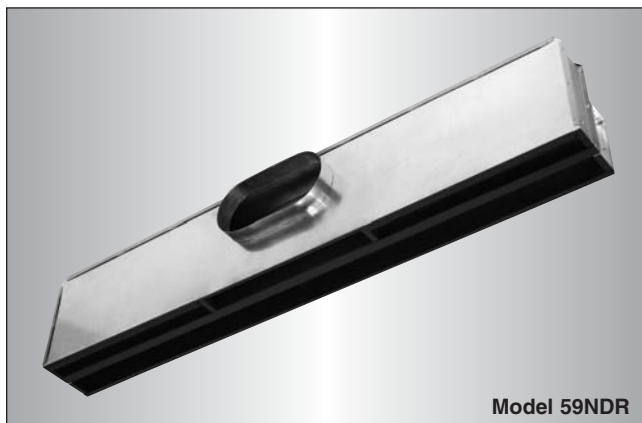
Models 59ND, 59NDI

See page C45



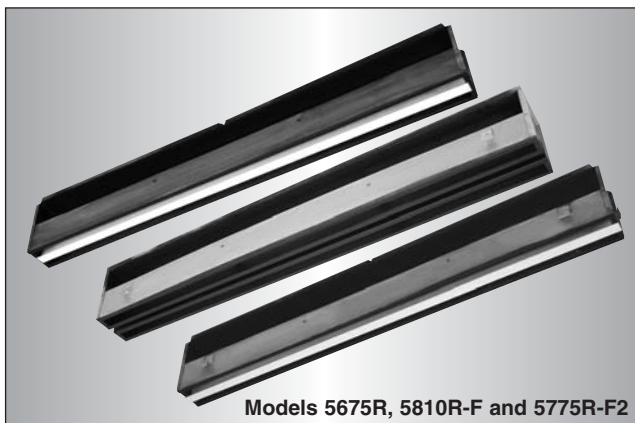
Model 59ND

Combination Supply/Return Air



Model 59NDR

Return Air



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

N Series – Premium Performance, Supply/Return

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

See page C45

Horizontal/Vertical Discharge –

Models 59NDR, 59NDRI

See page C45

Return Air Plenums for 5800, 5700, 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)

See page C36

– 5700R(I)-F, 5800R(I)-F

See page C38

– 5700R(I)-F2, 5800R(I)-F2

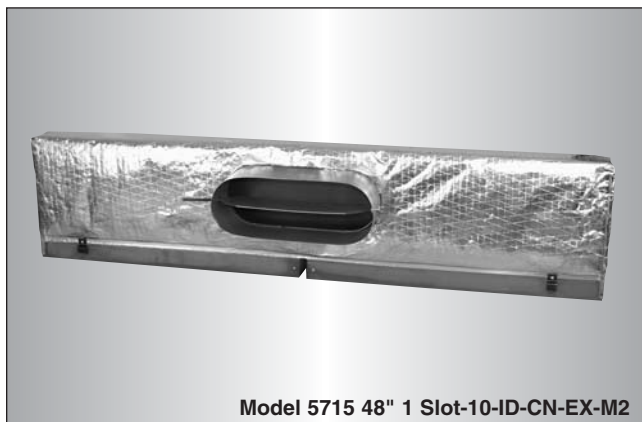
See page C38

Options and Accessories

Nailor offers a wide range of accessories and options for plenum slot diffusers. Inlet dampers, plaster frames, mounting clips, supplementary T-Bars and cross-notching are available.

For Supply and Return Plenums

See page C53



Model 5715 48" 1 Slot-10-ID-CN-EX-M2

Light Troffer Diffusers

The Nailor Light Troffer Diffusers have been designed to attach easily to standard air handling fluorescent light troffers. They provide an inconspicuous appearance with high engineering performance. Nailor manufactures both a single side or a double side diffuser.

Supply Air –

Single Side – Model 5410

See page C55

Double Side – Model 5420

See page C55

Return Air –

Single Side – Model 5410R

See page C55



ADJUSTABLE 'WIPER BLADE' PATTERN CONTROLLER

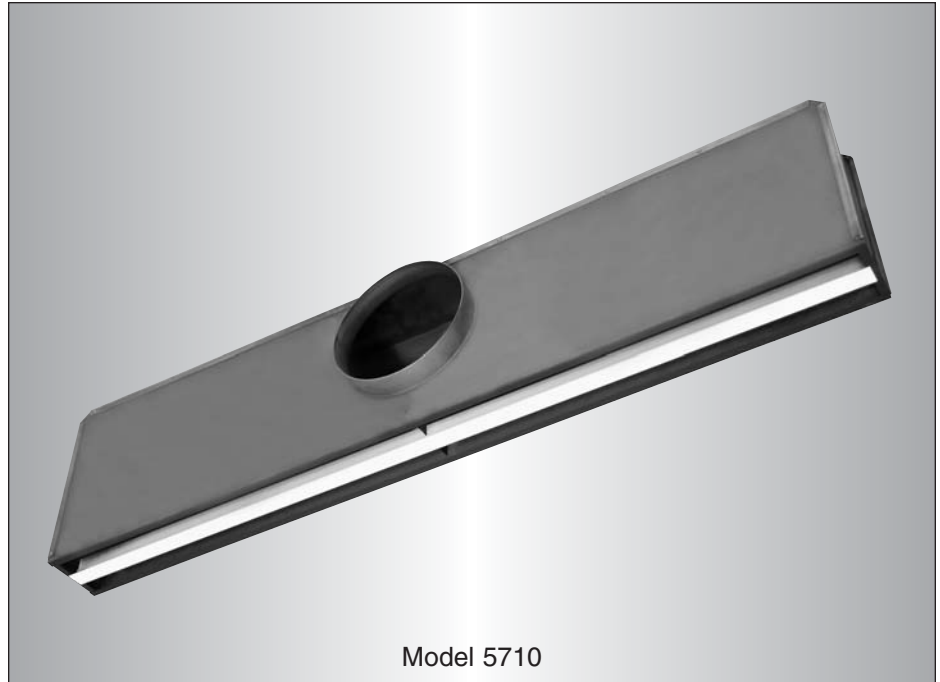
- FOR STANDARD LAY-IN T-BAR
- SUPPLY

Uninsulated Models:

5750	1/2" (13) Slot Width
5775	3/4" (19) Slot Width
5710	1" (25) Slot Width
5715	1 1/2" (38) Slot Width

Insulated Models:

5750I	1/2" (13) Slot Width
5775I	3/4" (19) Slot Width
5710I	1" (25) Slot Width
5715I	1 1/2" (38) Slot Width



Model 5710

The **5700 Series Plenum Slot Ceiling Diffusers** have been designed for standard Lay-in T-Bar ceiling grid applications. They integrate and blend with the suspended grid, thus offering an extremely unobtrusive method of air distribution. Available in a wide range of sizes and capacities, the **5700 Series** design offers the optimum combination of application flexibility, high performance and low cost.

The **5700 Series** features a friction pivoted adjustable extruded aluminum pattern controller in each slot. A key feature is the gasketed 'wiper blade' design. The direction of airflow is adjustable through a full 180° from the face of the diffuser. In the horizontal discharge setting, either left or right, the gasket seal at the top of the blade seals tightly against the inside of the diffuser plenum casing or factory supplied center T-Bar, assuring positive directional control. The pattern controller may also be set for vertical discharge.

In the 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 and the **5700 Series** therefore provides excellent performance in variable air volume applications.

FEATURES:

- Full 180° pattern controller adjustment means there are no 'lefts or rights'.
- 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 four slot widths.
- 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. They are dropped slightly below the diffuser face to align flush with the ceiling grid.
- Pattern controller is split mid-way on units 36" (900 mm) and longer. This permits a 2-way opposite blow pattern from a single slot.

Options:

- Internal insulation (add suffix 'I' to model number).

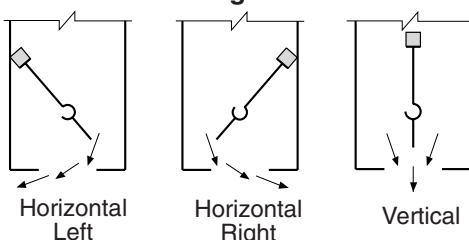
- A full range of options and accessories are available, see page C53.

Material: Corrosion-resistant steel plenum, extruded aluminum pattern controllers and center T-Bars.

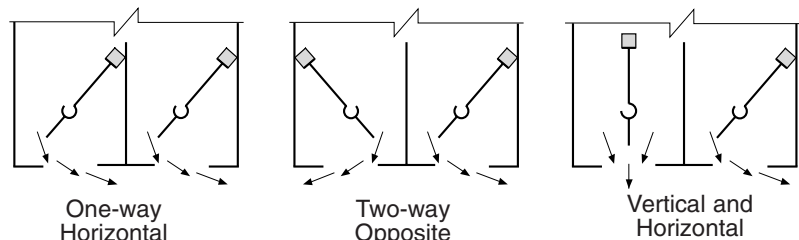
Finish: Black on pattern controllers and exposed surfaces. AW Appliance White baked enamel on center T-Bars.

Air Patterns

Single Slot

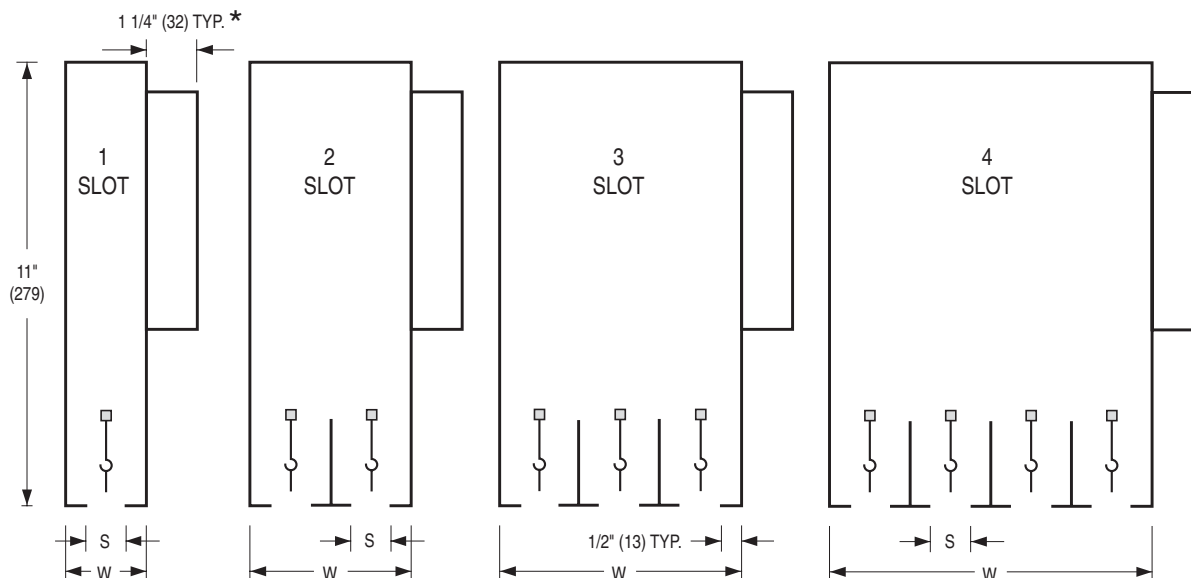


Multi-Slot



Dimensional Data

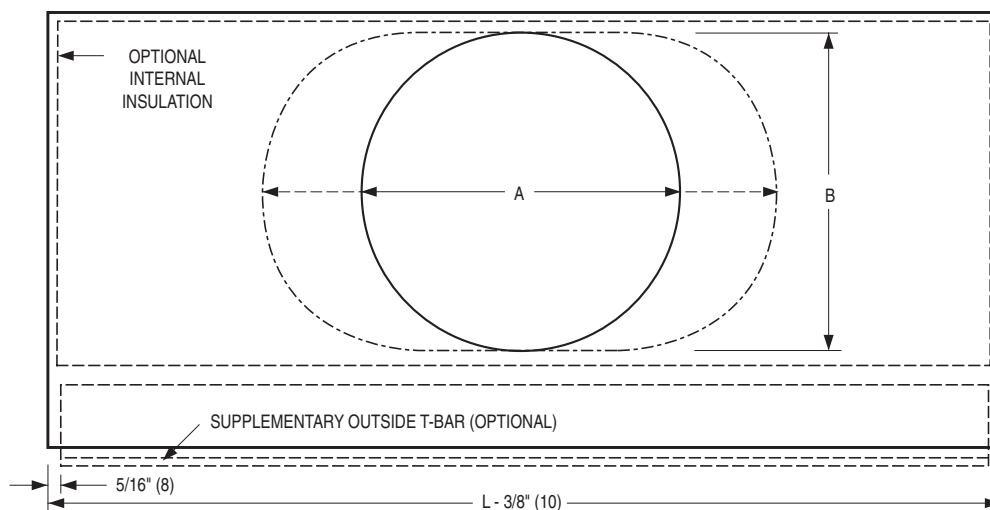
Model Series 5700 • Standard Lay-in T-Bar Models



		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 (31)	2 (51)	2 1/2 (64)
	2 Slot	3 (76)	3 1/2 (89)	4 (102)	5 (127)
	3 Slot	4 1/2 (114)	5 1/4 (133)	6 (152)	7 1/2 (191)
	4 Slot	6 (152)	7 (178)	8 (203)	10 (254)

	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 (378)
B	—	—	7 7/8 (200)	7 7/8 (200)

* 4" (102) with optional ID Inlet Damper



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

Dimensions are in inches (mm).

ADJUSTABLE 'WIPER BLADE' PATTERN CONTROLLER

- FOR NARROW REGRESSED T-BAR
- SUPPLY

Straddle Mount Models:

5775(I)-F 3/4" (19) Slot Width

5710(I)-F 1" (25) Slot Width

5715(I)-F 1 1/2" (38) Slot Width

Flat Face T-Bar Models:

5775(I)-F2 3/4" (19) Slot Width

5710(I)-F2 1" (25) Slot Width

5715(I)-F2 1 1/2" (38) Slot Width

- Suffix 'I' adds internal insulation



Model 5715-F

Model Series **5700-F** and **5700-F2 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 friction pivoted adjustable extruded aluminum pattern controller. A key feature is the gasketed 'wiper blade' design. The direction of airflow is adjustable through a full 180° from the face of the diffuser. In the horizontal discharge setting, either left or right, the gasket seal at the top of the blade seals tightly against the inside of the diffuser plenum casing or factory supplied center T-Bar. The pattern controller may also be set for vertical discharge.

The single slot units, for all models, are for installation alongside a main T-Bar runner. The series **5700-F** two slot units incorporate a center hat channel and are designed to straddle, longitudinally, a main T-Bar runner. The series **5700-F2** multi-slot units incorporate factory installed 1" (25) flat face T-Bars.

FEATURES:

- Full 180° pattern controller adjustment means there are no 'lefts or rights'.
- Available in 24" or 48" (600 or 1200) nominal lengths to suit both imperial and metric ceiling systems.
- A cross notch is supplied on 48" (1200) long units which allows the plenum to be installed in a 24" x 24" (600 x 600) ceiling grid.
- Series **5700-F** is available in a one or two slot configuration and Model Series **5700-F2** is available in a one, two, three, or four slot configuration.

- The single slot units are for installation alongside a main runner.

- **5700-F** two slot unit has a center hat channel that is designed to straddle a main T-Bar runner.

- **5700-F2** multi-slot units include 1" (25) flat face T-Bars.

Options:

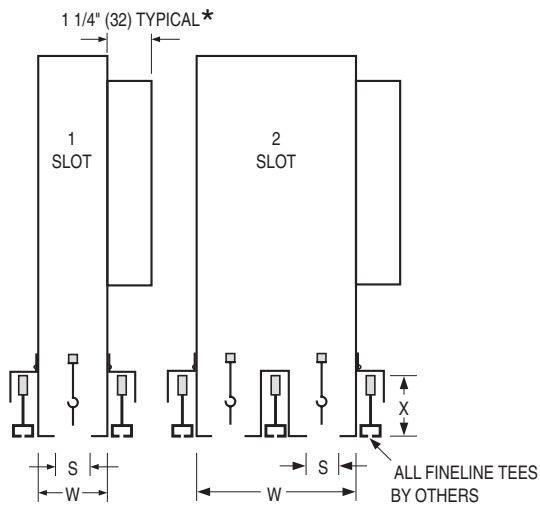
- Internal insulation (add suffix 'I' to model number).
- A full range of options and accessories are available, see page C53.

Material: Corrosion-resistant steel plenum, extruded aluminum pattern controllers. The Series **5700-F2** include center T-Bars on multi-slot units that are extruded aluminum.

Finish: Black on pattern controllers and exposed surfaces. AW Appliance White baked enamel on center T-Bars.

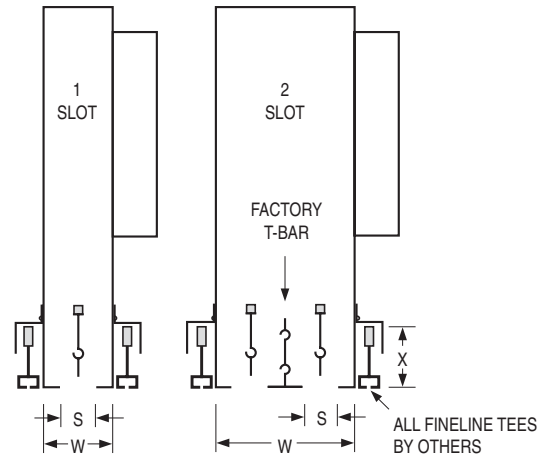
Dimensional Data

Model Series 5700-F and 5700-F2 • Narrow Regressed T-Bar



Model Series 5700-F

MODEL	S SLOT WIDTH	WIDTH W	
		1 SLOT	2 SLOT
5775-F	3/4 (19)	1 3/4 (44)	4 1/8 (105)
5710-F	1 (25)	2 (51)	4 5/8 (117)
5715-F	1 1/2 (38)	2 1/2 (64)	5 5/8 (143)

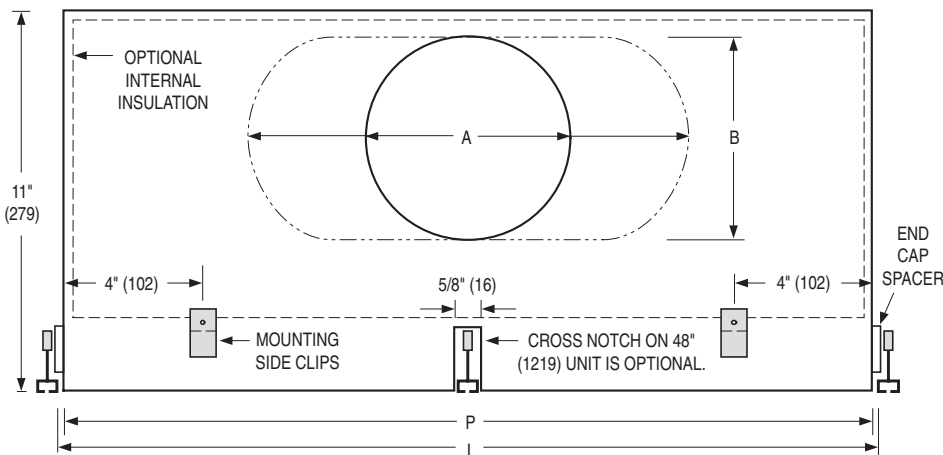


Model Series 5700-F2

MODEL	S SLOT WIDTH	WIDTH W			
		1 SLOT	2 SLOT	3 SLOT	4 SLOT
5775-F2	3/4 (19)	1 3/4 (44)	3 1/2 (89)	5 1/4 (133)	7 (178)
5710-F2	1 (25)	2 (51)	4 (102)	6 (152)	8 (203)
5715-F2	1 1/2 (38)	2 1/2 (64)	5 (127)	7 1/2 (191)	10 (254)

	NOMINAL INLET SIZE			
	6 ROUND	8 ROUND	10 OVAL	12 OVAL
A	5 7/8 (149)	7 7/8 (200)	11 (279)	14 1/8 (378)
B	—	—	7 7/8 (200)	7 7/8 (200)

* 4" (102) with optional ID Inlet Damper



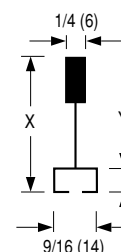
Imperial Ceiling Modules (inches)

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

T-BAR TYPE (MANUFACTURER)	X	Y
A ARMSTRONG SILHOUETTE	1 3/4 (44)	5/16 (8)
C CHICAGO METALLIC ULTRALINE	1 5/8 (41)	5/16 (8)
D DONN FINELINE®	1 25/32 (45)	5/16 (8)



Fineline® is a registered trademark of USG Interiors Inc.

Dimensions are in inches (mm).

HOW TO SPECIFY OR TO ORDER

(Show complete Model Number and Size, unless "Default" is desired).

'Wiper Blade' Supply Air Plenum Slot Diffusers for Lay-in T-Bar – Model Series 5700

5775I - 48 x 2 - 08 - - -

MODEL SERIES

- 'Wiper Blade' Pattern Controller 57

SLOT WIDTH (mm)

1/2"	(13)	50(I)
3/4"	(19)	75(I)
1"	(25)	10(I)
1 1/2"	(38)	15(I)

(Add Suffix 'I' for Internal Insulation)

NOMINAL LENGTH

inches	(mm)
- 20	(500)
- 24	(600)
- 30	(750)
- 36	(900)
- 48	(1200)
- 60	(1500)

NO. OF SLOTS

- 1
- 2
- 3
- 4

Note:

1. If more than one accessory is desired, list in order.

ACCESSORIES

- None (default)	—
- Cross Notch	CN
- Plaster Frame	PF
- Supplementary T-Bars	
One (Inlet Side)	T1
One (Opposite Inlet Side)	T0
Two (One Each Side)	T2
- T-Bar Mounting Clips (2)	M1
- T-Bar Mounting Clips (4)	M2
- External Foil Back Insulation	EX
- Straddle T-Bar	ST
(available with 2 slot and 4 slot models only)	

DAMPER

- None (default)	—
- Inlet Damper	ID

INLET SIZE

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

SUGGESTED SPECIFICATION:

Standard Lay-in T-Bar

Furnish and install **Nailor Model** (select one) **5750/5750I** (1/2" (13) slot), **5775/5775I** (3/4" (19) slot), **5710/5710I** (1" (25) slot) or **5715/5715I** (1 1/2" (38) 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 an adjustable, extruded aluminum, friction pivoted 'wiper blade' style pattern deflector mounted within each slot. Multi-slot units shall include extruded aluminum center T-Bars. The pattern deflector shall be adjustable in a horizontal or vertical setting. A gasket seal at the top of the blade shall seal tightly against the inside of the diffuser plenum casing or factory supplied center T-Bar when in the horizontal setting. The plenum shall have a side inlet with a neck not less than 1 1/4" (38) 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. The pattern controllers and all exposed edges shall have a BK Black finish and the center T-Bars shall have an AW Appliance White baked enamel finish. Models 5750I, 5775I, 5710I or 5715I 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 – 1991.

HOW TO SPECIFY OR TO ORDER

(Show complete Model Number and Size, unless "Default" is desired).

'Wiper Blade' Supply Air Plenum Slot Diffusers for Narrow Regressed Ceiling Grids – Model Series 5700-F and 5700-F2

MODEL SERIES		5775I-F - 48 x 2 - 08 - CN - ST - M2 - D - —		OPTIONAL ACCESSORIES	
- 'Wiper Blade' Pattern Controller	57			- None (default)	—
SLOT WIDTH (mm)				- Inlet Damper	ID
3/4" (19)	75(I)			- External Foil Back Insulation	EX
1" (25)	10(I)			- Earthquake Tabs	EQT
1 1/2" (38)	15(I)			SPECIFIED T-BAR	
(Add Suffix 'I' for Internal Insulation)				- 1 3/4" (44) high	A
STYLE				- 1 5/8" (41) high	C
- Straddle Mount (on 2 slot unit)	F			- 1 25/32" (45) high	D
- Flat Face T-Bars (on multi-slot units)	F2			INCLUDED ACCESSORIES	
NOMINAL LENGTH				- Cross Notch on 48" (1219) unit	CN
inches (mm)				- Straddle T-Bar on -F	ST
- 24 (600)				- 2 slot models (default)	
- 48 (1200)				- T-Bar Mounting Clips (4)	M2
NO. OF SLOTS				INLET SIZE	
- 1, 2, 3 or 4				4" (102)	Round 04
				5" (127)	Round 05
				6" (152)	Round 06
				7" (178)	Round 07
				8" (203)	Round 08
				10" (254)	Oval 10
				12" (305)	Oval 12

Notes:

1. Model 5700-F is only available with 1 or 2 slots.
2. If more than one accessory is desired, list in order.

SUGGESTED SPECIFICATION:

Narrow Regressed T-Bar, Straddle Mount

Furnish and install **Nailor Model** (select one) **5775-F/5775I-F** (3/4" (19) slot), **5710-F/5710I-F** (1" (25) slot) or **5715-F/5715I-F** (1 1/2" (38) 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 an adjustable, extruded aluminum, friction pivoted 'wiper blade' style pattern deflector mounted within each slot. The pattern deflector shall be adjustable in a horizontal or vertical setting. A gasket seal at the top of the blade shall seal tightly against the inside of the diffuser plenum casing when in the horizontal setting. The plenum shall have a side inlet with a neck not less than 1 1/4" (38) 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 slots as specified. Two slot models shall straddle the T-Bar lengthwise. The pattern controllers and all exposed edges shall have a BK Black finish. Models 5775I-F, 5710I-F or 5715I-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 – 1991.

Narrow Regressed T-Bar, Flat Face T-Bar(s)

Furnish and install **Nailor Model** (select one) **5775-F2/5775I-F2** (3/4" (19) slot), **5710-F2/5710I-F2** (1" (25) slot) or **5715-F2/5715I-F2** (1 1/2" (38) 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 an adjustable, extruded aluminum, friction pivoted 'wiper blade' style pattern deflector mounted within each slot. Multi-slot units shall include extruded aluminum center T-Bars. The pattern deflector shall be adjustable in a horizontal or vertical setting. A gasket seal at the top of the blade shall seal tightly against the inside of the diffuser plenum casing or factory supplied 1" (25) flat face center T-Bar when in the horizontal setting. The plenum shall have a side inlet with a neck not less than 1 1/4" (38) 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, two, three or four slots as specified. The pattern controllers and all exposed edges shall have a BK Black finish and the center T-Bars shall have an AW Appliance White baked enamel finish. Models 5775I-F2, 5710I-F2 or 5715I-F2 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 – 1991.

Performance Data

Model Series 5700 • 1/2" (13) Slot Width

1 Slot • 24" (610) Long • Models 5750(I)

6" Round Inlet	Airflow, CFM	15	25	35	50	60	65	80
	TP	.015	.028	.043	.063	.110	.170	.290
	NC	13	20	27	35	38	41	44
	T	1-3-6	2-4-9	5-7-11	7-9-13	8-10-15	9-11-16	10-12-18

1 Slot • 48" (1219) Long • Models 5750(I)

8" Round Inlet	Airflow, CFM	30	50	70	100	120	130	160
	TP	.019	.030	.048	.081	.125	.195	.310
	NC	13	20	28	35	38	41	44
	T	3-5-10	5-8-12	7-11-15	11-13-18	12-15-21	13-16-22	14-17-24

2 Slot • 24" (610) Long • Models 5750(I)

6" Round Inlet	Airflow, CFM	30	50	70	100	120	130	160
	TP	.026	.040	.069	.121	.178	.299	.385
	NC	13	21	27	35	38	41	43
	T	1-2-5	5-8-13	7-11-16	11-13-19	12-15-21	13-16-22	14-17-24

2 Slot • 48" (1219) Long • Models 5750(I)

8" Round Inlet	Airflow, CFM	60	100	140	200	240	260	320
	TP	.031	.054	.073	.131	.193	.334	.416
	NC	14	20	27	34	39	41	44
	T	1-2-5	7-11-19	10-16-23	15-19-26	17-21-31	18-22-32	19-23-34

3 Slot • 24" (610) Long • Models 5750(I)

6" Round Inlet	Airflow, CFM	45	75	105	150	180	195	240
	TP	.051	.073	.121	.195	.294	.416	.615
	NC	14	20	26	35	39	40	44
	T	4-6-12	6-10-16	9-13-19	13-16-23	15-18-25	15-18-26	16-20-28

3 Slot • 48" (1219) Long • Models 5750(I)

8" Round Inlet	Airflow, CFM	90	150	210	300	360	390	480
	TP	.055	.091	.135	.205	.310	.425	.630
	NC	15	21	27	35	39	41	46
	T	6-9-19	9-15-25	12-20-28	19-25-35	21-27-38	22-28-40	24-32-45

4 Slot • 24" (610) Long • Models 5750(I)

6" Round Inlet	Airflow, CFM	60	100	140	200	240	260	320
	TP	.060	.095	.145	.220	.320	.550	.875
	NC	15	19	27	36	39	42	46
	T	5-7-13	7-11-19	10-16-23	16-20-28	18-22-30	20-23-32	22-25-35

4 Slot • 48" (1219) Long • Models 5750(I)

8" Round Inlet	Airflow, CFM	120	200	280	400	480	520	640
	TP	.065	.099	.161	.240	.380	.610	.910
	NC	14	20	27	35	39	41	47
	T	7-12-23	11-16-28	15-23-33	22-28-40	25-31-42	26-32-45	29-36-50

CFM - cubic feet per minute

TP - total pressure - inches w.g.

T - throw in feet

NC - Noise Criteria (values) based on 10 dB room absorption, re 10⁻¹² watts.

Performance Notes:

- Throws are given at 150, 100 and 50 fpm terminal velocities under isothermal conditions.
- 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.

- Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70 – 1991.

Number of Slots	Ak Factor per foot	
	Supply	Return
1	.023	.023
2	.043	.043
3	.067	.067
4	.088	.088

Performance Data

Model Series 5700 • 3/4" (19) Slot Width

1 Slot • 24" (610) Long • Models 5775(I), 5775(I)-F, 5775(I)-F2

8" Round Inlet	Airflow, CFM	20	25	35	40	50	65	80
	TP	.017	.026	.052	.068	.106	.179	.272
	NC	—	—	15	19	26	34	40
	T	2-4-9	3-5-10	5-7-12	6-9-13	7-10-14	9-12-17	10-13-19

1 Slot • 48" (1219) Long • Models 5775(I), 5775(I)-F, 5775(I)-F2

10" Oval Inlet	Airflow, CFM	40	55	65	80	105	130	160
	TP	.017	.033	.046	.069	.119	.180	.276
	NC	—	—	12	19	27	36	41
	T	2-5-12	5-8-16	6-10-17	8-12-19	11-16-22	11-16-24	16-19-27

2 Slot • 24" (610) Long • Models 5775(I), 5775(I)-F, 5775(I)-F2

8" Round Inlet	Airflow, CFM	40	55	65	80	105	130	160
	TP	.017	.034	.047	.071	.122	.188	.285
	NC	—	—	12	19	27	34	41
	T	2-5-12	5-8-16	6-10-17	8-12-19	11-16-22	13-17-24	16-19-27

2 Slot • 48" (1219) Long • Models 5775(I), 5775(I)-F, 5775(I)-F2

10" Oval Inlet	Airflow, CFM	70	90	115	145	180	230	295
	TP	.017	.029	.047	.075	.115	.188	.309
	NC	—	—	14	20	27	34	40
	T	3-6-16	4-10-20	7-12-23	10-16-25	13-20-28	17-23-32	21-26-36

3 Slot • 24" (610) Long • Models 5775(I), 5775(I)-F2

8" Round Inlet	Airflow, CFM	65	80	100	125	160	200	255
	TP	.030	.046	.071	.111	.180	.282	.459
	NC	—	—	13	20	27	34	40
	T	4-9-20	7-12-22	10-16-25	12-19-28	17-22-31	20-25-35	23-28-39

3 Slot • 48" (1219) Long • Models 5775(I), 5775(I)-F2

10" Oval Inlet	Airflow, CFM	115	145	185	230	295	370	470
	TP	.032	.051	.082	.127	.209	.329	.532
	NC	—	—	13	20	27	34	40
	T	5-11-25	8-16-30	13-21-34	17-25-38	19-30-42	25-35-47	30-39-53

4 Slot • 24" (610) Long • Models 5775(I), 5775(I)-F2

8" Round Inlet	Airflow, CFM	80	100	125	155	195	250	315
	TP	.035	.054	.084	.130	.206	.338	.537
	NC	—	—	13	20	27	34	40
	T	4-10-21	7-13-25	10-17-28	13-21-31	16-25-34	22-28-39	26-31-44

4 Slot • 48" (1219) Long • Models 5775(I), 5775(I)-F2

10" Oval Inlet	Airflow, CFM	145	180	225	290	360	450	580
	TP	.039	.060	.094	.156	.241	.376	.626
	NC	—	—	13	20	27	34	40
	T	5-11-27	8-17-33	12-21-37	18-27-42	22-33-46	28-37-53	34-42-60

CFM - cubic feet per minute

TP - total pressure - inches w.g.

T - throw in feet

NC - Noise Criteria (values) based on 10 dB room absorption, re 10⁻¹² watts

Performance Notes:

- Throws are given at 150, 100 and 50 fpm terminal velocities under isothermal conditions.
- 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.

- Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70 – 1991.

Number of Slots	Ak Factor per foot	
	Supply	Return
1	.025	.025
2	.049	.047
3	.074	.073
4	.098	.097

Performance Data

Model Series 5700 • 1" (25) Slot Width

1 Slot • 24" (610) Long • Models 5710(I), 5710(I)-F, 5710(I)-F2

8" Round Inlet	Airflow, CFM	30	35	45	55	70	90	110
	TP	.021	.029	.048	.073	.118	.195	.292
	NC	—	—	14	20	27	35	41
	T	3-6-11	3-6-12	6-8-14	7-10-16	9-12-18	11-14-20	12-16-22

1 Slot • 48" (1219) Long • Models 5710(I), 5710(I)-F, 5710(I)-F2

10" Oval Inlet	Airflow, CFM	60	70	90	115	140	170	215
	TP	.022	.032	.050	.082	.124	.180	.289
	NC	—	—	13	21	27	34	40
	T	4-8-17	5-9-18	8-12-20	10-16-23	12-18-25	16-20-27	18-22-31

2 Slot • 24" (610) Long • Models 5710(I), 5710(I)-F, 5710(I)-F2

8" Round Inlet	Airflow, CFM	50	60	80	100	125	155	200
	TP	.018	.026	.047	.072	.112	.174	.288
	NC	—	—	13	21	28	34	40
	T	2-6-13	4-8-17	6-10-19	9-13-21	11-17-24	14-19-26	18-21-30

2 Slot • 48" (1219) Long • Models 5710(I), 5710(I)-F, 5710(I)-F2

10" Oval Inlet	Airflow, CFM	90	110	140	180	230	290	370
	TP	.022	.033	.054	.089	.145	.232	.376
	NC	—	—	13	20	27	34	40
	T	3-6-18	4-10-21	7-13-25	11-18-28	14-22-32	19-25-36	24-29-40

3 Slot • 24" (610) Long • Models 5710(I), 5710(I)-F2

8" Round Inlet	Airflow, CFM	75	100	125	155	195	350	315
	TP	.030	.054	.084	.130	.206	.338	.537
	NC	—	—	13	20	27	34	40
	T	4-8-20	7-13-25	10-17-28	13-21-31	17-25-34	22-28-39	26-31-44

3 Slot • 48" (1219) Long • Models 5710(I), 5710(I)-F2

10" Oval Inlet	Airflow, CFM	145	180	230	290	365	460	580
	TP	.039	.060	.098	.155	.247	.394	.626
	NC	—	—	13	20	27	34	40
	T	5-11-27	8-17-33	12-22-37	18-27-42	23-33-47	28-37-53	34-42-60

4 Slot • 24" (610) Long • Models 5710(I), 5710(I)-F2

8" Round Inlet	Airflow, CFM	95	120	150	190	245	305	385
	TP	.038	.060	.094	.153	.251	.389	.621
	NC	—	—	13	20	27	34	40
	T	4-9-22	6-13-27	10-17-30	14-22-34	19-28-39	23-31-43	28-34-48

4 Slot • 48" (1219) Long • Models 5710(I), 5710(I)-F2

10" Oval Inlet	Airflow, CFM	175	220	280	350	440	560	715
	TP	.045	.070	.113	.177	.280	.455	.741
	NC	—	—	13	20	27	34	40
	T	5-10-28	7-18-35	12-23-41	19-28-46	24-35-52	30-41-59	38-46-66

CFM - cubic feet per minute

TP - total pressure - inches w.g.

T - throw in feet

NC - Noise Criteria (values) based on 10 dB room absorption, re 10⁻¹² watts.

Performance Notes:

- Throws are given at 150, 100 and 50 fpm terminal velocities under isothermal conditions.
- 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.
- Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70 – 1991.

Number of Slots	Ak Factor per foot	
	Supply	Return
1	.029	.030
2	.058	.058
3	.087	.090
4	.116	.120

Performance Data

Model Series 5700 • 1 1/2" (38) Slot Width

1 Slot • 24" (610) Long • Models 5715(I), 5715(I)-F, 5715(I)-F2

8" Round Inlet	Airflow, CFM	50	70	90	110	130	150	170
	TP	.028	.054	.089	.133	.186	.248	.318
	NC	—	16	23	28	32	36	40
	T	4-8-15	6-10-16	10-14-20	11-15-22	12-16-24	14-17-25	16-19-27

1 Slot • 48" (1219) Long • Models 5715(I), 5715(I)-F, 5715(I)-F2

10" Oval Inlet	Airflow, CFM	90	120	150	180	210	240	270
	TP	.029	.051	.079	.114	.155	.203	.257
	NC	—	15	22	27	31	35	39
	T	4-10-18	7-12-22	9-14-23	12-18-26	14-20-29	16-22-32	18-24-34

2 Slot • 24" (610) Long • Models 5715(I), 5715(I)-F, 5715(I)-F2

8" Round Inlet	Airflow, CFM	90	125	160	195	230	265	300
	TP	.042	.081	.132	.197	.273	.363	.465
	NC	13	22	28	33	37	41	45
	T	4-9-17	9-13-23	11-17-25	13-20-28	17-22-32	19-25-34	23-29-38

2 Slot • 48" (1219) Long • Models 5715(I), 5715(I)-F, 5715(I)-F2

12" Oval Inlet	Airflow, CFM	160	220	280	340	400	460	520
	TP	.039	.073	.119	.175	.243	.321	.410
	NC	—	15	23	29	32	36	40
	T	5-10-23	9-16-30	14-21-34	17-26-38	20-28-40	23-30-42	26-32-45

3 Slot • 24" (610) Long • Models 5715(I), 5715(I)-F2

10" Oval Inlet	Airflow, CFM	100	145	190	235	280	325	370
	TP	.024	.051	.088	.135	.192	.258	.335
	NC	—	15	22	28	33	37	40
	T	4-9-21	8-15-28	12-19-32	16-24-36	19-24-39	23-31-43	26-33-46

3 Slot • 48" (1219) Long • Models 5715(I), 5715(I)-F2

12" Oval Inlet	Airflow, CFM	200	275	350	425	500	575	650
	TP	.039	.073	.118	.174	.241	.318	.407
	NC	—	16	22	28	32	36	39
	T	8-15-28	14-21-34	18-23-35	21-27-37	24-29-41	26-31-44	27-33-46

4 Slot • 24" (610) Long • Models 5715(I), 5715(I)-F2

12" Oval Inlet	Airflow, CFM	110	170	230	290	350	410	470
	TP	.015	.035	.065	.103	.150	.206	.271
	NC	—	—	18	21	27	32	36
	T	4-8-20	10-17-32	13-21-33	17-25-37	22-31-44	25-34-48	27-37-52

4 Slot • 48" (1219) Long • Models 5715(I), 5715(I)-F2

12" Oval Inlet	Airflow, CFM	200	300	400	500	600	700	800
	TP	.030	.067	.120	.187	.270	.367	.480
	NC	—	13	21	27	32	36	40
	T	6-13-26	11-20-34	14-22-36	19-28-40	24-31-45	27-34-48	29-36-51

CFM - cubic feet per minute

TP - total pressure - inches w.g.

T - throw in feet

NC - Noise Criteria (values) based on 10 dB room absorption, re 10⁻¹² watts.

Performance Notes:

- Throws are given at 150, 100 and 50 fpm terminal velocities under isothermal conditions.
- 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.
- Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70 – 1991.

Number of Slots	Ak Factor per foot	
	Supply	Return
1	.033	.043
2	.066	.083
3	.099	.129
4	.132	.172

ADJUSTABLE 'ICE TONG' PATTERN CONTROLLER

- FOR STANDARD LAY-IN T-BAR
- SUPPLY

Uninsulated Models:

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

Insulated Models:

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



Model 5810

The **5800 Series 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. Available in a wide range of sizes and capacities, the **5800 Series** design offers the discerning engineer and architect premium quality construction and design features.

The **5800 Series** features the same 'ice-tong' pattern controller as used in the **5000 Series** Linear Slot Diffuser, providing total flexibility in all applications. The direction of airflow is adjustable through a full 180° from the face of the diffuser, and pattern controllers may also be adjusted for volume control.

In the 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 **5800 Series** therefore provides excellent performance in variable air volume applications.

FEATURES:

- Full 180° pattern controller adjustment means there are no 'lefts or rights'. Pattern controllers also permit volume control.
- 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 three slot widths.
- 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. They are dropped slightly below the diffuser face to align flush with the ceiling grid.
- Pattern controller is split mid-way on units 48" (1200) and longer, permitting a 2-way opposite blow pattern from a single slot.

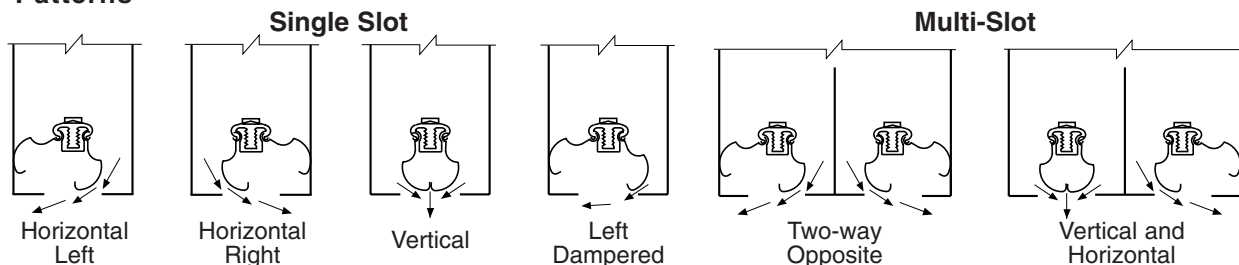
Options:

- Internal insulation (add suffix 'I' to model number).
- A full range of options and accessories are available, see page C53.

Material: Corrosion-resistant steel plenum and pattern controllers. Aluminum center T-Bars.

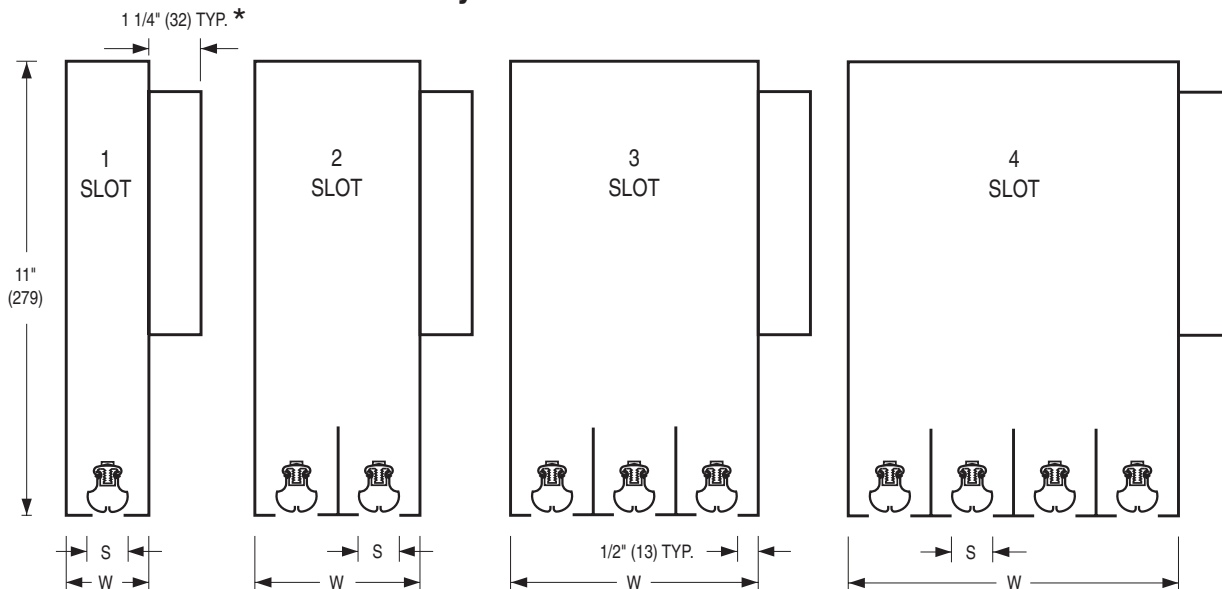
Finish: Black on pattern controllers and exposed surfaces. AW Appliance White baked enamel on center T-Bars.

Air Patterns



Dimensional Data

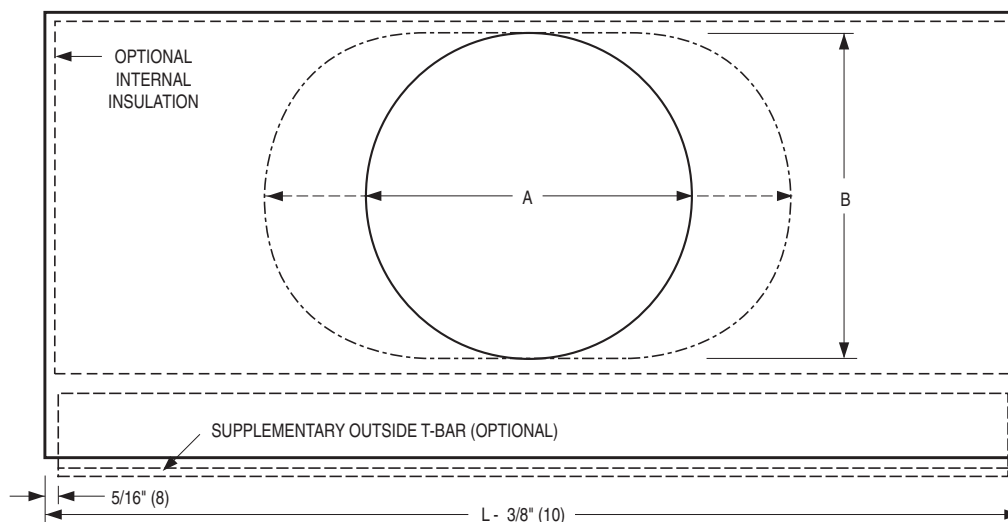
Model Series 5800 • Standard Lay-in T-Bar Models



		S		
		Slot Width		
		1/2 (13)	3/4 (19)	1 (25)
W	1 Slot	1 1/2 (38)	1 3/4 (31)	2 (51)
	2 Slot	3 (76)	3 1/2 (89)	4 (102)
	3 Slot	4 1/2 (114)	5 1/4 (133)	6 (152)
	4 Slot	6 (152)	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 (378)
B	—	—	7 7/8 (200)	7 7/8 (200)

* 4" (102) with optional ID Inlet Damper



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

Dimensions are in inches (mm).

ADJUSTABLE 'ICE TONG' PATTERN CONTROLLER

- FOR NARROW REGRESSED T-BAR
- SUPPLY

Straddle Mount Models:

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

Flat Face Center T-Bar Models:

- 5850(I)-F2 1/2" (13) Slot Width
- 5875(I)-F2 3/4" (19) Slot Width
- 5810(I)-F2 1" (25) Slot Width

- Suffix 'I' adds internal insulation



Model 5810-F2

Model Series **5800-F** and **5800-F2 Plenum Slot Supply 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 an 'ice tong' pattern controller that provides total flexibility in all applications. The direction of airflow is adjustable through a full 180° from the face of the diffuser and pattern controllers may also be adjusted for volume control. In the 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 series **5800-F** two slot units incorporate a center hat channel and are designed to straddle, longitudinally, along a main T-Bar runner. The series **5800-F2** multi-slot units incorporate factory installed 1" (25) flat face T-Bars.

FEATURES:

- Full 180° pattern controller adjustment means there are no 'lefts or rights'.
- Available in 24" or 48" (600 or 1200) nominal lengths to suit both imperial and metric ceiling systems.
- A cross notch is supplied on 48" (1200) long units which allows the plenum to be installed in a 24" x 24" (600 x 600) ceiling grid.
- Series **5800-F** is available in a one or two slot configuration and Series **5800-F2** is available in a one, two, three, or four slot configurations.

- The single slot units are for installation alongside a main runner.
- **5800-F** two slot unit has a center hat channel that is designed to straddle a main T-Bar runner.
- **5800-F2** multi-slot units include 1" (25) flat face T-Bars.

Options:

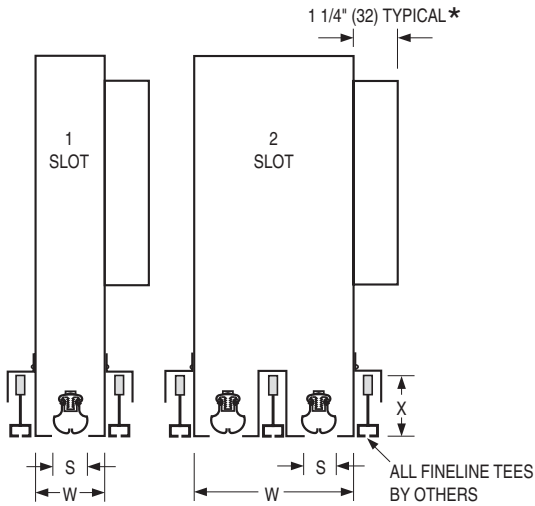
- Internal insulation (add suffix 'I' to model number).
- A full range of options and accessories are available, see page C53.

Material: Corrosion-resistant steel. The series **5800-F2** includes center T-Bars on multi-slot units that are extruded aluminum.

Finish: Black on pattern controllers and exposed surfaces. AW Appliance White baked enamel on center T-Bars.

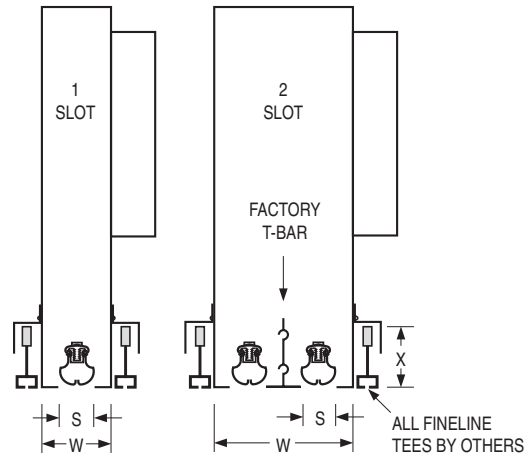
Dimensional Data

Model Series 5800-F and 5800-F2 • Narrow Regressed T-Bar



Model Series 5800-F

MODEL	S SLOT WIDTH	WIDTH W	
		1 SLOT	2 SLOT
5850-F	1/2 (13)	1 1/2 (38)	3 5/8 (92)
5875-F	3/4 (19)	1 3/4 (44)	4 1/8 (105)
5810-F	1 (25)	2 (51)	4 5/8 (117)

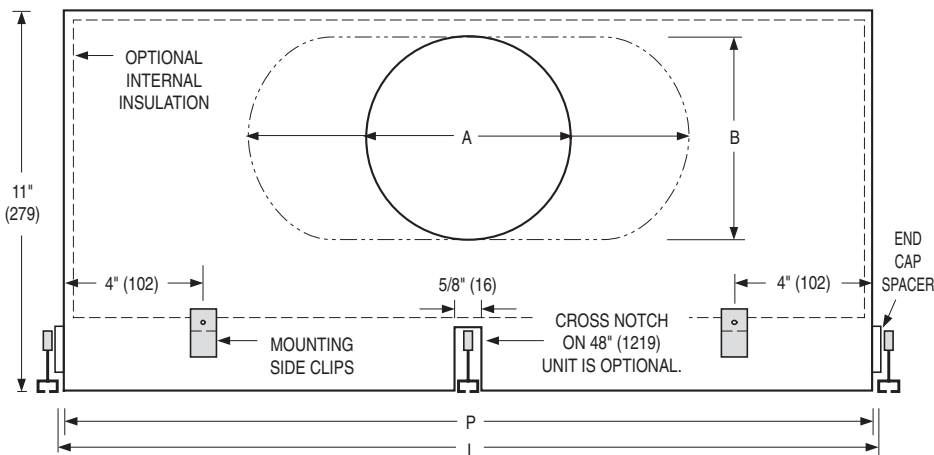


Model Series 5800-F2

MODEL	S SLOT WIDTH	WIDTH W			
		1 SLOT	2 SLOT	3 SLOT	4 SLOT
5850-F2	1/2 (13)	1 1/2 (38)	3 (76)	4 1/2 (114)	6 (152)
5875-F2	3/4 (19)	1 3/4 (44)	3 1/2 (89)	5 1/4 (133)	7 (178)
5810-F2	1 (25)	2 (51)	4 (102)	6 (152)	8 (203)

	NOMINAL INLET SIZE			
	6 ROUND	8 ROUND	10 OVAL	12 OVAL
A	5 7/8 (149)	7 7/8 (200)	11 (279)	14 1/8 (378)
B	—	—	7 7/8 (200)	7 7/8 (200)

* 4" (102) with optional ID Inlet Damper



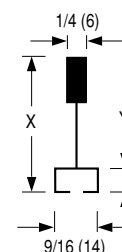
Imperial Ceiling Modules (inches)

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

T-BAR TYPE (MANUFACTURER)	X	Y
A ARMSTRONG SILHOUETTE	1 3/4 (44)	5/16 (8)
C CHICAGO METALLIC ULTRALINE	1 5/8 (41)	5/16 (8)
D DONN FINELINE®	1 25/32 (45)	5/16 (8)



Fineline® is a registered trademark of USG Interiors Inc.

Dimensions are in inches (mm).

HOW TO SPECIFY OR TO ORDER

(Show complete Model Number and Size, unless "Default" is desired).

'Ice Tong' Supply Air Plenum Slot Diffusers for Lay-in T-Bar – Model Series 5800

PLENUM SLOT AND LIGHT TROFFER DIFFUSERS

		5875I - 48 x 2 - 08 - - -	
MODEL SERIES		ACCESSORIES	
- 'Ice Tong' Pattern Controller		58	- None (default) —
SLOT WIDTH (mm)			- Cross Notch CN
1/2" (13)	50(I)		- Plaster Frame PF
3/4" (19)	75(I)		- Supplementary T-Bars
1" (25)	10(I)		One (Inlet Side) T1
(Add Suffix 'I' for Internal Insulation)			One (Opposite Inlet Side) T0
NOMINAL LENGTH			Two (One Each Side) T2
inches (mm)			- T-Bar Mounting Clips (2) M1
- 20 (500)			- T-Bar Mounting Clips (4) M2
- 24 (600)			- External Foil Back Insulation EX
- 30 (750)			- Straddle T-Bar ST
- 36 (900)			(available with 2 slot and 4 slot models only)
- 48 (1200)			
- 60 (1500)			
NO. OF SLOTS			DAMPER
- 1			- None (default) —
- 2			- Inlet Damper ID
- 3			
- 4			INLET SIZE
			4" (102) Round 04
			5" (127) Round 05
			6" (152) Round 06
			7" (178) Round 07
			8" (203) Round 08
			10" (254) Oval 10
			12" (305) Oval 12

Note:

1. If more than one accessory is desired, list in order.

SUGGESTED SPECIFICATION:

Standard Lay-in T-Bar

Furnish and install **Nailor Model** (select one) **5850/5850I** (1/2" (13) slot), **5875/5875I** (3/4" (19) slot) or **5810/5810I** (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 an adjustable, 'ice tong' style pattern deflector mounted within each slot. The pattern deflector shall allow the direction of airflow to be adjusted through a full 180° from the face of the diffuser. The plenum shall have a side inlet with a neck not less than 1 1/4" (38) 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 baked enamel finish. Models 5850I, 5875I or 5810I 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 – 1991.

HOW TO SPECIFY OR TO ORDER

(Show complete Model Number and Size, unless "Default" is desired).

'Ice Tong' Supply Air Plenum Slot Diffusers for Narrow Regressed Ceiling Grids – Model Series 5800-F and 5800-F2

MODEL SERIES		5875I-F - 48 x 2 - 08 - CN - ST - M2 - D - —		OPTIONAL ACCESSORIES	
- 'Ice Tong' Pattern Controller	58			- None (default)	—
SLOT WIDTH (mm)				- Inlet Damper	ID
1/2" (13)	50(I)			- External Foil Back Insulation	EX
3/4" (19)	75(I)			- Earthquake Tabs	EQT
1" (25)	10(I)			SPECIFIED T-BAR	
(Add Suffix 'I' for Internal Insulation)				- 1 3/4" (44) high	A
STYLE				- 1 5/8" (41) high	C
- Straddle Mount (on 2 slot unit)	F			- 1 25/32" (45) high	D
- Flat Face T-Bars (on multi-slot units)	F2			INCLUDED ACCESSORIES	
NOMINAL LENGTH				- Cross Notch on 48" (1219) unit (default)	CN
inches (mm)				- Straddle T-Bar on -F 2 slot models (default)	ST
- 24 (600)				- T-Bar Mounting Clips (4) (default)	M2
- 48 (1200)				INLET SIZE	
NO. OF SLOTS				4" (102) Round	04
- 1, 2, 3 or 4				5" (127) Round	05
Notes:				6" (152) Round	06
1. Model 5800-F is only available with 1 or 2 slots.				7" (178) Round	07
2. If more than one accessory is desired, list in order.				8" (203) Round	08
				10" (254) Oval	10
				12" (305) Oval	12

PLENUM SLOT AND LIGHT TROFFER DIFFUSERS

SUGGESTED SPECIFICATION:

Narrow Regressed T-Bar, Straddle Mount

Furnish and install **Nailor Model** (select one) **5850-F/5850I-F** (1/2" (13) slot), **5875-F/5875I-F** (3/4" (19) slot), **5810-F/5810I-F** (1" (25) slot) or **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 an adjustable 'ice tong' style pattern deflector mounted within each slot. The pattern deflector shall allow the direction of airflow to be adjusted through a full 180° from the face of the diffuser. The plenum shall have a side inlet with a neck not less than 1 1/4" (38) 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 slots as specified. Two slot models shall straddle the T-Bar lengthwise. The pattern controllers and all exposed edges shall have a BK Black finish. Models 5850I-F, 5875I-F or 5810I-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 – 1991.

Narrow Regressed T-Bar, Flat Face T-Bar(s)

Furnish and install **Nailor Model** (select one) **5850-F2/5850I-F2** (1/2" (13) slot), **5875-F2/5875I-F2** (3/4" (19) slot) or **5810-F2/5810I-F2** (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 an adjustable, 'ice tong' style pattern deflector mounted within each slot. The pattern deflector shall allow the direction of airflow to be adjusted through a full 180° from the face of the diffuser. The plenum shall have a side inlet with a neck not less than 1 1/4" (38) 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, 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 baked enamel finish. Models 5850I-F2, 5875I-F2 or 5810I-F2 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 – 1991.

Performance Data

Model Series 5800 • 1/2" (13) Slot Width

1 Slot • 24" (610) Long • Models 5850(I), 5850(I)-F, 5850(I)-F2

6" Round Inlet	Airflow, CFM	20	30	40	50	60	70	80	90
TP		.014	.031	.055	.087	.125	.170	.221	.280
NC		—	14	20	26	30	34	38	40
T		1-1-6	1-3-7	3-6-9	4-7-9	5-7-10	6-7-10	7-8-12	7-9-13

1 Slot • 48" (1219) Long • Models 5850(I), 5850(I)-F, 5850(I)-F2

6" Round Inlet	Airflow, CFM	35	50	65	80	95	110	125	140
TP		.011	.022	.037	.055	.078	.105	.135	.170
NC		—	16	22	27	31	34	37	40
T		1-2-7	2-3-9	2-5-10	4-8-12	6-9-13	7-10-14	7-10-15	7-11-15

8" Round Inlet	Airflow, CFM	50	65	80	95	110	125	140	155
TP		.024	.041	.063	.088	.118	.153	.191	.235
NC		—	18	23	27	30	33	36	39
T		2-3-9	2-5-10	4-8-12	6-9-13	7-10-14	7-10-15	7-11-15	8-11-16

1 Slot • 60" (1524) Long • Models 5850(I)

6" Round Inlet	Airflow, CFM	50	65	80	95	110	125	140	155
TP		.020	.034	.052	.074	.099	.128	.160	.196
NC		—	17	23	27	31	34	37	39
T		1-3-8	1-4-9	2-4-10	3-6-11	4-8-12	6-10-13	7-10-14	8-11-16

8" Round Inlet	Airflow, CFM	50	65	80	95	110	125	140	155
TP		.023	.039	.059	.083	.111	.143	.180	.221
NC		—	14	19	23	27	31	34	36
T		1-3-8	1-4-9	2-4-10	3-6-11	4-8-12	6-10-13	7-10-14	8-11-16

CFM - cubic feet per minute

TP - total pressure - inches w.g.

T - throw in feet

NC - Noise Criteria (values) based on 10 dB room absorption, re 10⁻¹² watts.

Performance Notes:

1. Throws are given at 150, 100 and 50 fpm terminal velocities under isothermal conditions.
2. 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.
3. Dash (—) in space indicates an NC level of less than 15.

4. Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70 – 1991.

Number of Slots	Ak Factor per foot	
	Supply	Return
1	.013	.033
2	.025	.066
3	.036	.099
4	.041	.132

Performance Data

Model Series 5800 • 1/2" (13) Slot Width

2 Slot • 24" (610) Long • Models 5850(I), 5850(I)-F, 5850(I)-F2

6" Round Inlet	Airflow, CFM	35	50	65	80	95	110	125	140
	TP	.017	.034	.058	.088	.124	.166	.214	.269
	NC	—	15	21	26	31	34	37	40
	T	1-3-7	2-5-8	3-7-9	5-8-11	6-8-12	7-9-13	8-10-14	8-10-15

2 Slot • 48" (1219) Long • Models 5850(I), 5850(I)-F, 5850(I)-F2

6" Round Inlet	Airflow, CFM	60	80	100	120	140	160	180	200
	TP	.020	.036	.057	.082	.111	.145	.184	.227
	NC	—	16	21	25	29	33	35	38
	T	1-3-9	2-4-11	3-6-12	4-8-13	5-9-14	6-10-15	7-11-16	8-13-17

8" Round Inlet	Airflow, CFM	80	100	120	140	160	180	200	220
	TP	.024	.037	.053	.072	.095	.120	.148	.179
	NC	—	18	22	26	29	32	35	37
	T	2-4-11	3-6-12	4-8-13	5-9-14	6-10-15	7-11-16	8-13-17	9-13-19

10" Oval Inlet	Airflow, CFM	100	120	140	160	180	200	220	240
	TP	.043	.063	.085	.111	.141	.174	.210	.250
	NC	15	19	23	26	29	32	34	36
	T	3-6-12	4-8-13	5-9-14	6-10-15	7-11-16	8-13-17	9-13-19	10-14-20

2 Slot • 60" (1524) Long • Models 5850(I)

8" Round Inlet	Airflow, CFM	120	140	160	180	200	220	240	260
	TP	.058	.078	.102	.130	.160	.194	.230	.270
	NC	18	22	25	28	31	33	35	37
	T	2-5-10	4-7-12	4-8-13	5-9-14	6-10-15	7-11-16	7-12-16	8-13-17

10" Oval Inlet	Airflow, CFM	140	160	180	200	220	240	260	280
	TP	.053	.069	.087	.107	.130	.155	.182	.211
	NC	19	22	25	28	30	32	34	36
	T	4-7-12	4-8-13	5-9-14	6-10-15	7-11-16	7-12-16	8-13-17	8-13-19

CFM - cubic feet per minute

TP - total pressure - inches w.g.

T - throw in feet

NC - Noise Criteria (values) based on 10 dB room absorption, re 10⁻¹² watts.

Performance Notes:

- Throws are given at 150, 100 and 50 fpm terminal velocities under isothermal conditions.
- 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.
- Dash (—) in space indicates an NC level of less than 15.

- Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70 – 1991.

Number of Slots	Ak Factor per foot	
	Supply	Return
1	.013	.033
2	.025	.066
3	.036	.099
4	.041	.132

Performance Data

Model Series 5800 • 3/4" (19) Slot Width

1 Slot • 24" (610) Long • Models 5875(I), 5875(I)-F, 5875(I)-F2

6" Round Inlet	Airflow, CFM	20	30	40	50	60	70	80	90
	TP	.011	.025	.044	.069	.100	.136	.177	.224
	NC	—	—	18	24	28	32	35	38
	T	1-2-4	1-3-6	2-4-7	3-6-9	5-7-10	6-7-10	7-8-11	7-9-12

8" Round Inlet	Airflow, CFM	30	40	50	60	70	80	90	100
	TP	.031	.055	.087	.125	.170	.221	.280	.346
	NC	—	16	21	25	29	31	34	37
	T	1-3-6	2-4-7	3-6-9	5-7-10	6-7-10	7-8-11	7-9-12	8-10-13

10" Oval Inlet	Airflow, CFM	40	50	60	70	80	90	100	110
	TP	.071	.111	.160	.218	.284	.360	.444	.538
	NC	—	16	21	25	28	31	34	36
	T	2-4-7	3-6-9	5-7-10	6-7-10	7-8-11	7-9-12	8-10-13	8-10-14

1 Slot • 48" (1219) Long • Models 5875(I), 5875(I)-F, 5875(I)-F2

6" Round Inlet	Airflow, CFM	35	50	65	80	95	110	125	140
	TP	.003	.019	.033	.044	.070	.093	.121	.151
	NC	—	15	20	25	28	31	34	37
	T	1-2-4	2-4-7	3-5-8	4-6-11	5-7-12	6-9-13	6-10-13	7-11-14

8" Round Inlet	Airflow, CFM	50	65	80	95	110	125	140	155
	TP	.016	.028	.042	.059	.080	.103	.129	.158
	NC	—	16	21	25	28	30	33	36
	T	2-4-7	3-5-8	4-6-11	5-7-12	6-9-13	6-10-13	7-11-14	7-11-15

10" Oval Inlet	Airflow, CFM	65	80	95	110	125	140	155	170
	TP	.031	.047	.066	.088	.114	.143	.175	.211
	NC	—	18	22	26	29	31	33	36
	T	3-5-8	4-6-11	5-7-12	6-9-13	6-10-13	7-11-14	7-11-15	8-12-16

12" Oval Inlet	Airflow, CFM	80	95	110	125	140	155	170	185
	TP	.052	.079	.099	.128	.160	.196	.236	.279
	NC	14	18	21	24	27	29	32	34
	T	4-6-11	5-7-12	6-9-13	6-10-13	7-11-14	7-11-15	8-12-16	8-13-18

1 Slot • 60" (1524) Long • Models 5875(I)

8" Round Inlet	Airflow, CFM	80	95	110	125	140	155	170	185
	TP	.032	.045	.060	.077	.097	.119	.143	.169
	NC	17	21	25	28	31	33	35	37
	T	3-5-8	4-6-10	5-7-11	5-8-12	6-9-14	7-10-15	7-11-16	8-12-17

10" Oval Inlet	Airflow, CFM	95	110	125	140	155	170	185	200
	TP	.041	.055	.071	.089	.109	.131	.155	.181
	NC	19	22	25	28	30	32	34	36
	T	4-6-10	5-7-11	5-8-12	6-9-14	7-10-15	7-11-16	8-12-17	8-13-18

12" Oval Inlet	Airflow, CFM	110	125	140	155	170	185	200	215
	TP	.055	.071	.089	.109	.131	.155	.181	.209
	NC	19	22	24	27	29	31	33	35
	T	5-7-11	5-8-12	6-9-14	7-10-15	7-11-16	8-12-17	8-13-18	9-14-19

CFM - cubic feet per minute

TP - total pressure - inches w.g.

T - throw in feet

NC - Noise Criteria (values) based on 10 dB room absorption, re 10⁻¹² watts.

Performance Notes:

1. Throws are given at 150, 100 and 50 fpm terminal velocities under isothermal conditions.

2. 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.

3. Dash (—) in space indicates an NC level of less than 15.

4. Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70 – 1991.

Number of Slots	Ak Factor per foot	
	Supply	Return
1	.019	.039
2	.034	.078
3	.046	.117
4	.062	.156

Performance Data

Model Series 5800 • 3/4" (19) Slot Width

2 Slot • 24" (610) Long • Models 5875(I), 5875(I)-F, 5875(I)-F2

6" Round Inlet	Airflow, CFM	50	65	80	95	110	125	140	155
	TP	.022	.037	.055	.078	.105	.135	.170	.208
	NC	—	19	24	28	32	35	38	41
	T	1-3-8	2-5-9	3-7-10	5-9-12	6-9-13	7-10-14	8-10-15	8-11-17
8" Round Inlet	Airflow, CFM	65	80	95	110	125	140	155	170
	TP	.029	.044	.063	.084	.108	.136	.166	.200
	NC	16	21	25	28	31	34	37	40
	T	2-5-9	3-7-10	5-9-12	6-9-13	7-10-14	8-10-15	8-11-17	9-11-19
10" Oval Inlet	Airflow, CFM	80	95	110	125	140	155	170	185
	TP	.049	.070	.093	.121	.151	.185	.223	.264
	NC	15	21	25	29	32	35	38	40
	T	3-7-10	5-9-12	6-9-13	7-10-14	8-10-15	8-11-17	9-11-19	10-12-20

2 Slot • 48" (1219) Long • Models 5875(I), 5875(I)-F, 5875(I)-F2

6" Round Inlet	Airflow, CFM	60	80	100	120	140	160	180	200
	TP	.018	.032	.049	.071	.097	.126	.160	.198
	NC	—	14	19	23	27	30	33	36
	T	1-4-10	2-5-12	2-6-13	3-6-13	4-7-14	4-10-14	5-11-16	6-12-17
8" Round Inlet	Airflow, CFM	80	100	120	140	160	180	200	220
	TP	.018	.028	.040	.054	.071	.090	.111	.134
	NC	—	15	19	23	27	30	33	36
	T	2-5-12	2-6-13	3-6-13	4-7-14	4-10-14	5-11-16	6-12-17	7-13-18
10" Oval Inlet	Airflow, CFM	100	120	140	160	180	200	220	240
	TP	.020	.029	.040	.052	.066	.082	.099	.118
	NC	—	17	21	24	27	30	33	35
	T	2-6-13	3-6-13	4-7-14	4-10-14	5-11-16	6-12-17	7-13-18	8-14-20
12" Oval Inlet	Airflow, CFM	120	140	160	180	200	220	240	260
	TP	.031	.042	.055	.078	.087	.105	.125	.146
	NC	—	16	19	24	27	30	33	35
	T	3-6-13	4-7-14	4-10-14	5-11-16	6-12-17	7-13-18	8-14-20	9-15-21

2 Slot • 60" (1524) Long • Models 5875(I)

8" Round Inlet	Airflow, CFM	140	160	180	200	220	240	260	280
	TP	.044	.057	.072	.089	.108	.128	.151	.175
	NC	20	23	26	28	31	33	35	37
	T	2-6-13	3-7-14	5-8-15	5-8-16	6-9-17	6-10-18	7-11-19	8-13-20
10" Oval Inlet	Airflow, CFM	160	180	200	220	240	260	280	300
	TP	.040	.051	.063	.076	.090	.106	.123	.141
	NC	20	23	25	28	30	32	34	36
	T	3-7-14	5-8-15	5-8-16	6-9-17	6-10-18	7-11-19	8-13-20	8-15-21
12" Oval Inlet	Airflow, CFM	180	200	220	240	260	280	300	320
	TP	.036	.044	.054	.064	.075	.087	.100	.113
	NC	19	22	24	26	28	30	32	34
	T	5-8-15	5-8-16	6-9-17	6-10-18	7-11-19	8-13-20	8-15-21	9-16-22

CFM - cubic feet per minute

TP - total pressure - inches w.g.

T - throw in feet

NC - Noise Criteria (values) based on 10 dB room absorption, re 10⁻¹² watts.

Performance Notes:

1. Throws are given at 150, 100 and 50 fpm terminal velocities under isothermal conditions.

2. 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.

3. Dash (—) in space indicates an NC level of less than 15.

4. Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70 – 1991.

Number of Slots	Ak Factor per foot	
	Supply	Return
1	.019	.039
2	.034	.078
3	.046	.117
4	.062	.156

Performance Data

Model Series 5800 • 3/4" (19) Slot Width

3 Slot • 24" (610) Long • Models 5875(I), 5875(I)-F2

6" Round Inlet	Airflow, CFM	60	80	100	120	140	160	180	200
	TP	.021	.038	.059	.086	.117	.152	.193	.238
	NC	—	18	24	28	32	35	38	41
	T	2-5-10	3-6-11	4-7-12	5-8-13	6-9-16	7-10-18	9-12-20	10-13-21

8" Round Inlet	Airflow, CFM	80	100	120	140	160	180	200	220
	TP	.025	.038	.055	.075	.098	.125	.154	.186
	NC	14	19	24	28	31	34	36	38
	T	3-6-11	4-7-12	5-8-13	6-9-16	7-10-18	9-12-20	10-13-21	10-14-22

10" Oval Inlet	Airflow, CFM	100	120	140	160	180	200	220	240
	TP	.040	.058	.078	.102	.130	.160	.194	.230
	NC	17	21	25	28	31	33	35	37
	T	4-7-12	5-8-13	6-9-16	7-10-18	9-12-20	10-13-21	10-14-22	11-14-23

3 Slot • 48" (1219) Long • Models 5875(I), 5875(I)-F2

6" Round Inlet	Airflow, CFM	125	150	175	200	225	250	275	300
	TP	.060	.087	.118	.154	.195	.240	.291	.346
	NC	18	22	26	30	33	35	37	39
	T	2-6-14	3-7-15	5-9-16	6-10-17	6-11-18	7-12-19	7-13-20	8-14-21

8" Round Inlet	Airflow, CFM	150	175	200	225	250	275	300	325
	TP	.046	.063	.082	.103	.128	.154	.184	.216
	NC	18	22	25	28	31	33	35	37
	T	3-7-15	5-9-16	6-10-17	6-11-18	7-12-19	7-13-20	8-14-21	9-15-23

10" Oval Inlet	Airflow, CFM	175	200	225	250	275	300	325	350
	TP	.041	.054	.068	.085	.102	.122	.143	.166
	NC	20	23	25	28	30	32	34	36
	T	5-9-16	6-10-17	6-11-18	7-12-19	7-13-20	8-14-21	9-15-23	10-16-25

12" Oval Inlet	Airflow, CFM	200	225	250	275	300	325	350	375
	TP	.033	.042	.052	.063	.074	.087	.101	.116
	NC	18	21	24	26	28	30	32	34
	T	6-10-17	6-11-18	7-12-19	7-13-20	8-14-21	9-15-23	10-16-25	11-17-27

3 Slot • 60" (1524) Long • Models 5875(I)

8" Round Inlet	Airflow, CFM	180	210	240	270	300	330	360	390
	TP	.056	.076	.100	.126	.156	.189	.224	.263
	NC	19	23	26	29	32	34	36	38
	T	3-8-15	5-10-16	6-11-18	7-12-19	7-13-20	8-14-21	8-15-22	9-16-23

10" Oval Inlet	Airflow, CFM	210	240	270	300	330	360	390	420
	TP	.052	.068	.086	.106	.129	.153	.186	.208
	NC	21	24	26	29	31	33	35	37
	T	5-10-16	6-11-18	7-12-19	7-13-20	8-14-21	8-15-22	9-16-23	9-17-24

12" Oval Inlet	Airflow, CFM	240	270	300	330	360	390	420	450
	TP	.040	.057	.068	.076	.090	.106	.123	.141
	NC	20	22	25	27	29	31	33	35
	T	6-11-18	7-12-19	7-13-20	8-14-21	8-15-22	9-16-23	9-17-24	10-17-25

CFM - cubic feet per minute

TP - total pressure - inches w.g.

T - throw in feet

NC - Noise Criteria (values) based on 10 dB room absorption, re 10⁻¹² watts.

Performance Notes:

1. Throws are given at 150, 100 and 50 fpm terminal velocities under isothermal conditions.

2. 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.

3. Dash (—) in space indicates an NC level of less than 15.

4. Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70 – 1991.

Number of Slots	Ak Factor per foot	
	Supply	Return
1	.019	.039
2	.034	.078
3	.046	.117
4	.062	.156

Performance Data

Model Series 5800 • 3/4" (19) Slot Width

4 Slot • 24" (610) Long • Models 5875(I), 5875(I)-F2

6" Round Inlet	Airflow, CFM	75	100	125	150	175	200	225	250
	TP	.027	.047	.074	.106	.145	.189	.239	.295
	NC	—	19	25	29	33	36	39	42
	T	2-6-11	3-7-13	5-8-14	7-10-15	8-11-17	9-12-20	9-13-21	10-14-23
8" Round Inlet	Airflow, CFM	100	125	150	175	200	225	250	275
	TP	.025	.039	.057	.077	.101	.128	.157	.191
	NC	15	20	24	29	32	35	37	39
	T	3-7-13	5-8-14	7-10-15	8-11-17	9-12-20	9-13-21	10-14-23	11-16-24
10" Oval Inlet	Airflow, CFM	125	150	175	200	225	250	275	300
	TP	.034	.049	.066	.087	.109	.135	.164	.195
	NC	19	22	25	29	32	34	36	38
	T	5-8-14	7-10-15	8-11-17	9-12-20	9-13-21	10-14-23	11-16-24	13-19-26

4 Slot • 48" (1219) Long • Models 5875(I), 5875(I)-F2

6" Round Inlet	Airflow, CFM	160	190	220	250	280	310	340	370
	TP	.091	.129	.172	.222	.279	.342	.412	.487
	NC	20	24	27	30	32	35	37	39
	T	3-8-15	4-10-16	5-12-18	6-13-20	7-14-21	9-15-22	10-16-24	11-17-26
8" Round Inlet	Airflow, CFM	190	220	250	280	310	340	370	400
	TP	.058	.078	.100	.126	.154	.185	.219	.256
	NC	20	23	26	29	31	34	36	38
	T	4-10-16	5-12-18	6-13-20	7-14-21	9-15-22	10-16-24	11-17-26	12-17-28
10" Oval Inlet	Airflow, CFM	220	250	280	310	340	370	400	430
	TP	.051	.066	.083	.102	.123	.145	.170	.197
	NC	20	23	26	29	31	33	35	37
	T	5-12-18	6-13-20	7-14-21	9-15-22	10-16-24	11-17-26	12-17-28	12-18-29
12" Oval Inlet	Airflow, CFM	250	280	310	340	370	400	430	460
	TP	.037	.046	.057	.068	.081	.095	.109	.125
	NC	19	22	25	27	29	31	33	35
	T	6-13-20	7-14-21	9-15-22	10-16-24	11-17-26	12-17-28	12-18-29	13-19-30

4 Slot • 60" (1524) Long • Models 5875(I)

8" Round Inlet	Airflow, CFM	220	260	300	340	380	420	460	500
	TP	.072	.101	.134	.172	.215	.262	.315	.372
	NC	20	24	27	30	33	35	37	39
	T	3-10-16	4-11-18	6-12-20	8-13-22	10-15-24	11-16-26	12-17-28	13-19-31
10" Oval Inlet	Airflow, CFM	260	300	340	380	420	460	500	540
	TP	.063	.083	.107	.134	.163	.196	.231	.270
	NC	21	24	27	30	33	35	37	39
	T	4-11-18	6-12-20	8-13-22	10-15-24	11-16-26	12-17-28	13-19-31	14-20-32
12" Oval Inlet	Airflow, CFM	300	340	380	420	460	500	540	580
	TP	.043	.055	.069	.084	.101	.119	.139	.160
	NC	20	23	26	28	31	33	35	37
	T	6-12-20	8-13-22	10-15-24	11-16-26	12-17-28	13-19-31	14-20-32	14-21-34

CFM - cubic feet per minute

TP - total pressure - inches w.g.

T - throw in feet

NC - Noise Criteria (values) based on 10 dB room absorption, re 10⁻¹² watts.

Performance Notes:

1. Throws are given at 150, 100 and 50 fpm terminal velocities under isothermal conditions.

2. 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.

3. Dash (—) in space indicates an NC level of less than 15.

4. Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70 – 1991.

Number of Slots	Ak Factor per foot	
	Supply	Return
1	.019	.039
2	.034	.078
3	.046	.117
4	.062	.156

Performance Data

Model Series 5800 • 1" (25) Slot Width

1 Slot • 24" (610) Long • Models 5810(I), 5810(I)-F, 5810(I)-F2

6" Round Inlet	Airflow, CFM	20	30	40	50	60	70	80	90
	TP	.006	.014	.026	.040	.058	.078	.102	.130
	NC	—	—	16	22	26	30	33	36
	T	1-2-4	2-3-5	2-4-6	3-5-7	4-6-8	4-6-9	5-6-9	5-7-10

8" Round Inlet	Airflow, CFM	30	40	50	60	70	80	90	100
	TP	.019	.033	.052	.074	.101	.132	.167	.207
	NC	—	—	16	22	26	29	31	34
	T	2-3-5	2-4-6	3-5-7	4-6-8	4-6-9	5-6-9	5-7-10	6-7-10

10" Oval Inlet	Airflow, CFM	40	50	60	70	80	90	100	110
	TP	.040	.063	.090	.123	.160	.203	.250	.303
	NC	—	14	19	23	26	28	31	34
	T	2-4-6	3-5-7	4-6-8	4-6-9	5-6-9	5-7-10	6-7-10	6-7-10

1 Slot • 48" (1219) Long • Models 5810(I), 5810(I)-F, 5810(I)-F2

6" Round Inlet	Airflow, CFM	50	65	80	95	110	125	140	155
	TP	.016	.026	.040	.056	.076	.098	.123	.150
	NC	—	17	22	25	29	32	35	37
	T	1-2-5	1-3-7	1-3-9	2-4-10	2-5-10	3-5-11	3-6-12	4-7-12

8" Round Inlet	Airflow, CFM	65	80	95	110	125	140	155	170
	TP	.018	.027	.038	.050	.065	.082	.100	.120
	NC	—	18	22	25	28	31	33	36
	T	1-3-7	1-3-9	2-4-10	2-5-10	3-5-11	3-6-12	4-7-12	5-8-13

10" Oval Inlet	Airflow, CFM	80	95	110	125	140	155	170	185
	TP	.029	.041	.055	.071	.089	.109	.131	.155
	NC	15	19	23	26	29	31	33	35
	T	1-3-9	2-4-10	2-5-10	3-5-11	3-6-12	4-7-12	5-8-13	6-9-14

12" Oval Inlet	Airflow, CFM	95	110	125	140	155	170	185	200
	TP	.045	.060	.077	.097	.119	.143	.169	.198
	NC	15	18	21	24	27	30	32	34
	T	2-4-10	2-5-10	3-5-11	3-6-12	4-7-12	5-8-13	6-9-14	7-10-15

1 Slot • 60" (1524) Long • Models 5810(I)

8" Round Inlet	Airflow, CFM	80	95	110	125	140	155	170	185
	TP	.021	.030	.040	.052	.065	.079	.096	.113
	NC	15	19	23	26	29	31	33	35
	T	1-3-7	1-3-9	2-4-9	3-5-10	3-5-11	4-6-11	5-7-12	6-8-13

10" Oval Inlet	Airflow, CFM	95	110	125	140	155	170	185	200
	TP	.025	.034	.043	.054	.067	.080	.095	.111
	NC	15	19	23	25	28	30	32	34
	T	1-3-9	2-4-9	3-5-10	3-5-11	4-6-11	5-7-12	6-8-13	6-9-14

12" Oval Inlet	Airflow, CFM	110	125	140	155	170	185	200	215
	TP	.033	.042	.053	.065	.078	.092	.107	.124
	NC	16	19	21	25	27	29	31	33
	T	2-4-9	3-5-10	3-5-11	4-6-11	5-7-12	6-8-13	6-9-14	7-10-15

CFM - cubic feet per minute

TP - total pressure - inches w.g.

T - throw in feet

NC - Noise Criteria (values) based on 10 dB room absorption, re 10⁻¹² watts.

Performance Notes:

1. Throws are given at 150, 100 and 50 fpm terminal velocities under isothermal conditions.

2. 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.

3. Dash (—) in space indicates an NC level of less than 15.

4. Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70 – 1991.

Number of Slots	Ak Factor per foot	
	Supply	Return
1	.025	.051
2	.045	.104
3	.060	.155
4	.082	.206

Performance Data

Model Series 5800 • 1" (25) Slot Width

2 Slot • 24" (610) Long • Models 5810(I), 5810(I)-F, 5810(I)-F2

6" Round Inlet	Airflow, CFM	50	65	80	95	110	125	140	155
	TP	.016	.028	.042	.059	.080	.103	.129	.158
	NC	—	16	22	26	30	33	36	39
	T	2-4-7	2-5-8	4-6-9	5-6-10	6-7-10	6-8-12	7-8-14	7-9-15
8" Round Inlet	Airflow, CFM	65	80	95	110	125	140	155	170
	TP	.021	.032	.045	.060	.077	.097	.119	.143
	NC	—	19	22	26	29	32	35	38
	T	2-5-8	4-6-9	5-6-10	6-7-10	6-8-12	7-8-14	7-9-15	8-10-15
10" Oval Inlet	Airflow, CFM	80	95	110	125	140	155	170	185
	TP	.035	.049	.065	.085	.106	.130	.156	.185
	NC	15	19	23	26	29	32	35	37
	T	4-6-9	5-6-10	6-7-10	6-8-12	7-8-14	7-9-15	8-10-15	8-10-16

2 Slot • 48" (1219) Long • Models 5810(I), 5810(I)-F, 5810(I)-F2

6" Round Inlet	Airflow, CFM	100	120	140	160	180	200	220	240
	TP	.043	.063	.085	.111	.141	.174	.210	.250
	NC	17	21	25	28	31	34	36	38
	T	1-4-8	2-6-9	4-7-12	5-8-13	6-9-14	6-10-14	7-11-15	8-12-17
8" Round Inlet	Airflow, CFM	120	140	160	180	200	220	240	260
	TP	.033	.045	.059	.074	.092	.111	.132	.155
	NC	17	21	24	27	30	32	34	36
	T	2-6-9	4-7-12	5-8-13	6-9-14	6-10-14	7-11-15	8-12-17	8-12-17
10" Oval Inlet	Airflow, CFM	140	160	180	200	220	240	260	280
	TP	.031	.040	.051	.063	.076	.090	.106	.123
	NC	18	21	24	27	29	31	33	35
	T	4-7-12	5-8-13	6-9-14	6-10-14	7-11-15	8-12-17	8-12-17	9-13-19
12" Oval Inlet	Airflow, CFM	160	180	200	220	240	260	280	300
	TP	.026	.032	.040	.048	.058	.068	.078	.090
	NC	17	21	23	25	27	29	31	33
	T	5-8-13	6-9-14	6-10-14	7-11-15	8-12-17	8-12-17	9-13-19	9-13-21

2 Slot • 60" (1524) Long • Models 5810(I)

8" Round Inlet	Airflow, CFM	160	180	200	220	240	260	280	300
	TP	.048	.061	.075	.091	.108	.127	.147	.169
	NC	21	24	26	28	30	32	34	36
	T	3-6-10	4-7-12	6-9-14	7-9-15	7-10-16	8-11-17	8-12-18	9-13-19
10" Oval Inlet	Airflow, CFM	180	200	220	240	260	280	300	320
	TP	.042	.052	.063	.074	.087	.101	.116	.132
	NC	21	23	25	28	30	32	34	36
	T	4-7-12	6-9-14	7-9-15	7-10-16	8-11-17	8-12-18	9-13-19	9-14-21
12" Oval Inlet	Airflow, CFM	200	220	240	260	280	300	320	340
	TP	.036	.044	.052	.061	.071	.082	.093	.105
	NC	20	23	25	27	29	31	33	35
	T	6-9-14	7-9-15	7-10-16	8-11-17	8-12-18	9-13-19	9-14-21	10-15-22

CFM - cubic feet per minute

TP - total pressure - inches w.g.

T - throw in feet

NC - Noise Criteria (values) based on 10 dB room absorption, re 10⁻¹² watts.

Performance Notes:

1. Throws are given at 150, 100 and 50 fpm terminal velocities under isothermal conditions.

2. 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.

3. Dash (—) in space indicates an NC level of less than 15.

4. Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70 – 1991.

Number of Slots	Ak Factor per foot	
	Supply	Return
1	.025	.051
2	.045	.104
3	.060	.155
4	.082	.206

Performance Data

Model Series 5800 • 1" (25) Slot Width

3 Slot • 24" (610) Long • Models 5810(I), 5810(I)-F2

6" Round Inlet	Airflow, CFM	60	80	100	120	140	160	180	200
	TP	.019	.035	.054	.078	.106	.138	.175	.216
	NC	—	16	21	25	29	32	35	38
	T	2-4-8	3-5-9	4-6-10	5-7-11	6-8-12	7-9-14	7-10-15	8-10-16

8" Round Inlet	Airflow, CFM	80	100	120	140	160	180	200	220
	TP	.018	.028	.040	.054	.071	.090	.111	.134
	NC	—	17	22	25	28	31	34	36
	T	3-5-9	4-6-10	5-7-11	6-8-12	7-9-14	7-10-15	8-10-16	8-11-17

10" Oval Inlet	Airflow, CFM	100	120	140	160	180	200	220	240
	TP	.024	.034	.046	.061	.077	.095	.115	.136
	NC	15	19	22	25	28	31	33	35
	T	4-6-10	5-7-11	6-8-12	7-9-14	7-10-15	8-10-16	8-11-17	9-11-18

3 Slot • 48" (1219) Long • Models 5810(I), 5810(I)-F2

6" Round Inlet	Airflow, CFM	125	150	175	200	225	250	275	300
	TP	.058	.083	.113	.148	.187	.231	.280	.333
	NC	16	20	24	27	30	33	35	37
	T	2-4-10	3-6-12	5-7-14	5-8-15	6-8-16	7-9-17	7-10-18	7-11-18

8" Round Inlet	Airflow, CFM	150	175	200	225	250	275	300	325
	TP	.039	.053	.069	.088	.108	.131	.156	.183
	NC	17	20	23	26	29	31	33	35
	T	3-6-12	5-7-14	5-8-15	6-8-16	7-9-17	7-10-18	7-11-18	8-12-20

10" Oval Inlet	Airflow, CFM	175	200	225	250	275	300	325	350
	TP	.036	.047	.060	.074	.089	.106	.125	.145
	NC	17	20	23	25	27	29	31	33
	T	5-7-14	5-8-15	6-8-16	7-9-17	7-10-18	7-11-18	8-12-20	8-13-22

12" Oval Inlet	Airflow, CFM	200	225	250	275	300	325	350	375
	TP	.026	.032	.040	.048	.058	.068	.078	.090
	NC	16	19	22	24	26	28	30	32
	T	5-8-15	6-8-16	7-9-17	7-10-18	7-11-18	8-12-20	8-13-22	9-14-23

3 Slot • 60" (1524) Long • Models 5810(I)

8" Round Inlet	Airflow, CFM	180	210	240	270	300	330	360	390
	TP	.051	.069	.090	.114	.141	.170	.203	.238
	NC	17	20	24	27	30	32	34	36
	T	3-7-13	4-8-15	6-9-17	6-10-18	7-11-19	7-12-20	8-13-22	8-14-23

10" Oval Inlet	Airflow, CFM	210	240	270	300	330	360	390	420
	TP	.044	.058	.073	.090	.109	.130	.152	.176
	NC	19	21	24	26	29	31	33	35
	T	4-8-15	6-9-17	6-10-18	7-11-19	7-12-20	8-13-22	8-14-23	9-15-24

12" Oval Inlet	Airflow, CFM	240	270	300	330	360	390	420	450
	TP	.029	.037	.046	.056	.066	.078	.090	.103
	NC	18	20	22	25	27	29	31	33
	T	6-9-17	6-10-18	7-11-19	7-12-20	8-13-22	8-14-23	9-15-24	10-16-26

CFM - cubic feet per minute

TP - total pressure - inches w.g.

T - throw in feet

NC - Noise Criteria (values) based on 10 dB room absorption, re 10⁻¹² watts.

Performance Notes:

1. Throws are given at 150, 100 and 50 fpm terminal velocities under isothermal conditions.

2. 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.

3. Dash (—) in space indicates an NC level of less than 15.

4. Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70 – 1991.

Number of Slots	Ak Factor per foot	
	Supply	Return
1	.025	.051
2	.045	.104
3	.060	.155
4	.082	.206

Performance Data

Model Series 5800 • 1" (25) Slot Width

4 Slot • 24" (610) Long • Models 5810(I), 5810(I)-F2

6" Round Inlet	Airflow, CFM	75	100	125	150	175	200	225	250
	TP	.024	.043	.068	.098	.133	.174	.220	.271
	NC	—	17	22	26	30	33	36	38
	T	3-5-10	4-7-11	6-8-12	6-8-13	7-9-15	7-10-16	8-11-18	8-11-19
8" Round Inlet	Airflow, CFM	100	125	150	175	200	225	250	275
	TP	.022	.034	.049	.066	.087	.109	.135	.164
	NC	—	18	22	26	30	32	34	37
	T	4-7-11	6-8-12	6-8-13	7-9-15	7-10-16	8-11-18	8-11-19	9-13-21
10" Oval Inlet	Airflow, CFM	125	150	175	200	225	250	275	300
	TP	.023	.033	.046	.059	.075	.093	.112	.134
	NC	16	20	23	27	29	32	34	36
	T	6-8-12	6-8-13	7-9-15	7-10-16	8-11-18	8-11-19	9-13-21	9-14-22

4 Slot • 48" (1219) Long • Models 5810(I), 5810(I)-F2

6" Round Inlet	Airflow, CFM	160	190	220	250	280	310	340	370
	TP	.085	.119	.160	.207	.259	.318	.382	.453
	NC	17	21	25	28	31	33	35	37
	T	3-6-14	5-7-15	6-8-16	7-10-17	7-11-18	8-12-19	8-13-20	9-14-21
8" Round Inlet	Airflow, CFM	190	220	250	280	310	340	370	400
	TP	.052	.070	.091	.114	.139	.168	.199	.232
	NC	18	21	24	27	29	31	33	35
	T	5-7-15	6-8-16	7-10-17	7-11-18	8-12-19	8-13-20	9-14-21	9-14-22
10" Oval Inlet	Airflow, CFM	220	250	280	310	340	370	400	430
	TP	.044	.057	.071	.087	.105	.124	.145	.168
	NC	18	21	24	26	28	30	32	34
	T	6-8-16	7-10-17	7-11-18	8-12-19	8-13-20	9-14-21	9-14-22	10-15-24
12" Oval Inlet	Airflow, CFM	250	280	310	340	370	400	430	460
	TP	.032	.040	.049	.059	.070	.082	.094	.108
	NC	17	20	23	25	27	29	31	33
	T	7-10-17	7-11-18	8-12-19	8-13-20	9-14-21	9-14-22	10-15-24	10-16-26

4 Slot • 60" (1524) Long • Models 5810(I)

8" Round Inlet	Airflow, CFM	220	260	300	340	380	420	460	500
	TP	.069	.096	.128	.164	.205	.250	.300	.354
	NC	17	21	25	28	30	32	35	37
	T	4-6-13	6-8-15	7-10-17	8-12-19	9-13-21	9-14-22	10-15-23	10-16-24
10" Oval Inlet	Airflow, CFM	260	300	340	380	420	460	500	540
	TP	.058	.077	.099	.124	.151	.181	.214	.250
	NC	19	22	25	28	30	32	34	36
	T	6-8-15	7-10-17	8-12-19	9-13-21	9-14-22	10-15-23	10-16-24	11-18-26
12" Oval Inlet	Airflow, CFM	300	340	380	420	460	500	540	580
	TP	.035	.045	.056	.069	.083	.098	.114	.131
	NC	18	21	24	26	28	30	32	34
	T	7-10-17	8-12-19	9-13-21	9-14-22	10-15-23	10-16-24	11-18-26	12-19-28

CFM - cubic feet per minute

TP - total pressure - inches w.g.

T - throw in feet

NC - Noise Criteria (values) based on 10 dB room absorption, re 10⁻¹² watts.

Performance Notes:

1. Throws are given at 150, 100 and 50 fpm terminal velocities under isothermal conditions.

2. 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.

3. Dash (—) in space indicates an NC level of less than 15.

4. Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70 – 1991.

Number of Slots	Ak Factor per foot	
	Supply	Return
1	.025	.051
2	.045	.104
3	.060	.155
4	.082	.206

ADJUSTABLE 'FLIP FLOP' PATTERN CONTROLLER

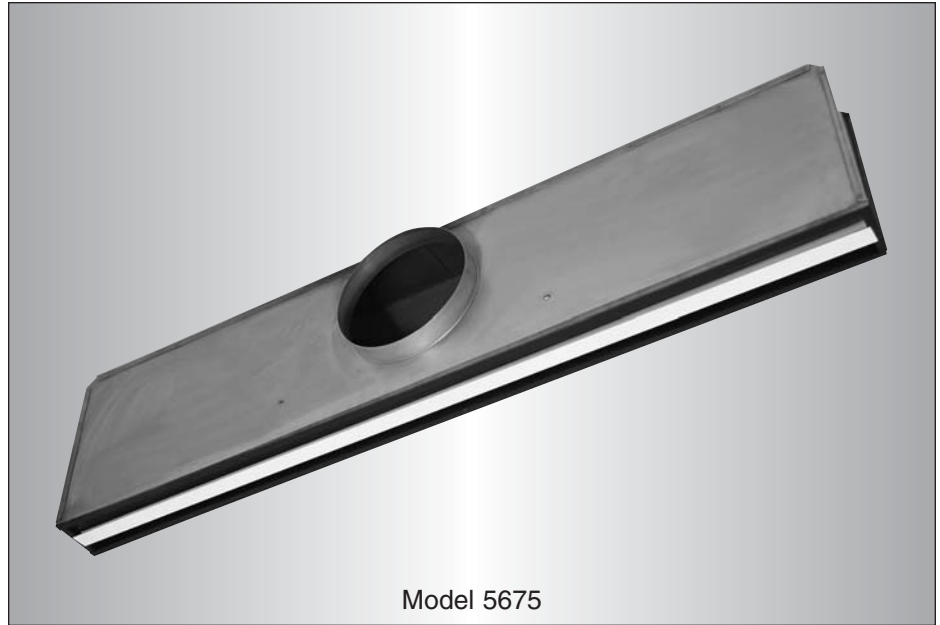
- FOR STANDARD LAY-IN T-BAR
- SUPPLY

Uninsulated Model:

5675 3/4" (19) Slot Width

Insulated Model:

5675I 3/4" (19) Slot Width



Model 5675

The **5600 Series 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) slot spacing, the **5600 Series** design offers high performance and extremely good value, where budgetary restraints are a consideration.

The **5600 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 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 and the **5600 Series** therefore provides excellent performance in variable air volume applications.

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.

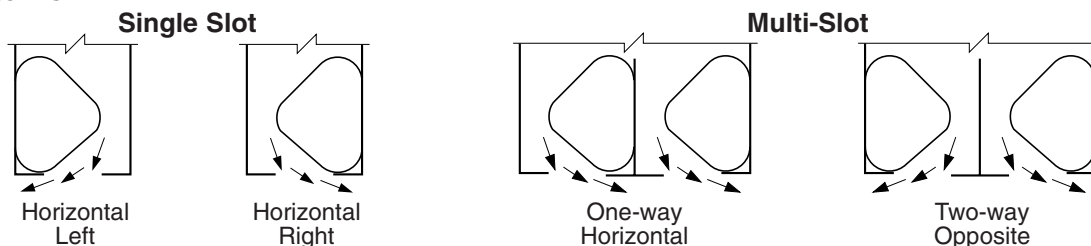
Options:

- Internal insulation (add suffix 'I' to model number).
- A full range of options and accessories are available, see page C53.

Material: Corrosion-resistant steel.

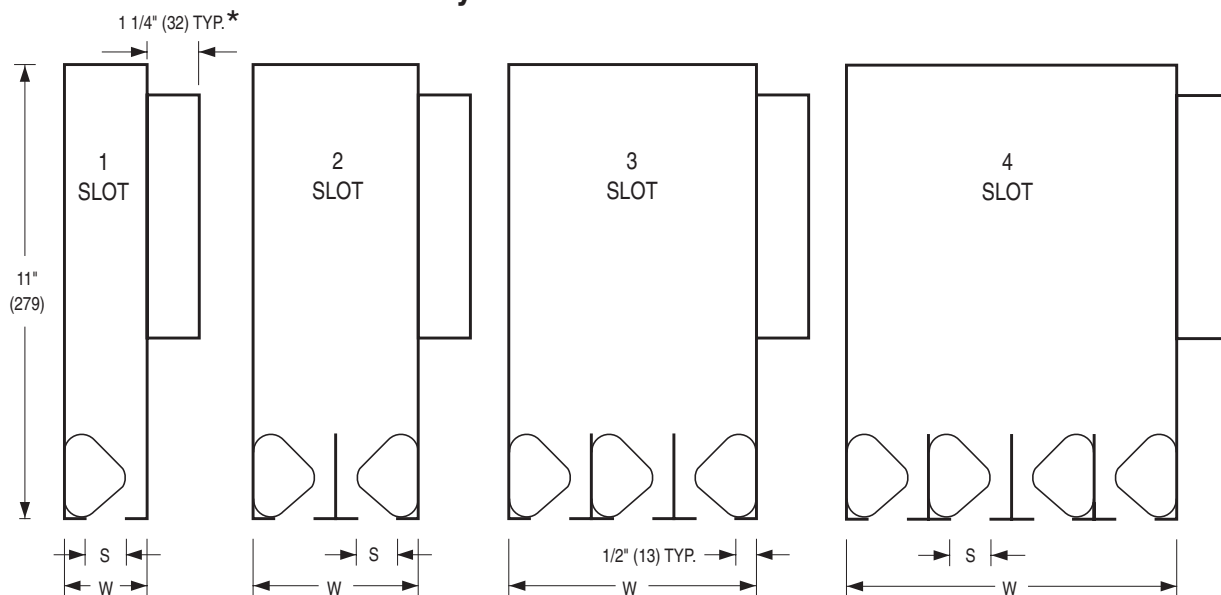
Finish: Black on pattern controllers and exposed surfaces. AW Appliance White baked enamel on center T-Bars.

Air Patterns



Dimensional Data

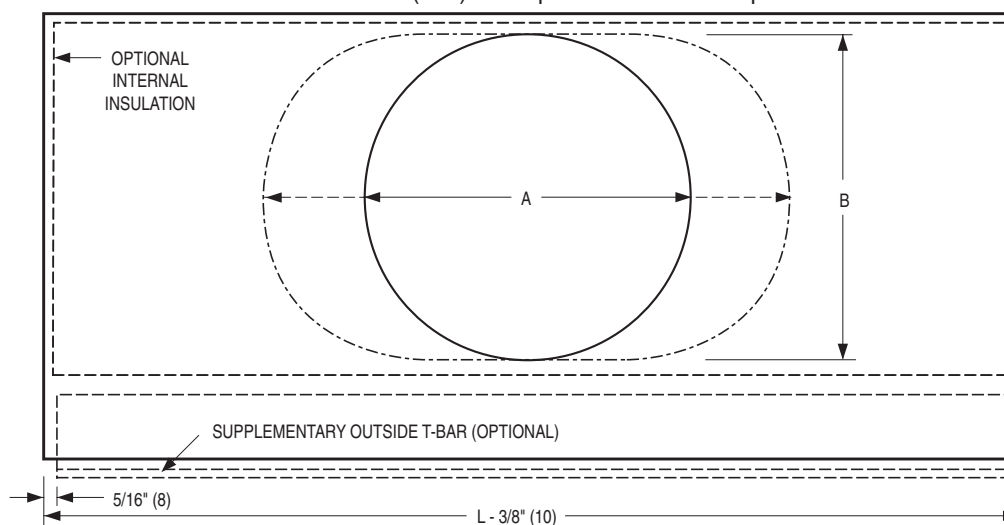
Model Series 5600 • Standard Lay-in T-Bar Models



		S
		Slot Width
		3/4 (19)
W	1 Slot	1 3/4 (31)
	2 Slot	3 1/2 (89)
	3 Slot	5 1/4 (133)
	4 Slot	7 (178)

	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 (378)
B	—	—	7 7/8 (200)	7 7/8 (200)

* 4" (102) with optional ID Inlet Damper



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

Dimensions are in inches (mm).

HOW TO SPECIFY OR TO ORDER

(Show complete Model Number and Size, unless "Default" is desired).

'Flip Flop' Supply Air Plenum Slot Diffusers – Model Series 5600

PLENUM SLOT AND LIGHT TROFFER DIFFUSERS

5675I - 48 x 2 - 08 - - -		
MODEL SERIES		ACCESSORIES
- 'Flip Flop' Pattern Controller	56	- None (default) —
SLOT WIDTH (mm)		- Cross Notch CN
3/4" (19)	75	- Plaster Frame PF
INTERNAL INSULATION		- Supplementary T-Bars
- None —		One (Inlet Side) T1
- Internal Insulation I		One (Opposite Inlet Side) T0
NOMINAL LENGTH		Two (One Each Side) T2
inches (mm)		- T-Bar Mounting Clips (2) M1
- 20 (500)		- T-Bar Mounting Clips (4) M2
- 24 (600)		- External Foil Back Insulation EX
- 30 (750)		- Straddle T-Bar ST
- 36 (900)		
- 48 (1200)		DAMPER
- 60 (1500)		- None (default) —
NO. OF SLOTS		- Inlet Damper ID
- 1		INLET SIZE
- 2		4" (102) Round 04
- 3		5" (127) Round 05
- 4		6" (152) Round 06
		7" (178) Round 07
		8" (203) Round 08
		10" (254) Oval 10
		12" (305) Oval 12

Note:

- If more than one accessory is desired, list in order.

SUGGESTED SPECIFICATION:

Furnish and install **Nailor Model 5675/5675I** (3/4" (19) 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" (38) 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 baked enamel finish. Model 5675I 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 – 1991.

Performance Data

Models 5675, 5675I

CFM PER FOOT	1 SLOT				2 SLOT				3 SLOT				4 SLOT			
	SP	NC	THROW		SP	NC	THROW		SP	NC	THROW		SP	NC	THROW	
			T1	T2			T1	T2			T1	T2			T1	T2
20	.027	20	3.3	11.5												
30	.059	23	6.3	15.0												
40	.104	27	8.0	19.0	.028	20	3.7	12.5								
50	.153	30	9.5	21.0												
60	.228	33	10.7	23.0	.061	24	7.7	16.0	.030	21	4.5	12.7				
70	.307	35	11.7	24.5												
80					.115	29	9.0	19.0					.034	22	5.2	13.5
90									.064	25	9.0	17.0				
100					.165	33	10.5	22.0								
120					.240	36	12.0	24.0	.120	30	10.2	20.0	.071	26	10.0	17.7
140					.335	38	13.0	25.5								
150									.184	35	11.5	23.0				
160													.134	31	11.2	21.0
180									.265	39	13.0	25.2				
200													.203	37	12.0	24.5
210									350	42	14.0	27.5				
240													.292	41	13.5	26.5
280													.392	45	15.0	29.0

CFM - cubic feet per minute

FPM - feet per minute velocity

SP - total pressure - inches w.g.

T - throw in feet under isothermal conditions

T1 - T @ 150 fpm terminal velocity at 9'-0" ceiling height

T2 - T @ 50 fpm terminal velocity at 9'-0" ceiling height

NC - Noise Criteria (values) based on 10 dB room absorption, re 10⁻¹² watts.

Performance Notes:

1. Throw data is for one-way blow in opposite direction to inlet collar under isothermal conditions.
2. NC values less than 20 are not shown.
3. Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70 – 1991.

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

RETURN AIR PLENUMS

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

5700R Series:

- 5750R(I) 1/2" (13) Slot Width
- 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
- Suffix 'I' adds internal insulation



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.

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 grids.
- Choice of 1, 2, 3 or 4 parallel slots.
- 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 4 slot widths.
- Series **5800R** is available in 3 slot widths.
- Series **5600R** is available in 1 slot width.

Options:

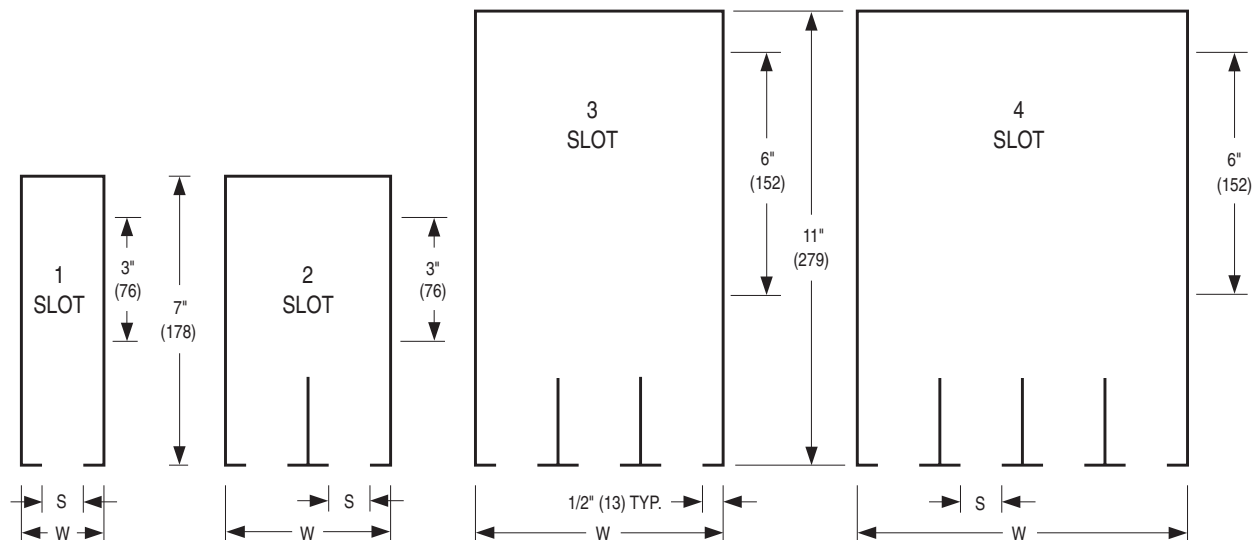
- Internal insulation (add suffix 'I' to model number).
- A full range of options and accessories are available, see page C53.

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

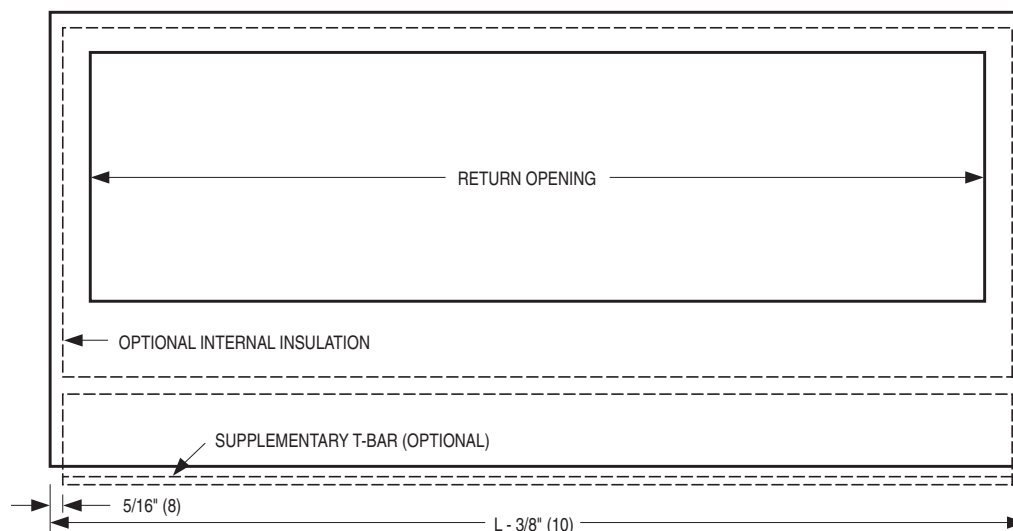
Finish: Black on exposed surfaces. AW Appliance White baked enamel on center T-Bars.

Dimensional Data

Model Series 5700R, 5800R, 5600R • Standard Lay-in T-Bar Models



		Models			
			5675R(I)		
		5850R(I)	5875R(I)	5810R(I)	
		5750R(I)	5775R(I)	5710R(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 (114)	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

Dimensions are in inches (mm).

RETURN AIR PLENUMS

- FOR NARROW REGRESSED T-BAR
- COMPLIMENTS THE SUPPLY SERIES
- INCLUDES LIGHT BARRIERS

Straddle Style:

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

1" (25) Flat Face T-Bar Style:

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

- Suffix 'I' adds internal insulation



Models 5810R-F, 5775R-F2

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.

The single slot units, for all models, are for installation alongside a main T-Bar runner. Model Series **5700R-F** and **5800R-F** two slot units incorporate a center hat channel and are designed to straddle, longitudinally, a main T-Bar runner. The Model Series **5700R-F2** and **5800R-F2** multi-slot units incorporate factory installed 1" (25) flat face T-Bars.

FEATURES:

- Available in 24" (600) or 48" (1200) nominal lengths, to suit both imperial and metric ceiling grids.
- A cross notch is supplied on 48" (1200) long units which allows the plenum to be installed in a 24" x 24" (600 x 600) ceiling grid.
- Series **5700R-F** and **5800R-F** are available in one or two slot configurations.
- Series **5700R-F2** and **5800R-F2** are available in one, two, three or four slot configurations.

- The single slot units are for installation alongside a main T-Bar runner.

- **5700R-F** and **5800R-F** two slot unit has a center hat channel that is designed to straddle a main T-Bar runner.

- **5700R-F2** and **5800R-F2** multi-slot units include 1" (25) flat face tees.

Options:

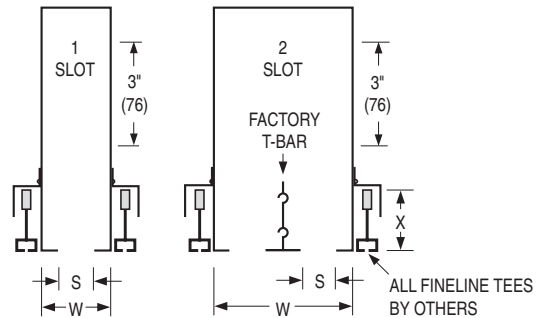
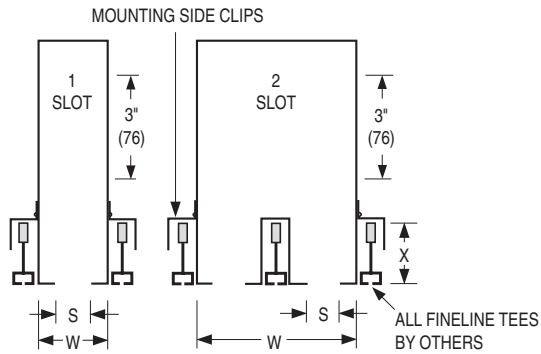
- Internal insulation (add suffix 'I' to model number).
- A full range of options and accessories are available, see page C53.

Material: Corrosion-resistant steel. Series **5700-F2** and **5800-F2** include extruded aluminum center T-Bars on multi-slot units.

Finish: Black on exposed surfaces. AW Appliance White baked enamel on center T-Bars.

Dimensional Data

Model Series 5700R-F, 5700R-F2, 5800R-F and 5800R-F2 • Narrow Regressed T-Bar

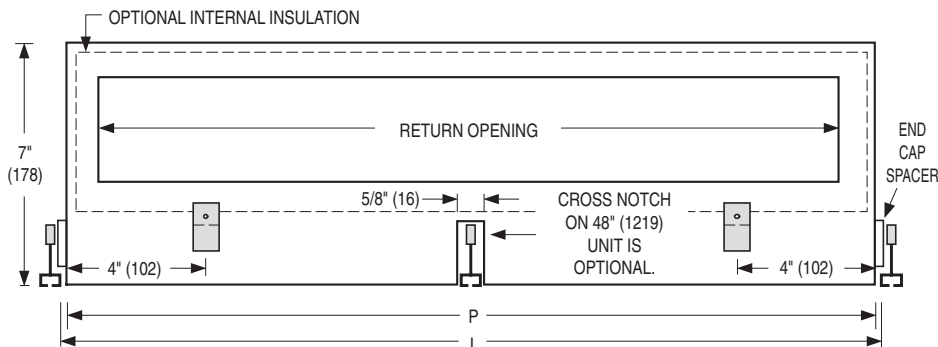


Model Series 5700R-F and 5800R-F

		Models			
		5850R(I)-F	5875R(I)-F	5810R(I)-F	
			5775R(I)-F	5710R(I)-F	5715R(I)-F
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 5/8 (92)	4 1/8 (105)	4 5/8 (117)	5 5/8 (143)

Model Series 5700R-F2 and 5800R-F2

		Models			
		5850R(I)-F2	5875R(I)-F2	5810R(I)-F2	
			5775R(I)-F2	5710R(I)-F2	5715R(I)-F2
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)
Width	3 Slot	4 1/2 (114)	5 1/4 (133)	6 (152)	7 1/2 (191)
	4 Slot	6 (152)	7 (178)	8 (203)	10 (254)



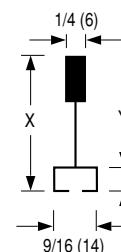
Imperial Ceiling Modules (inches)

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

T-BAR TYPE (MANUFACTURER)	X	Y
A ARMSTRONG SILHOUETTE	1 3/4 (44)	5/16 (8)
C CHICAGO METALLIC ULTRALINE	1 5/8 (41)	5/16 (8)
D DONN FINELINE®	1 25/32 (45)	5/16 (8)



Fineline® is a registered trademark of USG Interiors Inc.

Dimensions are in inches (mm).

HOW TO SPECIFY OR TO ORDER

(Show complete Model Number and Size, unless "Default" is desired).

Return Air Plenum Slot Diffusers for T-Bar Grids – Model Series 5700, 5800 and 5600

5775RI - 48 x 2 - —

MODEL SERIES

- 'Flip Flop' Series	56
- 'Wiper Blade' Series	57
- 'Ice Tong' Series	58

SLOT WIDTH (mm)

1/2" (13)	50
3/4" (19)	75
1" (25)	10
1 1/2" (38)	15

RETURN

(Add Suffix 'I' for Internal Insulation) R(I)

NOMINAL LENGTH

inches	(mm)
- 20	(500)
- 24	(600)
- 30	(750)
- 36	(900)
- 48	(1200)
- 60	(1500)

ACCESSORIES

- None (default)	—
- Cross Notch	CN
- Plaster Frame	PF
- Supplementary T-Bars	
One (Inlet Side)	T1
One (Opposite Inlet Side)	T0
Two (One Each Side)	T2
- T-Bar Mounting Clips (2)	M1
- T-Bar Mounting Clips (4)	M2
- External Foil Back Insulation	EX
- Straddle T-Bar	ST

NO. OF SLOTS

- 1
- 2
- 3
- 4

Notes:

1. Model Series 5600 is only available in a 3/4" (19) slot width (i.e. Model 5675 or 5675I).
2. Model Series 5800 is not available in a 1 1/2" (38) slot width.
3. If more than one accessory is desired, list in order.

SUGGESTED SPECIFICATION:

Standard Lay-in T-Bar

Furnish and install **Nailor Model** (select one) **5750R/5750RI**, **5850R/5850RI** (1/2" (13) slot), **5775R/5775RI**, **5875R/5875RI**, **5675R/5675RI** (3/4" (19) slot), **5710R/5710RI**, **5810R/5810RI** (1" (25) slot) or **5715R/5715RI** (1 1/2" (38) slot) **Plenum Slot Return 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 extruded aluminum T-Bars on multi-slot units. The plenum shall have a rectangular return opening and incorporate a light shield that blocks any stray light through the face of the diffuser. 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. All exposed edges shall have a BK Black finish and the center T-Bars shall have an AW Appliance White baked enamel finish. Models 5750RI, 5850RI, 5775RI, 5875RI, 5675RI, 5710RI, 5810RI or 5715RI 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 – 1991.

HOW TO SPECIFY OR TO ORDER

(Show complete Model Number and Size, unless "Default" is desired).

Return Air Plenum Slot Diffusers for Narrow Regressed Ceiling Grids

– Model Series 5700R-F, 5700R-F2, 5800R-F and 5800R-F2

5775RI-F - 48 x 2 - CN - ST - M2 - D - —

MODEL SERIES		OPTIONAL ACCESSORIES	
- 'Wiper Blade' Pattern Controller	57	- None (default)	—
- 'Ice Tong' Pattern Controller	58	- Inlet Damper	ID
		- External Foil Back Insulation	EX
		- Earthquake Tabs	EQT
SLOT WIDTH (mm)		SPECIFIED T-BAR	
1/2" (13)	50R(I)	- 1 3/4" (44) high	A
3/4" (19)	75R(I)	- 1 5/8" (41) high	C
1" (25)	10R(I)	- 1 25/32" (45) high	D
1 1/2" (38)	15R(I)		
(Add Suffix 'I' for Internal Insulation)		INCLUDED ACCESSORIES	
STYLE		- Cross Notch on 48" (1219) unit (default)	CN
- Straddle Mount (on 2 slot unit)	F	- Straddle T-Bar on -F 2 slot models (default)	ST
- Flat Face T-Bars (on multi-slot units)	F2	- T-Bar Mounting Clips (4) (default)	M2
NOMINAL LENGTH		NO. OF SLOTS	
inches (mm)		- 1, 2, 3 or 4	
- 24 (600)			
- 48 (1200)			

Notes:

- Models with '-F' are only available with 1 or 2 slots.
- If more than one accessory is desired, list in order.

SUGGESTED SPECIFICATION:

Narrow Regressed T-Bar – Straddle Mount

Furnish and install **Nailor Model** (select one) **5850R-F/5850RI-F** (1/2" (13) slot), **5775R-F/5775RI-F**, **5875R-F/5875RI-F** (3/4" (19) slot), **5710R-F/5710RI-F**, **5810R-F/5810RI-F** (1" (25) slot) or **5715R-F/5715RI-F** (1 1/2" (38) slot) **Plenum Slot Return Diffusers for Narrow Regressed T-Bar** of the sizes and capacities as shown on the plans and air distribution schedules. The plenum shall fit within a Narrow Regressed T-Bar ceiling system. The plenum shall be manufactured from corrosion-resistant steel. The plenum shall have a rectangular return opening and incorporate a light shield that blocks any stray light through the face of the diffuser. The diffuser shall be supplied in nominal standard lengths of either 24" or 48" (600 or 1200) and have one or two slots as specified. Two slot models shall straddle the T-Bar lengthwise. All exposed edges shall have a BK Black finish. Models 5850RI-F, 5775RI-F, 5875RI-F, 5710RI-F, 5810RI-F or 5715RI-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 – 1991.

Narrow Regressed T-Bar – Flat Face T-Bar(s)

Furnish and install **Nailor Model** (select one) **5850R-F2/5850RI-F2** (1/2" (13) slot), **5775R-F2/5775RI-F2**, **5875R-F2/5875RI-F2** (3/4" (19) slot), **5710R-F2/5710RI-F2**, **5810R-F2/5810RI-F2** (1" (25) slot) or **5715R-F2/5715RI-F2** (1 1/2" (38) slot) **Plenum Slot Return Diffusers for Narrow Regressed T-Bar** of the sizes and capacities as shown on the plans and air distribution schedules. The plenum shall fit within a Narrow Regressed T-Bar ceiling system. The plenum shall be manufactured from corrosion-resistant steel and include extruded aluminum T-Bars on multi-slot units. The plenum shall have a rectangular return opening and incorporate a light shield that blocks any stray light through the face of the diffuser. The diffuser shall be supplied in nominal standard lengths of either 24" or 48" (600 or 1200) and have one, two, three or four slots as specified. All exposed edges shall have a BK Black finish and the center T-Bars shall have an AW Appliance White baked enamel finish. Models 5850RI-F2, 5775RI-F2, 5875RI-F2, 5710RI-F2, 5810RI-F2 or 5715RI-F2 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 – 1991.

Performance Data

Model Series 5700R

1/2" (13) Slot • 24" (610) Long • Models 5750R(I)

1 Slot	Airflow, CFM	20	30	40	50	60	70	80	90	100
	Negative SP	.010	.021	.038	.059	.085	.116	.152	.192	.238
	NC	—	—	—	12	18	22	26	29	32
2 Slot	Airflow, CFM	40	60	80	100	120	140	160	180	200
	Negative SP	.010	.021	.038	.059	.085	.116	.152	.192	.238
	NC	—	—	—	15	21	25	29	32	35

1/2" (13) Slot • 48" (1219) Long • Models 5750R(I)

1 Slot	Airflow, CFM	40	60	80	100	120	140	160	180	200
	Negative SP	.010	.021	.038	.059	.085	.116	.152	.192	.238
	NC	—	—	—	12	18	22	26	29	32
2 Slot	Airflow, CFM	80	120	160	200	240	280	320	360	400
	Negative SP	.010	.021	.038	.059	.085	.116	.152	.192	.238
	NC	—	—	—	15	21	25	29	32	35

3/4" (19) Slot • 24" (610) Long • Models 5775R(I), 5775R(I)-F, 5775R(I)-F2

1 Slot	Airflow, CFM	30	45	60	75	90	105	120	135	150
	Negative SP	.010	.021	.038	.059	.085	.116	.152	.192	.238
	NC	—	—	—	12	18	22	26	29	32
2 Slot	Airflow, CFM	60	90	120	150	180	210	240	270	300
	Negative SP	.010	.021	.038	.059	.085	.116	.152	.192	.238
	NC	—	—	—	15	21	25	29	32	35

3/4" (19) Slot • 48" (1219) Long • Models 5775R(I), 5775R(I)-F, 5775R(I)-F2

1 Slot	Airflow, CFM	60	90	120	150	180	210	240	270	300
	Negative SP	.010	.021	.038	.059	.085	.116	.152	.192	.238
	NC	—	—	—	12	18	22	26	29	32
2 Slot	Airflow, CFM	120	180	240	300	360	420	480	540	600
	Negative SP	.010	.021	.038	.059	.085	.116	.152	.192	.238
	NC	—	—	—	15	21	25	29	32	35

1" (25) Slot • 24" (610) Long • Models 5710R(I), 5710R(I)-F, 5710R(I)-F2

1 Slot	Airflow, CFM	40	60	80	100	120	140	160	180	200
	Negative SP	.010	.021	.038	.059	.085	.116	.152	.192	.238
	NC	—	—	—	12	18	22	26	29	32
2 Slot	Airflow, CFM	80	120	160	200	240	280	320	360	400
	Negative SP	.010	.021	.038	.059	.085	.116	.152	.192	.238
	NC	—	—	—	15	21	25	29	32	35

1" (25) Slot • 48" (1219) Long • Models 5710R(I), 5710R(I)-F, 5710R(I)-F2

1 Slot	Airflow, CFM	80	120	160	200	240	280	320	360	400
	Negative SP	.010	.021	.038	.059	.085	.116	.152	.192	.238
	NC	—	—	—	12	18	22	26	29	32
2 Slot	Airflow, CFM	160	240	320	400	480	560	640	720	800
	Negative SP	.010	.021	.038	.059	.085	.116	.152	.192	.238
	NC	—	—	—	15	21	25	29	32	35

1 1/2" (38) Slot • 24" (610) Long • Models 5715R(I), 5715R(I)-F, 5715R(I)-F2

1 Slot	Airflow, CFM	60	90	120	150	180	210	240	270	300
	Negative SP	.010	.021	.038	.059	.085	.116	.152	.192	.238
	NC	—	—	—	12	18	22	26	29	32
2 Slot	Airflow, CFM	120	180	240	300	360	420	480	540	600
	Negative SP	.010	.021	.038	.059	.085	.116	.152	.192	.238
	NC	—	—	—	15	21	25	29	32	35

1 1/2" (38) Slot • 48" (1219) Long • Models 5715R(I), 5715R(I)-F, 5715R(I)-F2

1 Slot	Airflow, CFM	120	180	240	300	360	420	480	540	600
	Negative SP	.010	.021	.038	.059	.085	.116	.152	.192	.238
	NC	—	—	—	12	18	22	26	29	32
2 Slot	Airflow, CFM	240	360	480	600	720	840	960	1080	1200
	Negative SP	.010	.021	.038	.059	.085	.116	.152	.192	.238
	NC	—	—	—	15	21	25	29	32	35

CFM - cubic feet per minute

SP - static pressure - inches w.g.

NC - Noise Criteria (values) based on 10 dB room absorption, re 10⁻¹² watts.

Performance Notes:

1. Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70 – 1991.

Performance Data

Model Series 5800R

1/2" (13) Slot • 24" (610) Long • Models 5850R(I), 5850R(I)-F, 5850R(I)-F2

1 Slot	Airflow, CFM	20	30	40	50	60	70	80	90	100
	Negative SP	.010	.021	.038	.059	.085	.116	.152	.192	.238
	NC	—	—	—	12	18	22	26	29	32
2 Slot	Airflow, CFM	40	60	80	100	120	140	160	180	200
	Negative SP	.010	.021	.038	.059	.085	.116	.152	.192	.238
	NC	—	—	—	15	21	25	29	32	35

1/2" (13) Slot • 48" (1219) Long • Models 5850R(I), 5850R(I)-F, 5850R(I)-F2

1 Slot	Airflow, CFM	40	60	80	100	120	140	160	180	200
	Negative SP	.010	.021	.038	.059	.085	.116	.152	.192	.238
	NC	—	—	—	12	18	22	26	29	32
2 Slot	Airflow, CFM	80	120	160	200	240	280	320	360	400
	Negative SP	.010	.021	.038	.059	.085	.116	.152	.192	.238
	NC	—	—	—	15	21	25	29	32	35

3/4" (19) Slot • 24" (610) Long • Models 5875R(I), 5875R(I)-F, 5875R(I)-F2

1 Slot	Airflow, CFM	30	45	60	75	90	105	120	135	150
	Negative SP	.010	.021	.038	.059	.085	.116	.152	.192	.238
	NC	—	—	—	12	18	22	26	29	32
2 Slot	Airflow, CFM	60	90	120	150	180	210	240	270	300
	Negative SP	.010	.021	.038	.059	.085	.116	.152	.192	.238
	NC	—	—	—	15	21	25	29	32	35

3/4" (19) Slot • 48" (1219) Long • Models 5875R(I), 5875R(I)-F, 5875R(I)-F2

1 Slot	Airflow, CFM	60	90	120	150	180	210	240	270	300
	Negative SP	.010	.021	.038	.059	.085	.116	.152	.192	.238
	NC	—	—	—	12	18	22	26	29	32
2 Slot	Airflow, CFM	120	180	240	300	360	420	480	540	600
	Negative SP	.010	.021	.038	.059	.085	.116	.152	.192	.238
	NC	—	—	—	15	21	25	29	32	35

1" (25) Slot • 24" (610) Long • Models 5810R(I), 5810R(I)-F, 5810R(I)-F2

1 Slot	Airflow, CFM	40	60	80	100	120	140	160	180	200
	Negative SP	.010	.021	.038	.059	.085	.116	.152	.192	.238
	NC	—	—	—	12	18	22	26	29	32
2 Slot	Airflow, CFM	80	120	160	200	240	280	320	360	400
	Negative SP	.010	.021	.038	.059	.085	.116	.152	.192	.238
	NC	—	—	—	15	21	25	29	32	35

1" (25) Slot • 48" (1219) Long • Models 5810R(I), 5810R(I)-F, 5810R(I)-F2

1 Slot	Airflow, CFM	80	120	160	200	240	280	320	360	400
	Negative SP	.010	.021	.038	.059	.085	.116	.152	.192	.238
	NC	—	—	—	12	18	22	26	29	32
2 Slot	Airflow, CFM	160	240	320	400	480	560	640	720	800
	Negative SP	.010	.021	.038	.059	.085	.116	.152	.192	.238
	NC	—	—	—	15	21	25	29	32	35

CFM - cubic feet per minute

SP - static pressure - inches w.g.

NC - Noise Criteria (values) based on 10 dB room absorption, re 10⁻¹² watts.

Performance Notes:

1. Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70 – 1991.

Performance Data

Model Series 5600R

3/4" (19) Slot • 24" (610) Long • Model 5675R(I)

1 Slot	Airflow, CFM	30	45	60	75	90	105	120	135	150
	Negative SP	.010	.021	.038	.059	.085	.116	.152	.192	.238
	NC	—	—	—	12	18	22	26	29	32
2 Slot	Airflow, CFM	60	90	120	150	180	210	240	270	300
	Negative SP	.010	.021	.038	.059	.085	.116	.152	.192	.238
	NC	—	—	—	15	21	25	29	32	35

3/4" (19) Slot • 48" (1219) Long • Model 5675R(I)

1 Slot	Airflow, CFM	60	90	120	150	180	210	240	270	300
	Negative SP	.010	.021	.038	.059	.085	.116	.152	.192	.238
	NC	—	—	—	12	18	22	26	29	32
2 Slot	Airflow, CFM	120	180	240	300	360	420	480	540	600
	Negative SP	.010	.021	.038	.059	.085	.116	.152	.192	.238
	NC	—	—	—	15	21	25	29	32	35

CFM - cubic feet per minute

SP - static pressure - inches w.g.

NC - Noise Criteria (values) based on 10 dB room absorption, re 10⁻¹² watts.

Performance Notes:

1. Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70 – 1991.

59N SERIES

- FOR STANDARD LAY-IN T-BAR
- PREMIUM PERFORMANCE
- SUPPLY AND SUPPLY/RETURN

Supply Models:

59N(I) Horizontal Discharge

59ND(I) Horizontal/Vertical Discharge

Supply/Return Models:

59NR(I) Horizontal Discharge

59NDR(I) Horizontal/Vertical Discharge

- Suffix 'I' adds internal insulation



Models 59ND and 59NDR

The **59N Series Plenum Slot Diffusers** have been designed for standard Lay-in T-Bar ceiling grid applications. They integrate and blend with the suspended grid, offering an extremely unobtrusive method of air distribution. This series provides premium performance and is available in a supply and a supply/return combination. This series is suitable for variable air volume, heating and cooling applications.

All diffusers include an aerodynamic extruded aluminum pattern controller that provides a fixed horizontal discharge that produces a tight blanket of air into the room, maximizing coanda effect and induction of room air. In addition, **Models 59ND** and **59NDR** include a central down-blow section, which incorporates two pattern controllers that provide an adjustable vertical discharge along the wall or glass in perimeter applications.

An integral return air section, which returns room air in the ceiling plenum with minimal short-circuiting of supply air is provided on **Models 59NR** and **59NDR**.

FEATURES:

- Choice of horizontal or horizontal/vertical discharge with either a supply or a supply/return combination.
- An aerodynamic pattern controller provides a fixed horizontal discharge.
- Available in 24", 36", 48" and 60" (600, 900, 1200 and 1500 mm) nominal lengths, to suit both imperial and metric ceiling grids.
- Standard unit size 9" (229) in height.

Options:

- Internal insulation (add suffix 'I' to model number).
- Low height 7" (178) option when space is a restriction.
- High profile 11" (279) height option.
- A full range of options and accessories are available, see page C53.

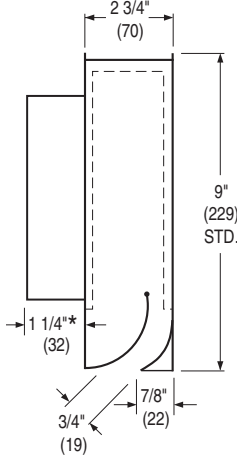
Material: Corrosion-resistant steel plenum. Extruded aluminum pattern controller.

Finish: BK Black pattern controllers and exposed edges.

Dimensional Data

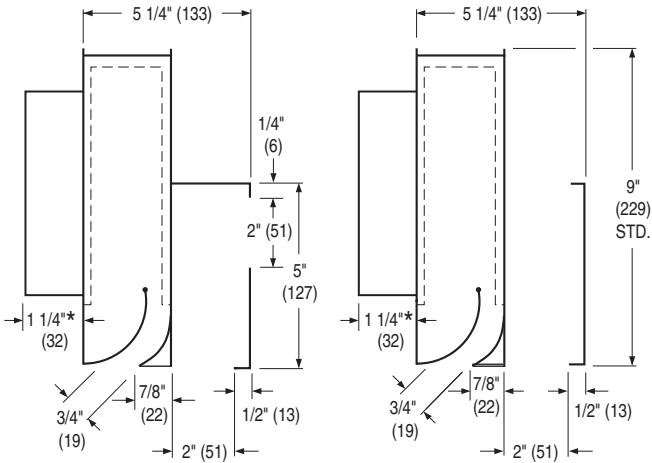
Models 59N(I) and 59NR(I)

Supply



Model 59N(I)

Supply/Return



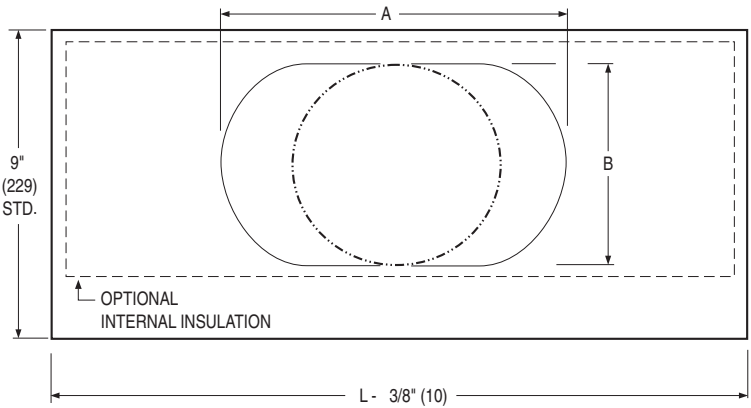
Model 59NR(I)

SR (Standard)
Side Inlet Return
Illustrated

TR (Optional)
Top Inlet Return
Illustrated

	Nominal Inlet Size		
	6 (152) Round	8 (203) Oval	10 (254) Oval
A	—	9 (229)	12 1/8 (308)
B	5 7/8 (149)	5 7/8 (149)	5 7/8 (149)

*4" (102) with optional ID Inlet Damper



Models 59N(I) and 59NR(I)

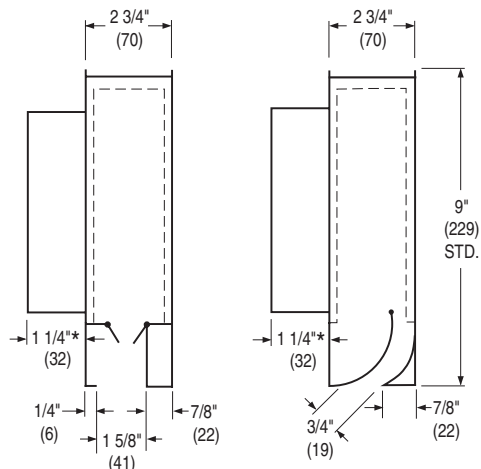
Nominal Length L	
Imperial Modules inches (mm)	Metric Modules (mm)
24 (610)	600
36 (914)	900
48 (1219)	1200
60 (1524)	1500

Dimensions are in inches (mm).

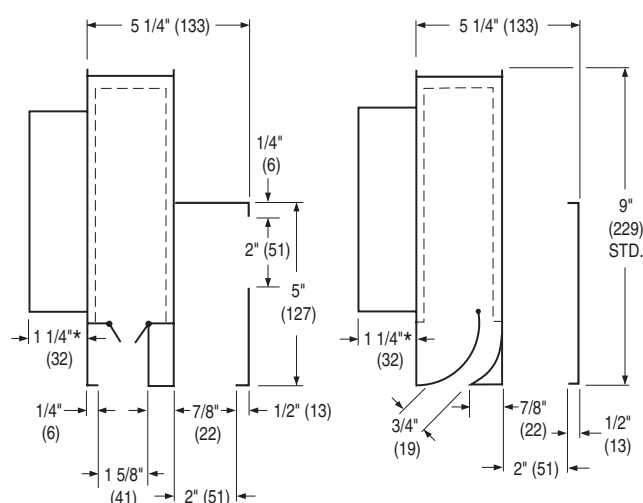
Dimensional Data

Models 59ND(I) and 59NDR(I)

Supply



Supply/Return



Model 59ND(I)

Section X-X

Section Y-Y

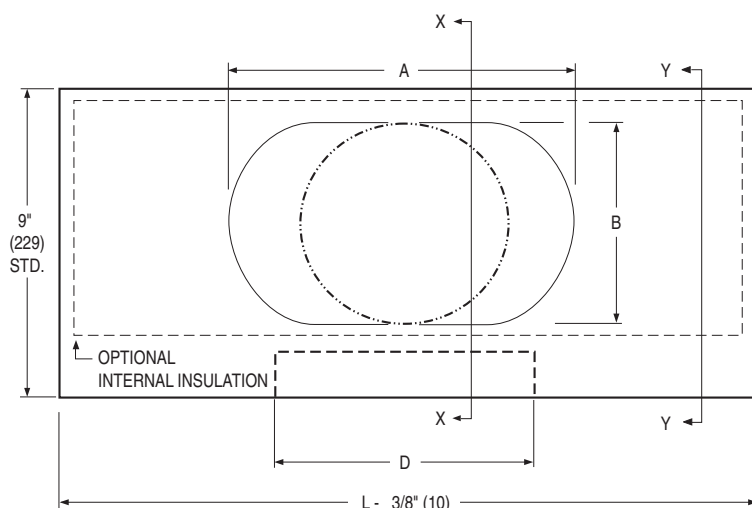
Model 59NDR(I)

Section X-X
SR (Standard)
Side Inlet Return Illustrated

Section Y-Y
TR (Optional)
Top Inlet Return Illustrated

	Nominal Inlet Size		
	6 (152) Round	8 (203) Oval	10 (254) Oval
A	—	9 (229)	12 1/8 (308)
B	5 7/8 (149)	5 7/8 (149)	5 7/8 (149)

*4" (102) with optional ID Inlet Damper



Nominal Length L		Available Down-Blow Slot Dimension D
Imperial Modules inches (mm)	Metric Modules (mm)	
24 (610)	600	8, 12 (203, 305)
36 (914)	900	12, 15 (305, 381)
48 (1219)	1200	12, 15, 18 (305, 381, 457)
60 (1524)	1500	15, 18, 21 (381, 457, 533)

Models 59ND(I) and 59NDR(I)

Dimensions are in inches (mm).

HOW TO SPECIFY OR TO ORDER

(Show complete Model Number and Size, unless "Default" is desired).

'N Slot' Plenum Diffusers – Model Series 59N

59NDRI - 48 x 1 - 08 - H9 - D15 - SR - - -

MODEL SERIES

- Supply 59N
- Supply/Return 59NR
- Supply with Downblow 59ND
- Supply/Return with Downblow 59NDR

INTERNAL INSULATION

- None —
- Internal Insulation I

NOMINAL LENGTH

- | inches | (mm) | |
|--------|--------|----|
| - 24 | (600) | 24 |
| - 36 | (900) | 36 |
| - 48 | (1200) | 48 |
| - 60 | (1500) | 60 |

NO. OF SLOTS

- 1 (default)

INLET SIZE (mm)

- | | | |
|-----|-------|----|
| 6" | (152) | 06 |
| 8" | (203) | 08 |
| 10" | (254) | 10 |

HEIGHT (mm)

- | | | |
|-----|-----------------|-----|
| 9" | (229) (default) | H9 |
| 7" | (178) | H7 |
| 11" | (279) | H11 |

ACCESSORIES

- None (default) —
- Plaster Frame PF
- Supplementary T-Bars
 - One (Inlet Side) T1
 - One (Opposite Inlet Side) T0
 - Two (One Each Side) T2
- T-Bar Mounting Clips (2) M1
- T-Bar Mounting Clips (4) M2
- External Foil Back Insulation EX
- Earthquake Tabs EQT

DAMPER

- None (default) —
- Supply Inlet Damper ID

RETURN INLET SELECTION

(Models 59NR(I) and 59NDR(I) only)

- Side Return (default) SR
- Top Return TR

DOWNBLOW LENGTH

(Models 59ND(I) and 59NDR(I) only)

- | | |
|------------|-------------------|
| 24" (600) | D8 (default) |
| 24" (600) | D12 (option) |
| 36" (900) | D12 (default) |
| 36" (900) | D15 (option) |
| 48" (1200) | D12 (default) |
| 48" (1200) | D15, D18 (option) |
| 60" (1500) | D15 (default) |
| 60" (1500) | D18, D21 (option) |

Note:

1. If more than one accessory is desired, list in order.

SUGGESTED SPECIFICATION:

Horizontal Discharge, Supply

Furnish and install **Nailor Model** (select one) **59N** or **59NI Horizontal Discharge 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 side inlet for connection to the duct. The plenum shall have an extruded aluminum fixed pattern controller within a 3/4" (19) slot. The plenum diffuser shall be supplied in nominal standard lengths of 24", 36", 48" and 60" (600, 900, 1200 and 1500) to suit a standard Lay-in T-Bar ceiling grid. The pattern controller and all exposed edges shall have a BK Black finish. Model 59NI 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 – 1991.

Horizontal Discharge, Supply/Return

Furnish and install **Nailor Model** (select one) **59NR** or **59NRI Horizontal Discharge Plenum Slot Supply/Return 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 incorporate a supply air and return air section. The supply plenum shall have an extruded aluminum fixed pattern controller within a 3/4" (19) slot and a side inlet for connection to the supply air duct. The return air section shall have a rectangular return opening on the side that functions as a light shield (top return opening is optional). The plenum diffuser shall be available in nominal standard lengths of 24", 36", 48" and 60" (600, 900, 1200 and 1500) to suit a standard Lay-in T-Bar ceiling grid. The pattern controller and all exposed edges shall have a BK Black finish. Model 59NRI 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 – 1991.

Horizontal/Vertical Discharge, Supply

Furnish and install **Nailor Model** (select one) **59ND** or **59NDI Horizontal/Vertical Discharge 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 side inlet for connection to the duct. The plenum shall have a central vertical down-blow section that has two hinged pattern controllers within a 1 5/8" (41) slot. The plenum diffuser shall be available in nominal standard lengths of 24", 36", 48" and 60" (600, 900, 1200 and 1500) to suit a standard Lay-in T-Bar ceiling grid. The pattern controller and all exposed edges shall have a BK Black finish. Model 59NDI 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 – 1991.

Horizontal/Vertical Discharge, Supply/Return

Furnish and install **Nailor Model** (select one) **59NDR** or **59NDRI Horizontal/Vertical Discharge Plenum Slot Supply/Return 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 incorporate a supply air and integral return air section. The supply plenum shall have a central vertical down-blow section that has two hinged pattern controllers within a 1 5/8" (41) slot opening, the end sections shall incorporate an extruded aluminum fixed horizontal pattern controller within a 3/4" (19) slot. The supply plenum shall include a side inlet for connection to the duct. The return air plenum shall have a rectangular return opening on the side that also functions as a light shield (top return opening is optional). The plenum diffuser shall be available in nominal standard lengths of 24", 36", 48" and 60" (600, 900, 1200 and 1500) to suit a standard Lay-in T-Bar ceiling grid. The pattern controllers and all exposed edges shall have a BK Black finish. Model 59NDRI 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 – 1991.

Performance Data

Models 59N(I) and 59NR(I) • Horizontal Pattern

24"(610) Long

6" Round Inlet	Airflow, CFM	60	80	100	120	140	160	180	200
	Total Pressure	.039	.070	.110	.158	.215	.281	.355	.439
	Static Pressure	.033	.059	.093	.134	.182	.238	.303	.372
	NC	—	—	22	27	31	34	36	39
	Horizontal Throw	3-5-13	5-9-15	6-11-17	8-12-19	10-15-20	11-14-21	12-16-23	13-17-24

8" Oval Inlet	Airflow, CFM	60	80	100	120	140	160	180	200
	Total Pressure	.023	.041	.064	.092	.125	.163	.207	.255
	Static Pressure	.021	.038	.059	.084	.115	.150	.190	.234
	NC	—	—	—	23	26	29	31	34
	Horizontal Throw	3-5-13	5-9-15	6-11-17	8-12-19	10-15-20	11-14-21	12-16-23	9-17-24

36"(914) Long

6" Round Inlet	Airflow, CFM	90	120	150	180	210	240	270	300
	Total Pressure	.057	.101	.157	.227	.309	.403	.511	.630
	Static Pressure	.044	.078	.121	.174	.237	.310	.393	.484
	NC	—	—	24	27	30	33	37	41
	Horizontal Throw	4-8-16	7-11-18	8-13-21	11-16-23	12-17-25	13-18-26	15-19-27	16-20-29

8" Oval Inlet	Airflow, CFM	90	120	150	180	210	240	270	300
	Total Pressure	.035	.062	.096	.139	.189	.247	.312	.386
	Static Pressure	.030	.053	.082	.118	.161	.211	.267	.329
	NC	—	—	20	23	26	29	33	37
	Horizontal Throw	4-8-16	7-11-18	8-13-21	11-16-23	12-17-25	13-18-26	15-19-27	16-20-29

48" (1219) Long

8" Oval Inlet	Airflow, CFM	120	160	200	240	280	320	360	400
	Total Pressure	.039	.069	.107	.155	.211	.275	.348	.430
	Static Pressure	.030	.053	.083	.119	.162	.211	.268	.330
	NC	—	—	20	24	29	33	36	40
	Horizontal Throw	5-9-18	8-13-22	10-15-24	13-18-26	16-20-28	17-21-30	18-22-32	20-24-33

10" Oval Inlet	Airflow, CFM	120	160	200	240	280	320	360	400
	Total Pressure	.028	.050	.079	.113	.154	.201	.255	.315
	Static Pressure	.024	.042	.066	.095	.130	.169	.214	.264
	NC	—	—	—	22	27	30	33	37
	Horizontal Throw	5-9-18	8-13-22	10-15-24	13-18-26	16-20-28	17-21-30	18-22-32	20-24-33

60" (1524) Long

8" Oval Inlet	Airflow, CFM	150	200	250	300	350	400	450	500
	Total Pressure	.048	.085	.133	.191	.260	.340	.430	.532
	Static Pressure	.034	.060	.094	.135	.184	.241	.305	.376
	NC	—	—	22	26	31	35	38	42
	Horizontal Throw	8-12-20	10-15-24	13-19-26	14-20-29	18-22-31	19-23-33	20-25-35	22-27-36

10" Oval Inlet	Airflow, CFM	150	200	250	300	350	400	450	500
	Total Pressure	.034	.061	.095	.137	.187	.244	.309	.381
	Static Pressure	.027	.048	.075	.108	.148	.193	.244	.301
	NC	—	—	20	24	29	32	35	39
	Horizontal Throw	8-12-20	10-15-24	13-19-26	14-20-29	18-22-31	19-23-33	20-25-35	22-27-36

Return Section

R Models	Airflow, CFM/FT.	30	40	50	60	70	80	90	100
	Negative Static Pressure	-.01	-.018	-.027	-.038	-.050	-.063	-.079	-.098

Performance Notes:

- Horizontal throws are given at 150, 100 and 50 fpm terminal velocities under isothermal conditions.
- All pressures are in inches w.g.

- Tested with one-way fixed horizontal discharge in the direction of the inlet. Straight flexible duct connection.
- NC values (Noise Criteria) are based on a room absorption of 10 dB, re

10⁻¹² watts. Dash (—) in space denotes an NC level less than 20.

- Data derived from independent tests conducted in accordance with ANSI/ASHRAE Standard 70-1991.

Performance Data

Models 59ND(I) and 59NDR(I) • Horizontal/Vertical Pattern

24"(610) Long with 8" (203) Down-Blow

6" Round Inlet	Airflow, CFM	60	80	100	120	140	160	180	200
	Total Pressure	.038	.067	.105	.152	.207	.270	.342	.422
	Static Pressure	.032	.057	.089	.128	.175	.228	.289	.357
	NC	—	—	—	23	27	30	35	39
	Horizontal Throw	2-5-12	4-7-15	7-11-19	9-15-22	11-17-24	13-18-25	14-19-26	15-20-28
	Vertical Throw	2-5-6	3-4-7	5-7-10	6-8-11	7-9-12	7-10-13	8-10-13	9-10-14
8" Oval Inlet	Airflow, CFM	60	80	100	120	140	160	180	200
	Total Pressure	.023	.042	.065	.094	.128	.167	.211	.260
	Static Pressure	.021	.038	.059	.084	.115	.150	.190	.235
	NC	—	—	—	—	23	26	31	35
	Horizontal Throw	2-5-12	4-7-15	7-11-19	9-15-22	11-17-24	13-18-25	14-19-26	15-20-28
	Vertical Throw	2-5-6	3-4-7	5-7-10	6-8-11	7-9-12	7-10-13	8-10-13	9-10-14

36"(914) Long with 15" (381) Down-Blow

6" Round Inlet	Airflow, CFM	90	120	150	180	210	240	270	300
	Total Pressure	.025	.046	.074	.101	.151	.200	.261	.322
	Static Pressure	.019	.036	.058	.078	.120	.160	.210	.259
	NC	—	—	22	28	32	36	39	43
	Horizontal Throw	1-3-12	2-5-15	3-7-17	6-11-21	9-13-22	10-16-24	11-17-25	12-18-26
	Vertical Throw	4-6-10	5-8-12	7-10-14	8-10-15	9-11-16	10-12-17	10-13-18	11-14-19
8" Oval Inlet	Airflow, CFM	90	120	150	180	210	240	270	300
	Total Pressure	.026	.045	.071	.102	.139	.182	.230	.284
	Static Pressure	.020	.036	.056	.081	.110	.145	.185	.228
	NC	—	—	—	21	25	30	34	38
	Horizontal Throw	1-3-12	2-5-15	3-7-17	6-11-21	9-13-22	10-16-24	11-17-25	12-18-26
	Vertical Throw	4-6-10	5-8-12	7-10-14	8-10-15	9-11-16	10-12-17	10-13-18	11-14-19

48" (1219) Long with 15" (381) Down-Blow

8" Oval Inlet	Airflow, CFM	120	160	200	240	280	320	360	400
	Total Pressure	.043	.077	.121	.174	.236	.309	.391	.482
	Static Pressure	.038	.067	.105	.151	.206	.269	.340	.420
	NC	—	—	—	25	30	34	38	44
	Horizontal Throw	3-5-16	4-7-18	4-9-20	5-11-22	6-13-24	7-14-26	10-15-28	12-17-29
	Vertical Throw	5-7-10	6-8-11	7-9-12	8-10-13	9-10-14	9-11-15	10-12-16	11-12-16
10" Oval Inlet	Airflow, CFM	120	160	200	240	280	320	360	400
	Total Pressure	.034	.060	.094	.135	.183	.239	.303	.374
	Static Pressure	.229	.252	.081	.117	.159	.207	.262	.324
	NC	—	—	—	22	27	31	35	41
	Horizontal Throw	3-5-16	4-7-18	4-9-20	5-11-22	6-13-24	7-14-26	10-15-28	12-17-29
	Vertical Throw	5-7-10	6-8-11	7-9-12	8-10-13	9-10-14	9-11-15	10-12-16	11-12-16

60" (1524) Long with 15" (381) Down-Blow

8" Oval Inlet	Airflow, CFM	150	200	250	300	350	400	450	500
	Total Pressure	.049	.087	.136	.196	.267	.349	.442	.546
	Static Pressure	.031	.058	.090	.130	.182	.240	.310	.390
	NC	—	—	23	29	34	38	43	45
	Horizontal Throw	2-5-16	3-8-20	5-11-22	6-12-25	7-12-26	8-14-28	8-15-29	9-16-30
	Vertical Throw	5-7-10	6-8-11	7-9-12	8-10-13	9-11-15	10-11-15	11-12-16	12-13-17
10" Oval Inlet	Airflow, CFM	150	200	250	300	350	400	450	500
	Total Pressure	.035	.062	.097	.139	.190	.248	.313	.387
	Static Pressure	.028	.049	.077	.111	.151	.197	.249	.308
	NC	—	—	20	26	31	35	40	42
	Horizontal Throw	2-5-16	3-8-20	5-11-22	6-12-25	7-12-26	8-14-28	8-15-29	9-16-30
	Vertical Throw	5-7-10	6-8-11	7-9-12	8-10-13	9-11-15	10-11-15	11-12-16	12-13-17

Return Section

R Models	Airflow, CFM/FT.	30	40	50	60	70	80	90	100
	Negative Static Pressure	-.01	-.018	-.027	-.038	-.050	-.063	-.079	-.098

Performance Notes:

- Horizontal throws are given at 150, 100 and 50 fpm terminal velocities under isothermal conditions.
- All pressures are in inches w.g.

- Tested with one-way fixed horizontal discharge in the direction of the inlet and center down-blow deflector full open. Straight flexible duct connection
- NC values (Noise Criteria) are based

- on a room absorption of 10 dB, re 10⁻¹² watts. Dash (—) in space denotes an NC level less than 20.
- Data derived from independent tests conducted in accordance with ANSI/ASHRAE Standard 70-1991.

Performance Data

Models 59ND(I) and 59NDR(I) • Horizontal/Vertical Pattern

36"(914) Long with 18" (457) Down-Blow

6" Round Inlet	Airflow, CFM	90	120	150	180	210	240	270	300
	Total Pressure	.025	.044	.069	.100	.136	.178	.225	.278
	Static Pressure	.019	.034	.054	.077	.105	.138	.174	.215
	NC	—	—	23	28	32	36	39	44
	Horizontal Throw	4-7-14	6-10-16	7-12-19	10-14-21	11-15-23	12-16-23	14-17-24	14-18-26
	Vertical Throw	2-6-7	3-4-8	6-8-11	7-9-12	8-10-13	8-11-14	9-11-14	10-11-15
8" Oval Inlet	Airflow, CFM	90	120	150	180	210	240	270	300
	Total Pressure	.022	.039	.061	.088	.120	.157	.199	.245
	Static Pressure	.017	.030	.047	.068	.093	.121	.153	.189
	NC	—	—	—	22	26	31	35	38
	Horizontal Throw	1-3-11	2-5-14	3-6-15	5-10-19	8-12-20	9-14-22	10-15-23	11-16-23
	Vertical Throw	4-7-11	6-9-13	8-11-15	9-11-17	10-12-18	11-13-19	11-14-20	12-15-21

48" (1219) Long with 18" (457) Down-Blow

8" Oval Inlet	Airflow, CFM	120	160	200	240	280	320	360	400
	Total Pressure	.040	.070	.110	.158	.216	.282	.356	.440
	Static Pressure	.034	.060	.094	.136	.185	.242	.306	.378
	NC	—	—	20	26	31	35	39	45
	Horizontal Throw	3-5-14	4-6-16	4-8-18	5-10-20	5-12-22	6-13-23	9-14-25	11-15-26
	Vertical Throw	6-8-11	7-9-12	8-10-13	9-11-14	10-11-15	10-12-17	11-13-18	12-13-18
10" Oval Inlet	Airflow, CFM	120	160	200	240	280	320	360	400
	Total Pressure	.031	.055	.085	.123	.168	.219	.277	.342
	Static Pressure	.026	.047	.073	.105	.143	.187	.237	.292
	NC	—	—	—	23	28	32	36	42
	Horizontal Throw	3-5-14	4-6-16	4-8-18	5-10-20	5-12-22	6-13-23	9-14-25	11-15-26
	Vertical Throw	6-8-11	7-9-12	8-10-13	9-11-14	10-11-15	10-12-17	11-13-18	12-13-18

60" (1524) Long with 18" (457) Down-Blow

8" Oval Inlet	Airflow, CFM	150	200	250	300	350	400	450	500
	Total Pressure	.047	.083	.130	.187	.254	.332	.420	.519
	Static Pressure	.033	.058	.091	.131	.178	.232	.294	.363
	NC	—	—	24	30	35	39	44	46
	Horizontal Throw	2-5-15	3-8-19	5-10-21	6-11-24	7-11-25	8-13-27	8-14-28	9-15-29
	Vertical Throw	5-7-11	6-8-12	7-9-13	8-11-14	9-12-16	11-12-16	12-13-17	13-14-18
10" Oval Inlet	Airflow, CFM	150	200	250	300	350	400	450	500
	Total Pressure	.033	.059	.092	.132	.180	.235	.297	.366
	Static Pressure	.026	.046	.072	.103	.141	.184	.233	.287
	NC	—	—	21	27	32	36	41	43
	Horizontal Throw	2-5-15	3-8-19	5-10-21	6-11-24	7-11-25	8-13-27	8-14-28	9-15-29
	Vertical Throw	5-7-11	6-8-12	7-9-13	8-11-14	9-12-16	11-12-16	12-13-17	13-14-18

Return Section

R Models	Airflow, CFM/FT.	30	40	50	60	70	80	90	100
	Negative Static Pressure	-.01	-.018	-.027	-.038	-.050	-.063	-.079	-.098

Performance Notes:

- Horizontal throws are given at 150, 100 and 50 fpm terminal velocities under isothermal conditions.
- All pressures are in inches w.g.

- Tested with one-way fixed horizontal discharge in the direction of the inlet and center down-blow deflector full open. Straight flexible duct connection.
- NC values (Noise Criteria) are based on a room absorption of 10 dB, re

- 10⁻¹² watts. Dash (—) in space denotes an NC level less than 20.
- Data derived from independent tests conducted in accordance with ANSI/ASHRAE Standard 70-1991.

Options and Accessories

Model Series: 5700, 5800, 5600, 59N

PF Slot Diffuser Plaster Frame

Slot diffuser mounting frames allow plenum slot diffusers to be installed in drywall or plaster ceilings. Installation of the frame in the ceiling is by others.

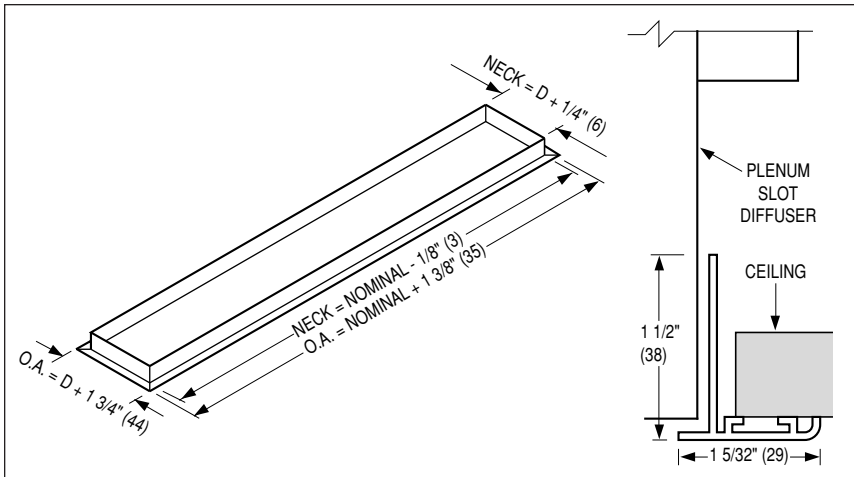
(Note: Diffuser will not fit through a plaster frame opening).

Material: Extruded aluminum with mitered corners.

Recommended Ceiling Opening dimensions:

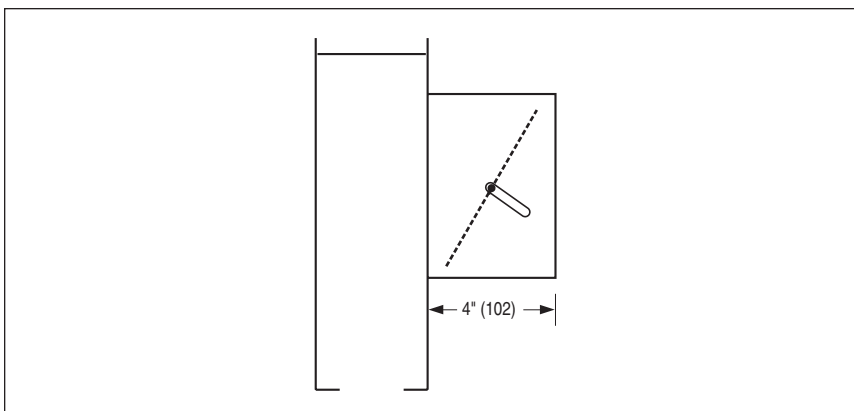
Width = Diffuser Width (D) + 1/2" (13)

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



ID Inlet Damper

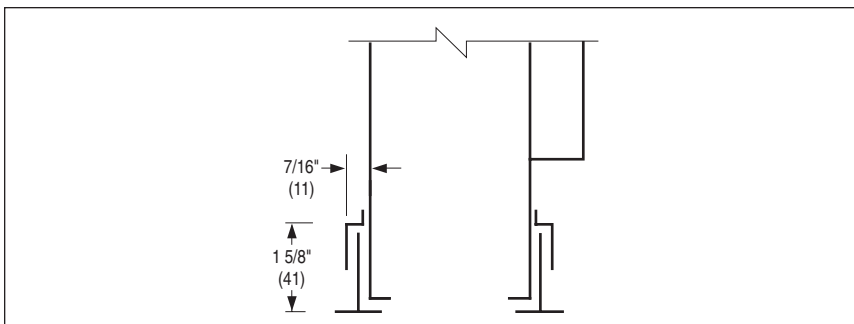
(Supply only)



Mounting Clips

M1 One Side
(2 opposite inlet side)

M2 Both sides (4)



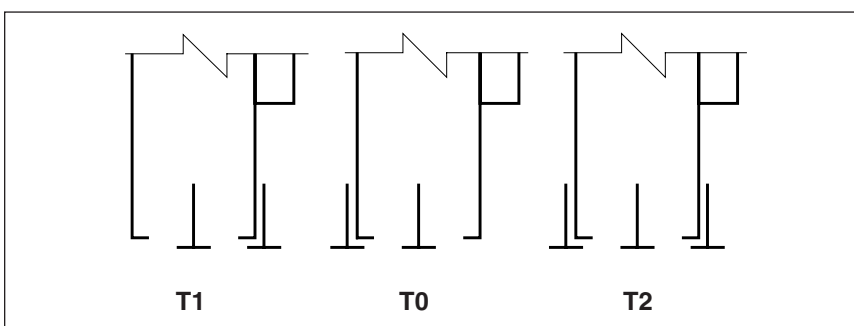
Supplementary T-Bars

T1 One on inlet side

T0 One opposite inlet side

T2 Two on both sides

Note: Center T-Bars are supplied by Nailor as standard.

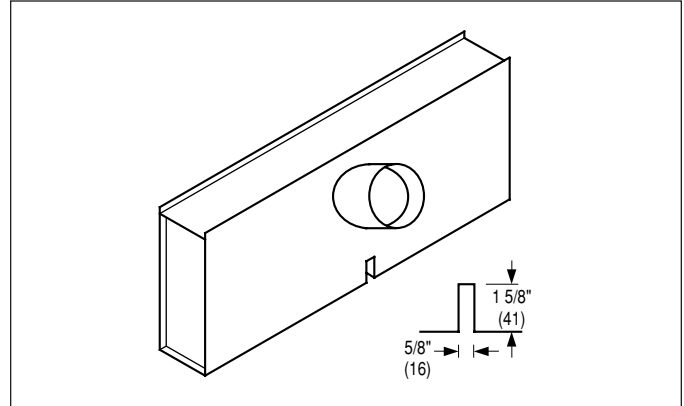


Options and Accessories

CN Cross Notch

Allows a 48" (1200) unit to be installed in a 24" x 24" (600 x 600) ceiling grid. Available on both supply and return models.

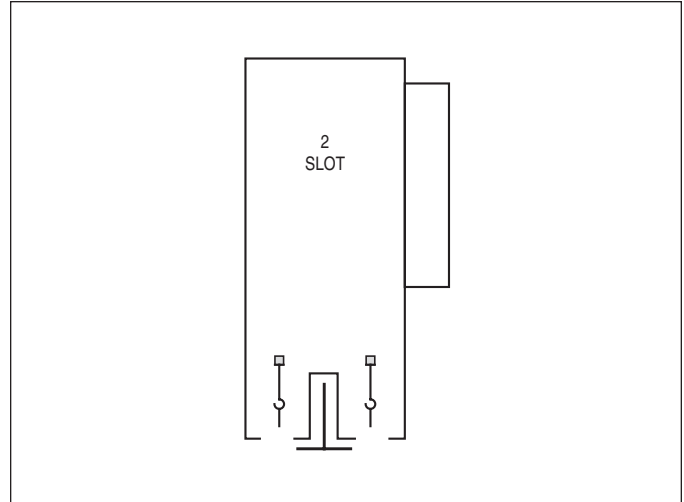
- This option is not available on the 59N Series.



ST Straddle T-Bar

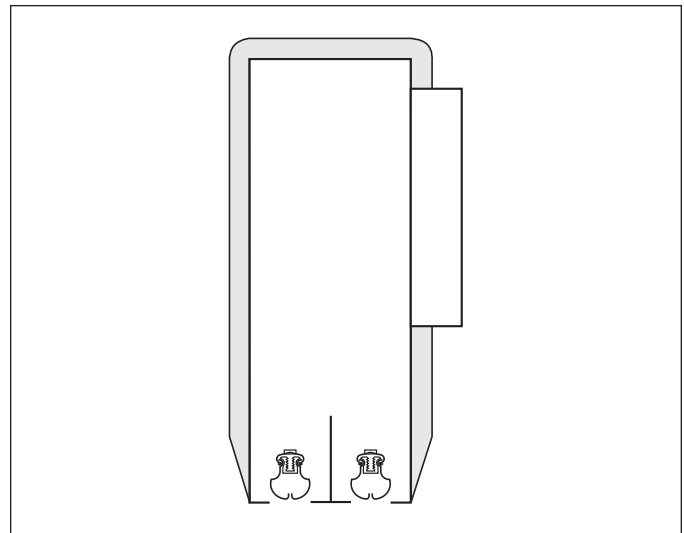
Center channel supplied with 2 or 4 slot unit. (T-Bar is supplied by others).

- This option is not available on the 59N Series.



EX External Foil Back Insulation

This option is offered on all non-insulated models. The insulation has a foil backing.



LIGHT TROFFER DIFFUSERS

- SINGLE OR DOUBLE SIDE
- SUPPLY AND RETURN

Models:

Supply:

5410 Single Side

5420 Double Side

Return:

5410R Single Side



Models 5410 and 5420

The **Series 5400 Light Troffer Diffusers** have been designed to provide an inconspicuous appearance with high engineering performance.

The **Series 5400 Diffusers** attach easily to standard air handling fluorescent light troffers. Custom fabrication is available to suit individual light troffer designs. Lighting and air distribution are provided through a single ceiling opening. The air opening is an unobtrusive slot at the side of the light troffer.

FEATURES:

- Diffusers are available in single or double side configurations.
- Standard design is for use with flush slot type (non-regressed) light troffers and fits most models.
- Custom fabrication is available to suit individual light troffer designs.
- Available to suit light troffer lengths of 24", 36", 48" and 60" (600, 900, 1200 and 1500) for both imperial and metric ceiling grids.
- Adjustable piano-type hinge pattern controllers.
- Top inlet or low profile side inlet models.
- Inlet collars are sized for nominal duct connection.
- Return models are available.
- Available with adjustable telescopic cross-over for field sizing to suit light troffer (low profile models only).
- Units are shipped knocked down for field assembly.

Options:

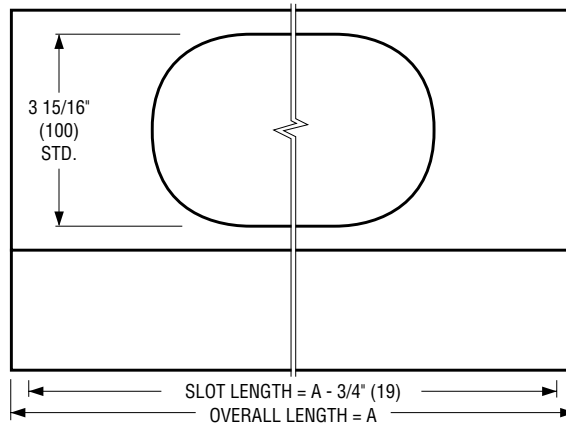
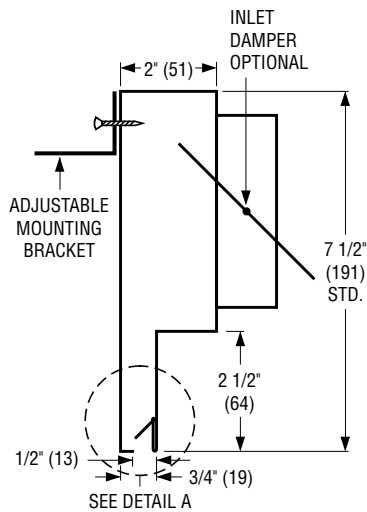
- RS Regressed slot option (pattern controller and horizontal lip are reversed).
- IN Internal insulation.
- EX External foil back insulation.
- HC High clearance option on double side units.
- TE Telescopic adjustable cross-over.
- ID Inlet damper (side inlets only).

Material: Corrosion-resistant steel.

Finish: BK Black on exposed surfaces.

Dimensional Data

Model 5410 • Supply • Single Side



INLET SELECTION:

Side Inlet

S4 4" (102) Round

S5 5" (127) Oval

S6 6" (152) Oval

STANDARD DIMENSIONAL DATA:

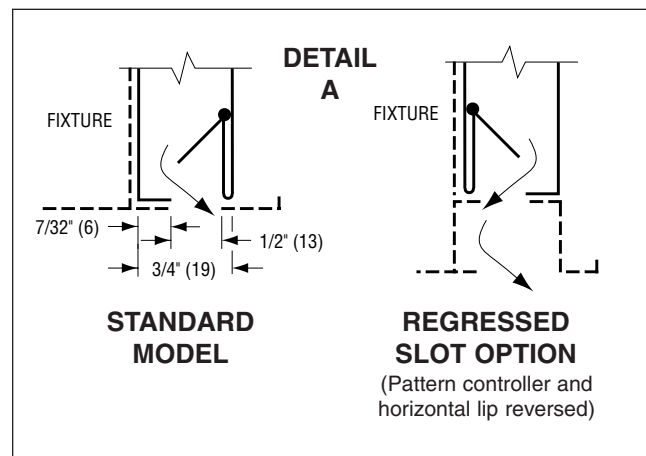
TROFFER SIZE (CEILING MODULE)			
IMPERIAL MODULES (INCHES)		METRIC MODULES (MM)	
FIXTURE NOM. LENGTH	A	FIXTURE NOM. LENGTH	A
24	17 1/2	600	445
36	25 3/4	900	654
48	41 1/2	1200	1054
60	49 3/4	1500	1264

SPECIFY:

'A' dimension
(if non-standard) _____.

NOTE:

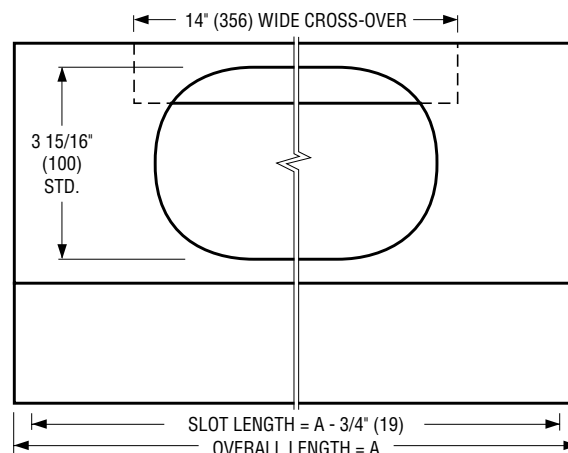
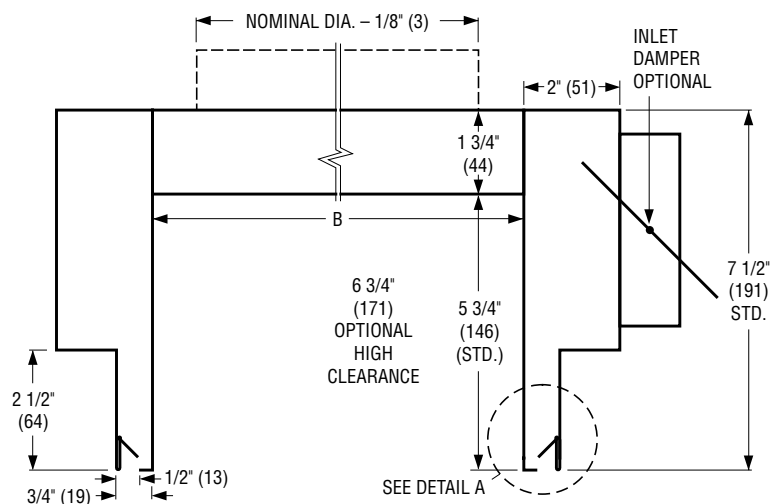
The light troffer manufacturer should provide an approved fully dimensioned drawing to ensure compatibility. In some cases, a sample light fixture will be required to be sent to the factory.



Dimensions are in inches (mm).

Dimensional Data

Model 5420 • Supply • Double Side



INLET SELECTION:

Side Inlet			Top Inlet		
S4	4"	(102) Round	T4	4"	(102) Round
S5	5"	(127) Oval	T5	5"	(127) Round
S6	6"	(152) Oval	T6	6"	(152) Round
S8	8"	(203) Oval	T7	7"	(178) Round
			T8	8"	(203) Round

STANDARD DIMENSIONAL DATA:

TROFFER SIZE (CEILING MODULE)			
IMPERIAL MODULES (INCHES)		METRIC MODULES (MM)	
FIXTURE SIZE W x L	A	FIXTURE SIZE W x L	A
12 x 48	41 1/2	300 x 1200	1054
20 x 60	41 1/2	500 x 1500	1054
24 x 24	17 1/2	600 x 600	445
24 x 48	41 1/2	600 x 1200	1054
30 x 30	23 1/2	750 x 750	597
36 x 36	25 3/4	900 x 900	654

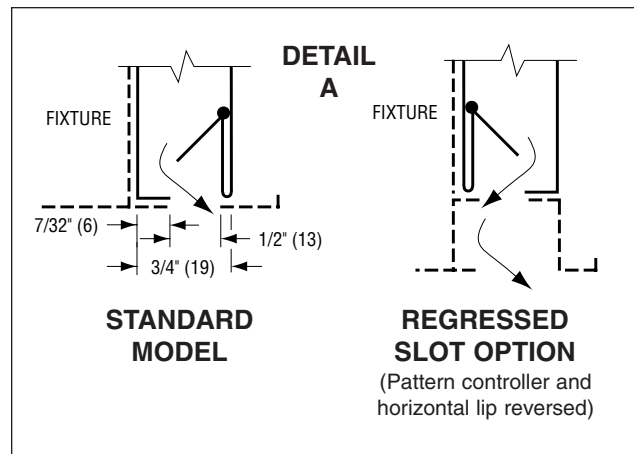
SPECIFY:

'B' dimension (always required unless TE Telescopic adjustable cross-over option specified) _____ .

'A' dimension (if non-standard) _____ .

NOTE:

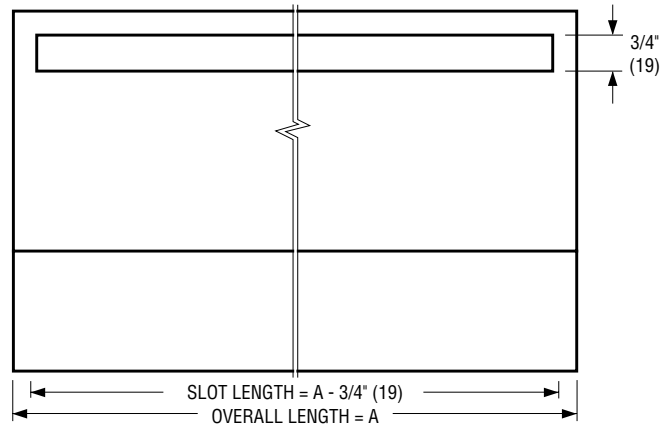
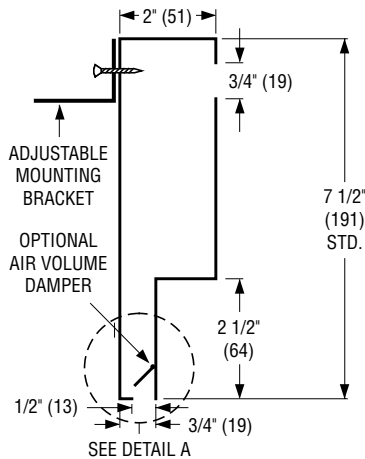
The light troffer manufacturer should provide an approved fully dimensioned drawing to ensure compatibility. In some cases, a sample light fixture will be required to be sent to the factory.



PLENUM SLOT AND LIGHT TROFFER DIFFUSERS

Dimensional Data

Model 5410R • Return • Single Side



STANDARD DIMENSIONAL DATA:

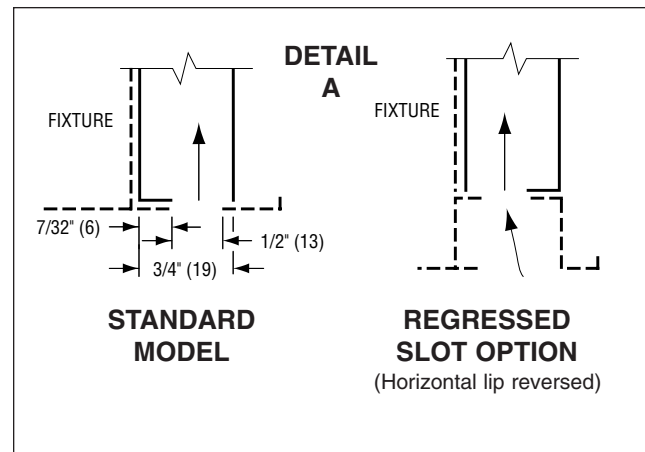
TROFFER SIZE (CEILING MODULE)			
IMPERIAL MODULES (INCHES)		METRIC MODULES (MM)	
FIXTURE SIZE W	A	FIXTURE SIZE W	A
24	17 1/2	600	445
36	25 3/4	900	654
48	41 1/2	1200	1054
60	49 3/4	1500	1264

SPECIFY:

'A' dimension
(if non-standard) _____.

NOTE:

The light troffer manufacturer should provide an approved fully dimensioned drawing to ensure compatibility. In some cases, a sample light fixture will be required to be sent to the factory.



Dimensions are in inches (mm).

HOW TO SPECIFY OR TO ORDER

(Show complete Model Number and Size, unless "Default" is desired).

Light Troffer Diffusers – Model Series 5400

5420 - S6 - 24 x 48 - TE				
MODEL			OPTIONS AND ACCESSORIES	
- Supply	Single Side	5410	- Internal Insulation	IN
	Double Side	5420	- External Insulation	EX
- Return	Single Side	5410R	- High Clearance	HC
			- Regressed Slot Light Fixture	RS
			- Telescopic Cross-Over (double side/side inlet models only)	TE
			- Inlet Damper (side inlet only)	ID
INLET TYPE/SIZE (Supply)			CEILING MODULE SIZE	
Side Inlet:			Double Side	
4" Oval	S4		Imperial (inches):	
5" Oval	S5		12 x 48, 20 x 60, 24 x 24,	
6" Oval	S6		24 x 48, 30 x 30, 36 x 36	
8" Oval	S8		Metric (mm):	
			300 x 1200, 500 x 1500, 600 x 600,	
			600 x 1200, 750 x 750, 900 x 900	
Top Inlet:			Single Side	
4" Round	T4		Imperial (inches):	
5" Round	T5		24, 36, 48, 60	
6" Round	T6		Metric (mm):	
7" Round	T7		600, 900, 1200, 1500	
8" Round	T8			
(Returns are non-ducted)	—			

Notes:

1. If non-standard overall length is required 'A' dimension is to be specified.
2. For double side units, specify 'B' dimension unless TE Telescopic Cross-Over has been selected.
3. In all cases the light fixture manufacturer should supply an approved fully dimensioned drawing to ensure compatibility. In some cases (recommended), a sample light fixture will be required to be sent to the factory.
4. Double side (saddle) units are shipped knocked-down for field assembly.

SUGGESTED SPECIFICATION:

Single Side, Supply

Furnish and install **Nailor Model 5410 Light Troffer Supply 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 include a side inlet. The slot opening shall incorporate a piano-type hinge pattern controller. The diffuser shall fit a flush slot type light troffer (RS regressed slot is optional). The pattern controller and all exposed surfaces shall have a BK Black finish.

The manufacturer shall provide published performance data for the light troffer supply diffuser, which shall be tested in accordance with ANSI/ASHRAE Standard 70 – 1991.

Double Side, Supply

Furnish and install **Nailor Model 5420 Double Side Light Troffer Supply 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 include a top or side inlet as specified. The slot openings shall incorporate piano-type hinge pattern controllers. The diffuser shall fit a flush slot type light troffer (RS regressed slot is optional). The pattern controller and all exposed surfaces shall have a BK Black finish.

The manufacturer shall provide published performance data for the light troffer supply diffuser, which shall be tested in accordance with ANSI/ASHRAE Standard 70 – 1991.

Single Side Return

Furnish and install **Nailor Model 5410R Single Side Light Troffer Return 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 have a rectangular return opening. The diffuser shall fit a flush slot type light troffer (RS regressed slot is optional). All exposed surfaces shall have a BK Black finish.

The manufacturer shall provide published performance data for the light troffer return diffuser, which shall be tested in accordance with ANSI/ASHRAE Standard 70 – 1991.

Performance Data

Model 5410

Single Side • 24" Long Light Troffer • 5" Oval Inlet

Airflow, CFM	30	40	50	60	70	80	90
TP	.04	.06	.10	.13	.17	.22	.36
SP	.03	.05	.09	.12	.15	.20	.33
NC	15	23	29	34	38	43	46
T	2-5	3-7	4-8	5-10	6-11	7-12	8-13

Single Side • 36" Long Light Troffer • 5" Oval Inlet

Airflow, CFM	40	50	60	70	80	90	100	110
TP	.05	.07	.11	.14	.18	.22	.26	.32
SP	.04	.06	.10	.12	.16	.19	.23	.28
NC	—	20	25	29	33	37	40	43
T	3-6	3-7	4-8	5-10	6-12	6-14	8-15	9-16

Single Side • 48" and 60" Long Light Troffer • 6" Oval Inlet

Airflow, CFM	40	50	60	70	80	90	100	110	120
TP	.03	.06	.08	.11	.13	.16	.22	.28	.30
SP	.03	.05	.07	.10	.12	.15	.20	.26	.28
NC	—	—	17	21	25	29	34	36	40
T	2-5	3-7	4-7	5-9	6-11	7-12	7-14	8-15	9-16

CFM - cubic feet per minute

TP - total pressure - inches w.g.

SP - static pressure - inches w.g.

T - throw in feet under isothermal conditions

NC - Noise Criteria (values) based on 10 dB room absorption, re 10⁻¹² watts.

Performance Notes:

1. Performance data is based on typical samples of light troffers. Performance may vary with other makes and models of light troffers.
2. Throws are given at 150 and 50 fpm terminal velocities, under isothermal conditions.
3. Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70 – 1991.

Length in feet	Ak Factor per foot	
	Single	Double
2	.057	.093
3	.089	.145
4	.120	.197

Performance Data

Model 5420

Double Side • 24" Long Light Troffer • 5" Round Inlet • Top Inlet

Airflow, CFM	60	70	80	100	120	140	160	180	200
TP	.07	.10	.12	.17	.25	.34	.37	.41	.45
SP	.06	.09	.10	.14	.20	.26	.28	.30	.31
NC	—	23	26	30	34	36	40	41	42
T	2-4	2-5	3-7	4-8	5-9	5-10	6-11	7-12	7-12

Double Side • 48" and 60" Long Light Troffer • 8" Round Inlet • Top Inlet

Airflow, CFM	60	80	100	120	140	160	180	200	220
TP	.03	.07	.08	.09	.13	.18	.23	.27	.35
SP	.03	.06	.07	.08	.12	.17	.21	.25	.32
NC	—	—	—	18	23	26	28	29	35
T	1-3	2-5	3-6	4-7	4-8	5-9	5-11	6-13	7-15

Double Side • 24" Long Light Troffer • 6" Oval Inlet • Side Inlet

Airflow, CFM	60	70	80	100	120	140	160	180	200
TP	.08	.11	.12	.17	.25	.32	.35	.37	.40
SP	.07	.10	.11	.15	.23	.29	.31	.32	.34
NC	22	25	27	33	35	37	42	43	45
T	2-4	2-5	3-7	4-8	5-9	5-10	6-11	7-12	7-12

Double Side • 48" and 60" Long Light Troffer • 6" Oval Inlet • Side Inlet

Airflow, CFM	60	80	100	120	140	160	180	200	220
TP	.04	.07	.09	.11	.16	.21	.28	.33	.41
SP	.03	.06	.08	.09	.14	.18	.24	.28	.352
NC	—	—	13	22	27	29	32	34	37
T	1-3	2-5	3-6	4-7	4-8	5-9	5-11	6-13	7-15

CFM - cubic feet per minute

TP - total pressure - inches w.g.

SP - static pressure - inches w.g.

T - throw in feet under isothermal conditions

NC - Noise Criteria (values) based on 10 dB room absorption, re 10⁻¹² watts.

Performance Notes:

1. Performance data is based on typical samples of light troffers. Performance may vary with other makes and models of light troffers.
2. Throws are given at 150 and 50 fpm terminal velocities, under isothermal conditions.
3. Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70 – 1991.

Length in feet	Ak Factor per foot	
	Single	Double
2	.057	.093
3	.089	.145
4	.120	.197