

# 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	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:  
 $P_{total} = P_{static} + P_{velocity}$
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:  
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, 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:**

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 (continued)

### Model TBD4100 1 in. Slot Width

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

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

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