

## SD & SDD Ceiling Diffuser (Page 31)

Face Velocity		400	500	600	700	800	900	1000
Pressure Loss		.010	.016	.022	.031	.040	.050	.062
6 x 6	CFM	60	80	95	110	125	140	155
Ak .155	Throw	2.5	3.5	4.0	4.5	5.5	6.0	6.5
8 x 8	CFM	110	135	160	190	215	245	270
Ak .270	Throw	3.5	4.0	5.0	6.0	6.5	7.5	8.5
10 x 10	CFM	170	215	255	300	340	385	425
Ak .425	Throw	4.0	5.5	6.0	7.5	8.5	9.5	10.0
12 x 12	CFM	240	300	360	420	480	540	600
Ak .600	Throw	5.0	6.0	7.5	8.5	9.5	11.0	12.0
14 x 14	CFM	320	400	480	560	640	720	800
Ak .625	Throw	5.5	7.0	8.0	9.5	11.0	12.0	14.0
16 x 16	CFM	425	530	635	740	850	955	1060
Ak 1.060	Throw	6.5	8.0	9.5	11.0	13.0	14.0	16.0
18 x 18	CFM	545	680	815	950	1090	1225	1360
Ak 1.360	Throw	7.0	9.0	11.0	13.0	14.0	16.0	18.0
20 x 20	CFM	660	825	990	1155	1320	1485	1650
Ak 1.650	Throw	8.0	10.0	12.0	14.0	16.0	18.0	20.0

Terminal Velocity of 50 FPM

## ECFM Aluminum Diffuser (Page 31)

Face Velocity		400	500	600	700	800	900	1000	1200	1400	1600	1800	2000
14 x 14	CFM	368	460	552	644	736	828	920	1104	1288	1472	1656	1840
Ak .920	Pt	.013	.020	.028	.038	.050	.063	.078	.112	.152	.199	.251	.310
16 x 16	CFM	484	605	726	847	968	1089	1210	1452	1694	1936	2178	2420
Ak 1.210	Pt	.013	.020	.028	.038	.050	.063	.078	.112	.153	.199	.252	.311
18 x 18	CFM	564	705	846	987	1128	1269	1410	1692	1974	2256	2538	2820
Ak 1.410	Pt	.012	.019	.027	.036	.047	.060	.074	.106	.144	.188	.235	.294
20 x 20	CFM	756	945	1134	1323	1512	1701	1890	2268	2646	3024	3402	3780
Ak 1.890	Pt	.013	.020	.028	.038	.050	.063	.078	.113	.153	.200	.252	.311

**Notes:**

1. ECFM diffusers tested with damper fully open.
2. Pt = Total Pressure is the sum of the static pressure and velocity pressure.
3. Ak is the effective area of the diffuser face.

## ECHVD Evaporative Cooler Diffuser (Page 32)

Face Velocity		400	500	600	700	800	900	1000	1200	1400	1600	1800	2000
6 x 6	CFM	47	59	71	83	95	107	119	142	166	190	213	237
Ak .119	Pt	.012	.019	.027	.036	.047	.059	.074	.105	.142	.186	.235	.289
8 x 8	CFM	118	148	177	207	237	266	296	355	414	473	532	592
Ak .296	Pt	.013	.020	.028	.039	.050	.063	.078	.112	.152	.197	.251	.308
10 x 10	CFM	189	237	284	331	378	426	473	568	662	757	851	946
Ak .473	Pt	.013	.021	.030	.041	.053	.067	.083	.119	.162	.209	.266	.328
12 x 12	CFM	281	351	421	491	562	632	702	842	983	1123	1264	1404
Ak .702	Pt	.012	.020	.026	.036	.046	.058	.072	.104	.142	.186	.235	.290
14 x 14	CFM	419	524	629	733	838	943	1048	1257	1467	1676	1886	2095
Ak 1.048	Pt	.012	.019	.026	.035	.046	.058	.072	.104	.141	.185	.233	.289
16 x 16	CFM	557	697	836	975	1115	1254	1393	1672	1950	2229	2508	2786
Ak 1.393	Pt	.012	.019	.026	.035	.046	.058	.072	.103	.141	.184	.232	.288
18 x 18	CFM	696	869	1043	1217	1391	1565	1739	2087	2434	2782	3130	3478
Ak 1.739	Pt	.012	.018	.026	.035	.046	.058	.072	.103	.140	.182	.231	.286

## ECBX Steel Box Diffuser (Page 32)

Face Velocity		400	500	600	700	800	900	1000	1200	1400	1600	1800	2000
14 x 14	CFM	383	479	574	670	766	861	957	1148	1340	1531	1723	1914
Ak .960	Pt	.043	.064	.090	.119	.152	.188	.228	.318	.421	.536	.665	.806
18 x 18	CFM	464	580	696	812	928	1044	1160	1392	1624	1856	2088	2320
Ak 1.160	Pt	.028	.042	.056	.075	.094	.115	.138	.190	.248	.313	.383	.460
20 x 20	CFM	537	670	804	938	1072	1206	1340	1608	1876	2144	2412	2680
Ak 1.340	Pt	.028	.042	.059	.077	.098	.121	.146	.203	.267	.339	.419	.505
22 x 22	CFM	668	836	1003	1170	1337	1504	1671	2005	2339	2674	3008	3342
Ak 1.670	Pt	.017	.027	.040	.056	.075	.097	.121	.179	.250	.333	.428	.537
24 x 24	CFM	730	912	1094	1277	1459	1642	1824	2189	2554	2918	3283	3648
Ak 1.820	Pt	.032	.048	.066	.086	.109	.134	.161	.222	.291	.367	.452	.544
30 x 30	CFM	1118	1398	1678	1957	2237	2516	2796	3355	3914	4474	5033	5592
Ak 2.790	Pt	.026	.040	.057	.076	.098	.122	.149	.211	.283	.365	.457	.558
36 x 36	CFM	1404	1756	2107	2458	2809	3160	3511	4213	4915	5618	6320	7022
Ak 3.510	Pt	.030	.043	.060	.078	.098	.120	.144	.197	.257	.324	.397	.477

**Notes:**

1. ECBX diffusers tested with damper fully open.
2. Pt = Total Pressure is the sum of the static pressure and velocity pressure.
3. Ak is the effective area of the diffuser face.
4. Tests conducted in accordance with ASHRAE 70-1991.

## ECSD & ECSDD Step-Down Evaporative Cooler Diffuser (Page 32)

Face Velocity		400	500	600	700	800	900	1000	1200	1400	1600	1800	2000
14 x 14	CFM	255	320	385	450	510	575	640	770	895	1025	1150	1280
Ak .740	Pt	.012	.018	.023	.035	.044	.051	.067	.094	.130	.171	.210	.250
16 x 16	CFM	370	465	560	650	745	835	930	1115	1300	1490	1675	1860
Ak .930	Pt	.016	.020	.031	.041	.055	.069	.084	.120	.160	.198	.240	.285
18 x 18	CFM	480	600	700	840	960	1080	1200	1440	1680	1920	2160	2400
Ak 1.200	Pt	.015	.022	.031	.044	.057	.072	.088	.122	.164	.205	.250	.290
20 x 20	CFM	600	750	900	1050	1200	1350	1500	1800	2100	2400	2700	3000
Ak 1.500	Pt	.017	.024	.035	.051	.058	.075	.091	.125	.170	.218	.260	.300

**Notes:**

1. ECSD diffusers tested with damper fully open.
2. Pt = Total Pressure is the sum of the static pressure and velocity pressure.
3. Ak is the effective area of the diffuser face.

Face Velocity		400	500	600	700	800	900	1000	1200	1400	1600	1800	2000
14 x 14	CFM	303	379	454	530	606	681	757	908	1060	1211	1363	1514
Ak .760	Ps	.015	.023	.034	.046	.061	.077	.096	.139	.191	.250	.318	.394
16 x 16	CFM	384	480	576	672	768	864	960	1152	1344	1536	1728	1920
Ak .960	Ps	.019	.029	.041	.055	.071	.089	.109	.156	.210	.271	.341	.418
18 x 18	CFM	495	619	743	867	990	1114	1238	1486	1733	1981	2228	2476
Ak 1.240	Ps	.018	.027	.039	.053	.068	.086	.105	.150	.202	.261	.329	.403
20 x 20	CFM	642	803	963	1124	1284	1445	1605	1926	2247	2568	2889	3210
Ak 1.600	Ps	.015	.025	.036	.050	.066	.084	.105	.154	.213	.282	.361	.450

**Notes:**

1. ECSDD diffusers tested with damper fully open.
2. Pt = Total Pressure is the sum of the static pressure and velocity pressure.
3. Ak is the effective area of the diffuser face.
4. Tests conducted in accordance with ASHRAE 70-1991.