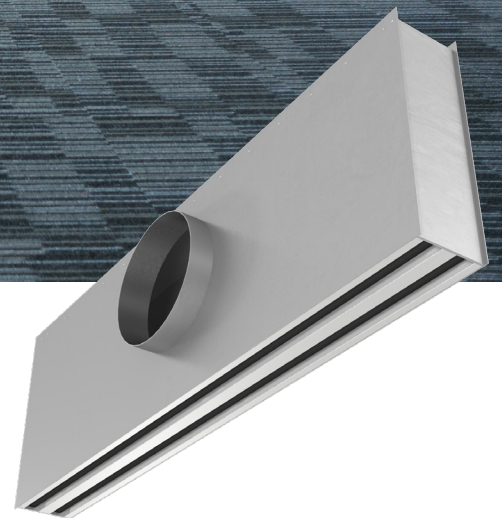


# TBD2/3/4/8

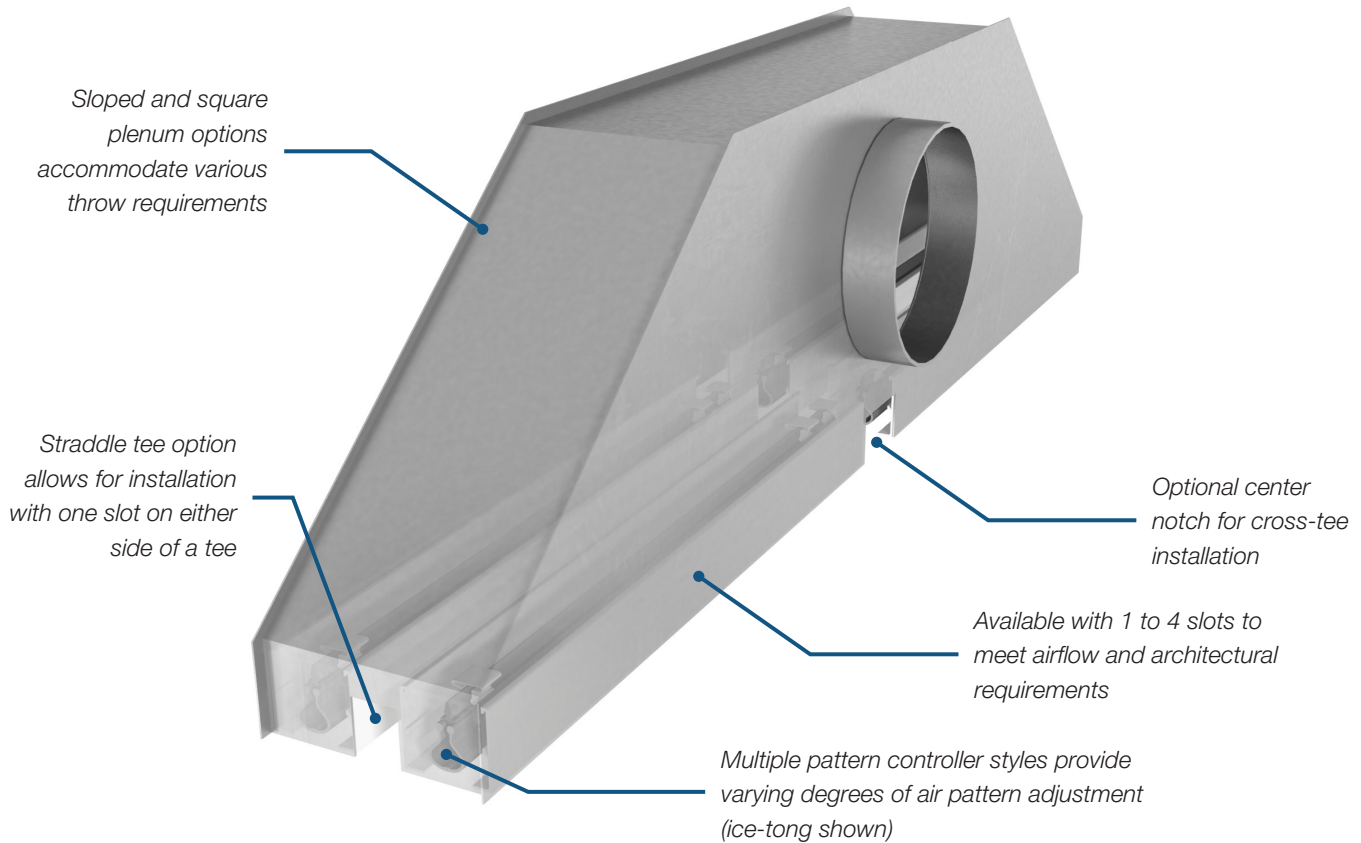
T-BAR DIFFUSER



# TBD2/3/4/8

## T-Bar Diffuser

T-bar diffusers consists of a coated steel casing with extruded aluminum center tee (minimum 2 slot) and pattern controllers. Air pattern controllers are available in multiple styles to provide various air patterns with a high induction ratio for a high degree of thermal comfort. Matching return diffusers are available to complement supply units and maintain the architectural appearance throughout the space.



## CEILING SYSTEM COMPATIBILITY

- + This diffuser can be ordered with a center notch option that bisects the diffuser length so that it can be installed on top of a cross tee.
- + A straddle tee option allows T-bar diffusers to be installed with one discharge slot on either side of a tee.
- + T-bar diffusers are also available with factory installed T-Bars or T-Bar clips on the exterior of the unit for ease of installation.
- + For drywall ceiling applications, a plaster frame is required for mounting.

## SLOPED SHOULDER PLENUM

- + A sloped shoulder plenum option is available for diffusers with “ice-tong” style pattern controllers.
- + The sloped plenum provides short horizontal throws and wide horizontal spreads, which is ideal for small spaces to reduce the chance of draft in the occupied zone.

## INSULATION OPTIONS

- + Internal insulation options include ¼ in. thick fiber free foam or coated fiberglass insulation.
- + External insulation is provided as ½ in. aluminum foil-backed fiberglass.

## RETURN DIFFUSER

- + A T-bar return diffuser is available to complement the T-bar supply diffusers.
- + The return diffuser is available with a rectangular opening in the diffuser plenum for non-ducted return applications.

## TYPICAL APPLICATIONS

The TBD series of T-bar diffusers are designed for lay-in installation in standard ceiling grids, and are typically installed along the perimeter of commercial spaces. They provide various air patterns with a high induction ratio for a high degree of thermal comfort.

### CONSTRUCTION

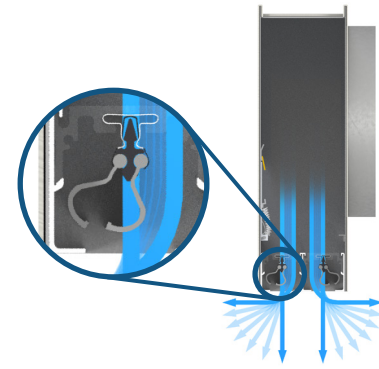
- + Slot Widths
  - 1/2 in. (TBDx50)
  - 3/4 in. (TBDx75)
  - 1 in. (TBDx100)
  - 1 1/2 in. (TBDx150)
- + Pattern Controller Style
  - Ice-tong (TBD3, TBD8)
  - Curved (TBD2)
  - Blade (TBD4)
- + Options
  - Return diffuser (TBR)
  - Sloped shoulder plenum (TBD8)
  - Internal insulation (TBDIx)
  - External insulation
  - Fire rated construction (TBxx-FR)
  - Factory installed outer T-bars
  - Aluminum plaster frame

### PATTERN CONTROLLERS

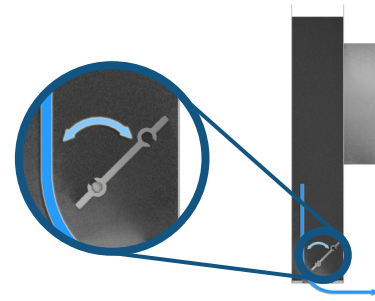
All pattern controllers on diffusers 36 in. and longer are divided into two segments to allow for split air pattern deflection.

#### Ice-Tong TBD3 & TBD8 series

- + The ice-tong style adjustable pattern controllers provide a full 180° range of air pattern adjustment for both horizontal and vertical set points.
- + When set for a horizontal air pattern, the aerodynamically curved pattern controllers produce a tight ceiling-hugging air pattern, even at low airflow rates.



Ice-Tong



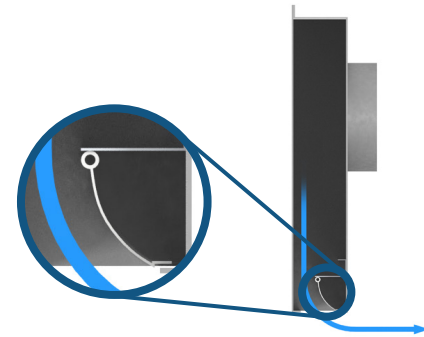
Blade

#### Blade TBD4 series

- + The blade type pattern controllers can be field adjusted to direct the airflow horizontally either toward or away from the diffuser inlet.

#### Curved TBD2 series

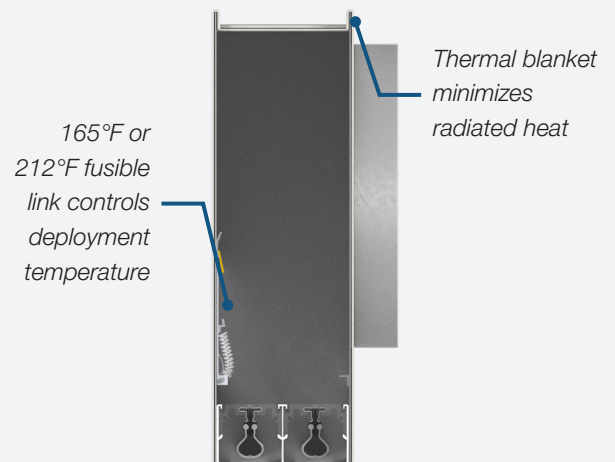
- + The curved adjustable pattern controllers provide a consistent horizontal air pattern.
- + Factory set pattern controllers also offer field adjustability for horizontal left or right airflow, or vertical airflow with the removal of the pattern controllers.



Curved

### FIRE RATED CONSTRUCTION

- + Optional Fire Rated Assembly listing in the UL Fire Resistance Directory. Fire rated models meet UL time vs. temperature test criteria and NFPA90A requirements.
- + Fire rated construction incorporates a thermal blanket and fire damper for use in fire rated T-bar ceiling applications. The butterfly-type fire damper is available with either a 165°F or 212°F fusible link.
- + Available with TBD3, TBD4, and TBR series models.



# PERFORMANCE DATA

## TBD2 – Curved Pattern Controller, 1 Slot

### Model TBD2100 1 in. Slot Width

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

### Model TBD2150 1-1/2 in. Slot Width

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

**Performance Notes:**

1. Tested in accordance with ASHRAE Standard 70 – 2006 Method of Testing for Rating the Performance of Air Outlets and Inlets.
2. Airflow is in cubic feet per minute [cfm].
3. NC, sound pressure levels, are based on a room absorption of 10 dB re 10<sup>-12</sup> Watts, and a single diffuser/grille.
4. Blanks "-" indicate an NC level below 15.
5. All pressures are in inches of water column [in. w.g.].
6. Pressures not listed can be calculated using the following formula:  
Ptotal = Pstatic + Pvelocity
7. Throw data is based on supply air and room air being at isothermal conditions.
8. Throw data is given in feet [ft] to terminal velocities of:  
150 fpm (minimum)  
100 fpm (middle)  
50 fpm (maximum)

# PERFORMANCE DATA

## TBD2 – Curved Pattern Controller, 1 Slot (continued)

<b>Model = 48 in. 6 in. Diameter Inlet</b>	<b>Flow Rate (cfm)</b>	<b>80</b>	<b>125</b>	<b>170</b>	<b>215</b>	<b>260</b>	<b>305</b>	<b>350</b>
	<b>Total Pressure (in. w.g.)</b>	0.025	0.061	0.112	0.179	0.262	0.361	0.475
	<b>Static Pressure (in. w.g.)</b>	0.014	0.035	0.065	0.104	0.153	0.210	0.277
	<b>Sound (NC)</b>	-	15	24	31	37	42	46
	<b>Throw (ft.)</b>	1-3-8	3-6-12	6-8-15	7-11-16	9-13-18	10-14-20	11-15-21
<b>Model = 48 in. 8 in. Diameter Inlet</b>	<b>Flow Rate (cfm)</b>	<b>90</b>	<b>145</b>	<b>200</b>	<b>255</b>	<b>310</b>	<b>365</b>	<b>420</b>
	<b>Total Pressure (in. w.g.)</b>	0.024	0.061	0.116	0.189	0.279	0.387	0.513
	<b>Static Pressure (in. w.g.)</b>	0.019	0.050	0.096	0.156	0.230	0.319	0.423
	<b>Sound (NC)</b>	-	16	26	33	39	43	48
	<b>Throw (ft.)</b>	2-5-11	6-9-16	8-12-16	10-15-21	12-16-23	14-17-25	15-19-26
<b>Model = 48 in. 10 in. Diameter Inlet</b>	<b>Flow Rate (cfm)</b>	<b>110</b>	<b>175</b>	<b>240</b>	<b>305</b>	<b>370</b>	<b>435</b>	<b>500</b>
	<b>Total Pressure (in. w.g.)</b>	0.028	0.071	0.134	0.216	0.318	0.440	0.582
	<b>Static Pressure (in. w.g.)</b>	0.026	0.065	0.122	0.197	0.290	0.401	0.529
	<b>Sound (NC)</b>	-	19	28	35	41	46	50
	<b>Throw (ft.)</b>	5-8-15	8-12-19	11-16-22	14-18-25	16-20-28	17-21-30	19-23-32
<b>Model = 48 in. 12 in. Diameter Inlet</b>	<b>Flow Rate (cfm)</b>	<b>150</b>	<b>200</b>	<b>250</b>	<b>300</b>	<b>350</b>	<b>400</b>	<b>450</b>
	<b>Total Pressure (in. w.g.)</b>	0.044	0.078	0.121	0.174	0.237	0.310	0.393
	<b>Static Pressure (in. w.g.)</b>	0.041	0.073	0.115	0.165	0.225	0.294	0.372
	<b>Sound (NC)</b>	-	21	27	33	37	41	45
	<b>Throw (ft.)</b>	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 previous page.

## TBD2 – Curved Pattern Controller, 2 Slot, 1-Way Discharge

### Model TBD2100 1 in. Slot Width

<b>Model = 24 in. 6 in. Diameter Inlet</b>	<b>Flow Rate (cfm)</b>	<b>90</b>	<b>125</b>	<b>160</b>	<b>195</b>	<b>230</b>	<b>265</b>	<b>300</b>
	<b>Total Pressure (in. w.g.)</b>	0.058	0.112	0.184	0.273	0.379	0.503	0.645
	<b>Static Pressure (in. w.g.)</b>	0.045	0.087	0.142	0.211	0.294	0.390	0.500
	<b>Sound (NC)</b>	16	25	33	38	43	47	51
	<b>Throw (ft.)</b>	5-8-16	8-11-20	10-15-22	12-17-25	14-19-27	16-20-29	18-22-31
<b>Model = 24 in. 8 in. Diameter Inlet</b>	<b>Flow Rate (cfm)</b>	<b>90</b>	<b>135</b>	<b>180</b>	<b>225</b>	<b>270</b>	<b>315</b>	<b>360</b>
	<b>Total Pressure (in. w.g.)</b>	0.033	0.074	0.131	0.204	0.294	0.400	0.523
	<b>Static Pressure (in. w.g.)</b>	0.029	0.064	0.114	0.178	0.257	0.349	0.456
	<b>Sound (NC)</b>	-	20	29	35	40	45	49
	<b>Throw (ft.)</b>	7-10-19	10-15-24	13-19-27	17-22-31	19-24-33	21-26-36	22-27-39
<b>Model = 24 in. 10 in. Diameter Inlet</b>	<b>Flow Rate (cfm)</b>	<b>100</b>	<b>155</b>	<b>210</b>	<b>265</b>	<b>320</b>	<b>375</b>	<b>430</b>
	<b>Total Pressure (in. w.g.)</b>	0.026	0.062	0.114	0.181	0.264	0.363	0.477
	<b>Static Pressure (in. w.g.)</b>	0.024	0.057	0.105	0.167	0.243	0.333	0.438
	<b>Sound (NC)</b>	-	18	27	34	40	44	48
	<b>Throw (ft.)</b>	9-13-23	13-20-28	18-23-33	21-26-37	24-29-41	25-31-44	27-33-47
<b>Model = 48 in. 6 in. Diameter Inlet</b>	<b>Flow Rate (cfm)</b>	<b>150</b>	<b>195</b>	<b>240</b>	<b>285</b>	<b>330</b>	<b>375</b>	<b>420</b>
	<b>Total Pressure (in. w.g.)</b>	0.078	0.132	0.200	0.281	0.377	0.487	0.611
	<b>Static Pressure (in. w.g.)</b>	0.042	0.070	0.106	0.150	0.201	0.260	0.326
	<b>Sound (NC)</b>	19	26	32	38	42	46	49
	<b>Throw (ft.)</b>	3-6-12	5-8-14	7-10-15	8-12-17	9-13-18	10-13-19	11-14-20
<b>Model = 48 in. 8 in. Diameter Inlet</b>	<b>Flow Rate (cfm)</b>	<b>170</b>	<b>225</b>	<b>280</b>	<b>335</b>	<b>390</b>	<b>445</b>	<b>500</b>
	<b>Total Pressure (in. w.g.)</b>	0.056	0.099	0.153	0.219	0.296	0.386	0.487
	<b>Static Pressure (in. w.g.)</b>	0.042	0.073	0.113	0.161	0.219	0.285	0.359
	<b>Sound (NC)</b>	15	23	30	35	39	43	47
	<b>Throw (ft.)</b>	6-8-15	7-11-17	9-13-19	11-15-21	13-16-22	14-17-24	15-18-25
<b>Model = 48 in. 10 in. Diameter Inlet</b>	<b>Flow Rate (cfm)</b>	<b>175</b>	<b>240</b>	<b>305</b>	<b>370</b>	<b>435</b>	<b>500</b>	<b>565</b>
	<b>Total Pressure (in. w.g.)</b>	0.038	0.072	0.116	0.171	0.236	0.312	0.398
	<b>Static Pressure (in. w.g.)</b>	0.032	0.060	0.097	0.142	0.196	0.259	0.331
	<b>Sound (NC)</b>	-	19	26	32	37	41	44
	<b>Throw (ft.)</b>	7-10-17	9-14-20	12-16-22	14-17-24	15-19-26	16-20-28	17-21-30
<b>Model = 48 in. 12 in. Diameter Inlet</b>	<b>Flow Rate (cfm)</b>	<b>200</b>	<b>275</b>	<b>350</b>	<b>425</b>	<b>500</b>	<b>575</b>	<b>650</b>
	<b>Total Pressure (in. w.g.)</b>	0.035	0.065	0.106	0.156	0.216	0.286	0.366
	<b>Static Pressure (in. w.g.)</b>	0.031	0.058	0.094	0.138	0.191	0.253	0.323
	<b>Sound (NC)</b>	-	18	26	31	36	40	44
	<b>Throw (ft.)</b>	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 end of section.

# PERFORMANCE DATA

## TBD2 – Curved Pattern Controller, 2 Slot, 1-Way Discharge (continued)

Model TBD2150 1-1/2 in. Slot Width

<b>Model = 24 in. 6 in. Diameter Inlet</b>	<b>Flow Rate (cfm)</b>	<b>90</b>	<b>125</b>	<b>160</b>	<b>195</b>	<b>230</b>	<b>265</b>	<b>300</b>
	<b>Total Pressure (in. w.g.)</b>	0.047	0.090	0.148	0.220	0.305	0.405	0.52
	<b>Static Pressure (in. w.g.)</b>	0.034	0.065	0.106	0.158	0.220	0.292	0.374
	<b>Sound (NC)</b>	-	22	29	35	40	44	48
	<b>Throw (ft.)</b>	5-8-15	7-11-19	9-14-21	11-16-23	13-18-25	15-19-27	17-20-29
<b>Model = 24 in. 8 in. Diameter Inlet</b>	<b>Flow Rate (cfm)</b>	<b>90</b>	<b>135</b>	<b>180</b>	<b>225</b>	<b>270</b>	<b>315</b>	<b>360</b>
	<b>Total Pressure (in. w.g.)</b>	0.026	0.059	0.105	0.164	0.237	0.322	0.421
	<b>Static Pressure (in. w.g.)</b>	0.022	0.050	0.089	0.138	0.199	0.271	0.355
	<b>Sound (NC)</b>	-	16	25	32	37	41	45
	<b>Throw (ft.)</b>	6-9-18	9-14-22	12-18-26	15-20-29	18-22-32	20-24-34	21-26-37
<b>Model = 24 in. 10 in. Diameter Inlet</b>	<b>Flow Rate (cfm)</b>	<b>100</b>	<b>155</b>	<b>210</b>	<b>265</b>	<b>320</b>	<b>375</b>	<b>430</b>
	<b>Total Pressure (in. w.g.)</b>	0.021	0.050	0.092	0.146	0.213	0.292	0.384
	<b>Static Pressure (in. w.g.)</b>	0.019	0.045	0.082	0.131	0.191	0.263	0.346
	<b>Sound (NC)</b>	-	15	24	31	36	41	45
	<b>Throw (ft.)</b>	8-12-22	12-19-27	17-22-31	20-25-35	22-27-39	24-30-42	26-32-45
<b>Model = 48 in. 6 in. Diameter Inlet</b>	<b>Flow Rate (cfm)</b>	<b>150</b>	<b>200</b>	<b>250</b>	<b>300</b>	<b>350</b>	<b>400</b>	<b>450</b>
	<b>Total Pressure (in. w.g.)</b>	0.064	0.113	0.177	0.254	0.346	0.452	0.572
	<b>Static Pressure (in. w.g.)</b>	0.027	0.048	0.076	0.109	0.148	0.193	0.245
	<b>Sound (NC)</b>	15	24	30	36	40	44	48
	<b>Throw (ft.)</b>	3-6-11	5-8-13	6-10-15	8-11-16	9-12-17	10-13-19	11-14-20
<b>Model = 48 in. 8 in. Diameter Inlet</b>	<b>Flow Rate (cfm)</b>	<b>180</b>	<b>240</b>	<b>300</b>	<b>360</b>	<b>420</b>	<b>480</b>	<b>540</b>
	<b>Total Pressure (in. w.g.)</b>	0.051	0.092	0.143	0.206	0.280	0.366	0.463
	<b>Static Pressure (in. w.g.)</b>	0.035	0.062	0.097	0.140	0.190	0.248	0.314
	<b>Sound (NC)</b>	-	22	28	34	38	42	46
	<b>Throw (ft.)</b>	6-8-14	7-11-17	9-13-19	11-14-20	13-16-22	14-17-24	14-18-25
<b>Model = 48 in. 10 in. Diameter Inlet</b>	<b>Flow Rate (cfm)</b>	<b>220</b>	<b>290</b>	<b>360</b>	<b>430</b>	<b>500</b>	<b>570</b>	<b>640</b>
	<b>Total Pressure (in. w.g.)</b>	0.049	0.086	0.132	0.188	0.254	0.330	0.417
	<b>Static Pressure (in. w.g.)</b>	0.039	0.068	0.105	0.149	0.202	0.262	0.331
	<b>Sound (NC)</b>	-	21	28	33	38	41	45
	<b>Throw (ft.)</b>	8-12-18	10-14-20	13-16-23	14-18-25	16-19-27	17-20-29	18-22-30
<b>Model = 48 in. 12 in. Diameter Inlet</b>	<b>Flow Rate (cfm)</b>	<b>275</b>	<b>355</b>	<b>435</b>	<b>515</b>	<b>595</b>	<b>675</b>	<b>755</b>
	<b>Total Pressure (in. w.g.)</b>	0.053	0.089	0.134	0.187	0.250	0.322	0.403
	<b>Static Pressure (in. w.g.)</b>	0.046	0.076	0.115	0.161	0.214	0.276	0.345
	<b>Sound (NC)</b>	15	23	29	34	38	42	45
	<b>Throw (ft.)</b>	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. Airflow is in cubic feet per minute [cfm].
3. NC, sound pressure levels, are based on a room absorption of 10 dB re 10<sup>-12</sup> Watts, and a single diffuser/grille.
4. Blanks "-" indicate an NC level below 15.
5. All pressures are in inches of water column [in. w.g.].
6. Pressures not listed can be calculated using the following formula:  
P<sub>total</sub> = P<sub>static</sub> + P<sub>velocity</sub>
7. Throw data is based on supply air and room air being at isothermal conditions.
8. Throw data is given in feet [ft] to terminal velocities of:  
150 fpm (minimum)  
100 fpm (middle)  
50 fpm (maximum)

# PERFORMANCE DATA

## TBD3 – Ice-Tong Pattern Controller, 1 Slot

### Model TBD350 1/2 in. Slot Width

Length = 24 in. Inlet = 6 in.	Total Pressure (in. w.g.)	0.053	0.120	0.214	0.334	0.481	0.654				
	Static Pressure (in. w.g.)	0.051	0.115	0.204	0.318	0.458	0.624				
	Flow Rate (cfm)	39	59	78	98	118	137				
	Sound (NC)	-	25	35	42	48	53				
	Throw (ft.)	4-7-14	7-11-19	10-14-22	12-18-25	14-19-27	17-21-30				
Length = 24 in. Inlet = 8 in.	Total Pressure (in. w.g.)	0.141	0.317	0.564							
	Static Pressure (in. w.g.)	0.139	0.312	0.554							
	Flow Rate (cfm)	70	105	140							
	Sound (NC)	26	40	49							
	Throw (ft.)	8-13-21	13-18-26	17-21-30							
Length = 48 in. Inlet = 6 in.	Total Pressure (in. w.g.)	0.020	0.045	0.080	0.124	0.179	0.244	0.319	0.403	0.498	
	Static Pressure (in. w.g.)	0.017	0.039	0.070	0.109	0.157	0.213	0.279	0.353	0.436	
	Flow Rate (cfm)	39	59	78	98	118	137	157	176	196	
	Sound (NC)	-	-	20	28	34	39	43	47	50	
	Throw (ft.)	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. Inlet = 8 in.	Total Pressure (in. w.g.)	0.045	0.100	0.178	0.278	0.401	0.546				
	Static Pressure (in. w.g.)	0.042	0.095	0.168	0.263	0.378	0.515				
	Flow Rate (cfm)	70	105	140	175	209	244				
	Sound (NC)	-	23	32	39	45	51				
	Throw (ft.)	4-6-12	6-9-16	8-12-19	10-15-21	12-16-23	14-17-25				
Length = 48 in. Inlet = 10 in.	Total Pressure (in. w.g.)	0.092	0.207	0.367	0.574						
	Static Pressure (in. w.g.)	0.089	0.201	0.357	0.558						
	Flow Rate (cfm)	109	164	218	273						
	Sound (NC)	20	33	43	50						
	Throw (ft.)	6-9-17	9-14-20	12-17-23	15-18-26						
Length = 48 in. Inlet = 12 in.	Total Pressure (in. w.g.)	0.174	0.391	0.695							
	Static Pressure (in. w.g.)	0.171	0.385	0.685							
	Flow Rate (cfm)	157	236	314							
	Sound (NC)	29	43	52							
	Throw (ft.)	9-13-20	13-17-24	16-20-28							
Length = 60 in. Inlet = 6 in.	Total Pressure (in. w.g.)	0.015	0.035	0.061	0.096	0.138	0.188	0.245	0.311	0.384	0.552
	Static Pressure (in. w.g.)	0.013	0.029	0.051	0.080	0.116	0.157	0.206	0.260	0.321	0.463
	Flow Rate (cfm)	39	59	78	98	118	137	157	176	196	235
	Sound (NC)	-	-	16	24	30	35	39	43	47	53
	Throw (ft.)	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. Inlet = 8 in.	Total Pressure (in. w.g.)	0.032	0.072	0.128	0.200	0.288	0.392	0.512			
	Static Pressure (in. w.g.)	0.029	0.066	0.118	0.184	0.265	0.361	0.472			
	Flow Rate (cfm)	70	105	140	175	209	244	279			
	Sound (NC)	-	18	27	35	41	46	50			
	Throw (ft.)	2-3-7	3-5-10	5-7-13	6-9-15	7-10-16	8-12-17	9-13-19			
Length = 60 in. Inlet = 10 in.	Total Pressure (in. w.g.)	0.063	0.143	0.253	0.396	0.570					
	Static Pressure (in. w.g.)	0.061	0.137	0.243	0.380	0.548					
	Flow Rate (cfm)	109	164	218	273	327					
	Sound (NC)	-	28	37	45	51					
	Throw (ft.)	4-5-11	5-8-14	7-11-16	9-13-18	11-14-20					
Length = 60 in. Inlet = 12 in.	Total Pressure (in. w.g.)	0.117	0.264	0.469							
	Static Pressure (in. w.g.)	0.115	0.258	0.459							
	Flow Rate (cfm)	157	236	314							
	Sound (NC)	24	37	46							
	Throw (ft.)	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. Airflow is in cubic feet per minute [cfm].
3. NC, sound pressure levels, are based on a room absorption of 10 dB re 10<sup>-12</sup> Watts, and a single diffuser/grille.
4. Blanks "-" indicate an NC level below 15.
5. All pressures are in inches of water column [in. w.g.].
6. Pressures not listed can be calculated using the following formula:  
Ptotal = Pstatic + Pvelocity
7. Throw data is based on supply air and room air being at isothermal conditions.
8. Throw data is given in feet [ft] to terminal velocities of:  
150 fpm (minimum)  
100 fpm (middle)  
50 fpm (maximum)
9. Blank area outside recommended operating range.
10. Does not include effects of ceiling radiation damper (TBD3-FR).



# PERFORMANCE DATA

## TBD3 – Ice-Tong Pattern Controller, 1 Slot (continued)

### Model TBD375 3/4 in. Slot Width

Length = 24 in. Inlet = 6 in.	Total Pressure (in. w.g.)	0.040	0.090	0.159	0.249	0.358	0.488	0.637			
	Static Pressure (in. w.g.)	0.037	0.084	0.149	0.233	0.336	0.457	0.597			
	Flow Rate (cfm)	39	59	78	98	118	137	157			
	Sound (NC)	-	22	33	41	48	54	58			
	Throw (ft.)	3-6-13	6-10-19	9-13-22	11-16-25	13-19-27	15-21-30	17-22-32			
Length = 24 in. Inlet = 8 in.	Total Pressure (in. w.g.)	0.102	0.229	0.406	0.635						
	Static Pressure (in. w.g.)	0.099	0.223	0.396	0.619						
	Flow Rate (cfm)	70	105	140	175						
	Sound (NC)	26	41	52	60						
	Throw (ft.)	8-11-21	11-17-26	15-21-30	19-24-33						
Length = 24 in. Inlet = 10 in.	Total Pressure (in. w.g.)	0.220	0.495	0.880							
	Static Pressure (in. w.g.)	0.217	0.489	0.870							
	Flow Rate (cfm)	109	164	218							
	NC	42	57	68							
	Throw (ft.)	12-18-26	18-23-32	22-26-37							
Length = 48 in. Inlet = 6 in.	Total Pressure (in. w.g.)	0.014	0.032	0.057	0.090	0.129	0.176	0.229	0.290	0.358	0.516
	Static Pressure (in. w.g.)	0.012	0.027	0.047	0.074	0.107	0.145	0.189	0.240	0.296	0.426
	Flow Rate (cfm)	39	59	78	98	118	137	157	176	196	235
	Sound (NC)	-	-	-	20	27	33	38	42	46	53
	Throw (ft.)	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. Inlet = 8 in.	Total Pressure (in. w.g.)	0.033	0.075	0.133	0.208	0.299	0.408	0.532			
	Static Pressure (in. w.g.)	0.031	0.069	0.123	0.192	0.277	0.377	0.492			
	Flow Rate (cfm)	70	105	140	175	209	244	279			
	Sound (NC)	-	19	29	37	44	50	55			
	Throw (ft.)	2-5-10	5-8-15	7-10-19	9-13-21	10-15-23	12-17-25	14-19-26			
Length = 48 in. Inlet = 10 in.	Total Pressure (in. w.g.)	0.067	0.151	0.269	0.421	0.606					
	Static Pressure (in. w.g.)	0.065	0.146	0.259	0.405	0.584					
	Flow Rate (cfm)	109	164	218	273	327					
	Sound (NC)	18	33	44	52	59					
	Throw (ft.)	5-8-16	8-12-20	11-16-23	13-18-26	16-20-29					
Length = 48 in. Inlet = 12 in.	Total Pressure (in. w.g.)	0.124	0.279	0.496							
	Static Pressure (in. w.g.)	0.122	0.273	0.486							
	Flow Rate (cfm)	157	236	314							
	Sound (NC)	30	45	56							
	Throw (ft.)	8-12-20	12-17-24	15-20-28							
Length = 60 in. Inlet = 6 in.	Total Pressure (in. w.g.)	0.011	0.024	0.042	0.066	0.095	0.129	0.169	0.214	0.264	0.380
	Static Pressure (in. w.g.)	0.008	0.018	0.032	0.050	0.073	0.099	0.129	0.163	0.202	0.290
	Flow Rate (cfm)	39	59	78	98	118	137	157	176	196	235
	Sound (NC)	-	-	-	-	21	26	31	36	40	46
	Throw (ft.)	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. Inlet = 8 in.	Total Pressure (in. w.g.)	0.024	0.054	0.095	0.149	0.214	0.292	0.381	0.482	0.595	
	Static Pressure (in. w.g.)	0.021	0.048	0.085	0.133	0.192	0.261	0.341	0.431	0.533	
	Flow Rate (cfm)	70	105	140	175	209	244	279	314	349	
	Sound (NC)	-	-	22	31	37	43	48	52	56	
	Throw (ft.)	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. Inlet = 10 in.	Total Pressure (in. w.g.)	0.047	0.106	0.188	0.294	0.423	0.576				
	Static Pressure (in. w.g.)	0.045	0.100	0.178	0.278	0.401	0.546				
	Flow Rate (cfm)	109	164	218	273	327	382				
	Sound (NC)	-	26	36	45	51	57				
	Throw (ft.)	3-5-9	5-7-14	6-9-16	8-11-18	9-14-20	11-15-22				
Length = 60 in. Inlet = 12 in.	Total Pressure (in. w.g.)	0.085	0.191	0.340	0.532						
	Static Pressure (in. w.g.)	0.083	0.186	0.330	0.516						
	Flow Rate (cfm)	157	236	314	393						
	Sound (NC)	23	38	48	57						
	Throw (ft.)	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. Airflow is in cubic feet per minute [cfm].
3. NC, sound pressure levels, are based on a room absorption of 10 dB re 10<sup>-12</sup> Watts, and a single diffuser/grille.
4. Blanks "-" indicate an NC level below 15.
5. All pressures are in inches of water column [in. w.g.].
6. Pressures not listed can be calculated using the following formula:  
Ptotal = Pstatic + Pvelocity
7. Throw data is based on supply air and room air being at isothermal conditions.
8. Throw data is given in feet [ft] to terminal velocities of:  
150 fpm (minimum)  
100 fpm (middle)  
50 fpm (maximum)
9. Blank area outside recommended operating range.
10. Does not include effects of ceiling radiation damper (TBD3-FR).

# PERFORMANCE DATA

## TBD3 – Ice-Tong Pattern Controller, 1 Slot (continued)

### Model TBD3100 1 in. Slot Width

Length = 24 in. Inlet = 6 in.	Total Pressure (in. w.g.)	0.026	0.057	0.102	0.159	0.230	0.313	0.408	0.517	0.638	
	Static Pressure (in. w.g.)	0.023	0.052	0.092	0.144	0.207	0.282	0.368	0.466	0.575	
	Flow Rate (cfm)	39	59	78	98	118	137	157	176	196	
	Sound (NC)	-	-	16	25	31	37	42	46	50	
	Throw (ft.)	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. Inlet = 8 in.	Total Pressure (in. w.g.)	0.055	0.124	0.221	0.345	0.496	0.676				
	Static Pressure (in. w.g.)	0.053	0.119	0.211	0.329	0.474	0.645				
	Flow Rate (cfm)	70	105	140	175	209	244				
	Sound (NC)	-	20	30	39	45	51				
	Throw (ft.)	7-10-21	10-16-26	14-21-30	17-24-33	21-26-37	23-28-39				
Length = 24 in. Inlet = 10 in.	Total Pressure (in. w.g.)	0.107	0.240	0.427							
	Static Pressure (in. w.g.)	0.104	0.234	0.417							
	Flow Rate (cfm)	109	164	218							
	NC	17	32	42							
	Throw (ft.)	11-16-26	16-23-32	22-26-37							
Length = 48 in. Inlet = 6 in.	Total Pressure (in. w.g.)	0.011	0.026	0.046	0.071	0.102	0.139	0.182	0.231	0.285	0.410
	Static Pressure (in. w.g.)	0.009	0.020	0.036	0.056	0.080	0.109	0.142	0.180	0.222	0.320
	Flow Rate (cfm)	39	59	78	98	118	137	157	176	196	235
	Sound (NC)	-	-	-	-	17	23	28	32	36	43
	Throw (ft.)	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. Inlet = 8 in.	Total Pressure (in. w.g.)	0.022	0.050	0.088	0.138	0.199	0.271	0.353	0.447	0.552	
	Static Pressure (in. w.g.)	0.020	0.044	0.078	0.122	0.176	0.240	0.313	0.397	0.490	
	Flow Rate (cfm)	70	105	140	175	209	244	279	314	349	
	Sound (NC)	-	-	-	22	29	35	39	44	48	
	Throw (ft.)	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. Inlet = 10 in.	Total Pressure (in. w.g.)	0.039	0.088	0.157	0.245	0.353	0.480	0.627			
	Static Pressure (in. w.g.)	0.037	0.083	0.147	0.229	0.330	0.449	0.587			
	Flow Rate (cfm)	109	164	218	273	327	382	436			
	Sound (NC)	-	-	24	32	39	45	50			
	Throw (ft.)	4-7-14	7-11-20	10-14-23	12-18-26	14-20-29	17-22-31	19-23-33			
Length = 48 in. Inlet = 12 in.	Total Pressure (in. w.g.)	0.065	0.147	0.261	0.408	0.588					
	Static Pressure (in. w.g.)	0.063	0.141	0.251	0.392	0.565					
	Flow Rate (cfm)	157	236	314	393	471					
	Sound (NC)	-	23	33	42	48					
	Throw (ft.)	7-10-20	10-15-24	14-20-28	17-22-31	20-24-34					
Length = 60 in. Inlet = 6 in.	Total Pressure (in. w.g.)	0.009	0.020	0.036	0.056	0.081	0.110	0.144	0.183	0.225	0.325
	Static Pressure (in. w.g.)	0.007	0.015	0.026	0.041	0.059	0.080	0.104	0.132	0.163	0.235
	Flow Rate (cfm)	39	59	78	98	118	137	157	176	196	235
	Sound (NC)	-	-	-	-	-	18	23	28	32	38
	Throw (ft.)	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. Inlet = 8 in.	Total Pressure (in. w.g.)	0.017	0.038	0.068	0.106	0.152	0.207	0.271	0.343	0.423	0.609
	Static Pressure (in. w.g.)	0.014	0.032	0.058	0.090	0.130	0.177	0.231	0.292	0.361	0.519
	Flow Rate (cfm)	70	105	140	175	209	244	279	314	349	419
	Sound (NC)	-	-	-	17	24	30	35	39	43	50
	Throw (ft.)	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. Inlet = 10 in.	Total Pressure (in. w.g.)	0.029	0.066	0.117	0.183	0.263	0.358	0.467	0.591		
	Static Pressure (in. w.g.)	0.027	0.060	0.107	0.167	0.240	0.327	0.427	0.541		
	Flow Rate (cfm)	109	164	218	273	327	382	436	491		
	Sound (NC)	-	-	19	27	34	40	44	49		
	Throw (ft.)	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. Inlet = 12 in.	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. Airflow is in cubic feet per minute [cfm].
3. NC, sound pressure levels, are based on a room absorption of 10 dB re 10<sup>-12</sup> Watts, and a single diffuser/grille.
4. Blanks “-” indicate an NC level below 15.
5. All pressures are in inches of water column [in. w.g.].
6. Pressures not listed can be calculated using the following formula:  
Ptotal = Pstatic + Pvelocity
7. Throw data is based on supply air and room air being at isothermal conditions.
8. Throw data is given in feet [ft] to terminal velocities of:  
150 fpm (minimum)  
100 fpm (middle)  
50 fpm (maximum)
9. Blank area outside recommended operating range.
10. Does not include effects of ceiling radiation damper (TBD3-FR).

# PERFORMANCE DATA

## TBD3 – Ice-Tong Pattern Controller, 2 Slot

### Model TBD350 1/2 in. Slot Width

<b>Length = 24 in. Inlet = 6 in.</b>	<b>Total Pressure (in. w.g.)</b>	0.045	0.080	0.124	0.179	0.244	0.319	0.403	0.498		
	<b>Static Pressure (in. w.g.)</b>	0.039	0.070	0.109	0.157	0.213	0.279	0.353	0.436		
	<b>Flow Rate (cfm)</b>	59	78	98	118	137	157	176	196		
	<b>Sound (NC)</b>	-	20	28	34	39	43	47	50		
	<b>Throw (ft.)</b>	7-11-19	10-14-22	12-18-25	14-19-27	17-21-30	18-22-32	19-24-34	20-25-35		
<b>Length = 24 in. Inlet = 8 in.</b>	<b>Total Pressure (in. w.g.)</b>	0.100	0.178	0.278	0.401						
	<b>Static Pressure (in. w.g.)</b>	0.095	0.168	0.263	0.378						
	<b>Flow Rate (cfm)</b>	105	140	175	209						
	<b>Sound (NC)</b>	23	32	39	45						
	<b>Throw (ft.)</b>	10-16-26	14-21-30	17-24-33	21-26-37						
<b>Length = 24 in. Inlet = 10 in.</b>	<b>Total Pressure (in. w.g.)</b>	0.207	0.367	0.574							
	<b>Static Pressure (in. w.g.)</b>	0.201	0.357	0.558							
	<b>Flow Rate (cfm)</b>	164	218	273							
	<b>NC</b>	33	43	50							
	<b>Throw (ft.)</b>	16-23-32	22-26-37	24-29-42							
<b>Length = 48 in. Inlet = 6 in.</b>	<b>Total Pressure (in. w.g.)</b>		0.039	0.061	0.088	0.120	0.157	0.199	0.245	0.353	0.480
	<b>Static Pressure (in. w.g.)</b>		0.029	0.046	0.066	0.090	0.117	0.148	0.183	0.263	0.358
	<b>Flow Rate (cfm)</b>		78	98	118	137	157	176	196	235	274
	<b>Sound (NC)</b>		-	17	23	28	32	36	40	46	51
	<b>Throw (ft.)</b>		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
<b>Length = 48 in. Inlet = 8 in.</b>	<b>Total Pressure (in. w.g.)</b>	0.039	0.069	0.108	0.156	0.212	0.277	0.351	0.433	0.624	
	<b>Static Pressure (in. w.g.)</b>	0.033	0.059	0.093	0.133	0.182	0.237	0.300	0.371	0.534	
	<b>Flow Rate (cfm)</b>	105	140	175	209	244	279	314	349	419	
	<b>Sound (NC)</b>	-	18	25	31	37	41	45	48	54	
	<b>Throw (ft.)</b>	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	
<b>Length = 48 in. Inlet = 10 in.</b>	<b>Total Pressure (in. w.g.)</b>	0.069	0.124	0.193	0.278	0.378	0.494	0.625			
	<b>Static Pressure (in. w.g.)</b>	0.064	0.114	0.177	0.256	0.348	0.454	0.575			
	<b>Flow Rate (cfm)</b>	164	218	273	327	382	436	491			
	<b>Sound (NC)</b>	17	27	34	40	45	50	53			
	<b>Throw (ft.)</b>	7-11-20	10-14-23	12-18-26	14-20-29	17-22-31	19-23-33	20-25-35			
<b>Length = 48 in. Inlet = 12 in.</b>	<b>Total Pressure (in. w.g.)</b>	0.120	0.214	0.334	0.482	0.655					
	<b>Static Pressure (in. w.g.)</b>	0.115	0.204	0.319	0.459	0.625					
	<b>Flow Rate (cfm)</b>	236	314	393	471	550					
	<b>Sound (NC)</b>	25	35	42	48	53					
	<b>Throw (ft.)</b>	10-15-24	14-20-28	17-22-31	20-24-34	21-26-37					
<b>Length = 60 in. Inlet = 6 in.</b>	<b>Total Pressure (in. w.g.)</b>		0.033	0.052	0.075	0.102	0.133	0.168	0.208	0.299	0.407
	<b>Static Pressure (in. w.g.)</b>		0.023	0.036	0.052	0.071	0.093	0.118	0.145	0.209	0.285
	<b>Flow Rate (cfm)</b>		78	98	118	137	157	176	196	235	274
	<b>Sound (NC)</b>		-	-	21	26	30	34	37	43	48
	<b>Throw (ft.)</b>		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
<b>Length = 60 in. Inlet = 8 in.</b>	<b>Total Pressure (in. w.g.)</b>	0.031	0.054	0.085	0.122	0.166	0.217	0.275	0.339	0.488	0.664
	<b>Static Pressure (in. w.g.)</b>	0.025	0.044	0.069	0.100	0.136	0.177	0.224	0.277	0.398	0.542
	<b>Flow Rate (cfm)</b>	105	140	175	209	244	279	314	349	419	489
	<b>Sound (NC)</b>	-	-	22	28	33	37	41	45	51	56
	<b>Throw (ft.)</b>	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
<b>Length = 60 in. Inlet = 10 in.</b>	<b>Total Pressure (in. w.g.)</b>	0.051	0.091	0.142	0.205	0.279	0.365	0.462	0.570		
	<b>Static Pressure (in. w.g.)</b>	0.046	0.081	0.127	0.183	0.249	0.325	0.411	0.508		
	<b>Flow Rate (cfm)</b>	164	218	273	327	382	436	491	545		
	<b>Sound (NC)</b>	-	22	30	36	41	45	49	52		
	<b>Throw (ft.)</b>	4-6-12	5-8-16	7-10-18	8-12-20	9-14-22	11-16-23	12-17-25	14-18-26		
<b>Length = 60 in. Inlet = 12 in.</b>	<b>Total Pressure</b>	0.085	0.152	0.237	0.342	0.465	0.607				
	<b>Static Pressure</b>	0.080	0.142	0.222	0.319	0.434	0.567				
	<b>Flow Rate</b>	236	314	393	471	550	628				
	<b>NC</b>	20	30	37	43	48	53				
	<b>Throw 150,100,50</b>	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.
- Airflow is in cubic feet per minute [cfm].
- NC, sound pressure levels, are based on a room absorption of 10 dB re 10<sup>-12</sup> Watts, and a single diffuser/grille.
- Blanks "-" indicate a NC level below 15.
- All pressures are in inches of water column [in. w.g.].
- Pressures not listed can be calculated using the following formula:  
Ptotal = Pstatic + Pvelocity
- Throw data is based on supply air and room air being at isothermal conditions.
- Throw data is given in feet [ft] to terminal velocities of:  
150 fpm (minimum)  
100 fpm (middle)  
50 fpm (maximum)
- Blank area outside recommended operating range.
- Does not include effects of ceiling radiation damper (TBD3-FR).

# PERFORMANCE DATA

## TBD3 – Ice-Tong Pattern Controller, 2 Slot (continued)

### Model TBD375 3/4 in. Slot Width

Length = 24 in. Inlet = 6 in.	Total Pressure (in. w.g.)	0.032	0.057	0.090	0.129	0.176	0.229	0.290	0.358	0.516	
	Static Pressure (in. w.g.)	0.027	0.047	0.074	0.107	0.145	0.189	0.240	0.296	0.426	
	Flow Rate (cfm)	59	78	98	118	137	157	176	196	235	
	Sound (NC)	-	-	20	27	33	38	42	46	53	
	Throw (ft.)	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. Inlet = 8 in.	Total Pressure (in. w.g.)	0.075	0.133	0.208	0.299	0.408	0.532	0.674			
	Static Pressure (in. w.g.)	0.069	0.123	0.192	0.277	0.377	0.492	0.623			
	Flow Rate (cfm)	105	140	175	209	244	279	314			
	Sound (NC)	19	29	37	44	50	55	59			
	Throw (ft.)	9-13-26	12-18-30	15-22-33	18-26-37	21-28-39	24-30-42	26-32-45			
Length = 24 in. Inlet = 10 in.	Total Pressure (in. w.g.)	0.151	0.269	0.421	0.606						
	Static Pressure (in. w.g.)	0.146	0.259	0.405	0.584						
	Flow Rate (cfm)	164	218	273	327						
	Sound (NC)	33	44	52	59						
	Throw (ft.)	14-21-32	19-26-37	23-29-42	26-32-46						
Length = 48 in. Inlet = 6 in.	Total Pressure (in. w.g.)		0.023	0.036	0.052	0.070	0.092	0.116	0.143	0.206	0.281
	Static Pressure (in. w.g.)		0.013	0.020	0.029	0.040	0.052	0.066	0.081	0.117	0.159
	Flow Rate (cfm)		78	98	118	137	157	176	196	235	274
	Sound (NC)		-	-	-	-	19	23	27	34	40
	Throw (ft.)		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. Inlet = 8 in.	Total Pressure (in. w.g.)	0.027	0.049	0.076	0.110	0.150	0.195	0.247	0.305	0.440	0.598
	Static Pressure (in. w.g.)	0.022	0.039	0.061	0.087	0.119	0.155	0.197	0.243	0.350	0.476
	Flow Rate (cfm)	105	140	175	209	244	279	314	349	419	489
	Sound (NC)	-	-	17	24	29	34	39	43	49	55
	Throw (ft.)	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. Inlet = 10 in.	Total Pressure (in. w.g.)	0.052	0.092	0.144	0.207	0.281	0.367	0.465	0.574		
	Static Pressure (in. w.g.)	0.046	0.082	0.128	0.184	0.251	0.328	0.415	0.512		
	Flow Rate (cfm)	164	218	273	327	382	436	491	545		
	Sound (NC)	-	22	30	37	42	47	52	55		
	Throw (ft.)	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. Inlet = 12 in.	Total Pressure (in. w.g.)	0.090	0.160	0.249	0.359	0.489	0.638				
	Static Pressure (in. w.g.)	0.084	0.150	0.234	0.336	0.458	0.598				
	Flow Rate (cfm)	236	314	393	471	550	628				
	Sound (NC)	22	33	41	48	54	59				
	Throw (ft.)	9-13-24	12-17-28	15-22-31	17-24-34	20-26-37	23-28-40				
Length = 60 in. Inlet = 6 in.	Total Pressure (in. w.g.)		0.017	0.027	0.039	0.053	0.069	0.088	0.108	0.156	0.213
	Static Pressure (in. w.g.)		0.007	0.012	0.017	0.023	0.030	0.037	0.046	0.066	0.090
	Flow Rate (cfm)		78	98	118	137	157	176	196	235	274
	Sound (NC)		-	-	-	-	-	18	22	28	34
	Throw (ft.)		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. Inlet = 8 in.	Total Pressure (in. w.g.)	0.020	0.036	0.057	0.081	0.111	0.145	0.183	0.226	0.326	0.443
	Static Pressure (in. w.g.)	0.015	0.026	0.041	0.059	0.080	0.105	0.133	0.164	0.236	0.321
	Flow Rate (cfm)	105	140	175	209	244	279	314	349	419	489
	Sound (NC)	-	-	-	18	23	28	33	36	43	49
	Throw (ft.)	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. Inlet = 10 in.	Total Pressure (in. w.g.)	0.037	0.067	0.104	0.150	0.204	0.266	0.337	0.416	0.599	
	Static Pressure (in. w.g.)	0.032	0.057	0.088	0.127	0.173	0.226	0.287	0.354	0.509	
	Flow Rate (cfm)	164	218	273	327	382	436	491	545	654	
	Sound (NC)	-	15	23	30	36	41	45	49	56	
	Throw (ft.)	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. Inlet = 12 in.	Total Pressure (in. w.g.)	0.064	0.113	0.177	0.255	0.347	0.454	0.574			
	Static Pressure (in. w.g.)	0.058	0.103	0.162	0.233	0.317	0.414	0.524			
	Flow Rate (cfm)	236	314	393	471	550	628	707			
	Sound (NC)	15	26	34	41	47	52	56			
	Throw (ft.)	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. Airflow is in cubic feet per minute [cfm].
3. NC, sound pressure levels, are based on a room absorption of 10 dB re 10<sup>-12</sup> Watts, and a single diffuser/grille.
4. Blanks "-" indicate an NC level below 15.
5. All pressures are in inches of water column [in. w.g.].
6. Pressures not listed can be calculated using the following formula:  
Ptotal = Pstatic + Pvelocity
7. Throw data is based on supply air and room air being at isothermal conditions.
8. Throw data is given in feet [ft] to terminal velocities of:  
150 fpm (minimum)  
100 fpm (middle)  
50 fpm (maximum)
9. Blank area outside recommended operating range.
10. Does not include effects of ceiling radiation damper (TBD3-FR).

# PERFORMANCE DATA

## TBD3 – Ice-Tong Pattern Controller, 2 Slot (continued)

### Model TBD3100 1 in. Slot Width

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

- Tested in accordance with ASHRAE Standard 70 – 2006 Method of Testing for Rating the Performance of Air Outlets and Inlets.
- Airflow is in cubic feet per minute [cfm].
- NC, sound pressure levels, are based on a room absorption of 10 dB re 10<sup>-12</sup> Watts, and a single diffuser/grille.
- Blanks "-" indicate an NC level below 15.
- All pressures are in inches of water column [in. w.g.].
- Pressures not listed can be calculated using the following formula:  
Ptotal = Pstatic + Pvelocity
- Throw data is based on supply air and room air being at isothermal conditions.
- Throw data is given in feet [ft] to terminal velocities of:  
150 fpm (minimum)  
100 fpm (middle)  
50 fpm (maximum)
- Blank area outside recommended operating range.
- Does not include effects of ceiling radiation damper (TBD3-FR).

# PERFORMANCE DATA

## TBD3 – Ice-Tong Pattern Controller, 3 Slot

### Model TBD350 1/2 in. Slot Width

Length = 24 in. Inlet = 6 in.	Total Pressure (in. w.g.)	0.029	0.051	0.079	0.114	0.155	0.203	0.257	0.317	0.457	0.622
	Static Pressure (in. w.g.)	0.023	0.041	0.064	0.092	0.125	0.163	0.206	0.255	0.367	0.499
	Flow Rate (cfm)	59	78	98	118	137	157	176	196	235	274
	Sound (NC)	-	-	21	27	32	36	40	44	50	55
	Throw (ft.)	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. Inlet = 8 in.	Total Pressure (in. w.g.)	0.056	0.099	0.155	0.224	0.304	0.397	0.503	0.621		
	Static Pressure (in. w.g.)	0.050	0.089	0.140	0.201	0.274	0.358	0.452	0.559		
	Flow Rate (cfm)	105	140	175	209	244	279	314	349		
	Sound (NC)	-	23	31	37	42	46	50	54		
	Throw (ft.)	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. Inlet = 10 in.	Total Pressure (in. w.g.)	0.107	0.190	0.296	0.427	0.581					
	Static Pressure (in. w.g.)	0.101	0.180	0.281	0.404	0.550					
	Flow Rate (cfm)	164	218	273	327	382					
	NC	24	33	40	46	51					
	Throw (ft.)	14-21-32	19-26-37	23-29-42	26-32-46	28-35-49					
Length = 48 in. Inlet = 6 in.	Total Pressure (in. w.g.)		0.030	0.046	0.067	0.091	0.119	0.150	0.185	0.267	0.363
	Static Pressure (in. w.g.)		0.020	0.031	0.044	0.060	0.079	0.100	0.123	0.177	0.241
	Flow Rate (cfm)		78	98	118	137	157	176	196	235	274
	Sound (NC)		-	-	19	24	28	32	36	42	47
	Throw (ft.)		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. Inlet = 8 in.	Total Pressure (in. w.g.)		0.045	0.071	0.102	0.139	0.182	0.230	0.284	0.409	0.557
	Static Pressure (in. w.g.)		0.035	0.055	0.080	0.109	0.142	0.180	0.222	0.319	0.434
	Flow Rate (cfm)		140	175	209	244	279	314	349	419	489
	Sound (NC)		-	19	25	30	35	39	42	48	53
	Throw (ft.)		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. Inlet = 10 in.	Total Pressure (in. w.g.)	0.041	0.073	0.114	0.163	0.223	0.291	0.368	0.454	0.654	
	Static Pressure (in. w.g.)	0.035	0.063	0.098	0.141	0.192	0.251	0.317	0.392	0.564	
	Flow Rate (cfm)	164	218	273	327	382	436	491	545	654	
	Sound (NC)	-	19	26	32	37	42	46	49	55	
	Throw (ft.)	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. Inlet = 12 in.	Total Pressure (in. w.g.)	0.066	0.117	0.182	0.263	0.357	0.467	0.591			
	Static Pressure (in. w.g.)	0.060	0.107	0.167	0.240	0.327	0.427	0.540			
	Flow Rate (cfm)	236	314	393	471	550	628	707			
	Sound (NC)	16	26	33	39	44	49	53			
	Throw (ft.)	9-13-24	12-17-28	15-22-31	17-24-34	20-26-37	23-28-40	24-30-42			
Length = 60 in. Inlet = 6 in.	Total Pressure (in. w.g.)		0.026	0.041	0.059	0.081	0.106	0.134	0.165	0.237	0.323
	Static Pressure (in. w.g.)		0.016	0.026	0.037	0.050	0.066	0.083	0.103	0.148	0.201
	Flow Rate (cfm)		78	98	118	137	157	176	196	235	274
	Sound (NC)		-	-	17	22	27	30	34	40	45
	Throw (ft.)		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. Inlet = 8 in.	Total Pressure (in. w.g.)		0.038	0.059	0.085	0.115	0.151	0.191	0.235	0.339	0.461
	Static Pressure (in. w.g.)		0.028	0.043	0.062	0.085	0.111	0.140	0.173	0.249	0.339
	Flow Rate (cfm)		140	175	209	244	279	314	349	419	489
	Sound (NC)		-	16	22	27	32	36	39	45	50
	Throw (ft.)		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. Inlet = 10 in.	Total Pressure (in. w.g.)	0.032	0.057	0.088	0.127	0.173	0.226	0.286	0.353	0.509	
	Static Pressure (in. w.g.)	0.026	0.047	0.073	0.105	0.143	0.186	0.236	0.291	0.419	
	Flow Rate (cfm)	164	218	273	327	382	436	491	545	654	
	Sound (NC)	-	15	22	28	34	38	42	45	51	
	Throw (ft.)	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. Inlet = 12 in.	Total Pressure (in. w.g.)	0.049	0.087	0.135	0.195	0.265	0.346	0.438	0.541		
	Static Pressure (in. w.g.)	0.043	0.077	0.120	0.172	0.234	0.306	0.388	0.479		
	Flow Rate (cfm)	236	314	393	471	550	628	707	785		
	Sound (NC)	-	21	29	35	40	44	48	52		
	Throw (ft.)	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. Airflow is in cubic feet per minute [cfm].
3. NC, sound pressure levels, are based on a room absorption of 10 dB re 10<sup>-12</sup> Watts, and a single diffuser/grille.
4. Blanks "-" indicate an NC level below 15.
5. All pressures are in inches of water column [in. w.g.].
6. Pressures not listed can be calculated using the following formula:  
P<sub>total</sub> = P<sub>static</sub> + P<sub>velocity</sub>
7. Throw data is based on supply air and room air being at isothermal conditions.
8. Throw data is given in feet [ft] to terminal velocities of:  
150 fpm (minimum)  
100 fpm (middle)  
50 fpm (maximum)
9. Blank area outside recommended operating range.
10. Does not include effects of ceiling radiation damper (TBD3-FR).

# PERFORMANCE DATA

## TBD3 – Ice-Tong Pattern Controller, 3 Slot (continued)

Model TBD375 3/4 in. Slot Width

<b>Length = 24 in. Inlet = 6 in.</b>	<b>Total Pressure (in. w.g.)</b>	0.019	0.033	0.052	0.075	0.102	0.133	0.168	0.207	0.299	0.406
	<b>Static Pressure (in. w.g.)</b>	0.013	0.023	0.036	0.052	0.071	0.093	0.117	0.145	0.209	0.284
	<b>Flow Rate (cfm)</b>	59	78	98	118	137	157	176	196	235	274
	<b>Sound (NC)</b>	-	-	-	16	22	26	31	35	41	47
	<b>Throw (ft.)</b>	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
<b>Length = 24 in. Inlet = 8 in.</b>	<b>Total Pressure (in. w.g.)</b>	0.041	0.073	0.114	0.164	0.224	0.292	0.370	0.457	0.657	
	<b>Static Pressure (in. w.g.)</b>	0.035	0.063	0.099	0.142	0.193	0.252	0.319	0.394	0.568	
	<b>Flow Rate (cfm)</b>	105	140	175	209	244	279	314	349	419	
	<b>Sound (NC)</b>	-	17	25	32	38	43	47	51	58	
	<b>Throw (ft.)</b>	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	
<b>Length = 24 in. Inlet = 10 in.</b>	<b>Total Pressure (in. w.g.)</b>	0.080	0.142	0.221	0.318	0.434	0.566				
	<b>Static Pressure (in. w.g.)</b>	0.074	0.132	0.206	0.296	0.403	0.526				
	<b>Flow Rate (cfm)</b>	164	218	273	327	382	436				
	<b>Sound (NC)</b>	20	30	39	45	51	56				
	<b>Throw (ft.)</b>	12-18-32	16-24-37	20-29-42	24-32-46	28-35-49	30-37-53				
<b>Length = 48 in. Inlet = 6 in.</b>	<b>Total Pressure (in. w.g.)</b>		0.014	0.022	0.031	0.043	0.056	0.070	0.087	0.125	0.170
	<b>Static Pressure (in. w.g.)</b>		0.004	0.006	0.009	0.012	0.016	0.020	0.024	0.035	0.048
	<b>Flow Rate (cfm)</b>		78	98	118	137	157	176	196	235	274
	<b>Sound (NC)</b>		-	-	-	-	-	-	17	24	29
	<b>Throw (ft.)</b>		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
<b>Length = 48 in. Inlet = 8 in.</b>	<b>Total Pressure (in. w.g.)</b>		0.029	0.045	0.064	0.087	0.114	0.144	0.178	0.257	0.349
	<b>Static Pressure (in. w.g.)</b>		0.019	0.029	0.042	0.057	0.074	0.094	0.116	0.167	0.227
	<b>Flow Rate (cfm)</b>		140	175	209	244	279	314	349	419	489
	<b>Sound (NC)</b>		-	-	-	18	23	28	32	38	44
	<b>Throw (ft.)</b>		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
<b>Length = 48 in. Inlet = 10 in.</b>	<b>Total Pressure (in. w.g.)</b>	0.029	0.052	0.081	0.116	0.158	0.206	0.261	0.323	0.465	0.632
	<b>Static Pressure (in. w.g.)</b>	0.023	0.042	0.065	0.094	0.128	0.167	0.211	0.260	0.375	0.510
	<b>Flow Rate (cfm)</b>	164	218	273	327	382	436	491	545	654	763
	<b>Sound (NC)</b>	-	-	18	25	31	36	40	44	50	56
	<b>Throw (ft.)</b>	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
<b>Length = 48 in. Inlet = 12 in.</b>	<b>Total Pressure (in. w.g.)</b>	0.049	0.087	0.135	0.195	0.265	0.346	0.438	0.541		
	<b>Static Pressure (in. w.g.)</b>	0.043	0.077	0.120	0.172	0.235	0.306	0.388	0.479		
	<b>Flow Rate (cfm)</b>	236	314	393	471	550	628	707	785		
	<b>Sound (NC)</b>	-	20	29	35	41	46	50	54		
	<b>Throw (ft.)</b>	9-13-24	12-17-28	15-22-31	17-24-34	20-26-37	23-28-40	24-30-42	26-31-44		
<b>Length = 60 in. Inlet = 6 in.</b>	<b>Total Pressure (in. w.g.)</b>		0.011	0.017	0.024	0.033	0.043	0.054	0.066	0.096	0.130
	<b>Static Pressure (in. w.g.)</b>		0.001	0.001	0.001	0.002	0.003	0.003	0.004	0.006	0.008
	<b>Flow Rate (cfm)</b>		78	98	118	137	157	176	196	235	274
	<b>Sound (NC)</b>		-	-	-	-	-	-	-	18	24
	<b>Throw (ft.)</b>		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
<b>Length = 60 in. Inlet = 8 in.</b>	<b>Total Pressure (in. w.g.)</b>		0.021	0.034	0.048	0.066	0.086	0.109	0.134	0.193	0.263
	<b>Static Pressure (in. w.g.)</b>		0.012	0.018	0.026	0.035	0.046	0.058	0.072	0.104	0.141
	<b>Flow Rate (cfm)</b>		140	175	209	244	279	314	349	419	489
	<b>Sound (NC)</b>		-	-	-	-	18	22	26	33	38
	<b>Throw (ft.)</b>		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
<b>Length = 60 in. Inlet = 10 in.</b>	<b>Total Pressure (in. w.g.)</b>	0.021	0.038	0.060	0.086	0.117	0.153	0.193	0.239	0.344	0.468
	<b>Static Pressure (in. w.g.)</b>	0.016	0.028	0.044	0.063	0.086	0.113	0.143	0.176	0.254	0.345
	<b>Flow Rate (cfm)</b>	164	218	273	327	382	436	491	545	654	763
	<b>Sound (NC)</b>	-	-	-	19	24	29	34	38	44	50
	<b>Throw (ft.)</b>	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
<b>Length = 60 in. Inlet = 12 in.</b>	<b>Total Pressure (in. w.g.)</b>	0.035	0.063	0.098	0.141	0.193	0.251	0.318	0.393	0.566	
	<b>Static Pressure (in. w.g.)</b>	0.030	0.053	0.083	0.119	0.162	0.212	0.268	0.331	0.476	
	<b>Flow Rate (cfm)</b>	236	314	393	471	550	628	707	785	942	
	<b>Sound (NC)</b>	-	-	22	29	35	40	44	48	54	
	<b>Throw (ft.)</b>	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. Airflow is in cubic feet per minute [cfm].
3. NC, sound pressure levels, are based on a room absorption of 10 dB re 10<sup>-12</sup> Watts, and a single diffuser/grille.
4. Blanks "-" indicate an NC level below 15.
5. All pressures are in inches of water column [in. w.g.].
6. Pressures not listed can be calculated using the following formula:  
Ptotal = Pstatic + Pvelocity
7. Throw data is based on supply air and room air being at isothermal conditions.
8. Throw data is given in feet [ft] to terminal velocities of:  
150 fpm (minimum)  
100 fpm (middle)  
50 fpm (maximum)
9. Blank area outside recommended operating range.
10. Does not include effects of ceiling radiation damper (TBD3-FR).

# PERFORMANCE DATA

## TBD3 – Ice-Tong Pattern Controller, 3 Slot (continued)

### Model TBD3100 1 in. Slot Width

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

- Tested in accordance with ASHRAE Standard 70 – 2006 Method of Testing for Rating the Performance of Air Outlets and Inlets.
- Airflow is in cubic feet per minute [cfm].
- NC, sound pressure levels, are based on a room absorption of 10 dB re 10<sup>-12</sup> Watts, and a single diffuser/grille.
- Blanks "-" indicate an NC level below 15.
- All pressures are in inches of water column [in. w.g.].
- Pressures not listed can be calculated using the following formula:  
Ptotal = Pstatic + Pvelocity
- Throw data is based on supply air and room air being at isothermal conditions.
- Throw data is given in feet [ft] to terminal velocities of:  
150 fpm (minimum)  
100 fpm (middle)  
50 fpm (maximum)
- Blank area outside recommended operating range.
- Does not include effects of ceiling radiation damper (TBD3-FR).



# PERFORMANCE DATA

## TBD3 – Ice-Tong Pattern Controller, 4 Slot

### Model TBD350 1/2 in. Slot Width

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

- Tested in accordance with ASHRAE Standard 70 – 2006 Method of Testing for Rating the Performance of Air Outlets and Inlets.
- Airflow is in cubic feet per minute [cfm].
- NC, sound pressure levels, are based on a room absorption of 10 dB re 10<sup>-12</sup> Watts, and a single diffuser/grille.
- Blanks "-" indicate an NC level below 15.
- All pressures are in inches of water column [in. w.g.].
- Pressures not listed can be calculated using the following formula:  
Ptotal = Pstatic + Pvelocity
- Throw data is based on supply air and room air being at isothermal conditions.
- Throw data is given in feet [ft] to terminal velocities of:  
150 fpm (minimum)  
100 fpm (middle)  
50 fpm (maximum)
- Blank area outside recommended operating range.
- Does not include effects of ceiling radiation damper (TBD3-FR).

# PERFORMANCE DATA

## TBD3 – Ice-Tong Pattern Controller, 4 Slot (continued)

### Model TBD375 3/4 in. Slot Width

Length = 24 in. Inlet = 6 in.	Total Pressure (in. w.g.)		0.023	0.036	0.052	0.070	0.092	0.116	0.143	0.206	0.281
	Static Pressure (in. w.g.)		0.013	0.020	0.029	0.040	0.052	0.066	0.081	0.117	0.159
	Flow Rate (cfm)		78	98	118	137	157	176	196	235	274
	Sound (NC)		-	-	-	-	19	23	27	34	40
	Throw (ft.)		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. Inlet = 8 in.	Total Pressure (in. w.g.)	0.027	0.049	0.076	0.110	0.150	0.195	0.247	0.305	0.440	0.598
	Static Pressure (in. w.g.)	0.022	0.039	0.061	0.087	0.119	0.155	0.197	0.243	0.350	0.476
	Flow Rate (cfm)	105	140	175	209	244	279	314	349	419	489
	Sound (NC)	-	-	17	24	29	34	39	43	49	55
	Throw (ft.)	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. Inlet = 10 in.	Total Pressure (in. w.g.)	0.052	0.092	0.144	0.207	0.281	0.367	0.465	0.574		
	Static Pressure (in. w.g.)	0.046	0.082	0.128	0.184	0.251	0.328	0.415	0.512		
	Flow Rate (cfm)	164	218	273	327	382	436	491	545		
	Sound (NC)	-	22	30	37	42	47	52	55		
	Throw (ft.)	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. Inlet = 8 in.	Total Pressure (in. w.g.)		0.020	0.031	0.045	0.061	0.079	0.100	0.124	0.178	0.243
	Static Pressure (in. w.g.)		0.010	0.015	0.022	0.030	0.039	0.050	0.062	0.089	0.121
	Flow Rate (cfm)		140	175	209	244	279	314	349	419	489
	Sound (NC)		-	-	-	-	16	20	24	31	37
	Throw (ft.)		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. Inlet = 10 in.	Total Pressure (in. w.g.)	0.020	0.035	0.055	0.079	0.107	0.140	0.177	0.219	0.315	0.429
	Static Pressure (in. w.g.)	0.014	0.025	0.039	0.056	0.077	0.100	0.127	0.157	0.226	0.307
	Flow Rate (cfm)	164	218	273	327	382	436	491	545	654	763
	Sound (NC)	-	-	17	23	28	32	36	43	48	55
	Throw (ft.)	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. Inlet = 12 in.	Total Pressure (in. w.g.)	0.032	0.057	0.090	0.129	0.176	0.230	0.291	0.359	0.517	
	Static Pressure (in. w.g.)	0.027	0.047	0.074	0.107	0.145	0.190	0.240	0.297	0.427	
	Flow Rate (cfm)	236	314	393	471	550	628	707	785	942	
	Sound (NC)	-	-	20	27	33	38	42	46	53	
	Throw (ft.)	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. Inlet = 8 in.	Total Pressure (in. w.g.)		0.015	0.024	0.034	0.046	0.060	0.076	0.094	0.136	0.184
	Static Pressure (in. w.g.)		0.005	0.008	0.011	0.016	0.020	0.026	0.032	0.046	0.062
	Flow Rate (cfm)		140	175	209	244	279	314	349	419	489
	Sound (NC)		-	-	-	-	-	19	25	31	37
	Throw (ft.)		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. Inlet = 10 in.	Total Pressure (in. w.g.)		0.026	0.041	0.059	0.080	0.105	0.133	0.164	0.236	0.321
	Static Pressure (in. w.g.)		0.016	0.025	0.037	0.050	0.065	0.082	0.102	0.146	0.199
	Flow Rate (cfm)		218	273	327	382	436	491	545	654	763
	Sound (NC)		-	-	-	17	22	26	30	37	42
	Throw (ft.)		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. Inlet = 12 in.	Total Pressure (in. w.g.)	0.024	0.042	0.066	0.095	0.130	0.169	0.214	0.265	0.381	0.518
	Static Pressure (in. w.g.)	0.018	0.032	0.051	0.073	0.099	0.129	0.164	0.202	0.291	0.396
	Flow Rate (cfm)	236	314	393	471	550	628	707	785	942	1099
	Sound (NC)	-	-	-	21	27	31	36	40	46	52
	Throw (ft.)	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. Airflow is in cubic feet per minute [cfm].
3. NC, sound pressure levels, are based on a room absorption of 10 dB re 10<sup>-12</sup> Watts, and a single diffuser/grille.
4. Blanks "-" indicate an NC level below 15.
5. All pressures are in inches of water column [in. w.g.].
6. Pressures not listed can be calculated using the following formula:  
Ptotal = Pstatic + Pvelocity
7. Throw data is based on supply air and room air being at isothermal conditions.
8. Throw data is given in feet [ft] to terminal velocities of:  
150 fpm (minimum)  
100 fpm (middle)  
50 fpm (maximum)
9. Blank area outside recommended operating range.
10. Does not include effects of ceiling radiation damper (TBD3-FR).

# PERFORMANCE DATA

## TBD3 – Ice-Tong Pattern Controller, 4 Slot (continued)

Model TBD3100 1 in. Slot Width

Length = 24 in. Inlet = 6 in.	Total Pressure (in. w.g.)		0.023	0.036	0.052	0.070	0.092	0.116	0.144	0.207	0.282
	Static Pressure (in. w.g.)		0.013	0.020	0.029	0.040	0.052	0.066	0.081	0.117	0.160
	Flow Rate (cfm)		78	98	118	137	157	176	196	235	274
	Sound (NC)		-	-	-	-	15	20	24	30	36
	Throw (ft.)		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. Inlet = 8 in.	Total Pressure (in. w.g.)	0.023	0.040	0.063	0.091	0.123	0.161	0.204	0.252	0.362	0.493
	Static Pressure (in. w.g.)	0.017	0.030	0.047	0.068	0.093	0.121	0.153	0.189	0.273	0.371
	Flow Rate (cfm)	105	140	175	209	244	279	314	349	419	489
	Sound (NC)	-	-	-	-	20	25	30	34	40	46
	Throw (ft.)	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. Inlet = 10 in.	Total Pressure (in. w.g.)	0.037	0.066	0.103	0.148	0.201	0.263	0.333	0.411	0.592	
	Static Pressure (in. w.g.)	0.031	0.056	0.087	0.126	0.171	0.223	0.283	0.349	0.502	
	Flow Rate (cfm)	164	218	273	327	382	436	491	545	654	
	Sound (NC)	-	-	17	24	29	34	39	42	49	
	Throw (ft.)	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. Inlet = 8 in.	Total Pressure (in. w.g.)		0.021	0.032	0.047	0.064	0.083	0.105	0.130	0.187	0.254
	Static Pressure (in. w.g.)		0.011	0.017	0.024	0.033	0.043	0.055	0.067	0.097	0.132
	Flow Rate (cfm)		140	175	209	244	279	314	349	419	489
	Sound (NC)		-	-	-	-	-	18	22	28	34
	Throw (ft.)		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. Inlet = 10 in.	Total Pressure (in. w.g.)	0.018	0.031	0.049	0.071	0.096	0.125	0.159	0.196	0.282	0.384
	Static Pressure (in. w.g.)	0.012	0.021	0.033	0.048	0.065	0.085	0.108	0.134	0.192	0.262
	Flow Rate (cfm)	164	218	273	327	382	436	491	545	654	763
	Sound (NC)	-	-	-	-	16	21	25	29	36	42
	Throw (ft.)	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. Inlet = 12 in.	Total Pressure (in. w.g.)	0.026	0.046	0.071	0.103	0.140	0.182	0.231	0.285	0.410	0.559
	Static Pressure (in. w.g.)	0.020	0.036	0.056	0.080	0.109	0.143	0.180	0.223	0.321	0.436
	Flow Rate (cfm)	236	314	393	471	550	628	707	785	942	1099
	Sound (NC)	-	-	-	17	23	28	32	36	43	48
	Throw (ft.)	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. Inlet = 8 in.	Total Pressure (in. w.g.)		0.017	0.027	0.039	0.053	0.069	0.087	0.108	0.155	0.211
	Static Pressure (in. w.g.)		0.007	0.011	0.016	0.022	0.029	0.037	0.045	0.065	0.089
	Flow Rate (cfm)		140	175	209	244	279	314	349	419	489
	Sound (NC)		-	-	-	-	-	-	18	25	31
	Throw (ft.)		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. Inlet = 10 in.	Total Pressure (in. w.g.)		0.025	0.040	0.057	0.078	0.101	0.128	0.158	0.228	0.310
	Static Pressure (in. w.g.)		0.015	0.024	0.035	0.047	0.061	0.078	0.096	0.138	0.188
	Flow Rate (cfm)		218	273	327	382	436	491	545	654	763
	Sound (NC)		-	-	-	-	17	21	25	32	38
	Throw (ft.)		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. Inlet = 12 in.	Total Pressure (in. w.g.)	0.020	0.036	0.056	0.081	0.111	0.144	0.183	0.226	0.325	0.442
	Static Pressure (in. w.g.)	0.015	0.026	0.041	0.059	0.080	0.105	0.132	0.163	0.235	0.320
	Flow Rate (cfm)	236	314	393	471	550	628	707	785	942	1099
	Sound (NC)	-	-	-	-	18	23	28	32	38	44
	Throw (ft.)	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. Airflow is in cubic feet per minute [cfm].
3. NC, sound pressure levels, are based on a room absorption of 10 dB re 10<sup>-12</sup> Watts, and a single diffuser/grille.
4. Blanks "-" indicate an NC level below 15.
5. All pressures are in inches of water column [in. w.g.].
6. Pressures not listed can be calculated using the following formula:  
P<sub>total</sub> = P<sub>static</sub> + P<sub>velocity</sub>
7. Throw data is based on supply air and room air being at isothermal conditions.
8. Throw data is given in feet [ft] to terminal velocities of:  
150 fpm (minimum)  
100 fpm (middle)  
50 fpm (maximum)
9. Blank area outside recommended operating range.
10. Does not include effects of ceiling radiation damper (TBD3-FR).

# PERFORMANCE DATA

## TBD8 – Ice-Tong Pattern Controller, Sloped Plenum, 1 Slot

### Model TBD850 1/2 in. Slot Width

Flow Rate (cfm)			50	60	70	80	90	100	120	140	160
Normal Length	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
Normal 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
		V	8	5-9	5-11	7-11	8-12	5-8-12	7-9-13	8-11-15	9-11-15
48 in. 5 in. Round	Total Pressure (in. w.g.)	H	.045	.060	.080	.110	.135	.170	.245	.330	.435
		V	.035	.047	.062	.086	.105	.133	.191	.258	.340
48 in. 5 in. Round	Sound (NC)	H	-	-	18	22	25	28	33	37	40
		V	-	-	-	18	21	24	29	33	36
60 in. 6 in. Round	Total Pressure (in. w.g.)	H	.027	.041	.054	.068	.088	.109	.156	.214	.279
		V	.020	.031	.041	.051	.066	.082	.117	.158	.209
60 in. 6 in. Round	Sound (NC)	H	-	-	-	18	21	24	29	33	36
		V	-	-	-	-	16	19	24	28	31

### Model TBD875 3/4 in. Slot Width

Flow Rate (cfm)			60	80	100	120	140	160	180	200	220
Normal Length	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
Normal 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
		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. 6 in. Round	Total Pressure (in. w.g.)	H	.042	.070	.112	.161	.217	.287	.364	.441	.553
		V	.031	.051	.082	.117	.158	.209	.265	.321	.403
48 in. 6 in. Round	Sound (NC)	H	-	19	25	30	34	37	40	43	46
		V	-	13	19	24	28	31	34	37	40
60 in. 7 in. Round	Total Pressure (in. w.g.)	H	.025	.049	.074	.107	.148	.197	.246	.303	.369
		V	.018	.036	.054	.078	.108	.144	.180	.222	.280
60 in. 7 in. Round	Sound (NC)	H	-	-	19	24	28	31	34	37	40
		V	-	-	-	19	23	26	29	32	35

### Model TBD8100 1 in. Slot Width

Flow Rate (cfm)			60	80	100	120	140	160	180	200	220
Normal Length	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
Normal 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
		V	5	7	8	5-8	7-9	7-9	5-7-11	5-8-11	7-8-12
48 in. 7 in. Round	Total Pressure (in. w.g.)	H	.028	.055	.083	.120	.166	.221	.276	.340	.413
		V	.019	.038	.057	.082	.113	.151	.189	.233	.284
48 in. 7 in. Round	Sound (NC)	H	-	15	21	26	30	33	36	39	42
		V	-	-	15	20	24	27	30	33	36
60 in. 8 in. Round	Total Pressure (in. w.g.)	H	.020	.031	.051	.072	.102	.133	.163	.204	.255
		V	.014	.021	.035	.048	.069	.090	.110	.138	.173
60 in. 8 in. Round	Sound (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:

- Tested in accordance with ASHRAE Standard 70 – 2006 Method of Testing for Rating the Performance of Air Outlets and Inlets.
- Airflow is in cubic feet per minute [cfm].
- NC, sound pressure levels, are based on a room absorption of 10 dB re 10<sup>-12</sup> Watts, and a single diffuser/grille.
- Blanks "-" indicate an NC level below 15.
- All pressures are in inches of water column [in. w.g.].
- Pressures not listed can be calculated using the following formula: Ptotal = Pstatic + Pvelocity
- Throw data is based on supply air and room air being at isothermal conditions.
- The throw, horizontal (H) and vertical (V), is the distance to terminal velocities (VT) of 150, 100 and 50 fpm. Spread is the maximum width of the jet as defined by the above terminal velocities.

# PERFORMANCE DATA

## TBD8 – Ice-Tong Pattern Controller, Sloped Plenum, 2 Slot

### Model TBD850 1/2 in. Slot Width

Flow Rate (cfm)			100	130	160	190	220	250	280	310	340
Normal Length	Throw (ft)	H	4-6-11	5-7-12	6-9-14	7-10-15	8-11-16	9-12-17	10-13-18	11-13-19	11-14-20
		V	2-3-5	2-4-6	3-4-7	3-5-7	4-6-8	4-6-8	5-6-9	5-7-9	6-7-10
Normal 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.	Total Pressure (in. w.g.)		.050	.084	.131	.184	.247	.315	.396	.487	.587
		Sound (NC)	-	17	25	30	35	39	43	46	49
60 in.	Total Pressure (in. w.g.)		.032	.053	.077	.112	.147	.193	.242	.294	.354
		Sound (NC)	-	-	21	24	28	32	36	39	41

### Model TBD875 3/4 in. Slot Width

Flow Rate (cfm)			130	160	190	220	250	280	310	340	370
Normal Length	Throw (ft)	H	5-7-12	6-9-13	7-10-14	8-11-15	9-11-16	10-12-17	10-13-18	11-13-19	11-14-20
		V	2-4-6	3-4-6	4-5-7	4-5-7	5-6-8	5-6-8	5-6-9	5-6-9	6-7-10
Normal 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	8-9-13
48 in.	Total Pressure (in. w.g.)		.059	.086	.126	.165	.216	.271	.330	.397	.472
		Sound (NC)	-	22	28	30	34	38	41	43	46
60 in.	Total Pressure (in. w.g.)		.045	.066	.091	.146	.161	.202	.247	.297	.353
		Sound (NC)	-	-	24	28	32	36	39	42	44

### Model TBD8100 1 in. Slot Width

Flow Rate (cfm)			160	190	220	250	280	310	340	370	400
Normal Length	Throw (ft)	H	5-8-12	6-9-14	7-10-15	8-11-16	9-12-18	10-12-17	11-13-18	11-13-19	11-14-20
		V	2-3-6	3-4-7	3-5-7	3-5-7	4-6-8	4-6-8	5-6-8	5-6-9	5-6-9
Normal 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
48 in.	Total Pressure (in. w.g.)		.060	.087	.114	.150	.188	.228	.275	.326	.381
		Sound (NC)	-	23	25	29	33	35	37	39	42
60 in.	Total Pressure (in. w.g.)		.040	.055	.076	.098	.122	.149	.180	.214	.250
		Sound (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. Airflow is in cubic feet per minute [cfm].
3. NC, sound pressure levels, are based on a room absorption of 10 dB re 10<sup>-12</sup> Watts, and a single diffuser/grille.
4. Blanks "-" indicate an NC level below 15.
5. All pressures are in inches of water column [in. w.g.].
6. Pressures not listed can be calculated using the following formula: Ptotal = Pstatic + Pvelocity
7. Throw data is based on supply air and room air being at isothermal conditions.
8. The throw, horizontal (H) and vertical (V), is the distance to terminal velocities (VT) of 150, 100 and 50 fpm. Spread is the maximum width of the jet as defined by the above terminal velocities.

# PERFORMANCE DATA

## TBD4 – Blade Pattern Controller, 1 Slot

### Model TBD475 3/4 in. Slot Width

Length = 24 in. Inlet = 6 in.	Total Pressure (in. w.g.)	0.030	0.068	0.121	0.190	0.273	0.372	0.486	0.615	0.759	
	Static Pressure (in. w.g.)	0.028	0.063	0.111	0.174	0.251	0.341	0.446	0.564	0.697	
	Flow Rate (cfm)	39	59	78	98	118	137	157	176	196	
	Sound (NC)	-	18	28	35	41	46	50	54	57	
	Throw (ft.)	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. Inlet = 8 in.	Total Pressure (in. w.g.)	0.071	0.160	0.284	0.443	0.638					
	Static Pressure (in. w.g.)	0.068	0.154	0.274	0.428	0.616					
	Flow Rate (cfm)	70	105	140	175	209					
	Sound (NC)	19	32	41	48	54					
	Throw (ft.)	6-8-17	8-13-21	11-17-25	14-19-28	17-21-30					
Length = 48 in. Inlet = 6 in.	Total Pressure (in. w.g.)	0.012	0.027	0.049	0.076	0.109	0.149	0.194	0.246	0.304	0.437
	Static Pressure (in. w.g.)	0.010	0.022	0.039	0.060	0.087	0.118	0.154	0.195	0.241	0.347
	Flow Rate (cfm)	39	59	78	98	118	137	157	176	196	235
	Sound (NC)	-	-	-	20	26	31	35	39	42	48
	Throw (ft.)	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. Inlet = 8 in.	Total Pressure (in. w.g.)	0.026	0.058	0.103	0.162	0.233	0.317	0.413	0.523		
	Static Pressure (in. w.g.)	0.023	0.053	0.093	0.146	0.210	0.286	0.374	0.473		
	Flow Rate (cfm)	70	105	140	175	209	244	279	314		
	Sound (NC)	-	16	25	32	38	43	47	51		
	Throw (ft.)	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. Inlet = 10 in.	Total Pressure (in. w.g.)	0.049	0.110	0.195	0.305	0.439	0.598				
	Static Pressure (in. w.g.)	0.046	0.104	0.185	0.289	0.417	0.567				
	Flow Rate (cfm)	109	164	218	273	327	382				
	Sound (NC)	-	26	35	42	48	53				
	Throw (ft.)	6-9-15	9-13-18	12-15-21	13-16-23	15-18-25	16-19-27				
Length = 48 in. Inlet = 12 in.	Total Pressure (in. w.g.)	0.085	0.192	0.341	0.532						
	Static Pressure (in. w.g.)	0.083	0.186	0.331	0.517						
	Flow Rate (cfm)	157	236	314	393						
	Sound (NC)	22	35	44	51						
	Throw (ft.)	8-12-18	12-15-22	14-18-25	16-20-28						
Length = 60 in. Inlet = 6 in.	Total Pressure (in. w.g.)	0.009	0.021	0.037	0.058	0.083	0.113	0.148	0.187	0.231	0.332
	Static Pressure (in. w.g.)	0.007	0.015	0.027	0.042	0.061	0.083	0.108	0.136	0.168	0.243
	Flow Rate (cfm)	39	59	78	98	118	137	157	176	196	235
	Sound (NC)	-	-	-	16	22	27	31	35	38	44
	Throw (ft.)	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. Inlet = 8 in.	Total Pressure (in. w.g.)	0.019	0.043	0.077	0.120	0.172	0.234	0.306	0.387	0.478	
	Static Pressure (in. w.g.)	0.017	0.037	0.067	0.104	0.150	0.204	0.266	0.337	0.416	
	Flow Rate (cfm)	70	105	140	175	209	244	279	314	349	
	Sound (NC)	-	-	20	27	33	38	42	46	50	
	Throw (ft.)	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. Inlet = 10 in.	Total Pressure (in. w.g.)	0.035	0.079	0.141	0.220	0.317	0.432	0.564			
	Static Pressure (in. w.g.)	0.033	0.074	0.131	0.205	0.295	0.402	0.525			
	Flow Rate (cfm)	109	164	218	273	327	382	436			
	Sound (NC)	-	21	30	37	43	48	52			
	Throw (ft.)	4-7-11	7-10-14	9-11-16	10-12-18	11-14-19	12-15-21	13-16-22			
Length = 60 in. Inlet = 12 in.	Total Pressure (in. w.g.)	0.060	0.136	0.241	0.377	0.543					
	Static Pressure (in. w.g.)	0.058	0.130	0.231	0.361	0.520					
	Flow Rate (cfm)	157	236	314	393	471					
	Sound (NC)	16	29	38	46	51					
	Throw (ft.)	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. Airflow is in cubic feet per minute [cfm].
3. NC, sound pressure levels, are based on a room absorption of 10 dB re 10<sup>-12</sup> Watts, and a single diffuser/grille.
4. Blanks "-" indicate an NC level below 15.
5. All pressures are in inches of water column [in. w.g.].
6. Pressures not listed can be calculated using the following formula:  
Ptotal = Pstatic + Pvelocity
7. Throw data is based on supply air and room air being at isothermal conditions.
8. Throw data is given in feet [ft] to terminal velocities of:  
150 fpm (minimum)  
100 fpm (middle)  
50 fpm (maximum)
9. Blank area outside recommended operating range.
10. Does not include effects of ceiling radiation damper (TBD4-FR).

# PERFORMANCE DATA

## TBD4 – Blade Pattern Controller, 1 Slot (continued)

Model TBD4100 1 in. Slot Width

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

**Performance Notes:**

- Tested in accordance with ASHRAE Standard 70 – 2006 Method of Testing for Rating the Performance of Air Outlets and Inlets.
- Airflow is in cubic feet per minute [cfm].
- NC, sound pressure levels, are based on a room absorption of 10 dB re 10<sup>-12</sup> Watts, and a single diffuser/grille.
- Blanks "-" indicate an NC level below 15.
- All pressures are in inches of water column [in. w.g.].
- Pressures not listed can be calculated using the following formula:  
Ptotal = Pstatic + Pvelocity
- Throw data is based on supply air and room air being at isothermal conditions.
- Throw data is given in feet [ft] to terminal velocities of:  
150 fpm (minimum)  
100 fpm (middle)  
50 fpm (maximum)
- Blank area outside recommended operating range.
- Does not include effects of ceiling radiation damper (TBD4-FR).

# PERFORMANCE DATA

## TBD4 – Blade Pattern Controller, 1 Slot (continued)

Model TBD4150 1-1/2 in. Slot Width

<b>Length = 24 in. Inlet = 6 in.</b>	<b>Total Pressure (in. w.g.)</b>	0.020	0.044	0.078	0.123	0.177	0.240	0.314	0.397	0.490	0.706
	<b>Static Pressure (in. w.g.)</b>	0.017	0.039	0.068	0.107	0.154	0.210	0.274	0.347	0.428	0.616
	<b>Flow Rate (cfm)</b>	39	59	78	98	118	137	157	176	196	235
	<b>Sound (NC)</b>	-	-	17	24	30	35	39	43	46	52
	<b>Throw (ft.)</b>	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
<b>Length = 24 in. Inlet = 8 in.</b>	<b>Total Pressure (in. w.g.)</b>	0.040	0.089	0.159	0.248	0.357	0.486	0.634			
	<b>Static Pressure (in. w.g.)</b>	0.037	0.084	0.149	0.232	0.334	0.455	0.595			
	<b>Flow Rate (cfm)</b>	70	105	140	175	209	244	279			
	<b>Sound (NC)</b>	-	21	31	38	44	49	53			
	<b>Throw (ft.)</b>	3-7-14	7-11-21	9-14-25	12-18-28	14-21-30	16-23-33	19-25-35			
<b>Length = 24 in. Inlet = 10 in.</b>	<b>Total Pressure (in. w.g.)</b>	0.071	0.161	0.285	0.446	0.642					
	<b>Static Pressure (in. w.g.)</b>	0.069	0.155	0.275	0.430	0.620					
	<b>Flow Rate (cfm)</b>	109	164	218	273	327					
	<b>Sound (NC)</b>	20	33	42	49	55					
	<b>Throw (ft.)</b>	7-11-22	11-16-27	15-22-31	18-24-34	22-27-38					
<b>Length = 48 in. Inlet = 6 in.</b>	<b>Total Pressure (in. w.g.)</b>	0.009	0.020	0.036	0.056	0.081	0.110	0.143	0.181	0.224	0.323
	<b>Static Pressure (in. w.g.)</b>	0.006	0.015	0.026	0.040	0.058	0.079	0.103	0.131	0.162	0.233
	<b>Flow Rate (cfm)</b>	39	59	78	98	118	137	157	176	196	235
	<b>Sound (NC)</b>	-	-	-	-	-	19	24	27	31	37
	<b>Throw (ft.)</b>	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
<b>Length = 48 in. Inlet = 8 in.</b>	<b>Total Pressure (in. w.g.)</b>	0.017	0.039	0.069	0.107	0.154	0.210	0.274	0.347	0.428	0.617
	<b>Static Pressure (in. w.g.)</b>	0.015	0.033	0.059	0.091	0.132	0.179	0.234	0.296	0.366	0.527
	<b>Flow Rate (cfm)</b>	70	105	140	175	209	244	279	314	349	419
	<b>Sound (NC)</b>	-	-	-	21	27	32	36	40	44	49
	<b>Throw (ft.)</b>	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
<b>Length = 48 in. Inlet = 10 in.</b>	<b>Total Pressure (in. w.g.)</b>	0.029	0.066	0.116	0.182	0.262	0.357	0.466	0.590		
	<b>Static Pressure (in. w.g.)</b>	0.027	0.060	0.106	0.166	0.240	0.326	0.426	0.539		
	<b>Flow Rate (cfm)</b>	109	164	218	273	327	382	436	491		
	<b>Sound (NC)</b>	-	15	25	32	38	43	47	51		
	<b>Throw (ft.)</b>	3-7-14	7-10-18	9-14-21	12-16-23	14-18-25	16-19-27	17-21-29	18-22-31		
<b>Length = 48 in. Inlet = 12 in.</b>	<b>Total Pressure (in. w.g.)</b>	0.046	0.104	0.184	0.288	0.415	0.565				
	<b>Static Pressure (in. w.g.)</b>	0.044	0.098	0.174	0.273	0.392	0.534				
	<b>Flow Rate (cfm)</b>	157	236	314	393	471	550				
	<b>Sound (NC)</b>	-	24	34	41	47	52				
	<b>Throw (ft.)</b>	6-10-18	10-15-22	13-18-25	16-20-28	18-22-30	19-23-33				
<b>Length = 60 in. Inlet = 6 in.</b>	<b>Total Pressure (in. w.g.)</b>	0.007	0.016	0.028	0.044	0.063	0.086	0.113	0.142	0.176	0.253
	<b>Static Pressure (in. w.g.)</b>	0.005	0.010	0.018	0.028	0.041	0.056	0.073	0.092	0.113	0.163
	<b>Flow Rate (cfm)</b>	39	59	78	98	118	137	157	176	196	235
	<b>Sound (NC)</b>	-	-	-	-	-	19	23	26	26	32
	<b>Throw (ft.)</b>	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
<b>Length = 60 in. Inlet = 8 in.</b>	<b>Total Pressure (in. w.g.)</b>	0.013	0.030	0.053	0.083	0.119	0.163	0.212	0.269	0.332	0.478
	<b>Static Pressure (in. w.g.)</b>	0.011	0.024	0.043	0.067	0.097	0.132	0.173	0.218	0.270	0.388
	<b>Flow Rate (cfm)</b>	70	105	140	175	209	244	279	314	349	419
	<b>Sound (NC)</b>	-	-	-	16	22	27	31	35	39	44
	<b>Throw (ft.)</b>	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
<b>Length = 60 in. Inlet = 10 in.</b>	<b>Total Pressure (in. w.g.)</b>	0.022	0.050	0.089	0.139	0.200	0.272	0.356	0.450	0.556	
	<b>Static Pressure (in. w.g.)</b>	0.020	0.044	0.079	0.123	0.178	0.242	0.316	0.400	0.494	
	<b>Flow Rate (cfm)</b>	109	164	218	273	327	382	436	491	545	
	<b>Sound (NC)</b>	-	-	19	26	32	37	42	45	49	
	<b>Throw (ft.)</b>	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	
<b>Length = 60 in. Inlet = 12 in.</b>	<b>Total Pressure (in. w.g.)</b>	0.035	0.078	0.139	0.217	0.312	0.425	0.555	0.703		
	<b>Static Pressure (in. w.g.)</b>	0.032	0.072	0.129	0.201	0.290	0.395	0.515	0.652		
	<b>Flow Rate (cfm)</b>	157	236	314	393	471	550	628	707		
	<b>Sound (NC)</b>	-	19	28	35	41	46	50	54		
	<b>Throw (ft.)</b>	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. Airflow is in cubic feet per minute [cfm].
3. NC, sound pressure levels, are based on a room absorption of 10 dB re 10<sup>-12</sup> Watts, and a single diffuser/grille.
4. Blanks "-" indicate an NC level below 15.
5. All pressures are in inches of water column [in. w.g.].
6. Pressures not listed can be calculated using the following formula:  
Ptotal = Pstatic + Pvelocity
7. Throw data is based on supply air and room air being at isothermal conditions.
8. Throw data is given in feet [ft] to terminal velocities of:  
150 fpm (minimum)  
100 fpm (middle)  
50 fpm (maximum)
9. Blank area outside recommended operating range.
10. Does not include effects of ceiling radiation damper (TBD4-FR).



# PERFORMANCE DATA

## TBD4 – Blade Pattern Controller, 2 Slot

### Model TBD475 3/4 in. Slot Width

<b>Length = 24 in. Inlet = 6 in.</b>	<b>Total Pressure (in. w.g.)</b>	0.027	0.049	0.076	0.109	0.149	0.194	0.246	0.304	0.437	0.595
	<b>Static Pressure (in. w.g.)</b>	0.022	0.039	0.060	0.087	0.118	0.154	0.195	0.241	0.347	0.473
	<b>Flow Rate (cfm)</b>	59	78	98	118	137	157	176	196	235	274
	<b>Sound (NC)</b>	-	18	25	31	36	40	44	48	53	58
	<b>Throw (ft.)</b>	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
<b>Length = 24 in. Inlet = 8 in.</b>	<b>Total Pressure (in. w.g.)</b>	0.058	0.103	0.162	0.233	0.317	0.413	0.523			
	<b>Static Pressure (in. w.g.)</b>	0.053	0.093	0.146	0.210	0.286	0.374	0.473			
	<b>Flow Rate (cfm)</b>	105	140	175	209	244	279	314			
	<b>Sound (NC)</b>	24	34	41	47	52	56	60			
	<b>Throw (ft.)</b>	7-11-21	9-14-25	12-18-28	14-21-30	16-23-33	19-25-35	21-26-37			
<b>Length = 24 in. Inlet = 10 in.</b>	<b>Total Pressure (in. w.g.)</b>	0.110	0.195	0.305	0.439	0.598					
	<b>Static Pressure (in. w.g.)</b>	0.104	0.185	0.289	0.417	0.567					
	<b>Flow Rate (cfm)</b>	164	218	273	327	382					
	<b>Sound (NC)</b>	37	47	54	60	65					
	<b>Throw (ft.)</b>	11-16-27	15-22-31	18-24-34	22-27-38	24-29-41					
<b>Length = 48 in. Inlet = 6 in.</b>	<b>Total Pressure (in. w.g.)</b>		0.021	0.033	0.048	0.065	0.085	0.108	0.133	0.191	0.260
	<b>Static Pressure (in. w.g.)</b>		0.011	0.018	0.025	0.035	0.045	0.057	0.071	0.102	0.138
	<b>Flow Rate (cfm)</b>		78	98	118	137	157	176	196	235	274
	<b>Sound (NC)</b>		-	-	-	19	24	27	31	37	42
	<b>Throw (ft.)</b>		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
<b>Length = 48 in. Inlet = 8 in.</b>	<b>Total Pressure (in. w.g.)</b>	0.024	0.042	0.066	0.095	0.129	0.168	0.213	0.263	0.379	0.515
	<b>Static Pressure (in. w.g.)</b>	0.018	0.032	0.050	0.072	0.098	0.128	0.162	0.201	0.289	0.393
	<b>Flow Rate (cfm)</b>	105	140	175	209	244	279	314	349	419	489
	<b>Sound (NC)</b>	-	15	22	28	33	38	41	45	51	55
	<b>Throw (ft.)</b>	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
<b>Length = 48 in. Inlet = 10 in.</b>	<b>Total Pressure (in. w.g.)</b>	0.042	0.074	0.116	0.167	0.227	0.297	0.375	0.463		
	<b>Static Pressure (in. w.g.)</b>	0.036	0.064	0.100	0.144	0.196	0.257	0.325	0.401		
	<b>Flow Rate (cfm)</b>	164	218	273	327	382	436	491	545		
	<b>Sound (NC)</b>	18	27	34	40	45	49	53	56		
	<b>Throw (ft.)</b>	7-10-18	9-14-21	12-16-23	14-18-25	16-19-27	17-21-29	18-22-31	19-23-33		
<b>Length = 48 in. Inlet = 12 in.</b>	<b>Total Pressure (in. w.g.)</b>	0.068	0.122	0.190	0.274	0.373	0.487	0.616			
	<b>Static Pressure (in. w.g.)</b>	0.063	0.112	0.174	0.251	0.342	0.447	0.565			
	<b>Flow Rate (cfm)</b>	236	314	393	471	550	628	707			
	<b>Sound (NC)</b>	28	37	44	50	55	59	63			
	<b>Throw (ft.)</b>	10-15-22	13-18-25	16-20-28	18-22-30	19-23-33	20-25-35	22-26-37			
<b>Length = 60 in. Inlet = 6 in.</b>	<b>Total Pressure (in. w.g.)</b>		0.017	0.026	0.037	0.051	0.066	0.084	0.103	0.149	0.202
	<b>Static Pressure (in. w.g.)</b>		0.007	0.010	0.015	0.020	0.026	0.033	0.041	0.059	0.080
	<b>Flow Rate (cfm)</b>		78	98	118	137	157	176	196	235	274
	<b>Sound (NC)</b>		-	-	-	-	18	22	26	31	36
	<b>Throw (ft.)</b>		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
<b>Length = 60 in. Inlet = 8 in.</b>	<b>Total Pressure (in. w.g.)</b>	0.018	0.032	0.050	0.072	0.098	0.128	0.163	0.201	0.289	0.393
	<b>Static Pressure (in. w.g.)</b>	0.012	0.022	0.035	0.050	0.068	0.089	0.112	0.138	0.199	0.271
	<b>Flow Rate (cfm)</b>	105	140	175	209	244	279	314	349	419	489
	<b>Sound (NC)</b>	-	-	17	23	28	32	36	39	45	50
	<b>Throw (ft.)</b>	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
<b>Length = 60 in. Inlet = 10 in.</b>	<b>Total Pressure (in. w.g.)</b>	0.031	0.056	0.087	0.125	0.170	0.222	0.281	0.347	0.500	0.680
	<b>Static Pressure (in. w.g.)</b>	0.026	0.046	0.071	0.103	0.140	0.182	0.231	0.285	0.410	0.558
	<b>Flow Rate (cfm)</b>	164	218	273	327	382	436	491	545	654	763
	<b>Sound (NC)</b>	-	21	28	34	39	43	47	50	56	61
	<b>Throw (ft.)</b>	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
<b>Length = 60 in. Inlet = 12 in.</b>	<b>Total Pressure (in. w.g.)</b>	0.050	0.090	0.140	0.201	0.274	0.358	0.453	0.560		
	<b>Static Pressure (in. w.g.)</b>	0.045	0.080	0.124	0.179	0.244	0.318	0.403	0.497		
	<b>Flow Rate (cfm)</b>	236	314	393	471	550	628	707	785		
	<b>Sound (NC)</b>	21	31	38	44	49	53	57	60		
	<b>Throw (ft.)</b>	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. Airflow is in cubic feet per minute [cfm].
3. NC, sound pressure levels, are based on a room absorption of 10 dB re 10<sup>-12</sup> Watts, and a single diffuser/grille.
4. Blanks "-" indicate an NC level below 15.
5. All pressures are in inches of water column [in. w.g.].
6. Pressures not listed can be calculated using the following formula:  
Ptotal = Pstatic + Pvelocity
7. Throw data is based on supply air and room air being at isothermal conditions.
8. Throw data is given in feet [ft] to terminal velocities of:  
150 fpm (minimum)  
100 fpm (middle)  
50 fpm (maximum)
9. Blank area outside recommended operating range.
10. Does not include effects of ceiling radiation damper (TBD4-FR).

# PERFORMANCE DATA

## TBD4 – Blade Pattern Controller, 2 Slot (continued)

### Model TBD4100 1 in. Slot Width

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

- Tested in accordance with ASHRAE Standard 70 – 2006 Method of Testing for Rating the Performance of Air Outlets and Inlets.
- Airflow is in cubic feet per minute [cfm].
- NC, sound pressure levels, are based on a room absorption of 10 dB re 10<sup>-12</sup> Watts, and a single diffuser/grille.
- Blanks "-" indicate an NC level below 15.
- All pressures are in inches of water column [in. w.g.].
- Pressures not listed can be calculated using the following formula:  
 $P_{total} = P_{static} + P_{velocity}$
- Throw data is based on supply air and room air being at isothermal conditions.
- Throw data is given in feet [ft] to terminal velocities of:  
150 fpm (minimum)  
100 fpm (middle)  
50 fpm (maximum)
- Blank area outside recommended operating range.
- Does not include effects of ceiling radiation damper (TBD4-FR).

# PERFORMANCE DATA

## TBD4 – Blade Pattern Controller, 2 Slot (continued)

Model TBD4150 1-1/2 in. Slot Width

Length = 24 in. Inlet = 6 in.	Total Pressure (in. w.g.)	0.020	0.036	0.056	0.081	0.110	0.143	0.181	0.224	0.323	0.439
	Static Pressure (in. w.g.)	0.015	0.026	0.040	0.058	0.079	0.103	0.131	0.162	0.233	0.317
	Flow Rate (cfm)	59	78	98	118	137	157	176	196	235	274
	Sound (NC)	-	-	-	-	19	24	27	31	37	42
	Throw (ft.)	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. Inlet = 8 in.	Total Pressure (in. w.g.)	0.039	0.069	0.107	0.154	0.210	0.274	0.347	0.428	0.617	
	Static Pressure (in. w.g.)	0.033	0.059	0.091	0.132	0.179	0.234	0.296	0.366	0.527	
	Flow Rate (cfm)	105	140	175	209	244	279	314	349	419	
	Sound (NC)	-	-	21	27	32	36	40	44	49	
	Throw (ft.)	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. Inlet = 10 in.	Total Pressure (in. w.g.)	0.066	0.116	0.182	0.262	0.357	0.466	0.590			
	Static Pressure (in. w.g.)	0.060	0.106	0.166	0.240	0.326	0.426	0.539			
	Flow Rate (cfm)	164	218	273	327	382	436	491			
	Sound (NC)	15	25	32	38	43	47	51			
	Throw (ft.)	11-16-27	15-22-31	18-24-34	22-27-38	24-29-41	25-31-44	27-33-46			
Length = 48 in. Inlet = 6 in.	Total Pressure (in. w.g.)		0.017	0.027	0.038	0.052	0.068	0.086	0.107	0.154	0.209
	Static Pressure (in. w.g.)		0.007	0.011	0.016	0.022	0.028	0.036	0.044	0.064	0.087
	Flow Rate (cfm)		78	98	118	137	157	176	196	235	274
	Sound (NC)		-	-	-	-	-	-	16	22	27
	Throw (ft.)		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. Inlet = 8 in.	Total Pressure (in. w.g.)	0.018	0.032	0.049	0.071	0.097	0.126	0.160	0.197	0.284	0.387
	Static Pressure (in. w.g.)	0.012	0.022	0.034	0.049	0.066	0.086	0.109	0.135	0.194	0.265
	Flow Rate (cfm)	105	140	175	209	244	279	314	349	419	489
	Sound (NC)	-	-	-	-	17	21	25	28	34	39
	Throw (ft.)	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. Inlet = 10 in.	Total Pressure (in. w.g.)	0.029	0.052	0.081	0.116	0.158	0.207	0.262	0.323	0.465	0.633
	Static Pressure (in. w.g.)	0.023	0.042	0.065	0.094	0.128	0.167	0.211	0.261	0.375	0.511
	Flow Rate (cfm)	164	218	273	327	382	436	491	545	654	763
	Sound (NC)	-	-	16	22	27	31	35	38	44	49
	Throw (ft.)	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. Inlet = 12 in.	Total Pressure (in. w.g.)	0.044	0.079	0.123	0.177	0.241	0.314	0.398	0.491		
	Static Pressure (in. w.g.)	0.039	0.069	0.107	0.154	0.210	0.274	0.347	0.429		
	Flow Rate (cfm)	236	314	393	471	550	628	707	785		
	Sound (NC)	-	17	24	30	35	39	43	46		
	Throw (ft.)	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. Inlet = 6 in.	Total Pressure (in. w.g.)		0.014	0.021	0.030	0.041	0.054	0.068	0.084	0.122	0.166
	Static Pressure (in. w.g.)		0.004	0.006	0.008	0.011	0.014	0.018	0.022	0.032	0.043
	Flow Rate (cfm)		78	98	118	137	157	176	196	235	274
	Sound (NC)		-	-	-	-	-	-	-	17	22
	Throw (ft.)		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. Inlet = 8 in.	Total Pressure (in. w.g.)	0.014	0.025	0.039	0.056	0.076	0.099	0.126	0.155	0.223	0.304
	Static Pressure (in. w.g.)	0.008	0.015	0.023	0.033	0.045	0.059	0.075	0.093	0.134	0.182
	Flow Rate (cfm)	105	140	175	209	244	279	314	349	419	489
	Sound (NC)	-	-	-	-	-	16	20	24	29	34
	Throw (ft.)	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. Inlet = 10 in.	Total Pressure (in. w.g.)	0.023	0.040	0.063	0.091	0.123	0.161	0.204	0.252	0.363	0.493
	Static Pressure (in. w.g.)	0.017	0.030	0.047	0.068	0.093	0.121	0.153	0.189	0.273	0.371
	Flow Rate (cfm)	164	218	273	327	382	436	491	545	654	763
	Sound (NC)	-	-	-	17	22	26	30	33	39	44
	Throw (ft.)	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. Inlet = 12 in.	Total Pressure (in. w.g.)	0.034	0.061	0.095	0.137	0.186	0.243	0.307	0.379	0.546	
	Static Pressure (in. w.g.)	0.029	0.051	0.079	0.114	0.155	0.203	0.257	0.317	0.456	
	Flow Rate (cfm)	236	314	393	471	550	628	707	785	942	
	Sound (NC)	-	-	19	25	30	34	38	41	47	
	Throw (ft.)	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. Airflow is in cubic feet per minute [cfm].
3. NC, sound pressure levels, are based on a room absorption of 10 dB re 10<sup>-12</sup> Watts, and a single diffuser/grille.
4. Blanks "-" indicate an NC level below 15.
5. All pressures are in inches of water column [in. w.g.].
6. Pressures not listed can be calculated using the following formula:  
Ptotal = Pstatic + Pvelocity
7. Throw data is based on supply air and room air being at isothermal conditions.
8. Throw data is given in feet [ft] to terminal velocities of:  
150 fpm (minimum)  
100 fpm (middle)  
50 fpm (maximum)
9. Blank area outside recommended operating range.
10. Does not include effects of ceiling radiation damper (TBD4-FR).

# PERFORMANCE DATA

## TBD4 – Blade Pattern Controller, 3 Slot

### Model TBD475 3/4 in. Slot Width

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

- Tested in accordance with ASHRAE Standard 70 – 2006 Method of Testing for Rating the Performance of Air Outlets and Inlets.
- Airflow is in cubic feet per minute [cfm].
- NC, sound pressure levels, are based on a room absorption of 10 dB re 10<sup>-12</sup> Watts, and a single diffuser/grille.
- Blanks "-" indicate an NC level below 15.
- All pressures are in inches of water column [in. w.g.].
- Pressures not listed can be calculated using the following formula:  
Ptotal = Pstatic + Pvelocity
- Throw data is based on supply air and room air being at isothermal conditions.
- Throw data is given in feet [ft] to terminal velocities of:  
150 fpm (minimum)  
100 fpm (middle)  
50 fpm (maximum)
- Blank area outside recommended operating range.
- Does not include effects of ceiling radiation damper (TBD4-FR).

# PERFORMANCE DATA

## TBD4 – Blade Pattern Controller, 3 Slot (continued)

Model TBD4100 1 in. Slot Width

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

- Tested in accordance with ASHRAE Standard 70 – 2006 Method of Testing for Rating the Performance of Air Outlets and Inlets.
- Airflow is in cubic feet per minute [cfm].
- NC, sound pressure levels, are based on a room absorption of 10 dB re 10<sup>-12</sup> Watts, and a single diffuser/grille.
- Blanks "-" indicate an NC level below 15.
- All pressures are in inches of water column [in. w.g.].
- Pressures not listed can be calculated using the following formula:  
Ptotal = Pstatic + Pvelocity
- Throw data is based on supply air and room air being at isothermal conditions.
- Throw data is given in feet [ft] to terminal velocities of:  
150 fpm (minimum)  
100 fpm (middle)  
50 fpm (maximum)
- Blank area outside recommended operating range.
- Does not include effects of ceiling radiation damper (TBD4-FR).

# PERFORMANCE DATA

## TBD4 – Blade Pattern Controller, 3 Slot (continued)

Model TBD4150 1-1/2 in. Slot Width

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

- Tested in accordance with ASHRAE Standard 70 – 2006 Method of Testing for Rating the Performance of Air Outlets and Inlets.
- Airflow is in cubic feet per minute [cfm].
- NC, sound pressure levels, are based on a room absorption of 10 dB re 10<sup>-12</sup> Watts, and a single diffuser/grille.
- Blanks "-" indicate an NC level below 15.
- All pressures are in inches of water column [in. w.g.].
- Pressures not listed can be calculated using the following formula:  
Ptotal = Pstatic + Pvelocity
- Throw data is based on supply air and room air being at isothermal conditions.
- Throw data is given in feet [ft] to terminal velocities of:  
150 fpm (minimum)  
100 fpm (middle)  
50 fpm (maximum)
- Blank area outside recommended operating range.
- Does not include effects of ceiling radiation damper (TBD4-FR).

# PERFORMANCE DATA

## TBD4 – Blade Pattern Controller, 4 Slot

### Model TBDA75 3/4 in. Slot Width

<b>Length = 24 in. Inlet = 6 in.</b>	<b>Total Pressure (in. w.g.)</b>	0.021	0.033	0.048	0.065	0.085	0.108	0.133	0.191	0.260
	<b>Static Pressure (in. w.g.)</b>	0.011	0.018	0.025	0.035	0.045	0.057	0.071	0.102	0.138
	<b>Flow Rate (cfm)</b>	78	98	118	137	157	176	196	235	274
	<b>Sound (NC)</b>	-	-	-	19	24	27	31	37	42
	<b>Throw (ft.)</b>	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
<b>Length = 24 in. Inlet = 8 in.</b>	<b>Total Pressure (in. w.g.)</b>	0.042	0.066	0.095	0.129	0.168	0.213	0.263	0.379	0.515
	<b>Static Pressure (in. w.g.)</b>	0.032	0.050	0.072	0.098	0.128	0.162	0.201	0.289	0.393
	<b>Flow Rate (cfm)</b>	140	175	209	244	279	314	349	419	489
	<b>Sound (NC)</b>	15	22	28	33	38	41	45	51	55
	<b>Throw (ft.)</b>	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
<b>Length = 24 in. Inlet = 10 in.</b>	<b>Total Pressure (in. w.g.)</b>	0.074	0.116	0.167	0.227	0.297	0.375	0.463	0.667	
	<b>Static Pressure (in. w.g.)</b>	0.064	0.100	0.144	0.196	0.257	0.325	0.401	0.577	
	<b>Flow Rate (cfm)</b>	218	273	327	382	436	491	545	654	
	<b>Sound (NC)</b>	27	34	40	45	49	53	56	62	
	<b>Throw (ft.)</b>	11-17-31	14-21-34	17-26-38	20-29-41	23-31-44	26-33-46	28-34-49	31-38-53	
<b>Length = 48 in. Inlet = 8 in.</b>	<b>Total Pressure (in. w.g.)</b>	0.019	0.029	0.042	0.057	0.075	0.094	0.116	0.168	0.228
	<b>Static Pressure (in. w.g.)</b>	0.009	0.014	0.019	0.027	0.035	0.044	0.054	0.078	0.106
	<b>Flow Rate (cfm)</b>	140	175	209	244	279	314	349	419	489
	<b>Sound (NC)</b>	-	-	-	17	21	25	28	34	39
	<b>Throw (ft.)</b>	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
<b>Length = 48 in. Inlet = 10 in.</b>	<b>Total Pressure (in. w.g.)</b>	0.031	0.049	0.070	0.096	0.125	0.158	0.195	0.281	0.382
	<b>Static Pressure (in. w.g.)</b>	0.021	0.033	0.048	0.065	0.085	0.107	0.133	0.191	0.260
	<b>Flow Rate (cfm)</b>	218	273	327	382	436	491	545	654	763
	<b>Sound (NC)</b>	-	16	22	27	31	35	39	44	49
	<b>Throw (ft.)</b>	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
<b>Length = 48 in. Inlet = 12 in.</b>	<b>Total Pressure (in. w.g.)</b>	0.049	0.076	0.109	0.149	0.195	0.246	0.304	0.438	0.596
	<b>Static Pressure (in. w.g.)</b>	0.039	0.060	0.087	0.118	0.155	0.196	0.242	0.348	0.474
	<b>Flow Rate (cfm)</b>	314	393	471	550	628	707	785	942	1099
	<b>Sound (NC)</b>	18	25	31	36	40	44	48	54	58
	<b>Throw (ft.)</b>	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
<b>Length = 60 in. Inlet = 8 in.</b>	<b>Total Pressure (in. w.g.)</b>	0.015	0.023	0.033	0.044	0.058	0.074	0.091	0.131	0.178
	<b>Static Pressure (in. w.g.)</b>	0.005	0.007	0.010	0.014	0.018	0.023	0.028	0.041	0.056
	<b>Flow Rate (cfm)</b>	140	175	209	244	279	314	349	419	489
	<b>Sound (NC)</b>	-	-	-	-	16	20	23	29	34
	<b>Throw (ft.)</b>	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
<b>Length = 60 in. Inlet = 10 in.</b>	<b>Total Pressure (in. w.g.)</b>	0.024	0.038	0.054	0.074	0.096	0.122	0.150	0.216	0.294
	<b>Static Pressure (in. w.g.)</b>	0.014	0.022	0.032	0.043	0.056	0.071	0.088	0.126	0.172
	<b>Flow Rate (cfm)</b>	218	273	327	382	436	491	545	654	763
	<b>Sound (NC)</b>	-	-	17	22	26	30	33	39	44
	<b>Throw (ft.)</b>	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
<b>Length = 60 in. Inlet = 12 in.</b>	<b>Total Pressure (in. w.g.)</b>	0.037	0.058	0.083	0.113	0.148	0.187	0.231	0.333	0.453
	<b>Static Pressure (in. w.g.)</b>	0.027	0.042	0.061	0.083	0.108	0.137	0.169	0.243	0.331
	<b>Flow Rate (cfm)</b>	314	393	471	550	628	707	785	942	1099
	<b>Sound (NC)</b>	-	20	26	31	35	39	42	48	53
	<b>Throw (ft.)</b>	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. Airflow is in cubic feet per minute [cfm].
3. NC, sound pressure levels, are based on a room absorption of 10 dB re 10<sup>-12</sup> Watts, and a single diffuser/grille.
4. Blanks "-" indicate an NC level below 15.
5. All pressures are in inches of water column [in. w.g.].
6. Pressures not listed can be calculated using the following formula:  
Ptotal = Pstatic + Pvelocity
7. Throw data is based on supply air and room air being at isothermal conditions.
8. Throw data is given in feet [ft] to terminal velocities of:  
150 fpm (minimum)  
100 fpm (middle)  
50 fpm (maximum)
9. Blank area outside recommended operating range.
10. Does not include effects of ceiling radiation damper (TBD4-FR).

# PERFORMANCE DATA

## TBD4 – Blade Pattern Controller, 4 Slot (continued)

### Model TBD4100 1 in. Slot Width

Length = 24 in. Inlet = 6 in.	Total Pressure (in. w.g.)	0.023	0.036	0.052	0.070	0.092	0.116	0.143	0.207	0.281
	Static Pressure (in. w.g.)	0.013	0.020	0.029	0.040	0.052	0.066	0.081	0.117	0.159
	Flow Rate (cfm)	78	98	118	137	157	176	196	235	274
	Sound (NC)	-	-	-	-	19	23	26	32	37
	Throw (ft.)	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. Inlet = 8 in.	Total Pressure (in. w.g.)	0.038	0.059	0.085	0.116	0.152	0.192	0.237	0.341	0.465
	Static Pressure (in. w.g.)	0.028	0.044	0.063	0.086	0.112	0.142	0.175	0.252	0.343
	Flow Rate (cfm)	140	175	209	244	279	314	349	419	489
	Sound (NC)	-	-	18	23	27	31	34	40	45
	Throw (ft.)	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. Inlet = 10 in.	Total Pressure (in. w.g.)	0.057	0.089	0.129	0.175	0.229	0.289	0.357	0.514	
	Static Pressure (in. w.g.)	0.047	0.074	0.106	0.144	0.189	0.239	0.295	0.425	
	Flow Rate (cfm)	218	273	327	382	436	491	545	654	
	Sound (NC)	-	18	24	29	33	37	40	46	
	Throw (ft.)	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. Inlet = 8 in.	Total Pressure (in. w.g.)	0.021	0.033	0.047	0.064	0.083	0.105	0.130	0.188	0.255
	Static Pressure (in. w.g.)	0.011	0.017	0.024	0.033	0.043	0.055	0.068	0.098	0.133
	Flow Rate (cfm)	140	175	209	244	279	314	349	419	489
	Sound (NC)	-	-	-	-	18	21	25	31	36
	Throw (ft.)	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. Inlet = 10 in.	Total Pressure (in. w.g.)	0.030	0.048	0.068	0.093	0.122	0.154	0.190	0.274	0.373
	Static Pressure (in. w.g.)	0.020	0.032	0.046	0.063	0.082	0.104	0.128	0.184	0.251
	Flow Rate (cfm)	218	273	327	382	436	491	545	654	763
	Sound (NC)	-	-	-	19	23	27	31	36	41
	Throw (ft.)	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. Inlet = 12 in.	Total Pressure (in. w.g.)	0.042	0.066	0.095	0.129	0.169	0.214	0.264	0.380	0.517
	Static Pressure (in. w.g.)	0.032	0.050	0.073	0.099	0.129	0.163	0.201	0.290	0.395
	Flow Rate (cfm)	314	393	471	550	628	707	785	942	1099
	Sound (NC)	-	-	19	24	28	32	36	41	46
	Throw (ft.)	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. Inlet = 8 in.	Total Pressure (in. w.g.)	0.017	0.027	0.039	0.053	0.070	0.088	0.109	0.157	0.213
	Static Pressure (in. w.g.)	0.007	0.012	0.017	0.023	0.030	0.038	0.047	0.067	0.091
	Flow Rate (cfm)	140	175	209	244	279	314	349	419	489
	Sound (NC)	-	-	-	-	-	19	22	28	33
	Throw (ft.)	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. Inlet = 10 in.	Total Pressure (in. w.g.)	0.025	0.039	0.056	0.077	0.100	0.127	0.157	0.226	0.307
	Static Pressure (in. w.g.)	0.015	0.024	0.034	0.046	0.061	0.077	0.095	0.136	0.185
	Flow Rate (cfm)	218	273	327	382	436	491	545	654	763
	Sound (NC)	-	-	-	16	21	24	28	34	38
	Throw (ft.)	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. Inlet = 12 in.	Total Pressure (in. w.g.)	0.035	0.054	0.078	0.106	0.138	0.175	0.216	0.311	0.423
	Static Pressure (in. w.g.)	0.025	0.038	0.055	0.075	0.098	0.124	0.153	0.221	0.301
	Flow Rate (cfm)	314	393	471	550	628	707	785	942	1099
	Sound (NC)	-	-	16	21	25	29	33	38	43
	Throw (ft.)	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. Airflow is in cubic feet per minute [cfm].
3. NC, sound pressure levels, are based on a room absorption of 10 dB re 10<sup>-12</sup> Watts, and a single diffuser/grille.
4. Blanks “-” indicate an NC level below 15.
5. All pressures are in inches of water column [in. w.g.].
6. Pressures not listed can be calculated using the following formula:  
Ptotal = Pstatic + Pvelocity
7. Throw data is based on supply air and room air being at isothermal conditions.
8. Throw data is given in feet [ft] to terminal velocities of:  
150 fpm (minimum)  
100 fpm (middle)  
50 fpm (maximum)
9. Blank area outside recommended operating range.
10. Does not include effects of ceiling radiation damper (TBD4-FR).



# PERFORMANCE DATA

## TBD4 – Blade Pattern Controller, 4 Slot (continued)

Model TBD4150 1-1/2 in. Slot Width

Length = 24 in. Inlet = 6 in.	Total Pressure (in. w.g.)	0.017	0.026	0.037	0.051	0.066	0.084	0.103	0.149	0.203
	Static Pressure (in. w.g.)	0.007	0.010	0.015	0.020	0.026	0.033	0.041	0.059	0.080
	Flow Rate (cfm)	78	98	118	137	157	176	196	235	274
	Sound (NC)	-	-	-	-	-	18	21	27	32
	Throw (ft.)	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. Inlet = 8 in.	Total Pressure (in. w.g.)	0.027	0.041	0.060	0.081	0.106	0.134	0.166	0.239	0.325
	Static Pressure (in. w.g.)	0.017	0.026	0.037	0.051	0.066	0.084	0.104	0.149	0.203
	Flow Rate (cfm)	140	175	209	244	279	314	349	419	489
	Sound (NC)	-	-	-	17	21	25	29	34	39
	Throw (ft.)	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. Inlet = 10 in.	Total Pressure (in. w.g.)	0.039	0.061	0.089	0.120	0.157	0.199	0.246	0.354	0.482
	Static Pressure (in. w.g.)	0.029	0.046	0.066	0.090	0.117	0.149	0.184	0.264	0.360
	Flow Rate (cfm)	218	273	327	382	436	491	545	654	763
	Sound (NC)	-	-	18	23	27	31	35	40	45
	Throw (ft.)	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. Inlet = 8 in.	Total Pressure (in. w.g.)	0.015	0.024	0.034	0.046	0.061	0.077	0.095	0.136	0.185
	Static Pressure (in. w.g.)	0.005	0.008	0.012	0.016	0.021	0.026	0.032	0.046	0.063
	Flow Rate (cfm)	140	175	209	244	279	314	349	419	489
	Sound (NC)	-	-	-	-	-	17	20	26	31
	Throw (ft.)	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. Inlet = 10 in.	Total Pressure (in. w.g.)	0.022	0.034	0.048	0.066	0.086	0.109	0.135	0.194	0.264
	Static Pressure (in. w.g.)	0.012	0.018	0.026	0.035	0.046	0.059	0.072	0.104	0.142
	Flow Rate (cfm)	218	273	327	382	436	491	545	654	763
	Sound (NC)	-	-	-	-	18	22	25	31	36
	Throw (ft.)	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. Inlet = 12 in.	Total Pressure (in. w.g.)	0.029	0.046	0.066	0.090	0.118	0.149	0.184	0.264	0.360
	Static Pressure (in. w.g.)	0.019	0.030	0.044	0.059	0.078	0.098	0.121	0.175	0.238
	Flow Rate (cfm)	314	393	471	550	628	707	785	942	1099
	Sound (NC)	-	-	-	19	23	27	30	36	41
	Throw (ft.)	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. Inlet = 8 in.	Total Pressure (in. w.g.)	0.013	0.020	0.029	0.039	0.051	0.065	0.080	0.116	0.157
	Static Pressure (in. w.g.)	0.003	0.005	0.006	0.009	0.012	0.015	0.018	0.026	0.035
	Flow Rate (cfm)	140	175	209	244	279	314	349	419	489
	Sound (NC)	-	-	-	-	-	-	17	23	28
	Throw (ft.)	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. Inlet = 10 in.	Total Pressure (in. w.g.)	0.018	0.028	0.040	0.055	0.072	0.091	0.112	0.162	0.220
	Static Pressure (in. w.g.)	0.008	0.013	0.018	0.025	0.032	0.041	0.050	0.072	0.098
	Flow Rate (cfm)	218	273	327	382	436	491	545	654	763
	Sound (NC)	-	-	-	-	15	19	23	28	33
	Throw (ft.)	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. Inlet = 12 in.	Total Pressure (in. w.g.)	0.024	0.038	0.055	0.074	0.097	0.123	0.152	0.218	0.297
	Static Pressure (in. w.g.)	0.014	0.022	0.032	0.044	0.057	0.072	0.089	0.128	0.175
	Flow Rate (cfm)	314	393	471	550	628	707	785	942	1099
	Sound (NC)	-	-	-	16	20	24	27	33	38
	Throw (ft.)	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. Airflow is in cubic feet per minute [cfm].
3. NC, sound pressure levels, are based on a room absorption of 10 dB re 10<sup>-12</sup> Watts, and a single diffuser/grille.
4. Blanks "-" indicate an NC level below 15.
5. All pressures are in inches of water column [in. w.g.].
6. Pressures not listed can be calculated using the following formula:  
Ptotal = Pstatic + Pvelocity
7. Throw data is based on supply air and room air being at isothermal conditions.
8. Throw data is given in feet [ft] to terminal velocities of:  
150 fpm (minimum)  
100 fpm (middle)  
50 fpm (maximum)
9. Blank area outside recommended operating range.
10. Does not include effects of ceiling radiation damper (TBD4-FR).







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