

## PERFORMANCE DATA | S85, S585 | 35° DEFLECTION (NO DAMPER)

IP DATA					NC	METRIC DATA					OCTAVE BAND, dB						
NOM DUCT	DUCT AREA	NECK VEL	AIRFLOW	Ps		NOM DUCT	DUCT AREA	NECK VEL	AIRFLOW	Ps	OCTAVE BAND, dB						
in	ft <sup>2</sup>	FPM	CFM	"WG		mm	m <sup>2</sup>	m/s	L/s	Pa	2	3	4	5	6	7	
6" x 6"	0.25	350	67	-0.27	12	152 x 152	0.02	1.78	32	-6.8	51	48	28	16	-	-	
		538	103	-0.64	23			2.73	49	-16.0	47	46	38	27	21	12	
		725	139	-1.17	31			3.68	65	-29.1	45	44	45	34	29	23	
		913	175	-1.85	37			4.64	82	-46.0	43	43	50	40	35	31	
		1100	211	-2.69	42			5.59	99	-66.9	41	42	55	45	39	37	
10" x 6"	0.42	350	118	-0.27	15	254 x 152	0.04	1.78	56	-6.8	53	50	31	18	13	-	
		538	181	-0.64	26			2.73	86	-16.0	50	48	41	29	24	15	
		725	244	-1.17	33			3.68	115	-29.1	47	46	47	37	31	25	
		913	308	-1.85	39			4.64	145	-46.0	45	45	53	43	37	33	
		1100	371	-2.69	44			5.59	175	-66.9	43	44	57	47	42	39	
12" x 6"	0.50	350	144	-0.27	15	305 x 152	0.05	1.78	68	-6.8	54	51	32	19	13	-	
		538	220	-0.64	26			2.73	104	-16.0	50	49	41	30	24	15	
		725	297	-1.17	34			3.68	140	-29.1	48	47	48	38	32	26	
		913	374	-1.85	40			4.64	177	-46.0	46	46	54	44	38	34	
		1100	451	-2.69	45			5.59	213	-66.9	44	45	58	48	43	40	
12" x 8"	0.67	300	170	-0.20	13	305 x 203	0.06	1.52	80	-5.0	57	53	29	16	11	-	
		475	269	-0.50	25			2.41	127	-12.5	53	51	40	28	23	12	
		650	368	-0.94	33			3.30	174	-23.4	50	49	47	36	31	23	
		825	467	-1.51	39			4.19	221	-37.6	48	48	53	42	37	32	
		1000	566	-2.22	44			5.08	267	-55.3	46	47	57	47	42	38	
18" x 6"	0.75	300	189	-0.20	13	457 x 152	0.07	1.52	89	-5.0	57	54	30	17	11	-	
		450	283	-0.45	24			2.29	134	-11.2	54	52	39	27	22	11	
		600	377	-0.80	31			3.05	178	-19.9	51	50	46	35	29	21	
		750	472	-1.25	37			3.81	223	-31.1	49	49	51	40	35	29	
		900	566	-1.80	42			4.57	267	-44.8	48	48	55	45	39	35	
22" x 6"	0.92	300	232	-0.20	14	559 x 152	0.09	1.52	110	-5.0	58	55	31	18	12	-	
		450	349	-0.45	25			2.29	165	-11.2	55	52	40	28	23	12	
		600	465	-0.80	32			3.05	219	-19.9	52	51	47	35	30	22	
		750	581	-1.25	38			3.81	274	-31.1	50	50	52	41	36	30	
		900	697	-1.80	42			4.57	329	-44.8	49	49	56	46	40	36	
18" x 10"	1.25	300	332	-0.20	16	457 x 254	0.12	1.52	157	-5.0	60	56	32	19	14	-	
		450	499	-0.45	26			2.29	235	-11.2	56	54	41	29	24	13	
		600	665	-0.80	34			3.05	314	-19.9	54	52	48	37	31	23	
		750	831	-1.25	39			3.81	392	-31.1	52	51	53	43	37	31	
		900	997	-1.80	44			4.57	471	-44.8	50	50	57	47	42	37	
27" x 8"	1.50	250	330	-0.14	12	686 x 203	0.14	1.27	156	-3.5	62	58	29	15	-	-	
		413	545	-0.38	25			2.10	257	-9.4	58	55	40	28	23	11	
		575	760	-0.73	33			2.92	359	-18.3	55	53	48	37	31	23	
		738	975	-1.21	40			3.75	460	-30.1	53	52	54	43	37	31	
		900	1189	-1.80	45			4.57	561	-44.8	51	51	58	48	42	38	
24" x 10"	1.67	250	373	-0.14	12	610 x 254	0.15	1.27	176	-3.5	62	58	29	16	-	-	
		413	616	-0.38	25			2.10	291	-9.4	58	56	41	28	23	12	
		575	859	-0.73	34			2.92	405	-18.3	55	54	48	37	32	23	
		738	1101	-1.21	40			3.75	520	-30.1	53	53	54	43	38	32	
		900	1344	-1.80	45			4.57	634	-44.8	51	51	59	49	43	39	
16" x 16"	1.78	250	404	-0.14	13	406 x 406	0.17	1.27	191	-3.5	63	59	30	16	11	-	
		388	626	-0.33	24			1.97	295	-8.3	59	56	40	27	22	-	
		525	848	-0.61	32			2.67	400	-15.2	56	55	47	35	30	20	
		663	1070	-0.97	38			3.37	505	-24.3	54	53	52	41	35	28	
		800	1292	-1.42	43			4.06	610	-35.4	53	52	56	46	40	35	
18" x 18"	2.25	250	517	-0.14	14	457 x 457	0.21	1.27	244	-3.5	64	60	31	17	12	-	
		388	801	-0.33	25			1.97	378	-8.3	60	57	41	28	23	11	
		525	1085	-0.61	33			2.67	512	-15.2	57	56	48	36	31	21	
		663	1369	-0.97	39			3.37	646	-24.3	55	54	53	42	36	29	
		800	1653	-1.42	44			4.06	780	-35.4	54	53	57	47	41	36	

NOTE: See notes on page J1-35.

# S80 / S580 / S85 / S585 SERIES



Return Grille | Single, Fixed Deflection

## PERFORMANCE DATA | S85, S585 | 35° DEFLECTION (NO DAMPER)

		IP DATA				NC	METRIC DATA					OCTAVE BAND, dB						
NOM DUCT	DUCT AREA	NECK VEL	AIRFLOW	Ps	NOM DUCT		DUCT AREA	NECK VEL	AIRFLOW	Ps	2	3	4	5	6	7		
in	ft <sup>2</sup>	FPM	CFM	"WG	mm	m <sup>2</sup>	m/s	L/s	Pa									
30" x 12"	2.50	250	571	-0.14	14	762 x 305	0.23	1.27	270	-3.5	64	60	31	17	12	-		
		388	885	-0.33	25			1.97	418	-8.3	60	58	41	29	23	11		
		525	1200	-0.61	33			2.67	566	-15.2	58	56	48	36	31	22		
		663	1514	-0.97	39			3.37	714	-24.3	56	55	53	42	37	30		
		800	1828	-1.42	44			4.06	863	-35.4	54	54	58	47	42	36		
20" x 20"	2.78	220	566	-0.11	11	508 x 508	0.26	1.12	267	-2.7	66	61	29	15	-	-		
		365	939	-0.30	24			1.85	443	-7.4	61	59	40	28	22	-		
		510	1312	-0.58	33			2.59	619	-14.4	59	57	48	36	31	21		
		655	1686	-0.95	39			3.33	795	-23.7	56	55	54	43	37	30		
		800	2059	-1.42	45			4.06	972	-35.4	55	54	58	48	42	37		
30" x 16"	3.33	220	681	-0.11	12	762 x 406	0.31	1.12	322	-2.7	64	59	26	13	-	-		
		365	1131	-0.30	25			1.85	534	-7.4	59	57	38	26	20	-		
		510	1580	-0.58	34			2.59	746	-14.4	57	55	46	34	29	19		
		655	2029	-0.95	40			3.33	958	-23.7	54	53	52	41	35	28		
		800	2478	-1.42	45			4.06	1170	-35.4	53	52	56	46	40	35		
36" x 14"	3.50	220	714	-0.11	12	914 x 356	0.33	1.12	337	-2.7	67	62	29	16	-	-		
		340	1103	-0.26	24			1.73	520	-6.4	63	60	39	27	21	-		
		460	1492	-0.47	31			2.34	704	-11.7	60	58	46	35	29	19		
		580	1881	-0.75	37			2.95	888	-18.6	58	57	52	40	35	27		
		700	2270	-1.09	42			3.56	1072	-27.1	57	56	56	45	40	33		
30" x 18"	3.75	220	771	-0.11	13	762 x 457	0.35	1.12	364	-2.7	67	63	30	16	11	-		
		340	1191	-0.26	24			1.73	562	-6.4	63	60	40	27	22	-		
		460	1612	-0.47	32			2.34	761	-11.7	61	59	47	35	29	19		
		580	2032	-0.75	38			2.95	959	-18.6	59	57	52	41	35	27		
		700	2453	-1.09	43			3.56	1158	-27.1	57	56	56	46	40	33		
36" x 18"	4.50	200	845	-0.09	11	914 x 457	0.42	1.02	399	-2.2	69	64	28	14	-	-		
		325	1372	-0.23	24			1.65	648	-5.8	64	61	40	27	21	-		
		450	1900	-0.45	32			2.29	897	-11.2	62	59	47	35	30	19		
		575	2428	-0.73	38			2.92	1146	-18.3	60	58	53	41	36	27		
		700	2956	-1.09	43			3.56	1395	-27.1	58	57	57	46	41	34		
42" x 18"	5.25	200	988	-0.09	12	1067 x 457	0.49	1.02	466	-2.2	64	59	24	-	-	-		
		325	1606	-0.23	24			1.65	758	-5.8	60	57	35	22	17	-		
		450	2224	-0.45	33			2.29	1049	-11.2	57	55	43	31	25	15		
		575	2841	-0.73	39			2.92	1341	-18.3	55	54	48	37	32	23		
		700	3459	-1.09	44			3.56	1632	-27.1	54	53	53	42	37	30		
30" x 28"	5.83	200	1107	-0.09	12	762 x 711	0.54	1.02	522	-2.2	70	65	29	15	-	-		
		325	1799	-0.23	25			1.65	849	-5.8	66	62	41	28	22	-		
		450	2491	-0.45	33			2.29	1176	-11.2	63	61	48	36	31	20		
		575	3183	-0.73	39			2.92	1502	-18.3	61	59	54	42	37	29		
		700	3875	-1.09	45			3.56	1829	-27.1	59	58	58	48	42	35		
30" x 30"	6.25	200	1188	-0.09	13	762 x 762	0.58	1.02	561	-2.2	70	65	30	16	-	-		
		325	1931	-0.23	25			1.65	911	-5.8	66	63	41	28	23	-		
		450	2674	-0.45	33			2.29	1262	-11.2	63	61	48	36	31	20		
		575	3416	-0.73	40			2.92	1612	-18.3	61	60	54	43	37	29		
		700	4159	-1.09	45			3.56	1963	-27.1	59	59	59	48	42	36		
46" x 22"	7.03	200	1336	-0.09	13	1168 x 559	0.65	1.02	630	-2.2	71	66	30	16	11	-		
		325	2170	-0.23	26			1.65	1024	-5.8	66	63	41	29	23	-		
		450	3005	-0.45	34			2.29	1418	-11.2	64	61	49	37	31	21		
		575	3840	-0.73	40			2.92	1812	-18.3	61	60	55	43	38	29		
		700	4674	-1.09	45			3.56	2206	-27.1	60	59	59	48	43	36		
36" x 30"	7.50	200	1432	-0.09	13	914 x 762	0.70	1.02	676	-2.2	71	66	31	16	11	-		
		325	2327	-0.23	26			1.65	1098	-5.8	67	63	42	29	23	-		
		450	3222	-0.45	34			2.29	1521	-11.2	64	62	49	37	32	21		
		575	4117	-0.73	41			2.92	1943	-18.3	62	60	55	44	38	30		
		700	5012	-1.09	46			3.56	2365	-27.1	60	59	59	49	43	36		

NOTE: See notes on page J1-35.

## PERFORMANCE DATA | S85, S585 | 35° DEFLECTION (NO DAMPER)

IP DATA					NC	METRIC DATA					OCTAVE BAND, dB						
NOM DUCT	DUCT AREA	NECK VEL	AIRFLOW	Ps		NOM DUCT	DUCT AREA	NECK VEL	AIRFLOW	Ps	OCTAVE BAND, dB						
in	ft <sup>2</sup>	FPM	CFM	"WG		mm	m <sup>2</sup>	m/s	L/s	Pa	2	3	4	5	6	7	
34" x 34"	8.03	200	1536	-0.09	14	864 x 864	0.75	1.02	725	-2.2	65	60	24	-	-	-	
		325	2495	-0.23	26			1.65	1178	-5.8	60	57	35	23	17	-	
		450	3455	-0.45	35			2.29	1631	-11.2	58	55	43	31	26	15	
		575	4415	-0.73	41			2.92	2083	-18.3	55	54	49	37	32	23	
		700	5374	-1.09	46			3.56	2536	-27.1	54	53	53	42	37	30	
42" x 30"	8.75	200	1676	-0.09	14	1067 x 762	0.81	1.02	791	-2.2	71	67	31	17	12	-	
		300	2514	-0.20	25			1.52	1186	-5.0	68	64	41	27	22	-	
		400	3352	-0.36	32			2.03	1582	-8.8	66	63	47	35	29	18	
		500	4189	-0.56	38			2.54	1977	-13.8	64	62	52	41	35	25	
		600	5027	-0.80	42			3.05	2373	-19.9	62	61	56	45	40	32	
48" x 30"	10.00	200	1920	-0.09	15	1219 x 762	0.93	1.02	906	-2.2	72	67	32	18	12	-	
		300	2879	-0.20	25			1.52	1359	-5.0	69	65	41	28	23	-	
		400	3839	-0.36	33			2.03	1812	-8.8	66	64	48	35	30	18	
		500	4799	-0.56	38			2.54	2265	-13.8	64	62	53	41	36	26	
		600	5759	-0.80	43			3.05	2718	-19.9	63	61	57	46	40	32	
42" x 36"	10.50	200	2020	-0.09	15	1067 x 914	0.98	1.02	953	-2.2	72	67	32	18	13	-	
		300	3029	-0.20	25			1.52	1430	-5.0	69	65	41	28	23	-	
		400	4039	-0.36	33			2.03	1906	-8.8	66	64	48	36	30	18	
		500	5049	-0.56	38			2.54	2383	-13.8	64	63	53	41	36	26	
		600	6059	-0.80	43			3.05	2859	-19.9	63	62	57	46	41	33	
42" x 38"	11.08	200	2134	-0.09	15	1067 x 965	1.03	1.02	1007	-2.2	64	59	24	-	-	-	
		300	3201	-0.20	26			1.52	1511	-5.0	61	57	33	20	15	-	
		400	4268	-0.36	33			2.03	2014	-8.8	58	56	40	28	22	-	
		500	5335	-0.56	39			2.54	2518	-13.8	56	55	45	33	28	18	
		600	6402	-0.80	43			3.05	3022	-19.9	55	54	49	38	33	25	
48" x 36"	12.00	200	2313	-0.09	15	1219 x 914	1.11	1.02	1092	-2.2	73	68	33	18	13	-	
		300	3470	-0.20	26			1.52	1638	-5.0	69	66	42	29	23	-	
		400	4627	-0.36	33			2.03	2183	-8.8	67	64	48	36	31	19	
		500	5783	-0.56	39			2.54	2729	-13.8	65	63	54	42	36	27	
		600	6940	-0.80	44			3.05	3275	-19.9	63	62	58	47	41	33	
44" x 44"	13.44	180	2338	-0.07	13	1118 x 1118	1.25	0.91	1104	-1.8	74	69	31	16	11	-	
		285	3702	-0.18	25			1.45	1747	-4.5	70	67	41	28	23	-	
		390	5066	-0.34	33			1.98	2391	-8.4	68	65	48	36	31	19	
		495	6430	-0.54	39			2.51	3035	-13.5	66	64	54	42	37	27	
		600	7794	-0.80	44			3.05	3678	-19.9	64	63	58	47	42	34	
46" x 46"	14.69	180	2559	-0.07	14	1168 x 1168	1.37	0.91	1208	-1.8	75	69	31	17	11	-	
		285	4052	-0.18	26			1.45	1913	-4.5	71	67	42	28	23	-	
		390	5545	-0.34	34			1.98	2617	-8.4	68	65	49	36	31	19	
		495	7038	-0.54	40			2.51	3322	-13.5	66	64	54	43	37	27	
		600	8532	-0.80	45			3.05	4026	-19.9	64	63	59	47	42	34	
48" x 48"	16.00	180	2791	-0.07	14	1219 x 1219	1.49	0.91	1317	-1.8	75	70	31	17	12	-	
		285	4419	-0.18	26			1.45	2085	-4.5	71	67	42	29	23	-	
		390	6047	-0.34	34			1.98	2854	-8.4	68	66	49	37	31	19	
		495	7674	-0.54	40			2.51	3622	-13.5	66	64	55	43	37	28	
		600	9302	-0.80	45			3.05	4390	-19.9	65	63	59	48	42	34	

NOTES: 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 or dB 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.