



Ceiling Component Diffusers



T-bar Diffusers - Supply and Return TBD2 Series

Price TBD2 series diffusers utilize an aerodynamic extruded pattern controller to produce an excellent horizontal ceiling pattern for VAV while providing the best value and flexibility to the owner. These diffusers are available in 1 and 2 slot configurations and feature a compact 8 in. high plenum.

..... **B11**



T-bar Diffusers - Supply and Return TBD3 Series

Price TBD3 series T-bar supply diffusers have extruded aluminum "ice tong" blades for 180° pattern control. The TBD3 produces a tight ceiling-hugging air pattern even at low flows or a strong vertical pattern as required. These diffusers are available with 1 to 4 slots in standard ceiling module lengths from 24 in. to 60 in.

..... **B16**



T-bar Diffusers - Supply and Return TBD4 Series

Price TBD4 series diffusers provide a tight horizontal air pattern that is ideal for VAV systems. The blade type pattern controllers are fitted with a tight sealing extruded vinyl blade edge for positive control. They are field adjustable for air patterns toward or away from the diffuser inlet side. The TBD4 is available in 1 to 4 slots.

..... **B30**



T-bar Diffusers - Supply and Supply / Return TBD6 Series

The TBD6 series diffusers are for ceiling mounting in exterior zones. They are designed for high velocity discharge and high room air induction with low sound and pressure drops while using a fixed horizontal air pattern. The TBD6 can be ordered with an integrated return or center down blow section. An automatic changeover model (TBDI6 HC) is also available which varies the air pattern based on supply temperature.

..... **B46**



T-bar Diffusers - Supply and Return TBD7 Series

Price TBD7 series diffusers are a louvered, fixed pattern diffuser that provides high air capacity with a tight horizontal ceiling air pattern and low sound. Mid-module installation is possible due to stabilizing end caps and tile supporting flanges. The diffuser is available with 1 to 4 slots in a 1 or 2 way pattern.

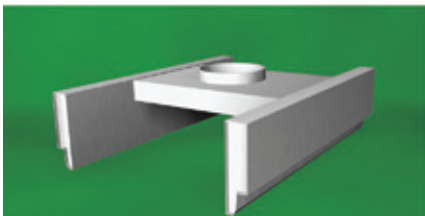
..... **B52**



T-bar Diffusers - Supply and Return TBD8 Series

Price TBD8 series diffusers combine extruded aluminum "ice tong" blades with a sloped shoulder plenum to produce an air pattern with increased spread through 180° of control. The TBD8 accommodates the air distribution limitations frequently encountered in T-bar ceiling layouts even under VAV conditions.

..... **B57**



Light Troffer Diffusers LTA / LTF / LTN / LTR

Price light troffer diffusers have been developed to provide superior air distribution at low sound levels when interfaced with compatible air handling light fixtures. All models are available as single sided, double sided saddle type with round top inlet or double sided low profile saddle type with oval side inlet. All models are available to suit surface slot or regressed slot light fixtures.

..... **B62**



Low Temperature Linear Diffuser LDLT

Price LDLT Series low temperature linear diffusers are designed to distribute low temperature supply air to spaces, including perimeter areas or large open interior zones. Various internal diffuser components are thermally insulated to reduce the risk of condensation. LDLTs are available in 24 and 48 in. modules, one- or 2 way air discharge patterns.

..... **B68**

T-bar Diffusers

Application Guidelines

Overview

Most ceiling component diffusers consist of engineered plenum sections with a variety of air pattern controllers at the discharge face. Diffusers in this section are designed to integrate into ceiling suspension systems or with commercial light fixtures. When installed, many models are effectively hidden from direct view, while other models fit into and augment the ceiling suspension system. Most diffusers in this section are designed for flexible duct connection. For optimum performance and lower sound levels, the recommended location of balancing dampers is in the branch takeoffs upstream of the flexible duct sections.

Insulated models are internally lined with 1/4 in. [6] thick coated fiberglass insulation.

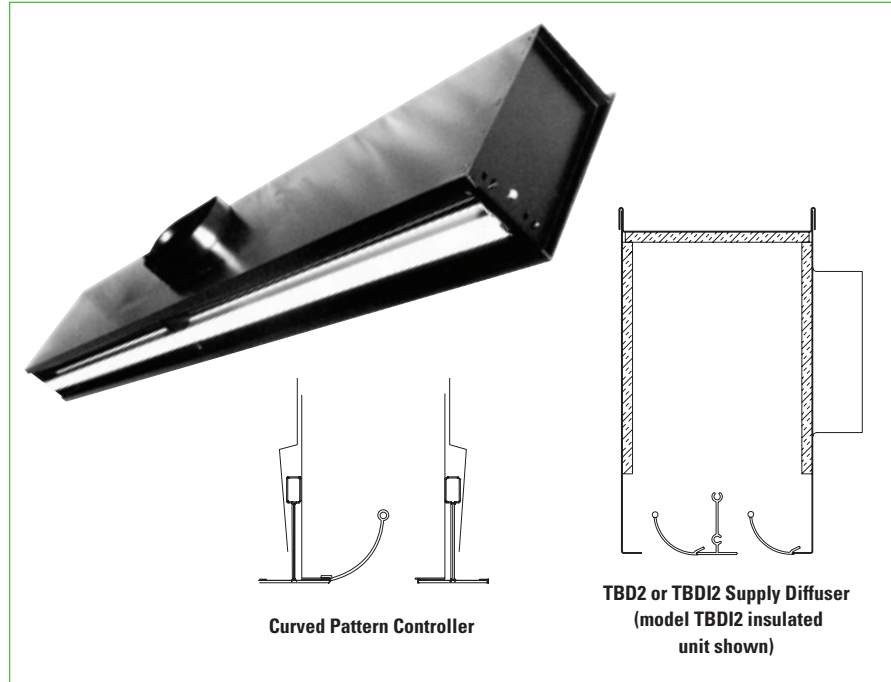
TBD2 Series

The TBD2 Series of diffusers are designed for use with T-bar ceiling systems. A variety of suggested installation details are available. The low 8 in. plenum height accommodates restricted ceiling spaces. Available in 1 slot or 2 slot models in a range of standard lengths, they offer a choice of two slot widths. Aerodynamically curved pattern controllers manufactured from extruded aluminum provide a consistent horizontal air pattern ideally suited to VAV systems. Pattern controllers are factory set but offer field adjustability for horizontal left, right or vertical air flow.

Insulated diffuser available: Model TBDI2.

TBD2-FR Series

The TBD2-FR Series of T-bar diffusers are intended for use in an exposed grid suspended ceiling (T-bar Lay-in) with up to a three hour UL and ULC rating and must be installed in accordance with installation instructions.



T-bar Diffusers Application Guidelines

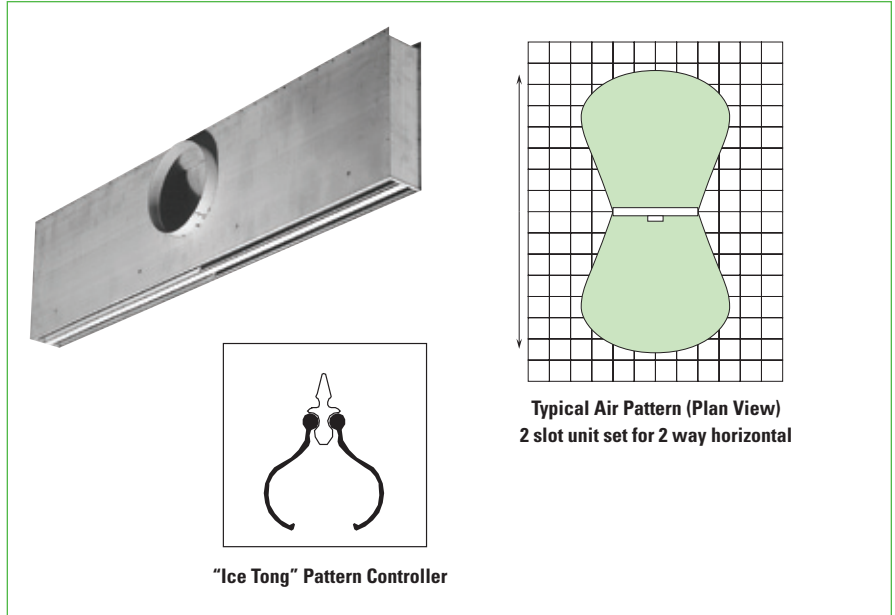
TBD3 Series

The TBD3 series of diffusers are designed to fit into a paired T-bar location. A variety of suggested installation details are available to facilitate integration into the ceiling grid. An example is optional T-bars that can be supplied and factory mounted on one or two sides if so specified. Available in 1 to 4 slot models in a range of standard lengths, they offer a choice of three slot widths, all featuring an adjustable air pattern. Precise extruded aluminum air pattern controllers provide the ultimate in VAV air distribution. Set for a horizontal air pattern, the aerodynamically curved pattern controllers produce a tight ceiling-hugging air pattern, even at low flow rates. The air pattern controllers allow a full 180° range of air pattern adjustment.

Insulated diffuser available: Model TBDI3.

TBD3-FR Series

The TBD3-FR series of T-bar diffusers are the Fire-Rated version of our standard TBD3 series. This design is intended for use in an exposed grid suspended ceiling (T-bar Lay-in) with up to a three hour UL and ULC rating and must be installed in accordance with installation instructions.



T-bar Diffusers Application Guidelines

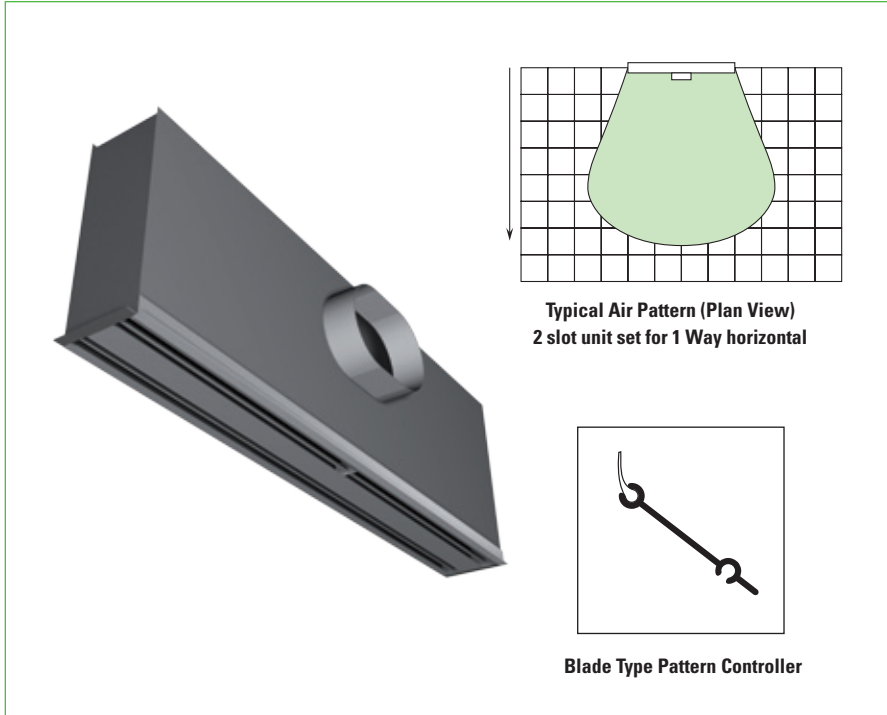
TBD4 Series

The TBD4 series of diffusers are designed for use with T-bar ceiling systems. A variety of suggested installation details are available. Examples include optional factory mounted T-bars, and factory modification to provide for straddle mounting of 2 slot units. Available in 1 to 4 slot models in a range of standard lengths, they offer a choice of three slot widths. The blade type air pattern controllers are adjustable and include vinyl seals for positive control. The direction of the horizontal air pattern can be field adjusted, to direct it either toward or away from the inlet side of the diffuser. Internal insulation is another available option.

Insulated diffuser available: Model TBDI4.

TBD4-FR Series

The TBD4-FR series of T-bar diffusers are the Fire-Rated version of our standard TBD4 series. Available in 1 slot or 2 slot models in a range of standard lengths, they offer a choice of three slot widths. This design is intended for use in an exposed grid suspended ceiling (T-bar Lay-in) with up to a three hour UL and ULC rating and must be installed in accordance with installation instructions.

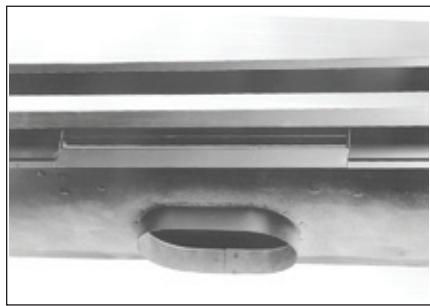


T-bar Diffusers Application Guidelines

TBD6 Series

The TBD6 series of T-bar diffusers has been designed for ceiling mounting in exterior zones. They provide a fixed horizontal air pattern with a high induction ratio for a high degree of comfort in perimeter zones. TBD6 units are available in two basic configurations and two slot widths. The first configuration is a high induction single slot fixed horizontal air pattern. The second is a single slot supply as above, plus an integral single return slot for ceiling plenum return air. TBD6 diffusers are designed for lay-in installation in a standard T-bar ceiling suspension system. TBD6 diffusers are available in a range of standard lengths.

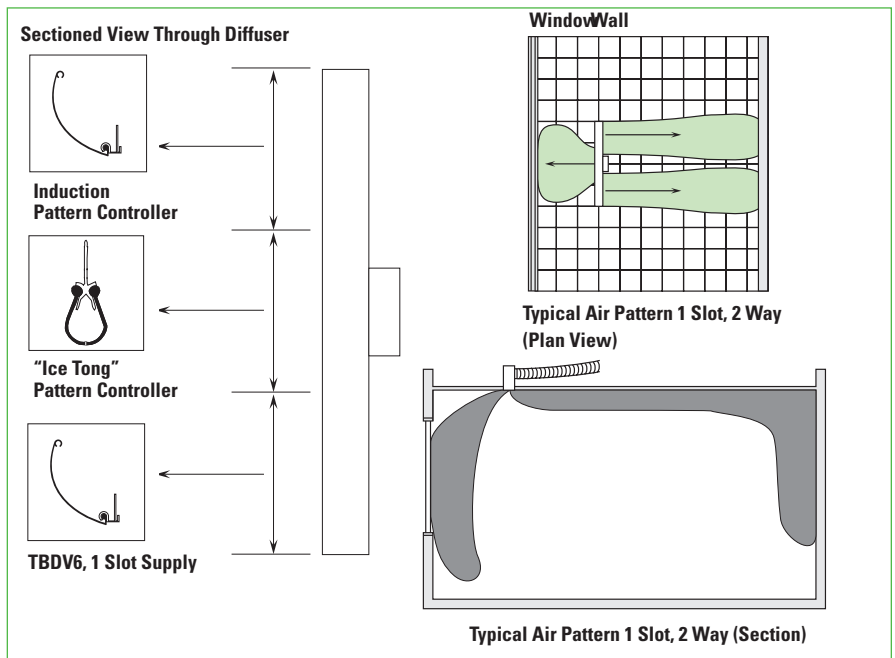
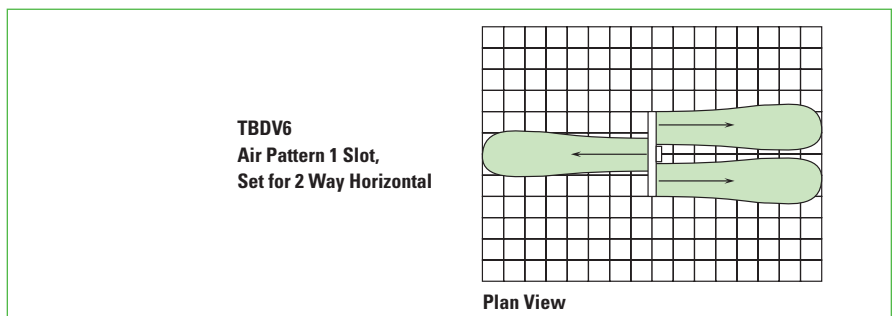
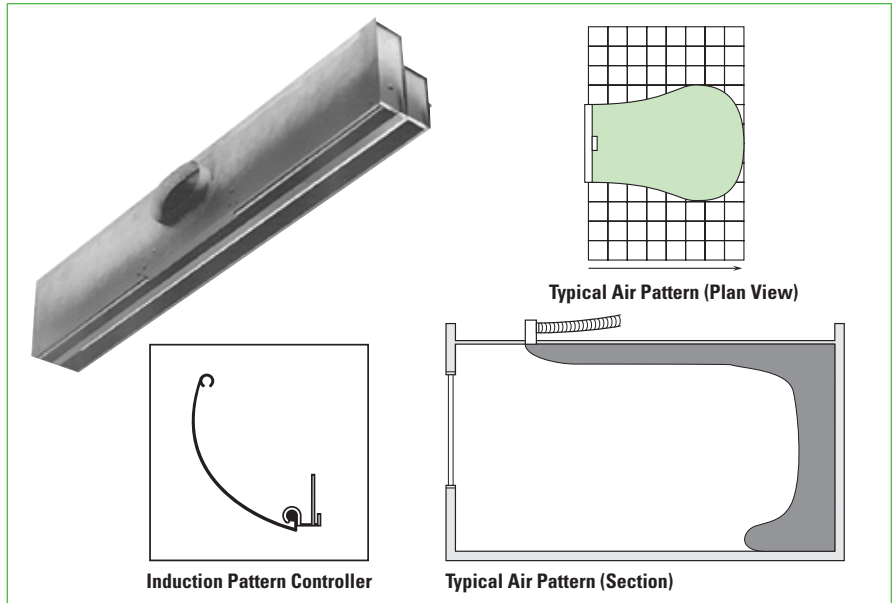
Insulated diffuser available: Model TBDI6.



TBDV6 Slot Detail

The TBDV6 series of T-bar diffusers is a single slot supply air unit designed for ceiling installation at the building perimeter. The air slot has been subdivided longitudinally into three sections. The sections at either end provide high induction fixed pattern horizontal air distribution similar to the TBD6 series. The center section includes adjustable "ice tong" type air pattern controllers, which provide a full 180° of air pattern adjustment. When installed adjacent to a window or outsidewall, the air pattern from the center section can be adjusted to an angled vertical discharge. This can allow a quantity of conditioned air to blanket a cold exterior wall or window, minimizing any cascading down drafts that would otherwise be generated by room air in contact with such cold surfaces. The TBDV6 is available in two basic configurations. The first configuration is a single slot supply air unit as described above. The second is a single slot supply unit plus an integral single return slot for ceiling plenum return air.

Insulated diffuser available: Model TBDVI6.



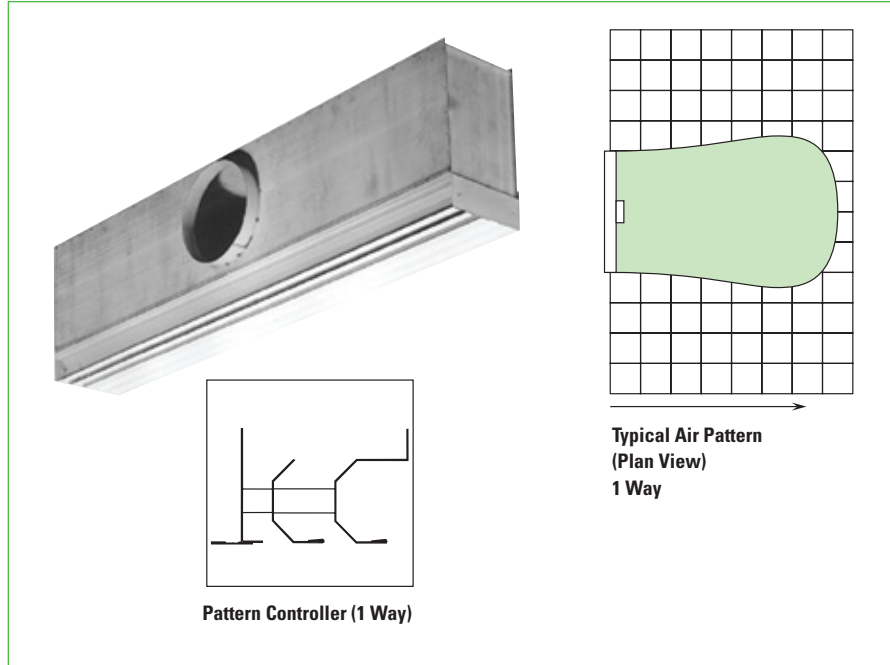
T-bar Diffusers Application Guidelines

TBD7 Series

The TBD7 series of T-bar diffusers provide a fixed horizontal air pattern. They are available in 1 to 4 slot models, in 1 way or 2 way air patterns in a range of standard lengths. Designed for flexible duct connections, they can be easily installed in most T-Bar suspension ceiling systems. Two mounting styles are available: T-bar Lay-in in mid-module, or T-bar Lay-in adjacent to an existing grid member. Stabilizing end caps and tile supporting flanges facilitate diffuser installations at mid-module. Internal insulation is another available option.

Insulated diffuser available: Model TBDI7.

CEILING COMPONENT DIFFUSERS

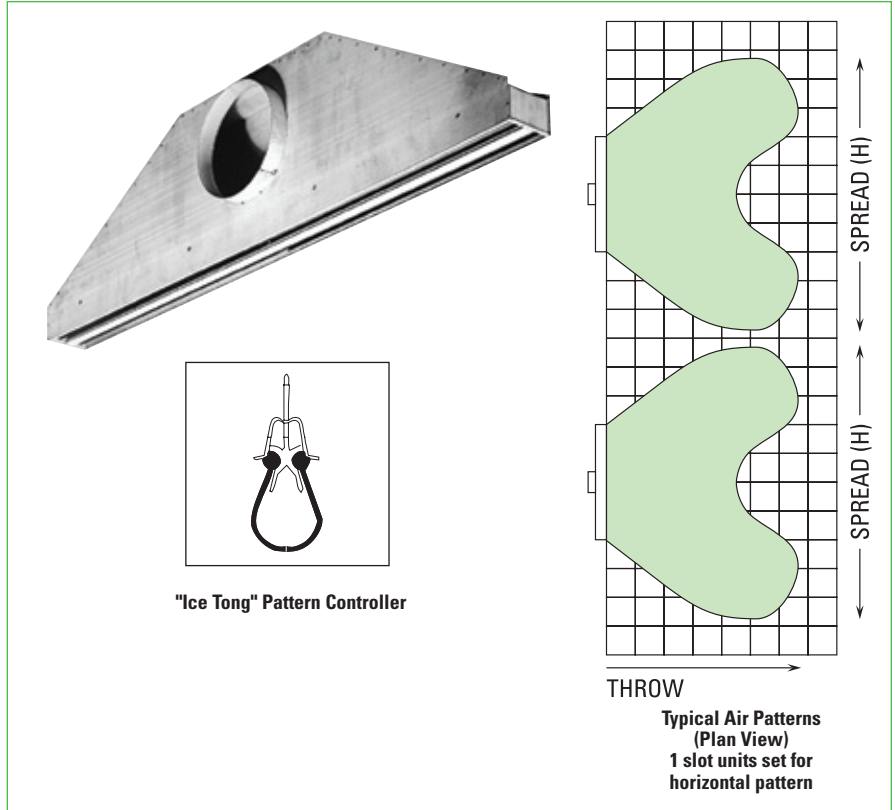


T-bar Diffusers Application Guidelines

TBD8 Series

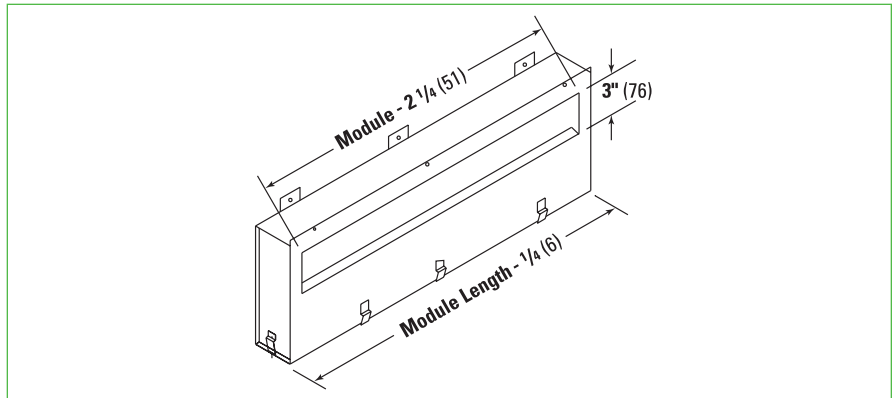
The TBD8 series of diffusers have been designed for installation into paired T-bar ceiling suspension systems. Designed for flexible duct connection, tenant changes or other revisions can be made by simply adding or relocating diffusers into another paired T-bar section. The TBD8 diffuser features a unique sloped-shoulder plenum design in combination with adjustable extruded aluminum "ice tong" air pattern controllers. The sloped-shoulder plenum design provides short horizontal throws and wide horizontal spreads, performance characteristics that accommodate the air distribution limitations frequently encountered in modular layouts of integrated paired T-bar ceiling systems. The adjustable air pattern controllers provide a full 180° of air pattern adjustment, from a horizontal air pattern to the left or right, to a vertical air discharge. A choice of three slot widths is offered and a range of standard module lengths are available.

Insulated diffuser available: Model TBDI8.



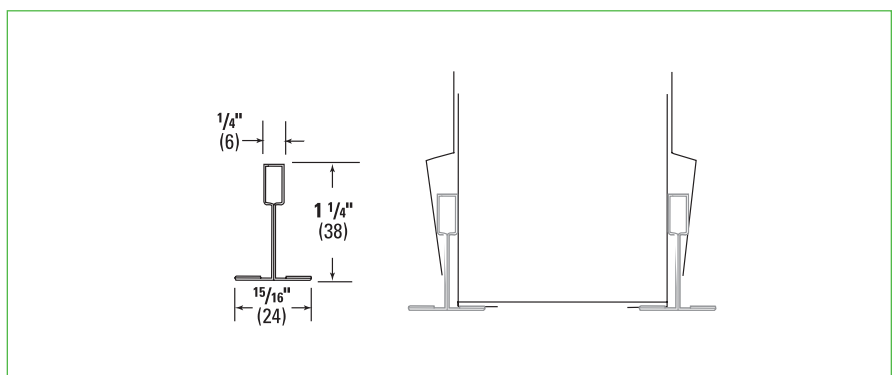
TBR-FR Series

The Price TBR-FR return T-bar diffuser is designed to be compatible with Price Fire-Rated T-bar supply diffusers. The TBR-FR is supplied with a rectangular opening in the diffuser plenum for non-ducted return applications. For ducted return applications, a 14 in. oval duct is offered as an option.



T-bar Clips

Factory installed T-bar clips on both sides and ends are standard on TBD2-FR, TBD3-FR, TBD4-FR, TBD7-FR and TBR-FR diffusers.



Light Troffer Diffusers Application Guidelines

LT Series

The LTA / LTF / LTN family of light troffer diffusers has been developed to provide superior air distribution at low sound levels when interfaced with compatible air handling light fixtures. All diffuser models are available as single-sided units, as double-sided saddle type units with round top inlet, or as low profile double-sided saddle type units with oval side inlet. All models are available in arrangements suitable for surface slot light fixtures and in modified arrangements for regressed slot light fixtures.

Light troffer diffusers are available in a range of standard sizes to suit most commercial air handling light fixtures. Light troffer diffusers are an ideal selection for VAV applications, so long as any adjustable air pattern controllers in the diffuser (LTA) or in the light fixture (LTN) are properly adjusted while air balancing the installed system.

External insulation is an available option for all models.

LTA

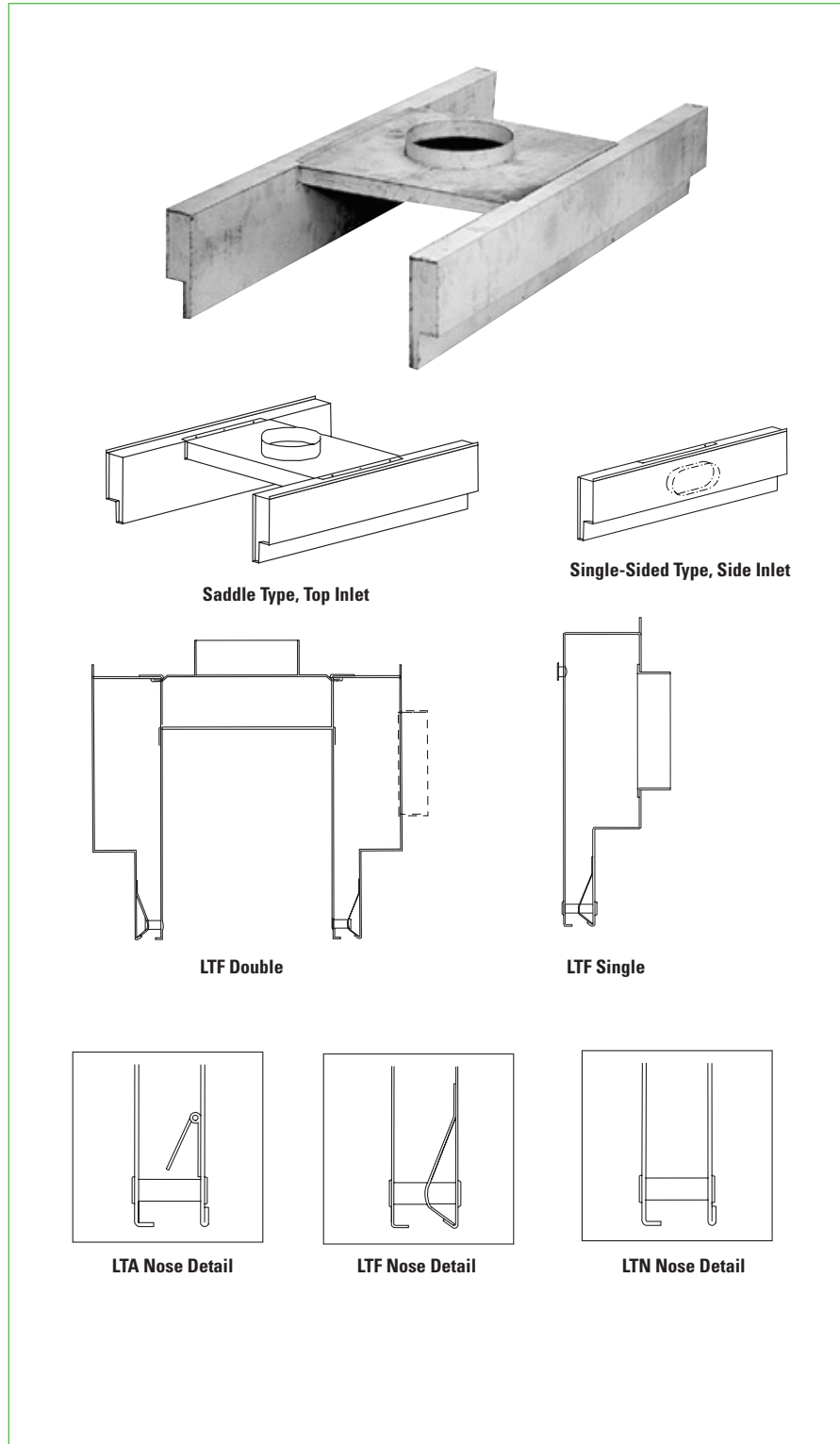
The LTA model features an adjustable air pattern controller that can be set to provide horizontal or vertical throws. The air pattern controller requires field adjustment during balancing to eliminate any potential for objectionable down drafts in the occupied zone.

LTF

The LTF model features a superior fixed horizontal air pattern, eliminating any need for on-site adjustment of the air pattern controller during balancing. It also provides a benefit to the owner / occupant by eliminating potential down drafts and/or occupant complaints as a result of improperly adjusted air pattern controllers. The fixed aerodynamically curved pattern controller provides low sound levels and a superior horizontal air pattern, even at low flow rates. The model LTF is an ideal selection for VAV applications.

LTN

The LTN model does not include any pattern controller and is designed for use on regressed slot light fixtures where the air pattern controller is an integral part of the light fixture.



Saddle Type, Top Inlet

Single-Sided Type, Side Inlet

LTF Double

LTF Single

LTA Nose Detail

LTF Nose Detail

LTN Nose Detail

T-bar Diffusers TBD2 Series - Supply

Product Information

Models

1 in. [25] Slot Width	
Non-Insulated	TBD2100
Insulated	TBDI2100
1 1/2 in. [38] Slot Width	
Non-Insulated	TBD2150
Insulated	TBDI2150

Price TBD2 Series T-bar diffusers have been engineered to produce a consistent horizontal ceiling pattern required for today's variable volume cooling applications, while providing the best possible value and flexibility to the owner. The air pattern is field adjustable from horizontal, toward or away from the inlet, to vertical, without the use of tools.

Features

- Available in 1 and 2 slot configurations.
- Available standard module lengths of 24 in. [610], 30 in. [762], 36 in. [914], 48 in. [1219] and 60 in. [1524].
- Extruded aluminum center T on 2 slot units.
- Curved extruded aluminum pattern controllers.
- Factory installed pattern controllers designed for quick field removal to adjust pattern.
- Module lengths of 36 in. [914], 48 in. [1219], and 60 in. [1524] have pattern controllers divided into two sections along the length, allowing for split air patterns.
- Plenum height is a compact 8 in. [203].
- Face is finished in standard black.
- Inlets are drawn type for low leakage.

Available Options

- Center notch (CN) available to split diffuser length (i.e. allows 48 in. [1219] unit to be installed into two 24 in. [610] ceiling modules).
- Straddle mounting (ST).
- Factory installed outer T-bars (TB1 / TB2).
- Factory installed outer T-bar clips (TC1 / TC2).
- Internal fiber free foam or coated fiberglass insulation
- External aluminum foil-backed fiberglass insulation.

Product Information Index

Performance Data	B13-15
Options and Accessories	B61
Suggested Specification	B73

Dimensional Data - Imperial (in.) / Metric [mm]

Model	Module	Inlet Size	H	1 Slot W	2 Slot W
TBD/TBDI 2100 1 in. [25] Slot	24 [610]	6, 8, 10 [152, 203, 254]	8 [203]	2 [51]	4 [102]
	30 [762]				
	36 [914]	12 [305]	11 [279]		
	48 [1219]				
	60 [1524]				
TBD/TBDI 2150 1 1/2 in. [38] Slot	24 [610]	6, 8, 10 [152, 203, 254]	8 [203]	2 3/8 [60]	4 3/4 [121]
	30 [762]				
	36 [914]	12 [305]	11 [279]		
	48 [1219]				
	60 [1524]				

All inlets shall be provided as ovals of equivalent circumference to round size listed.

- One blade per slot on 24 in. [610] and 30 in. [762] nominal lengths. Two blades per slot on all other sizes.
- Blades factory installed and field adjustable for left, right or vertical air flows.
- Spring rotates up for blade removal.
- Factory tolerance $\pm 1/32$ in. [1].
- Straddle Style 17, add 5/8 in. [16] to W.
- TBDI c/w insulation

Material

- Shell - Steel
- Pattern Controller / Center T - Extruded Aluminum

Finish

- Diffuser Face / Shell - Black **B17**
- Pattern Controller - Black **B17**
- Center T - White Powder Coat **B12**

For optional and special finishes see color matrix.

✓ Product Selection Checklist

- 1] Select Inlet Diameter based on system design or duct requirements.
- 2] Select Module Length based on ceiling module.
- 3] Select Outlet Type by module number (slot width, insulation).
- 4] Select Number of Slots.
- 5] Select Integral Options if desired (see page B61).
- 6] Select Finish (center T only).

Example: 8 / 48 / TBD2100 / 2 / B12

Fire-Rated T-bar Diffusers - Assembly TBD2-FR Series



Product Information

Three Hour Rating - Lay-in Models

1 in. [25] Slot Width	Non-Insulated	TBD2100-FR
	Insulated	TBDI2100-FR
1 1/2 in. [38] Slot Width	Non-Insulated	TBD2150-FR
	Insulated	TBDI2150-FR

Price TBD2-FR Series T-bar diffusers are Fire-Rated Assemblies UL Listed (Underwriters Laboratories Fire Resistance Directory) and ULC Listed (Underwriters Laboratories of Canada Equipment and Materials Directory). This design meets time versus temperature test criteria and NFPA 90A requirements.

The **TBD2-FR** has been engineered to produce a consistent horizontal ceiling pattern. The air pattern is field adjustable from horizontal, toward or away from the inlet, to vertical, without the use of tools.

Features

- Available in 1 and 2 slot configurations.
- Available standard module lengths of 24 in.[610], 30 in.[762], 36 in.[914], 48 in.[1219] and 60 in.[1524].
- Non-adjustable, non-asbestos flap type ceiling radiation damper fits flush against plenum wall for low noise and unrestricted air flow.
- Flap damper has the thermal blanket encased within the blade to eliminate air stream erosion and deterioration.
- Positive spring closure and locking clip for added safety.
- Designed for use in an exposed grid suspension ceiling (T-bar Lay-in) with up to a three hour assembly rating. Units must be installed in accordance with the instructions that accompany each unit.
- Easily replaceable fusible link. Standard 165 °F [74 °C], optional 212 °F [100 °C].
- Factory installed outer T-bar clips (all four sides).
- Extruded aluminum centerT on 2 slot units.
- Factory installed curved aluminum pattern controllers designed for quick field removal to adjust pattern.
- Module lengths of 36 in. [914], 48 in. [1219], and 60 in. [1524] have pattern controllers divided into two sections along the length, allowing for split air patterns lengthwise.
- Slot edges are hemmed for added rigidity and straightness.
- Inlets are drawn type for low leakage.
- Optional coated fiberglass insulation (**TBDI2-FR**).

Construction

- Shell - Steel
- Pattern Controller / Center T - Extruded Aluminum

Air Pattern Split Deflection available on 36 in. [914], 48 in. [1219] and 60 in. [1524] units.

Listed Inlet Size	Nominal Inlet Dimensions
5*	5 in. Round
6	4 in. x 7.000"
8	4 in. x 10.125"
10	4 in. x 13.250"
12	4 in. x 16.375"

Dimensional Data - Imperial (in.) / Metric [mm]

Model	Module Sizes		1 Slot Units W	2 Slot Units W	Available Inlets
TBD/	24 in.	[610]	2 in. [51]	4 in. [102]	5**, 6", 8", 10" [127*, 152, 203, 254]
TBDI	30 in.	[762]	2 in. [51]	4 in. [102]	5**, 6", 8", 10" [127*, 152, 203, 254]
2100-FR	36 in.	[914]	2 in. [51]	4 in. [102]	5**, 6", 8", 10" [127*, 152, 203, 254]
1 in. Slot [25]	48 in.	[1219]	2 in. [51]	4 in. [102]	6", 8", 10", 12" [152, 203, 254, 305]
	60 in.	[1524]	2 in. [51]	4 in. [102]	6", 8", 10", 12" [152, 203, 254, 305]
TBD/	24 in.	[610]	2 3/8 in. [60]	4 3/4 in. [121]	5**, 6", 8", 10" [127*, 152, 203, 254]
TBDI	30 in.	[762]	2 3/8 in. [60]	4 3/4 in. [121]	5**, 6", 8", 10" [127*, 152, 203, 254]
2150-FR	36 in.	[914]	2 3/8 in. [60]	4 3/4 in. [121]	5**, 6", 8", 10" [127*, 152, 203, 254]
1 1/2 in. Slot [38]	48 in.	[1219]	2 3/8 in. [60]	4 3/4 in. [121]	6", 8", 10", 12" [152, 203, 254, 305]
	60 in.	[1524]	2 3/8 in. [60]	4 3/4 in. [121]	6", 8", 10", 12" [152, 203, 254, 305]

* All inlets, except 5 in., shall be provided as ovals of equivalent circumference to round size listed.

- One blade per slot on 24 in. [610] and 30 in. [762] nominal lengths. Two blades per slot on all other sizes.
- Blades factory installed and field adjustable for left, right or vertical air flows.
- Spring rotates up for blade removal.
- Factory tolerance ± 1/32 in. [1].
- TBDI-FR c/w internal insulation

Finish

Diffuser Face and Pattern Controller - Black **B17**
Center T - White Powder Coat **B12**

For optional and special finishes see color matrix.

Product Information Index

Suggested SpecificationB75
* see Performance Note on page B75

✓ Product Selection Checklist

- 1] Select Inlet Diameter based on system design or duct requirements.
- 2] Select Module Length based on ceiling module.
- 3] Select Outlet Type by model number (slot width, insulation).
- 4] Select Number of Slots.
- 5] Select Finish (center T only).

Example: 8 / 48 / TBD2100-FR / 2 / B12

T-bar Diffusers TBD2 Series - Supply

Performance Data - 1 Slot

Model TBD2100 1 in. [25] Slot Width

	Air flow, cfm	50	75	100	125	150	175	200
Model = 24 in. / 600 mm 6 in. [152 mm] Diameter Inlet	Total Pressure	0.031	0.070	0.124	0.194	0.279	0.380	0.496
	Static Pressure	0.027	0.061	0.108	0.169	0.243	0.330	0.432
	NC (Noise Criteria)	-	18	27	34	39	43	47
	Throw	3-6-11	6-8-17	7-11-20	9-14-23	11-17-25	13-19-27	15-20-29
	Air flow, cfm	50	80	110	140	170	200	230
Model = 24 in. / 600 mm 8 in. [203 mm] Diameter Inlet	Total Pressure	0.023	0.060	0.113	0.182	0.269	0.372	0.492
	Static Pressure	0.022	0.056	0.106	0.172	0.254	0.352	0.465
	NC (Noise Criteria)	-	17	26	33	39	44	48
	Throw	4-7-13	7-11-21	10-15-25	13-19-28	15-22-31	18-23-33	21-25-36
	Air flow, cfm	75	105	135	165	195	225	255
Model = 24 in. / 600 mm 10 in. [254 mm] Diameter Inlet	Total Pressure	0.042	0.082	0.136	0.203	0.283	0.377	0.484
	Static Pressure	0.041	0.080	0.132	0.197	0.275	0.366	0.470
	NC (Noise Criteria)	-	22	30	36	40	45	48
	Throw	8-12-23	11-16-27	14-21-31	17-24-34	20-26-37	23-28-39	24-30-42
	Air flow, cfm	80	120	160	200	240	280	320
Model = 48 in. / 1200 mm 6 in. [152 mm] Diameter Inlet	Total Pressure	0.027	0.061	0.109	0.171	0.246	0.334	0.437
	Static Pressure	0.017	0.038	0.068	0.106	0.152	0.207	0.271
	NC (Noise Criteria)	-	16	24	31	36	41	45
	Throw	1-3-8	3-6-12	5-8-14	7-10-16	8-12-18	9-13-19	11-14-20
	Air flow, cfm	100	150	200	250	300	350	400
Model = 48 in. / 1200 mm 8 in. [203 mm] Diameter Inlet	Total Pressure	0.032	0.072	0.128	0.200	0.288	0.392	0.512
	Static Pressure	0.027	0.060	0.107	0.168	0.242	0.329	0.430
	NC (Noise Criteria)	-	19	27	34	39	44	48
	Throw	3-6-12	6-9-16	8-12-19	10-15-21	12-16-23	14-17-25	15-19-26
	Air flow, cfm	100	160	220	280	340	400	460
Model = 48 in. / 1200 mm 10 in. [254 mm] Diameter Inlet	Total Pressure	0.026	0.065	0.124	0.201	0.296	0.409	0.541
	Static Pressure	0.023	0.060	0.114	0.184	0.271	0.376	0.497
	NC (Noise Criteria)	-	18	27	34	40	45	49
	Throw	4-7-14	8-11-19	10-15-22	13-17-25	16-19-27	17-21-29	18-22-31
	Air flow, cfm	150	200	250	300	350	400	450
Model = 48 in. / 1200 mm 12 in. [305 mm] Diameter Inlet	Total Pressure	0.048	0.085	0.133	0.192	0.261	0.341	0.432
	Static Pressure	0.046	0.081	0.127	0.183	0.249	0.325	0.411
	NC (Noise Criteria)	-	22	29	34	39	43	46
	Throw	8-12-20	11-16-23	13-18-25	16-20-28	17-21-30	19-23-32	20-24-34
	Air flow, cfm	150	200	250	300	350	400	450

Model TBD2150 1-1/2 in. [38] Slot Width

	Air flow, cfm	50	75	100	125	150	175	200
Model = 24 in. / 600 mm 6 in. [152 mm] Diameter Inlet	Total Pressure	0.028	0.063	0.113	0.176	0.253	0.345	0.450
	Static Pressure	0.024	0.054	0.096	0.151	0.217	0.295	0.386
	NC (Noise Criteria)	-	17	25	32	37	42	46
	Throw	3-5-11	5-8-16	7-11-20	9-14-22	11-16-25	13-19-26	14-20-28
	Air flow, cfm	50	80	110	140	170	200	230
Model = 24 in. / 600 mm 8 in. [203 mm] Diameter Inlet	Total Pressure	0.021	0.054	0.102	0.166	0.244	0.338	0.447
	Static Pressure	0.020	0.051	0.096	0.156	0.229	0.317	0.420
	NC (Noise Criteria)	-	15	25	32	38	42	47
	Throw	4-7-13	7-11-21	10-15-24	12-18-27	15-21-30	18-23-33	20-25-35
	Air flow, cfm	75	105	135	165	195	225	255
Model = 24 in. / 600 mm 10 in. [254 mm] Diameter Inlet	Total Pressure	0.038	0.074	0.123	0.184	0.257	0.342	0.439
	Static Pressure	0.037	0.072	0.119	0.178	0.249	0.331	0.426
	NC (Noise Criteria)	-	21	28	34	39	43	47
	Throw	8-12-22	11-16-26	14-21-30	17-23-33	20-26-36	22-27-39	24-29-41
	Air flow, cfm	75	105	135	165	195	225	255

Performance Notes:

- Tested in accordance with ASHRAE Standard 70-2006 "Method of Testing for Rating the Performance of Air Outlets and Inlets".
- Air flow is in cfm.
- All pressures are in in. w.g.
- Throw values are measured in feet for terminal velocities of 150 fpm (minimum), 100 fpm (middle) and 50 fpm (maximum).
- Throw data is based on supply air and room air being at isothermal conditions.
- NC values are based on room absorption of 10 dB re 10⁻¹² watts and one diffuser.
- Blanks indicate NC less than 15.
- Does not include effects of ceiling radiation damper (TBD2-FR)

T-bar Diffusers TBD2 Series - Supply



Performance Data - 1 Slot (continued)

	Air flow, cfm	80	125	170	215	260	305	350
Model = 48 in. / 1200 mm 6 in. [152 mm] Diameter Inlet	Total Pressure	0.025	0.061	0.112	0.179	0.262	0.361	0.475
	Static Pressure	0.014	0.035	0.065	0.104	0.153	0.210	0.277
	NC (Noise Criteria)	-	15	24	31	37	42	46
	Throw	1-3-8	3-6-12	6-8-15	7-11-16	9-13-18	10-14-20	11-15-21
Model = 48 in. / 1200 mm 8 in. [203 mm] Diameter Inlet	Air flow, cfm	90	145	200	255	310	365	420
	Total Pressure	0.024	0.061	0.116	0.189	0.279	0.387	0.513
	Static Pressure	0.019	0.050	0.096	0.156	0.230	0.319	0.423
	NC (Noise Criteria)	-	16	26	33	39	43	48
Model = 48 in. / 1200 mm 10 in. [254 mm] Diameter Inlet	Air flow, cfm	110	175	240	305	370	435	500
	Total Pressure	0.028	0.071	0.134	0.216	0.318	0.440	0.582
	Static Pressure	0.026	0.065	0.122	0.197	0.290	0.401	0.529
	NC (Noise Criteria)	-	19	28	35	41	46	50
Model = 48 in. / 1200 mm 12 in. [305 mm] Diameter Inlet	Air flow, cfm	150	200	250	300	350	400	450
	Total Pressure	0.044	0.078	0.121	0.174	0.237	0.310	0.393
	Static Pressure	0.041	0.073	0.115	0.165	0.225	0.294	0.372
	NC (Noise Criteria)	-	21	27	33	37	41	45
	Throw	8-12-19	10-16-22	13-18-25	16-19-27	17-21-30	18-22-32	19-24-34

For performance notes, see page B13.

Performance Data - 2 Slot, 1 Way

Model TBD2100 1 in. [25] Slot Width

	Air flow, cfm	90	125	160	195	230	265	300
Model = 24 in. / 600 mm 6 in. [152 mm] Diameter Inlet	Total Pressure	0.058	0.112	0.184	0.273	0.379	0.503	0.645
	Static Pressure	0.045	0.087	0.142	0.211	0.294	0.390	0.500
	NC (Noise Criteria)	16	25	33	38	43	47	51
	Throw	5-8-16	8-11-20	10-15-22	12-17-25	14-19-27	16-20-29	18-22-31
Model = 24 in. / 600 mm 8 in. [203 mm] Diameter Inlet	Air flow, cfm	90	135	180	225	270	315	360
	Total Pressure	0.033	0.074	0.131	0.204	0.294	0.400	0.523
	Static Pressure	0.029	0.064	0.114	0.178	0.257	0.349	0.456
	NC (Noise Criteria)	-	20	29	35	40	45	49
Model = 24 in. / 600 mm 10 in. [254 mm] Diameter Inlet	Air flow, cfm	100	155	210	265	320	375	430
	Total Pressure	0.026	0.062	0.114	0.181	0.264	0.363	0.477
	Static Pressure	0.024	0.057	0.105	0.167	0.243	0.333	0.438
	NC (Noise Criteria)	-	18	27	34	40	44	48
Model = 48 in. / 1200 mm 6 in. [152 mm] Diameter Inlet	Air flow, cfm	150	195	240	285	330	375	420
	Total Pressure	0.078	0.132	0.200	0.281	0.377	0.487	0.611
	Static Pressure	0.042	0.070	0.106	0.150	0.201	0.260	0.326
	NC (Noise Criteria)	19	26	32	38	42	46	49
Model = 48 in. / 1200 mm 8 in. [203 mm] Diameter Inlet	Air flow, cfm	170	225	280	335	390	445	500
	Total Pressure	0.056	0.099	0.153	0.219	0.296	0.386	0.487
	Static Pressure	0.042	0.073	0.113	0.161	0.219	0.285	0.359
	NC (Noise Criteria)	15	23	30	35	39	43	47
Model = 48 in. / 1200 mm 10 in. [254 mm] Diameter Inlet	Air flow, cfm	175	240	305	370	435	500	565
	Total Pressure	0.038	0.072	0.116	0.171	0.236	0.312	0.398
	Static Pressure	0.032	0.060	0.097	0.142	0.196	0.259	0.331
	NC (Noise Criteria)	-	19	26	32	37	41	44
Model = 48 in. / 1200 mm 12 in. [305 mm] Diameter Inlet	Air flow, cfm	200	275	350	425	500	575	650
	Total Pressure	0.035	0.065	0.106	0.156	0.216	0.286	0.366
	Static Pressure	0.031	0.058	0.094	0.138	0.191	0.253	0.323
	NC (Noise Criteria)	-	18	26	31	36	40	44
	Throw	9-13-20	12-16-23	15-18-26	16-20-29	18-22-31	19-23-33	20-25-35

For performance notes, see page B15.

Performance Data - 2 Slot, 1 Way (continued)

Model TBD2150 1-1/2 in. [38] Slot Width

	Air flow, cfm	90	125	160	195	230	265	300
Model = 24 in. / 600 mm 6 in. [152 mm] Diameter Inlet	Total Pressure	0.047	0.090	0.148	0.220	0.305	0.405	0.520
	Static Pressure	0.034	0.065	0.106	0.158	0.220	0.292	0.374
	NC (Noise Criteria)	-	22	29	35	40	44	48
	Throw	5-8-15	7-11-19	9-14-21	11-16-23	13-18-25	15-19-27	17-20-29
Model = 24 in. / 600 mm 8 in. [203 mm] Diameter Inlet	Air flow, cfm	90	135	180	225	270	315	360
	Total Pressure	0.026	0.059	0.105	0.164	0.237	0.322	0.421
	Static Pressure	0.022	0.050	0.089	0.138	0.199	0.271	0.355
	NC (Noise Criteria)	-	16	25	32	37	41	45
Model = 24 in. / 600 mm 10 in. [254 mm] Diameter Inlet	Air flow, cfm	100	155	210	265	320	375	430
	Total Pressure	0.021	0.050	0.092	0.146	0.213	0.292	0.384
	Static Pressure	0.019	0.045	0.082	0.131	0.191	0.263	0.346
	NC (Noise Criteria)	-	15	24	31	36	41	45
Model = 48 in. / 1200 mm 6 in. [152 mm] Diameter Inlet	Throw	8-12-22	12-19-27	17-22-31	20-25-35	22-27-39	24-30-42	26-32-45
	Air flow, cfm	150	200	250	300	350	400	450
	Total Pressure	0.064	0.113	0.177	0.254	0.346	0.452	0.572
	Static Pressure	0.027	0.048	0.076	0.109	0.148	0.193	0.245
Model = 48 in. / 1200 mm 8 in. [203 mm] Diameter Inlet	NC (Noise Criteria)	15	24	30	36	40	44	48
	Throw	3-6-11	5-8-13	6-10-15	8-11-16	9-12-17	10-13-19	11-14-20
	Air flow, cfm	180	240	300	360	420	480	540
	Total Pressure	0.051	0.092	0.143	0.206	0.280	0.366	0.463
Model = 48 in. / 1200 mm 10 in. [254 mm] Diameter Inlet	Static Pressure	0.035	0.062	0.097	0.140	0.190	0.248	0.314
	NC (Noise Criteria)	-	22	28	34	38	42	46
	Throw	6-8-14	7-11-17	9-13-19	11-14-20	13-16-22	14-17-24	14-18-25
	Air flow, cfm	220	290	360	430	500	570	640
Model = 48 in. / 1200 mm 12 in. [305 mm] Diameter Inlet	Total Pressure	0.049	0.086	0.132	0.188	0.254	0.330	0.417
	Static Pressure	0.039	0.068	0.105	0.149	0.202	0.262	0.331
	NC (Noise Criteria)	-	21	28	33	38	41	45
	Throw	8-12-18	10-14-20	13-16-23	14-18-25	16-19-27	17-20-29	18-22-30
Model = 48 in. / 1200 mm 12 in. [305 mm] Diameter Inlet	Air flow, cfm	275	355	435	515	595	675	755
	Total Pressure	0.053	0.089	0.134	0.187	0.250	0.322	0.403
	Static Pressure	0.046	0.076	0.115	0.161	0.214	0.276	0.345
	NC (Noise Criteria)	15	23	29	34	38	42	45
	Throw	11-15-22	14-18-25	16-19-27	17-21-30	19-23-32	20-24-34	21-26-36

Performance Notes:

1. Tested in accordance with ASHRAE Standard 70-2006 "Method of Testing for Rating the Performance of Air Outlets and Inlets".
2. Air flow is in cfm.
3. All pressures are in in. w.g.
4. Throw values are measured in feet for terminal velocities of 150 fpm (minimum), 100 fpm (middle) and 50 fpm (maximum).
5. Throw data is based on supply air and room air being at isothermal conditions.
6. NC values are based on room absorption of 10 dB re 10⁻¹² watts and one diffuser.
7. Blanks indicate NC less than 15.
8. Does not include effects of ceiling radiation damper (TBD2-FR)

T-bar Diffusers TBD3 Series - Supply



Product Information

Models

1/2 in. [13] Slot Width	Non-Insulated	TBD350
	Insulated	TBDI350
3/4 in. [19] Slot Width	Non-Insulated	TBD375
	Insulated	TBDI375
1 in. [25] Slot Width	Non-Insulated	TBD3100
	Insulated	TBDI3100

Price TBD 3 Series T-bar supply diffusers feature extruded aluminum "ice tong" pattern controllers that provide the ultimate in VAV air distribution. The smooth, aerodynamic curvature of the adjustable pattern controller produces a tight ceiling-hugging horizontal pattern, even at low flow rates. These unique pattern controllers can also be set for vertical projection. Balance dampening is also possible in both horizontal and vertical pattern settings.

Features

- Available in 1, 2, 3 and 4 slot types.
- Available in both imperial and hard metric module sizes.
- Available standard module lengths of 24 in./600 mm, 30 in./750 mm, 36 in./900 mm, 48 in./1200 mm and 60 in./1500 mm.
- Pattern controllers on the 36 in./900 mm, 48 in./1200 mm and 60 in./1500 mm diffusers are divided into two segments which allows for split air pattern deflection (See illustration).

Available Options

- Center notch (**CN**) available to bisect diffuser length (i.e. allows 48 in./1200 mm unit to be installed into two 24 in./600 mm ceiling modules).
- Straddle mounting (**ST**).
- Factory installed outer T-bars (**TB1 / TB2**).
- Factory installed T-bar clips (**TC1 / TC2**).
- Aluminum plaster frame (**APF**).
- Internal fiber free foam or coated fiberglass insulation.
- External aluminum foil-backed fiberglass insulation.

Material

- Shell - Coated Steel
- Pattern Controller / Center T - Extruded Aluminum

Finish

- Shell
- Pattern Controller - Black
- Center T - White Powder Coat

MILL
B17
B12

For optional and special finishes see color matrix.

Product Information Index

Performance Data	B18 - B29
Options and Accessories.....	B61
Suggested Specification	B73

Dimensional Data - Imperial (in.) / Metric [mm]

Model	Module		Inlet Size D	1 Slot		2 Slot		3 Slot		4 Slot										
	Imperial (in.)	Metric [mm]		H	W	H	W	H	W	H	W									
												H	W	H	W	H	W			
TBD/TBDI 350 1/2 in. [13] Slot	24	600	6, 8, 10 [152, 203, 254]	8	1 1/2	8	3	11	4 1/2	11	6									
	30	750		[203]	[38]	[203]	[76]	[279]	[114]	[279]	[152]									
	36	900		12 [305]	11	1 1/2	11	3	11	4 1/2	11	6								
	48	1200											[279]	[38]	[279]	[76]	[279]	[114]	[279]	[152]
	60	1500											[279]	[38]	[279]	[76]	[279]	[114]	[279]	[152]
TBD/TBDI 375 3/4 in. [19] Slot	24	600	6, 8, 10 [152, 203, 254]	8	1 3/4	8	3 1/2	11	5 1/4	11	7									
	30	750		[203]	[44]	[203]	[89]	[279]	[133]	[279]	[178]									
	36	900		12 [305]	11	1 3/4	11	3 1/2	11	5 1/4	11	7								
	48	1200											[279]	[44]	[279]	[89]	[279]	[133]	[279]	[178]
	60	1500											[279]	[44]	[279]	[89]	[279]	[133]	[279]	[178]
TBD/TBDI 3100 1 in. [25] Slot	24	600	6, 8, 10 [152, 203, 254]	8	2	8	4	11	6	11	8									
	30	750		[203]	[51]	[203]	[102]	[279]	[152]	[279]	[203]									
	36	900		12 [305]	11	2	11	4	11	6	11	8								
	48	1200											[279]	[51]	[279]	[102]	[279]	[152]	[279]	[203]
	60	1500											[279]	[51]	[279]	[102]	[279]	[152]	[279]	[203]

Supplied as equivalent oval except 6 in. on 3 and 4 slot units.

✓ Product Selection Checklist

- 1] Select Inlet Diameter based on system design or duct requirements.
- 2] Select Module Length based on ceiling module.
- 3] Select Outlet Type by model number (slot width, insulation).
- 4] Select Number of Slots.
- 5] Select Integral Options if desired (see page B61).
- 6] Select Finish (center T only).

Example: 8 / 48 / TBD375 / 2 / B12

Fire-Rated T-bar Diffusers - Assembly TBD3-FR Series



Product Information

Three Hour Rating - Lay-in Models

1/2 in. [13] Slot Width	Non-Insulated	TBD350-FR
	Insulated	TBDI350-FR
3/4 in. [19] Slot Width	Non-Insulated	TBD375-FR
	Insulated	TBDI375-FR
1 in. [25] Slot Width	Non-Insulated	TBD3100-FR
	Insulated	TBDI3100-FR

Price TBD3-FR Series T-bar diffuser are Fire-Rated Assemblies UL Listed (Underwriters Laboratories Fire Resistance Directory) and ULC Listed (Underwriters Laboratories of Canada Equipment and Materials Directory). This design meets time versus temperature test criteria and NFPA 90A requirements.

TBD3-FR T-bar diffusers feature extruded aluminum "ice tong" pattern controllers. The smooth curvature of the adjustable pattern controller produces a tight ceiling-hugging pattern down to low flow rates, or a strong vertical pattern as required. The pattern controllers can also damper the air flow in either horizontal or vertical and produce 180° control of the air pattern.

Features

- Available in 1 and 2 slot configurations.
 - Available in both imperial and hard metric module sizes.
 - Available standard module lengths of 24 in./600 mm, 30 in./750 mm, 36 in./900 mm, 48 in./1200 mm and 60 in./1500 mm.
 - Non-adjustable, non-asbestos flap type ceiling radiation damper fits flush against plenum wall for low noise and unrestricted air flow.
 - Flap damper has the thermal blanket encased within the blade to eliminate air stream erosion and deterioration.
 - Positive spring closure and locking clip for added safety.
 - Designed for use in an exposed grid suspension ceiling (T-bar Lay-in) with up to a three hour assembly rating. Units must be installed in accordance with the instructions that accompany each unit.
 - Easily replaceable fusible link. Standard 165 °F [74 °C], optional 212 °F [100 °C].
 - Factory installed outer T-bar clips (all four sides).
 - Module lengths of 48 in./1200 mm and 60 in./1500 mm have pattern controllers divided into two segments, which allows for air pattern split deflection (see illustration above).
 - Optional coated fiberglass insulation (**TBDI3-FR**).
- ### Construction
- Plenum – Coated Steel
 - Pattern Controller / Center T – Extruded Aluminum

Dimensional Data - Imperial (in.) / Metric [mm]

Model	Module		D	1 Slot		2 Slot	
	Imperial	Metric		W	H	W	
TBD/	24 in.	600	6", 8", 10"*[152,203*,254*]	1 1/4 [32]	11 [279]	2 1/2 [64]	
TBDI	30 in.	750	6", 8", 10"*[152,203*,254*]	1 1/4 [32]	11 [279]	2 1/2 [64]	
350-FR	36 in.	900	6", 8", 10"*[152,203*,254*]	1 1/4 [32]	11 [279]	2 1/2 [64]	
1/2 in. Slot [13]	48 in.	1200	6", 8", 10", 12"*[152,203*,254*,305*]	1 1/4 [32]	11 [279]	2 1/2 [64]	
	60 in.	1500	6", 8", 10", 12"*[152,203*,254*,305*]	1 1/4 [32]	11 [279]	2 1/2 [64]	
TBD/	24 in.	600	6", 8", 10"*[152,203*,254*]	1 1/2 [38]	12 [305]	3 [76]	
TBDI	30 in.	750	6", 8", 10"*[152,203*,254*]	1 1/2 [38]	12 [305]	3 [76]	
375-FR	36 in.	900	6", 8", 10"*[152,203*,254*]	1 1/2 [38]	12 [305]	3 [76]	
3/4 in. Slot [19]	48 in.	1200	6", 8", 10", 12"*[152,203*,254*,305*]	1 1/2 [38]	12 [305]	3 [76]	
	60 in.	1500	6", 8", 10", 12"*[152,203*,254*,305*]	1 1/2 [38]	12 [305]	3 [76]	
TBD/	24 in.	600	6", 8", 10"*[152,203*,254*]	1 3/4 [44]	12 [305]	3 1/2 [89]	
TBDI	30 in.	750	6", 8", 10"*[152,203*,254*]	1 3/4 [44]	12 [305]	3 1/2 [89]	
3100-FR	36 in.	900	6", 8", 10"*[152,203*,254*]	1 3/4 [44]	12 [305]	3 1/2 [89]	
1 in. Slot [25]	48 in.	1200	6", 8", 10", 12"*[152,203*,254*,305*]	1 3/4 [44]	12 [305]	3 1/2 [89]	
	60 in.	1500	6", 8", 10", 12"*[152,203*,254*,305*]	1 3/4 [44]	12 [305]	3 1/2 [89]	

*Supplied as equivalent oval.

Finish

Shell **MILL**
 Pattern Controller - Black **B17**
 Center T - White Powder Coat **B12**

For optional and special finishes see color matrix.

Product Information Index

Suggested Specification B75
 * see Performance Note on page B75

Product Selection Checklist

- 1) Select Inlet Diameter based on system design or duct requirements.
- 2) Select Module Length based on ceiling module.
- 3) Select Outlet Type by model number (slot width, insulation).
- 4) Select Number of Slots.
- 5) Select Finish (center T only).

Example: 8 / 48 / TBD375-FR / 2 / B12

T-bar Diffusers

TBD3 Series - Supply



Performance Data - 1 Slot

Model TBD350 1/2 in. [13] Slot Width											
Length = 24 in./600 mm Inlet = 6 in. [152]	Total Pressure	0.053	0.120	0.214	0.334	0.481	0.654				
	Static Pressure	0.051	0.115	0.204	0.318	0.458	0.624				
	Flow Rate	39	59	78	98	118	137				
	NC	----	25	35	42	48	53				
	Throw 150,100,50	4-7-14	7-11-19	10-14-22	12-18-25	14-19-27	17-21-30				
Length = 24 in./600 mm Inlet = 8 in. [203]	Total Pressure	0.141	0.317	0.564							
	Static Pressure	0.139	0.312	0.554							
	Flow Rate	70	105	140							
	NC	26	40	49							
	Throw 150,100,50	8-13-21	13-18-26	17-21-30							
Length = 48 in./1200 mm Inlet = 6 in. [152]	Total Pressure	0.020	0.045	0.080	0.124	0.179	0.244	0.319	0.403	0.498	
	Static Pressure	0.017	0.039	0.070	0.109	0.157	0.213	0.279	0.353	0.436	
	Flow Rate	39	59	78	98	118	137	157	176	196	
	NC	----	----	20	28	34	39	43	47	50	
	Throw 150,100,50	1-3-7	3-5-10	4-7-13	6-8-16	7-10-17	8-12-19	9-13-20	10-15-21	11-16-22	
Length = 48 in./1200 mm Inlet = 8 in. [203]	Total Pressure	0.045	0.100	0.178	0.278	0.401	0.546				
	Static Pressure	0.042	0.095	0.168	0.263	0.378	0.515				
	Flow Rate	70	105	140	175	209	244				
	NC	----	23	32	39	45	51				
	Throw 150,100,50	4-6-12	6-9-16	8-12-19	10-15-21	12-16-23	14-17-25				
Length = 48 in./1200 mm Inlet = 10 in. [254]	Total Pressure	0.092	0.207	0.367	0.574						
	Static Pressure	0.089	0.201	0.357	0.558						
	Flow Rate	109	164	218	273						
	NC	20	33	43	50						
	Throw 150,100,50	6-9-17	9-14-20	12-17-23	15-18-26						
Length = 48 in./1200 mm Inlet = 12 in. [305]	Total Pressure	0.174	0.391	0.695							
	Static Pressure	0.171	0.385	0.685							
	Flow Rate	157	236	314							
	NC	29	43	52							
	Throw 150,100,50	9-13-20	13-17-24	16-20-28							
Length = 60 in./1500 mm Inlet = 6 in. [152]	Total Pressure	0.015	0.035	0.061	0.096	0.138	0.188	0.245	0.311	0.384	0.552
	Static Pressure	0.013	0.029	0.051	0.080	0.116	0.157	0.206	0.260	0.321	0.463
	Flow Rate	39	59	78	98	118	137	157	176	196	235
	NC	----	----	16	24	30	35	39	43	47	53
	Throw 150,100,50	1-1-4	1-3-6	2-4-8	3-5-10	4-6-11	4-7-13	5-8-14	6-9-15	6-10-16	8-11-17
Length = 60 in./1500 mm Inlet = 8 in. [203]	Total Pressure	0.032	0.072	0.128	0.200	0.288	0.392	0.512			
	Static Pressure	0.029	0.066	0.118	0.184	0.265	0.361	0.472			
	Flow Rate	70	105	140	175	209	244	279			
	NC	----	18	27	35	41	46	50			
	Throw 150,100,50	2-3-7	3-5-10	5-7-13	6-9-15	7-10-16	8-12-17	9-13-19			
Length = 60 in./1500 mm Inlet = 10 in. [254]	Total Pressure	0.063	0.143	0.253	0.396	0.570					
	Static Pressure	0.061	0.137	0.243	0.380	0.548					
	Flow Rate	109	164	218	273	327					
	NC	----	28	37	45	51					
	Throw 150,100,50	4-5-11	5-8-14	7-11-16	9-13-18	11-14-20					
Length = 60 in./1500 mm Inlet = 12 in. [305]	Total Pressure	0.117	0.264	0.469							
	Static Pressure	0.115	0.258	0.459							
	Flow Rate	157	236	314							
	NC	24	37	46							
	Throw 150,100,50	5-8-14	8-11-17	10-14-20							

Performance Notes:

1. Tested in accordance with ASHRAE Standard 70-2006 "Method of Testing for Rating the Performance of Air Outlets and Inlets".
2. Air flow is in cfm.
3. All pressures are in in. w.g.
4. Throw values are measured in feet for terminal velocities of 150 fpm (minimum), 100 fpm (middle) and 50 fpm (maximum).
5. Throw data is based on supply air and room air being at isothermal conditions.
6. NC values are based on room absorption of 10 dB re 10⁻¹² watts and one diffuser.
7. Blanks indicate NC less than 15.
8. Shaded area outside recommended operating range.
9. Does not include effects of ceiling radiation damper (TBD3-FR)

T-bar Diffusers TBD3 Series - Supply



Performance Data - 1 Slot

Model TBD375 3/4 in. [19] Slot Width											
Length = 24 in./600 mm Inlet = 6 in. [152]	Total Pressure	0.040	0.090	0.159	0.249	0.358	0.488	0.637			
	Static Pressure	0.037	0.084	0.149	0.233	0.336	0.457	0.597			
	Flow Rate	39	59	78	98	118	137	157			
	NC	----	22	33	41	48	54	58			
	Throw 150,100,50	3-6-13	6-10-19	9-13-22	11-16-25	13-19-27	15-21-30	17-22-32			
Length = 24 in./600 mm Inlet = 8 in. [203]	Total Pressure	0.102	0.229	0.406	0.635						
	Static Pressure	0.099	0.223	0.396	0.619						
	Flow Rate	70	105	140	175						
	NC	26	41	52	60						
	Throw 150,100,50	8-11-21	11-17-26	15-21-30	19-24-33						
Length = 24 in./600 mm Inlet = 10 in. [254]	Total Pressure	0.220	0.495	0.880	1.374	1.979	2.694	3.518	4.453	5.497	7.916
	Static Pressure	0.217	0.489	0.870	1.359	1.957	2.663	3.478	4.402	5.435	7.826
	Flow Rate	109	164	218	273	327	382	436	491	545	654
	NC	42	57	68	76	83	88	93	98	102	108
	Throw 150,100,50	12-18-26	18-23-32	22-26-37	24-29-42	26-32-46	28-35-49	30-37-53	32-40-56	34-42-59	37-46-65
Length = 48 in./1200 mm Inlet = 6 in. [152]	Total Pressure	0.014	0.032	0.057	0.090	0.129	0.176	0.229	0.290	0.358	0.516
	Static Pressure	0.012	0.027	0.047	0.074	0.107	0.145	0.189	0.240	0.296	0.426
	Flow Rate	39	59	78	98	118	137	157	176	196	235
	NC	----	----	----	20	27	33	38	42	46	53
	Throw 150,100,50	1-2-6	2-4-9	3-6-12	5-7-14	6-9-17	7-10-19	8-12-20	9-13-21	10-14-22	12-17-24
Length = 48 in./1200 mm Inlet = 8 in. [203]	Total Pressure	0.033	0.075	0.133	0.208	0.299	0.408	0.532			
	Static Pressure	0.031	0.069	0.123	0.192	0.277	0.377	0.492			
	Flow Rate	70	105	140	175	209	244	279			
	NC	----	19	29	37	44	50	55			
	Throw 150,100,50	2-5-10	5-8-15	7-10-19	9-13-21	10-15-23	12-17-25	14-19-26			
Length = 48 in./1200 mm Inlet = 10 in. [254]	Total Pressure	0.067	0.151	0.269	0.421	0.606					
	Static Pressure	0.065	0.146	0.259	0.405	0.584					
	Flow Rate	109	164	218	273	327					
	NC	18	33	44	52	59					
	Throw 150,100,50	5-8-16	8-12-20	11-16-23	13-18-26	16-20-29					
Length = 48 in./1200 mm Inlet = 12 in. [305]	Total Pressure	0.124	0.279	0.496							
	Static Pressure	0.122	0.273	0.486							
	Flow Rate	157	236	314							
	NC	30	45	56							
	Throw 150,100,50	8-12-20	12-17-24	15-20-28							
Length = 60 in./1500 mm Inlet = 6 in. [152]	Total Pressure	0.011	0.024	0.042	0.066	0.095	0.129	0.169	0.214	0.264	0.380
	Static Pressure	0.008	0.018	0.032	0.050	0.073	0.099	0.129	0.163	0.202	0.290
	Flow Rate	39	59	78	98	118	137	157	176	196	235
	NC	----	----	----	----	21	26	31	36	40	46
	Throw 150,100,50	0-1-3	1-2-5	1-3-7	2-4-8	3-5-10	4-6-12	4-7-13	5-7-15	5-8-16	7-10-17
Length = 60 in./1500 mm Inlet = 8 in. [203]	Total Pressure	0.024	0.054	0.095	0.149	0.214	0.292	0.381	0.482	0.595	
	Static Pressure	0.021	0.048	0.085	0.133	0.192	0.261	0.341	0.431	0.533	
	Flow Rate	70	105	140	175	209	244	279	314	349	
	NC	----	----	22	31	37	43	48	52	56	
	Throw 150,100,50	1-3-6	3-4-9	4-6-12	5-7-15	6-9-16	7-10-17	8-12-19	9-13-20	10-15-21	
Length = 60 in./1500 mm Inlet = 10 in. [254]	Total Pressure	0.047	0.106	0.188	0.294	0.423	0.576				
	Static Pressure	0.045	0.100	0.178	0.278	0.401	0.546				
	Flow Rate	109	164	218	273	327	382				
	NC	----	26	36	45	51	57				
	Throw 150,100,50	3-5-9	5-7-14	6-9-16	8-11-18	9-14-20	11-15-22				
Length = 60 in./1500 mm Inlet = 12 in. [305]	Total Pressure	0.085	0.191	0.340	0.532						
	Static Pressure	0.083	0.186	0.330	0.516						
	Flow Rate	157	236	314	393						
	NC	23	38	48	57						
	Throw 150,100,50	4-7-13	7-10-17	9-13-20	11-16-22						

Performance Notes:

1. Tested in accordance with ASHRAE Standard 70-2006 "Method of Testing for Rating the Performance of Air Outlets and Inlets".
2. Air flow is in cfm.
3. All pressures are in in. w.g.
4. Throw values are measured in feet for terminal velocities of 150 fpm (minimum), 100 fpm (middle) and 50 fpm (maximum).
5. Throw data is based on supply air and room air being at isothermal conditions.
6. NC values are based on room absorption of 10 dB re 10⁻¹² watts and one diffuser.
7. Blanks indicate NC less than 15.
8. Shaded area outside recommended operating range.
9. Does not include effects of ceiling radiation damper (TBD3-FR)

T-bar Diffusers TBD3 Series - Supply



Performance Data - 1 Slot

Model TBD3100 1 in. [25] Slot Width											
Length = 24 in./600 mm Inlet = 6 in. [152]	Total Pressure	0.026	0.057	0.102	0.159	0.230	0.313	0.408	0.517	0.638	
	Static Pressure	0.023	0.052	0.092	0.144	0.207	0.282	0.368	0.466	0.575	
	Flow Rate	39	59	78	98	118	137	157	176	196	
	NC	----	----	16	25	31	37	42	46	50	
	Throw 150,100,50	2-5-12	5-9-18	8-12-22	10-15-25	12-18-27	14-20-30	16-22-32	18-24-34	19-25-35	
Length = 24 in./600 mm Inlet = 8 in. [203]	Total Pressure	0.055	0.124	0.221	0.345	0.496	0.676				
	Static Pressure	0.053	0.119	0.211	0.329	0.474	0.645				
	Flow Rate	70	105	140	175	209	244				
	NC	----	20	30	39	45	51				
	Throw 150,100,50	7-10-21	10-16-26	14-21-30	17-24-33	21-26-37	23-28-39				
Length = 24 in./600 mm Inlet = 10 in. [254]	Total Pressure	0.107	0.240	0.427							
	Static Pressure	0.104	0.234	0.417							
	Flow Rate	109	164	218							
	NC	17	32	42							
	Throw 150,100,50	11-16-26	16-23-32	22-26-37							
Length = 48 in./1200 mm Inlet = 6 in. [152]	Total Pressure	0.011	0.026	0.046	0.071	0.102	0.139	0.182	0.231	0.285	0.410
	Static Pressure	0.009	0.020	0.036	0.056	0.080	0.109	0.142	0.180	0.222	0.320
	Flow Rate	39	59	78	98	118	137	157	176	196	235
	NC	----	----	----	----	17	23	28	32	36	43
	Throw 150,100,50	1-1-5	1-3-8	2-5-10	4-6-13	5-8-15	6-9-18	7-10-20	8-12-21	9-13-22	10-15-24
Length = 48 in./1200 mm Inlet = 8 in. [203]	Total Pressure	0.022	0.050	0.088	0.138	0.199	0.271	0.353	0.447	0.552	
	Static Pressure	0.020	0.044	0.078	0.122	0.176	0.240	0.313	0.397	0.490	
	Flow Rate	70	105	140	175	209	244	279	314	349	
	NC	----	----	----	22	29	35	39	44	48	
	Throw 150,100,50	2-4-9	4-7-14	6-9-18	8-11-21	9-14-23	11-16-25	12-18-26	14-20-28	15-21-30	
Length = 48 in./1200 mm Inlet = 10 in. [254]	Total Pressure	0.039	0.088	0.157	0.245	0.353	0.480	0.627			
	Static Pressure	0.037	0.083	0.147	0.229	0.330	0.449	0.587			
	Flow Rate	109	164	218	273	327	382	436			
	NC	----	----	24	32	39	45	50			
	Throw 150,100,50	4-7-14	7-11-20	10-14-23	12-18-26	14-20-29	17-22-31	19-23-33			
Length = 48 in./1200 mm Inlet = 12 in. [305]	Total Pressure	0.065	0.147	0.261	0.408	0.588					
	Static Pressure	0.063	0.141	0.251	0.392	0.565					
	Flow Rate	157	236	314	393	471					
	NC	----	23	33	42	48					
	Throw 150,100,50	7-10-20	10-15-24	14-20-28	17-22-31	20-24-34					
Length = 60 in./1500 mm Inlet = 6 in. [152]	Total Pressure	0.009	0.020	0.036	0.056	0.081	0.110	0.144	0.183	0.225	0.325
	Static Pressure	0.007	0.015	0.026	0.041	0.059	0.080	0.104	0.132	0.163	0.235
	Flow Rate	39	59	78	98	118	137	157	176	196	235
	NC	----	----	----	----	----	18	23	28	32	38
	Throw 150,100,50	0-1-2	1-1-4	1-2-6	2-4-7	2-4-9	3-5-10	4-6-12	4-7-13	5-7-15	6-9-17
Length = 60 in./1500 mm Inlet = 8 in. [203]	Total Pressure	0.017	0.038	0.068	0.106	0.152	0.207	0.271	0.343	0.423	0.609
	Static Pressure	0.014	0.032	0.058	0.090	0.130	0.177	0.231	0.292	0.361	0.519
	Flow Rate	70	105	140	175	209	244	279	314	349	419
	NC	----	----	----	17	24	30	35	39	43	50
	Throw 150,100,50	1-2-5	2-4-8	3-5-10	4-7-13	5-8-16	6-9-17	7-10-19	8-12-20	9-13-21	10-16-23
Length = 60 in./1500 mm Inlet = 10 in. [254]	Total Pressure	0.029	0.066	0.117	0.183	0.263	0.358	0.467	0.591		
	Static Pressure	0.027	0.060	0.107	0.167	0.240	0.327	0.427	0.541		
	Flow Rate	109	164	218	273	327	382	436	491		
	NC	----	----	19	27	34	40	44	49		
	Throw 150,100,50	2-4-8	4-6-12	5-8-16	7-10-18	8-12-20	9-14-22	11-16-23	12-17-25		
Length = 60 in./1500 mm Inlet = 12 in. [305]	Total Pressure	0.048	0.107	0.190	0.297	0.428	0.583				
	Static Pressure	0.045	0.101	0.180	0.282	0.406	0.552				
	Flow Rate	157	236	314	393	471	550				
	NC	----	17	28	36	43	48				
	Throw 150,100,50	4-6-12	6-9-17	8-12-20	10-15-22	12-17-24	14-18-26				

Performance Notes:

1. Tested in accordance with ASHRAE Standard 70-2006 "Method of Testing for Rating the Performance of Air Outlets and Inlets".
2. Air flow is in cfm.
3. All pressures are in in. w.g.
4. Throw values are measured in feet for terminal velocities of 150 fpm (minimum), 100 fpm (middle) and 50 fpm (maximum).
5. Throw data is based on supply air and room air being at isothermal conditions.
6. NC values are based on room absorption of 10 dB re 10⁻¹² watts and one diffuser.
7. Blanks indicate NC less than 15.
8. Shaded area outside recommended operating range
9. Does not include effects of ceiling radiation damper (TBD3-FR).

T-bar Diffusers TBD3 Series - Supply



Performance Data - 2 Slot

Model TBD350 1/2 in. [13] Slot Width											
Length = 24 in./600 mm Inlet = 6 in. [152]	Total Pressure	0.045	0.080	0.124	0.179	0.244	0.319	0.403	0.498		
	Static Pressure	0.039	0.070	0.109	0.157	0.213	0.279	0.353	0.436		
	Flow Rate	59	78	98	118	137	157	176	196		
	NC	----	20	28	34	39	43	47	50		
	Throw 150,100,50	7-11-19	10-14-22	12-18-25	14-19-27	17-21-30	18-22-32	19-24-34	20-25-35		
Length = 24 in./600 mm Inlet = 8 in. [203]	Total Pressure	0.100	0.178	0.278	0.401						
	Static Pressure	0.095	0.168	0.263	0.378						
	Flow Rate	105	140	175	209						
	NC	23	32	39	45						
	Throw 150,100,50	10-16-26	14-21-30	17-24-33	21-26-37						
Length = 24 in./600 mm Inlet = 10 in. [254]	Total Pressure	0.207	0.367	0.574							
	Static Pressure	0.201	0.357	0.558							
	Flow Rate	164	218	273							
	NC	33	43	50							
	Throw 150,100,50	16-23-32	22-26-37	24-29-42							
Length = 48 in./1200 mm Inlet = 6 in. [152]	Total Pressure		0.039	0.061	0.088	0.120	0.157	0.199	0.245	0.353	0.480
	Static Pressure		0.029	0.046	0.066	0.090	0.117	0.148	0.183	0.263	0.358
	Flow Rate		78	98	118	137	157	176	196	235	274
	NC		----	17	23	28	32	36	40	46	51
	Throw 150,100,50		2-5-10	4-6-13	5-8-15	6-9-18	7-10-20	8-12-21	9-13-22	10-15-24	12-18-26
Length = 48 in./1200 mm Inlet = 8 in. [203]	Total Pressure	0.039	0.069	0.108	0.156	0.212	0.277	0.351	0.433	0.624	
	Static Pressure	0.033	0.059	0.093	0.133	0.182	0.237	0.300	0.371	0.534	
	Flow Rate	105	140	175	209	244	279	314	349	419	
	NC	----	18	25	31	37	41	45	48	54	
	Throw 150,100,50	4-7-14	6-9-18	8-11-21	9-14-23	11-16-25	12-18-26	14-20-28	15-21-30	18-23-32	
Length = 48 in./1200 mm Inlet = 10 in. [254]	Total Pressure	0.069	0.124	0.193	0.278	0.378	0.494	0.625			
	Static Pressure	0.064	0.114	0.177	0.256	0.348	0.454	0.575			
	Flow Rate	164	218	273	327	382	436	491			
	NC	17	27	34	40	45	50	53			
	Throw 150,100,50	7-11-20	10-14-23	12-18-26	14-20-29	17-22-31	19-23-33	20-25-35			
Length = 48 in./1200 mm Inlet = 12 in. [305]	Total Pressure	0.120	0.214	0.334	0.482	0.655					
	Static Pressure	0.115	0.204	0.319	0.459	0.625					
	Flow Rate	236	314	393	471	550					
	NC	25	35	42	48	53					
	Throw 150,100,50	10-15-24	14-20-28	17-22-31	20-24-34	21-26-37					
Length = 60 in./1500 mm Inlet = 6 in. [152]	Total Pressure		0.033	0.052	0.075	0.102	0.133	0.168	0.208	0.299	0.407
	Static Pressure		0.023	0.036	0.052	0.071	0.093	0.118	0.145	0.209	0.285
	Flow Rate		78	98	118	137	157	176	196	235	274
	NC		----	----	21	26	30	34	37	43	48
	Throw 150,100,50		1-2-6	2-4-7	2-4-9	3-5-10	4-6-12	4-7-13	5-7-15	6-9-17	7-10-18
Length = 60 in./1500 mm Inlet = 8 in. [203]	Total Pressure	0.031	0.054	0.085	0.122	0.166	0.217	0.275	0.339	0.488	0.664
	Static Pressure	0.025	0.044	0.069	0.100	0.136	0.177	0.224	0.277	0.398	0.542
	Flow Rate	105	140	175	209	244	279	314	349	419	489
	NC	----	----	22	28	33	37	41	45	51	56
	Throw 150,100,50	2-4-8	3-5-10	4-7-13	5-8-16	6-9-17	7-10-19	8-12-20	9-13-21	10-16-23	12-17-25
Length = 60 in./1500 mm Inlet = 10 in. [254]	Total Pressure	0.051	0.091	0.142	0.205	0.279	0.365	0.462	0.570		
	Static Pressure	0.046	0.081	0.127	0.183	0.249	0.325	0.411	0.508		
	Flow Rate	164	218	273	327	382	436	491	545		
	NC	----	22	30	36	41	45	49	52		
	Throw 150,100,50	4-6-12	5-8-16	7-10-18	8-12-20	9-14-22	11-16-23	12-17-25	14-18-26		
Length = 60 in./1500 mm Inlet = 12 in. [305]	Total Pressure	0.085	0.152	0.237	0.342	0.465	0.607				
	Static Pressure	0.080	0.142	0.222	0.319	0.434	0.567				
	Flow Rate	236	314	393	471	550	628				
	NC	20	30	37	43	48	53				
	Throw 150,100,50	6-9-17	8-12-20	10-15-22	12-17-24	14-18-26	16-20-28				

Performance Notes:

- Tested in accordance with ASHRAE Standard 70-2006 "Method of Testing for Rating the Performance of Air Outlets and Inlets".
- Air flow is in cfm.
- All pressures are in in. w.g.
- Throw values are measured in feet for terminal velocities of 150 fpm (minimum), 100 fpm (middle) and 50 fpm (maximum).
- Throw data is based on supply air and room air being at isothermal conditions.
- NC values are based on room absorption of 10 dB re 10⁻¹² watts and one diffuser.
- Blanks indicate NC less than 15.
- Shaded area outside recommended operating range.
- Does not include effects of ceiling radiation damper (TBD3-FR)

T-bar Diffusers TBD3 Series - Supply



Performance Data - 2 Slot

Model TBD375 3/4 in. [19] Slot Width											
Length = 24 in./600 mm Inlet = 6 in. [152]	Total Pressure	0.032	0.057	0.090	0.129	0.176	0.229	0.290	0.358	0.516	
	Static Pressure	0.027	0.047	0.074	0.107	0.145	0.189	0.240	0.296	0.426	
	Flow Rate	59	78	98	118	137	157	176	196	235	
	NC	----	----	20	27	33	38	42	46	53	
	Throw 150,100,50	3-7-15	6-10-20	8-13-25	10-15-27	12-18-30	13-20-32	15-23-34	17-25-35	20-27-39	
Length = 24 in./600 mm Inlet = 8 in. [203]	Total Pressure	0.075	0.133	0.208	0.299	0.408	0.532	0.674			
	Static Pressure	0.069	0.123	0.192	0.277	0.377	0.492	0.623			
	Flow Rate	105	140	175	209	244	279	314			
	NC	19	29	37	44	50	55	59			
	Throw 150,100,50	9-13-26	12-18-30	15-22-33	18-26-37	21-28-39	24-30-42	26-32-45			
Length = 24 in./600 mm Inlet = 10 in. [254]	Total Pressure	0.151	0.269	0.421	0.606						
	Static Pressure	0.146	0.259	0.405	0.584						
	Flow Rate	164	218	273	327						
	NC	33	44	52	59						
	Throw 150,100,50	14-21-32	19-26-37	23-29-42	26-32-46						
Length = 48 in./1200 mm Inlet = 6 in. [152]	Total Pressure		0.023	0.036	0.052	0.070	0.092	0.116	0.143	0.206	0.281
	Static Pressure		0.013	0.020	0.029	0.040	0.052	0.066	0.081	0.117	0.159
	Flow Rate		78	98	118	137	157	176	196	235	274
	NC		----	----	----	----	19	23	27	34	40
	Throw 150,100,50		1-3-9	2-5-11	3-7-13	4-8-15	5-9-17	7-10-20	7-11-22	9-13-24	10-15-26
Length = 48 in./1200 mm Inlet = 8 in. [203]	Total Pressure	0.027	0.049	0.076	0.110	0.150	0.195	0.247	0.305	0.440	0.598
	Static Pressure	0.022	0.039	0.061	0.087	0.119	0.155	0.197	0.243	0.350	0.476
	Flow Rate	105	140	175	209	244	279	314	349	419	489
	NC	----	----	17	24	29	34	39	43	49	55
	Throw 150,100,50	2-5-12	4-8-16	6-10-19	8-12-23	9-14-25	10-16-26	12-17-28	13-19-30	16-23-32	18-25-35
Length = 48 in./1200 mm Inlet = 10 in. [254]	Total Pressure	0.052	0.092	0.144	0.207	0.281	0.367	0.465	0.574		
	Static Pressure	0.046	0.082	0.128	0.184	0.251	0.328	0.415	0.512		
	Flow Rate	164	218	273	327	382	436	491	545		
	NC	----	22	30	37	42	47	52	55		
	Throw 150,100,50	6-9-18	8-12-23	10-15-26	12-18-29	14-21-31	16-23-33	18-25-35	20-26-37		
Length = 48 in./1200 mm Inlet = 12 in. [305]	Total Pressure	0.090	0.160	0.249	0.359	0.489	0.638				
	Static Pressure	0.084	0.150	0.234	0.336	0.458	0.598				
	Flow Rate	236	314	393	471	550	628				
	NC	22	33	41	48	54	59				
	Throw 150,100,50	9-13-24	12-17-28	15-22-31	17-24-34	20-26-37	23-28-40				
Length = 60 in./1500 mm Inlet = 6 in. [152]	Total Pressure		0.017	0.027	0.039	0.053	0.069	0.088	0.108	0.156	0.213
	Static Pressure		0.007	0.012	0.017	0.023	0.030	0.037	0.046	0.066	0.090
	Flow Rate		78	98	118	137	157	176	196	235	274
	NC		----	----	----	----	----	18	22	28	34
	Throw 150,100,50		1-1-5	1-2-6	1-3-7	2-4-9	2-5-10	3-6-11	4-6-12	5-7-15	6-9-17
Length = 60 in./1500 mm Inlet = 8 in. [203]	Total Pressure	0.020	0.036	0.057	0.081	0.111	0.145	0.183	0.226	0.326	0.443
	Static Pressure	0.015	0.026	0.041	0.059	0.080	0.105	0.133	0.164	0.236	0.321
	Flow Rate	105	140	175	209	244	279	314	349	419	489
	NC	----	----	18	23	28	33	36	43	49	55
	Throw 150,100,50	1-2-7	2-4-9	3-5-11	4-7-13	5-8-15	6-9-18	7-10-20	7-11-21	9-13-23	10-15-25
Length = 60 in./1500 mm Inlet = 10 in. [254]	Total Pressure	0.037	0.067	0.104	0.150	0.204	0.266	0.337	0.416	0.599	
	Static Pressure	0.032	0.057	0.088	0.127	0.173	0.226	0.287	0.354	0.509	
	Flow Rate	164	218	273	327	382	436	491	545	654	
	NC	----	15	23	30	36	41	45	49	56	
	Throw 150,100,50	3-5-10	5-7-14	6-9-17	7-10-20	8-12-22	9-14-23	10-15-25	11-17-26	14-20-28	
Length = 60 in./1500 mm Inlet = 12 in. [305]	Total Pressure	0.064	0.113	0.177	0.255	0.347	0.454	0.574			
	Static Pressure	0.058	0.103	0.162	0.233	0.317	0.414	0.524			
	Flow Rate	236	314	393	471	550	628	707			
	NC	15	26	34	41	47	52	56			
	Throw 150,100,50	5-7-15	7-10-20	8-12-22	10-15-24	11-17-26	13-20-28	15-21-30			

Performance Notes:

1. Tested in accordance with ASHRAE Standard 70-2006 "Method of Testing for Rating the Performance of Air Outlets and Inlets."
2. Air flow is in cfm.
3. All pressures are in in. w.g.
4. Throw values are measured in feet for terminal velocities of 150 fpm (minimum), 100 fpm (middle) and 50 fpm (maximum).
5. Throw data is based on supply air and room air being at isothermal conditions.
6. NC values are based on room absorption of 10 dB re 10⁻¹² watts and one diffuser.
7. Blanks indicate NC less than 15.
8. Shaded area outside recommended operating range.
9. Does not include effects of ceiling radiation damper (TBD3-FR)

T-bar Diffusers TBD3 Series - Supply



Performance Data - 2 Slot

Model TBD3100 1 in. [25] Slot Width											
Length = 24 in./600 mm Inlet = 6 in. [152]	Total Pressure	0.026	0.046	0.071	0.102	0.139	0.182	0.231	0.285	0.410	0.558
	Static Pressure	0.020	0.036	0.056	0.080	0.109	0.142	0.180	0.222	0.320	0.436
	Flow Rate	59	78	98	118	137	157	176	196	235	274
	NC	----	----	----	17	23	28	32	36	43	48
	Throw 150,100,50	5-9-18	8-12-22	10-15-25	12-18-27	14-20-30	16-22-32	18-24-34	19-25-35	22-27-39	24-30-42
Length = 24 in./600 mm Inlet = 8 in. [203]	Total Pressure	0.050	0.088	0.138	0.199	0.271	0.353	0.447	0.552		
	Static Pressure	0.044	0.078	0.122	0.176	0.240	0.313	0.397	0.490		
	Flow Rate	105	140	175	209	244	279	314	349		
	NC	----	----	22	29	35	39	44	48		
	Throw 150,100,50	10-16-26	14-21-30	17-24-33	21-26-37	23-28-39	24-30-42	26-32-45	27-33-47		
Length = 24 in./600 mm Inlet = 10 in. [254]	Total Pressure	0.088	0.157	0.245	0.353	0.480	0.627				
	Static Pressure	0.083	0.147	0.229	0.330	0.449	0.587				
	Flow Rate	164	218	273	327	382	436				
	NC	----	24	32	39	45	50				
	Throw 150,100,50	16-23-32	22-26-37	24-29-42	26-32-46	28-35-49	30-37-53				
Length = 48 in./1200 mm Inlet = 6 in. [152]	Total Pressure		0.023	0.036	0.052	0.070	0.092	0.116	0.144	0.207	0.282
	Static Pressure		0.013	0.020	0.029	0.040	0.052	0.066	0.081	0.117	0.160
	Flow Rate		78	98	118	137	157	176	196	235	274
	NC		----	----	----	----	15	20	24	30	36
	Throw 150,100,50		1-2-8	1-3-10	2-5-12	3-6-13	4-8-15	5-9-17	6-10-19	8-12-23	9-13-26
Length = 48 in./1200 mm Inlet = 8 in. [203]	Total Pressure	0.023	0.040	0.063	0.091	0.123	0.161	0.204	0.252	0.362	0.493
	Static Pressure	0.017	0.030	0.047	0.068	0.093	0.121	0.153	0.189	0.273	0.371
	Flow Rate	105	140	175	209	244	279	314	349	419	489
	NC	----	----	----	----	20	25	30	34	41	48
	Throw 150,100,50	2-4-10	3-7-14	5-9-17	7-10-21	8-12-24	9-14-26	10-15-28	11-17-30	14-21-32	16-24-35
Length = 48 in./1200 mm Inlet = 10 in. [254]	Total Pressure	0.037	0.066	0.103	0.148	0.201	0.263	0.333	0.411	0.592	
	Static Pressure	0.031	0.056	0.087	0.126	0.171	0.223	0.283	0.349	0.502	
	Flow Rate	164	218	273	327	382	436	491	545	654	
	NC	----	----	17	24	29	34	39	42	49	
	Throw 150,100,50	4-8-16	7-11-21	9-13-26	11-16-29	12-19-31	14-21-33	16-24-35	18-26-37	21-29-40	
Length = 48 in./1200 mm Inlet = 12 in. [305]	Total Pressure	0.057	0.102	0.160	0.230	0.313	0.409	0.517	0.639		
	Static Pressure	0.052	0.092	0.144	0.208	0.282	0.369	0.467	0.576		
	Flow Rate	236	314	393	471	550	628	707	785		
	NC	----	17	25	31	37	42	46	50		
	Throw 150,100,50	8-12-23	10-15-28	13-19-31	15-23-34	18-26-37	21-28-40	23-30-42	26-31-44		
Length = 60 in./1500 mm Inlet = 6 in. [152]	Total Pressure		0.019	0.030	0.043	0.058	0.076	0.096	0.118	0.170	0.232
	Static Pressure		0.009	0.014	0.020	0.027	0.036	0.045	0.056	0.081	0.110
	Flow Rate		78	98	118	137	157	176	196	235	274
	NC		----	----	----	----	----	16	20	27	32
	Throw 150,100,50		0-1-4	1-1-5	1-2-6	1-3-8	2-4-9	2-5-10	3-5-11	4-6-13	5-8-15
Length = 60 in./1500 mm Inlet = 8 in. [203]	Total Pressure	0.018	0.032	0.050	0.072	0.098	0.128	0.163	0.201	0.289	0.393
	Static Pressure	0.012	0.022	0.035	0.050	0.068	0.089	0.112	0.138	0.199	0.271
	Flow Rate	105	140	175	209	244	279	314	349	419	489
	NC	----	----	----	----	16	21	26	30	36	42
	Throw 150,100,50	1-2-6	1-3-8	2-5-10	3-6-12	4-7-13	5-8-15	6-9-17	6-10-19	8-12-23	9-13-25
Length = 60 in./1500 mm Inlet = 10 in. [254]	Total Pressure	0.029	0.051	0.080	0.115	0.157	0.205	0.259	0.320	0.460	0.626
	Static Pressure	0.023	0.041	0.064	0.093	0.126	0.165	0.208	0.257	0.370	0.504
	Flow Rate	164	218	273	327	382	436	491	545	654	763
	NC	----	----	----	19	25	30	34	38	45	50
	Throw 150,100,50	2-4-9	3-6-12	5-8-15	6-9-18	7-11-21	8-12-23	9-14-25	10-15-26	12-18-28	14-21-31
Length = 60 in./1500 mm Inlet = 12 in. [305]	Total Pressure	0.044	0.078	0.121	0.175	0.238	0.311	0.394	0.486		
	Static Pressure	0.038	0.068	0.106	0.152	0.208	0.271	0.343	0.424		
	Flow Rate	236	314	393	471	550	628	707	785		
	NC	----	----	20	27	32	37	42	45		
	Throw 150,100,50	4-6-13	6-9-17	7-11-22	9-13-24	10-15-26	12-17-28	13-19-30	14-22-31		

Performance Notes:

1. Tested in accordance with ASHRAE Standard 70-2006 "Method of Testing for Rating the Performance of Air Outlets and Inlets."
2. Air flow is in cfm.
3. All pressures are in in. w.g.
4. Throw values are measured in feet for terminal velocities of 150 fpm (minimum), 100 fpm (middle) and 50 fpm (maximum).
5. Throw data is based on supply air and room air being at isothermal conditions.
6. NC values are based on room absorption of 10 dB re 10⁻¹² watts and one diffuser.
7. Blanks indicate NC less than 15.
8. Shaded area outside recommended operating range.
9. Does not include effects of ceiling radiation damper (TBD3-FR)

T-bar Diffusers TBD3 Series - Supply



Performance Data - 3 Slot

Model TBD3350 1/2 in. [13] Slot Width											
Length = 24 in./600 mm Inlet = 6 in. [152]	Total Pressure	0.029	0.051	0.079	0.114	0.155	0.203	0.257	0.317	0.457	0.622
	Static Pressure	0.023	0.041	0.064	0.092	0.125	0.163	0.206	0.255	0.367	0.499
	Flow Rate	59	78	98	118	137	157	176	196	235	274
	NC	----	----	21	27	32	36	40	44	50	55
	Throw 150,100,50	3-7-15	6-10-20	8-13-25	10-15-27	12-18-30	13-20-32	15-23-34	17-25-35	20-27-39	24-30-42
Length = 24 in./600 mm Inlet = 8 in. [203]	Total Pressure	0.056	0.099	0.155	0.224	0.304	0.397	0.503	0.621		
	Static Pressure	0.050	0.089	0.140	0.201	0.274	0.358	0.452	0.559		
	Flow Rate	105	140	175	209	244	279	314	349		
	NC	----	23	31	37	42	46	50	54		
	Throw 150,100,50	9-13-26	12-18-30	15-22-33	18-26-37	21-28-39	24-30-42	26-32-45	27-33-47		
Length = 24 in./600 mm Inlet = 10 in. [254]	Total Pressure	0.107	0.190	0.296	0.427	0.581					
	Static Pressure	0.101	0.180	0.281	0.404	0.550					
	Flow Rate	164	218	273	327	382					
	NC	24	33	40	46	51					
	Throw 150,100,50	14-21-32	19-26-37	23-29-42	26-32-46	28-35-49					
Length = 48 in./1200 mm Inlet = 6 in. [152]	Total Pressure		0.030	0.046	0.067	0.091	0.119	0.150	0.185	0.267	0.363
	Static Pressure		0.020	0.031	0.044	0.060	0.079	0.100	0.123	0.177	0.241
	Flow Rate		78	98	118	137	157	176	196	235	274
	NC		----	----	19	24	28	32	36	42	47
	Throw 150,100,50		1-3-9	2-5-11	3-7-13	4-8-15	5-9-17	7-10-20	7-11-22	9-13-24	10-15-26
Length = 48 in./1200 mm Inlet = 8 in. [203]	Total Pressure		0.045	0.071	0.102	0.139	0.182	0.230	0.284	0.409	0.557
	Static Pressure		0.035	0.055	0.080	0.109	0.142	0.180	0.222	0.319	0.434
	Flow Rate		140	175	209	244	279	314	349	419	489
	NC		----	19	25	30	35	39	42	48	53
	Throw 150,100,50		4-8-16	6-10-19	8-12-23	9-14-25	10-16-26	12-17-28	13-19-30	16-23-32	18-25-35
Length = 48 in./1200 mm Inlet = 10 in. [254]	Total Pressure	0.041	0.073	0.114	0.163	0.223	0.291	0.368	0.454	0.654	
	Static Pressure	0.035	0.063	0.098	0.141	0.192	0.251	0.317	0.392	0.564	
	Flow Rate	164	218	273	327	382	436	491	545	654	
	NC	----	19	26	32	37	42	46	49	55	
	Throw 150,100,50	6-9-18	8-12-23	10-15-26	12-18-29	14-21-31	16-23-33	18-25-35	20-26-37	23-29-40	
Length = 48 in./1200 mm Inlet = 12 in. [305]	Total Pressure	0.066	0.117	0.182	0.263	0.357	0.467	0.591			
	Static Pressure	0.060	0.107	0.167	0.240	0.327	0.427	0.540			
	Flow Rate	236	314	393	471	550	628	707			
	NC	16	26	33	39	44	49	53			
	Throw 150,100,50	9-13-24	12-17-28	15-22-31	17-24-34	20-26-37	23-28-40	24-30-42			
Length = 60 in./1500 mm Inlet = 6 in. [152]	Total Pressure		0.026	0.041	0.059	0.081	0.106	0.134	0.165	0.237	0.323
	Static Pressure		0.016	0.026	0.037	0.050	0.066	0.083	0.103	0.148	0.201
	Flow Rate		78	98	118	137	157	176	196	235	274
	NC		----	----	17	22	27	30	34	40	45
	Throw 150,100,50		1-1-5	1-2-6	1-3-7	2-4-9	2-5-10	3-6-11	4-6-12	5-7-15	6-9-17
Length = 60 in./1500 mm Inlet = 8 in. [203]	Total Pressure		0.038	0.059	0.085	0.115	0.151	0.191	0.235	0.339	0.461
	Static Pressure		0.028	0.043	0.062	0.085	0.111	0.140	0.173	0.249	0.339
	Flow Rate		140	175	209	244	279	314	349	419	489
	NC		----	16	22	27	32	36	39	45	50
	Throw 150,100,50		2-4-9	3-5-11	4-7-13	5-8-15	6-9-18	7-10-20	7-11-21	9-13-23	10-15-25
Length = 60 in./1500 mm Inlet = 10 in. [254]	Total Pressure	0.032	0.057	0.088	0.127	0.173	0.226	0.286	0.353	0.509	
	Static Pressure	0.026	0.047	0.073	0.105	0.143	0.186	0.236	0.291	0.419	
	Flow Rate	164	218	273	327	382	436	491	545	654	
	NC	----	15	22	28	34	38	42	45	51	
	Throw 150,100,50	3-5-10	5-7-14	6-9-17	7-10-20	8-12-22	9-14-23	10-15-25	11-17-26	14-20-28	
Length = 60 in./1500 mm Inlet = 12 in. [305]	Total Pressure	0.049	0.087	0.135	0.195	0.265	0.346	0.438	0.541		
	Static Pressure	0.043	0.077	0.120	0.172	0.234	0.306	0.388	0.479		
	Flow Rate	236	314	393	471	550	628	707	785		
	NC	----	21	29	35	40	44	48	52		
	Throw 150,100,50	5-7-15	7-10-20	8-12-22	10-15-24	11-17-26	13-20-28	15-21-30	16-22-31		

Performance Notes:

1. Tested in accordance with ASHRAE Standard 70-2006 "Method of Testing for Rating the Performance of Air Outlets and Inlets."
2. Air flow is in cfm.
3. All pressures are in in. w.g.
4. Throw values are measured in feet for terminal velocities of 150 fpm (minimum), 100 fpm (middle) and 50 fpm (maximum).
5. Throw data is based on supply air and room air being at isothermal conditions.
6. NC values are based on room absorption of 10 dB re 10⁻¹² watts and one diffuser.
7. Blanks indicate NC less than 15.
8. Shaded area outside recommended operating range.
9. Does not include effects of ceiling radiation damper (TBD3-FR)

T-bar Diffusers TBD3 Series - Supply



Performance Data - 3 Slot

Model TBD375 3/4 in. [19] Slot Width											
Length = 24 in./600 mm Inlet = 6 in. [152]	Total Pressure	0.019	0.033	0.052	0.075	0.102	0.133	0.168	0.207	0.299	0.406
	Static Pressure	0.013	0.023	0.036	0.052	0.071	0.093	0.117	0.145	0.209	0.284
	Flow Rate	59	78	98	118	137	157	176	196	235	274
	NC	----	----	----	16	22	26	31	35	41	47
	Throw 150,100,50	2-4-13	3-8-17	5-11-22	8-13-26	10-15-30	11-17-32	13-19-34	14-22-35	17-26-39	20-30-42
Length = 24 in./600 mm Inlet = 8 in. [203]	Total Pressure	0.041	0.073	0.114	0.164	0.224	0.292	0.370	0.457	0.657	
	Static Pressure	0.035	0.063	0.099	0.142	0.193	0.252	0.319	0.394	0.568	
	Flow Rate	105	140	175	209	244	279	314	349	419	
	NC	----	17	25	32	38	43	47	51	58	
	Throw 150,100,50	6-12-23	10-15-30	13-19-33	15-23-37	18-27-39	20-30-42	23-32-45	26-33-47	30-37-52	
Length = 24 in./600 mm Inlet = 10 in. [254]	Total Pressure	0.080	0.142	0.221	0.318	0.434	0.566				
	Static Pressure	0.074	0.132	0.206	0.296	0.403	0.526				
	Flow Rate	164	218	273	327	382	436				
	NC	20	30	39	45	51	56				
	Throw 150,100,50	12-18-32	16-24-37	20-29-42	24-32-46	28-35-49	30-37-53				
Length = 48 in./1200 mm Inlet = 6 in. [152]	Total Pressure		0.014	0.022	0.031	0.043	0.056	0.070	0.087	0.125	0.170
	Static Pressure		0.004	0.006	0.009	0.012	0.016	0.020	0.024	0.035	0.048
	Flow Rate		78	98	118	137	157	176	196	235	274
	NC		----	----	----	----	----	----	17	24	29
	Throw 150,100,50		1-2-7	1-3-9	2-4-11	2-5-13	3-7-15	4-8-16	5-9-18	7-11-22	9-13-26
Length = 48 in./1200 mm Inlet = 8 in. [203]	Total Pressure		0.029	0.045	0.064	0.087	0.114	0.144	0.178	0.257	0.349
	Static Pressure		0.019	0.029	0.042	0.057	0.074	0.094	0.116	0.167	0.227
	Flow Rate		140	175	209	244	279	314	349	419	489
	NC		----	----	----	18	23	28	32	38	44
	Throw 150,100,50		3-6-13	4-8-16	6-10-19	8-11-23	9-13-26	10-15-28	11-16-30	13-19-32	15-23-35
Length = 48 in./1200 mm Inlet = 10 in. [254]	Total Pressure	0.029	0.052	0.081	0.116	0.158	0.206	0.261	0.323	0.465	0.632
	Static Pressure	0.023	0.042	0.065	0.094	0.128	0.167	0.211	0.260	0.375	0.510
	Flow Rate	164	218	273	327	382	436	491	545	654	763
	NC	----	----	18	25	31	36	40	44	50	56
	Throw 150,100,50	3-8-15	6-10-20	8-13-25	10-15-29	12-18-31	14-20-33	15-23-35	17-25-37	20-29-40	24-31-44
Length = 48 in./1200 mm Inlet = 12 in. [305]	Total Pressure	0.049	0.087	0.135	0.195	0.265	0.346	0.438	0.541		
	Static Pressure	0.043	0.077	0.120	0.172	0.235	0.306	0.388	0.479		
	Flow Rate	236	314	393	471	550	628	707	785		
	NC	----	20	29	35	41	46	50	54		
	Throw 150,100,50	9-13-24	12-17-28	15-22-31	17-24-34	20-26-37	23-28-40	24-30-42	26-31-44		
Length = 60 in./1500 mm Inlet = 6 in. [152]	Total Pressure		0.011	0.017	0.024	0.033	0.043	0.054	0.066	0.096	0.130
	Static Pressure		0.001	0.001	0.001	0.002	0.003	0.003	0.004	0.006	0.008
	Flow Rate		78	98	118	137	157	176	196	235	274
	NC		----	----	----	----	----	----	----	18	24
	Throw 150,100,50		0-1-3	1-1-5	1-2-6	1-2-7	1-3-8	2-4-9	2-5-10	3-6-12	4-7-14
Length = 60 in./1500 mm Inlet = 8 in. [203]	Total Pressure		0.021	0.034	0.048	0.066	0.086	0.109	0.134	0.193	0.263
	Static Pressure		0.012	0.018	0.026	0.035	0.046	0.058	0.072	0.104	0.141
	Flow Rate		140	175	209	244	279	314	349	419	489
	NC		----	----	----	18	22	26	33	38	
	Throw 150,100,50		1-3-7	2-4-9	3-5-11	3-6-13	5-7-15	5-8-16	6-9-18	7-11-22	9-13-25
Length = 60 in./1500 mm Inlet = 10 in. [254]	Total Pressure	0.021	0.038	0.060	0.086	0.117	0.153	0.193	0.239	0.344	0.468
	Static Pressure	0.016	0.028	0.044	0.063	0.086	0.113	0.143	0.176	0.254	0.345
	Flow Rate	164	218	273	327	382	436	491	545	654	763
	NC	----	----	19	24	29	34	38	44	50	
	Throw 150,100,50	2-3-9	3-6-11	4-7-14	6-9-17	7-10-20	8-11-23	9-13-25	9-14-26	11-17-28	13-20-31
Length = 60 in./1500 mm Inlet = 12 in. [305]	Total Pressure	0.035	0.063	0.098	0.141	0.193	0.251	0.318	0.393	0.566	
	Static Pressure	0.030	0.053	0.083	0.119	0.162	0.212	0.268	0.331	0.476	
	Flow Rate	236	314	393	471	550	628	707	785	942	
	NC	----	----	22	29	35	40	44	48	54	
	Throw 150,100,50	3-6-12	5-8-16	7-10-21	8-12-24	10-14-26	11-16-28	12-18-30	14-21-31	16-24-34	

Performance Notes:

1. Tested in accordance with ASHRAE Standard 70-2006 "Method of Testing for Rating the Performance of Air Outlets and Inlets."
2. Air flow is in cfm.
3. All pressures are in in. w.g.
4. Throw values are measured in feet for terminal velocities of 150 fpm (minimum), 100 fpm (middle) and 50 fpm (maximum).
5. Throw data is based on supply air and room air being at isothermal conditions.
6. NC values are based on room absorption of 10 dB re 10⁻¹² watts and one diffuser.
7. Blanks indicate NC less than 15.
8. Shaded area outside recommended operating range.
9. Does not include effects of ceiling radiation damper (TBD3-FR)

T-bar Diffusers TBD3 Series - Supply



Performance Data - 3 Slot

Model TBD3100 1 in. [25] Slot Width											
Length = 24 in./600 mm Inlet = 6 in. [152]	Total Pressure	0.017	0.030	0.047	0.068	0.092	0.120	0.152	0.188	0.271	0.369
	Static Pressure	0.011	0.020	0.031	0.045	0.062	0.080	0.102	0.126	0.181	0.246
	Flow Rate	59	78	98	118	137	157	176	196	235	274
	NC	----	----	----	----	15	20	24	28	35	41
	Throw 150,100,50	1-3-11	2-5-15	4-9-19	5-11-23	7-13-27	10-15-31	11-17-34	13-19-35	15-23-39	18-27-42
Length = 24 in./600 mm Inlet = 8 in. [203]	Total Pressure	0.031	0.055	0.086	0.124	0.168	0.220	0.278	0.343	0.495	
	Static Pressure	0.025	0.045	0.070	0.101	0.138	0.180	0.228	0.281	0.405	
	Flow Rate	105	140	175	209	244	279	314	349	419	
	NC	----	----	----	20	26	31	35	39	46	
	Throw 150,100,50	4-10-20	8-14-27	11-17-33	14-20-37	16-24-39	18-27-42	20-31-45	23-33-47	27-37-52	
Length = 24 in./600 mm Inlet = 10 in. [254]	Total Pressure	0.052	0.093	0.145	0.209	0.284	0.371	0.470	0.580		
	Static Pressure	0.047	0.083	0.129	0.186	0.254	0.331	0.419	0.518		
	Flow Rate	164	218	273	327	382	436	491	545		
	NC	----	----	23	30	35	40	45	49		
	Throw 150,100,50	11-16-32	14-21-37	18-27-42	21-32-46	25-35-49	28-37-53	32-40-56	34-42-59		
Length = 48 in./1200 mm Inlet = 6 in. [152]	Total Pressure		0.016	0.026	0.037	0.050	0.065	0.083	0.102	0.147	0.200
	Static Pressure		0.006	0.010	0.014	0.019	0.025	0.032	0.040	0.057	0.078
	Flow Rate		78	98	118	137	157	176	196	235	274
	NC		----	----	----	----	----	----	17	24	30
	Throw 150,100,50		1-1-5	1-2-8	1-3-10	2-4-11	2-5-13	3-6-14	3-8-16	5-10-19	7-11-22
Length = 48 in./1200 mm Inlet = 8 in. [203]	Total Pressure		0.027	0.042	0.061	0.082	0.108	0.136	0.168	0.242	0.330
	Static Pressure		0.017	0.026	0.038	0.052	0.068	0.086	0.106	0.153	0.208
	Flow Rate		140	175	209	244	279	314	349	419	489
	NC		----	----	----	18	22	26	31	39	49
	Throw 150,100,50		2-4-11	3-6-14	4-9-17	5-10-20	7-11-23	9-13-26	9-14-28	11-17-32	13-20-35
Length = 48 in./1200 mm Inlet = 10 in. [254]	Total Pressure	0.024	0.042	0.066	0.095	0.129	0.168	0.213	0.263	0.378	0.515
	Static Pressure	0.018	0.032	0.050	0.072	0.098	0.128	0.162	0.200	0.288	0.392
	Flow Rate	164	218	273	327	382	436	491	545	654	763
	NC	----	----	16	21	26	30	34	41	47	47
	Throw 150,100,50	2-5-13	4-9-18	6-11-22	9-13-27	10-16-31	12-18-33	13-20-35	15-22-37	18-27-40	21-31-44
Length = 48 in./1200 mm Inlet = 12 in. [305]	Total Pressure	0.035	0.063	0.098	0.141	0.192	0.251	0.318	0.392	0.565	
	Static Pressure	0.030	0.053	0.083	0.119	0.162	0.211	0.267	0.330	0.475	
	Flow Rate	236	314	393	471	550	628	707	785	942	
	NC	----	----	16	23	28	33	38	42	48	
	Throw 150,100,50	5-10-19	9-13-26	11-16-31	13-19-34	15-22-37	17-26-40	19-29-42	21-31-44	26-34-49	
Length = 60 in./1500 mm Inlet = 6 in. [152]	Total Pressure		0.014	0.022	0.031	0.042	0.055	0.070	0.086	0.124	0.169
	Static Pressure		0.004	0.006	0.009	0.012	0.015	0.019	0.024	0.034	0.047
	Flow Rate		78	98	118	137	157	176	196	235	274
	NC		----	----	----	----	----	----	----	21	27
	Throw 150,100,50		0-1-2	0-1-3	1-1-5	1-2-6	1-2-7	1-3-8	1-3-9	2-5-11	3-6-13
Length = 60 in./1500 mm Inlet = 8 in. [203]	Total Pressure		0.022	0.034	0.049	0.067	0.088	0.111	0.137	0.198	0.269
	Static Pressure		0.012	0.019	0.027	0.037	0.048	0.061	0.075	0.108	0.147
	Flow Rate		140	175	209	244	279	314	349	419	489
	NC		----	----	----	----	19	23	29	35	35
	Throw 150,100,50		1-2-6	1-3-8	2-4-10	2-5-11	3-6-13	4-7-14	5-8-16	6-10-19	7-11-22
Length = 60 in./1500 mm Inlet = 10 in. [254]	Total Pressure	0.019	0.033	0.052	0.075	0.102	0.134	0.169	0.209	0.301	0.409
	Static Pressure	0.013	0.023	0.037	0.053	0.072	0.094	0.119	0.146	0.211	0.287
	Flow Rate	164	218	273	327	382	436	491	545	654	763
	NC	----	----	----	----	17	22	26	30	37	43
	Throw 150,100,50	1-2-7	2-4-10	3-6-12	4-7-15	6-9-17	7-10-20	7-11-22	8-12-25	10-15-28	12-17-31
Length = 60 in./1500 mm Inlet = 12 in. [305]	Total Pressure	0.028	0.049	0.076	0.110	0.150	0.196	0.248	0.306	0.440	0.599
	Static Pressure	0.022	0.039	0.061	0.088	0.119	0.156	0.197	0.243	0.350	0.477
	Flow Rate	236	314	393	471	550	628	707	785	942	1099
	NC	----	----	----	18	24	29	33	37	44	50
	Throw 150,100,50	2-5-11	4-7-14	6-9-18	7-11-22	8-13-25	10-14-28	11-16-30	12-18-31	14-22-34	17-25-37

Performance Notes:

1. Tested in accordance with ASHRAE Standard 70-2006 "Method of Testing for Rating the Performance of Air Outlets and Inlets."
2. Air flow is in cfm.
3. All pressures are in in. w.g.
4. Throw values are measured in feet for terminal velocities of 150 fpm (minimum), 100 fpm (middle) and 50 fpm (maximum).
5. Throw data is based on supply air and room air being at isothermal conditions.
6. NC values are based on room absorption of 10 dB re 10⁻¹² watts and one diffuser.
7. Blanks indicate NC less than 15.
8. Shaded area outside recommended operating range.
9. Does not include effects of ceiling radiation damper (TBD3-FR)

T-bar Diffusers TBD3 Series - Supply



Performance Data - 4 Slot

Model TBD3350 1/2 in. [13] Slot Width											
Length = 24 in./600 mm Inlet = 6 in. [152]	Total Pressure		0.039	0.061	0.088	0.120	0.157	0.199	0.245	0.353	0.480
	Static Pressure		0.029	0.046	0.066	0.090	0.117	0.148	0.183	0.263	0.358
	Flow Rate		78	98	118	137	157	176	196	235	274
	NC		---	17	23	28	32	36	40	46	51
	Throw 150,100,50		4-9-18	6-11-23	9-14-27	11-16-30	12-18-32	14-20-34	15-23-35	18-27-39	21-30-42
Length = 24 in./600 mm Inlet = 8 in. [203]	Total Pressure	0.039	0.069	0.108	0.156	0.212	0.277	0.351	0.433	0.624	
	Static Pressure	0.033	0.059	0.093	0.133	0.182	0.237	0.300	0.371	0.534	
	Flow Rate	105	140	175	209	244	279	314	349	419	
	NC	---	18	25	31	37	41	45	48	54	
	Throw 150,100,50	7-12-24	11-16-30	13-20-33	16-24-37	19-28-39	21-30-42	24-32-45	27-33-47	30-37-52	
Length = 24 in./600 mm Inlet = 10 in. [254]	Total Pressure	0.069	0.124	0.193	0.278	0.378	0.494	0.625			
	Static Pressure	0.064	0.114	0.177	0.256	0.348	0.454	0.575			
	Flow Rate	164	218	273	327	382	436	491			
	NC	17	27	34	40	45	50	53			
	Throw 150,100,50	13-19-32	17-25-37	21-29-42	25-32-46	28-35-49	30-37-53	32-40-56			
Length = 48 in./1200 mm Inlet = 6 in. [152]	Total Pressure		0.026	0.040	0.058	0.078	0.102	0.130	0.160	0.230	0.314
	Static Pressure		0.016	0.024	0.035	0.048	0.063	0.079	0.098	0.141	0.192
	Flow Rate		78	98	118	137	157	176	196	235	274
	NC		---	---	17	22	26	30	34	40	45
	Throw 150,100,50		1-2-8	1-3-10	2-5-12	3-6-13	4-8-15	5-9-17	6-10-19	8-12-23	9-13-26
Length = 48 in./1200 mm Inlet = 8 in. [203]	Total Pressure		0.036	0.056	0.081	0.110	0.143	0.182	0.224	0.323	0.439
	Static Pressure		0.026	0.040	0.058	0.079	0.104	0.131	0.162	0.233	0.317
	Flow Rate		140	175	209	244	279	314	349	419	489
	NC		---	16	22	27	31	35	39	45	50
	Throw 150,100,50		3-7-14	5-9-17	7-10-21	8-12-24	9-14-26	10-15-28	11-17-30	14-21-32	16-24-35
Length = 48 in./1200 mm Inlet = 10 in. [254]	Total Pressure	0.030	0.053	0.083	0.119	0.162	0.212	0.268	0.331	0.476	0.648
	Static Pressure	0.024	0.043	0.067	0.097	0.131	0.172	0.217	0.268	0.386	0.526
	Flow Rate	164	218	273	327	382	436	491	545	654	763
	NC	---	---	21	27	33	37	41	44	50	55
	Throw 150,100,50	4-8-16	7-11-21	9-13-26	11-16-29	12-19-31	14-21-33	16-24-35	18-26-37	21-29-40	25-31-44
Length = 48 in./1200 mm Inlet = 12 in. [305]	Total Pressure	0.045	0.080	0.125	0.180	0.244	0.319	0.404	0.499		
	Static Pressure	0.039	0.070	0.109	0.157	0.214	0.279	0.353	0.436		
	Flow Rate	236	314	393	471	550	628	707	785		
	NC	---	20	28	34	39	43	47	50		
	Throw 150,100,50	8-12-23	10-15-28	13-19-31	15-23-34	18-26-37	21-28-40	23-30-42	26-31-44		
Length = 60 in./1500 mm Inlet = 6 in. [152]	Total Pressure		0.023	0.037	0.053	0.072	0.094	0.119	0.146	0.211	0.287
	Static Pressure		0.013	0.021	0.030	0.041	0.054	0.068	0.084	0.121	0.165
	Flow Rate		78	98	118	137	157	176	196	235	274
	NC		---	---	15	20	25	29	32	38	43
	Throw 150,100,50		0-1-4	1-1-5	1-2-6	1-3-8	2-4-9	2-5-10	3-5-11	4-6-13	5-8-15
Length = 60 in./1500 mm Inlet = 8 in. [203]	Total Pressure		0.031	0.048	0.069	0.094	0.123	0.156	0.193	0.278	0.378
	Static Pressure		0.021	0.033	0.047	0.064	0.083	0.106	0.130	0.188	0.256
	Flow Rate		140	175	209	244	279	314	349	419	489
	NC		---	---	19	25	29	33	36	42	47
	Throw 150,100,50		1-3-8	2-5-10	3-6-12	4-7-13	5-8-15	6-9-17	6-10-19	8-12-23	9-13-25
Length = 60 in./1500 mm Inlet = 10 in. [254]	Total Pressure		0.043	0.067	0.096	0.131	0.172	0.217	0.268	0.386	0.525
	Static Pressure		0.033	0.051	0.074	0.101	0.132	0.167	0.206	0.296	0.403
	Flow Rate		218	273	327	382	436	491	545	654	763
	NC		---	18	24	29	34	38	41	47	52
	Throw 150,100,50		3-6-12	5-8-15	6-9-18	7-11-21	8-12-23	9-14-25	10-15-26	12-18-28	14-21-31
Length = 60 in./1500 mm Inlet = 12 in. [305]	Total Pressure	0.035	0.061	0.096	0.138	0.188	0.246	0.311	0.384	0.553	
	Static Pressure	0.029	0.051	0.080	0.116	0.158	0.206	0.261	0.322	0.463	
	Flow Rate	236	314	393	471	550	628	707	785	942	
	NC	---	16	24	30	35	39	43	47	53	
	Throw 150,100,50	4-6-13	6-9-17	7-11-22	9-13-24	10-15-26	12-17-28	13-19-30	14-22-31	17-24-34	

Performance Notes:

1. Tested in accordance with ASHRAE Standard 70-2006 "Method of Testing for Rating the Performance of Air Outlets and Inlets."
2. Air flow is in cfm.
3. All pressures are in in. w.g.
4. Throw values are measured in feet for terminal velocities of 150 fpm (minimum), 100 fpm (middle) and 50 fpm (maximum).
5. Throw data is based on supply air and room air being at isothermal conditions.
6. NC values are based on room absorption of 10 dB re 10⁻¹² watts and one diffuser.
7. Blanks indicate NC less than 15.
8. Shaded area outside recommended operating range.
9. Does not include effects of ceiling radiation damper (TBD3-FR)

T-bar Diffusers TBD3 Series - Supply



Performance Data - 4 Slot

Model TBD375 3/4 in. [19] Slot Width

Length = 24 in./600 mm Inlet = 6 in. [152]	Total Pressure		0.023	0.036	0.052	0.070	0.092	0.116	0.143	0.206	0.281
	Static Pressure		0.013	0.020	0.029	0.040	0.052	0.066	0.081	0.117	0.159
	Flow Rate		78	98	118	137	157	176	196	235	274
	NC		----	----	----	----	19	23	27	34	40
	Throw 150,100,50		2-5-15	4-9-19	5-11-23	7-13-27	10-15-31	11-17-34	13-19-35	15-23-39	18-27-42
Length = 24 in./600 mm Inlet = 8 in. [203]	Total Pressure	0.027	0.049	0.076	0.110	0.150	0.195	0.247	0.305	0.440	0.598
	Static Pressure	0.022	0.039	0.061	0.087	0.119	0.155	0.197	0.243	0.350	0.476
	Flow Rate	105	140	175	209	244	279	314	349	419	489
	NC	----	----	17	24	29	34	39	43	49	55
	Throw 150,100,50	4-10-20	8-14-27	11-17-33	14-20-37	16-24-39	18-27-42	20-31-45	23-33-47	27-37-52	32-39-56
Length = 24 in./600 mm Inlet = 10 in. [254]	Total Pressure	0.052	0.092	0.144	0.207	0.281	0.367	0.465	0.574		
	Static Pressure	0.046	0.082	0.128	0.184	0.251	0.328	0.415	0.512		
	Flow Rate	164	218	273	327	382	436	491	545		
	NC	----	22	30	37	42	47	52	55		
	Throw 150,100,50	11-16-32	14-21-37	18-27-42	21-32-46	25-35-49	28-37-53	32-40-56	34-42-59		
Length = 48 in./1200 mm Inlet = 8 in. [203]	Total Pressure		0.020	0.031	0.045	0.061	0.079	0.100	0.124	0.178	0.243
	Static Pressure		0.010	0.015	0.022	0.030	0.039	0.050	0.062	0.089	0.121
	Flow Rate		140	175	209	244	279	314	349	419	489
	NC		----	----	----	----	16	20	24	31	37
	Throw 150,100,50		2-4-11	3-6-14	4-9-17	5-10-20	7-11-23	9-13-26	9-14-28	11-17-32	13-20-35
Length = 48 in./1200 mm Inlet = 10 in. [254]	Total Pressure	0.020	0.035	0.055	0.079	0.107	0.140	0.177	0.219	0.315	0.429
	Static Pressure	0.014	0.025	0.039	0.056	0.077	0.100	0.127	0.157	0.226	0.307
	Flow Rate	164	218	273	327	382	436	491	545	654	763
	NC	----	----	----	17	23	28	32	36	43	48
	Throw 150,100,50	2-5-13	4-9-18	6-11-22	9-13-27	10-16-31	12-18-33	13-20-35	15-22-37	18-27-40	21-31-44
Length = 48 in./1200 mm Inlet = 12 in. [305]	Total Pressure	0.032	0.057	0.090	0.129	0.176	0.230	0.291	0.359	0.517	
	Static Pressure	0.027	0.047	0.074	0.107	0.145	0.190	0.240	0.297	0.427	
	Flow Rate	236	314	393	471	550	628	707	785	942	
	NC	----	----	20	27	33	38	42	46	53	
	Throw 150,100,50	5-10-19	9-13-26	11-16-31	13-19-34	15-22-37	17-26-40	19-29-42	21-31-44	26-34-49	
Length = 60 in./1500 mm Inlet = 8 in. [203]	Total Pressure		0.015	0.024	0.034	0.046	0.060	0.076	0.094	0.136	0.184
	Static Pressure		0.005	0.008	0.011	0.016	0.020	0.026	0.032	0.046	0.062
	Flow Rate		140	175	209	244	279	314	349	419	489
	NC		----	----	----	----	----	----	19	25	31
	Throw 150,100,50		1-2-6	1-3-8	2-4-10	2-5-11	3-6-13	4-7-14	5-8-16	6-10-19	7-11-22
Length = 60 in./1500 mm Inlet = 10 in. [254]	Total Pressure		0.026	0.041	0.059	0.080	0.105	0.133	0.164	0.236	0.321
	Static Pressure		0.016	0.025	0.037	0.050	0.065	0.082	0.102	0.146	0.199
	Flow Rate		218	273	327	382	436	491	545	654	763
	NC		----	----	----	17	22	26	30	37	42
	Throw 150,100,50		2-4-10	3-6-12	4-7-15	6-9-17	7-10-20	7-11-22	8-12-25	10-15-28	12-17-31
Length = 60 in./1500 mm Inlet = 12 in. [305]	Total Pressure	0.024	0.042	0.066	0.095	0.130	0.169	0.214	0.265	0.381	0.518
	Static Pressure	0.018	0.032	0.051	0.073	0.099	0.129	0.164	0.202	0.291	0.396
	Flow Rate	236	314	393	471	550	628	707	785	942	1099
	NC	----	----	----	21	27	31	36	40	46	52
	Throw 150,100,50	2-5-11	4-7-14	6-9-18	7-11-22	8-13-25	10-14-28	11-16-30	12-18-31	14-22-34	17-25-37

Performance Notes:

1. Tested in accordance with ASHRAE Standard 70-2006 "Method of Testing for Rating the Performance of Air Outlets and Inlets."
2. Air flow is in cfm.
3. All pressures are in in. w.g.
4. Throw values are measured in feet for terminal velocities of 150 fpm (minimum), 100 fpm (middle) and 50 fpm (maximum).
5. Throw data is based on supply air and room air being at isothermal conditions.
6. NC values are based on room absorption of 10 dB re 10⁻¹² watts and one diffuser.
7. Blanks indicate NC less than 15.
8. Shaded area outside recommended operating range.
9. Does not include effects of ceiling radiation damper (TBD3-FR)

T-bar Diffusers TBD3 Series - Supply



Performance Data - 4 Slot

Model TBD3100 1 in. [25] Slot Width											
Length = 24 in./600 mm Inlet = 6 in. [152]	Total Pressure		0.023	0.036	0.052	0.070	0.092	0.116	0.144	0.207	0.282
	Static Pressure		0.013	0.020	0.029	0.040	0.052	0.066	0.081	0.117	0.160
	Flow Rate		78	98	118	137	157	176	196	235	274
	NC		----	----	----	----	15	20	24	30	36
	Throw 150,100,50		2-4-13	3-6-17	4-8-20	5-11-24	7-13-27	8-15-30	10-17-34	13-20-39	16-24-42
Length = 24 in./600 mm Inlet = 8 in. [203]	Total Pressure	0.023	0.040	0.063	0.091	0.123	0.161	0.204	0.252	0.362	0.493
	Static Pressure	0.017	0.030	0.047	0.068	0.093	0.121	0.153	0.189	0.273	0.371
	Flow Rate	105	140	175	209	244	279	314	349	419	489
	NC	----	----	----	----	20	25	30	34	40	46
	Throw 150,100,50	3-7-18	5-12-24	8-15-30	12-18-36	14-21-39	16-24-42	18-27-45	20-30-47	24-36-52	28-39-56
Length = 24 in./600 mm Inlet = 10 in. [254]	Total Pressure	0.037	0.066	0.103	0.148	0.201	0.263	0.333	0.411	0.592	
	Static Pressure	0.031	0.056	0.087	0.126	0.171	0.223	0.283	0.349	0.502	
	Flow Rate	164	218	273	327	382	436	491	545	654	
	NC	----	----	17	24	29	34	39	42	49	
	Throw 150,100,50	7-14-28	12-19-37	16-23-42	19-28-46	22-33-49	25-37-53	28-40-56	31-42-59	37-46-65	
Length = 48 in./1200 mm Inlet = 8 in. [203]	Total Pressure		0.021	0.032	0.047	0.064	0.083	0.105	0.130	0.187	0.254
	Static Pressure		0.011	0.017	0.024	0.033	0.043	0.055	0.067	0.097	0.132
	Flow Rate		140	175	209	244	279	314	349	419	489
	NC		----	----	----	----	----	18	22	28	34
	Throw 150,100,50		1-3-10	2-4-12	3-6-15	3-8-17	5-10-20	6-11-22	7-12-25	10-15-30	12-17-35
Length = 48 in./1200 mm Inlet = 10 in. [254]	Total Pressure	0.018	0.031	0.049	0.071	0.096	0.125	0.159	0.196	0.282	0.384
	Static Pressure	0.012	0.021	0.033	0.048	0.065	0.085	0.108	0.134	0.192	0.262
	Flow Rate	164	218	273	327	382	436	491	545	654	763
	NC	----	----	----	----	16	21	25	29	36	42
	Throw 150,100,50	2-4-12	3-6-16	4-10-19	6-12-23	8-14-27	10-16-31	12-18-35	13-19-37	16-23-40	18-27-44
Length = 48 in./1200 mm Inlet = 12 in. [305]	Total Pressure	0.026	0.046	0.071	0.103	0.140	0.182	0.231	0.285	0.410	0.559
	Static Pressure	0.020	0.036	0.056	0.080	0.109	0.143	0.180	0.223	0.321	0.436
	Flow Rate	236	314	393	471	550	628	707	785	942	1099
	NC	----	----	----	17	23	28	32	36	43	48
	Throw 150,100,50	3-7-17	6-11-22	9-14-28	11-17-34	13-20-37	15-22-40	17-25-42	19-28-44	22-34-49	26-37-52
Length = 60 in./1500 mm Inlet = 8 in. [203]	Total Pressure		0.017	0.027	0.039	0.053	0.069	0.087	0.108	0.155	0.211
	Static Pressure		0.007	0.011	0.016	0.022	0.029	0.037	0.045	0.065	0.089
	Flow Rate		140	175	209	244	279	314	349	419	489
	NC		----	----	----	----	----	----	18	25	31
	Throw 150,100,50		1-1-5	1-2-7	1-3-8	2-3-10	2-5-11	3-6-13	3-7-14	5-8-17	6-10-20
Length = 60 in./1500 mm Inlet = 10 in. [254]	Total Pressure		0.025	0.040	0.057	0.078	0.101	0.128	0.158	0.228	0.310
	Static Pressure		0.015	0.024	0.035	0.047	0.061	0.078	0.096	0.138	0.188
	Flow Rate		218	273	327	382	436	491	545	654	763
	NC		----	----	----	----	17	21	25	32	38
	Throw 150,100,50		1-3-9	2-4-11	3-6-13	4-8-15	5-9-17	6-10-20	7-11-22	9-13-26	10-15-30
Length = 60 in./1500 mm Inlet = 12 in. [305]	Total Pressure	0.020	0.036	0.056	0.081	0.111	0.144	0.183	0.226	0.325	0.442
	Static Pressure	0.015	0.026	0.041	0.059	0.080	0.105	0.132	0.163	0.235	0.320
	Flow Rate	236	314	393	471	550	628	707	785	942	1099
	NC	----	----	----	----	18	23	28	32	38	44
	Throw 150,100,50	1-3-9	3-6-13	4-8-16	6-9-19	7-11-22	8-13-25	9-14-28	10-16-31	13-19-34	15-22-37

Performance Notes:

1. Tested in accordance with ASHRAE Standard 70-2006 "Method of Testing for Rating the Performance of Air Outlets and Inlets."
2. Air flow is in cfm.
3. All pressures are in in. w.g.
4. Throw values are measured in feet for terminal velocities of 150 fpm (minimum), 100 fpm (middle) and 50 fpm (maximum).
5. Throw data is based on supply air and room air being at isothermal conditions.
6. NC values are based on room absorption of 10 dB re 10⁻¹² watts and one diffuser.
7. Blanks indicate NC less than 15.
8. Shaded area outside recommended operating range.
9. Does not include effects of ceiling radiation damper (TBD3-FR)

T-bar Supply Diffusers

TBD4 Series - Supply



Product Information

Models

3/4 in. [19] Slot Width	Non-Insulated	TBD475
	Insulated	TBDI475
1 in. [25] Slot Width	Non-Insulated	TBD4100
	Insulated	TBDI4100
1 1/2 in. [38] Slot Width	Non-Insulated	TBD4150
	Insulated	TBDI4150

Price TBD 4 Series T-bar diffusers have been designed to provide a tight horizontal air pattern that is suitable for VAV systems. The air pattern is field adjustable toward or away from the diffuser inlet side.

Features

- Available in 1 and 2 slot types (standard); 3 and 4 slot units are an available option as a special order.
- Available in both imperial and hard metric module sizes.
- Available standard module lengths of 24 in./600 mm, 30 in./750 mm, 36 in./900 mm, 48 in./1200 mm and 60 in./1500 mm.
- Pattern controllers are fitted with a tight-sealing extruded vinyl blade edge seal.
- 2 slot units feature an extruded aluminum center T that has been "dropped" below the diffuser face to match the ceiling grid and provide superior performance.

Available Options

- Center notch (**CN**) available to bisect diffuser length (i.e. allows 48 in./1200 mm unit to be installed into two 24 in./600 mm ceiling modules).
- Straddle mounting (**ST**).
- Factory installed outer T-bars (**TB1 /TB2**).
- Factory installed T-bar clips (**TC1 /TC2**).
- Internal fiber free foam or coated fiberglass insulation
- External aluminum foil-backed fiberglass insulation.
- Aluminum Plaster Frame (**APF**).

Material

- Shell - Coated Steel
- Pattern Controller / Center T - Extruded Aluminum
- Blade Gasket - Vinyl

Finish

Shell	MILL
Plenum Face / Pattern Controller	
Black	B17
Center T - White Powder Coat	B12

For optional and special finishes see color matrix.

Product Information Index

Performance Data	B32 - B43
Options and Accessories	B61
Suggested Specification	B73

Air Pattern Split Deflection available on 36 in./900 mm, 48 in./1200 mm and 60 in./1500 mm units.

Length = Module - 1/4" (6)

Dimensional Data - Imperial (in.) / Metric [mm]

Model	Module		Inlet Size D	1 Slot		2 Slot		3 Slot		4 Slot	
	Imperial (in.)	Metric [mm]		H	W	H	W	H	W	H	W
TBD/TBDI 475 3/4 in. [19] Slot	24	600	6, 8, 10 [152, 203, 254]	8	1 3/4 [44]	8	3 1/2 [89]	11	5 1/4 [133]	11	7
	30	750		[203]	[44]	[203]	[89]	[279]	[133]	[279]	[178]
	36	900	12 [305]	11	1 3/4 [44]	11	3 1/2 [89]	11	5 1/4 [133]	11	7
	48	1200		[279]	[44]	[279]	[89]	[279]	[133]	[279]	[178]
60	1500										
TBD/TBDI 4100 1 in. [25] Slot	24	600	6, 8, 10 [152, 203, 254]	8	2 [64]	8	4 [102]	11	6 [152]	11	8
	30	750		[203]	[64]	[203]	[102]	[279]	[152]	[279]	[203]
	36	900	12 [305]	11	2 [64]	11	4 [102]	11	6 [152]	11	8
	48	1200		[279]	[64]	[279]	[102]	[279]	[152]	[279]	[203]
60	1500										
TBD/TBDI 4150 1 1/2 in. [38] Slot	24	600	6, 8, 10 [152, 203, 254]	8	2 1/2 [64]	8	5 [127]	11	7 1/2 [191]	11	10
	30	750		[203]	[64]	[203]	[127]	[279]	[191]	[279]	[254]
	36	900	12 [305]	11	2 1/2 [64]	11	5 [127]	11	7 1/2 [191]	11	10
	48	1200		[279]	[64]	[279]	[127]	[279]	[191]	[279]	[254]
60	1500										

Supplied as equivalent oval except 6 in. on 3 and 4 slot units.

✓ Product Selection Checklist

- 1] Select Inlet Diameter based on system design or duct requirements.
- 2] Select Module Length based on ceiling module.
- 3] Select Outlet Type by model number (slot width, insulation).
- 4] Select Number of Slots.
- 5] Select Integral Options if desired (see page B61).
- 6] Select Finish (center T only).

Example: 8 / 48 / TBD475 / 2 / B12

Fire-Rated T-bar Diffusers - Assembly TBD4 - FR Series



Product Information

Three Hour Rating - Lay-in Models

3/4 in. [19] Slot Width	Non-Insulated	TBD475-FR
	Insulated	TBDI475-FR
1 in. [25] Slot Width	Non-Insulated	TBD4100-FR
	Insulated	TBDI4100-FR
1 1/2 in. [38] Slot Width	Non-Insulated	TBD4150-FR
	Insulated	TBDI4150-FR

Price TBD4-FR Series T-bar diffusers are Fire-Rated Assemblies UL Listed (Underwriters Laboratories Fire Resistance Directory) and ULC Listed (Underwriters Laboratories of Canada Equipment and Materials Directory). This design meets time versus temperature test criteria and NFPA 90A requirements.

TBD4-FR T-bar diffusers have been designed to provide a tight horizontal air pattern that is ideal for VAV systems. The air pattern is field adjustable toward or away from the diffuser inlet side.

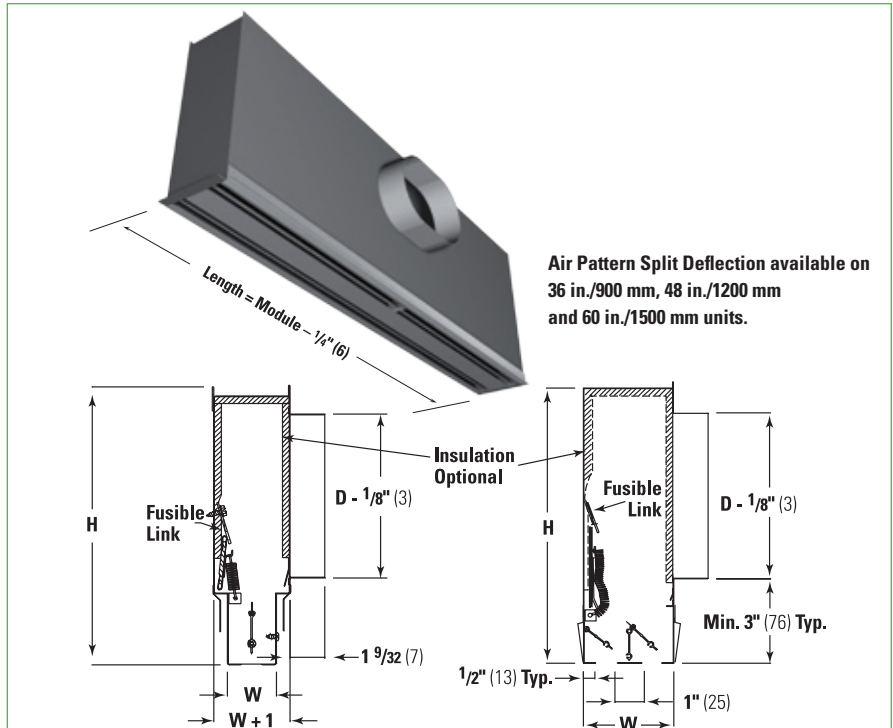
Features

- Available in 1 and 2 slot configurations.
- Available in both imperial and hard metric module sizes.
- Available standard module lengths of 24 in./600 mm, 30 in./750 mm, 36 in./900 mm, 48 in./1200 mm and 60 in./1500 mm.
- 2 slot units have an extruded aluminum center T that has been "dropped" below the diffuser face to match the ceiling grid and provide superior performance.
- Pattern controllers are fitted with a tight-sealing extruded vinyl blade edge seal.
- Non-adjustable, non-asbestos flap type Ceiling Radiation Damper fits flush against plenum wall for low noise and unrestricted air flow.
- Flap damper has the thermal blanket encased within the blade to eliminate air stream erosion and deterioration.
- Positive spring closure and locking clip for added safety.
- Diffuser plenum constructed of coated steel.
- Designed for use in an exposed grid suspension ceiling (T-bar Lay-in) with up to a three hour assembly rating. Units must be installed in accordance with the instructions that accompany each unit.
- Easily replaceable fusible link. Standard 165 °F [74 °C], optional 212 °F [100 °C].
- Factory installed outer T-bar clips (all four sides).
- Optional coated fiberglass insulation (**TBDI4-FR**).

Construction

- Shell - Coated Steel
- Pattern Controller / Center T - Extruded Aluminum
- Blade Gasket - Vinyl

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Air Pattern Split Deflection available on 36 in./900 mm, 48 in./1200 mm and 60 in./1500 mm units.

Dimensional Data - Imperial (in.) / Metric [mm]

Model	Module Length		1 Slot Units			2 Slot Units		
	Imperial (in.)	Metric [mm]	H	D	W	H	D	W
TBD/	24	600	10" [254]	6" [152]	1 3/4" [44]	10" [254]	6" [152]	3 1/2" [89]
TBDI	30	750	10" [254]	6" [152]	1 3/4" [44]	10" [254]	6" [152]	3 1/2" [89]
475-FR	36	900	10" [254]	6" [152]	1 3/4" [44]	10" [254]	6" [152]	3 1/2" [89]
3/4 in. Slot	48	1200	12" [305]	6" [152]	1 3/4" [44]	12" [305]	8" [203]	3 1/2" [89]
	60	1500	12" [305]	8" [203]	1 3/4" [44]	12" [305]	12" [305]	3 1/2" [89]
TBD/	24	600	10" [254]	6" [152]	2" [51]	10" [254]	6" [152]	4" [102]
TBDI	30	750	10" [254]	6" [152]	2" [51]	12" [305]	8" [203]	4" [102]
4100-FR	36	900	10" [254]	6" [152]	2" [51]	12" [305]	8" [203]	4" [102]
1 in. Slot	48	1200	12" [305]	8" [203]	2" [51]	12" [305]	8" [203]	4" [102]
	60	1500	12" [305]	12" [305]	2" [51]	12" [305]	12" [305]	4" [102]
TBD/	24	600	12" [305]	8" [203]	2 1/2" [64]	12" [305]	8" [203]	5" [127]
TBDI	30	750	12" [305]	8" [203]	2 1/2" [64]	12" [305]	10" [254]	5" [127]
4150-FR	36	900	12" [305]	8" [203]	2 1/2" [64]	12" [305]	10" [254]	5" [127]
1 1/2 in. Slot	48	1200	12" [305]	8" [203]	2 1/2" [64]	12" [305]	14" [354]	5" [127]
	60	1500	12" [305]	12" [305]	2 1/2" [64]	12" [305]	14" [354]	5" [127]

* Supplied as oval equivalent inlets.

Finish

Shell	MILL
Plenum Face / Pattern Controller - Black	B17
Center T - White Powder Coat	B12

For optional and special finishes see color matrix.

Product Information Index

Suggested Specification B75
* see Performance Note on page B75

Product Selection Checklist

- 1) Select Inlet Diameter based on system design or duct requirements.
- 2) Select Module Length based on ceiling module.
- 3) Select Outlet Type by model number (Slot width, insulation).
- 4) Select Number of Slots.
- 5) Select Finish (center T only).

Example: 8 / 48 / TBD475-FR / 2 / B12

All Metric dimensions () are soft conversion. Imperial dimensions are converted to metric and rounded to the nearest millimeter.

T-bar Diffusers TBD4 Series - Supply



Performance Data - 1 Slot

Model TBD475 3/4 in. [19] Slot Width											
Length = 24 in./600 mm Inlet = 6 in. [152]	Total Pressure	0.030	0.068	0.121	0.190	0.273	0.372	0.486	0.615	0.759	
	Static Pressure	0.028	0.063	0.111	0.174	0.251	0.341	0.446	0.564	0.697	
	Flow Rate	39	59	78	98	118	137	157	176	196	
	NC	----	18	28	35	41	46	50	54	57	
	Throw 150,100,50	2-4-10	4-7-14	6-10-18	8-12-21	10-14-23	11-17-24	13-18-26	14-20-28	16-21-29	
Length = 24 in./600 mm Inlet = 8 in. [203]	Total Pressure	0.071	0.160	0.284	0.443	0.638					
	Static Pressure	0.068	0.154	0.274	0.428	0.616					
	Flow Rate	70	105	140	175	209					
	NC	19	32	41	48	54					
	Throw 150,100,50	6-8-17	8-13-21	11-17-25	14-19-28	17-21-30					
Length = 48 in./1200 mm Inlet = 6 in. [152]	Total Pressure	0.012	0.027	0.049	0.076	0.109	0.149	0.194	0.246	0.304	0.437
	Static Pressure	0.010	0.022	0.039	0.060	0.087	0.118	0.154	0.195	0.241	0.347
	Flow Rate	39	59	78	98	118	137	157	176	196	235
	NC	----	----	----	20	26	31	35	39	42	48
	Throw 150,100,50	1-2-6	2-4-10	3-6-12	5-8-14	6-10-15	7-11-16	8-12-18	10-13-19	11-14-20	12-15-22
Length = 48 in./1200 mm Inlet = 8 in. [203]	Total Pressure	0.026	0.058	0.103	0.162	0.233	0.317	0.413	0.523		
	Static Pressure	0.023	0.053	0.093	0.146	0.210	0.286	0.374	0.473		
	Flow Rate	70	105	140	175	209	244	279	314		
	NC	----	16	25	32	38	43	47	51		
	Throw 150,100,50	3-6-11	6-8-14	8-11-17	9-13-19	11-14-20	13-16-22	14-17-23	14-18-25		
Length = 48 in./1200 mm Inlet = 10 in. [254]	Total Pressure	0.049	0.110	0.195	0.305	0.439	0.598				
	Static Pressure	0.046	0.104	0.185	0.289	0.417	0.567				
	Flow Rate	109	164	218	273	327	382				
	NC	----	26	35	42	48	53				
	Throw 150,100,50	6-9-15	9-13-18	12-15-21	13-16-23	15-18-25	16-19-27				
Length = 48 in./1200 mm Inlet = 12 in. [305]	Total Pressure	0.085	0.192	0.341	0.532						
	Static Pressure	0.083	0.186	0.331	0.517						
	Flow Rate	157	236	314	393						
	NC	22	35	44	51						
	Throw 150,100,50	8-12-18	12-15-22	14-18-25	16-20-28						
Length = 60 in./1500 mm Inlet = 6 in. [152]	Total Pressure	0.009	0.021	0.037	0.058	0.083	0.113	0.148	0.187	0.231	0.332
	Static Pressure	0.007	0.015	0.027	0.042	0.061	0.083	0.108	0.136	0.168	0.243
	Flow Rate	39	59	78	98	118	137	157	176	196	235
	NC	----	----	----	16	22	27	31	35	38	44
	Throw 150,100,50	1-1-5	1-3-8	2-5-9	3-6-11	5-8-12	6-9-12	7-9-13	8-10-14	9-11-15	9-12-16
Length = 60 in./1500 mm Inlet = 8 in. [203]	Total Pressure	0.019	0.043	0.077	0.120	0.172	0.234	0.306	0.387	0.478	
	Static Pressure	0.017	0.037	0.067	0.104	0.150	0.204	0.266	0.337	0.416	
	Flow Rate	70	105	140	175	209	244	279	314	349	
	NC	----	----	20	27	33	38	42	46	50	
	Throw 150,100,50	2-4-9	4-7-11	6-9-13	8-10-14	9-11-15	10-12-17	10-13-18	11-13-19	11-14-20	
Length = 60 in./1500 mm Inlet = 10 in. [254]	Total Pressure	0.035	0.079	0.141	0.220	0.317	0.432	0.564			
	Static Pressure	0.033	0.074	0.131	0.205	0.295	0.402	0.525			
	Flow Rate	109	164	218	273	327	382	436			
	NC	----	21	30	37	43	48	52			
	Throw 150,100,50	4-7-11	7-10-14	9-11-16	10-12-18	11-14-19	12-15-21	13-16-22			
Length = 60 in./1500 mm Inlet = 12 in. [305]	Total Pressure	0.060	0.136	0.241	0.377	0.543					
	Static Pressure	0.058	0.130	0.231	0.361	0.520					
	Flow Rate	157	236	314	393	471					
	NC	16	29	38	46	51					
	Throw 150,100,50	7-9-13	9-12-16	11-13-19	12-15-21	13-16-23					

Performance Notes:

1. Tested in accordance with ASHRAE Standard 70-2006 "Method of Testing for Rating the Performance of Air Outlets and Inlets."
2. Air flow is in cfm.
3. All pressures are in in. w.g.
4. Throw values are measured in feet for terminal velocities of 150 fpm (minimum), 100 fpm (middle) and 50 fpm (maximum).
5. Throw data is based on supply air and room air being at isothermal conditions.
6. NC values are based on room absorption of 10 dB re 10⁻¹² watts and one diffuser.
7. Blanks indicate NC less than 15.
8. Shaded area outside recommended operating range.
9. Does not include effects of ceiling radiation damper (TBD4-FR)

T-bar Diffusers TBD4 Series - Supply



Performance Data - 1 Slot

Model TBD4100 1 in. [25] Slot Width											
Length = 24 in./600 mm Inlet = 6 in. [152]	Total Pressure	0.032	0.072	0.128	0.200	0.288	0.392	0.512			
	Static Pressure	0.029	0.066	0.118	0.184	0.265	0.361	0.472			
	Flow Rate	39	59	78	98	118	137	157			
	NC	--	17	26	34	39	44	49			
	Throw 150,100,50	1-3-9	3-7-13	6-9-18	7-11-21	9-13-23	10-15-24	12-18-26			
Length = 24 in./600 mm Inlet = 8 in. [203]	Total Pressure	0.068	0.152	0.270	0.422	0.608					
	Static Pressure	0.065	0.146	0.260	0.407	0.586					
	Flow Rate	70	105	140	175	209					
	NC	19	32	41	48	54					
	Throw 150,100,50	4-8-16	8-12-21	10-16-25	13-19-28	16-21-30					
Length = 48 in./1200 mm Inlet = 6 in. [152]	Total Pressure	0.014	0.032	0.056	0.088	0.127	0.172	0.225	0.285	0.352	0.507
	Static Pressure	0.012	0.026	0.046	0.072	0.104	0.142	0.185	0.235	0.290	0.417
	Flow Rate	39	59	78	98	118	137	157	176	196	235
	NC	--	--	--	17	23	28	33	36	40	46
	Throw 150,100,50	1-1-5	1-3-9	2-5-12	4-7-14	5-9-15	7-10-16	8-12-18	9-13-19	10-14-20	12-15-22
Length = 48 in./1200 mm Inlet = 8 in. [203]	Total Pressure	0.028	0.062	0.111	0.173	0.249	0.340	0.444	0.561	0.693	
	Static Pressure	0.025	0.057	0.101	0.158	0.227	0.309	0.404	0.511	0.631	
	Flow Rate	70	105	140	175	209	244	279	314	349	
	NC	--	--	24	31	37	42	46	50	53	
	Throw 150,100,50	2-4-10	4-8-14	7-10-17	9-13-19	10-14-20	12-16-22	14-17-23	14-18-25	15-19-26	
Length = 48 in./1200 mm Inlet = 10 in. [254]	Total Pressure	0.049	0.109	0.194	0.304	0.437	0.595				
	Static Pressure	0.046	0.104	0.184	0.288	0.415	0.565				
	Flow Rate	109	164	218	273	327	382				
	NC	--	25	35	42	48	53				
	Throw 150,100,50	5-8-15	8-12-18	11-15-21	13-16-23	15-18-25	16-19-27				
Length = 48 in./1200 mm Inlet = 12 in. [305]	Total Pressure	0.079	0.179	0.317	0.496						
	Static Pressure	0.077	0.173	0.308	0.480						
	Flow Rate	157	236	314	393						
	NC	22	35	44	52						
	Throw 150,100,50	8-12-18	12-15-22	14-18-25	16-20-28						
Length = 60 in./1500 mm Inlet = 6 in. [152]	Total Pressure	0.011	0.025	0.044	0.068	0.099	0.134	0.175	0.222	0.274	0.394
	Static Pressure	0.008	0.019	0.034	0.053	0.076	0.104	0.135	0.171	0.212	0.305
	Flow Rate	39	59	78	98	118	137	157	176	196	235
	NC	--	--	--	--	18	23	28	31	35	41
	Throw 150,100,50	0-1-4	1-2-7	2-4-9	3-6-11	4-7-12	5-8-12	6-9-13	7-10-14	8-11-15	9-12-16
Length = 60 in./1500 mm Inlet = 8 in. [203]	Total Pressure	0.021	0.048	0.085	0.133	0.191	0.260	0.339	0.429	0.530	
	Static Pressure	0.019	0.042	0.075	0.117	0.168	0.229	0.299	0.379	0.468	
	Flow Rate	70	105	140	175	209	244	279	314	349	
	NC	--	--	18	25	31	36	41	44	48	
	Throw 150,100,50	1-3-8	3-6-11	5-8-13	7-10-14	8-11-15	10-12-17	10-13-18	11-13-19	11-14-20	
Length = 60 in./1500 mm Inlet = 10 in. [254]	Total Pressure	0.037	0.082	0.146	0.228	0.329	0.447	0.584			
	Static Pressure	0.034	0.077	0.136	0.213	0.306	0.417	0.544			
	Flow Rate	109	164	218	273	327	382	436			
	NC	--	20	29	36	42	47	51			
	Throw 150,100,50	3-7-11	7-10-14	9-11-16	10-12-18	11-14-19	12-15-21	13-16-22			
Length = 60 in./1500 mm Inlet = 12 in. [305]	Total Pressure	0.059	0.132	0.234	0.366	0.527					
	Static Pressure	0.056	0.126	0.224	0.351	0.505					
	Flow Rate	157	236	314	393	471					
	NC	16	29	38	46	51					
	Throw 150,100,50	6-9-13	9-12-16	11-13-19	12-15-21	13-16-23					

Performance Notes:

1. Tested in accordance with ASHRAE Standard 70-2006 "Method of Testing for Rating the Performance of Air Outlets and Inlets."
2. Air flow is in cfm.
3. All pressures are in in. w.g.
4. Throw values are measured in feet for terminal velocities of 150 fpm (minimum), 100 fpm (middle) and 50 fpm (maximum).
5. Throw data is based on supply air and room air being at isothermal conditions.
6. NC values are based on room absorption of 10 dB re 10⁻¹² watts and one diffuser.
7. Blanks indicate NC less than 15.
8. Shaded area outside recommended operating range.
9. Does not include effects of ceiling radiation damper (TBD4-FR)

T-bar Diffusers TBD4 Series - Supply



Performance Data - 1 Slot

Model TBD4150 1-1/2 in. [38] Slot Width											
Length = 24 in./600 mm Inlet = 6 in. [152]	Total Pressure	0.020	0.044	0.078	0.123	0.177	0.240	0.314	0.397	0.490	0.706
	Static Pressure	0.017	0.039	0.068	0.107	0.154	0.210	0.274	0.347	0.428	0.616
	Flow Rate	39	59	78	98	118	137	157	176	196	235
	NC	--	--	17	24	30	35	39	43	46	52
	Throw 150,100,50	1-2-8	2-5-12	4-8-16	6-10-20	8-12-23	9-14-24	10-16-26	12-18-28	13-20-29	16-23-32
Length = 24 in./600 mm Inlet = 8 in. [203]	Total Pressure	0.040	0.089	0.159	0.248	0.357	0.486	0.634			
	Static Pressure	0.037	0.084	0.149	0.232	0.334	0.455	0.595			
	Flow Rate	70	105	140	175	209	244	279			
	NC	--	21	31	38	44	49	53			
	Throw 150,100,50	3-7-14	7-11-21	9-14-25	12-18-28	14-21-30	16-23-33	19-25-35			
Length = 24 in./600 mm Inlet = 10 in. [254]	Total Pressure	0.071	0.161	0.285	0.446	0.642					
	Static Pressure	0.069	0.155	0.275	0.430	0.620					
	Flow Rate	109	164	218	273	327					
	NC	20	33	42	49	55					
	Throw 150,100,50	7-11-22	11-16-27	15-22-31	18-24-34	22-27-38					
Length = 48 in./1200 mm Inlet = 6 in. [152]	Total Pressure	0.009	0.020	0.036	0.056	0.081	0.110	0.143	0.181	0.224	0.323
	Static Pressure	0.006	0.015	0.026	0.040	0.058	0.079	0.103	0.131	0.162	0.233
	Flow Rate	39	59	78	98	118	137	157	176	196	235
	NC	--	--	--	--	--	19	24	27	31	37
	Throw 150,100,50	0-1-3	1-2-7	2-3-10	2-5-12	3-7-15	5-9-16	6-10-18	7-11-19	8-12-20	10-15-22
Length = 48 in./1200 mm Inlet = 8 in. [203]	Total Pressure	0.017	0.039	0.069	0.107	0.154	0.210	0.274	0.347	0.428	0.617
	Static Pressure	0.015	0.033	0.059	0.091	0.132	0.179	0.234	0.296	0.366	0.527
	Flow Rate	70	105	140	175	209	244	279	314	349	419
	NC	--	--	--	21	27	32	36	40	44	49
	Throw 150,100,50	1-3-9	3-6-13	5-9-17	7-11-19	9-13-20	10-16-22	12-17-23	13-18-25	15-19-26	17-20-29
Length = 48 in./1200 mm Inlet = 10 in. [254]	Total Pressure	0.029	0.066	0.116	0.182	0.262	0.357	0.466	0.590		
	Static Pressure	0.027	0.060	0.106	0.166	0.240	0.326	0.426	0.539		
	Flow Rate	109	164	218	273	327	382	436	491		
	NC	--	15	25	32	38	43	47	51		
	Throw 150,100,50	3-7-14	7-10-18	9-14-21	12-16-23	14-18-25	16-19-27	17-21-29	18-22-31		
Length = 48 in./1200 mm Inlet = 12 in. [305]	Total Pressure	0.046	0.104	0.184	0.288	0.415	0.565				
	Static Pressure	0.044	0.098	0.174	0.273	0.392	0.534				
	Flow Rate	157	236	314	393	471	550				
	NC	--	24	34	41	47	52				
	Throw 150,100,50	6-10-18	10-15-22	13-18-25	16-20-28	18-22-30	19-23-33				
Length = 60 in./1500 mm Inlet = 6 in. [152]	Total Pressure	0.007	0.016	0.028	0.044	0.063	0.086	0.113	0.142	0.176	0.253
	Static Pressure	0.005	0.010	0.018	0.028	0.041	0.056	0.073	0.092	0.113	0.163
	Flow Rate	39	59	78	98	118	137	157	176	196	235
	NC	--	--	--	--	--	--	19	23	26	32
	Throw 150,100,50	0-1-2	1-1-5	1-2-8	2-4-10	2-5-12	3-7-12	4-8-13	5-9-14	6-10-15	8-12-16
Length = 60 in./1500 mm Inlet = 8 in. [203]	Total Pressure	0.013	0.030	0.053	0.083	0.119	0.163	0.212	0.269	0.332	0.478
	Static Pressure	0.011	0.024	0.043	0.067	0.097	0.132	0.173	0.218	0.270	0.388
	Flow Rate	70	105	140	175	209	244	279	314	349	419
	NC	--	--	--	16	22	27	31	35	39	44
	Throw 150,100,50	1-2-7	2-4-11	3-7-13	5-9-14	7-11-15	8-12-17	10-13-18	11-13-19	11-14-20	13-15-22
Length = 60 in./1500 mm Inlet = 10 in. [254]	Total Pressure	0.022	0.050	0.089	0.139	0.200	0.272	0.356	0.450	0.556	
	Static Pressure	0.020	0.044	0.079	0.123	0.178	0.242	0.316	0.400	0.494	
	Flow Rate	109	164	218	273	327	382	436	491	545	
	NC	--	--	19	26	32	37	42	45	49	
	Throw 150,100,50	2-4-11	4-8-14	7-11-16	9-12-18	11-14-19	12-15-21	13-16-22	14-17-23	14-18-25	
Length = 60 in./1500 mm Inlet = 12 in. [305]	Total Pressure	0.035	0.078	0.139	0.217	0.312	0.425	0.555	0.703		
	Static Pressure	0.032	0.072	0.129	0.201	0.290	0.395	0.515	0.652		
	Flow Rate	157	236	314	393	471	550	628	707		
	NC	--	19	28	35	41	46	50	54		
	Throw 150,100,50	4-8-13	8-12-16	11-13-19	12-15-21	13-16-23	14-18-25	15-19-27	16-20-28		

Performance Notes:

1. Tested in accordance with ASHRAE Standard 70-2006 "Method of Testing for Rating the Performance of Air Outlets and Inlets."
2. Air flow is in cfm.
3. All pressures are in in. w.g.
4. Throw values are measured in feet for terminal velocities of 150 fpm (minimum), 100 fpm (middle) and 50 fpm (maximum).
5. Throw data is based on supply air and room air being at isothermal conditions.
6. NC values are based on room absorption of 10 dB re 10⁻¹² watts and one diffuser.
7. Blanks indicate NC less than 15.
8. Shaded area outside recommended operating range.
9. Does not include effects of ceiling radiation damper (TBD4-FR)

T-bar Diffusers TBD4 Series - Supply



Performance Data - 2 Slot

Model TBD475 3/4 in. [19] Slot Width											
Length = 24 in./600 mm Inlet = 6 in. [152]	Total Pressure	0.027	0.049	0.076	0.109	0.149	0.194	0.246	0.304	0.437	0.595
	Static Pressure	0.022	0.039	0.060	0.087	0.118	0.154	0.195	0.241	0.347	0.473
	Flow Rate	59	78	98	118	137	157	176	196	235	274
	NC	---	18	25	31	36	40	44	48	53	58
	Throw 150,100,50	2-5-12	4-8-16	6-10-20	8-12-23	9-14-24	10-16-26	12-18-28	13-20-29	16-23-32	18-24-35
Length = 24 in./600 mm Inlet = 8 in. [203]	Total Pressure	0.058	0.103	0.162	0.233	0.317	0.413	0.523			
	Static Pressure	0.053	0.093	0.146	0.210	0.286	0.374	0.473			
	Flow Rate	105	140	175	209	244	279	314			
	NC	24	34	41	47	52	56	60			
	Throw 150,100,50	7-11-21	9-14-25	12-18-28	14-21-30	16-23-33	19-25-35	21-26-37			
Length = 24 in./600 mm Inlet = 10 in. [254]	Total Pressure	0.110	0.195	0.305	0.439	0.598					
	Static Pressure	0.104	0.185	0.289	0.417	0.567					
	Flow Rate	164	218	273	327	382					
	NC	37	47	54	60	65					
	Throw 150,100,50	11-16-27	15-22-31	18-24-34	22-27-38	24-29-41					
Length = 48 in./1200 mm Inlet = 6 in. [152]	Total Pressure		0.021	0.033	0.048	0.065	0.085	0.108	0.133	0.191	0.260
	Static Pressure		0.011	0.018	0.025	0.035	0.045	0.057	0.071	0.102	0.138
	Flow Rate		78	98	118	137	157	176	196	235	274
	NC		---	---	---	19	24	27	31	37	42
	Throw 150,100,50		2-3-10	2-5-12	3-7-15	5-9-16	6-10-18	7-11-19	8-12-20	10-15-22	12-16-23
Length = 48 in./1200 mm Inlet = 8 in. [203]	Total Pressure	0.024	0.042	0.066	0.095	0.129	0.168	0.213	0.263	0.379	0.515
	Static Pressure	0.018	0.032	0.050	0.072	0.098	0.128	0.162	0.201	0.289	0.393
	Flow Rate	105	140	175	209	244	279	314	349	419	489
	NC	---	15	22	28	33	38	41	45	51	55
	Throw 150,100,50	3-6-13	5-9-17	7-11-19	9-13-20	10-16-22	12-17-23	13-18-25	15-19-26	17-20-29	18-22-31
Length = 48 in./1200 mm Inlet = 10 in. [254]	Total Pressure	0.042	0.074	0.116	0.167	0.227	0.297	0.375	0.463		
	Static Pressure	0.036	0.064	0.100	0.144	0.196	0.257	0.325	0.401		
	Flow Rate	164	218	273	327	382	436	491	545		
	NC	18	27	34	40	45	49	53	56		
	Throw 150,100,50	7-10-18	9-14-21	12-16-23	14-18-25	16-19-27	17-21-29	18-22-31	19-23-33		
Length = 48 in./1200 mm Inlet = 12 in. [305]	Total Pressure	0.068	0.122	0.190	0.274	0.373	0.487	0.616			
	Static Pressure	0.063	0.112	0.174	0.251	0.342	0.447	0.565			
	Flow Rate	236	314	393	471	550	628	707			
	NC	28	37	44	50	55	59	63			
	Throw 150,100,50	10-15-22	13-18-25	16-20-28	18-22-30	19-23-33	20-25-35	22-26-37			
Length = 60 in./1500 mm Inlet = 6 in. [152]	Total Pressure		0.017	0.026	0.037	0.051	0.066	0.084	0.103	0.149	0.202
	Static Pressure		0.007	0.010	0.015	0.020	0.026	0.033	0.041	0.059	0.080
	Flow Rate		78	98	118	137	157	176	196	235	274
	NC		---	---	---	---	18	22	26	31	36
	Throw 150,100,50		1-2-8	2-4-10	2-5-12	3-7-12	4-8-13	5-9-14	6-10-15	8-12-16	9-12-18
Length = 60 in./1500 mm Inlet = 8 in. [203]	Total Pressure	0.018	0.032	0.050	0.072	0.098	0.128	0.163	0.201	0.289	0.393
	Static Pressure	0.012	0.022	0.035	0.050	0.068	0.089	0.112	0.138	0.199	0.271
	Flow Rate	105	140	175	209	244	279	314	349	419	489
	NC	---	---	17	23	28	32	36	39	45	50
	Throw 150,100,50	2-4-11	3-7-13	5-9-14	7-11-15	8-12-17	10-13-18	11-13-19	11-14-20	13-15-22	14-17-23
Length = 60 in./1500 mm Inlet = 10 in. [254]	Total Pressure	0.031	0.056	0.087	0.125	0.170	0.222	0.281	0.347	0.500	0.680
	Static Pressure	0.026	0.046	0.071	0.103	0.140	0.182	0.231	0.285	0.410	0.558
	Flow Rate	164	218	273	327	382	436	491	545	654	763
	NC	---	21	28	34	39	43	47	50	56	61
	Throw 150,100,50	4-8-14	7-11-16	9-12-18	11-14-19	12-15-21	13-16-22	14-17-23	14-18-25	16-19-27	17-21-29
Length = 60 in./1500 mm Inlet = 12 in. [305]	Total Pressure	0.050	0.090	0.140	0.201	0.274	0.358	0.453	0.560		
	Static Pressure	0.045	0.080	0.124	0.179	0.244	0.318	0.403	0.497		
	Flow Rate	236	314	393	471	550	628	707	785		
	NC	21	31	38	44	49	53	57	60		
	Throw 150,100,50	8-12-16	11-13-19	12-15-21	13-16-23	14-18-25	15-19-27	16-20-28	17-21-30		

Performance Notes:

1. Tested in accordance with ASHRAE Standard 70-2006 "Method of Testing for Rating the Performance of Air Outlets and Inlets."
2. Air flow is in cfm.
3. All pressures are in in. w.g.
4. Throw values are measured in feet for terminal velocities of 150 fpm (minimum), 100 fpm (middle) and 50 fpm (maximum).
5. Throw data is based on supply air and room air being at isothermal conditions.
6. NC values are based on room absorption of 10 dB re 10⁻¹² watts and one diffuser.
7. Blanks indicate NC less than 15.
8. Shaded area outside recommended operating range.
9. Does not include effects of ceiling radiation damper (TBD4-FR)

T-bar Diffusers TBD4 Series - Supply



Performance Data - 2 Slot

Model TBD4100 1 in. [25] Slot Width

Length = 24 in./600 mm Inlet = 6 in. [152]	Total Pressure	0.032	0.056	0.088	0.127	0.172	0.225	0.285	0.352	0.507	0.690
	Static Pressure	0.026	0.046	0.072	0.104	0.142	0.185	0.235	0.290	0.417	0.568
	Flow Rate	59	78	98	118	137	157	176	196	235	274
	NC	----	----	17	23	28	33	36	40	46	50
	Throw 150,100,50	2-4-11	3-7-14	5-9-18	7-11-22	8-13-24	10-14-26	11-16-28	12-18-29	14-22-32	17-24-35
Length = 24 in./600 mm Inlet = 8 in. [203]	Total Pressure	0.062	0.111	0.173	0.249	0.340	0.444	0.561	0.693		
	Static Pressure	0.057	0.101	0.158	0.227	0.309	0.404	0.511	0.631		
	Flow Rate	105	140	175	209	244	279	314	349		
	NC	----	24	31	37	42	46	50	53		
	Throw 150,100,50	5-10-19	9-13-25	11-16-28	13-19-30	15-22-33	17-25-35	19-26-37	21-28-39		
Length = 24 in./600 mm Inlet = 10 in. [254]	Total Pressure	0.109	0.194	0.304	0.437	0.595					
	Static Pressure	0.104	0.184	0.288	0.415	0.565					
	Flow Rate	164	218	273	327	382					
	NC	25	35	42	48	53					
	Throw 150,100,50	10-15-27	13-20-31	17-24-34	20-27-38	23-29-41					
Length = 48 in./1200 mm Inlet = 6 in. [152]	Total Pressure		0.026	0.041	0.059	0.080	0.105	0.133	0.164	0.236	0.321
	Static Pressure		0.016	0.025	0.037	0.050	0.065	0.082	0.102	0.146	0.199
	Flow Rate		78	98	118	137	157	176	196	235	274
	NC		----	----	----	----	17	21	25	30	35
	Throw 150,100,50		1-2-9	2-4-11	2-6-13	3-8-16	4-9-18	6-10-19	7-11-20	9-13-22	10-16-23
Length = 48 in./1200 mm Inlet = 8 in. [203]	Total Pressure	0.028	0.049	0.077	0.111	0.151	0.198	0.250	0.309	0.444	0.605
	Static Pressure	0.022	0.039	0.062	0.089	0.121	0.158	0.199	0.246	0.355	0.483
	Flow Rate	105	140	175	209	244	279	314	349	419	489
	NC	----	----	----	21	26	30	34	37	43	48
	Throw 150,100,50	2-4-12	3-8-16	5-10-19	8-12-20	9-14-22	11-16-23	12-18-25	13-19-26	16-20-29	18-22-31
Length = 48 in./1200 mm Inlet = 10 in. [254]	Total Pressure	0.046	0.082	0.129	0.185	0.252	0.330	0.417	0.515		
	Static Pressure	0.041	0.072	0.113	0.163	0.222	0.290	0.367	0.453		
	Flow Rate	164	218	273	327	382	436	491	545		
	NC	----	18	25	31	36	40	44	47		
	Throw 150,100,50	5-9-18	8-12-21	10-15-23	12-18-25	14-19-27	16-21-29	18-22-31	19-23-33		
Length = 48 in./1200 mm Inlet = 12 in. [305]	Total Pressure	0.072	0.128	0.200	0.288	0.392	0.512	0.648			
	Static Pressure	0.066	0.118	0.185	0.266	0.362	0.472	0.598			
	Flow Rate	236	314	393	471	550	628	707			
	NC	17	26	34	39	44	49	53			
	Throw 150,100,50	9-13-22	12-18-25	15-20-28	18-22-30	19-23-33	20-25-35	22-26-37			
Length = 60 in./1500 mm Inlet = 6 in. [152]	Total Pressure		0.021	0.032	0.047	0.063	0.083	0.105	0.129	0.186	0.253
	Static Pressure		0.011	0.017	0.024	0.033	0.043	0.054	0.067	0.096	0.131
	Flow Rate		78	98	118	137	157	176	196	235	274
	NC		----	----	----	----	----	17	20	26	31
	Throw 150,100,50		1-2-6	1-3-9	2-4-11	2-5-12	3-6-13	4-8-14	5-9-15	6-11-16	8-12-18
Length = 60 in./1500 mm Inlet = 8 in. [203]	Total Pressure	0.022	0.039	0.060	0.087	0.118	0.154	0.195	0.241	0.347	0.472
	Static Pressure	0.016	0.029	0.045	0.064	0.087	0.114	0.145	0.178	0.257	0.350
	Flow Rate	105	140	175	209	244	279	314	349	419	489
	NC	----	----	----	16	21	25	29	32	38	43
	Throw 150,100,50	1-3-10	2-5-13	4-8-14	5-10-15	7-11-17	8-13-18	10-13-19	11-14-20	13-15-22	14-17-23
Length = 60 in./1500 mm Inlet = 10 in. [254]	Total Pressure	0.036	0.064	0.099	0.143	0.195	0.254	0.322	0.397	0.572	
	Static Pressure	0.030	0.054	0.084	0.121	0.164	0.214	0.271	0.335	0.482	
	Flow Rate	164	218	273	327	382	436	491	545	654	
	NC	----	----	20	26	31	35	39	42	48	
	Throw 150,100,50	3-7-14	6-10-16	8-12-18	10-14-19	12-15-21	13-16-22	14-17-23	14-18-25	16-19-27	
Length = 60 in./1500 mm Inlet = 12 in. [305]	Total Pressure	0.055	0.098	0.152	0.220	0.299	0.390	0.494	0.610		
	Static Pressure	0.049	0.088	0.137	0.197	0.268	0.350	0.443	0.547		
	Flow Rate	236	314	393	471	550	628	707	785		
	NC	----	21	28	34	39	43	47	51		
	Throw 150,100,50	7-11-16	10-13-19	12-15-21	13-16-23	14-18-25	15-19-27	16-20-28	17-21-30		

Performance Notes:

1. Tested in accordance with ASHRAE Standard 70-2006 "Method of Testing for Rating the Performance of Air Outlets and Inlets."
2. Air flow is in cfm.
3. All pressures are in in. w.g.
4. Throw values are measured in feet for terminal velocities of 150 fpm (minimum), 100 fpm (middle) and 50 fpm (maximum).
5. Throw data is based on supply air and room air being at isothermal conditions.
6. NC values are based on room absorption of 10 dB re 10⁻¹² watts and one diffuser.
7. Blanks indicate NC less than 15.
8. Shaded area outside recommended operating range.
9. Does not include effects of ceiling radiation damper (TBD4-FR)

T-bar Diffusers TBD4 Series - Supply



Performance Data - 2 Slot

Model TBD4150 1-1/2 in. [38] Slot Width											
Length = 24 in./600 mm Inlet = 6 in. [152]	Total Pressure	0.020	0.036	0.056	0.081	0.110	0.143	0.181	0.224	0.323	0.439
	Static Pressure	0.015	0.026	0.040	0.058	0.079	0.103	0.131	0.162	0.233	0.317
	Flow Rate	59	78	98	118	137	157	176	196	235	274
	NC	----	----	----	----	19	24	27	31	37	42
	Throw 150,100,50	2-5-12	4-8-16	6-10-20	8-12-23	9-14-24	10-16-26	12-18-28	13-20-29	16-23-32	18-24-35
Length = 24 in./600 mm Inlet = 8 in. [203]	Total Pressure	0.039	0.069	0.107	0.154	0.210	0.274	0.347	0.428	0.617	
	Static Pressure	0.033	0.059	0.091	0.132	0.179	0.234	0.296	0.366	0.527	
	Flow Rate	105	140	175	209	244	279	314	349	419	
	NC	----	----	21	27	32	36	40	44	49	
	Throw 150,100,50	7-11-21	9-14-25	12-18-28	14-21-30	16-23-33	19-25-35	21-26-37	23-28-39	25-30-43	
Length = 24 in./600 mm Inlet = 10 in. [254]	Total Pressure	0.066	0.116	0.182	0.262	0.357	0.466	0.590			
	Static Pressure	0.060	0.106	0.166	0.240	0.326	0.426	0.539			
	Flow Rate	164	218	273	327	382	436	491			
	NC	15	25	32	38	43	47	51			
	Throw 150,100,50	11-16-27	15-22-31	18-24-34	22-27-38	24-29-41	25-31-44	27-33-46			
Length = 48 in./1200 mm Inlet = 6 in. [152]	Total Pressure		0.017	0.027	0.038	0.052	0.068	0.086	0.107	0.154	0.209
	Static Pressure		0.007	0.011	0.016	0.022	0.028	0.036	0.044	0.064	0.087
	Flow Rate		78	98	118	137	157	176	196	235	274
	NC		----	----	----	----	----	----	16	22	27
	Throw 150,100,50		1-1-6	1-2-9	1-3-11	2-5-13	3-6-15	3-7-17	4-9-19	6-11-22	8-13-23
Length = 48 in./1200 mm Inlet = 8 in. [203]	Total Pressure	0.018	0.032	0.049	0.071	0.097	0.126	0.160	0.197	0.284	0.387
	Static Pressure	0.012	0.022	0.034	0.049	0.066	0.086	0.109	0.135	0.194	0.265
	Flow Rate	105	140	175	209	244	279	314	349	419	489
	NC	----	----	----	----	17	21	25	28	34	39
	Throw 150,100,50	1-3-10	2-5-13	3-7-17	5-10-20	6-12-22	8-13-23	10-15-25	11-17-26	13-20-29	16-22-31
Length = 48 in./1200 mm Inlet = 10 in. [254]	Total Pressure	0.029	0.052	0.081	0.116	0.158	0.207	0.262	0.323	0.465	0.633
	Static Pressure	0.023	0.042	0.065	0.094	0.128	0.167	0.211	0.261	0.375	0.511
	Flow Rate	164	218	273	327	382	436	491	545	654	763
	NC	----	----	16	22	27	31	35	38	44	49
	Throw 150,100,50	3-6-16	5-10-21	8-13-23	10-16-25	12-18-27	14-21-29	16-22-31	17-23-33	21-25-36	22-27-39
Length = 48 in./1200 mm Inlet = 12 in. [305]	Total Pressure	0.044	0.079	0.123	0.177	0.241	0.314	0.398	0.491		
	Static Pressure	0.039	0.069	0.107	0.154	0.210	0.274	0.347	0.429		
	Flow Rate	236	314	393	471	550	628	707	785		
	NC	----	17	24	30	35	39	43	46		
	Throw 150,100,50	6-11-22	10-15-25	13-19-28	15-22-30	18-23-33	20-25-35	22-26-37	23-28-39		
Length = 60 in./1500 mm Inlet = 6 in. [152]	Total Pressure		0.014	0.021	0.030	0.041	0.054	0.068	0.084	0.122	0.166
	Static Pressure		0.004	0.006	0.008	0.011	0.014	0.018	0.022	0.032	0.043
	Flow Rate		78	98	118	137	157	176	196	235	274
	NC		----	----	----	----	----	----	----	17	22
	Throw 150,100,50		0-1-4	1-1-6	1-2-9	1-3-10	2-4-12	2-5-13	3-6-15	4-9-16	5-10-18
Length = 60 in./1500 mm Inlet = 8 in. [203]	Total Pressure	0.014	0.025	0.039	0.056	0.076	0.099	0.126	0.155	0.223	0.304
	Static Pressure	0.008	0.015	0.023	0.033	0.045	0.059	0.075	0.093	0.134	0.182
	Flow Rate	105	140	175	209	244	279	314	349	419	489
	NC	----	----	----	----	16	20	24	29	34	39
	Throw 150,100,50	1-2-7	1-3-11	2-5-13	3-7-15	4-9-17	5-11-18	7-12-19	8-13-20	11-15-22	12-17-23
Length = 60 in./1500 mm Inlet = 10 in. [254]	Total Pressure	0.023	0.040	0.063	0.091	0.123	0.161	0.204	0.252	0.363	0.493
	Static Pressure	0.017	0.030	0.047	0.068	0.093	0.121	0.153	0.189	0.273	0.371
	Flow Rate	164	218	273	327	382	436	491	545	654	763
	NC	----	----	----	17	22	26	30	33	39	44
	Throw 150,100,50	2-4-12	3-7-16	5-10-18	7-12-19	10-15-21	11-16-22	12-17-23	14-18-25	16-19-27	17-21-29
Length = 60 in./1500 mm Inlet = 12 in. [305]	Total Pressure	0.034	0.061	0.095	0.137	0.186	0.243	0.307	0.379	0.546	
	Static Pressure	0.029	0.051	0.079	0.114	0.155	0.203	0.257	0.317	0.456	
	Flow Rate	236	314	393	471	550	628	707	785	942	
	NC	----	----	19	25	30	34	38	41	47	
	Throw 150,100,50	4-9-16	7-12-19	10-15-21	12-16-23	14-18-25	15-19-27	16-20-28	17-21-30	19-23-33	

Performance Notes:

1. Tested in accordance with ASHRAE Standard 70-2006 "Method of Testing for Rating the Performance of Air Outlets and Inlets."
2. Air flow is in cfm.
3. All pressures are in in. w.g.
4. Throw values are measured in feet for terminal velocities of 150 fpm (minimum), 100 fpm (middle) and 50 fpm (maximum).
5. Throw data is based on supply air and room air being at isothermal conditions.
6. NC values are based on room absorption of 10 dB re 10⁻¹² watts and one diffuser.
7. Blanks indicate NC less than 15.
8. Shaded area outside recommended operating range.
9. Does not include effects of ceiling radiation damper (TBD4-FR)

T-bar Diffusers TBD4 Series - Supply



Performance Data - 3 Slot

Model TBD475 3/4 in. [19] Slot Width

Length = 24 in./600 mm Inlet = 6 in. [152]	Total Pressure	0.017	0.030	0.046	0.067	0.091	0.119	0.150	0.186	0.267	0.364
	Static Pressure	0.011	0.020	0.031	0.044	0.060	0.079	0.100	0.123	0.177	0.242
	Flow Rate	59	78	98	118	137	157	176	196	235	274
	NC	----	----	15	21	26	30	34	38	43	48
	Throw 150,100,50	2-3-10	3-6-14	4-9-17	6-10-21	8-12-24	9-14-26	10-15-28	11-17-29	14-21-32	16-24-35
Length = 24 in./600 mm Inlet = 8 in. [203]	Total Pressure	0.034	0.060	0.094	0.136	0.185	0.241	0.306	0.377	0.543	
	Static Pressure	0.028	0.050	0.079	0.113	0.154	0.202	0.255	0.315	0.454	
	Flow Rate	105	140	175	209	244	279	314	349	419	
	NC	----	23	30	36	41	45	49	52	58	
	Throw 150,100,50	5-9-18	8-12-25	10-15-28	12-18-30	14-21-33	16-25-35	18-26-37	20-28-39	25-30-43	
Length = 24 in./600 mm Inlet = 10 in. [254]	Total Pressure	0.061	0.109	0.171	0.246	0.335	0.437	0.553	0.683		
	Static Pressure	0.056	0.099	0.155	0.223	0.304	0.397	0.503	0.620		
	Flow Rate	164	218	273	327	382	436	491	545		
	NC	25	35	42	48	53	57	61	64		
	Throw 150,100,50	10-14-27	13-19-31	16-24-34	19-27-38	22-29-41	25-31-44	27-33-46	28-34-49		
Length = 48 in./1200 mm Inlet = 6 in. [152]	Total Pressure		0.013	0.021	0.030	0.041	0.054	0.068	0.084	0.121	0.165
	Static Pressure		0.004	0.006	0.008	0.011	0.014	0.018	0.022	0.032	0.043
	Flow Rate		78	98	118	137	157	176	196	235	274
	NC		----	----	----	----	----	18	21	27	32
	Throw 150,100,50		1-2-8	1-3-11	2-5-13	3-7-15	4-8-17	5-10-19	6-11-20	8-13-22	10-15-23
Length = 48 in./1200 mm Inlet = 8 in. [203]	Total Pressure		0.026	0.040	0.058	0.079	0.104	0.131	0.162	0.233	0.317
	Static Pressure		0.016	0.025	0.036	0.049	0.064	0.081	0.100	0.143	0.195
	Flow Rate		140	175	209	244	279	314	349	419	489
	NC		----	----	18	23	28	31	34	39	46
	Throw 150,100,50		3-7-15	5-9-19	7-11-20	9-13-22	10-15-23	11-17-25	13-19-26	15-20-29	18-22-31
Length = 48 in./1200 mm Inlet = 10 in. [254]	Total Pressure	0.025	0.044	0.069	0.099	0.135	0.177	0.224	0.276	0.398	0.542
	Static Pressure	0.019	0.034	0.053	0.077	0.105	0.137	0.173	0.214	0.308	0.419
	Flow Rate	164	218	273	327	382	436	491	545	654	763
	NC	----	16	23	29	34	39	42	46	52	56
	Throw 150,100,50	4-9-18	7-12-21	10-15-23	12-18-25	14-19-27	16-21-29	18-22-31	19-23-33	21-25-36	22-27-39
Length = 48 in./1200 mm Inlet = 12 in. [305]	Total Pressure	0.040	0.070	0.110	0.158	0.215	0.281	0.356	0.439	0.633	
	Static Pressure	0.034	0.060	0.094	0.136	0.185	0.241	0.305	0.377	0.543	
	Flow Rate	236	314	393	471	550	628	707	785	942	
	NC	16	26	33	39	44	48	52	55	61	
	Throw 150,100,50	8-13-22	11-17-25	14-20-28	17-22-30	19-23-33	20-25-35	22-26-37	23-28-39	25-30-43	
Length = 60 in./1500 mm Inlet = 6 in. [152]	Total Pressure		0.011	0.017	0.024	0.032	0.042	0.054	0.066	0.095	0.130
	Static Pressure		0.001	0.001	0.001	0.002	0.002	0.003	0.004	0.005	0.007
	Flow Rate		78	98	118	137	157	176	196	235	274
	NC		----	----	----	----	----	----	17	22	27
	Throw 150,100,50		1-1-6	1-2-8	1-3-10	2-4-12	2-6-13	3-7-14	4-8-15	6-10-16	8-12-18
Length = 60 in./1500 mm Inlet = 8 in. [203]	Total Pressure		0.020	0.031	0.045	0.061	0.080	0.101	0.125	0.180	0.246
	Static Pressure		0.010	0.016	0.023	0.031	0.040	0.051	0.063	0.091	0.123
	Flow Rate		140	175	209	244	279	314	349	419	489
	NC		----	----	----	18	22	26	30	35	40
	Throw 150,100,50		2-4-12	3-7-14	4-9-15	6-11-17	8-12-18	9-13-19	10-14-20	12-15-22	14-17-23
Length = 60 in./1500 mm Inlet = 10 in. [254]	Total Pressure	0.019	0.034	0.053	0.076	0.103	0.135	0.171	0.211	0.303	0.413
	Static Pressure	0.013	0.024	0.037	0.053	0.073	0.095	0.120	0.148	0.214	0.291
	Flow Rate	164	218	273	327	382	436	491	545	654	763
	NC	----	18	24	29	33	37	40	46	51	
	Throw 150,100,50	3-6-14	5-9-16	7-12-18	9-14-19	11-15-21	13-16-22	14-17-23	14-18-25	16-19-27	17-21-29
Length = 60 in./1500 mm Inlet = 12 in. [305]	Total Pressure	0.030	0.053	0.082	0.119	0.162	0.211	0.267	0.330	0.475	0.646
	Static Pressure	0.024	0.043	0.067	0.096	0.131	0.171	0.217	0.267	0.385	0.524
	Flow Rate	236	314	393	471	550	628	707	785	942	1099
	NC	----	20	27	33	38	42	46	49	55	60
	Throw 150,100,50	6-10-16	9-13-19	11-15-21	13-16-23	14-18-25	15-19-27	16-20-28	17-21-30	19-23-33	20-25-35

Performance Notes:

1. Tested in accordance with ASHRAE Standard 70-2006 "Method of Testing for Rating the Performance of Air Outlets and Inlets."
2. Air flow is in cfm.
3. All pressures are in in. w.g.
4. Throw values are measured in feet for terminal velocities of 150 fpm (minimum), 100 fpm (middle) and 50 fpm (maximum).
5. Throw data is based on supply air and room air being at isothermal conditions.
6. NC values are based on room absorption of 10 dB re 10⁻¹² watts and one diffuser.
7. Blanks indicate NC less than 15.
8. Shaded area outside recommended operating range.
9. Does not include effects of ceiling radiation damper (TBD4-FR)

T-bar Diffusers TBD4 Series - Supply



Performance Data - 3 Slot

Model TBD4100 1 in. [25] Slot Width											
Length = 24 in./600 mm Inlet = 6 in. [152]	Total Pressure	0.017	0.029	0.046	0.066	0.090	0.117	0.149	0.183	0.264	0.360
	Static Pressure	0.011	0.019	0.030	0.044	0.059	0.077	0.098	0.121	0.174	0.237
	Flow Rate	59	78	98	118	137	157	176	196	235	274
	NC	----	----	----	----	19	23	27	30	36	41
	Throw 150,100,50	1-2-9	2-4-12	3-7-15	4-9-19	6-11-22	8-12-25	9-14-28	10-15-29	12-19-32	14-22-35
Length = 24 in./600 mm Inlet = 8 in. [203]	Total Pressure	0.028	0.049	0.077	0.111	0.151	0.197	0.250	0.308	0.444	0.604
	Static Pressure	0.022	0.039	0.062	0.089	0.121	0.157	0.199	0.246	0.354	0.482
	Flow Rate	105	140	175	209	244	279	314	349	419	489
	NC	----	----	16	22	27	31	35	38	44	49
	Throw 150,100,50	3-8-17	6-11-22	9-14-28	11-17-30	13-19-33	15-22-35	17-25-37	18-28-39	22-30-43	26-33-46
Length = 24 in./600 mm Inlet = 10 in. [254]	Total Pressure	0.042	0.075	0.117	0.169	0.230	0.300	0.379	0.468	0.675	
	Static Pressure	0.037	0.065	0.102	0.146	0.199	0.260	0.329	0.406	0.585	
	Flow Rate	164	218	273	327	382	436	491	545	654	
	NC	----	----	22	28	33	37	41	44	50	
	Throw 150,100,50	8-13-26	11-17-31	14-21-34	17-26-38	20-29-41	23-31-44	26-33-46	28-34-49	31-38-53	
Length = 48 in./1200 mm Inlet = 6 in. [152]	Total Pressure		0.017	0.026	0.037	0.051	0.066	0.084	0.103	0.149	0.203
	Static Pressure		0.007	0.010	0.015	0.020	0.026	0.033	0.041	0.059	0.080
	Flow Rate		78	98	118	137	157	176	196	235	274
	NC		----	----	----	----	----	18	21	27	32
	Throw 150,100,50		1-1-6	1-2-9	1-3-11	2-5-13	3-6-15	3-7-17	4-9-19	6-11-22	8-13-23
Length = 48 in./1200 mm Inlet = 8 in. [203]	Total Pressure		0.027	0.041	0.060	0.081	0.106	0.134	0.166	0.239	0.325
	Static Pressure		0.017	0.026	0.037	0.051	0.066	0.084	0.104	0.149	0.203
	Flow Rate		140	175	209	244	279	314	349	419	489
	NC		----	----	----	17	21	25	29	34	39
	Throw 150,100,50		2-5-13	3-7-17	5-10-20	6-12-22	8-13-23	10-15-25	11-17-26	13-20-29	16-22-31
Length = 48 in./1200 mm Inlet = 10 in. [254]	Total Pressure	0.022	0.039	0.061	0.089	0.120	0.157	0.199	0.246	0.354	0.482
	Static Pressure	0.017	0.029	0.046	0.066	0.090	0.117	0.149	0.184	0.264	0.360
	Flow Rate	164	218	273	327	382	436	491	545	654	763
	NC	----	----	----	18	23	27	31	35	40	45
	Throw 150,100,50	3-6-16	5-10-21	8-13-23	10-16-25	12-18-27	14-21-29	16-22-31	17-23-33	21-25-36	22-27-39
Length = 48 in./1200 mm Inlet = 12 in. [305]	Total Pressure	0.031	0.055	0.086	0.124	0.169	0.220	0.279	0.344	0.495	0.674
	Static Pressure	0.025	0.045	0.070	0.101	0.138	0.180	0.228	0.282	0.405	0.552
	Flow Rate	236	314	393	471	550	628	707	785	942	1099
	NC	----	----	17	23	28	32	36	40	45	50
	Throw 150,100,50	9-13-22	12-18-25	15-20-28	18-22-30	19-23-33	20-25-35	22-26-37	23-28-39	25-30-43	27-33-47
Length = 60 in./1500 mm Inlet = 6 in. [152]	Total Pressure		0.014	0.022	0.031	0.043	0.056	0.071	0.087	0.126	0.171
	Static Pressure		0.004	0.006	0.009	0.012	0.016	0.020	0.025	0.036	0.049
	Flow Rate		78	98	118	137	157	176	196	235	274
	NC		----	----	----	----	----	15	19	25	30
	Throw 150,100,50		0-1-4	1-1-6	1-2-9	1-3-10	2-4-12	2-5-13	3-6-15	4-9-16	5-10-18
Length = 60 in./1500 mm Inlet = 8 in. [203]	Total Pressure		0.022	0.034	0.049	0.067	0.088	0.111	0.137	0.198	0.269
	Static Pressure		0.012	0.019	0.027	0.037	0.048	0.061	0.075	0.108	0.147
	Flow Rate		140	175	209	244	279	314	349	419	489
	NC		----	----	----	----	18	22	26	32	36
	Throw 150,100,50		1-3-11	2-5-13	3-7-15	4-9-17	5-11-18	7-12-19	8-13-20	11-15-22	12-17-23
Length = 60 in./1500 mm Inlet = 10 in. [254]	Total Pressure	0.018	0.032	0.050	0.073	0.099	0.129	0.163	0.201	0.290	0.395
	Static Pressure	0.013	0.022	0.035	0.050	0.068	0.089	0.113	0.139	0.200	0.273
	Flow Rate	164	218	273	327	382	436	491	545	654	763
	NC	----	----	----	15	20	24	28	31	37	42
	Throw 150,100,50	2-4-12	3-7-16	5-10-18	7-12-19	10-15-21	11-16-22	12-17-23	14-18-25	16-19-27	17-21-29
Length = 60 in./1500 mm Inlet = 12 in. [305]	Total Pressure	0.025	0.045	0.070	0.101	0.137	0.179	0.227	0.280	0.403	0.548
	Static Pressure	0.020	0.035	0.054	0.078	0.107	0.139	0.176	0.217	0.313	0.426
	Flow Rate	236	314	393	471	550	628	707	785	942	1099
	NC	----	----	----	20	25	29	33	36	42	47
	Throw 150,100,50	4-9-16	7-12-19	10-15-21	12-16-23	14-18-25	15-19-27	16-20-28	17-21-30	19-23-33	20-25-35

Performance Notes:

1. Tested in accordance with ASHRAE Standard 70-2006 "Method of Testing for Rating the Performance of Air Outlets and Inlets."
2. Air flow is in cfm.
3. All pressures are in in. w.g.
4. Throw values are measured in feet for terminal velocities of 150 fpm (minimum), 100 fpm (middle) and 50 fpm (maximum).
5. Throw data is based on supply air and room air being at isothermal conditions.
6. NC values are based on room absorption of 10 dB re 10⁻¹² watts and one diffuser.
7. Blanks indicate NC less than 15.
8. Shaded area outside recommended operating range.
9. Does not include effects of ceiling radiation damper (TBD4-FR)

T-bar Diffusers TBD4 Series - Supply



Performance Data - 3 Slot

Model TBD4150 1-1/2 in. [38] Slot Width											
Length = 24 in./600 mm Inlet = 6 in. [152]	Total Pressure	0.012	0.021	0.033	0.047	0.064	0.083	0.105	0.130	0.187	0.255
	Static Pressure	0.006	0.011	0.017	0.024	0.033	0.043	0.055	0.068	0.098	0.133
	Flow Rate	59	78	98	118	137	157	176	196	235	274
	NC	----	----	----	----	----	18	21	25	31	36
	Throw 150,100,50	1-2-6	1-3-11	2-4-13	3-6-16	4-8-18	5-11-21	6-12-24	7-13-26	11-16-32	12-18-35
Length = 24 in./600 mm Inlet = 8 in. [203]	Total Pressure	0.019	0.034	0.053	0.077	0.105	0.137	0.173	0.213	0.307	0.418
	Static Pressure	0.014	0.024	0.038	0.054	0.074	0.097	0.122	0.151	0.217	0.296
	Flow Rate	105	140	175	209	244	279	314	349	419	489
	NC	----	----	----	16	21	25	29	32	38	43
	Throw 150,100,50	2-5-14	4-9-19	6-12-23	9-14-28	11-16-33	12-19-35	14-21-37	16-23-39	19-28-43	22-33-46
Length = 24 in./600 mm Inlet = 10 in. [254]	Total Pressure	0.029	0.051	0.080	0.115	0.157	0.205	0.259	0.320	0.461	0.627
	Static Pressure	0.023	0.041	0.064	0.093	0.126	0.165	0.209	0.258	0.371	0.505
	Flow Rate	164	218	273	327	382	436	491	545	654	763
	NC	----	----	16	22	27	31	35	39	44	49
	Throw 150,100,50	5-11-22	9-15-29	12-18-34	15-22-38	17-26-41	19-29-44	22-33-46	24-34-49	29-38-53	33-41-58
Length = 48 in./1200 mm Inlet = 6 in. [152]	Total Pressure		0.012	0.019	0.028	0.038	0.049	0.062	0.077	0.110	0.150
	Static Pressure		0.002	0.004	0.005	0.007	0.009	0.012	0.014	0.021	0.028
	Flow Rate		78	98	118	137	157	176	196	235	274
	NC		----	----	----	----	----	----	17	23	28
	Throw 150,100,50		0-1-3	1-1-5	1-2-8	1-3-11	2-3-13	2-4-14	2-5-16	3-8-19	5-11-22
Length = 48 in./1200 mm Inlet = 8 in. [203]	Total Pressure		0.019	0.030	0.043	0.058	0.076	0.096	0.118	0.170	0.232
	Static Pressure		0.009	0.014	0.020	0.027	0.036	0.045	0.056	0.081	0.110
	Flow Rate		140	175	209	244	279	314	349	419	489
	NC		----	----	----	16	20	24	29	29	34
	Throw 150,100,50		1-3-11	2-4-14	3-6-17	4-8-20	5-11-22	6-13-25	8-14-26	11-17-29	13-20-31
Length = 48 in./1200 mm Inlet = 10 in. [254]	Total Pressure	0.015	0.027	0.043	0.062	0.084	0.110	0.139	0.172	0.247	0.337
	Static Pressure	0.010	0.018	0.027	0.039	0.054	0.070	0.089	0.109	0.158	0.214
	Flow Rate	164	218	273	327	382	436	491	545	654	763
	NC	----	----	----	----	18	22	26	29	35	40
	Throw 150,100,50	2-4-13	3-7-17	5-10-22	7-13-25	9-15-27	12-17-29	13-20-31	15-22-33	17-25-36	20-27-39
Length = 48 in./1200 mm Inlet = 12 in. [305]	Total Pressure	0.021	0.038	0.059	0.085	0.116	0.152	0.192	0.237	0.341	0.465
	Static Pressure	0.016	0.028	0.044	0.063	0.086	0.112	0.142	0.175	0.252	0.342
	Flow Rate	236	314	393	471	550	628	707	785	942	1099
	NC	----	----	----	18	23	27	31	34	40	45
	Throw 150,100,50	3-8-19	6-13-25	10-16-28	13-19-30	15-22-33	17-25-35	19-26-37	21-28-39	25-30-43	27-33-47
Length = 60 in./1500 mm Inlet = 6 in. [152]	Total Pressure		0.011	0.017	0.024	0.032	0.042	0.053	0.066	0.095	0.129
	Static Pressure		0.001	0.001	0.001	0.002	0.002	0.003	0.004	0.005	0.007
	Flow Rate		78	98	118	137	157	176	196	235	274
	NC		----	----	----	----	----	----	----	20	25
	Throw 150,100,50		0-1-2	0-1-3	1-1-5	1-2-7	1-2-9	1-3-11	2-3-12	2-5-15	3-7-17
Length = 60 in./1500 mm Inlet = 8 in. [203]	Total Pressure		0.016	0.025	0.036	0.049	0.064	0.080	0.099	0.143	0.195
	Static Pressure		0.006	0.009	0.013	0.018	0.024	0.030	0.037	0.053	0.073
	Flow Rate		140	175	209	244	279	314	349	419	489
	NC		----	----	----	----	17	21	24	29	32
	Throw 150,100,50		1-2-7	1-3-11	2-4-13	2-5-15	3-7-18	4-9-19	5-11-20	7-13-22	9-15-23
Length = 60 in./1500 mm Inlet = 10 in. [254]	Total Pressure	0.013	0.023	0.036	0.051	0.070	0.091	0.115	0.142	0.205	0.278
	Static Pressure	0.007	0.013	0.020	0.029	0.039	0.051	0.065	0.080	0.115	0.156
	Flow Rate	164	218	273	327	382	436	491	545	654	763
	NC	----	----	----	----	----	19	23	26	32	37
	Throw 150,100,50	1-2-10	2-4-14	3-7-17	4-10-19	6-12-21	8-14-22	10-16-23	12-17-25	14-19-27	16-21-29
Length = 60 in./1500 mm Inlet = 12 in. [305]	Total Pressure	0.017	0.031	0.049	0.070	0.095	0.124	0.157	0.194	0.280	0.381
	Static Pressure	0.012	0.021	0.033	0.048	0.065	0.084	0.107	0.132	0.190	0.259
	Flow Rate	236	314	393	471	550	628	707	785	942	1099
	NC	----	----	----	----	19	24	28	31	37	42
	Throw 150,100,50	2-5-15	4-9-19	6-12-21	9-15-23	12-17-25	13-19-27	15-20-28	17-21-30	19-23-33	20-25-35

Performance Notes:

1. Tested in accordance with ASHRAE Standard 70-2006 "Method of Testing for Rating the Performance of Air Outlets and Inlets."
2. Air flow is in cfm.
3. All pressures are in in. w.g.
4. Throw values are measured in feet for terminal velocities of 150 fpm (minimum), 100 fpm (middle) and 50 fpm (maximum).
5. Throw data is based on supply air and room air being at isothermal conditions.
6. NC values are based on room absorption of 10 dB re 10⁻¹² watts and one diffuser.
7. Blanks indicate NC less than 15.
8. Shaded area outside recommended operating range.
9. Does not include effects of ceiling radiation damper (TBD4-FR)

T-bar Diffusers TBD4 Series - Supply



Performance Data - 4 Slot

Model TBDA75 3/4 in. [19] Slot Width										
Length = 24 in./600 mm Inlet = 6 in. [152]	Total Pressure	0.021	0.033	0.048	0.065	0.085	0.108	0.133	0.191	0.260
	Static Pressure	0.011	0.018	0.025	0.035	0.045	0.057	0.071	0.102	0.138
	Flow Rate	78	98	118	137	157	176	196	235	274
	NC	--	--	--	19	24	27	31	37	42
	Throw 150,100,50	2-4-12	3-7-15	4-9-19	6-11-22	8-12-25	9-14-28	10-15-29	12-19-32	14-22-35
Length = 24 in./600 mm Inlet = 8 in. [203]	Total Pressure	0.042	0.066	0.095	0.129	0.168	0.213	0.263	0.379	0.515
	Static Pressure	0.032	0.050	0.072	0.098	0.128	0.162	0.201	0.289	0.393
	Flow Rate	140	175	209	244	279	314	349	419	489
	NC	15	22	28	33	38	41	45	51	55
	Throw 150,100,50	6-11-22	9-14-28	11-17-30	13-19-33	15-22-35	17-25-37	18-28-39	22-30-43	26-33-46
Length = 24 in./600 mm Inlet = 10 in. [254]	Total Pressure	0.074	0.116	0.167	0.227	0.297	0.375	0.463	0.667	
	Static Pressure	0.064	0.100	0.144	0.196	0.257	0.325	0.401	0.577	
	Flow Rate	218	273	327	382	436	491	545	654	
	NC	27	34	40	45	49	53	56	62	
	Throw 150,100,50	11-17-31	14-21-34	17-26-38	20-29-41	23-31-44	26-33-46	28-34-49	31-38-53	
Length = 48 in./1200 mm Inlet = 8 in. [203]	Total Pressure	0.019	0.029	0.042	0.057	0.075	0.094	0.116	0.168	0.228
	Static Pressure	0.009	0.014	0.019	0.027	0.035	0.044	0.054	0.078	0.106
	Flow Rate	140	175	209	244	279	314	349	419	489
	NC	--	--	--	17	21	25	28	34	39
	Throw 150,100,50	2-5-13	3-7-17	5-10-20	6-12-22	8-13-23	10-15-25	11-17-26	13-20-29	16-22-31
Length = 48 in./1200 mm Inlet = 10 in. [254]	Total Pressure	0.031	0.049	0.070	0.096	0.125	0.158	0.195	0.281	0.382
	Static Pressure	0.021	0.033	0.048	0.065	0.085	0.107	0.133	0.191	0.260
	Flow Rate	218	273	327	382	436	491	545	654	763
	NC	--	16	22	27	31	35	39	44	49
	Throw 150,100,50	5-10-21	8-13-23	10-16-25	12-18-27	14-21-29	16-22-31	17-23-33	21-25-36	22-27-39
Length = 48 in./1200 mm Inlet = 12 in. [305]	Total Pressure	0.049	0.076	0.109	0.149	0.195	0.246	0.304	0.438	0.596
	Static Pressure	0.039	0.060	0.087	0.118	0.155	0.196	0.242	0.348	0.474
	Flow Rate	314	393	471	550	628	707	785	942	1099
	NC	18	25	31	36	40	44	48	54	58
	Throw 150,100,50	10-15-25	13-19-28	15-22-30	18-23-33	20-25-35	22-26-37	23-28-39	25-30-43	27-33-47
Length = 60 in./1500mm Inlet = 8 in. [203]	Total Pressure	0.015	0.023	0.033	0.044	0.058	0.074	0.091	0.131	0.178
	Static Pressure	0.005	0.007	0.010	0.014	0.018	0.023	0.028	0.041	0.056
	Flow Rate	140	175	209	244	279	314	349	419	489
	NC	--	--	--	--	16	20	23	29	34
	Throw 150,100,50	1-3-11	2-5-13	3-7-15	4-9-17	5-11-18	7-12-19	8-13-20	11-15-22	12-17-23
Length = 60 in./1500 mm Inlet = 10 in. [254]	Total Pressure	0.024	0.038	0.054	0.074	0.096	0.122	0.150	0.216	0.294
	Static Pressure	0.014	0.022	0.032	0.043	0.056	0.071	0.088	0.126	0.172
	Flow Rate	218	273	327	382	436	491	545	654	763
	NC	--	--	17	22	26	30	33	39	44
	Throw 150,100,50	3-7-16	5-10-18	7-12-19	10-15-21	11-16-22	12-17-23	14-18-25	16-19-27	17-21-29
Length = 60 in./1500 mm Inlet = 12 in. [305]	Total Pressure	0.037	0.058	0.083	0.113	0.148	0.187	0.231	0.333	0.453
	Static Pressure	0.027	0.042	0.061	0.083	0.108	0.137	0.169	0.243	0.331
	Flow Rate	314	393	471	550	628	707	785	942	1099
	NC	--	20	26	31	35	39	42	48	53
	Throw 150,100,50	7-12-19	10-15-21	12-16-23	14-18-25	15-19-27	16-20-28	17-21-30	19-23-33	20-25-35

Performance Notes:

1. Tested in accordance with ASHRAE Standard 70-2006 "Method of Testing for Rating the Performance of Air Outlets and Inlets."
2. Air flow is in cfm.
3. All pressures are in in. w.g.
4. Throw values are measured in feet for terminal velocities of 150 fpm (minimum), 100 fpm (middle) and 50 fpm (maximum).
5. Throw data is based on supply air and room air being at isothermal conditions.
6. NC values are based on room absorption of 10 dB re 10⁻¹² watts and one diffuser.
7. Blanks indicate NC less than 15.
8. Shaded area outside recommended operating range.
9. Does not include effects of ceiling radiation damper (TBD4-FR)

T-bar Diffusers TBD4 Series - Supply



Performance Data - 4 Slot

Model TBD4100 1 in. [25] Slot Width

Length = 24 in./600 mm Inlet = 6 in. [152]	Total Pressure	0.023	0.036	0.052	0.070	0.092	0.116	0.143	0.207	0.281
	Static Pressure	0.013	0.020	0.029	0.040	0.052	0.066	0.081	0.117	0.159
	Flow Rate	78	98	118	137	157	176	196	235	274
	NC	----	----	----	----	19	23	26	32	37
	Throw 150,100,50	1-3-11	2-5-14	3-7-17	4-10-19	6-11-22	7-12-25	9-14-28	11-17-32	13-19-35
Length = 24 in./600 mm Inlet = 8 in. [203]	Total Pressure	0.038	0.059	0.085	0.116	0.152	0.192	0.237	0.341	0.465
	Static Pressure	0.028	0.044	0.063	0.086	0.112	0.142	0.175	0.252	0.343
	Flow Rate	140	175	209	244	279	314	349	419	489
	NC	----	----	18	23	27	31	34	40	45
	Throw 150,100,50	4-10-20	7-12-25	10-15-29	11-17-33	13-20-35	15-22-37	16-25-39	20-29-43	23-33-46
Length = 24 in./600 mm Inlet = 10 in. [254]	Total Pressure	0.057	0.089	0.129	0.175	0.229	0.289	0.357	0.514	
	Static Pressure	0.047	0.074	0.106	0.144	0.189	0.239	0.295	0.425	
	Flow Rate	218	273	327	382	436	491	545	654	
	NC	----	18	24	29	33	37	40	46	
	Throw 150,100,50	10-15-31	13-19-34	15-23-38	18-27-41	20-31-44	23-33-46	26-34-49	31-38-53	
Length = 48 in./1200 mm Inlet = 8 in. [203]	Total Pressure	0.021	0.033	0.047	0.064	0.083	0.105	0.130	0.188	0.255
	Static Pressure	0.011	0.017	0.024	0.033	0.043	0.055	0.068	0.098	0.133
	Flow Rate	140	175	209	244	279	314	349	419	489
	NC	----	----	----	----	18	21	25	31	36
	Throw 150,100,50	1-3-12	2-5-15	3-7-18	4-10-21	6-12-23	7-13-25	9-15-26	12-18-29	14-21-31
Length = 48 in./1200 mm Inlet = 10 in. [254]	Total Pressure	0.030	0.048	0.068	0.093	0.122	0.154	0.190	0.274	0.373
	Static Pressure	0.020	0.032	0.046	0.063	0.082	0.104	0.128	0.184	0.251
	Flow Rate	218	273	327	382	436	491	545	654	763
	NC	----	----	----	19	23	27	31	36	41
	Throw 150,100,50	3-8-18	5-11-23	8-14-25	11-16-27	12-18-29	14-21-31	15-23-33	18-25-36	21-27-39
Length = 48 in./1200 mm Inlet = 12 in. [305]	Total Pressure	0.042	0.066	0.095	0.129	0.169	0.214	0.264	0.380	0.517
	Static Pressure	0.032	0.050	0.073	0.099	0.129	0.163	0.201	0.290	0.395
	Flow Rate	314	393	471	550	628	707	785	942	1099
	NC	----	----	19	24	28	32	36	41	46
	Throw 150,100,50	7-13-25	11-17-28	13-20-30	15-23-33	18-25-35	20-26-37	22-28-39	25-30-43	27-33-47
Length = 60 in./1500 mm Inlet = 8 in. [203]	Total Pressure	0.017	0.027	0.039	0.053	0.070	0.088	0.109	0.157	0.213
	Static Pressure	0.007	0.012	0.017	0.023	0.030	0.038	0.047	0.067	0.091
	Flow Rate	140	175	209	244	279	314	349	419	489
	NC	----	----	----	----	----	19	22	28	33
	Throw 150,100,50	1-2-8	1-3-12	2-5-14	3-6-16	4-8-18	5-10-19	6-12-20	8-14-22	11-16-23
Length = 60 in./1500 mm Inlet = 10 in. [254]	Total Pressure	0.025	0.039	0.056	0.077	0.100	0.127	0.157	0.226	0.307
	Static Pressure	0.015	0.024	0.034	0.046	0.061	0.077	0.095	0.136	0.185
	Flow Rate	218	273	327	382	436	491	545	654	763
	NC	----	----	----	16	21	24	28	34	38
	Throw 150,100,50	2-5-15	3-8-18	5-11-19	7-13-21	9-15-22	11-16-23	12-18-25	15-19-27	17-21-29
Length = 60 in./1500 mm Inlet = 12 in. [305]	Total Pressure	0.035	0.054	0.078	0.106	0.138	0.175	0.216	0.311	0.423
	Static Pressure	0.025	0.038	0.055	0.075	0.098	0.124	0.153	0.221	0.301
	Flow Rate	314	393	471	550	628	707	785	942	1099
	NC	----	----	16	21	25	29	33	38	43
	Throw 150,100,50	5-10-19	7-13-21	10-16-23	12-18-25	14-19-27	16-20-28	17-21-30	19-23-33	20-25-35

Performance Notes:

1. Tested in accordance with ASHRAE Standard 70-2006 "Method of Testing for Rating the Performance of Air Outlets and Inlets."
2. Air flow is in cfm.
3. All pressures are in in. w.g.
4. Throw values are measured in feet for terminal velocities of 150 fpm (minimum), 100 fpm (middle) and 50 fpm (maximum).
5. Throw data is based on supply air and room air being at isothermal conditions.
6. NC values are based on room absorption of 10 dB re 10⁻¹² watts and one diffuser.
7. Blanks indicate NC less than 15.
8. Shaded area outside recommended operating range.
9. Does not include effects of ceiling radiation damper (TBD4-FR)

T-bar Diffusers TBD4 Series - Supply



Performance Data - 4 Slot

Model TBD4150 1-1/2 in. [38] Slot Width										
Length = 24 in./600 mm Inlet = 6 in. [152]	Total Pressure	0.017	0.026	0.037	0.051	0.066	0.084	0.103	0.149	0.203
	Static Pressure	0.007	0.010	0.015	0.020	0.026	0.033	0.041	0.059	0.080
	Flow Rate	78	98	118	137	157	176	196	235	274
	NC	----	----	----	----	----	18	21	27	32
	Throw 150,100,50	1-2-7	1-3-12	2-4-14	3-6-16	3-7-19	4-9-21	5-12-23	7-14-28	10-16-33
Length = 24 in./600 mm Inlet = 8 in. [203]	Total Pressure	0.027	0.041	0.060	0.081	0.106	0.134	0.166	0.239	0.325
	Static Pressure	0.017	0.026	0.037	0.051	0.066	0.084	0.104	0.149	0.203
	Flow Rate	140	175	209	244	279	314	349	419	489
	NC	----	----	----	17	21	25	29	34	39
	Throw 150,100,50	3-6-17	4-9-21	6-12-25	8-14-29	11-17-33	12-19-37	14-21-39	17-25-43	19-29-46
Length = 24 in./600 mm Inlet = 10 in. [254]	Total Pressure	0.039	0.061	0.089	0.120	0.157	0.199	0.246	0.354	0.482
	Static Pressure	0.029	0.046	0.066	0.090	0.117	0.149	0.184	0.264	0.360
	Flow Rate	218	273	327	382	436	491	545	654	763
	NC	----	----	18	23	27	31	35	40	45
	Throw 150,100,50	6-13-26	10-16-32	13-19-38	15-23-41	17-26-44	19-29-46	22-32-49	26-38-53	30-41-58
Length = 48 in./1200 mm Inlet = 8 in. [203]	Total Pressure	0.015	0.024	0.034	0.046	0.061	0.077	0.095	0.136	0.185
	Static Pressure	0.005	0.008	0.012	0.016	0.021	0.026	0.032	0.046	0.063
	Flow Rate	140	175	209	244	279	314	349	419	489
	NC	----	----	----	----	----	17	20	26	31
	Throw 150,100,50	1-2-7	1-3-11	2-4-15	2-6-17	3-7-20	4-9-22	5-11-24	7-15-29	10-17-31
Length = 48 in./1200 mm Inlet = 10 in. [254]	Total Pressure	0.022	0.034	0.048	0.066	0.086	0.109	0.135	0.194	0.264
	Static Pressure	0.012	0.018	0.026	0.035	0.046	0.059	0.072	0.104	0.142
	Flow Rate	218	273	327	382	436	491	545	654	763
	NC	----	----	----	18	22	25	31	36	41
	Throw 150,100,50	2-4-15	3-7-19	4-10-23	6-13-27	8-15-29	10-17-31	12-19-33	15-23-36	18-27-39
Length = 48 in./1200 mm Inlet = 12 in. [305]	Total Pressure	0.029	0.046	0.066	0.090	0.118	0.149	0.184	0.264	0.360
	Static Pressure	0.019	0.030	0.044	0.059	0.078	0.098	0.121	0.175	0.238
	Flow Rate	314	393	471	550	628	707	785	942	1099
	NC	----	----	----	19	23	27	30	36	41
	Throw 150,100,50	4-9-22	6-14-27	9-16-30	13-19-33	15-22-35	16-25-37	18-27-39	22-30-43	26-33-47
Length = 60 in./1500 mm Inlet = 8 in. [203]	Total Pressure	0.013	0.020	0.029	0.039	0.051	0.065	0.080	0.116	0.157
	Static Pressure	0.003	0.005	0.006	0.009	0.012	0.015	0.018	0.026	0.035
	Flow Rate	140	175	209	244	279	314	349	419	489
	NC	----	----	----	----	----	17	23	28	33
	Throw 150,100,50	1-1-5	1-2-7	1-3-10	2-4-14	2-5-15	3-6-17	3-7-19	5-10-22	6-14-23
Length = 60 in./1500 mm Inlet = 10 in. [254]	Total Pressure	0.018	0.028	0.040	0.055	0.072	0.091	0.112	0.162	0.220
	Static Pressure	0.008	0.013	0.018	0.025	0.032	0.041	0.050	0.072	0.098
	Flow Rate	218	273	327	382	436	491	545	654	763
	NC	----	----	----	----	15	19	23	28	33
	Throw 150,100,50	1-3-11	2-4-15	3-6-18	4-9-21	5-11-22	6-14-23	8-15-25	11-18-27	14-21-29
Length = 60 in./1500 mm Inlet = 12 in. [305]	Total Pressure	0.024	0.038	0.055	0.074	0.097	0.123	0.152	0.218	0.297
	Static Pressure	0.014	0.022	0.032	0.044	0.057	0.072	0.089	0.128	0.175
	Flow Rate	314	393	471	550	628	707	785	942	1099
	NC	----	----	----	16	20	24	27	33	38
	Throw 150,100,50	3-6-17	4-9-21	6-13-23	8-15-25	10-17-27	13-20-28	14-21-30	17-23-33	20-25-35

Performance Notes:

1. Tested in accordance with ASHRAE Standard 70-2006 "Method of Testing for Rating the Performance of Air Outlets and Inlets."
2. Air flow is in cfm.
3. All pressures are in in. w.g.
4. Throw values are measured in feet for terminal velocities of 150 fpm (minimum), 100 fpm (middle) and 50 fpm (maximum).
5. Throw data is based on supply air and room air being at isothermal conditions.
6. NC values are based on room absorption of 10 dB re 10⁻¹² watts and one diffuser.
7. Blanks indicate NC less than 15.
8. Shaded area outside recommended operating range.
9. Does not include effects of ceiling radiation damper (TBD4-FR)

T-bar Diffusers

TBR Series - Return



Product Information

Models

1/2 in. [13] Slot Width	TBR
Non-Insulated	TBRI
Insulated	
3/4 in. [19] Slot Width	TBR
Non-Insulated	TBRI
Insulated	
1 in. [25] Slot Width	TBR
Non-Insulated	TBRI
Insulated	
1 3/8 in. [35] Slot Width	TBR
Non-Insulated	TBRI
Insulated	
1 1/2 in. [38] Slot Width	TBR
Non-Insulated	TBRI
Insulated	

Price TBR Series T-bar return diffusers have been designed to complement the TBD2, TBD3 and TBD4 Series of supply diffusers and can be used with most suspended ceiling systems.

Features

- Available in 1, 2, 3 and 4 slot types.
- Available in both imperial and hard metric module sizes.
- Available standard module lengths of 24 in./600 mm, 30 in./750 mm, 36 in./900 mm, 48 in./1200 mm and 60 in./1500 mm.

Available Options

- Center notch (**CN**) available to bisect diffuser length (i.e. allows 48 in./1200 mm unit to be installed into two 24 in./600 mm ceiling modules).
- Straddle mounting (**ST**). Add 1/8 in. [3] to W dimensions.
- Factory installed outer T-bars (**TB1 / TB2**).
- Factory installed T-bar clips (**TC1 / TC2**).
- Fiber free foam or coated fiberglass insulation (**TBRI**).
- Aluminum Plaster Frame (**APF**).

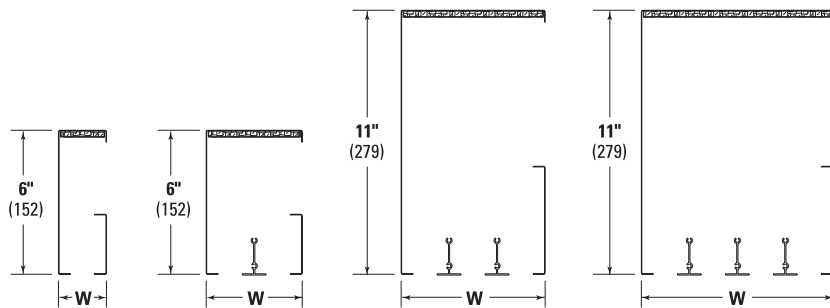
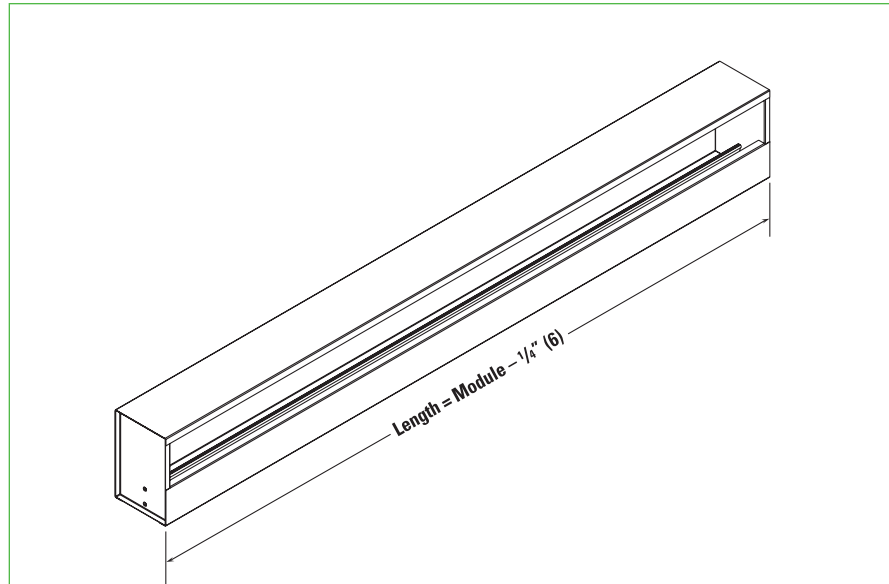
Material

- Shell - Coated Steel
- Center T - Extruded Aluminum

Finish

Shell **MILL**
Center T - White Powder Coat **B12**

For optional and special finishes see color matrix.



Dimensional Data - Imperial (in.) / Metric [mm]

Model	Module		1 Slot W	2 Slot W	3 Slot W	4 Slot W
	Imperial (in.)	Metric [mm]				
TBR/TBRI 350 1/2 in. [13] Slot	24, 30, 36, 48, 60	600, 750, 900, 1200, 1500	1 1/2 in. [38]	3 in. [76]	4 1/2 in. [114]	6 in. [152]
TBR/TBRI 375, 475 3/4 in. [19] Slot	24, 30, 36, 48, 60	600, 750, 900, 1200, 1500	1 3/4 in. [44]	3 1/2 in. [89]	5 1/4 in. [133]	7 in. [178]
TBR/TBRI 2100 1 in. [25] Slot	24, 30, 36, 48, 60	600, 750, 900, 1200, 1500	2 in. [51]	4 in. [102]	- [-]	- [-]
TBR/TBRI 3100, 4100 1 in. [25] Slot	24, 30, 36, 48, 60	600, 750, 900, 1200, 1500	2 in. [51]	4 in. [102]	6 in. [152]	8 in. [203]
TBR/TBRI 2150 1 3/8 in. [35] Slot	24, 30, 36, 48, 60	600, 750, 900, 1200, 1500	2 3/8 in. [60]	4 3/4 in. [121]	- [-]	- [-]
TBR/TBRI 4150 1 1/2 in. [38] Slot	24, 30, 36, 48, 60	600, 750, 900, 1200, 1500	2 1/2 in. [64]	5 in. [127]	7 1/2 in. [191]	10 in. [254]

✓ Product Selection Checklist

- 1) Select Module Length based on ceiling module.
- 2) Select Outlet Type by model number (slot width, insulation).
- 3) Select Number of Slots.
- 4) Select Integral Options if desired (see page B61).
- 5) Select Finish (center T only).

Example: 48 / TBR375 / 2 / B12

Product Information Index

Options and Accessories B61
Suggested Specification B73

Fire-Rated T-bar Return Diffusers - Assembly TBR-FR Series



Product Information

Three Hour Rating - Lay-in Models

¾ in. [19] Slot Width	TBR-FR75
1 in. [25] Slot Width	TBR-FR100
1½ in. [38] Slot Width	TBR-FR150

Price TBR-FR Series T-bar diffuser are Fire-Rated Assemblies UL Listed (Underwriters Laboratories Fire Resistance Directory) and ULC Listed (Underwriters Laboratories of Canada Equipment and Materials Directory). This design meets time versus temperature test criteria and NFPA 90A requirements.

Price TBR-FR Return T-bar diffuser is designed to be compatible with Price Fire-Rated T-bar Supply diffusers. It is supplied with a rectangular opening in the diffuser plenum for non-ducted return applications. For ducted return applications, a 14 in. oval inlet duct is an option.

Features

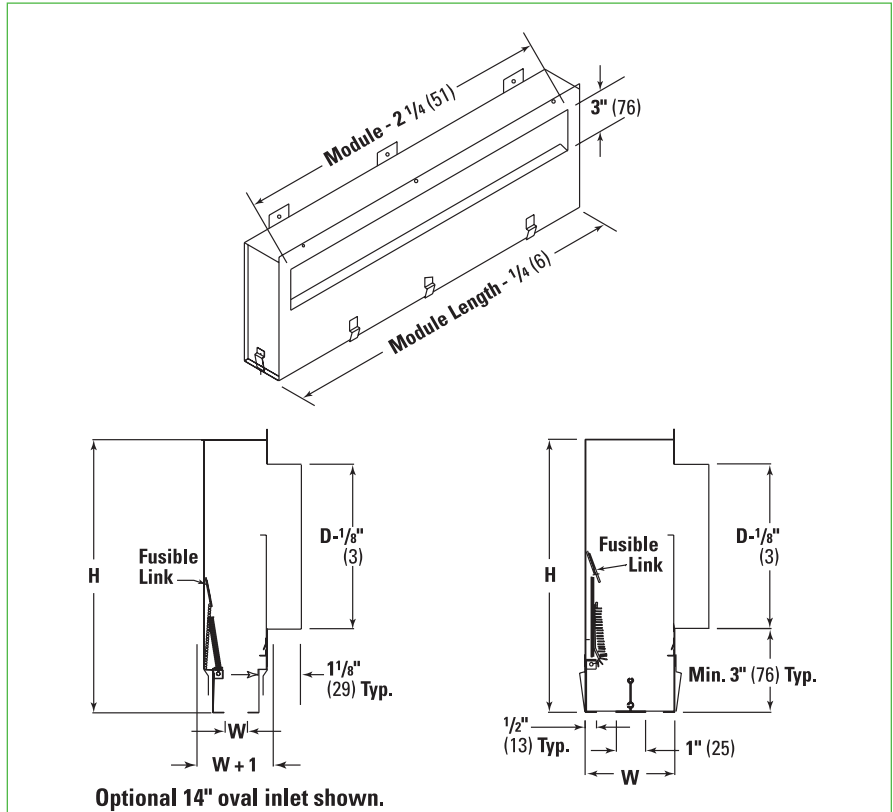
- Available in 1 and 2 slot configurations.
- Available in both imperial and hard metric module sizes.
- Available standard module lengths of 24 in./600 mm, 30 in./750 mm, 36 in./900 mm, 48 in./1200 mm and 60 in./1500 mm.
- 2 slot units have an extruded aluminum center T that has been "dropped" below the diffuser face to match the ceiling grid and provide superior performance.
- Non-adjustable, non-asbestos flap type Ceiling Radiation Damper fits flush against plenum wall for low noise and unrestricted air flow.
- Flap damper has the thermal blanket encased within the blade eliminating air stream erosion and deterioration.
- Positive spring closure and locking clip for added safety.
- Designed for use in an exposed grid suspension ceiling (T-bar Lay-in) with up to a three hour assembly rating. Units must be installed in accordance with the instructions that accompany each unit.
- Easily replaceable fusible link. Standard 165 °F [74 °C], optional 212 °F [100 °C].
- Factory installed outer T-bar clips (all four sides).
- Optional 14 in. oval inlet duct available for ducted returns.

Construction

- Shell / Plenum – Coated Steel

Finish

Shell **MILL**
Center T – White Powder Coat **B12**
For optional and special finishes see color matrix.



Optional 14" oval inlet shown.

Dimensional Data - Imperial (in.) / Metric [mm]

Model	Module Length		1 Slot Units			2 Slot Units		
	Imperial (in.)	Metric [mm]	H	D	W	H	D	W
TBR-FR 75 ¾ in. Slot [19]	24	600	10" [254]	14" [356*]	1¾" [44]	10" [254]	14" [356*]	3½" [89]
	30	750	10" [254]	14" [356*]	1¾" [44]	10" [254]	14" [356*]	3½" [89]
	36	900	10" [254]	14" [356*]	1¾" [44]	10" [254]	14" [356*]	3½" [89]
	48	1200	12" [305]	14" [356*]	1¾" [44]	12" [305]	14" [356*]	3½" [89]
TBR-74 100 1 in. Slot [25]	24	600	10" [254]	14" [356*]	2" [51]	10" [254]	14" [356*]	4" [102]
	30	750	10" [254]	14" [356*]	2" [51]	10" [254]	14" [356*]	4" [102]
	36	900	10" [254]	14" [356*]	2" [51]	10" [254]	14" [356*]	4" [102]
	48	1200	12" [305]	14" [356*]	2" [51]	12" [305]	14" [356*]	4" [102]
TBR-FR 150 1½ in. Slot [38]	24	600	12" [305]	14" [356*]	2½" [64]	12" [305]	14" [356*]	5" [127]
	30	750	12" [305]	14" [356*]	2½" [64]	12" [305]	14" [356*]	5" [127]
	36	900	12" [305]	14" [356*]	2½" [64]	12" [305]	14" [356*]	5" [127]
	48	1200	12" [305]	14" [356*]	2½" [64]	12" [305]	14" [356*]	5" [127]
60	1500	12" [305]	14" [356*]	2½" [64]	12" [305]	14" [356*]	5" [127]	

* Supplied as oval equivalent inlets.

✓ Product Selection Checklist

- 1) Select Module Length based on ceiling module.
- 2) Select Outlet Type by model number (slot width).
- 3) Select Number of Slots.
- 4) Select Integral Options if desired (ducted return).
- 5) Select Finish (center T only).

Example: 48 / TBR-FR75 / 2 / B12

T-bar Diffusers

TBD6 Series - Supply and Supply / Return



Product Information

Models

High induction single slot horizontal pattern only.

$\frac{3}{8}$ in. [10] Slot Width
Non-Insulated **TBD638**
Insulated **TBDI638**

$\frac{3}{4}$ in. [19] Slot Width
Non-Insulated **TBD675**
Insulated **TBDI675**

High induction single slot horizontal supply pattern complete with integral single return slot.

$\frac{3}{8}$ in. [10] Slot Width
Non-Insulated **TBDR638**
Insulated **TBDRI638**

$\frac{3}{4}$ in. [19] Slot Width
Non-Insulated **TBDR675**
Insulated **TBDRI675**

High induction single slot horizontal supply complete with center vertical discharge section.

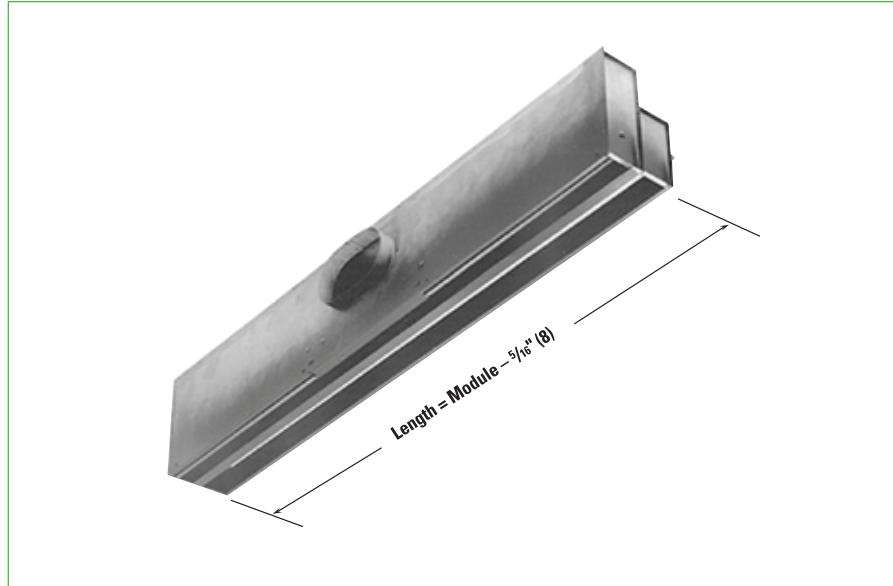
$\frac{3}{8}$ in. [10] Slot Width
Non-Insulated **TBDV638**
Insulated **TBDVI638**

$\frac{3}{4}$ in. [19] Slot Width
Non-Insulated **TBDV675**
Insulated **TBDVI675**

High induction single slot horizontal supply complete with center vertical discharge section and integral single return slot.

$\frac{3}{8}$ in. [10] Slot Width
Non-Insulated **TBDRV638**
Insulated **TBDRVI638**

$\frac{3}{4}$ in. [19] Slot Width
Non-Insulated **TBDRV675**
Insulated **TBDRVI675**



Price TBD6 Series

This T-bar diffuser is designed for high velocity discharge and high room air induction with low sound and pressure drop. Primarily intended for perimeter installation, this series is available in four basic configurations and two slot widths - $\frac{3}{4}$ in. [19] and $\frac{3}{8}$ in. [10].

Application - TBD6 / TBDR6

In cooling applications, typically installed at perimeter discharging inward with a high induction ceiling-hugging air pattern mixing supply and room air, thereby minimizing temperature gradients.

Application - TBDV6 / TBDRV6

This diffuser produces two distinct air patterns simultaneously. When installed in a perimeter location, its high induction horizontal air pattern mixes rapidly with room air, eliminating temperature gradients. A 180° adjustable air pattern is discharged vertically from the center of the unit to blanket the exterior wall or window with conditioned air, thereby minimizing convective drafts.

For more information, contact your local Price sales rep.

Features

- Available in both imperial and hard metric module sizes.
- Available standard module lengths of 24 in./600 mm, 30 in./750 mm, 36 in./900 mm, 48 in./1200 mm and 60 in./1500 mm.

Material

- Shell / Plenum Face - Coated Steel
- Blade Assembly - Extruded Aluminum

Finish

Plenum Face & Blade **B17**
For optional and special finishes see color matrix.

Options

- Internal fiber free foam or coated fiberglass insulation.
- External aluminum foil-backed fiberglass insulation.

CEILING COMPONENT DIFFUSERS

Product Information Index

Performance DataB48
Options and AccessoriesB61
Suggested SpecificationB73

✓ Product Selection Checklist

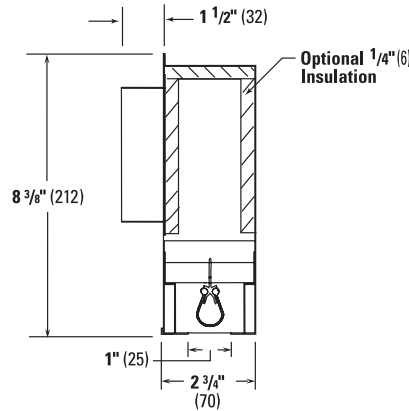
- 1] Select Inlet Diameter based on system design or duct requirements.
- 2] Select Module Length based on ceiling module.
- 3] Select Outlet Type by model number (slot width, insulation).
- 4] Select Number of Slots.
- 5] Select Integral Options (excluding ST and CN) if desired (see page B61).
- 6] Select Finish (center T only).

Example: 8 / 48 / TBD675 / B12

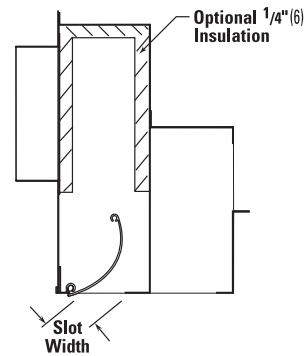
T-bar Diffusers TBD6 Series - Supply and Supply / Return



CEILING COMPONENT DIFFUSERS

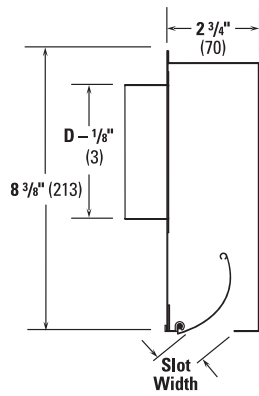


TBDV6
(Center Vertical Discharge Section shown)

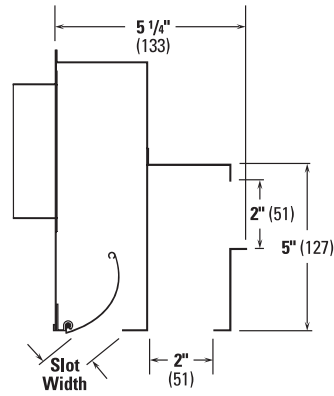


TBDRV6
(Horizontal Supply Section shown)

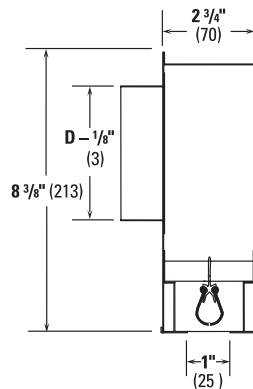
Note: Inlets larger than 4 in. [102] round will be supplied as equivalent ovals.
 6 in. [152] = 4 in. x 7 in. [102 x 172]
 8 in. [203] = 4 in. x 10 1/8 in. [102 x 257]
 10 in. [254] = 4 in. x 13 1/4 [102 x 337]



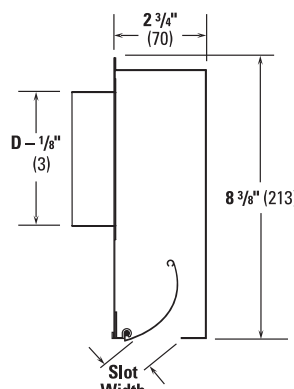
TBD6



TBDR6



TBDV6
(Center Vertical Discharge Section shown)



TBDV6
(Horizontal Discharge Section shown)

T-bar Diffusers

TBD6 Series - Supply and Supply / Return



Performance Data

TBD675 36 in. / 900 mm Module, 8 in. [203] Oval Inlet

Air flow		50	75	100	125	150	200	250	300	350	400
Air Pattern Horizontal 1 Way	Total Pressure	0.007	0.016	0.028	0.043	0.062	0.111	0.173	0.249	0.339	0.442
	Static Pressure	0.006	0.013	0.023	0.035	0.050	0.091	0.141	0.203	0.276	0.360
	Throw Horiz. End	1-2-9	2-5-13	4-9-17	6-11-19	9-13-21	11-17-24	14-19-27	17-21-30	19-23-32	20-24-34
	NC	—	—	—	—	15	22	28	33	36	40

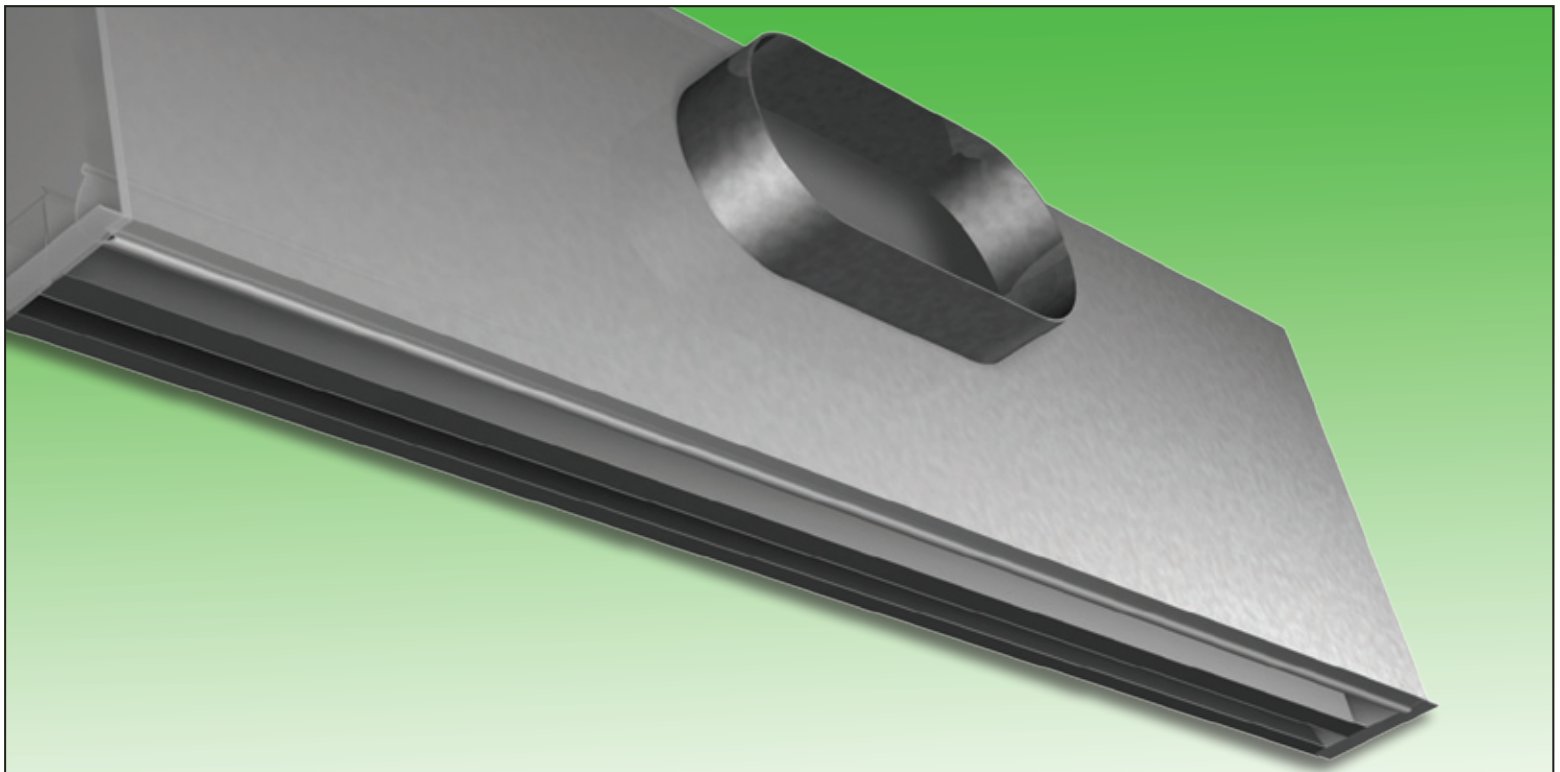
TBDV675 48 in. / 1200 mm Module, 8 in. [203] Inlet, 15 in. [381] Downblow Section

Air flow		100	125	150	175	200	225	250	275	300	350
Air Pattern Horizontal / Vertical	Total Pressure	0.035	0.054	0.078	0.106	0.139	0.176	0.217	0.263	0.312	0.425
	Static Pressure	0.030	0.046	0.066	0.090	0.119	0.150	0.185	0.224	0.266	0.362
	Throw Horiz. End	3-7-12	5-9-14	7-10-15	8-11-16	10-12-17	10-13-18	11-13-19	11-14-20	12-15-21	13-16-22
	Throw Vertical	2-3-5	3-4-5	3-4-6	3-4-6	4-5-6	4-5-7	4-5-7	4-5-8	5-6-8	5-6-8
NC	—	—	15	18	23	27	30	33	35	40	40
Air flow		100	125	150	175	200	225	250	275	300	350
Air Pattern Horizontal 2 Way	Total Pressure	0.049	0.077	0.111	0.151	0.198	0.250	0.309	0.374	0.445	0.606
	Static Pressure	0.044	0.069	0.099	0.135	0.178	0.224	0.277	0.335	0.399	0.543
	Throw Horiz. End	3-7-13	5-9-14	7-11-15	8-12-17	10-13-18	11-13-19	11-14-20	12-15-21	13-15-22	13-17-23
	Throw Horiz. Center	4-7-13	6-9-14	7-11-16	8-12-17	9-13-18	11-14-20	12-14-20	12-15-21	13-16-22	14-17-24
NC	—	—	21	25	30	33	36	39	41	45	45
Air flow		100	125	150	175	200	225	250	275	300	350
Air Pattern Horizontal 1 Way	Total Pressure	0.052	0.082	0.118	0.160	0.209	0.265	0.327	0.396	0.471	0.641
	Static Pressure	0.047	0.074	0.106	0.144	0.189	0.239	0.295	0.357	0.425	0.578
	Throw Horizontal	4-9-17	6-11-19	9-13-21	10-15-23	11-17-24	13-18-26	14-19-27	16-20-28	17-21-30	19-23-32
	NC	—	—	21	25	30	33	36	39	41	45

Performance Notes:

1. Tested in accordance with ASHRAE Standard 70-2006 "Method of Testing for Rating the Performance of Air Outlets and Inlets."
2. Air flow is in cfm.
3. All pressures are in in. w.g.
4. Throw values are measured in feet for terminal velocities of 150 fpm (minimum), 100 fpm (middle) and 50 fpm (maximum).
5. Throw data is based on supply air and room air being at isothermal conditions.
6. NC values are based on room absorption of 10 dB re 10⁻¹² watts and one diffuser.
7. Blanks indicate NC less than 15.

CEILING COMPONENT DIFFUSERS

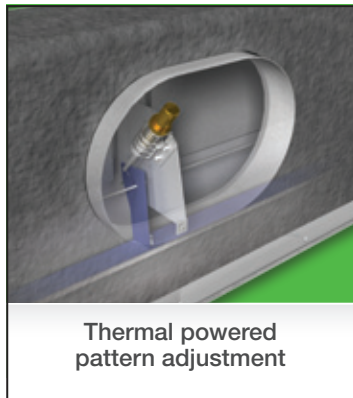
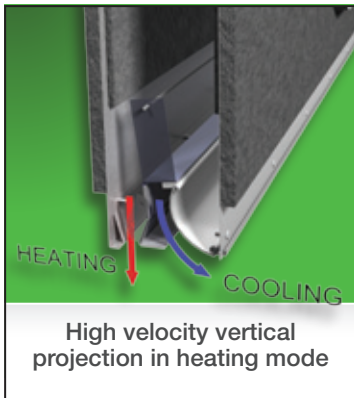


TBDi6 HC Series

BI-DIRECTIONAL PATTERN DIFFUSER

The Price TBDi6 HC bi-directional pattern diffuser is designed to automatically provide a horizontal pattern during cooling and a vertical pattern during heating. It is ideal for perimeter applications such as office applications with overhead cooling and heating air supply.

Specifically designed to automatically change over to heating or cooling mode.



www.priceindustries.com for additional product information, including product videos and brochures.

Thermal Powered Heating / Cooling Auto Changeover T-bar Diffuser **TBDI6 HC Series**



Product Information

The **TBDI6 HC** bi-directional pattern diffuser is designed to automatically provide a horizontal pattern during cooling and a vertical pattern during heating. An internal actuator mechanism senses supply air temperature and adjusts the air pattern to suit heating or cooling applications.

Supply air temperatures of less than 69°F [21°C] will have a 1 way horizontal air pattern similar to our standard TBD6 diffuser, while supply air temperatures greater than 81°F [27°C] will result in a vertical air pattern suitable for heating applications.

This product is primarily intended to be used for perimeter applications with overhead heating. These systems are used in situations where perimeter radiation is not an option due to architectural constraints or practical considerations (i.e. more leasable space is desired).

Designing an overhead heating / cooling system with conventional fixed or manually adjustable diffusers is difficult at best and usually involves a compromise in the desired air pattern. For this application, the diffuser is specifically designed to automatically set to the appropriate air pattern setting.

Features

- Automatic pattern control adjustment based on supply air temperature.
- Available in both imperial and hard metric module sizes.
- Available in standard module lengths 24 in./600 mm, 30 in./750 mm, 36 in./900 mm, 48 in./1200 mm and 60 in./1500 mm.
- Curved extruded aluminum horizontal pattern controller.
- 1/4 in. [6] internal insulation.

Material

- Shell - Coated Steel
- Horizontal Pattern Controller - extruded aluminum.

Options

- Internal fiber free foam or coated fiberglass insulation.
- External aluminum foil-backed fiberglass insulation.

Finish

Shell **MILL**
 Pattern Controller (Black) **B17**
 Center Tee (White Powder Coat) **B12**
 (Black) **B17**
 Face Surfaces **MILL**
 (BFS Black) **B17**

For optional and special finishes see color matrix.

Flow Condition - Heating

Flow Condition - Cooling

Dimensional Data - Imperial (in.) / Metric [mm]

Nom. Module	Imperial (in.)		Metric [mm]		Inlet Size	Round Equivalent
	L		Nom. Module	L		
24	23 ³ / ₄ "		600	594	6 in. x 8.937 in. [152 x 227]	8 in. [203]
30	29 ³ / ₄ "		750	744	6 in. x 8.937 in. [152 x 227]	8 in. [203]
36	35 ³ / ₄ "		900	894	6 in. x 8.937 in. [152 x 227]	8 in. [203]
48	47 ³ / ₄ "		1200	1194	6 in. x 12.078 in. [152 x 307]	10 in. [254]
60	59 ³ / ₄ "		1500	1494	6 in. x 12.078 in. [152 x 307]	10 in. [254]

✓ Product Selection Checklist

- 1) Select Inlet Diameter based on system design or duct requirements.
- 2) Select Module Length based on ceiling module.
- 3) Select Outlet Type by model number.
- 4) Select Integral Options (excluding ST and CN) if desired (see page B61).
- 5) Select Finish.

Example: 10 / 48 / TBDI6 HC / B12

Thermal Powered Heating / Cooling Auto Changeover T-bar Diffuser TBDI6 HC Series



Performance Data

Unit Size	Air Pattern	Neck Velocity	200	300	400	500	600	700	800	900	1000
		VP, in. w.g.	0.002	0.006	0.010	0.016	0.022	0.031	0.040	0.050	0.062
24 in./600 mm Length 8 in. Oval Inlet	Horizontal Pattern	Flow Rate, cfm	64	96	129	161	193	225	257		
		Total Pressure	0.035	0.076	0.132	0.203	0.289	0.389	0.503		
		NC	-	-	22	29	34	39	43		
	Vertical Pattern	Throw 150, 100, 50 fpm	3-7-14	7-10-18	9-14-21	12-16-23	14-18-25	16-19-27	17-21-29		
		Flow Rate, cfm	64	96	129	161	193				
		Total Pressure	0.051	0.113	0.197	0.304	0.434				
30 in./750 mm Length 8 in. Oval Inlet	Horizontal Pattern	Flow Rate, cfm	64	96	129	161	193	225	257	289	
		Total Pressure	0.028	0.061	0.106	0.162	0.230	0.309	0.398	0.498	
		NC	-	-	19	26	32	36	41	44	
	Vertical Pattern	Throw 150, 100, 50 fpm	2-5-11	5-9-17	8-11-19	10-14-21	11-17-23	13-18-25	15-19-27	17-20-29	
		Flow Rate, cfm	64	96	129	161	193	225			
		Total Pressure	0.040	0.088	0.153	0.236	0.335	0.451			
36 in./900 mm Length 8 in. Oval Inlet	Horizontal Pattern	Flow Rate, cfm	64	96	129	161	193	225	257	289	321
		Total Pressure	0.023	0.049	0.085	0.129	0.182	0.243	0.313	0.390	0.476
		NC	-	-	16	23	29	33	38	41	44
	Vertical Pattern	Throw 150, 100, 50 fpm	2-4-10	4-7-14	6-10-17	8-12-20	10-14-21	11-16-23	13-17-25	14-19-26	16-20-28
		Flow Rate, cfm	64	96	129	161	193	225	257		
		Total Pressure	0.031	0.068	0.118	0.180	0.255	0.341	0.440		
48 in./1200 mm Length 10 in. Oval Inlet	Horizontal Pattern	Flow Rate, cfm	89	134	179	223	268	312	357	402	
		Total Pressure	0.024	0.052	0.089	0.136	0.193	0.258	0.332	0.415	
		NC	-	-	17	24	29	34	38	42	
	Vertical Pattern	Throw 150, 100, 50 fpm	2-4-10	4-7-14	6-10-17	8-12-19	10-14-21	11-16-22	13-17-24	14-18-25	
		Flow Rate, cfm	89	134	179	223	268	312	357		
		Total Pressure	0.033	0.072	0.126	0.193	0.273	0.366	0.472		
60 in./1500 mm Length 10 in. Oval Inlet	Horizontal Pattern	Flow Rate, cfm	89	134	179	223	268	312	357	402	446
		Total Pressure	0.017	0.037	0.063	0.096	0.134	0.178	0.227	0.282	0.342
		NC	-	-	-	19	25	30	34	37	40
	Vertical Pattern	Throw 150, 100, 50 fpm	1-3-7	3-5-10	5-7-13	6-9-15	7-10-16	8-12-17	9-13-19	10-14-20	11-15-21
		Flow Rate, cfm	89	134	179	223	268	312	357	402	446
		Total Pressure	0.022	0.048	0.082	0.124	0.174	0.232	0.297	0.369	0.448

Performance Notes:

1. Tested in accordance with ASHRAE Standard 70-2006 "Method of Testing for Rating the Performance of Air Outlets and Inlets."
2. Air flow is in cfm.
3. All pressures are in in. w.g.
4. Throw values are measured in feet for terminal velocities of 150 fpm (minimum), 100 fpm (middle) and 50 fpm (maximum).
5. Horizontal pattern throw data based on 20°F cooling.
6. Vertical pattern throw data is based on a perimeter application with diffuser mounted within 18" from wall and on 15°F heating.
7. NC values are based on room absorption of 10 dB re 10-12 watts and one diffuser.
8. Blanks indicate NC less than 15.
9. Shaded area outside recommended operating range.

T-bar Diffusers TBD7 Series – Supply



Product Information

Models

$\frac{3}{4}$ in. [19] Slot Width	TBD7
Non-Insulated	TBDI7
Insulated	

Price TBD7 Series is a fixed pattern T-bar mounted linear slot diffuser designed to provide high air capacity with a tight horizontal ceiling air pattern. The fixed louvers present a less noticeable ceiling opening, thereby maintaining the architectural appeal of the ceiling.

Features

- High air capacity with low sound.
- Available in 1 through 4 slot models.
- Available in both imperial and hard metric module sizes.
- Available standard module lengths of 24 in./600 mm, 30 in./750 mm, 36 in./900 mm, 48 in./1200 mm, and 60 in./1500 mm.
- Available in one or two way air pattern.
- Two mounting styles:
 - T-bar Lay-in mid-module.
 - T-bar Lay-in adjacent to grid member.
- Stabilizing end caps and tile supporting flanges permit diffuser installation anywhere at mid-module of ceiling system.

Available Options

- Optional factory installed T-bar clip (**TC1, TC2**).
- Internal fiber free foam or coated fiberglass insulation.
- External aluminum foil-backed fiberglass insulation.
- Aluminum plaster frame (**APF**).

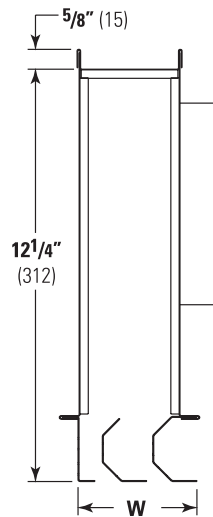
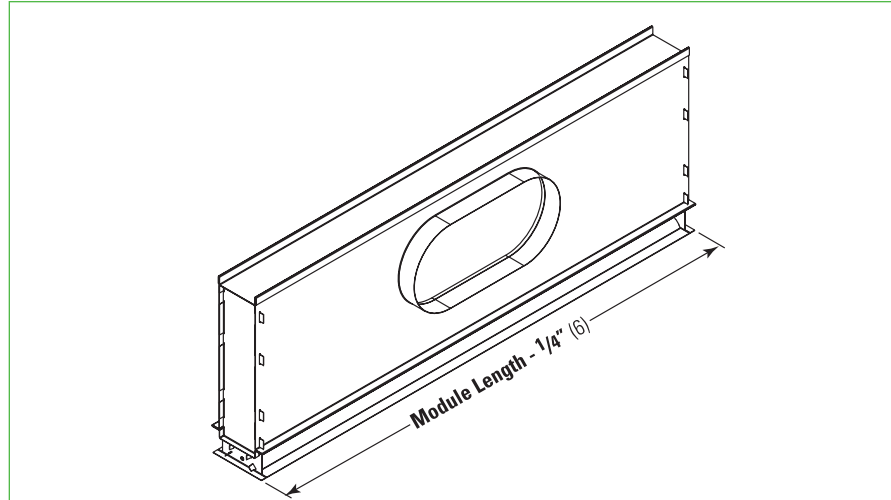
Material

- Shell / Plenum Face – Coated Steel

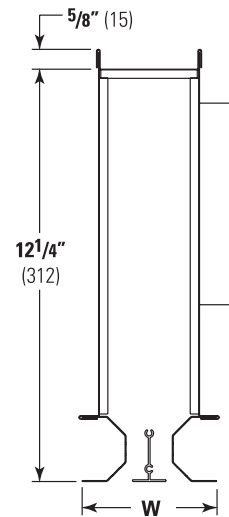
Finish

Shell	MILL
CenterT and Exposed Face	
White Powder Coat	B12

For optional and special finishes see color matrix.



1-Way Pattern



2-Way Pattern

✓ Product Selection Checklist

- 1] Select Inlet Diameter based on system design or duct requirements.
- 2] Select Module Length based on ceiling module.
- 3] Select Outlet Type by model number (Slot width, insulation).
- 4] Select Number of Slots.
- 5] Select 1 or 2 Way air pattern.
- 6] Select Integral Options if desired (see page B61).
- 7] Select Finish (Plenum Face only).

Example: 8 / 48 / TBD7 / 2 / 2 / B12

Product Information Index

Performance Data	B53 - B55
Options and Accessories	B61
Suggested Specification	B74

	W	
	1 Way	2 Way
1 Slot	2 in. [51]	--
2 Slot	3½ in. [90]	4 in. [102]
3 Slot	5 in. [127]	5½ in. [140]
4 Slot	6½ in. [165]	7 in. [178]

Module Length	L
24 in. [600]	23¾ in. [594]
30 in. [750]	29¾ in. [744]
36 in. [900]	35¾ in. [894]
48 in. [1200]	47¾ in. [1194]
60 in. [1500]	59¾ in. [1494]

Inlet Sizes
6 in. [152] Round
8 in. [203] Round
10 in. [254] Oval = 6 in. x 12 1/16 in. [152x307]
12 in. [305] Oval = 6 in. x 15 7/32 in. [152x387]

T-bar Diffusers TBD7 Series – Supply



Performance Data – 1 Slot, 1 Way

Length = 24 in./600 mm Inlet = 6 in. [152]	Total Pressure	0.029	0.065	0.116	0.182	0.262	0.356	0.465	0.589	0.727	1.047
	Static Pressure	0.027	0.060	0.106	0.166	0.239	0.326	0.425	0.538	0.665	0.957
	Flow Rate	39	59	78	98	118	137	157	176	196	235
	NC	--	--	19	24	29	33	36	39	42	47
	Throw 150,100,50	1-3-8	3-6-12	5-8-13	6-10-15	8-12-16	9-13-18	10-13-19	12-14-20	12-15-21	13-16-23
Length = 24 in./600 mm Inlet = 8 in. [203]	Total Pressure	0.077	0.173	0.308	0.482	0.694	0.944	1.233	1.561	1.927	2.774
	Static Pressure	0.075	0.168	0.298	0.466	0.671	0.914	1.193	1.510	1.864	2.685
	Flow Rate	70	105	140	175	209	244	279	314	349	419
	NC	--	21	29	35	39	43	47	50	52	57
	Throw 150,100,50	4-7-13	7-10-15	9-13-18	11-14-20	13-15-22	14-17-24	15-18-25	15-19-27	16-20-28	18-22-31
Length = 48 in./1200 mm Inlet = 6 in. [152]	Total Pressure	0.010	0.023	0.041	0.064	0.093	0.126	0.165	0.209	0.258	0.371
	Static Pressure	0.008	0.018	0.031	0.049	0.070	0.096	0.125	0.158	0.195	0.281
	Flow Rate	39	59	78	98	118	137	157	176	196	235
	NC	--	--	--	--	18	22	25	28	31	36
	Throw 150,100,50	1-1-6	1-3-9	2-6-10	4-7-11	6-9-12	7-9-13	8-10-14	9-11-15	9-11-16	10-12-18
Length = 48 in./1200 mm Inlet = 8 in. [203]	Total Pressure	0.024	0.054	0.097	0.151	0.217	0.296	0.387	0.489	0.604	0.870
	Static Pressure	0.022	0.049	0.087	0.135	0.195	0.265	0.347	0.439	0.542	0.780
	Flow Rate	70	105	140	175	209	244	279	314	349	419
	NC	--	--	17	22	27	31	34	37	40	45
	Throw 150,100,50	2-4-10	4-8-12	7-10-14	9-11-15	10-12-17	10-13-18	11-14-19	12-14-20	12-15-21	14-17-23
Length = 60 in./1500 mm Inlet = 6 in. [152]	Total Pressure	0.008	0.017	0.031	0.048	0.069	0.094	0.123	0.155	0.192	0.276
	Static Pressure	0.005	0.012	0.021	0.032	0.047	0.063	0.083	0.105	0.129	0.186
	Flow Rate	39	59	78	98	118	137	157	176	196	235
	NC	--	--	--	--	--	19	22	25	28	33
	Throw 150,100,50	0-1-4	1-2-7	2-4-8	3-7-9	4-7-10	6-8-11	7-8-12	7-9-13	8-9-13	8-10-15
Length = 60 in./1500 mm Inlet = 8 in. [203]	Total Pressure	0.017	0.039	0.069	0.107	0.154	0.210	0.274	0.347	0.428	0.617
	Static Pressure	0.015	0.033	0.059	0.091	0.132	0.179	0.234	0.296	0.366	0.527
	Flow Rate	70	105	140	175	209	244	279	314	349	419
	NC	--	--	--	19	23	27	31	34	36	41
	Throw 150,100,50	1-3-8	3-7-10	6-8-11	7-9-13	8-10-14	9-11-15	9-11-16	10-12-17	10-13-18	11-14-20

Performance Data – 2 Slot, 1 Way

Length = 24 in./600 mm Inlet = 6 in. [152]	Total Pressure	0.023	0.041	0.064	0.093	0.126	0.165	0.209	0.258	0.371	0.505
	Static Pressure	0.018	0.031	0.049	0.070	0.096	0.125	0.158	0.195	0.281	0.383
	Flow Rate	59	78	98	118	137	157	176	196	235	274
	NC	--	----	----	18	22	25	28	31	36	40
	Throw 150,100,50	1-3-9	2-6-12	4-7-15	6-9-16	7-10-18	8-12-19	9-13-20	10-15-21	12-16-23	14-18-25
Length = 24 in./600 mm Inlet = 8 in. [203]	Total Pressure	0.054	0.097	0.151	0.217	0.296	0.387	0.489	0.604	0.870	1.184
	Static Pressure	0.049	0.087	0.135	0.195	0.265	0.347	0.439	0.542	0.780	1.062
	Flow Rate	105	140	175	209	244	279	314	349	419	489
	NC	--	17	22	27	31	34	37	40	45	49
	Throw 150,100,50	4-8-15	7-11-18	9-13-20	11-15-22	12-17-24	14-18-25	15-19-27	16-20-28	18-22-31	19-24-33
Length = 48 in./1200 mm Inlet = 8 in. [203]	Total Pressure	0.020	0.035	0.055	0.079	0.108	0.141	0.178	0.220	0.317	0.432
	Static Pressure	0.014	0.025	0.040	0.057	0.077	0.101	0.128	0.158	0.228	0.310
	Flow Rate	105	140	175	209	244	279	314	349	419	489
	NC	--	----	----	16	20	24	27	30	34	38
	Throw 150,100,50	2-4-12	3-7-14	5-10-15	7-12-17	9-13-18	11-14-19	12-14-20	12-15-21	14-17-23	15-18-25
Length = 48 in./1200 mm Inlet = 10 in. [254]	Total Pressure	0.023	0.041	0.064	0.093	0.126	0.165	0.209	0.258	0.371	0.505
	Static Pressure	0.018	0.031	0.049	0.070	0.096	0.125	0.158	0.195	0.281	0.383
	Flow Rate	118	157	196	235	274	314	353	392	470	549
	NC	--	----	----	18	22	25	28	31	36	40
	Throw 150,100,50	2-5-12	4-9-14	6-11-16	9-12-18	10-13-19	12-14-20	12-15-21	13-16-23	14-18-25	15-19-27
Length = 60 in./1500 mm Inlet = 8 in. [203]	Total Pressure	0.015	0.027	0.041	0.060	0.081	0.106	0.134	0.166	0.239	0.325
	Static Pressure	0.009	0.017	0.026	0.037	0.051	0.066	0.084	0.104	0.149	0.203
	Flow Rate	105	140	175	209	244	279	314	349	419	489
	NC	--	----	----	----	17	21	24	27	31	35
	Throw 150,100,50	1-3-10	2-5-11	4-8-13	5-10-14	7-11-15	9-11-16	10-12-17	10-13-18	11-14-20	12-15-21
Length = 60 in./1500 mm Inlet = 10 in. [254]	Total Pressure	0.017	0.031	0.048	0.069	0.094	0.123	0.155	0.192	0.276	0.376
	Static Pressure	0.012	0.021	0.032	0.047	0.063	0.083	0.105	0.129	0.186	0.254
	Flow Rate	118	157	196	235	274	314	353	392	470	549
	NC	--	----	----	----	19	22	25	28	33	37
	Throw 150,100,50	2-4-10	3-7-12	5-9-13	7-10-15	9-11-16	10-12-17	10-13-18	11-13-19	12-15-21	13-16-22

For performance notes, see page B55.

T-bar Diffusers TBD7 Series – Supply



Performance Data – 3 Slot, 1 Way

Length = 24 in./600 mm Inlet = 8 in. [203]	Total Pressure	0.029	0.052	0.082	0.118	0.161	0.210	0.265	0.328	0.472	0.642
	Static Pressure	0.024	0.042	0.066	0.096	0.130	0.170	0.215	0.265	0.382	0.520
	Flow Rate	105	140	175	209	244	279	314	349	419	489
	NC	----	----	16	21	25	28	31	34	38	42
	Throw 150,100,50	3-6-13	5-9-18	7-11-20	9-13-22	10-16-24	12-18-25	13-19-27	15-20-28	18-22-31	19-24-33
Length = 24 in./600 mm Inlet = 10 in. [254]	Total Pressure	0.035	0.062	0.097	0.140	0.190	0.248	0.314	0.388	0.559	0.761
	Static Pressure	0.029	0.052	0.081	0.117	0.160	0.208	0.264	0.326	0.469	0.639
	Flow Rate	118	157	196	235	274	314	353	392	470	549
	NC	----	----	18	22	26	30	33	35	40	44
	Throw 150,100,50	3-7-15	6-10-19	8-13-21	10-15-23	12-18-25	13-19-27	15-20-28	17-21-30	19-23-33	20-25-35
Length = 48 in./1200 mm Inlet = 8 in. [203]	Total Pressure	0.012	0.021	0.033	0.048	0.065	0.086	0.108	0.134	0.192	0.262
	Static Pressure	0.006	0.011	0.018	0.026	0.035	0.046	0.058	0.071	0.103	0.140
	Flow Rate	105	140	175	209	244	279	314	349	419	489
	NC	----	----	----	----	15	19	22	24	29	33
	Throw 150,100,50	1-2-9	2-4-13	3-6-15	4-9-17	6-11-18	7-13-19	9-14-20	11-15-21	13-17-23	15-18-25
Length = 48 in./1200 mm Inlet = 10 in. [254]	Total Pressure	0.014	0.024	0.038	0.055	0.075	0.098	0.124	0.153	0.220	0.300
	Static Pressure	0.008	0.015	0.023	0.033	0.044	0.058	0.074	0.091	0.131	0.178
	Flow Rate	118	157	196	235	274	314	353	392	470	549
	NC	----	----	----	----	17	20	23	26	30	34
	Throw 150,100,50	1-3-11	2-5-14	4-8-16	5-11-18	7-13-19	9-14-20	11-15-21	12-16-23	14-18-25	15-19-27
Length = 60 in./1500 mm Inlet = 10 in. [254]	Total Pressure	0.011	0.019	0.030	0.043	0.058	0.076	0.096	0.119	0.171	0.232
	Static Pressure	0.005	0.009	0.014	0.020	0.028	0.036	0.046	0.056	0.081	0.110
	Flow Rate	118	157	196	235	274	314	353	392	470	549
	NC	----	----	----	----	----	17	20	23	28	32
	Throw 150,100,50	1-2-9	2-4-12	3-6-13	4-9-15	5-11-16	7-12-17	9-13-18	11-13-19	12-15-21	13-16-22
Length = 60 in./1500 mm Inlet = 12 in. [305]	Total Pressure	0.014	0.024	0.038	0.055	0.075	0.098	0.124	0.153	0.220	0.300
	Static Pressure	0.008	0.015	0.023	0.033	0.044	0.058	0.074	0.091	0.131	0.178
	Flow Rate	147	196	245	294	343	392	441	490	588	686
	NC	----	----	----	----	17	20	23	26	30	34
	Throw 150,100,50	1-3-12	3-6-13	4-9-15	6-12-16	8-13-18	11-13-19	12-14-20	12-15-21	13-16-23	15-18-25

Performance Data – 4 Slot, 1 Way

Length = 24 in./600 mm Inlet = 8 in. [203]	Total Pressure	0.020	0.035	0.055	0.079	0.108	0.141	0.179	0.220	0.317	0.432
	Static Pressure	0.014	0.025	0.040	0.057	0.077	0.101	0.128	0.158	0.228	0.310
	Flow Rate	105	140	175	209	244	279	314	349	419	489
	NC	----	----	----	16	20	24	27	30	34	38
	Throw 150,100,50	2-4-12	3-7-16	5-10-20	7-12-22	9-14-24	11-16-25	12-18-27	13-20-28	16-22-31	18-24-33
Length = 24 in./600 mm Inlet = 10 in. [254]	Total Pressure	0.023	0.041	0.064	0.093	0.126	0.165	0.209	0.258	0.371	0.505
	Static Pressure	0.018	0.031	0.049	0.070	0.096	0.125	0.158	0.195	0.281	0.383
	Flow Rate	118	157	196	235	274	314	353	392	470	549
	NC	----	----	----	18	22	25	28	31	36	40
	Throw 150,100,50	2-5-13	4-9-18	6-11-21	9-13-23	10-16-25	12-18-27	13-20-28	15-21-30	18-23-33	20-25-35
Length = 48 in./1200 mm Inlet = 10 in. [254]	Total Pressure	0.010	0.018	0.028	0.040	0.054	0.071	0.090	0.111	0.159	0.217
	Static Pressure	0.004	0.008	0.012	0.017	0.024	0.031	0.039	0.048	0.069	0.095
	Flow Rate	118	157	196	235	274	314	353	392	470	549
	NC	----	----	----	----	----	17	20	22	27	31
	Throw 150,100,50	1-2-8	2-3-13	2-5-16	3-8-18	5-11-19	6-13-20	8-15-21	10-16-23	13-18-25	15-19-27
Length = 48 in./1200 mm Inlet = 12 in. [305]	Total Pressure	0.013	0.023	0.035	0.051	0.070	0.091	0.115	0.142	0.204	0.278
	Static Pressure	0.007	0.013	0.020	0.029	0.039	0.051	0.064	0.080	0.114	0.156
	Flow Rate	147	196	245	294	343	392	441	490	588	686
	NC	----	----	----	16	19	22	25	30	33	33
	Throw 150,100,50	1-3-12	2-5-16	4-8-18	5-12-20	7-14-21	10-16-23	12-17-24	13-18-25	16-20-28	17-21-30
Length = 60 in./1500 mm Inlet = 10 in. [254]	Total Pressure	0.008	0.014	0.022	0.032	0.043	0.056	0.071	0.088	0.127	0.173
	Static Pressure	0.002	0.004	0.006	0.009	0.013	0.017	0.021	0.026	0.037	0.051
	Flow Rate	118	157	196	235	274	314	353	392	470	549
	NC	----	----	----	----	----	----	17	20	25	29
	Throw 150,100,50	1-1-6	1-3-10	2-4-13	3-6-15	3-8-16	4-10-17	6-13-18	7-13-19	10-15-21	13-16-22
Length = 60 in./1500 mm Inlet = 12 in. [305]	Total Pressure	0.010	0.018	0.028	0.040	0.054	0.071	0.090	0.111	0.159	0.217
	Static Pressure	0.004	0.008	0.012	0.017	0.024	0.031	0.039	0.048	0.069	0.095
	Flow Rate	147	196	245	294	343	392	441	490	588	686
	NC	----	----	----	----	----	17	20	22	27	31
	Throw 150,100,50	1-2-9	2-4-13	3-6-15	4-9-16	5-12-18	7-13-19	9-14-20	11-15-21	13-16-23	15-18-25

For performance notes, see page B55.

T-bar Diffusers TBD7 Series – Supply



Performance Data – 2 Slot, 2 Way

Length = 24 in./600 mm Inlet = 6 in. [152]	Total Pressure	0.023	0.041	0.064	0.093	0.126	0.165	0.209	0.258	0.371	0.505
	Static Pressure	0.018	0.031	0.049	0.070	0.096	0.125	0.158	0.195	0.281	0.383
	Flow Rate	59	78	98	118	137	157	176	196	235	274
	NC	----	----	----	18	22	25	28	31	36	40
	Throw 150,100,50	1-2-5	1-3-6	2-4-8	3-5-10	4-6-11	4-6-13	5-7-14	5-8-16	6-10-19	8-11-23
Length = 24 in./600 mm Inlet = 8 in. [203]	Total Pressure	0.054	0.097	0.151	0.217	0.296	0.387	0.489	0.604	0.870	1.184
	Static Pressure	0.049	0.087	0.135	0.195	0.265	0.347	0.439	0.542	0.780	1.062
	Flow Rate	105	140	175	209	244	279	314	349	419	489
	NC	----	17	22	27	31	34	37	40	45	49
	Throw 150,100,50	2-4-9	4-6-11	5-7-14	6-9-17	7-10-20	8-11-23	9-13-25	10-14-27	11-17-29	13-20-32
Length = 48 in./1200 mm Inlet = 8 in. [203]	Total Pressure	0.020	0.035	0.055	0.079	0.108	0.141	0.178	0.220	0.317	0.432
	Static Pressure	0.014	0.025	0.040	0.057	0.077	0.101	0.128	0.158	0.228	0.310
	Flow Rate	105	140	175	209	244	279	314	349	419	489
	NC	----	----	----	16	20	24	27	30	34	38
	Throw 150,100,50	1-2-7	2-4-9	3-5-11	4-7-13	5-8-15	6-9-17	7-10-18	7-11-19	9-13-21	10-15-22
Length = 48 in./1200 mm Inlet = 10 in. [254]	Total Pressure	0.023	0.041	0.064	0.093	0.126	0.165	0.209	0.258	0.371	0.505
	Static Pressure	0.018	0.031	0.049	0.070	0.096	0.125	0.158	0.195	0.281	0.383
	Flow Rate	118	157	196	235	274	314	353	392	470	549
	NC	----	----	----	18	22	25	28	31	36	40
	Throw 150,100,50	1-3-7	2-5-10	4-6-12	5-7-15	6-9-17	6-10-18	7-11-19	8-12-20	10-15-22	11-17-24
Length = 60 in./1500 mm Inlet = 8 in. [203]	Total Pressure	0.015	0.027	0.041	0.060	0.081	0.106	0.134	0.166	0.239	0.325
	Static Pressure	0.009	0.017	0.026	0.037	0.051	0.066	0.084	0.104	0.149	0.203
	Flow Rate	105	140	175	209	244	279	314	349	419	489
	NC	----	----	----	----	17	21	24	27	31	35
	Throw 150,100,50	1-2-6	1-3-8	2-5-10	3-6-12	4-7-13	5-8-13	6-9-14	7-10-15	8-12-16	9-13-18
Length = 60 in./1500 mm Inlet = 10 in. [254]	Total Pressure	0.017	0.031	0.048	0.069	0.094	0.123	0.155	0.192	0.276	0.376
	Static Pressure	0.012	0.021	0.032	0.047	0.063	0.083	0.105	0.129	0.186	0.254
	Flow Rate	118	157	196	235	274	314	353	392	470	549
	NC	----	----	----	----	19	22	25	28	33	37
	Throw 150,100,50	1-2-7	2-4-9	3-6-11	4-7-12	5-8-13	6-9-14	7-10-15	7-11-16	9-12-17	10-13-19

Performance Data – 4 Slot, 2 Way

Length = 24 in./600 mm Inlet = 8 in. [203]	Total Pressure	0.020	0.035	0.055	0.079	0.108	0.141	0.178	0.220	0.317	0.432
	Static Pressure	0.014	0.025	0.040	0.057	0.077	0.101	0.128	0.158	0.228	0.310
	Flow Rate	105	140	175	209	244	279	314	349	419	489
	NC	----	----	----	16	20	24	27	30	34	38
	Throw 150,100,50	1-2-7	2-4-9	3-5-11	4-7-13	5-8-15	6-9-17	7-10-20	7-11-22	9-13-26	10-15-30
Length = 24 in./600 mm Inlet = 10 in. [254]	Total Pressure	0.023	0.041	0.064	0.093	0.126	0.165	0.209	0.258	0.371	0.505
	Static Pressure	0.018	0.031	0.049	0.070	0.096	0.125	0.158	0.195	0.281	0.383
	Flow Rate	118	157	196	235	274	314	353	392	470	549
	NC	----	----	----	18	22	25	28	31	36	40
	Throw 150,100,50	1-3-7	2-5-10	4-6-12	5-7-15	6-9-17	6-10-19	7-11-22	8-12-24	10-15-29	11-17-34
Length = 48 in./1200 mm Inlet = 10 in. [254]	Total Pressure	0.010	0.018	0.028	0.040	0.054	0.071	0.090	0.111	0.159	0.217
	Static Pressure	0.004	0.008	0.012	0.017	0.024	0.031	0.039	0.048	0.069	0.095
	Flow Rate	118	157	196	235	274	314	353	392	470	549
	NC	----	----	----	----	17	20	22	25	27	31
	Throw 150,100,50	1-1-5	1-2-7	1-3-9	2-5-11	3-6-13	4-7-14	5-8-16	6-9-18	7-11-21	8-13-24
Length = 48 in./1200 mm Inlet = 12 in. [305]	Total Pressure	0.013	0.023	0.035	0.051	0.070	0.091	0.115	0.142	0.204	0.278
	Static Pressure	0.007	0.013	0.020	0.029	0.039	0.051	0.064	0.080	0.114	0.156
	Flow Rate	147	196	245	294	343	392	441	490	588	686
	NC	----	----	----	----	16	19	22	25	30	33
	Throw 150,100,50	1-2-7	1-3-9	2-5-11	3-7-13	4-8-16	6-9-18	7-10-20	7-11-22	9-13-25	10-16-27
Length = 60 in./1500 mm Inlet = 10 in. [254]	Total Pressure	0.008	0.014	0.022	0.032	0.043	0.056	0.071	0.088	0.127	0.173
	Static Pressure	0.002	0.004	0.006	0.009	0.013	0.017	0.021	0.026	0.037	0.051
	Flow Rate	118	157	196	235	274	314	353	392	470	549
	NC	----	----	----	----	----	17	20	25	29	33
	Throw 150,100,50	0-1-3	1-1-6	1-2-8	1-3-10	2-4-11	3-6-13	3-7-15	4-8-16	6-10-17	8-11-19
Length = 60 in./1500 mm Inlet = 12 in. [305]	Total Pressure	0.010	0.018	0.028	0.040	0.054	0.071	0.090	0.111	0.159	0.217
	Static Pressure	0.004	0.008	0.012	0.017	0.024	0.031	0.039	0.048	0.069	0.095
	Flow Rate	147	196	245	294	343	392	441	490	588	686
	NC	----	----	----	----	----	17	20	22	27	31
	Throw 150,100,50	1-1-5	1-2-8	2-4-10	2-5-12	3-7-14	4-8-16	5-9-17	6-10-18	8-12-19	9-14-21

Performance Notes:

- Tested in accordance with ASHRAE Standard 70-2006 "Method of Testing for Rating the Performance of Air Outlets and Inlets."
- Air flow is in cfm.
- All pressures are in in. w.g.
- Throw values are measured in feet for terminal velocities of 150 fpm (minimum), 100 fpm (middle) and 50 fpm (maximum).
- Throw data is based on supply air and room air being at isothermal conditions.
- NC values are based on room absorption of 10 dB re 10⁻¹² watts and one diffuser.
- Blanks indicate NC less than 15.

T-bar Diffusers

TBR7 Series – Return



Product Information

Models

$\frac{3}{4}$ in. [19] Slot Width	TBR7
Non-Insulated	TBRI7
Insulated	

Price TBR7 Series T-bar return diffusers have been designed to complement the Price TBD7 Series of supply diffusers and maintain the architectural appeal of the ceiling. Can be used with most suspended ceiling systems.

Features

- High air capacity with low sound.
- Available in 1 through 4 slot models.
- Available in both imperial and hard metric module sizes.
- Available standard module lengths of 24 in./600 mm, 30 in./750 mm, 48 in./1200 mm, and 60 in./1500 mm.
- Optional 36 in./900 mm module length.
- Available in 1 or 2 way air pattern.
- Two mounting styles:
 - T-bar Lay-in mid-module.
 - T-bar Lay-in adjacent to grid member.
- Stabilizing end caps and tile supporting flanges permit diffuser installation anywhere at mid-module of ceiling system.

Available Options

- Optional factory installed T-bar clip (**TC1**).
- Aluminum plaster frame (**APF**).
- Fiber free foam or coated fiberglass insulation (**TBRI**).

Material

- Shell / Plenum Face – Coated Steel.

Finish

Shell	MILL
CenterT and Exposed Face	
White Powder Coat	B12

For optional and special finishes see color matrix.

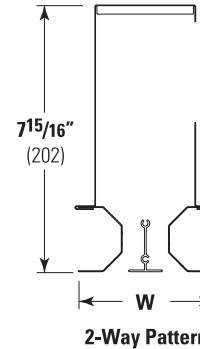
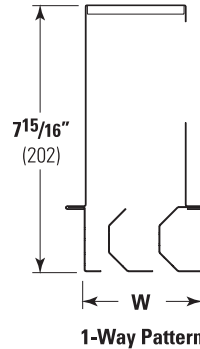
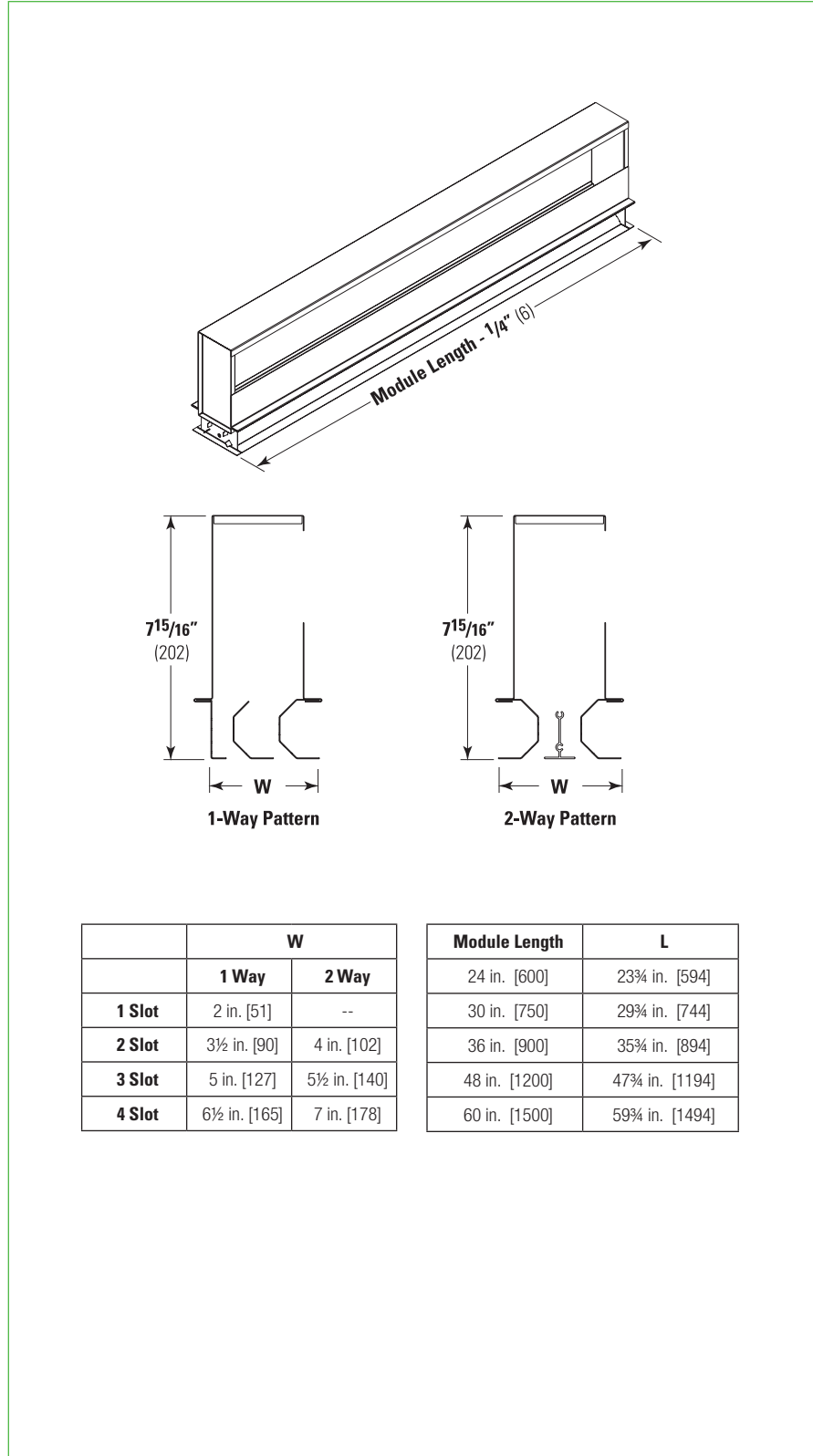
✓ Product Selection Checklist

- 1] Select Module Length based on ceiling module.
- 2] Select Outlet Type by model number (slot width, insulation).
- 3] Select Number of Slots.
- 4] Select 1 or 2 Way air pattern.
- 5] Select Integral Options if desired (see Page B61).
- 6] Select Finish (Plenum Face only).

Example: 48 / TBR 7 / 2 / 2 / B12

Product Information Index

Options and Accessories.....	B61
Suggested Specification	B74



	W	
	1 Way	2 Way
1 Slot	2 in. [51]	--
2 Slot	3½ in. [90]	4 in. [102]
3 Slot	5 in. [127]	5½ in. [140]
4 Slot	6½ in. [165]	7 in. [178]

Module Length	L
24 in. [600]	23¾ in. [594]
30 in. [750]	29¾ in. [744]
36 in. [900]	35¾ in. [894]
48 in. [1200]	47¾ in. [1194]
60 in. [1500]	59¾ in. [1494]

T-bar Diffusers TBD8 Series – Supply

Sloped Shoulder Plenum
Enhanced Spread / Reduced Throw

Product Information

Models

1/2 in. [13] Slot Width	
Non-Insulated	TBD850
Exterior Insulated	TBDI850
3/4 in. [19] Slot Width	
Non-Insulated	TBD875
Exterior Insulated	TBDI875
1 in. [25] Slot Width	
Non-Insulated	TBD8100
Exterior Insulated	TBDI8100

Price TBD8 Series, with its unique sloped-shoulder plenum design, provides short horizontal projection and wide horizontal spread. These performance characteristics accommodate the air distribution limitations frequently encountered in modular layouts of integrated paired T-bar ceiling systems.

Features

- Diffuser features unique sloped-shoulder plenum design that provides shorter horizontal projection and wider horizontal spread.
- Diffuser supplied with extruded aluminum “ice tong” pattern controllers for the ultimate in VAV control.
- Available in 1 or 2 slot types.
- Available in both imperial and hard metric module sizes.
- Available standard module lengths of 24 in./600 mm, 30 in./750 mm, 48 in./1200 mm and 60 in./1500 mm.
- Pattern controllers on the 48 in./1200 mm and 60 in./1500 mm diffusers are divided into two segments for split air pattern deflection (**TBDI**).

Available Options

- Center notch (**CN**) available to bisect diffuser length (i.e. allows 48 in./1200 mm unit to be installed into two 24 in./600 mm ceiling modules).
- Straddle mounting (**ST**).
- Factory installed outer T-bars (**TB1 /TB2**).
- Factory installed T-bar clips (**TC1 /TC2**).
- Aluminum Plaster Frame (**APF**).
- External aluminum foil-backed fiberglass insulation.

Material

- Shell – Coated Steel
- Pattern Controller / Center T – Extruded Aluminum

Finish

- Shell **MILL**
- Pattern Controller - Black **B17**
- Center T – White Powder Coat **B12**

For optional and special finishes see color matrix.

Product Information Index

Performance Data	B59 - B60
Options and Accessories	B61
Suggested Specification	B74

Dimensional Data - Imperial (in.) / Metric [mm]

Model	Module		H	1 Slot W	2 Slot W	D
	Imperial (in.)	Metric [mm]				
TBD/TBDI 850 1/2 in. [13] Slot	24, 30	600, 750	6 3/8 [162]	1 1/4 [32]	2 1/2 [63]	5 [127]*
	48	1200	9 3/8 [238]	1 1/4 [32]	2 1/2 [63]	5 [127]
	60	1500	10 3/8 [264]	1 1/4 [32]	2 1/2 [63]	6 [152]
TBD/TBDI 875 3/4 in. [19] Slot	24, 30	600, 750	6 3/8 [162]	1 1/2 [38]	3 [76]	5 [127]*
	48	1200	9 3/8 [238]	1 1/2 [38]	3 [76]	6 [152]
	60	1500	10 3/8 [264]	1 1/2 [38]	3 [76]	7 [178]
TBD/TBDI 8100 1 in. [25] Slot	24, 30	600, 750	6 3/8 [162]	1 3/4 [44]	3 1/2 [89]	6 [152]*
	48	1200	10 [254]	1 3/4 [44]	3 1/2 [89]	7 [178]
	60	1500	11 [279]	1 3/4 [44]	3 1/2 [89]	8 [203]

*Supplied as equivalent oval.

✓ Product Selection Checklist

- 1) Select Inlet Diameter based on system design or duct requirements.
- 2) Select Module Length based on ceiling module.
- 3) Select Outlet Type by model number (slot width, insulation).
- 4) Select Number of Slots.
- 5) Select Integral Options if desired (see page B61).
- 6) Select Finish (plenum face only).

Example: 8 / 48 / TBD875 / 2 / B12

All Metric dimensions () are soft conversion.
Imperial dimensions are converted to metric and rounded to the nearest millimeter.

Application Recommendations Advantages of a Sloped-Shoulder Plenum

Performance data as published on the following pages is based on isothermal (0 °F temperature differential) conditions as per ASHRAE Standard 70-2006. For horizontal air distribution, both forward projection (throw) values and spread values are given for terminal velocities (V_T) of 150, 100 and 50 fpm. Similar values are given for vertical air distribution.

The TBD8 diffuser incorporates a unique sloped-shoulder plenum design. This provides a short horizontal projection and wide horizontal spread. These performance characteristics accommodate the air distribution limitations frequently encountered in modular layouts of integrated paired T-bar ceiling systems. Horizontal spread values are approximately 150% of the horizontal projection (throw) values.

Cooling applications generally require horizontal air distribution to provide optimum comfort conditions in the occupied spaces. With a 20 °F cooling differential, the $V_T = 100$ horizontal projection and spread can be used as a convenient selection aid for cooling applications.

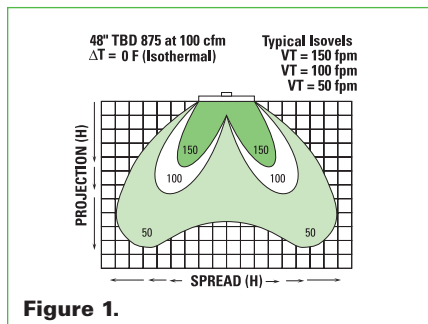


Figure 1.

Typical isothermal isovels to $V_T = 150$, $V_T = 100$ and $V_T = 50$ are illustrated in Figure 1. With a 20 °F cooling differential and all other conditions the same, an isovel to $V_T = 50$ is illustrated in Figure 2.

By comparing the two illustrations, it will be noted that the horizontal projection and spread for the 20 °F cooling $V_T = 50$ is approximately the same as the isothermal $V_T = 100$.

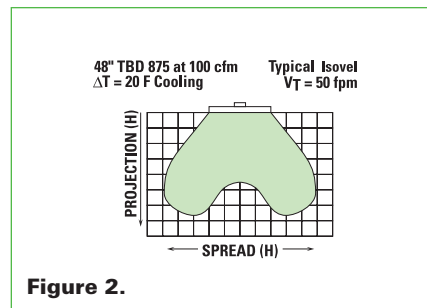


Figure 2.

Caution should be exercised when selecting TBD8 diffusers for progressive installation into long continuous lengths of paired T-bar ceiling members. Successive diffusers should be located far enough apart so as to minimize any overlap of the horizontal spread of the individual air patterns. The distance as installed, inlet center-line to inlet center-line, should be equal to or greater than the horizontal spread value for the individual diffuser at the point of selection. Horizontal projection and spread values would be as tabulated (Illustrated in Figure 3).

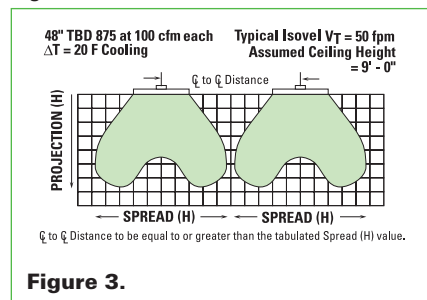


Figure 3.

An acceptable alternative is to locate progressive TBD8 diffusers so that the distance between is held to 12 in. [305] or less. The adjacent air patterns would then coalesce into a single, extended horizontal air pattern as illustrated in Figure 4. Under these application conditions, the extended horizontal projection would be approximately 125% of the value tabulated for a single individual diffuser.

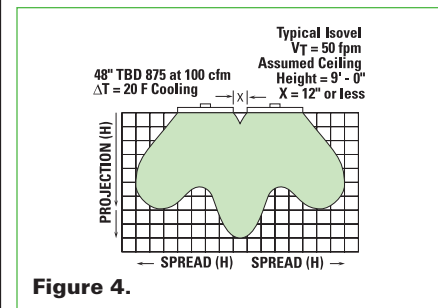


Figure 4.

Diffuser locations are not recommended where the distance between the diffusers is greater than 12 in. [305], but less than the minimum as recommended in Figure 3. These locations will result in a substantial overlap of the individual horizontal spreads. Dumping will occur where the adjacent air patterns interfere with each other. This is illustrated in Figure 5.

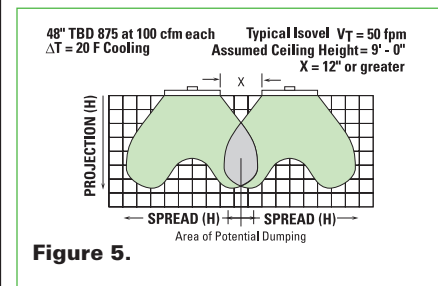


Figure 5.

Data in the performance tables on the following pages is based on a ceiling height of 9 ft. The preceding comments and recommendations assume a 9 ft ceiling height. For higher ceilings, horizontal spreads can be overlapped 1 ft for each additional foot of ceiling height in excess of 9 ft. Any dumping will then be limited so that the effect will be dissipated before the air enters the comfort zone.

T-bar Diffusers TBD8 Series – Supply



Performance Data - 1 Slot

Model TBD850 1/2 in. [13] Slot Width

Capacity, cfm				50	60	70	80	90	100	120	140	160
Throw, ft	H			2-4-8	3-5-9	3-6-10	4-7-11	5-8-11	6-8-12	7-9-13	8-10-14	9-11-15
	V			1-2-6	2-4-7	2-4-8	3-5-8	3-6-9	4-6-9	5-7-10	6-8-11	7-8-11
Nominal Length	Spread ft		H	6-12	7-13	5-9-15	6-10-16	7-12-17	9-12-18	10-13-19	12-15-21	13-16-22
	ft		V	8	5-9	5-11	7-11	8-12	5-8-12	7-9-13	8-11-15	9-11-15
48 in./1200 mm 6 in. [127] Round	Total Pressure NC	H	.045	.060	.080	.110	.135	.170	.245	.330	.435	
		V	.035	.047	.062	.086	.105	.133	.191	.258	.340	
60 in./1500 mm 6 in. [152] Round	Total Pressure NC	H	—	—	—	18	22	25	28	33	40	
		V	—	—	—	18	21	24	29	33	36	
60 in./1500 mm 7 in. [178] Round	Total Pressure NC	H	.027	.041	.054	.068	.088	.109	.156	.214	.279	
		V	.020	.031	.041	.051	.066	.082	.117	.158	.209	
60 in./1500 mm 8 in. [203] Round	Total Pressure NC	H	—	—	—	18	21	24	29	33	36	
		V	—	—	—	16	19	24	28	31	36	

Model TBD875 3/4 in. [19] Slot Width

Capacity, cfm				60	80	100	120	140	160	180	200	220
Throw, ft	H			3-4-9	4-6-10	5-7-11	6-9-12	7-10-14	8-10-15	9-11-15	9-11-16	10-12-17
	V			1-3-6	3-4-7	3-5-8	4-6-9	5-7-9	5-7-10	6-7-10	6-8-11	7-8-11
Nominal Length	Spread ft		H	4-6-13	6-9-15	7-10-16	9-13-18	10-15-21	12-15-22	13-16-23	14-17-24	15-18-25
	ft		V	8	5-9	7-11	5-8-12	7-9-12	7-9-13	8-9-13	8-11-15	9-11-15
48 in./1200 mm 6 in. [152] Round	Total Pressure NC	H	.042	.070	.112	.161	.217	.287	.364	.441	.553	
		V	.031	.051	.082	.117	.158	.209	.265	.321	.403	
60 in./1500 mm 7 in. [178] Round	Total Pressure NC	H	—	19	25	30	34	37	40	43	46	
		V	—	13	19	24	28	31	34	37	40	
60 in./1500 mm 8 in. [203] Round	Total Pressure NC	H	.025	.049	.074	.107	.148	.197	.246	.303	.369	
		V	.018	.036	.054	.078	.108	.144	.180	.222	.280	
60 in./1500 mm 9 in. [228] Round	Total Pressure NC	H	—	—	19	24	28	31	34	37	40	
		V	—	—	19	23	26	29	32	35		

Model TBD8100 1 in. [25] Slot Width

Capacity, cfm				60	80	100	120	140	160	180	200	220
Throw, ft	H			2-4-8	3-5-10	4-7-11	5-8-12	6-9-13	7-10-14	8-10-15	9-11-16	10-12-17
	V			1-2-4	2-3-5	2-3-6	3-4-6	3-5-7	3-5-7	4-5-8	4-6-8	5-6-9
Nominal Length	Spread ft		H	6-12	7-15	6-10-16	7-12-18	9-13-19	10-15-21	12-15-22	13-16-24	15-18-25
	ft		V	5	7	8	5-8	7-9	7-9	5-7-11	5-8-11	7-8-12
48 in./1200 mm 7 in. [178] Round	Total Pressure NC	H	.028	.055	.083	.120	.166	.221	.276	.340	.413	
		V	.019	.038	.057	.082	.113	.151	.189	.233	.284	
60 in./1500 mm 8 in. [203] Round	Total Pressure NC	H	—	15	21	26	30	33	36	39	42	
		V	—	—	15	20	24	27	30	33	36	
60 in./1500 mm 9 in. [228] Round	Total Pressure NC	H	.020	.031	.051	.072	.102	.133	.163	.204	.255	
		V	.014	.021	.035	.048	.069	.090	.110	.138	.173	
60 in./1500 mm 10 in. [254] Round	Total Pressure NC	H	—	—	16	21	25	28	31	34	37	
		V	—	—	—	—	18	21	24	27	30	

Table of Velocity Pressures, in. w.g.

cfm	50	60	70	80	90	100	120	140	160	180	200	220
5 in.	0.008	0.012	0.016	0.021	0.027	0.034	0.048	0.066	0.086	0.109	0.134	0.162
6 in.	0.004	0.006	0.008	0.010	0.013	0.016	0.023	0.032	0.041	0.052	0.065	0.078
7 in.	0.002	0.003	0.004	0.006	0.007	0.009	0.013	0.017	0.022	0.028	0.035	0.042
8 in.	0.001	0.002	0.003	0.003	0.004	0.005	0.007	0.010	0.013	0.017	0.020	0.025

Performance Notes:

1. Tested in accordance with ASHRAE Standard 70-2006 "Method of Testing for Rating the Performance of Air Outlets and Inlets."
2. Air flow is in cfm.
3. All pressures are in in. w.g.
4. The throw, horizontal (H) and vertical (V), is the distance to terminal velocities (V_t) of 150, 100 and 50 fpm. Spread is the maximum width of the jet as defined by the above terminal velocities.
5. Throw data is based on supply air and room air being at isothermal conditions.
6. NC values are based on room absorption of 10 dB re 10⁻¹² watts and one diffuser.
7. Blanks indicate NC less than 15.

T-bar Diffusers TBD8 Series – Supply



Performance Data - 2 Slot

Model TBD850 1/2 in. [13] Slot Width

Capacity, cfm		100		130		160		190		220		250		280		310		340		
Throw, ft		H	V	H	V	H	V	H	V	H	V	H	V	H	V	H	V	H	V	
Nominal Length	Spread ft	H	6-9-16	7-10-18	9-13-21	10-15-22	12-16-24	13-18-25	15-19-27	16-19-28	16-21-30									
		V	3-4-6	3-5-8	4-5-9	4-6-9	5-8-10	5-8-10	6-8-12	6-9-12	8-9-13									
48 in./1200 mm	TP		.050	.084	.131	.184	.247	.315	.396	.487	.587									
	NC		—	17	25	30	35	39	43	46	49									
60 in./1500 mm	TP		.032	.053	.077	.112	.147	.193	.242	.294	.354									
	NC		—	—	21	24	28	32	36	39	41									

Model TBD875 3/4 in. [19] Slot Width

Capacity, cfm		130		160		190		220		250		280		310		340		370		
Throw, ft		H	V	H	V	H	V	H	V	H	V	H	V	H	V	H	V	H	V	
Nominal Length	Spread ft	H	7-10-18	9-13-19	10-15-21	12-16-22	13-16-24	15-18-25	15-19-27	16-19-28	16-21-30									
		V	3-5-8	4-5-8	5-6-9	5-6-9	6-8-10	6-8-10	6-8-12	6-8-12	6-8-12	8-9-13								
48 in./1200 mm	TP		.059	.086	.126	.165	.216	.271	.330	.397	.472									
	NC		—	22	28	30	34	38	41	43	46									
60 in./1500 mm	TP		.045	.066	.091	.146	.161	.202	.247	.297	.353									
	NC		—	—	24	28	32	36	39	42	44									

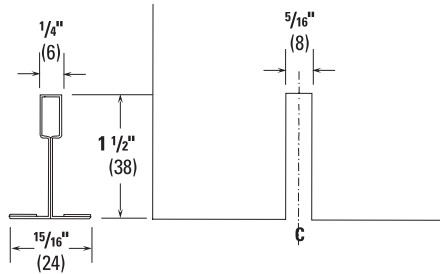
Model TBD8100 1 in. [25] Slot Width

Capacity, cfm		160		190		220		250		280		310		340		370		400		
Throw, ft		H	V	H	V	H	V	H	V	H	V	H	V	H	V	H	V	H	V	
Nominal Length	Spread ft	H	7-12-18	9-13-21	10-15-22	12-16-24	13-18-25	15-18-27	16-19-27	16-19-28	16-21-30									
		V	3-4-8	4-5-9	4-6-9	4-6-9	5-8-10	5-8-10	6-8-10	6-8-12	6-8-12	6-8-12								
48 in./1200 mm	TP		.060	.087	.114	.150	.188	.228	.275	.326	.381									
	NC		—	23	25	29	33	35	37	39	42									
60 in./1500 mm	TP		.040	.055	.076	.098	.122	.149	.180	.214	.250									
	NC		—	19	22	25	28	30	32	34	37									

Performance Notes:

1. Tested in accordance with ASHRAE Standard 70-2006 "Method of Testing for Rating the Performance of Air Outlets and Inlets."
2. Air flow is in cfm.
3. All pressures are in in. w.g.
4. The throw, horizontal (H) and vertical (V), is the distance to terminal velocities (V_t) of 150, 100 and 50 fpm. Spread is the maximum width of the jet as defined by the above terminal velocities.
5. Throw data is based on supply air and room air being at isothermal conditions.
6. NC values are based on room absorption of 10 dB re 10^{-12} watts and one diffuser.
7. Blanks indicate NC less than 15.

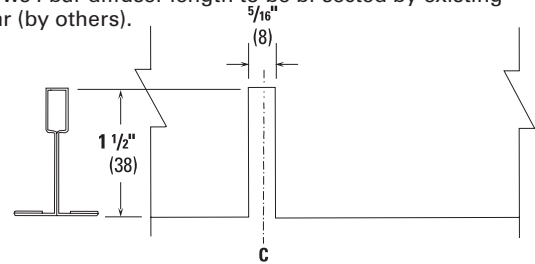
ST - Straddle Mount



Allows T-bar diffuser to straddle existing T-bar (by others).

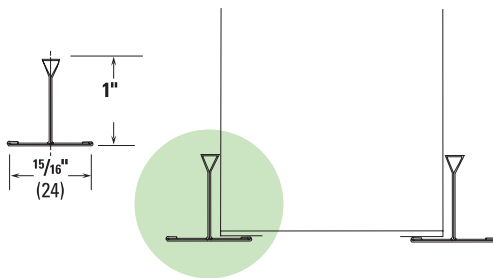
CN - Center Notch

Allows T-bar diffuser length to be bi-sected by existing T-bar (by others).

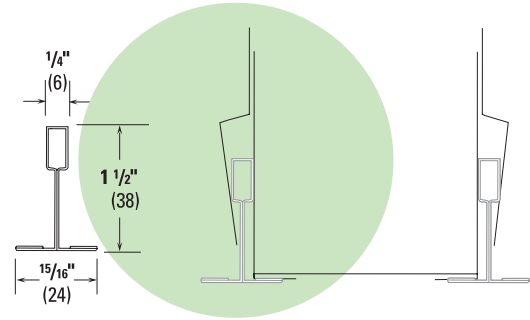


e.g. Allows 48 in. [1219] unit to be installed into two 24 in. [610] ceiling modules.

TB1 - Factory installed T-bars on inlet side. TB2 - Factory installed T-bars both sides.

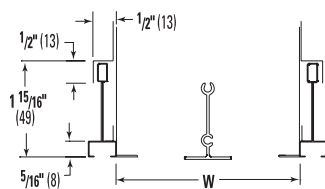


TC1 - Factory installed T-bars Clips on inlet side. TC2 - Factory installed T-bars Clips both sides.

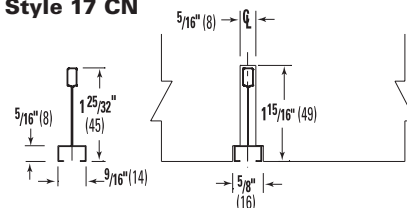


Style 17 Options - (Narrow bolt slot (fineline) 9/16 in. [14] T-bar) TBD/TBR 2, 3 and 4 only

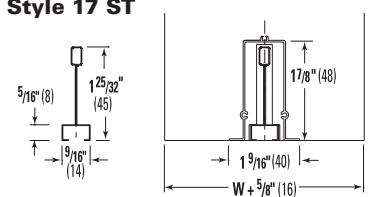
Style 17



Style 17 CN

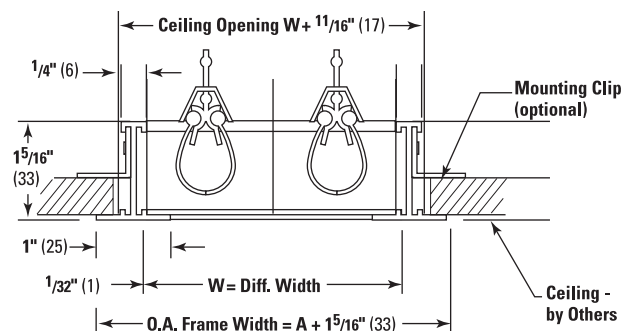


Style 17 ST



APF - Aluminum Plaster Frame

For mounting T-bar diffuser in plaster or drywall. Available with all Price T-bar diffusers.



* Refer to product descriptions for availability.

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All Metric dimensions () are soft conversion.
Imperial dimensions are converted to metric and rounded to the nearest millimeter.

Light Troffer Diffusers LTA / LTF / LTN Series – Supply



Product Information

Models

Single- or double-sided supply adjustable pattern controller **LTA**

Single- or double-sided supply fixed pattern controller **LTF**

Single- or double-sided supply without pattern controllers. **LTN**

Price LTA / LTF / LTN Light troffer diffusers attach quickly and easily to most manufacturer's models of light troffers and are suitable for surface slot and regressed slot applications.

Features

- Available with an adjustable pattern controller to adjust discharge from horizontal to vertical and provide trim dampening (**LTA**).
- Fixed pattern controller types provide a superior horizontal air pattern and low sound (**LTF**).
- Available without pattern controllers for regressed slot light fixtures that are furnished with integral pattern controllers (**LTN**).
- Available in both imperial and hard metric module sizes.
- Available standard module lengths of 24 in. / 600 mm, 36 in. / 900 mm, 48 in. / 1200 mm to suit standard light fixture lengths.
- Available as single-sided models or saddle (double-sided) models.
- Optional external foil-backed insulation is available (**AFI**).
- Units can be shipped knocked down for field assembly (**KD**).
- Matching return unit available (**LTR**).
- Low profile units available (**LP**), supplied with oval side inlet.
- Available with optional adjustable crossover (**ADJ**) for field sizing to suit light fixtures (LP models only).

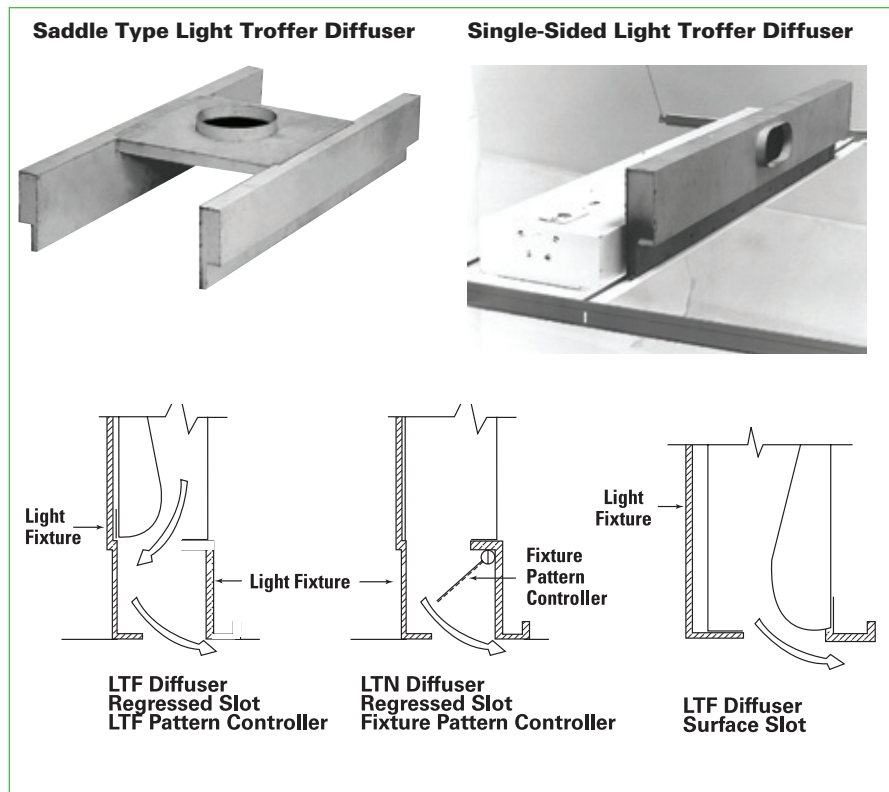
Material

- Shell – Coated Steel

Finish

Shell

MILL



Diffuser / Fixture Compatibility

The compatibility of the diffuser and light fixture is very important. Price has worked with most light fixture manufacturers to ensure the compatibility of the two components. Most problems occur when special light fixtures are used in both flush slot and regressed slot types. To ensure the compatibility of standard or special flush slot or regressed slot light fixtures with the LT diffusers, the preferred procedure is for the light fixture manufacturer to provide an approved, fully dimensioned drawing. This will enable Price to check the fixture construction and slot configuration. This procedure should be followed up with a production sample fixture to verify compatibility between the physical diffuser and the fixture, as well as the performance of the diffuser on the fixture..

Regressed Slot Fixture

This applies to fixtures which have a continuous reveal around the fixture lens. The configuration of this reveal varies a great deal depending on the fixture manufacturer. The depth and width of the reveal varies and may contain a combination of air deflector and blank-off. These items can have a significant effect on the performance of the LT diffuser with regard to pressure drop, noise level and air pattern. For this reason, it is important that compatibility and performance be verified on regressed slot fixtures.

Surface Slot Fixture

This applies to fixtures where the supply air slot on the fixture is essentially flush with the ceiling surface. The performance data in this catalog applies to all surface slot fixtures.

Product Information Index

Dimensional DataB64
Performance Data B65 - B66
Suggested Specification B74

✓ Product Selection Checklist

- 1] Select Inlet Diameter based on system design or duct requirements.
- 2] Select Model (LTA / LTF / LTN).
- 3] Select Troffer Size based on light fixture.
- 4] Select Integral Options, if desired.

Example: 5 / LTF / 24 / KD.

All Metric dimensions () are soft conversion.
Imperial dimensions are converted to metric and rounded to the nearest millimeter.

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Application Guidelines

Air Diffusion with Light Troffer Diffusers

The LT series of light troffer diffusers has been developed in the Price laboratory to provide superior horizontal air distribution at low sound levels when interfaced with compatible air handling light fixtures. The LT series can be factory coordinated to accommodate the normal slot configurations of either surface slot or regressed slot air handling light fixtures.

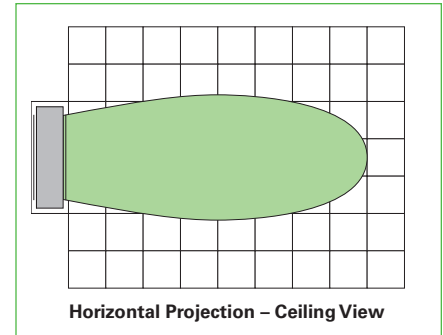
The Price LTF light troffer diffuser has been designed with a curved pattern controller to provide a superior horizontal air pattern. This results in optimum space air distribution, ideal for general air conditioning applications. The horizontal air pattern produces maximum entrainment of room air, which generates the air motion required to provide optimum comfort conditions throughout the occupied zone.

The consistent horizontal air pattern eliminates the need for the installer or balancing contractor to adjust the pattern controller to avoid vertical air discharge. This performance feature eliminates vertical air discharge pattern, the most frequent source of complaint about draft conditions in occupied zones, when field setting of adjustable pattern controllers has been overlooked.

Return Air Application

The LTN diffusers can be used as a ducted return or LTR units can be used when the ceiling space is being used as a return plenum. The use of a bare slot for return has the disadvantages of see-through to the ceiling space and possible room-to-room noise transmission.

Where slots are used for a non-ducted return air application, 1.5 to 2 return slots should be used for every supply slot. If this ratio cannot be satisfied, additional return air openings should be provided. For the return air to pass through the slots, there must be a pressure differential across the slot. This pressure differential must be created by the plenum return system alone or in combination with the supply system. In order for the air to be returned evenly through the light fixture slots, the plenum return air system must be designed so that a relatively uniform negative pressure is provided throughout the ceiling plenum.



Diffuser Selection and Layout

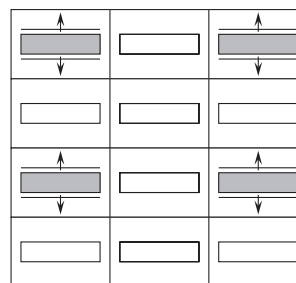
The selection and layout of light troffer diffusers in a space will depend on the size of the space, light fixture module, amount of air to be supplied, required space noise level, number of diffusers required and throw.

The type of diffusers used, single-sided or saddle type, will depend on the amount of air to be supplied to the space and the required capacity per diffuser. Generally, a saddle type diffuser will supply one and a half times more air than a single-sided unit for the same noise level and at lower pressure drop.

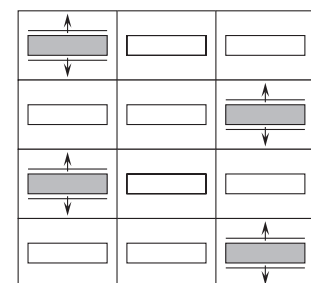
Light troffer diffusers provide a good method of air distribution up to an air loading of between 2 and 3 cfm per square foot [10 to 15 L/s per square meter]. Based on a 9 ft 0 in. [2.74 m] ceiling height, this is equal to between 13 and 20 air changes per hour.

Location of the diffusers will depend on the lighting module. The spacing of the diffusers will be determined by the air pattern and throw. Where diffusers discharge toward each other, the throw should be equal to one-half the distance between the diffusers plus 2 ft 0 in. [0.6 m]. Where diffusers discharge toward a wall, the throw should be equal to the distance between the wall and diffuser plus 2 ft 0 in. [0.6 m]. These

Diffuser Patterns



Alternate Row Pattern



Alternate Row Staggered Pattern

throw recommendations are based on a 9 ft 0 in. [2.74 m] ceiling height. The capacity of the diffusers should be selected to satisfy the above throw requirements. Sufficient diffusers should be used to provide good, even air distribution throughout the space. Typical diffuser arrangements are shown above.

Short-Circuiting

Where light fixture slots are used for supply and return air, concern has been raised with regard to short circuiting of the supply air. When the supply air is discharged toward

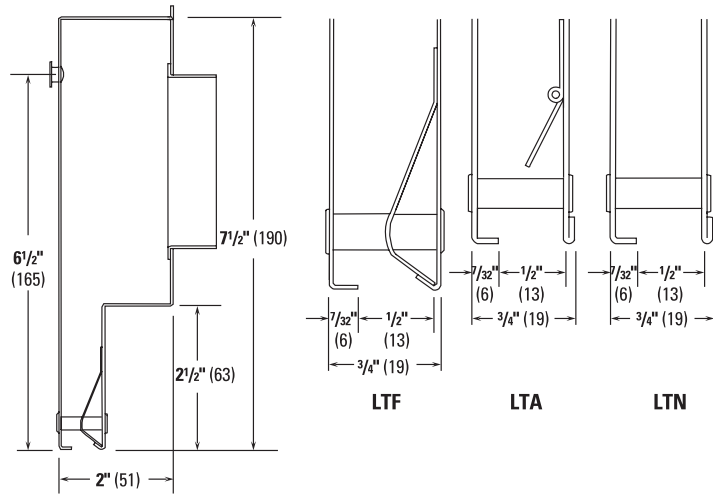
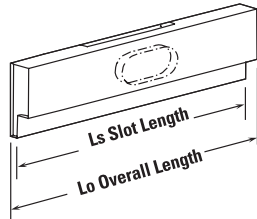
the return air slot, the return slot should be located at a distance equal to or greater than the supply air throw to a terminal velocity of 50 fpm. If this criteria is followed, the amount of short circuiting will not be significant.

When the supply air stream reaches the point of $V_T = 50$ fpm, the temperature of the air stream will be within 1 °F [0.6 °C] of the room temperature due to the entrainment of room air. Thus, the work of the supply air stream in picking up the heat load and generating room air motion has been accomplished.

Light Troffer Diffusers LTA / LTF / LTN Series – Supply



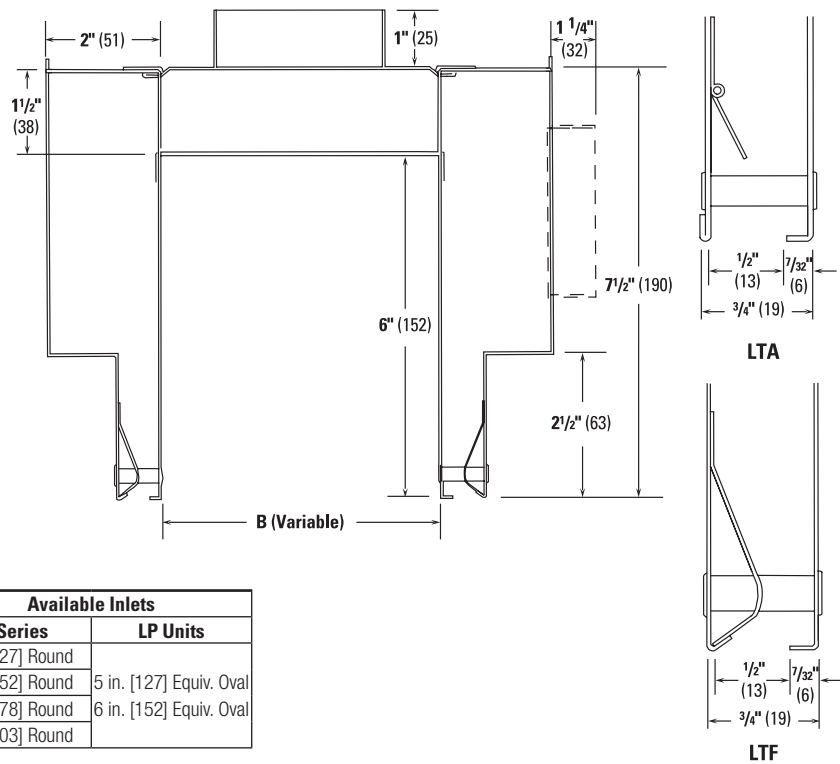
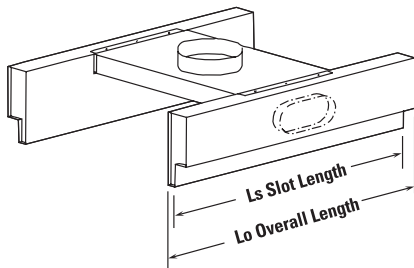
10 Series Single-Sided Supply Diffusers



Dimensional Data - Imperial (in.) / Metric [mm]

Model	Lo	Ls	Available Inlets	
			10 Series	LP Units
10-2	17 in. [432]	16 1/4 [413]	5 in. [127] Round	5 in. [127] Equiv. Oval
10-3	25 1/4 [641]	24 1/2 [622]	6 in. [152] Round	6 in. [152] Equiv. Oval
10-4	41 3/4 [1061]	41 [1041]	7 in. [178] Round 8 in. [203] Round	7 in. [178] Equiv. Oval

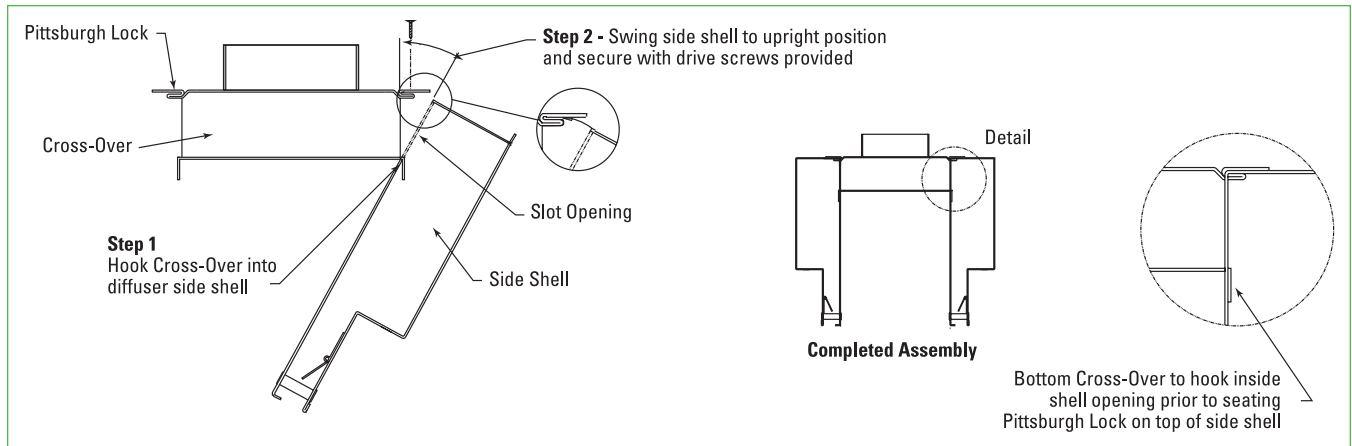
Saddle Type Supply Diffusers



Dimensional Data - Imperial (in.) / Metric [mm]

Model	Lo	Ls	Available Inlets	
			10 Series	LP Units
14	41 3/4 [1061]	40 [1041]		
14-LP	41 3/4 [1061]	40 [1041]		
22	17 in. [432]	16 1/4 [413]		
24	41 3/4 [1061]	40 [1041]	5 in. [127] Round	5 in. [127] Equiv. Oval
24-LP	41 3/4 [1061]	40 [1041]	6 in. [152] Round	
33	25 1/4 [641]	24 1/2 [622]	7 in. [178] Round	6 in. [152] Equiv. Oval
44	41 3/4 [1061]	40 [1041]	8 in. [203] Round	

Field Assembly Knocked Down (KD) Option



Performance Data – Single-Sided

For 4' / 1200 mm Light Fixture

Neck Size	Capacity, cfm	50	60	70	80	90	100	110	120	140
	Throw, ft	1-2-10	2-4-14	2-5-17	3-6-19	4-8-20	4-10-21	5-12-22	6-14-24	8-17-25
5 in. Oval	Total Pressure	.053	.076	.104	.136	.171	.202	.255	.305	.415
	NC	—	—	—	23	27	31	34	37	42
6 in. Oval	Total Pressure	.048	.070	.095	.124	.157	.194	.234	.279	.380
	NC	—	—	—	23	27	31	34	37	42

For 3' / 900 mm Light Fixture

Neck Size	Capacity, cfm	40	50	60	70	80	90	100	110	120
	Throw, ft	3-6-13	4-8-15	6-10-16	8-11-18	9-13-19	10-14-20	11-15-21	12-16-22	13-17-23
5 in. Oval	Total Pressure	.063	.102	.142	.192	.252	.317	.394	.476	.564
	NC	—	22	27	31	35	39	42	45	48
6 in. Oval	Total Pressure	.061	.094	.136	.183	.240	.303	.376	.455	.538
	NC	—	22	27	31	35	39	42	45	48

For 2' / 600 mm Light Fixture

Neck Size	Capacity, cfm	30	40	50	60	70	80	90
	Throw, ft	2-5-11	4-7-13	6-9-15	7-11-17	8-13-18	10-13-19	11-14-20
5 in. Oval	Total Pressure	.056	.099	.157	.225	.307	.401	.507
	NC	—	24	30	36	40	45	48
6 in. Oval	Total Pressure	.055	.097	.152	.219	.298	.389	.493
	NC	—	24	30	36	40	45	48

Table of Velocity Pressures, in. w.g.

cfm	20	30	40	50	60	70	80	90	100	110	120	140	160	180	200	220
5 in.	.001	.003	.005	.009	.012	.017	.022	.027	.034	.041	.049	.066	.087	.110	.135	.163
6 in.	—	—	—	.004	.006	.008	.010	.013	.016	.020	.023	.031	.041	.052	.063	.078
8 in.	—	—	—	.001	.002	.002	.003	.004	.005	.006	.007	.010	.013	.017	.021	.025

Performance Notes:

- Tested in accordance with ASHRAE Standard 70-2006 "Method of Testing for Rating the Performance of Air Outlets and Inlets".
- Air flow is in cubic feet per minute, cfm.
- All pressures are in in. w.g.
- Throw values are measured in feet for terminal velocities of 150 fpm (minimum), 100 fpm (middle) and 50 fpm (maximum).
- Throw data is based on supply air and room air being at isothermal conditions.
- NC values are based on room absorption of 10 dB re 10⁻¹² watts and one diffuser.
- Blanks indicate NC less than 15.
- Tested without a light fixture. Light fixture may alter performance data.

Performance Data – Saddle Type

For 4' / 1200 mm Light Fixture

Neck Size	Capacity, cfm	60	80	100	120	140	160	180	200	220
	Throw, ft	0-1-3	1-1-5	1-2-8	1-3-10	2-4-12	2-5-13	3-6-14	4-8-15	4-9-16
5 in. [127] Round	Total Pressure	.053	.098	.151	.217	.292	.385	.487	.598	.722
	NC	—	—	20	26	30	34	37	41	44
6 in. [152] Round	Total Pressure	.034	.057	.090	.130	.175	.232	.294	.356	.441
	NC	—	—	—	24	29	32	36	39	42
8 in. [203] Round	Total Pressure	.024	.043	.068	.097	.133	.173	.219	.271	.327
	NC	—	—	—	20	25	29	32	35	38
LP-5 in. [127] Oval	Total Pressure	.035	.065	.100	.144	.193	.255	.322	.396	.478
	NC	—	—	22	27	32	36	39	42	45
LP-6 in. [152] Oval	Total Pressure	.025	.042	.067	.097	.131	.173	.219	.265	.328
	NC	—	—	—	23	28	32	35	38	41

For 3' / 900 mm Light Fixture

Neck Size	Capacity, cfm	50	60	70	80	100	120	140	160	180
	Throw, ft	1-2-7	1-3-8	2-4-10	2-5-11	4-7-12	6-9-14	6-10-14	7-11-51	8-12-16
5 in. [127] Round	Total Pressure	.036	.051	.071	.092	.144	.204	.281	.367	.460
	NC	—	—	—	22	28	33	37	40	43
6 in. [152] Round	Total Pressure	.031	.045	.062	.080	.126	.178	.246	.321	.402
	NC	—	—	—	22	28	33	37	40	43
LP-5 in. [127] Oval	Total Pressure	.036	.051	.071	.092	.144	.204	.281	.367	.460
	NC	—	—	—	22	28	33	37	40	43
LP-6 in. [152] Oval	Total Pressure	.031	.045	.062	.080	.126	.178	.246	.321	.402
	NC	—	—	—	22	28	33	37	40	43

For 2' / 600 mm Light Fixture

Neck Size	Capacity, cfm	40	50	60	70	80	90	100	110	120
	Throw, ft	1-3-7	2-4-8	3-5-9	3-6-10	4-7-11	5-7-11	5-8-12	6-9-12	7-9-13
5 in. [127] Round	Total Pressure	.040	.062	.090	.124	.163	.200	.252	.304	.363
	NC	—	—	—	23	27	31	34	37	40
6 in. [152] Round	Total Pressure	.039	.061	.088	.118	.151	.197	.242	.302	.348
	NC	—	—	—	23	27	31	34	37	40
LP-5 in. [127] Oval	Total Pressure	.031	.050	.072	.100	.129	.164	.199	.240	.287
	NC	—	—	—	21	25	29	32	35	38
LP-6 in. [152] Oval	Total Pressure	.029	.044	.064	.089	.114	.144	.178	.222	.256
	NC	—	—	—	21	25	29	32	35	38

Table of Velocity Pressures, in. w.g.

cfm	20	30	40	50	60	70	80	90	100	110	120	140	160	180	200	220
5 in.	.001	.003	.005	.009	.012	.017	.022	.027	.034	.041	.049	.066	.087	.110	.135	.163
6 in.	—	—	—	.004	.006	.008	.010	.013	.016	.020	.023	.031	.041	.052	.063	.078
8 in.	—	—	—	.001	.002	.002	.003	.004	.005	.006	.007	.010	.013	.017	.021	.025

Performance Notes:

1. Tested in accordance with ASHRAE Standard 70-2006 "Method of Testing for Rating the Performance of Air Outlets and Inlets".
2. Air flow is in cubic feet per minute, cfm.
3. All pressures are in in. w.g.
4. Throw values are measured in feet for terminal velocities of 150 fpm (minimum), 100 fpm (middle) and 50 fpm (maximum).
5. Throw data is based on supply air and room air being at isothermal conditions.
6. NC values are based on room absorption of 10 dB re 10⁻¹² watts and one diffuser.
7. Blanks indicate NC less than 15.
8. Tested without a light fixture. Light fixture may alter performance data.

Light Troffer Diffusers

LTR Diffuser - Return

Product Information

Models

Single-sided return troffer diffuser **LTR**

Price LTR return light troffer diffusers are designed to damper intake to the return plenum in order to balance the air return throughout a relatively large space.

Features

- Prevents direct light leakage from the plenum through the slot.
- Available standard module lengths of 24 in. [610], 36 in. [914], 48 in. [1219].

Material

- Shell – Coated Steel

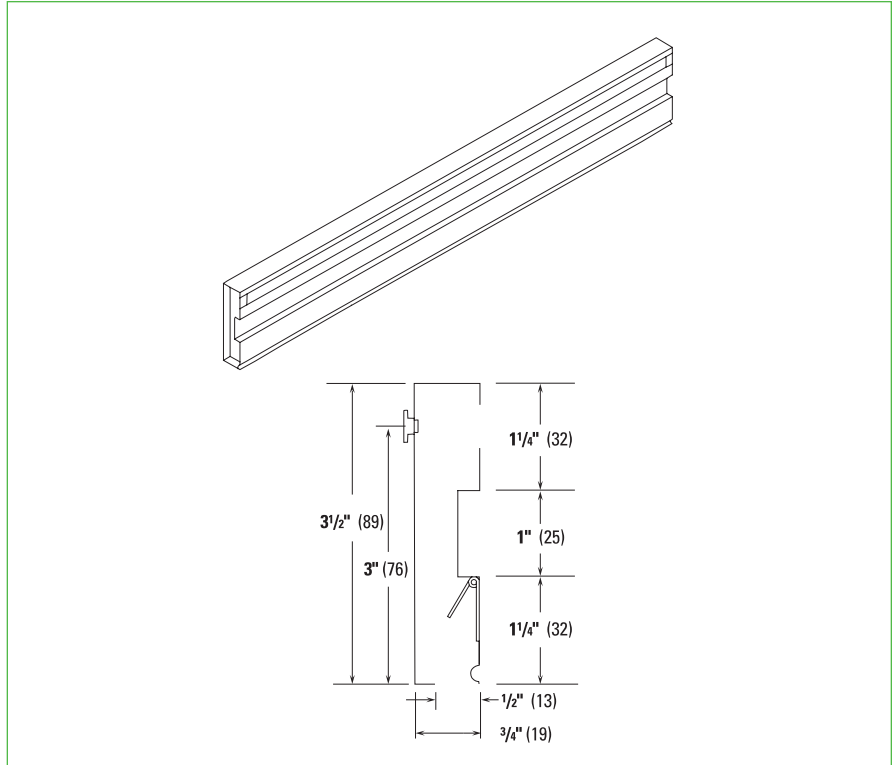
Finish

Shell

MILL

Dimensional Data - Imperial (in.) / Metric [mm]

Plenum Return Size	Troffer Length	Overall Length A	Slot Length B
LTR-4	48 in. [1219]	41 ³ / ₄ in. [1060]	41 in. [1041]
LTR-3	36 in. [914]	25 ¹ / ₄ in. [641]	24 ¹ / ₂ in. [622]
LTR-2	24 in. [610]	17 in. [432]	16 ¹ / ₄ in. [413]



✓ Product Selection Checklist

- 1] Select Module Length based on light fixture.
- 2] Select Model.

Example: 24 / LTR.

Performance Data

Model	Capacity, cfm	20	30	40	50	60	70	80	90	100
LTR-4	Static Pressure	.003	.007	.012	.020	.029	.040	.051	.065	.080
	NC	—	—	—	—	—	—	16	19	22
LTR-3	Static Pressure	.009	.021	.036	.057	.084	.112	.147	.188	.230
	NC	—	—	—	15	20	24	28	31	34
LTR-2	Static Pressure	.021	.049	.084	.130	.196	.260	.340	.440	.530
	NC	—	—	18	24	29	33	37	40	43

Performance Notes:

1. Tested in accordance with ASHRAE Standard 70-2006 "Method of Testing for Rating the Performance of Air Outlets and Inlets".
2. Air flow is in cubic feet per minute, cfm.
3. All pressures are in in. w.g.
4. NC values are based on room absorption of 10 dB re 10⁻¹² watts and one diffuser.
5. Blanks indicate NC less than 15.

Low Temperature Linear Diffuser LDLT Series



Product Features

Model LDLT

Steel Construction

2 way air pattern **LDLT/2**
 1 way air pattern **LDLT/1**
 1 way air pattern
 opposite inlet side **LDLT/1S**

Aluminum Construction

2 way pattern **ALDLT/2**
 1 way pattern **ALDLT/1**
 1 way pattern
 opposite inlet side **ALDLT/1S**

Price LDLT Series low temperature linear diffusers are designed to distribute low temperature supply air to spaces that require linear air distribution patterns, such as perimeter areas or large open interior zones. The LDLT Series incorporates an Induction Chamber (IC), which is designed to deliver high velocity thin air jets through tapered metal discharge slots. The tapered slots efficiently convert static pressure to velocity pressure causing a high rate of induction of room air and rapid mixing of the low temperature air. The result is a tight horizontal air pattern and extended throw values, even at reduced flow conditions. The good horizontal air pattern and rapid mixing of the Price Series LDLT ensure comfort is maintained in the occupied space with low temperature supply air.

The discharge slots are located along the length of the diffuser. Two or four foot diffuser lengths are available with 2 way or 1 way air patterns. Aesthetics are incorporated into the design; the 1 way air pattern is designed with discharge slots on both sides, with one side fitted with a black blank-off strip resulting in a symmetrical appearance. The unit features all metal construction without the use of plastic components.

In addition to providing good air distribution, the tapered air nozzles of the IC are configured to optimize acoustical performance and low pressure drop.

Construction features incorporated into the LDLT diffuser design to reduce the risk of condensation include:

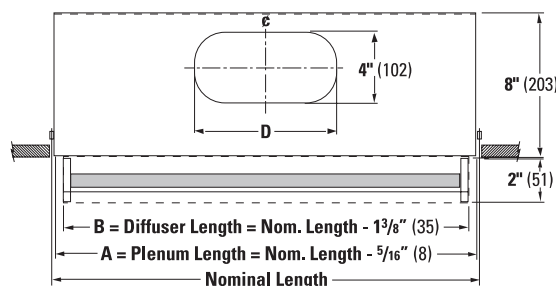
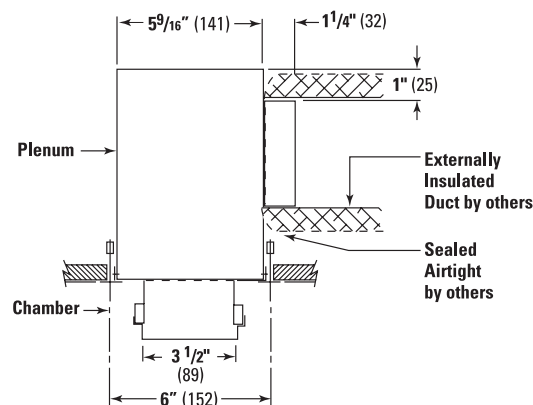
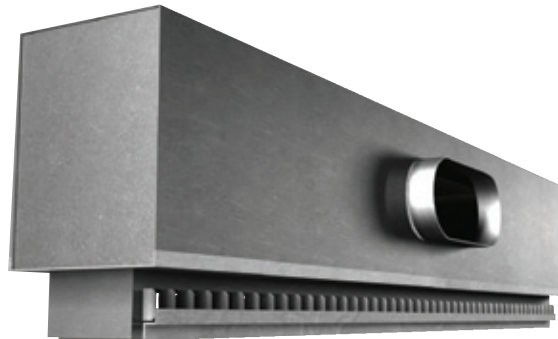
- The air pressure plenum is fixed and the gasket is sealed to the IC.
- The air pressure plenum is thermally lined with $\frac{3}{4}$ in. dual density insulation with foil facing to prevent condensation in the unconditioned plenum space.
- The IC incorporates a uniquely designed and thermally lined bottom panel preventing condensation from forming on the diffuser.

Standard White Powder Coat **B12**

Special Finishes - Available upon request **SPL**

Product Information Index

Performance Data B70-B71
 Suggested Specification B76



Nom. Round Inlet Size	Imperial (in.)		Metric [mm]	
	A	B	A	B
4, 6, 8	24	6	[610]	[152]
6, 8, 10	48	6	[1219]	[152]

Round Equivalent for Oval Inlet		
Round	Oval (4xD)	Oval (102xD)
4	4x4	[102x102]
6	4x7	[102x178]
8	4x10 $\frac{1}{8}$	[102x257]
10	4x13 $\frac{1}{2}$	[102x343]

✓ Product Selection Checklist

- 1] Select Inlet Diameter based on desired performance characteristics.
- 2] Select Diffuser Type 1 or 2 way pattern.
- 3] Select Module Length based on ceiling module.
- 4] Select Finish.

Example: LDLT/1/6/2W/48/B12

Installation Guidelines

Low Temperature Diffusers

Diffusers designed for low temperature air distribution must be installed using recommended industry practice to ensure that condensation does not form. Because installation is critical to successful performance, the following additional recommendations are brought to the attention of the installer:

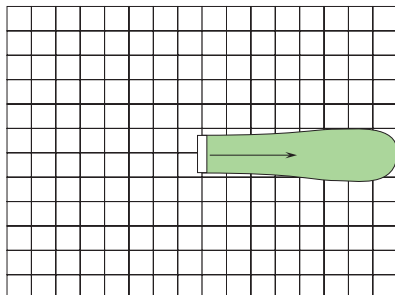
- Provide externally insulated duct, complete with vapor barrier and a suggested minimum resistivity of R3. Field install duct and duct insulation so as to tightly compress foil face insulation on the diffuser backpan.

- Seal airtight the field joint at the diffuser with industry approved duct sealer.
- In the event that the foil face lining of the insulation is punctured, repair with foil tape.

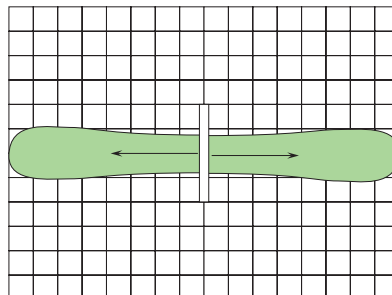
Frame Styles

Style 3 T-bar mount is offered for mounting into T-bar ceilings.

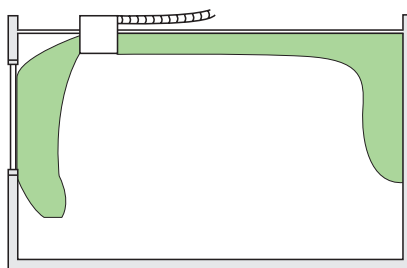
Air Pattern – LDLT Series



Typical 1 Way Air Pattern (Plan View)



Typical 2 Way Air Pattern (Plan View)



Typical 2 Way Air Pattern, Perimeter Application (Section)

The LDLT Series low temperature linear diffuser is available with either a 2 way or 1 way horizontal air pattern. Air is projected in a high induction, non-spreading air pattern. The discharge slots of the induction chamber promote long throws and maintain the air stream on the ceiling, even at low flow conditions. The LDLT Series is particularly suited to perimeter wall applications. Air can be directed toward or away from the perimeter wall or a combination of the two.

Low Temperature Linear Diffuser LDLT Series



Performance Data – 48 in. [1219] Length 1 way

Inlet Size 6 in.

				Isothermal Conditions				Cooling Conditions			
cfm	TP	SP	NC	Throw (ft)			Drop in.	Throw (ft)			Drop in.
				150 fpm	100 fpm	50 fpm		150 fpm	100 fpm	50 fpm	
40	0.02	0.02	—	1	3	12	10	1	2	5	12
60	0.04	0.03	—	3	7	22	18	3	6	9	21
80	0.08	0.07	—	5	12	30	25	4	6	15	35

Inlet Size 8 in.

				Isothermal Conditions				Cooling Conditions			
cfm	TP	SP	NC	Throw (ft)			Drop in.	Throw (ft)			Drop in.
				150 fpm	100 fpm	50 fpm		150 fpm	100 fpm	50 fpm	
40	0.02	0.02	—	1	3	12	10	1	2	5	12
60	0.04	0.04	—	3	7	22	18	3	6	9	21
80	0.07	0.07	—	5	12	30	25	4	6	15	35

Inlet Size 10 in.

				Isothermal Conditions				Cooling Conditions			
cfm	TP	SP	NC	Throw (ft)			Drop in.	Throw (ft)			Drop in.
				150 fpm	100 fpm	50 fpm		150 fpm	100 fpm	50 fpm	
40	0.02	0.02	—	1	3	12	10	1	2	5	12
60	0.04	0.04	—	3	7	22	18	3	6	9	21
80	0.07	0.07	—	5	12	30	25	4	6	15	35

Performance Data – 24 in. [610] Length 1 way

Inlet Size 4 in.

				Isothermal Conditions				Cooling Conditions			
cfm	TP	SP	NC	Throw (ft)			Drop in.	Throw (ft)			Drop in.
				150 fpm	100 fpm	50 fpm		150 fpm	100 fpm	50 fpm	
20	0.01	0.01	—	1	3	12	9	1	3	10	20
30	0.03	0.02	—	3	7	19	14	3	7	13	26
40	0.06	0.05	—	6	13	25	18	6	12	15	30
50	0.09	0.07	—	9	16	32	23	9	13	18	36
60	0.12	0.09	—	13	19	38	28	12	13	19	38

Inlet Size 6 in.

				Isothermal Conditions				Cooling Conditions			
cfm	TP	SP	NC	Throw (ft)			Drop in.	Throw (ft)			Drop in.
				150 fpm	100 fpm	50 fpm		150 fpm	100 fpm	50 fpm	
20	0.01	0.01	—	1	3	12	9	1	3	10	20
30	0.03	0.03	—	3	7	19	14	3	7	13	26
40	0.06	0.06	—	6	13	25	18	6	12	15	30
50	0.09	0.09	—	9	16	32	23	9	13	18	36
60	0.13	0.12	—	13	19	38	28	12	13	19	38

Inlet Size 8 in.

				Isothermal Conditions				Cooling Conditions			
cfm	TP	SP	NC	Throw (ft)			Drop in.	Throw (ft)			Drop in.
				150 fpm	100 fpm	50 fpm		150 fpm	100 fpm	50 fpm	
20	0.01	0.01	—	1	3	12	9	1	3	10	20
30	0.02	0.02	—	3	7	19	14	3	7	13	26
40	0.04	0.04	—	6	13	25	18	6	12	15	30
50	0.07	0.07	—	9	16	32	23	9	13	18	36
60	0.10	0.10	—	13	19	38	28	12	13	19	38

Performance Notes:

- Tested in accordance with ASHRAE Standard 70-2006 "Method of Testing for Rating the Performance of Air Outlets and Inlets".
- Air flow in cubic feet per minute, cfm.
- All pressures are in in. w.g.
TP = total pressure
SP = static pressure.
- NC values are based on room absorption of 10 dB re 10⁻¹² watts and one diffuser.
- Isothermal conditions indicate supply air temperature is equal to room air temperature.
- Cooling conditions are based on a supply air temperature of 40 °F and a room temperature of 75 °F.
- Throw values are measured in feet for terminal velocities of 150 fpm (minimum), 100 fpm (middle) and 50 fpm (maximum).
- Drop is in inches at a terminal velocity of 50 fpm.
- Blanks indicate NC less than 15.

B-70

All Metric dimensions () are soft conversion.
Imperial dimensions are converted to metric and rounded to the nearest millimeter.

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Low Temperature Linear Diffuser LDLT Series



Performance Data – 48 in. [1219] Length 2 way

Inlet Size 6 in.

cfm	TP	SP	NC	Isothermal Conditions			Drop in.	Cooling Conditions			Drop in.
				150 fpm	Throw (ft) 100 fpm	50 fpm		150 fpm	Throw (ft) 100 fpm	50 fpm	
50	0.01	0.01	—	1	2	6	7	1	2	3	9
100	0.05	0.03	—	2	4	15	17	2	3	6	18
150	0.11	0.07	19	4	10	18	20	3	5	9	27
200	0.20	0.14	26	8	15	22	24	4	6	12	36

Inlet Size 8 in.

cfm	TP	SP	NC	Isothermal Conditions			Drop in.	Cooling Conditions			Drop in.
				150 fpm	Throw (ft) 100 fpm	50 fpm		150 fpm	Throw (ft) 100 fpm	50 fpm	
50	0.01	0.01	—	1	2	6	7	1	2	3	9
100	0.04	0.03	—	2	4	15	17	2	3	6	18
150	0.09	0.08	16	4	10	18	20	3	5	9	27
200	0.16	0.14	24	8	15	22	24	4	6	12	36

Inlet Size 10 in.

cfm	TP	SP	NC	Isothermal Conditions			Drop in.	Cooling Conditions			Drop in.
				150 fpm	Throw (ft) 100 fpm	50 fpm		150 fpm	Throw (ft) 100 fpm	50 fpm	
50	0.01	0.01	—	1	2	6	7	1	2	3	9
100	0.04	0.04	—	2	4	15	17	2	3	6	18
150	0.08	0.08	15	4	10	18	20	3	5	9	27
200	0.14	0.13	23	8	15	22	24	4	6	12	36

Performance Data – 24 in. [610] Length 2 way

Inlet Size 4 in.

cfm	TP	SP	NC	Isothermal Conditions			Drop in.	Cooling Conditions			Drop in.
				150 fpm	Throw (ft) 100 fpm	50 fpm		150 fpm	Throw (ft) 100 fpm	50 fpm	
40	0.03	0.02	—	2	4	15	12	2	4	12	26
60	0.07	0.04	—	4	8	18	14	4	8	13	29
80	0.12	0.07	15	7	12	24	19	7	11	15	33
100	0.18	0.10	20	10	15	30	24	10	12	17	37

Inlet Size 6 in.

cfm	TP	SP	NC	Isothermal Conditions			Drop in.	Cooling Conditions			Drop in.
				150 fpm	Throw (ft) 100 fpm	50 fpm		150 fpm	Throw (ft) 100 fpm	50 fpm	
40	0.02	0.02	—	2	4	15	12	2	4	12	26
60	0.05	0.04	—	4	8	18	14	4	8	13	29
80	0.08	0.07	—	7	12	24	19	7	11	15	33
100	0.13	0.11	19	10	15	30	24	10	12	17	37

Inlet Size 8 in.

cfm	TP	SP	NC	Isothermal Conditions			Drop in.	Cooling Conditions			Drop in.
				150 fpm	Throw (ft) 100 fpm	50 fpm		150 fpm	Throw (ft) 100 fpm	50 fpm	
40	0.02	0.02	—	2	4	15	12	2	4	12	26
60	0.04	0.04	—	4	8	18	14	4	8	13	29
80	0.07	0.07	—	7	12	24	19	7	11	15	33
100	0.11	0.10	18	10	15	30	24	10	12	17	37

Performance Notes:

- Tested in accordance with ASHRAE Standard 70-2006 "Method of Testing for Rating the Performance of Air Outlets and Inlets".
- Air flow in cubic feet per minute, cfm.
- All pressures are in in. w.g.
TP = total pressure
SP = static pressure.
- NC values are based on room absorption of 10 dB re 10⁻¹² watts and one diffuser.
- Isothermal conditions indicate supply air temperature is equal to room air temperature.
- Cooling conditions are based on a supply air temperature of 40 °F and a room temperature of 75 °F.
- Throw values are measured in feet for terminal velocities of 150 fpm (minimum), 100 fpm (middle) and 50 fpm (maximum).
- Drop is in inches at a terminal velocity of 50 fpm.
- Blanks indicate NC less than 15.

Ceiling Component Diffusers Special Manufacture

Introduction

For over 50 years, Price has built an enviable reputation as a qualified designer and dependable supplier of specialized ceiling component products. These are often required to satisfy a unique function without compromising air distribution performance.

Illustrated on these pages are a few examples of special manufacture ceiling component diffusers. We have a commendable track record of successful applications, and invite your inquiry.

Special Split Heating / Cooling T-bar Diffuser

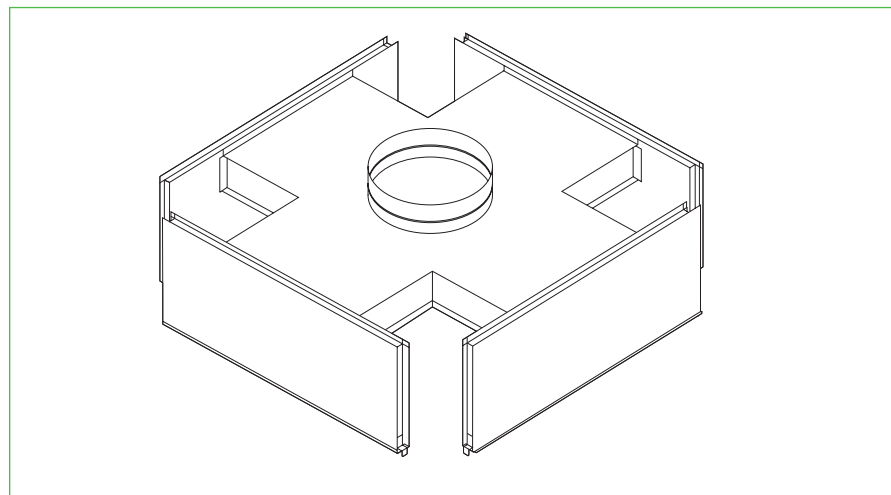
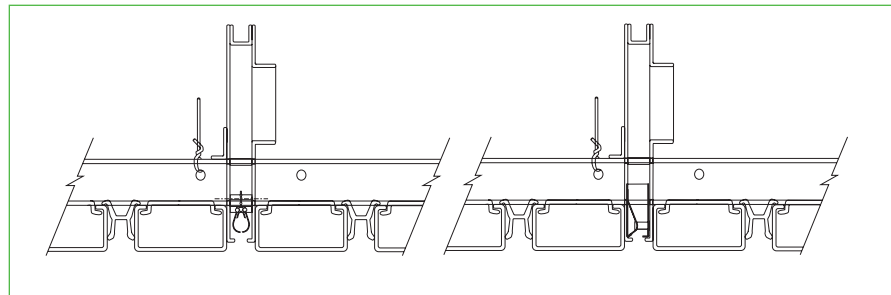
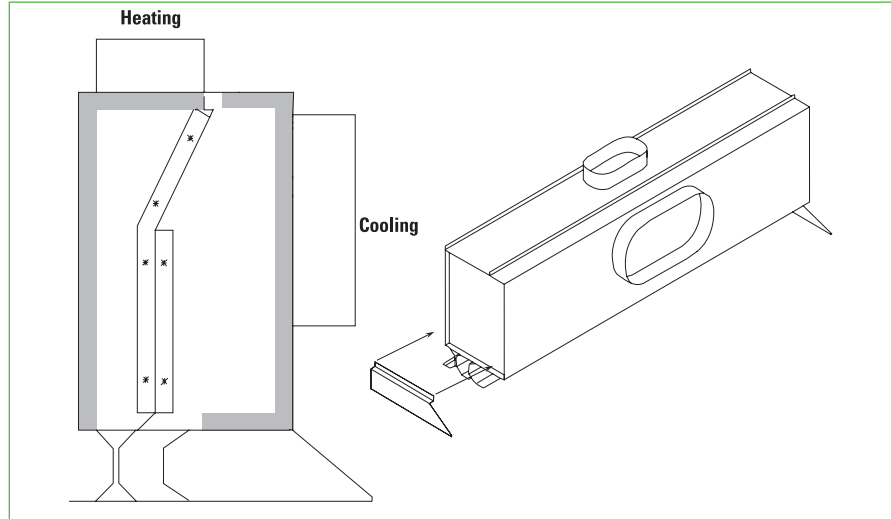
- Price Split Heating / Cooling T-bar diffusers are designed to provide either a vertical air flow when heating is required or a horizontal air flow when cooling is required.
- Changeover from heating to cooling made upstream of diffuser.
- Designed to be in systems with separate heating and cooling supplies.

Special Integrated T-bar Diffusers for Metal Linear Ceilings

- Price fixed horizontal pattern T-bar diffusers are designed to incorporate into custom metal linear ceiling systems.

Special 4 Sided Light Troffer Diffuser

- Price 4 sided light troffer diffusers are designed for high capacity and omni-directional air flow.
- 2 and 3 sided configurations are also available.



Ceiling Component Diffusers

Suggested Specification

T-bar Diffusers

TBD2 / TBDI2

Supply Diffuser

Supply and install Price TBD2/TBDI2 series of T-bar supply diffusers of sizes and capacities as shown on the drawings (on the diffuser schedule). Diffuser shall have 1 in. [25] or 1 1/2 in. [38] slot and be available in 1 or 2 slot models. On 2 slot models, diffuser shall be supplied with an extruded aluminum center T painted B12 White = white powder coat. Paint finish shall pass 500 hours of salt spray exposure with no measurable creep in accordance with ASTM D1654 and 1000 hours with no rusting or blistering as per ASTM D610 and ASTM D714. Diffuser shall feature curved extruded aluminum pattern controllers, factory installed for the specified air pattern. Pattern controllers shall be capable of field adjustment for horizontal air patterns toward or away from the inlet. Two slot diffusers may be adjusted for vertical discharge. Pattern controllers are to be painted black. The diffuser plenum shall be constructed out of coated steel. The visible face of the plenum shall be factory finished in matte black. Internal or external insulation is available as an option (model TBDI).

TBD3 / TBDI3

Supply Diffuser

Supply and install Price TBD3/TBDI3 series of T-bar supply diffusers of sizes and capacities as shown on the drawings (on the diffuser schedule). Diffuser shall have 1/2 in. [13], 3/4 [19] or 1 in. [25] slot and be available in 1, 2, 3 or 4 slot models. On 2, 3, 4 slot models, diffuser shall be supplied with an extruded aluminum center T painted B12 White = white powder coat. Paint finish shall pass 500 hours of salt spray exposure with no measurable creep in accordance with ASTM D1654 and 1000 hours with no rusting or blistering as per ASTM D610 and ASTM D714. Diffuser shall feature extruded aluminum "ice tong" pattern controllers and produce 180° control of the air pattern. Pattern controllers are to be painted black. Diffuser plenum shall be constructed of coated steel. Internal or external insulation is available as an option (model TBDI).

TBR / TBRI

Return Diffuser

Supply and install Price TBR/TBRI series of T-bar return diffusers of sizes and capacities as shown on the drawings (on the diffuser schedule). Return units shall have 1/2 in. [13], 3/4 in. [19], 1 in. [25], or 1 1/2" [38] slot and be available in 1, 2, 3 or 4 slot models. On 2, 3 and 4 slot models, an extruded aluminum center T painted white is to be supplied. Diffuser plenum shall be constructed of coated steel. Internal insulation is available as an option (model TBRI).

TBD4 / TBDI4

Supply Diffuser

Supply and install Price TBD4/TBDI4 series of T-bar supply diffusers of sizes and capacities as shown on the drawings (on the diffuser schedule). Diffuser shall have 3/4 in. [19], 1 in. [25] or 1 1/2 in. [38] slot and be available in 1, 2, 3 or 4 slot models. On 2, 3 or 4 slot models diffuser shall be supplied with an extruded aluminum center T painted B12 White = white powder coat. Paint finish shall pass 500 hours of salt spray exposure with no measurable creep in accordance with ASTM D1654 and 1000 hours with no rusting or blistering as per ASTM D610 and ASTM D714. Diffuser shall feature extruded aluminum pattern controllers fitted with a tight sealing extruded vinyl blade seal. Pattern controllers shall provide an adjustable air pattern toward or away from the inlet. Two and four slot diffusers may also be adjusted to vertical air pattern. Pattern controllers are to be painted black. Diffuser plenum shall be constructed out of coated steel. Internal or external insulation is available as an option (model TBDI).

TBD6 / TBDI6

Supply Diffuser

Supply and install Price TBD6/TBDI6 series of T-bar supply diffuser of sizes and capacities as shown on the drawings (on the diffuser schedule). Diffuser shall have a 3/8 in. [10] or 3/4 in. [19] slot and feature an aerodynamically curved extruded aluminum high induction pattern controller, designed for high velocity discharge. Pattern controller to be painted black. Diffuser plenum shall be constructed out of coated steel. Internal or external insulation is available as an option (model TBDI6).

TBDR6 / TBDR16

Return Diffuser

Supply and install Price TBDR6/TBDR16 series of T-bar combination supply and return diffusers of sizes and capacities as shown on the drawings (on the diffuser schedule). Supply section shall have a 3/8 in. [10] or 3/4 in. [19] slot and feature an aerodynamically curved extruded aluminum high induction pattern controller, designed for high velocity discharge. Pattern controller to be painted black. Return section is to be integral and will feature a 2 in. [50] return slot. Plenum shall be constructed out of coated steel. Internal or external insulation is available as an option (model TBDR16).

TBDV6 / TBDVI6

Supply / Center Vertical Discharge

Supply and install Price TBDV6/TBDVI6 series of T-bar supply diffusers of sizes and capacities as shown on the diffuser schedule. Diffuser shall feature a 1 in. [25] center vertical discharge section, utilizing extruded aluminum "ice tong" pattern controllers to produce an air pattern adjustable through 180°. The end sections of the diffuser are supplied with a 3/8 in. [10] or 3/4 in. [19] slot and use an aerodynamically curved extruded aluminum high induction pattern controller, designed for high velocity discharge. All pattern controllers are to be painted black. Diffuser plenum shall be constructed out of coated steel. Internal or external insulation is available as an option (model TBDVI6).

TBDRV6 / TBDRVI6

Supply / Supply-Return

Supply and install Price TBDRV6/TBDRVI6 series of combination supply and supply-return diffusers of sizes and capacities as shown on the plans and schedule. Supply section shall feature a 1 in. [25] center vertical discharge section utilizing extruded aluminum "ice tong" pattern controllers to produce an air pattern adjustable through 180°. The end sections of the diffuser are supplied with a 3/8 in. [10] or 3/4 in. [19] slot and use an aerodynamically curved extruded aluminum high induction pattern controller, designed for high velocity discharge and low sound and pressure drop. All pattern controllers are to be painted black. Diffuser return section is to be integral and will feature a 2 in. [50] return slot. Plenum is to be constructed of coated steel. Internal or external insulation is available as an option (model TBDRVI6).

Ceiling Component Diffusers

Suggested Specification



T-bar Diffusers

TBD16 HC

Thermal Powered Diffuser

Supply and install Price model TBD16 HC T-bar supply slot diffusers of the sizes and capacities as shown on the drawings and diffuser schedules. The diffuser shall have an outlet consisting of two slots. One slot shall consist of an aerodynamically curved pattern controller, designed for a tight horizontal air pattern with high induction and high velocity discharge. A second discharge slot, parallel to the first, shall be designed to produce a strong vertical air pattern, suitable for heating applications. This vertical discharge slot shall incorporate a trim adjustment volume damper. A self-powered, thermally actuated two position deflector shall be incorporated onto the entrance to the discharge slots in order to direct the air flow to the horizontal slot when supply air temperatures are below 69 °F [21 °C] and to the vertical slot when the supply air temperature is above 81 °F [27 °C].

The horizontal pattern control blade shall be of extruded aluminum and finished in black. The centre tee between the two slots shall be finished in B12 white powder coat. The remaining face surfaces shall have a Mill finish. Paint finish shall pass 500 hours of salt spray exposure with no measurable creep in accordance with ASTM D1654 and 1000 hours with no rusting or blistering as per ASTM D610 and ASTM D714. The diffuser shall be complete with a full length plenum, 12 in. [305] high, fabricated of coated steel. Internal or external insulation is available as an option.

Performance data shall be based on tests conducted in accordance with ASHRAE Standard 70-2006 and shall be available for both horizontal and vertical air patterns.

TBD7 / TBDI7

Supply Diffuser

Supply and install Price TBD7/TBDI7 Series of T-bar supply diffusers of sizes and capacities as shown on the drawings (on the diffuser schedule). Diffuser shall have a 3/4 in. [19] slot and be available in 1, 2, 3 and 4 slot models. Diffuser shall feature fixed louvered pattern controllers, which provide high air capacity while maintaining the architectural appeal of the ceiling. Diffuser shall be available in one or two way air pattern. Diffuser face and louvered pattern controllers are to be painted white. Diffuser plenum shall be constructed of coated steel. Internal or external insulation is available as an option (model TBDI).

TBR7 / TBRI7

Return Diffuser

Supply and install Price TBR/TBRI7 Series of T-bar return diffusers of sizes and capacities as shown on the drawings (on the diffuser schedule). Return units shall have a 3/4 in. [19] slot and be available in 1, 2, 3 and 4 slot models and shall match in appearance the TBD/TBDI7 series when viewed from the diffuser face. Diffuser face to be painted B12 White = white powder coat Paint. finish shall pass 500 hours of salt spray exposure with no measurable creep in accordance with ASTM D1654 and 1000 hours with no rusting or blistering as per ASTM D610 and ASTM D714. Plenum to be constructed of coated steel. Internal insulation is available as an option (model TBRI).

TBD8 / TBDI8

Supply Diffuser

Supply and install Price TBD8/TBDI8 Series of T-bar supply diffusers of sizes and capacities as shown on the drawings (on the diffuser schedule). Diffuser shall have 1/2 in. [13], 3/4 in. [19] or 1 in. [25] slot and be available in 1 or 2 slot models. On 2 slot models, diffusers shall be supplied with an extruded aluminum center T painted B12 White = white powder coat. Paint finish shall pass 500 hours of salt spray exposure with no measurable creep in accordance with ASTM D1654 and 1000 hours with no rusting or blistering as per ASTM D610 and ASTM D714. Diffuser shall feature extruded aluminum "ice tong" pattern controllers and produce 180° control of the air pattern. Pattern controllers are to be painted black. Diffuser plenum is to feature a sloped-shoulder design in order to produce an air pattern with short horizontal projection and wide horizontal spread. Diffuser plenum is to be constructed of coated steel and externally lined with 1/2 in. thick [13] foil-backed fiberglass insulation (model TBDI).

TBR / TBRI8

Return Diffuser

Supply and install Price TBR/TBRI8 Series of T-bar return diffusers of sizes and capacities as shown on the drawings (on the diffuser schedule). Return units shall have 1/2 in. [13], 3/4 in. [19] or 1 in. [25] slot and be available in 1 or 2 slot models. On 2 slot models, an extruded aluminum center T painted B12 White = white powder coat is to be supplied. Paint finish shall pass 500 hours of salt spray exposure with no measurable creep in accordance with ASTM D1654 and 1000 hours with no rusting or blistering as per ASTM D610 and ASTM D714. Diffuser plenum shall be constructed of coated steel. Internal insulation is available as an option (model TBRI).

Insulation

Externally insulated units shall be wrapped with 1/2 in. [13] thick aluminum foil-backed insulation (AFI).

Internally insulated models shall be lined with 1/4 in. [6] thick fiber free foam or coated fiberglass insulation.

The foam insulation shall meet the requirements of UL181 / UL723 - ASTM E84 Flame Spread of less than 25 & Smoke Generation of less than 50, ASHRAE 62-1089 / ATS 1000.01 Toxic Combustion Bi-products, UL181 Air Erosion and ASTM C665 Fungi Resistance.

LTA / LTF / LTN

Light Troffer Diffuser

Supply and install Price LTA/LTF/LTN series of light troffer diffusers of sizes and capacities as show on the plans and schedule.

LTA

Provide diffusers with hinged pattern controllers to control discharge from horizontal to vertical and provide trim dampering. Pattern controllers are to be adjustable through the discharge slots of the diffuser-fixture combination.

LTF

Provide diffusers with fixed aerodynamically curved pattern controllers are to provide superior horizontal air pattern.

LTN

Provide diffusers without pattern controllers for use in regressed slot light fixtures.

Diffusers to have oval side inlets (on single type units and saddle type low profile units) and round inlets (on saddle type units). Diffusers shall be designed to integrate with the light fixture without the requirements of screw type fasteners. Diffuser manufacturer is to ensure compatibility between diffusers and light fixture. Diffuser is to be constructed of coated steel. Where insulation is required, specify exterior foil-backed 1/2 in. [13] insulation.

Fire-Rated Diffusers

Suggested Specification

TBD2-FR / TBDI2-FR

Supply Diffuser

Supply and install Price TBD2-FR/TBDI2-FR series of T-bar Fire-Rated diffuser assemblies of sizes and capacities as shown on the drawings (on the diffuser schedule). Diffusers shall be Fire-Rated assemblies listed in the UL, Underwriter' Laboratories Fire Resistance Directory and in the ULC, Underwriter' Laboratories of Canada Equipment and Materials Directory. Diffusers shall meet UL time and temperature test criteria and NFPA 90A requirements. This design is intended for use in an exposed grid suspended ceiling (T-bar Lay-in) with up to a three hour rating and must be installed in accordance with installation instructions. The diffuser plenum shall be constructed out of coated steel and include a flap damper with the thermal blanket encased out of the air stream to protect it from erosion and deterioration. The flap damper shall sit flush against the plenum wall for low noise and unrestricted air flow. It shall also have a positive spring closure and locking clip for added safety. Fuse link replacement (optional 212 °F available) may be easily accomplished with the removal and reinsertion of one screw. Diffuser shall have 1 in. [25] or 1 1/2 in. [38] slot and be available in 1 or 2 slot models. On 2 slot models, the diffuser shall be supplied with an extruded aluminum center T painted B12 White Powder Coat. Paint finish shall pass 500 hours of salt spray exposure with no measurable creep in accordance with ASTM D1654 and 1000 hours with no rusting or blistering as per ASTM D610 and ASTM D714. Diffuser shall feature curved extruded aluminum pattern controllers, factory installed for the specified air pattern. Pattern controllers shall be capable of field adjustment for horizontal air patterns toward or away from the inlet, and for vertical air patterns. Pattern controllers are to be painted black. The interior of the plenum shall be factory finished in matte black.

Options

- 212 °F [100 °C] fusible link.
- TBDI2-FR internal 1/4 in. [6] coated fiberglass insulation.

TBD3-FR / TBDI3-FR

Supply Diffuser

Supply and install Price TBD3-FR/TBDI3-FR series of T-bar supply diffusers of sizes and capacities as shown on the drawings (on the diffuser schedule). Diffusers shall be Fire-Rated assemblies listed in the UL, Underwriter' Laboratories Fire Resistance Directory and in the ULC, Underwriter' Laboratories of Canada Equipment and Materials Directory. Diffusers shall meet UL time and temperature test criteria and NFPA 90A requirements. This design is intended for use in an exposed grid suspended ceiling (T-bar Lay-in) with up to a three hour rating and must be installed in accordance with installation instructions. The diffuser plenum shall be constructed out of coated steel and include a flap damper with the thermal blanket encased out of the air stream to protect it from erosion and deterioration. The flap damper shall sit flush against the plenum wall for low noise and unrestricted air flow. It shall also have a positive spring closure and locking clip for added safety. Fuse link replacement (optional 212 °F available) may be easily accomplished with the removal and reinsertion of one screw. Diffuser shall have 1/2 in. [13], 3/4 in. [19] or 1 in. [25] slot and be available in 1 and 2 slot models. On 2 slot models, the diffuser shall be supplied with an extruded aluminum center T painted B12 White Powder Coat. Paint finish shall pass 500 hours of salt spray exposure with no measurable creep in accordance with ASTM D1654 and 1000 hours with no rusting or blistering as per ASTM D610 and ASTM D714. Diffuser shall feature extruded aluminum "ice tong" pattern controllers and produce 180° control of the air pattern. Pattern controllers are to be painted black.

Options

- 212 °F [100 °C] fusible link.
- TBDI3-FR internal 1/4 in. [6] coated fiberglass insulation.

TBD4-FR / TBDI4-FR

Supply Diffuser

Supply and install Price TBD4-FR/TBDI4-FR series of T-bar supply diffusers of sizes and capacities as shown on the drawings (on the diffuser schedule). Diffusers shall be Fire-Rated assemblies listed in the UL, Underwriter' Laboratories Fire Resistance Directory and in the ULC, Underwriter' Laboratories of Canada Equipment and Materials Directory. Diffusers shall meet UL time and temperature test criteria and NFPA 90A requirements. This design is intended for use in an exposed grid suspended ceiling (T-bar Lay-in) with up to a three hour rating and must be installed in accordance with installation instructions. The diffuser plenum shall be constructed out of coated steel and include a flap damper with the thermal blanket encased out of the air stream to protect it from erosion and deterioration. The flap damper shall sit flush against the plenum wall for low noise and unrestricted air flow. It shall also have a positive spring closure and locking clip for added safety. Fuse link replacement (optional 212 °F available) may be easily accomplished with the removal and reinsertion of one screw. Diffuser shall have 3/4 in. [19], 1 in. [25] OR 1 1/2 in. [38] slot and be available in 1 or 2 slot models. On 2 slot models, the diffuser shall be supplied with an extruded aluminum center T painted B12 White Powder Coat. Paint finish shall pass 500 hours of salt spray exposure with no measurable creep in accordance with ASTM D1654 and 1000 hours with no rusting or blistering as per ASTM D610 and ASTM D714. Diffuser shall feature extruded aluminum pattern controllers fitted with a tight sealing extruded vinyl blade seal. Pattern controllers shall provide an adjustable air pattern horizontally toward or away from the inlet, and vertically. Pattern controllers are to be painted black.

Options

- 212 °F [100 °C] fusible link.
- TBDI4-FR internal 1/4 in. [6] coated fiberglass insulation.

Low Temperature Diffusers

Suggested Specification

LDLT/ALDLT

Linear Low Temperature Diffuser

Furnish and install Price model (LDLT steel, ALDLT aluminum) low temperature linear diffusers of sizes designated by the plan and air distribution schedule. Diffuser shall consist of a supply air plenum lined with $\frac{3}{4}$ in. dual density fibreglass with foil face, which meets requirement of NFPA 90A and UL181. The supply air plenum shall be gasket sealed to the induction chamber. The diffuser induction chamber shall project the supply air through multiple tapered discharge slots, and shall be all-metal construction. A distribution baffle shall be provided to ensure equal pressurization across the induction chamber. The chamber shall be internally insulated with $\frac{1}{2}$ in. fibreglass with foil face, which meets requirement of NFPA 90A and UL181.

The unit shall be designed and verified by test to prevent condensation from forming on the surface of the unit at 40 °F supply temperature and ceiling plenum conditions of 78 °F, 60% humidity.

Units shall be tested in accordance with ASHRAE Standard 70-2006. Performance data shall be provided for throw and drop at 40 °F supply air temperature with a room temperature of 75 °F.

Finish shall be B12 White Powder Coat. Paint finish shall pass 500 hours of salt spray exposure with no measurable creep in accordance with ASTM D1654 and 1000 hours with no rusting or blistering as per ASTM D610 and ASTM D714.



