

**13SD Performance Data: Horizontal Throw**

IP/METRIC DATA: 13SD (NO DAMPER)

IP Data							Metric Data					
Nom Duct	Duct Area	Neck Vel	Air Flow	Pt	Throw	NC	Nom Duct	Duct Area	Neck Vel	Air Flow	Pt	Throw
in	ft <sup>2</sup>	FPM	CFM	"WG	ft		mm	m <sup>2</sup>	m/s	L/s	Pa	m
6" x 4"	0.167	100	17	.005	1 - 2 - 4	-	152 x 102	0.015	0.51	8	1.3	0.2 - 0.5 - 1.2
		150	25	.012	2 - 3 - 6	-			0.76	12	3.0	0.5 - 0.9 - 1.8
		200	33	.022	3 - 4 - 8	-			1.02	16	5.4	0.8 - 1.2 - 2.4
		300	50	.049	4 - 6 - 11	12			1.52	24	12.1	1.2 - 1.8 - 3.3
		400	67	.087	5 - 8 - 13	20			2.03	31	21.6	1.6 - 2.4 - 3.9
		500	83	.135	6 - 10 - 14	27			2.54	39	33.7	2.0 - 3.0 - 4.3
		600	100	.195	8 - 11 - 16	33			3.05	47	48.5	2.4 - 3.3 - 4.7
		700	117	.265	9 - 12 - 17	37			3.56	55	66.0	2.8 - 3.6 - 5.1
		800	133	.346	10 - 13 - 18	41			4.06	63	86.3	3.2 - 3.9 - 5.5
6" x 6"	0.250	100	25	.005	1 - 2 - 5	-	152 x 152	0.023	0.51	12	1.3	0.3 - 0.6 - 1.5
		150	38	.012	2 - 4 - 7	-			0.76	18	3.0	0.6 - 1.1 - 2.2
		200	50	.022	3 - 5 - 10	-			1.02	24	5.4	1.0 - 1.5 - 2.9
		300	75	.049	5 - 7 - 13	14			1.52	35	12.1	1.5 - 2.2 - 4.1
		400	100	.087	6 - 10 - 16	22			2.03	47	21.6	1.9 - 2.9 - 4.7
		500	125	.135	8 - 12 - 17	29			2.54	59	33.7	2.4 - 3.6 - 5.3
		600	150	.195	10 - 13 - 19	34			3.05	71	48.5	2.9 - 4.1 - 5.8
		700	175	.265	11 - 15 - 21	39			3.56	83	66.0	3.4 - 4.4 - 6.3
		800	200	.346	13 - 16 - 22	43			4.06	94	86.3	3.9 - 4.7 - 6.7
8" x 6"	0.333	100	33	.005	1 - 2 - 6	-	203 x 152	0.031	0.51	16	1.3	0.3 - 0.7 - 1.7
		150	50	.012	2 - 4 - 8	-			0.76	24	3.0	0.7 - 1.3 - 2.5
		200	67	.022	4 - 6 - 11	-			1.02	31	5.4	1.1 - 1.7 - 3.4
		300	100	.049	6 - 8 - 16	15			1.52	47	12.1	1.7 - 2.5 - 4.7
		400	133	.087	7 - 11 - 18	23			2.03	63	21.6	2.2 - 3.4 - 5.5
		500	167	.135	9 - 14 - 20	30			2.54	79	33.7	2.8 - 4.2 - 6.1
		600	200	.195	11 - 16 - 22	36			3.05	94	48.5	3.4 - 4.7 - 6.7
		700	233	.265	13 - 17 - 24	40			3.56	110	66.0	3.9 - 5.1 - 7.2
		800	267	.346	15 - 18 - 25	44			4.06	126	86.3	4.5 - 5.5 - 7.7
8" x 8"	0.444	100	44	.005	1 - 3 - 6	-	203 x 203	0.041	0.51	21	1.3	0.4 - 0.8 - 1.9
		150	67	.012	3 - 5 - 10	-			0.76	31	3.0	0.8 - 1.5 - 2.9
		200	89	.022	4 - 6 - 13	-			1.02	42	5.4	1.3 - 1.9 - 3.9
		300	133	.049	6 - 10 - 18	16			1.52	63	12.1	1.9 - 2.9 - 5.5
		400	178	.087	8 - 13 - 21	25			2.03	84	21.6	2.6 - 3.9 - 6.3
		500	222	.135	11 - 16 - 23	31			2.54	105	33.7	3.2 - 4.8 - 7.0
		600	267	.195	13 - 18 - 25	37			3.05	126	48.5	3.9 - 5.5 - 7.7
		700	311	.265	15 - 19 - 27	41			3.56	147	66.0	4.5 - 5.9 - 8.3
		800	356	.346	17 - 21 - 29	45			4.06	168	86.3	5.1 - 6.3 - 8.9
8" x 10"	0.556	100	56	.005	1 - 3 - 7	-	203 x 254	0.052	0.51	26	1.3	0.4 - 0.9 - 2.2
		150	83	.012	3 - 5 - 11	-			0.76	39	3.0	0.9 - 1.6 - 3.2
		200	111	.022	5 - 7 - 14	-			1.02	52	5.4	1.4 - 2.2 - 4.3
		300	167	.049	7 - 11 - 20	17			1.52	79	12.1	2.2 - 3.2 - 6.1
		400	222	.087	9 - 14 - 23	26			2.03	105	21.6	2.9 - 4.3 - 7.0
		500	278	.135	12 - 18 - 26	32			2.54	131	33.7	3.6 - 5.4 - 7.9
		600	333	.195	14 - 20 - 28	38			3.05	157	48.5	4.3 - 6.1 - 8.6
		700	389	.265	17 - 22 - 31	42			3.56	184	66.0	5.0 - 6.6 - 9.3
		800	444	.346	19 - 23 - 33	46			4.06	210	86.3	5.8 - 7.0 - 10.0
9" x 9"	0.563	100	56	.005	1 - 3 - 7	-	229 x 229	0.052	0.51	27	1.3	0.4 - 0.9 - 2.2
		150	84	.012	3 - 5 - 11	-			0.76	40	3.0	0.9 - 1.6 - 3.3
		200	113	.022	5 - 7 - 14	-			1.02	53	5.4	1.5 - 2.2 - 4.4
		300	169	.049	7 - 11 - 20	17			1.52	80	12.1	2.2 - 3.3 - 6.1
		400	225	.087	10 - 14 - 23	26			2.03	106	21.6	2.9 - 4.4 - 7.1
		500	281	.135	12 - 18 - 26	32			2.54	133	33.7	3.6 - 5.4 - 7.9
		600	338	.195	14 - 20 - 29	38			3.05	159	48.5	4.4 - 6.1 - 8.7
		700	394	.265	17 - 22 - 31	42			3.56	186	66.0	5.1 - 6.6 - 9.4
		800	450	.346	19 - 23 - 33	46			4.06	212	86.3	5.8 - 7.1 - 10.0

SECURITY GRILLES

1 3 5 D NOTES: Throw values are given for isothermal conditions and terminal velocities of 150, 100, and 50 FPM (0.75, 0.50, and 0.25 m/s). NC values are based on octave band 2 - 7 sound power levels minus a room absorption of 10dB, re 10<sup>-12</sup> Watts. Dash in space denotes a NC value of less than 10. Data was obtained from tests conducted in accordance with ANSI/ASHRAE Standard 70, ISO Standard 5219, and ISO Standard 3741. See Krueger's selection program for performance data not shown, including octave band data.

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**13SD Performance Data: Horizontal Throw**
**IP/METRIC DATA: 13SD (NO DAMPER)**

IP Data							Metric Data					
Nom Duct	Duct Area	Neck Vel	Air Flow	Pt	Throw	NC	Nom Duct	Duct Area	Neck Vel	Air Flow	Pt	Throw
in	ft <sup>2</sup>	FPM	CFM	"WG	ft		mm	m <sup>2</sup>	m/s	L/s	Pa	m
10" x 10"	0.694	100	69	.005	1 - 3 - 8	-	254 x 254	0.065	0.51	33	1.3	0.5 - 1.0 - 2.4
		150	104	.012	3 - 6 - 12	-			0.76	49	3.0	1.0 - 1.8 - 3.6
		200	139	.022	5 - 8 - 16	-			1.02	66	5.4	1.6 - 2.4 - 4.8
		250	174	.034	7 - 10 - 20	13			1.27	82	8.4	2.0 - 3.0 - 6.0
		300	208	.049	8 - 12 - 22	18			1.52	98	12.1	2.4 - 3.6 - 6.8
		400	278	.087	11 - 16 - 26	27			2.03	131	21.6	3.2 - 4.8 - 7.9
		500	347	.135	13 - 20 - 29	33			2.54	164	33.7	4.0 - 6.0 - 8.8
		600	417	.195	16 - 22 - 32	39			3.05	197	48.5	4.8 - 6.8 - 9.7
700	486	.265	19 - 24 - 34	43	3.56	229	66.0	5.6 - 7.4 - 10.4				
10" x 12"	0.833	100	83	.005	2 - 4 - 9	-	254 x 305	0.077	0.51	39	1.3	0.5 - 1.1 - 2.6
		150	125	.012	4 - 7 - 13	-			0.76	59	3.0	1.1 - 2.0 - 4.0
		200	167	.022	6 - 9 - 17	-			1.02	79	5.4	1.8 - 2.6 - 5.3
		250	208	.034	7 - 11 - 22	13			1.27	98	8.4	2.2 - 3.3 - 6.6
		300	250	.049	9 - 13 - 25	19			1.52	118	12.1	2.6 - 4.0 - 7.5
		400	333	.087	12 - 17 - 28	27			2.03	157	21.6	3.5 - 5.3 - 8.6
		500	417	.135	15 - 22 - 32	34			2.54	197	33.7	4.4 - 6.6 - 9.7
		600	500	.195	17 - 25 - 35	40			3.05	236	48.5	5.3 - 7.5 - 10.6
700	583	.265	20 - 27 - 38	44	3.56	275	66.0	6.2 - 8.1 - 11.4				
10" x 14"	0.972	100	97	.005	2 - 4 - 9	-	254 x 356	0.090	0.51	46	1.3	0.5 - 1.2 - 2.9
		150	146	.012	4 - 7 - 14	-			0.76	69	3.0	1.2 - 2.1 - 4.3
		200	194	.022	6 - 9 - 19	-			1.02	92	5.4	1.9 - 2.9 - 5.7
		250	243	.034	8 - 12 - 24	14			1.27	115	8.4	2.4 - 3.6 - 7.2
		300	292	.049	9 - 14 - 27	19			1.52	138	12.1	2.9 - 4.3 - 8.1
		400	389	.087	13 - 19 - 31	28			2.03	184	21.6	3.8 - 5.7 - 9.3
		500	486	.135	16 - 24 - 34	35			2.54	229	33.7	4.8 - 7.2 - 10.4
		600	583	.195	19 - 27 - 38	40			3.05	275	48.5	5.7 - 8.1 - 11.4
700	681	.265	22 - 29 - 41	45	3.56	321	66.0	6.7 - 8.7 - 12.3				
12" x 12"	1.000	100	100	.005	2 - 4 - 10	-	305 x 305	0.093	0.51	47	1.3	0.5 - 1.2 - 2.9
		150	150	.012	4 - 7 - 14	-			0.76	71	3.0	1.2 - 2.2 - 4.4
		200	200	.022	6 - 10 - 19	-			1.02	94	5.4	1.9 - 2.9 - 5.8
		250	250	.034	8 - 12 - 24	14			1.27	118	8.4	2.4 - 3.6 - 7.3
		300	300	.049	10 - 14 - 27	20			1.52	142	12.1	2.9 - 4.4 - 8.2
		400	400	.087	13 - 19 - 31	28			2.03	189	21.6	3.9 - 5.8 - 9.5
		500	500	.135	16 - 24 - 35	35			2.54	236	33.7	4.8 - 7.3 - 10.6
		600	600	.195	19 - 27 - 38	40			3.05	283	48.5	5.8 - 8.2 - 11.6
700	700	.265	22 - 29 - 41	45	3.56	330	66.0	6.8 - 8.8 - 12.5				
12" x 14"	1.167	100	117	.005	2 - 4 - 10	-	305 x 356	0.108	0.51	55	1.3	0.6 - 1.3 - 3.1
		150	175	.012	4 - 8 - 15	-			0.76	83	3.0	1.3 - 2.4 - 4.7
		200	233	.022	7 - 10 - 21	-			1.02	110	5.4	2.1 - 3.1 - 6.3
		250	292	.034	9 - 13 - 26	15			1.27	138	8.4	2.6 - 3.9 - 7.8
		300	350	.049	10 - 15 - 29	20			1.52	165	12.1	3.1 - 4.7 - 8.8
		400	467	.087	14 - 21 - 34	29			2.03	220	21.6	4.2 - 6.3 - 10.2
		500	583	.135	17 - 26 - 38	36			2.54	275	33.7	5.2 - 7.8 - 11.4
		600	700	.195	21 - 29 - 41	41			3.05	330	48.5	6.3 - 8.8 - 12.5
700	817	.265	24 - 31 - 44	46	3.56	385	66.0	7.3 - 9.6 - 13.5				
12" x 16"	1.333	100	133	.005	2 - 5 - 11	-	305 x 406	0.124	0.51	63	1.3	0.6 - 1.4 - 3.4
		150	200	.012	5 - 8 - 17	-			0.76	94	3.0	1.4 - 2.5 - 5.0
		200	267	.022	7 - 11 - 22	-			1.02	126	5.4	2.2 - 3.4 - 6.7
		250	333	.034	9 - 14 - 28	15			1.27	157	8.4	2.8 - 4.2 - 8.4
		300	400	.049	11 - 17 - 31	21			1.52	189	12.1	3.4 - 5.0 - 9.5
		400	533	.087	15 - 22 - 36	29			2.03	252	21.6	4.5 - 6.7 - 10.9
		500	667	.135	18 - 28 - 40	36			2.54	315	33.7	5.6 - 8.4 - 12.2
		600	800	.195	22 - 31 - 44	42			3.05	378	48.5	6.7 - 9.5 - 13.4
700	933	.265	26 - 34 - 48	46	3.56	440	66.0	7.8 - 10.2 - 14.4				

NOTES: Throw values are given for isothermal conditions and terminal velocities of 150, 100, and 50 FPM (0.75, 0.50, and 0.25 m/s). NC values are based on octave band 2 - 7 sound power levels minus a room absorption of 10dB, re 10<sup>-12</sup> Watts. Dash in space denotes a NC value of less than 10. Data was obtained from tests conducted in accordance with ANSI/ASHRAE Standard 70, ISO Standard 5219, and ISO Standard 3741. See Krueger's selection program for performance data not shown, including octave band data.

**13SD Performance Data: Horizontal Throw**

**IP/METRIC DATA: 13SD (NO DAMPER)**

IP Data							Metric Data					
Nom Duct	Duct Area	Neck Vel	Air Flow	Pt	Throw	NC	Nom Duct	Duct Area	Neck Vel	Air Flow	Pt	Throw
in	ft²	FPM	CFM	"WG	ft		mm	m²	m/s	L/s	Pa	m
14" x 14"	1.361	100	136	.005	2 - 5 - 11	-	356 x 356	0.126	0.51	64	1.3	0.6 - 1.4 - 3.4
		150	204	.012	5 - 8 - 17	-			0.76	96	3.0	1.4 - 2.5 - 5.1
		200	272	.022	7 - 11 - 22	-			1.02	128	5.4	2.3 - 3.4 - 6.8
		250	340	.034	9 - 14 - 28	15			1.27	161	8.4	2.8 - 4.2 - 8.5
		300	408	.049	11 - 17 - 31	21			1.52	193	12.1	3.4 - 5.1 - 9.6
		400	544	.087	15 - 22 - 36	30			2.03	257	21.6	4.5 - 6.8 - 11.0
		500	681	.135	19 - 28 - 41	36			2.54	321	33.7	5.6 - 8.5 - 12.3
		600	817	.195	22 - 31 - 44	42			3.05	385	48.5	6.8 - 9.6 - 13.5
700	953	.265	26 - 34 - 48	46	3.56	450	66.0	7.9 - 10.3 - 14.6				
14" x 16"	1.556	100	156	.005	2 - 5 - 12	-	356 x 406	0.145	0.51	73	1.3	0.7 - 1.5 - 3.6
		150	233	.012	5 - 9 - 18	-			0.76	110	3.0	1.5 - 2.7 - 5.4
		200	311	.022	8 - 12 - 24	-			1.02	147	5.4	2.4 - 3.6 - 7.2
		250	389	.034	10 - 15 - 30	16			1.27	184	8.4	3.0 - 4.5 - 9.0
		300	467	.049	12 - 18 - 34	22			1.52	220	12.1	3.6 - 5.4 - 10.2
		400	622	.087	16 - 24 - 39	30			2.03	294	21.6	4.8 - 7.2 - 11.8
		500	778	.135	20 - 30 - 43	37			2.54	367	33.7	6.0 - 9.0 - 13.2
		600	933	.195	24 - 34 - 48	42			3.05	440	48.5	7.2 - 10.2 - 14.4
700	1089	.265	28 - 36 - 51	47	3.56	514	66.0	8.4 - 11.0 - 15.6				
14" x 18"	1.750	100	175	.005	2 - 5 - 13	-	356 x 457	0.163	0.51	83	1.3	0.7 - 1.6 - 3.8
		150	263	.012	5 - 9 - 19	-			0.76	124	3.0	1.6 - 2.9 - 5.8
		200	350	.022	8 - 13 - 25	-			1.02	165	5.4	2.6 - 3.8 - 7.7
		250	438	.034	11 - 16 - 32	17			1.27	206	8.4	3.2 - 4.8 - 9.6
		300	525	.049	13 - 19 - 36	22			1.52	248	12.1	3.8 - 5.8 - 10.8
		400	700	.087	17 - 25 - 41	31			2.03	330	21.6	5.1 - 7.7 - 12.5
		500	875	.135	21 - 32 - 46	37			2.54	413	33.7	6.4 - 9.6 - 14.0
		600	1050	.195	25 - 36 - 50	43			3.05	496	48.5	7.7 - 10.8 - 15.3
700	1225	.265	29 - 39 - 54	47	3.56	578	66.0	9.0 - 11.7 - 16.6				
16" x 16"	1.778	100	178	.005	2 - 5 - 13	-	406 x 406	0.165	0.51	84	1.3	0.7 - 1.6 - 3.9
		150	267	.012	5 - 10 - 19	-			0.76	126	3.0	1.6 - 2.9 - 5.8
		200	356	.022	8 - 13 - 25	-			1.02	168	5.4	2.6 - 3.9 - 7.7
		250	444	.034	11 - 16 - 32	17			1.27	210	8.4	3.2 - 4.8 - 9.7
		300	533	.049	13 - 19 - 36	22			1.52	252	12.1	3.9 - 5.8 - 10.9
		400	711	.087	17 - 25 - 41	31			2.03	336	21.6	5.2 - 7.7 - 12.6
		500	889	.135	21 - 32 - 46	37			2.54	420	33.7	6.4 - 9.7 - 14.1
		600	1067	.195	25 - 36 - 51	43			3.05	503	48.5	7.7 - 10.9 - 15.4
700	1244	.265	30 - 39 - 55	47	3.56	587	66.0	9.0 - 11.8 - 16.7				
14" x 20"	1.944	100	194	.005	2 - 6 - 13	-	356 x 508	0.181	0.51	92	1.3	0.8 - 1.7 - 4.0
		150	292	.012	6 - 10 - 20	-			0.76	138	3.0	1.7 - 3.0 - 6.1
		200	389	.022	9 - 13 - 27	-			1.02	184	5.4	2.7 - 4.0 - 8.1
		250	486	.034	11 - 17 - 33	17			1.27	229	8.4	3.4 - 5.1 - 10.1
		300	583	.049	13 - 20 - 38	22			1.52	275	12.1	4.0 - 6.1 - 11.4
		400	778	.087	18 - 27 - 43	31			2.03	367	21.6	5.4 - 8.1 - 13.2
		500	972	.135	22 - 33 - 49	38			2.54	459	33.7	6.7 - 10.1 - 14.7
		600	1167	.195	27 - 38 - 53	43			3.05	551	48.5	8.1 - 11.4 - 16.2
700	1361	.265	31 - 41 - 57	48	3.56	642	66.0	9.4 - 12.3 - 17.4				
14" x 22"	2.139	100	214	.005	3 - 6 - 14	-	356 x 559	0.199	0.51	101	1.3	0.8 - 1.8 - 4.2
		150	321	.012	6 - 10 - 21	-			0.76	151	3.0	1.8 - 3.2 - 6.4
		200	428	.022	9 - 14 - 28	11			1.02	202	5.4	2.8 - 4.2 - 8.5
		250	535	.034	12 - 17 - 35	17			1.27	252	8.4	3.5 - 5.3 - 10.6
		300	642	.049	14 - 21 - 39	23			1.52	303	12.1	4.2 - 6.4 - 12.0
		400	856	.087	19 - 28 - 46	31			2.03	404	21.6	5.7 - 8.5 - 13.8
		500	1069	.135	23 - 35 - 51	38			2.54	505	33.7	7.1 - 10.6 - 15.5
		600	1283	.195	28 - 39 - 56	44			3.05	606	48.5	8.5 - 12.0 - 16.9
700	1497	.265	33 - 43 - 60	48	3.56	707	66.0	9.9 - 12.9 - 18.3				

SECURITY GRILLES

1 3 5 D NOTES: Throw values are given for isothermal conditions and terminal velocities of 150, 100, and 50 FPM (0.75, 0.50, and 0.25 m/s). NC values are based on octave band 2 - 7 sound power levels minus a room absorption of 10dB, re 10<sup>-12</sup> Watts. Dash in space denotes a NC value of less than 10. Data was obtained from tests conducted in accordance with ANSI/ASHRAE Standard 70, ISO Standard 5219, and ISO Standard 3741. See Krueger's selection program for performance data not shown, including octave band data.

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**13SD Performance Data: Horizontal Throw**
**IP/METRIC DATA: 13SD (NO DAMPER)**

IP Data							Metric Data					
Nom Duct	Duct Area	Neck Vel	Air Flow	Pt	Throw	NC	Nom Duct	Duct Area	Neck Vel	Air Flow	Pt	Throw
in	ft <sup>2</sup>	FPM	CFM	"WG	ft		mm	m <sup>2</sup>	m/s	L/s	Pa	m
16" x 20"	2.222	100	222	.005	3 - 6 - 14	-	406 x 508	0.206	0.51	105	1.3	0.8 - 1.8 - 4.3
		150	333	.012	6 - 11 - 21	-			0.76	157	3.0	1.8 - 3.2 - 6.5
		200	444	.022	9 - 14 - 28	11			1.02	210	5.4	2.9 - 4.3 - 8.7
		250	556	.034	12 - 18 - 36	18			1.27	262	8.4	3.6 - 5.4 - 10.8
		300	667	.049	14 - 21 - 40	23			1.52	315	12.1	4.3 - 6.5 - 12.2
		400	889	.087	19 - 28 - 46	32			2.03	420	21.6	5.8 - 8.7 - 14.1
		500	1111	.135	24 - 36 - 52	38			2.54	524	33.7	7.2 - 10.8 - 15.8
		600	1333	.195	28 - 40 - 57	44			3.05	629	48.5	8.7 - 12.2 - 17.3
		700	1556	.265	33 - 43 - 61	48	3.56	734	66.0	10.1 - 13.2 - 18.7		
16" x 22"	2.444	100	244	.005	3 - 6 - 15	-	406 x 559	0.227	0.51	115	1.3	0.9 - 1.9 - 4.5
		150	367	.012	6 - 11 - 22	-			0.76	173	3.0	1.9 - 3.4 - 6.8
		200	489	.022	10 - 15 - 30	11			1.02	231	5.4	3.0 - 4.5 - 9.1
		250	611	.034	12 - 19 - 37	18			1.27	288	8.4	3.8 - 5.7 - 11.3
		300	733	.049	15 - 22 - 42	23			1.52	346	12.1	4.5 - 6.8 - 12.8
		400	978	.087	20 - 30 - 49	32			2.03	461	21.6	6.1 - 9.1 - 14.8
		500	1222	.135	25 - 37 - 54	39			2.54	577	33.7	7.6 - 11.3 - 16.5
		600	1467	.195	30 - 42 - 60	44			3.05	692	48.5	9.1 - 12.8 - 18.1
		700	1711	.265	35 - 46 - 64	49	3.56	808	66.0	10.6 - 13.8 - 19.6		
18" x 20"	2.500	100	250	.005	3 - 6 - 15	-	457 x 508	0.232	0.51	118	1.3	0.9 - 1.9 - 4.6
		150	375	.012	6 - 11 - 23	-			0.76	177	3.0	1.9 - 3.4 - 6.9
		200	500	.022	10 - 15 - 30	11			1.02	236	5.4	3.1 - 4.6 - 9.2
		250	625	.034	13 - 19 - 38	18			1.27	295	8.4	3.8 - 5.7 - 11.5
		300	750	.049	15 - 23 - 43	24			1.52	354	12.1	4.6 - 6.9 - 13.0
		350	875	.066	18 - 26 - 46	28			1.78	413	16.5	5.4 - 8.0 - 14.0
		400	1000	.087	20 - 30 - 49	32			2.03	472	21.6	6.1 - 9.2 - 15.0
		500	1250	.135	25 - 38 - 55	39			2.54	590	33.7	7.6 - 11.5 - 16.7
		600	1500	.195	30 - 43 - 60	44	3.05	708	48.5	9.2 - 13.0 - 18.3		
20" x 20"	2.778	100	278	.005	3 - 7 - 16	-	508 x 508	0.258	0.51	131	1.3	0.9 - 2.0 - 4.8
		150	417	.012	7 - 12 - 24	-			0.76	197	3.0	2.0 - 3.6 - 7.3
		200	556	.022	11 - 16 - 32	12			1.02	262	5.4	3.2 - 4.8 - 9.7
		250	694	.034	13 - 20 - 40	19			1.27	328	8.4	4.0 - 6.0 - 12.1
		300	833	.049	16 - 24 - 45	24			1.52	393	12.1	4.8 - 7.3 - 13.7
		350	972	.066	19 - 28 - 49	29			1.78	459	16.5	5.6 - 8.5 - 14.7
		400	1111	.087	21 - 32 - 52	33			2.03	524	21.6	6.4 - 9.7 - 15.8
		500	1389	.135	27 - 40 - 58	39			2.54	655	33.7	8.1 - 12.1 - 17.6
		600	1667	.195	32 - 45 - 64	45	3.05	787	48.5	9.7 - 13.7 - 19.3		
20" x 22"	3.056	100	306	.005	3 - 7 - 17	-	508 x 559	0.284	0.51	144	1.3	1.0 - 2.1 - 5.1
		150	458	.012	7 - 13 - 25	-			0.76	216	3.0	2.1 - 3.8 - 7.6
		200	611	.022	11 - 17 - 33	12			1.02	288	5.4	3.4 - 5.1 - 10.1
		250	764	.034	14 - 21 - 42	19			1.27	361	8.4	4.2 - 6.3 - 12.7
		300	917	.049	17 - 25 - 47	24			1.52	433	12.1	5.1 - 7.6 - 14.3
		350	1069	.066	19 - 29 - 51	29			1.78	505	16.5	5.9 - 8.9 - 15.5
		400	1222	.087	22 - 33 - 54	33			2.03	577	21.6	6.8 - 10.1 - 16.5
		500	1528	.135	28 - 42 - 61	40			2.54	721	33.7	8.5 - 12.7 - 18.5
		600	1833	.195	33 - 47 - 67	45	3.05	865	48.5	10.1 - 14.3 - 20.2		
22" x 22"	3.361	100	336	.005	3 - 7 - 18	-	559 x 559	0.312	0.51	159	1.3	1.0 - 2.2 - 5.3
		150	504	.012	7 - 13 - 26	-			0.76	238	3.0	2.2 - 4.0 - 8.0
		200	672	.022	12 - 18 - 35	13			1.02	317	5.4	3.5 - 5.3 - 10.6
		250	840	.034	15 - 22 - 44	19			1.27	397	8.4	4.4 - 6.7 - 13.3
		300	1008	.049	18 - 26 - 49	25			1.52	476	12.1	5.3 - 8.0 - 15.0
		350	1176	.066	20 - 31 - 53	29			1.78	555	16.5	6.2 - 9.3 - 16.2
		400	1344	.087	23 - 35 - 57	33			2.03	635	21.6	7.1 - 10.6 - 17.3
		500	1681	.135	29 - 44 - 64	40			2.54	793	33.7	8.9 - 13.3 - 19.4
		600	2017	.195	35 - 49 - 70	46	3.05	952	48.5	10.6 - 15.0 - 21.2		

NOTES: Throw values are given for isothermal conditions and terminal velocities of 150, 100, and 50 FPM (0.75, 0.50, and 0.25 m/s). NC values are based on octave band 2 - 7 sound power levels minus a room absorption of 10dB, re 10<sup>-12</sup> Watts. Dash in space denotes a NC value of less than 10. Data was obtained from tests conducted in accordance with ANSI/ASHRAE Standard 70, ISO Standard 5219, and ISO Standard 3741. See Krueger's selection program for performance data not shown, including octave band data.

**13SD Performance Data: Horizontal Throw**

**IP/METRIC DATA: 13SD (NO DAMPER)**

IP Data							Metric Data					
Nom Duct	Duct Area	Neck Vel	Air Flow	Pt	Throw	NC	Nom Duct	Duct Area	Neck Vel	Air Flow	Pt	Throw
in	ft <sup>2</sup>	FPM	CFM	"WG	ft		mm	m <sup>2</sup>	m/s	L/s	Pa	m
24" x 24"	4.000	100	400	.005	4 - 8 - 19	-	610 x 610	0.372	0.51	189	1.3	1.1 - 2.4 - 5.8
		150	600	.012	8 - 14 - 29	-			0.76	283	3.0	2.4 - 4.4 - 8.7
		200	800	.022	13 - 19 - 38	14			1.02	378	5.4	3.9 - 5.8 - 11.6
		250	1000	.034	16 - 24 - 48	20			1.27	472	8.4	4.8 - 7.3 - 14.5
		300	1200	.049	19 - 29 - 54	26			1.52	566	12.1	5.8 - 8.7 - 16.4
		350	1400	.066	22 - 33 - 58	30			1.78	661	16.5	6.8 - 10.2 - 17.7
		400	1600	.087	25 - 38 - 62	34			2.03	755	21.6	7.7 - 11.6 - 18.9
		500	2000	.135	32 - 48 - 70	41			2.54	944	33.7	9.7 - 14.5 - 21.1
600	2400	.195	38 - 54 - 76	46	3.05	1133	48.5	11.6 - 16.4 - 23.2				
26" x 26"	4.694	100	469	.005	4 - 9 - 21	-	660 x 660	0.436	0.51	222	1.3	1.2 - 2.7 - 6.3
		150	704	.012	9 - 16 - 31	-			0.76	332	3.0	2.7 - 4.7 - 9.4
		200	939	.022	14 - 21 - 41	14			1.02	443	5.4	4.2 - 6.3 - 12.6
		250	1174	.034	17 - 26 - 52	21			1.27	554	8.4	5.2 - 7.9 - 15.7
		300	1408	.049	21 - 31 - 58	26			1.52	665	12.1	6.3 - 9.4 - 17.7
		350	1643	.066	24 - 36 - 63	31			1.78	775	16.5	7.3 - 11.0 - 19.2
		400	1878	.087	28 - 41 - 67	35			2.03	886	21.6	8.4 - 12.6 - 20.5
		500	2347	.135	34 - 52 - 75	42			2.54	1108	33.7	10.5 - 15.7 - 22.9
600	2817	.195	41 - 58 - 83	47	3.05	1329	48.5	12.6 - 17.7 - 25.1				
28" x 28"	5.444	100	544	.005	4 - 9 - 22	-	711 x 711	0.506	0.51	257	1.3	1.3 - 2.9 - 6.8
		150	817	.012	9 - 17 - 33	-			0.76	385	3.0	2.9 - 5.1 - 10.2
		200	1089	.022	15 - 22 - 45	15			1.02	514	5.4	4.5 - 6.8 - 13.5
		250	1361	.034	19 - 28 - 56	22			1.27	642	8.4	5.6 - 8.5 - 16.9
		300	1633	.049	22 - 33 - 63	27			1.52	771	12.1	6.8 - 10.2 - 19.1
		350	1906	.066	26 - 39 - 68	32			1.78	899	16.5	7.9 - 11.9 - 20.6
		400	2178	.087	30 - 45 - 73	36			2.03	1028	21.6	9.0 - 13.5 - 22.1
		500	2722	.135	37 - 56 - 81	42			2.54	1285	33.7	11.3 - 16.9 - 24.7
600	3267	.195	45 - 63 - 89	48	3.05	1542	48.5	13.5 - 19.1 - 27.0				
30" x 30"	6.250	100	625	.005	4 - 10 - 24	-	762 x 762	0.581	0.51	295	1.3	1.4 - 3.1 - 7.3
		150	938	.012	10 - 18 - 36	-			0.76	442	3.0	3.1 - 5.4 - 10.9
		200	1250	.022	16 - 24 - 48	15			1.02	590	5.4	4.8 - 7.3 - 14.5
		250	1563	.034	20 - 30 - 60	22			1.27	737	8.4	6.0 - 9.1 - 18.1
		300	1875	.049	24 - 36 - 67	28			1.52	885	12.1	7.3 - 10.9 - 20.5
		350	2188	.066	28 - 42 - 73	32			1.78	1032	16.5	8.5 - 12.7 - 22.1
		400	2500	.087	32 - 48 - 78	36			2.03	1180	21.6	9.7 - 14.5 - 23.6
		500	3125	.135	40 - 60 - 87	43			2.54	1475	33.7	12.1 - 18.1 - 26.4
600	3750	.195	48 - 67 - 95	48	3.05	1770	48.5	14.5 - 20.5 - 29.0				

NOTES: Throw values are given for isothermal conditions and terminal velocities of 150, 100, and 50 FPM (0.75, 0.50, and 0.25 m/s). NC values are based on octave band 2 - 7 sound power levels minus a room absorption of 10dB, re 10<sup>-12</sup> Watts. Dash in space denotes a NC value of less than 10. Data was obtained from tests conducted in accordance with ANSI/ASHRAE Standard 70, ISO Standard 5219, and ISO Standard 3741. See Krueger's selection program for performance data not shown, including octave band data.

SECURITY GRILLES