

INTRODUCTION

The S80/S580 return grilles are designed to fit most common commercial and residential applications. They offer fixed 3/4" blade spacing with 35° deflection and a 1 1/4" flange.

The S85/S585 return grilles are designed to fit most applications where limited sight through the grille is required. They offer fixed 1/2" blade spacing with 35° deflection and a 1 1/4" flange.

If the application requires large amounts of air to be returned through the return grille, then the blade deflection of 0° should be used to keep the pressure drop and sound to a minimum.

MODELS

- S80 - Fixed deflection steel return grille, 3/4" blade spacing
- S580 - Fixed deflection aluminum return grille, 3/4" blade spacing
- S85 - Fixed deflection steel return grille, 1/2" blade spacing
- S585 - Fixed deflection aluminum return grille, 1/2" blade spacing

FEATURES

- Horizontal (H) or vertical (V) front blades
- 35° (H/V) or 0° (HZ/VZ) blade deflection
- Standard finish is #44 British White
- Optional finishes available

ACCESSORIES

- Steel opposed blade damper (model OBD)
- Steel painted opposed blade damper (model POBD)
- Aluminum opposed blade damper (model 5OBD)
- Square to round adapter (model SRAC325)
- Steel plaster frame (model 8PF)
- Aluminum plaster frame (model 58PF)
- 1" or 2" filter frame, minimum size is 8"x8" and maximum is 48" x 36" (model 5FF)



S80



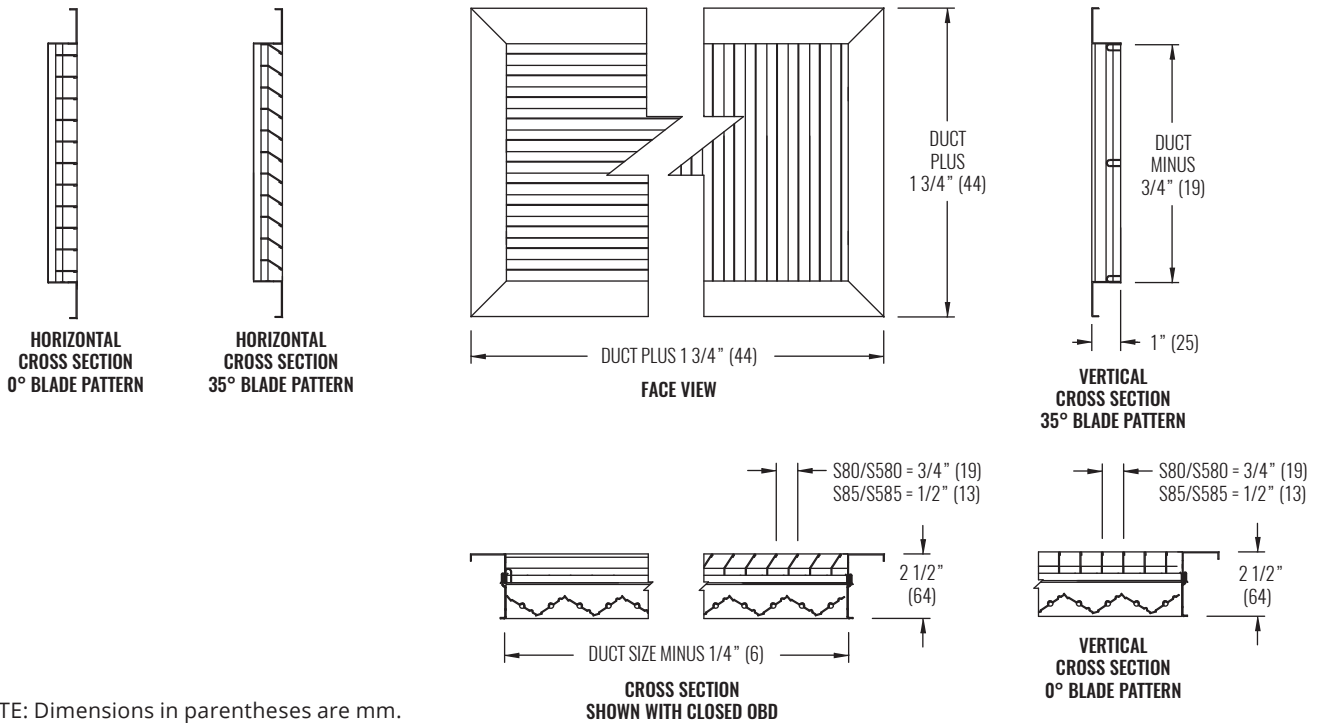
S85

S80 / S580 / S85 / S585 SERIES



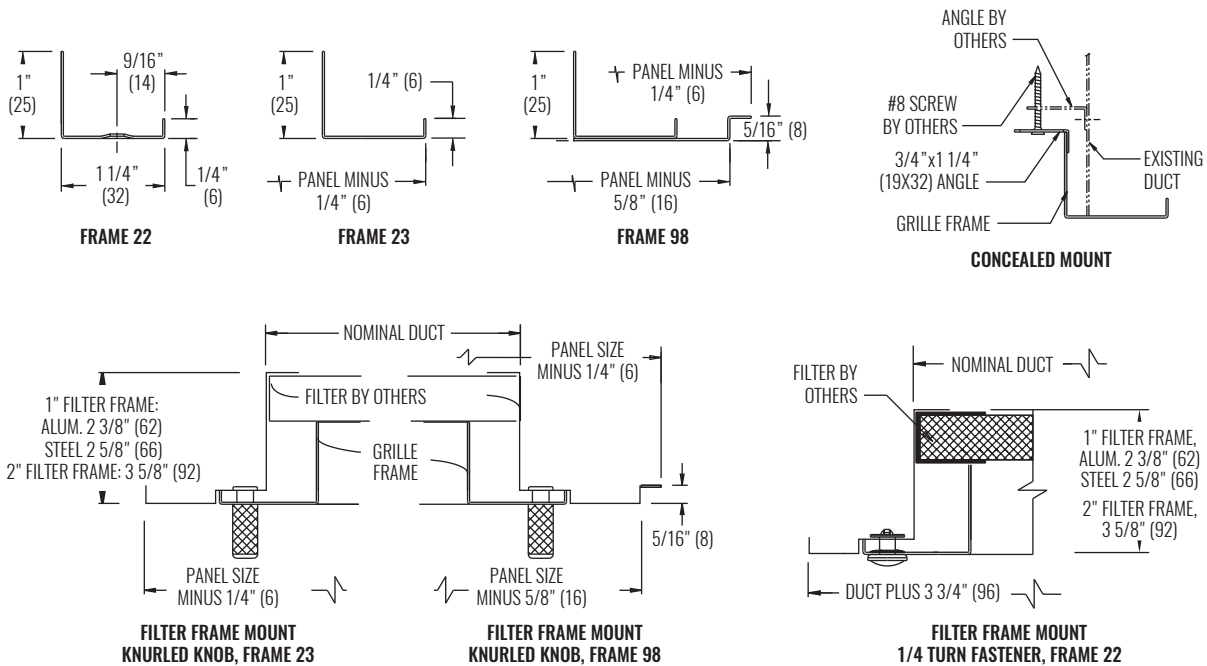
Return Grille | Single, Fixed Deflection

DIMENSIONAL DATA



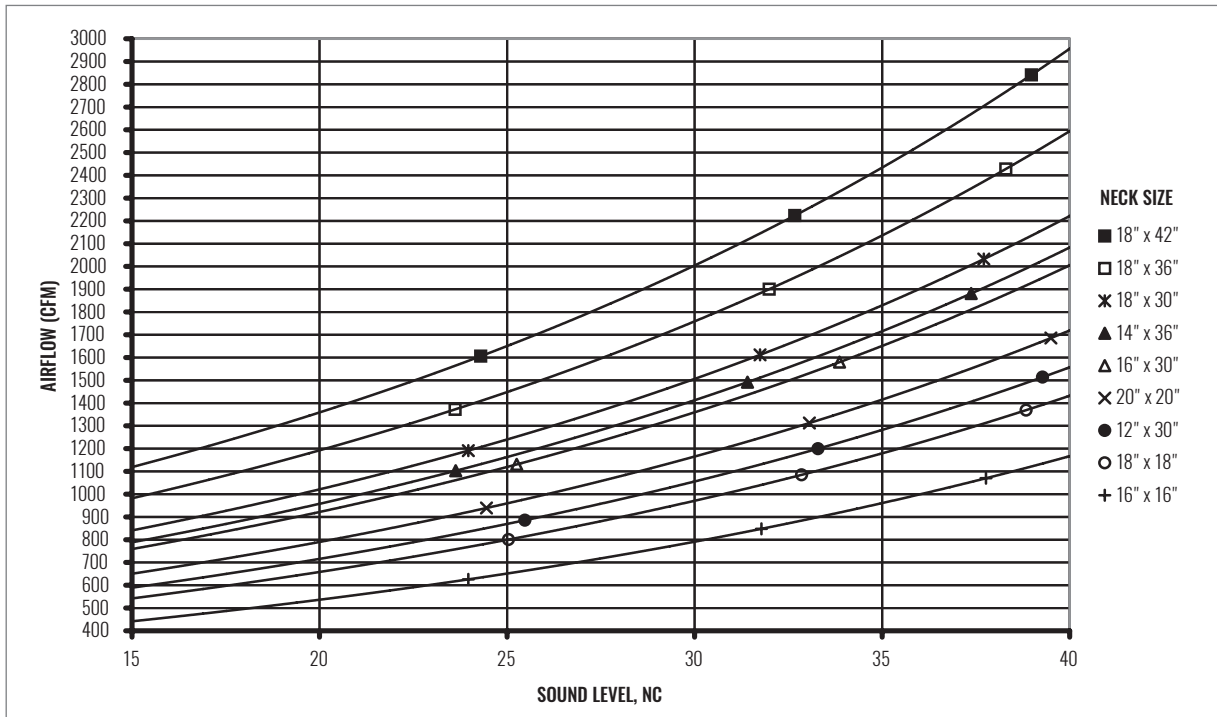
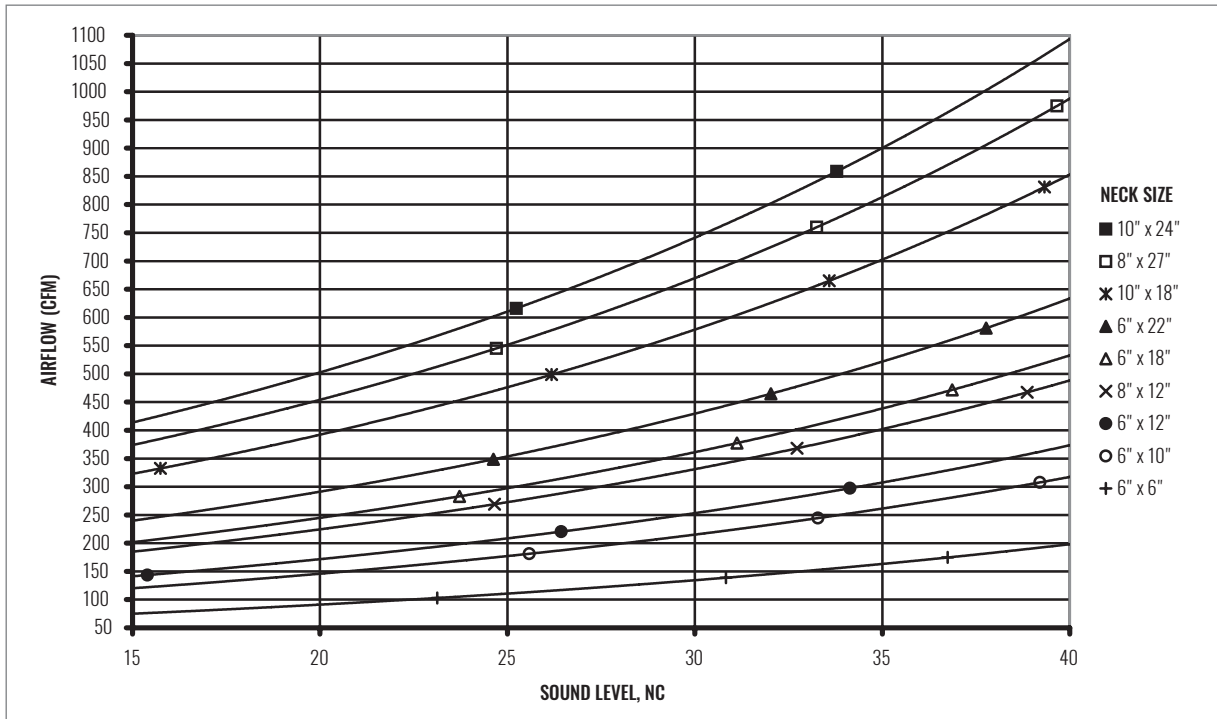
NOTE: Dimensions in parentheses are mm.

DIMENSIONAL DATA | FRAMES & MOUNTINGS



NOTE: Dimensions in parentheses are mm. Maximum duct size for F23 and F98 = Panel Size - 5" (127).

SOUND CHARTS | S85, S585 | 35° DEFLECTION (NO DAMPER)



GRILLES | RETURN

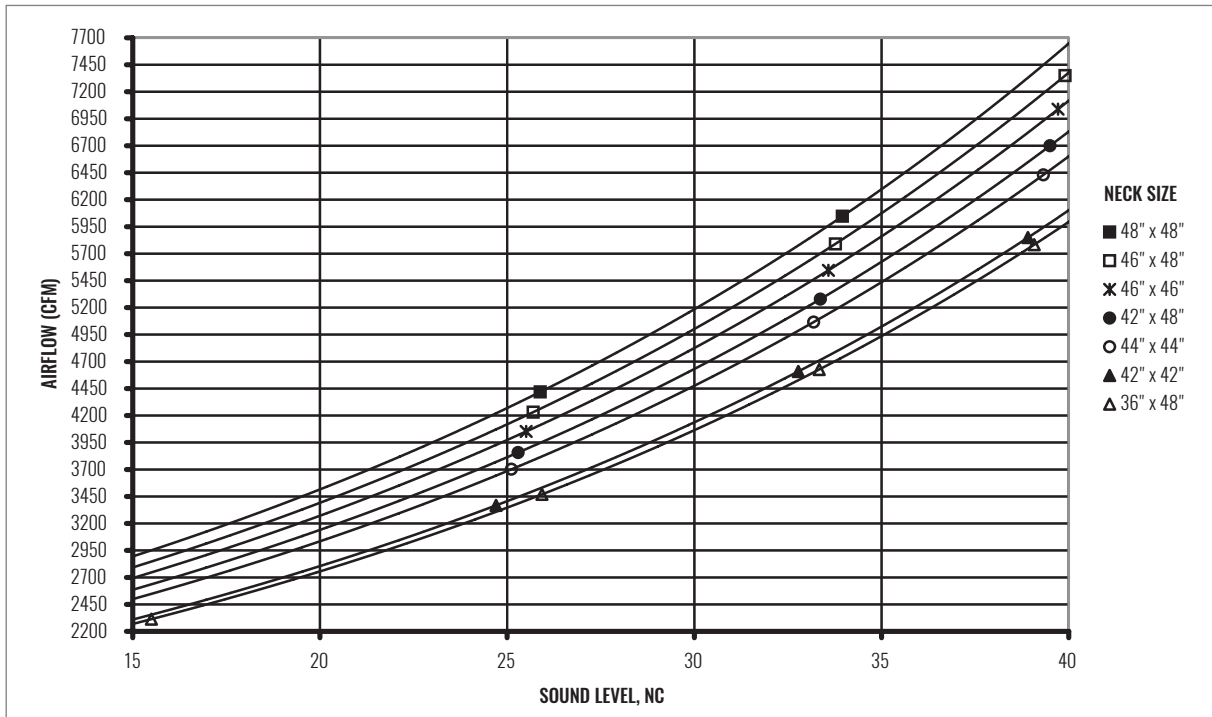
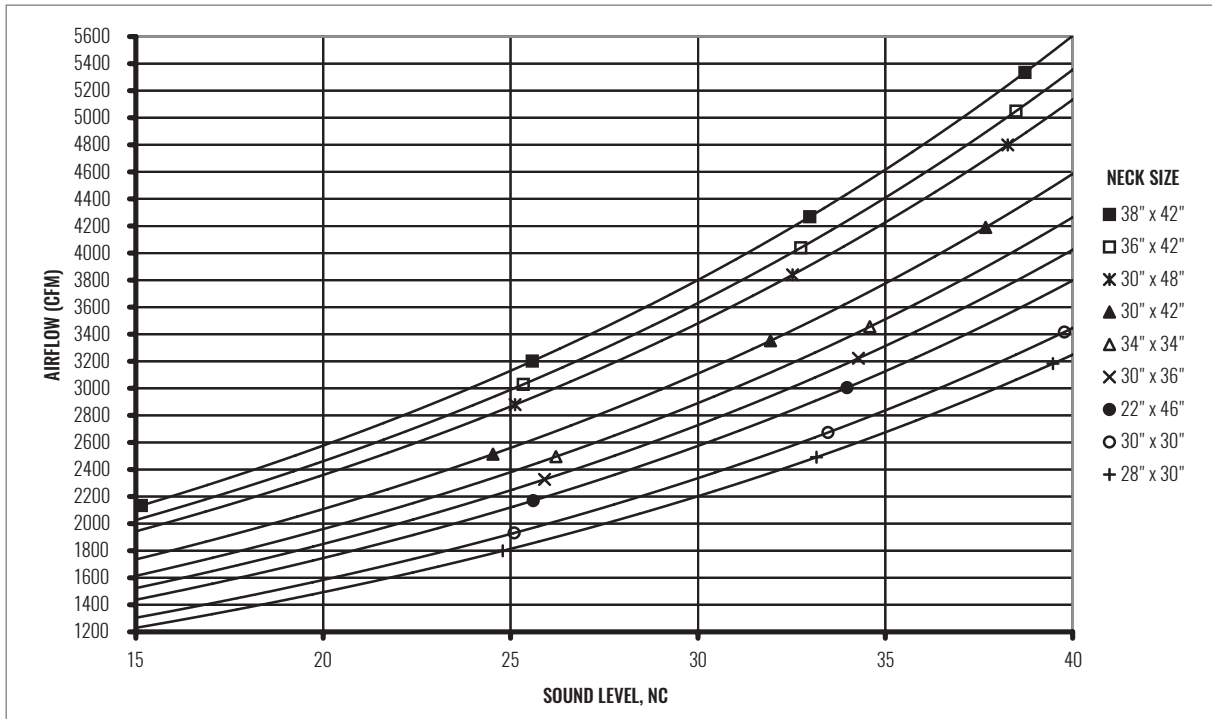
S80 / S580 / S85 / S585 SERIES



Return Grille | Single, Fixed Deflection

SOUND CHARTS | S85, S585 | 35° DEFLECTION (NO DAMPER)

GRILLES | RETURN



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 ²	FPM	CFM	"WG		mm	m ²	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 ²	FPM	CFM	"WG	mm		m ²	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							
in	ft ²	FPM	CFM	"WG		mm	m ²	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 10⁻¹² 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.

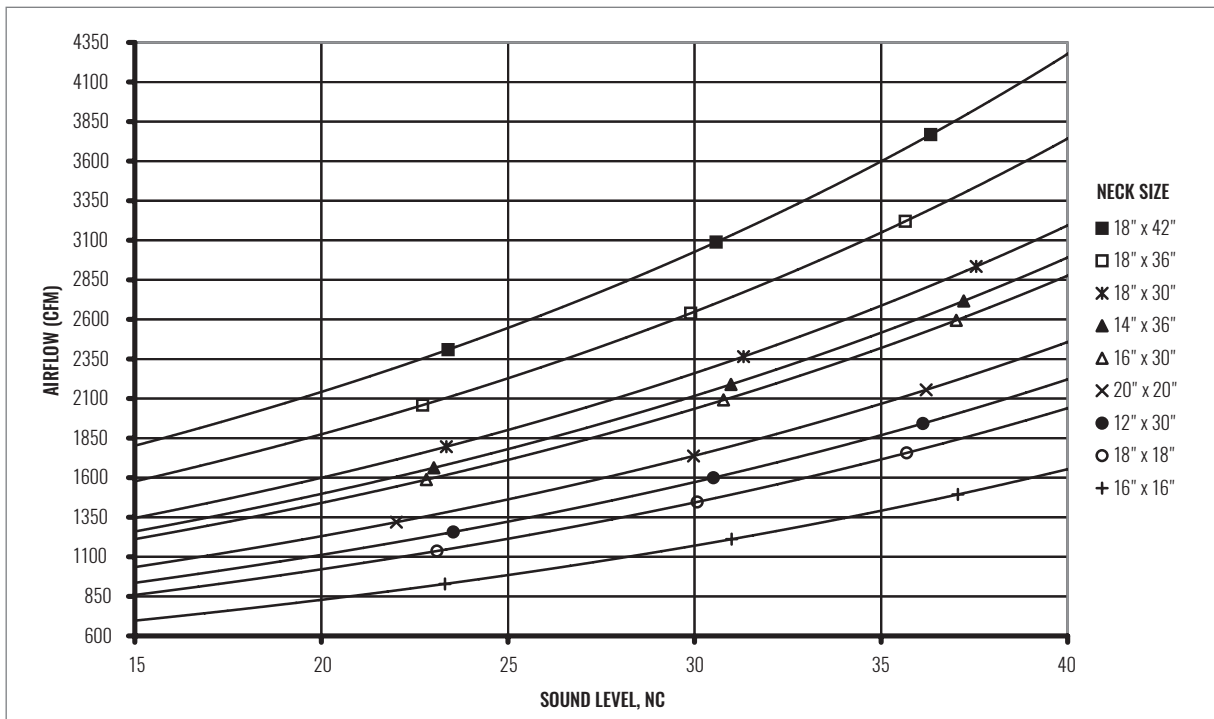
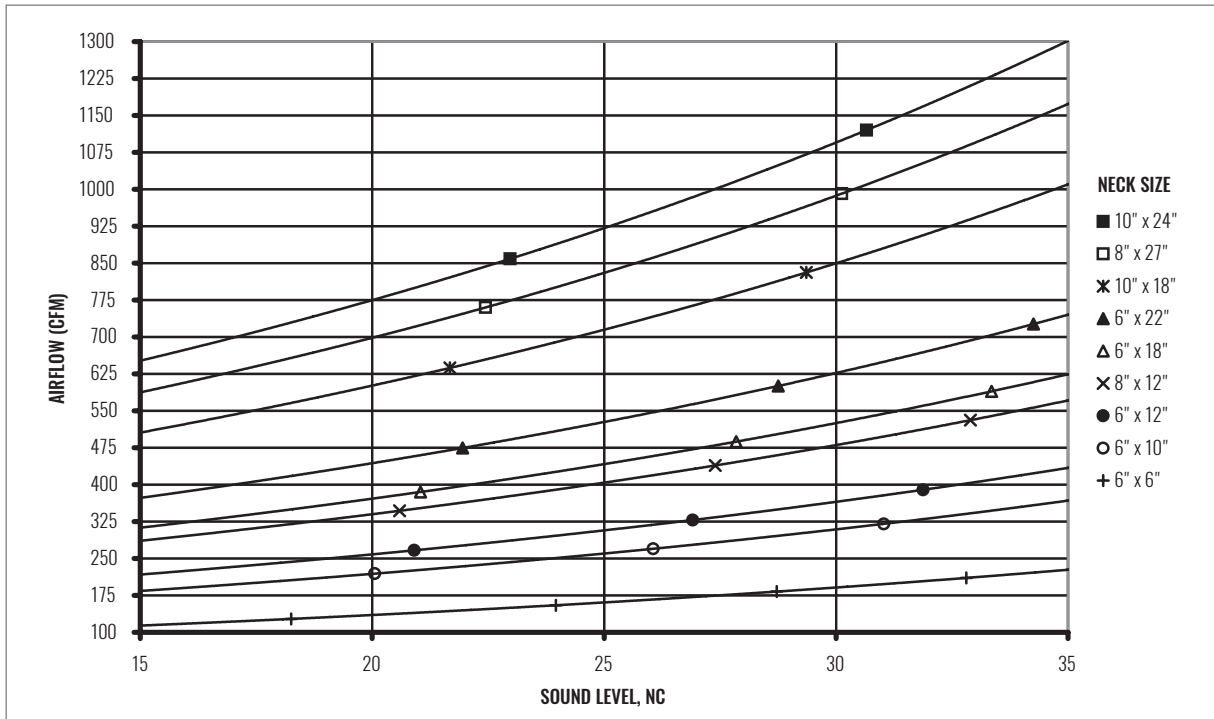
S80 / S580 / S85 / S585 SERIES

Return Grille | Single, Fixed Deflection

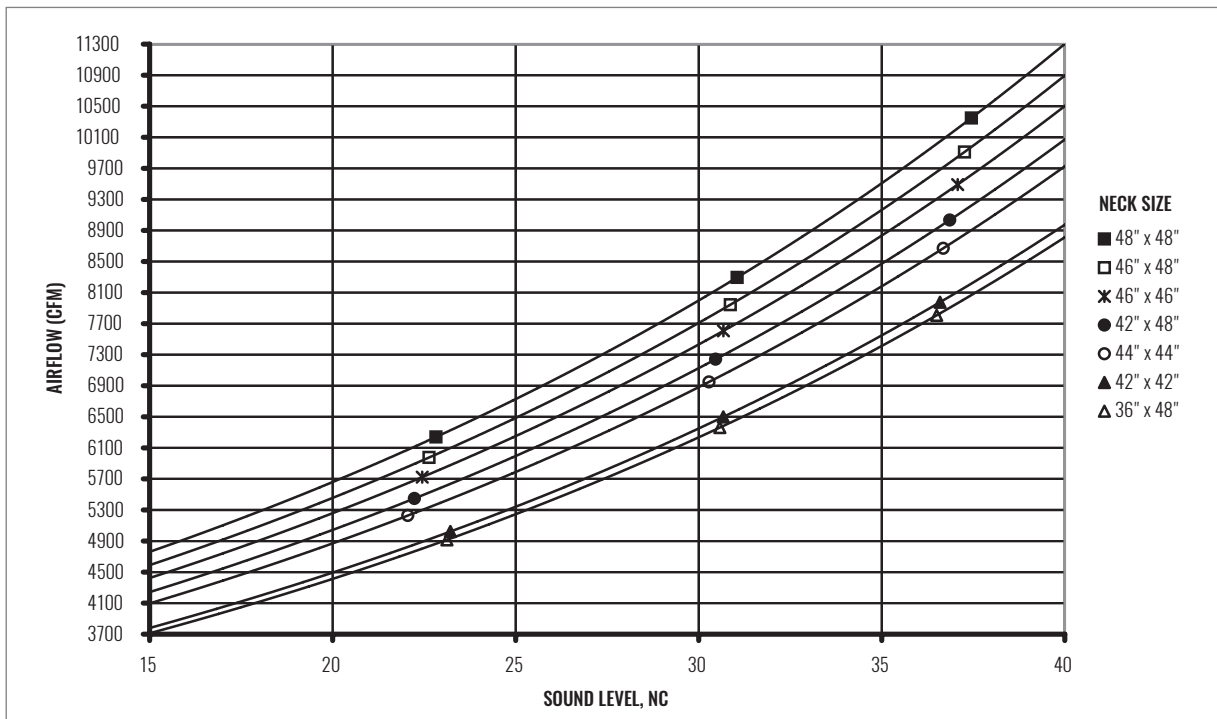
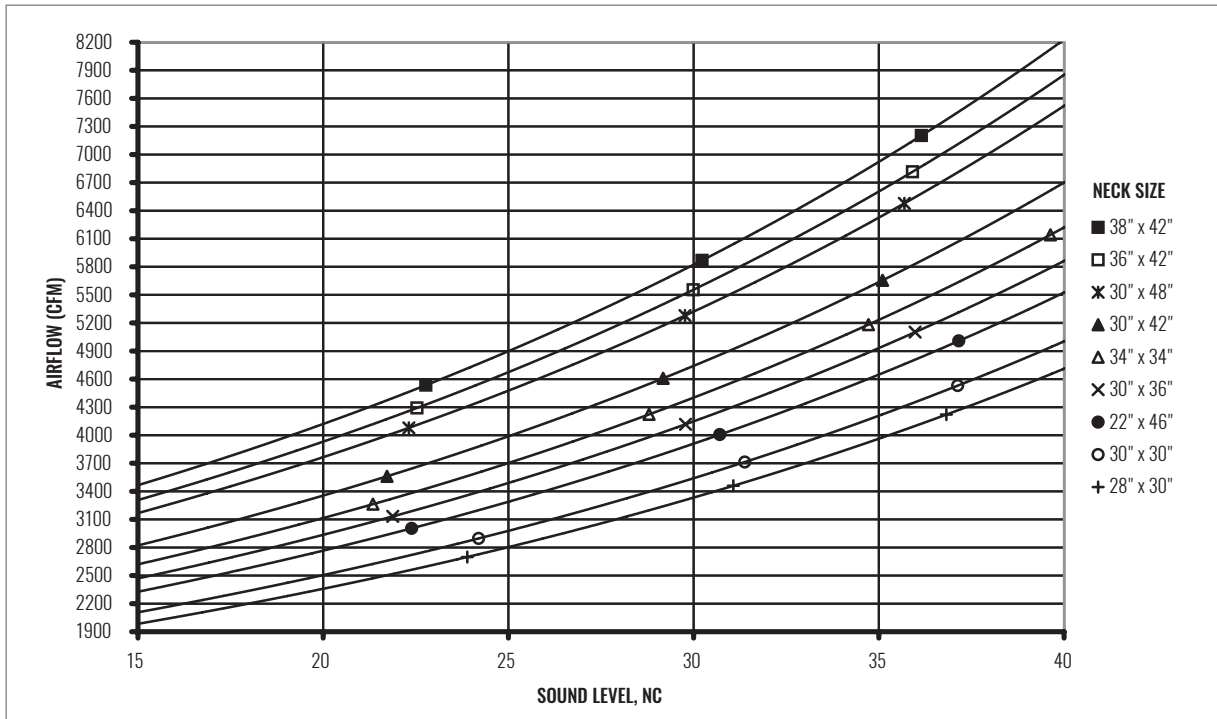


GRILLES | RETURN

SOUND CHARTS | S85, S585 | 0° DEFLECTION (NO DAMPER)



SOUND CHARTS | S85, S585 | 0° DEFLECTION (NO DAMPER)



GRILLES | RETURN

S80 / S580 / S85 / S585 SERIES



Return Grille | Single, Fixed Deflection

PERFORMANCE DATA | S85, S585 | 0° 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 ²	FPM	CFM	"WG	mm		m ²	m/s	L/s	Pa								
6" x 6"	0.25	520	100	-0.055	11	152 x 152	0.02	2.64	47	-13.6	33	29	14	-	-	-		
		665	127	-0.089	18			3.38	60	-22.2	40	36	25	16	12	-		
		810	155	-0.132	24			4.11	73	-33.0	45	41	33	22	15	12		
		955	183	-0.184	29			4.85	86	-45.8	50	46	40	28	17	15		
		1100	211	-0.244	33			5.59	99	-60.8	54	49	46	32	19	18		
10" x 6"	0.42	500	169	-0.050	12	254 x 152	0.04	2.54	80	-12.6	35	30	15	-	-	-		
		650	219	-0.085	20			3.30	103	-21.2	42	38	26	18	14	11		
		800	270	-0.129	26			4.06	127	-32.2	47	43	35	25	17	15		
		950	320	-0.182	31			4.83	151	-45.4	52	48	42	30	19	18		
		1100	371	-0.244	35			5.59	175	-60.8	56	52	49	34	22	21		
12" x 6"	0.50	500	205	-0.050	13	305 x 152	0.05	2.54	97	-12.6	36	31	16	11	-	-		
		650	267	-0.085	21			3.30	126	-21.2	43	38	27	19	14	12		
		800	328	-0.129	27			4.06	155	-32.2	48	44	36	25	18	16		
		950	390	-0.182	32			4.83	184	-45.4	53	49	43	31	20	19		
		1100	451	-0.244	36			5.59	213	-60.8	57	53	49	35	22	21		
12" x 8"	0.67	450	255	-0.041	12	305 x 203	0.06	2.29	120	-10.2	34	30	13	-	-	-		
		613	347	-0.076	21			3.11	164	-18.9	42	38	26	19	15	12		
		775	439	-0.121	27			3.94	207	-30.2	49	45	36	26	19	16		
		938	531	-0.177	33			4.76	251	-44.2	54	50	44	32	21	20		
		1100	623	-0.244	38			5.59	294	-60.8	58	54	51	37	24	23		
18" x 6"	0.75	450	283	-0.041	12	457 x 152	0.07	2.29	134	-10.2	34	30	13	-	11	-		
		613	385	-0.076	21			3.11	182	-18.9	43	39	26	19	15	13		
		775	487	-0.121	28			3.94	230	-30.2	49	45	36	26	19	17		
		938	590	-0.177	33			4.76	278	-44.2	55	50	44	32	22	20		
		1100	692	-0.244	38			5.59	326	-60.8	59	55	51	37	24	23		
22" x 6"	0.92	450	349	-0.041	13	559 x 152	0.09	2.29	165	-10.2	35	31	14	-	12	-		
		613	475	-0.076	22			3.11	224	-18.9	44	40	27	20	16	13		
		775	600	-0.121	29			3.94	283	-30.2	50	46	37	27	20	18		
		938	726	-0.177	34			4.76	343	-44.2	55	51	45	33	23	21		
		1100	852	-0.244	39			5.59	402	-60.8	60	56	52	38	25	24		
18" x 10"	1.25	400	443	-0.032	11	457 x 254	0.12	2.03	209	-8.0	34	30	-	-	11	-		
		575	637	-0.067	22			2.92	301	-16.6	44	39	26	19	17	14		
		750	831	-0.114	29			3.81	392	-28.3	51	47	37	28	21	19		
		925	1025	-0.173	35			4.70	484	-43.0	57	52	46	34	24	23		
		1100	1219	-0.244	40			5.59	575	-60.8	61	57	54	40	27	26		
27" x 8"	1.50	400	529	-0.032	12	686 x 203	0.14	2.03	249	-8.0	35	30	11	-	12	-		
		575	760	-0.067	22			2.92	359	-16.6	44	40	27	20	18	15		
		750	991	-0.114	30			3.81	468	-28.3	52	47	38	28	22	19		
		925	1222	-0.173	36			4.70	577	-43.0	57	53	47	35	25	23		
		1100	1454	-0.244	41			5.59	686	-60.8	62	58	55	40	28	26		
24" x 10"	1.67	400	597	-0.032	12	610 x 254	0.15	2.03	282	-8.0	35	31	12	-	13	-		
		575	859	-0.067	23			2.92	405	-16.6	45	41	27	21	18	15		
		750	1120	-0.114	31			3.81	529	-28.3	52	48	39	29	22	20		
		925	1381	-0.173	37			4.70	652	-43.0	58	54	48	35	25	24		
		1100	1643	-0.244	42			5.59	775	-60.8	63	58	55	41	28	27		
16" x 16"	1.78	400	646	-0.032	13	406 x 406	0.17	2.03	305	-8.0	35	31	12	-	13	-		
		575	929	-0.067	23			2.92	438	-16.6	45	41	28	21	19	15		
		750	1211	-0.114	31			3.81	572	-28.3	53	48	39	29	23	20		
		925	1494	-0.173	37			4.70	705	-43.0	58	54	48	36	26	24		
		1100	1777	-0.244	42			5.59	838	-60.8	63	59	55	41	28	27		
18" x 18"	2.25	400	827	-0.032	14	457 x 457	0.21	2.03	390	-8.0	36	32	13	11	14	-		
		550	1137	-0.061	23			2.79	536	-15.2	45	41	27	21	19	16		
		700	1446	-0.099	30			3.56	683	-24.6	52	47	37	28	23	20		
		850	1756	-0.146	36			4.32	829	-36.3	57	53	45	34	26	24		
		1000	2066	-0.202	40			5.08	975	-50.3	61	57	52	39	28	27		

NOTE: See notes on page J1-40.

PERFORMANCE DATA | S85, S585 | 0° 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 ²	FPM	CFM	"WG		mm	m ²	m/s	L/s	Pa	2	3	4	5	6	7	
30" x 12"	2.50	400	914	-0.32	14	762 x 305	0.23	2.03	431	-8.0	37	33	14	11	15	-	
		550	1257	-0.61	24			2.79	593	-15.2	46	41	27	21	19	16	
		700	1600	-0.99	31			3.56	755	-24.6	52	48	38	29	23	21	
		850	1942	-1.46	36			4.32	917	-36.3	57	53	46	35	26	24	
		1000	2285	-2.02	41			5.08	1078	-50.3	62	58	53	40	28	27	
20" x 20"	2.78	350	901	-0.25	11	508 x 508	0.26	1.78	425	-6.2	34	30	-	-	13	-	
		513	1319	-0.53	22			2.60	622	-13.2	44	40	25	20	19	15	
		675	1737	-0.92	30			3.43	820	-22.9	52	47	36	28	23	20	
		838	2155	-1.42	36			4.25	1017	-35.3	58	53	46	35	26	24	
30" x 16"	3.33	350	1084	-0.25	12	762 x 406	0.31	1.78	512	-6.2	32	27	-	-	11	-	
		513	1588	-0.53	23			2.60	749	-13.2	42	38	23	17	13		
		675	2091	-0.92	31			3.43	987	-22.9	50	45	34	26	21	18	
		838	2594	-1.42	37			4.25	1224	-35.3	55	51	44	33	24	22	
		1000	3098	-2.02	42			5.08	1462	-50.3	60	56	51	38	27	25	
36" x 14"	3.50	350	1135	-0.25	12	914 x 356	0.33	1.78	536	-6.2	35	31	-	-	14	-	
		513	1662	-0.53	23			2.60	785	-13.2	45	41	26	21	20	16	
		675	2189	-0.92	31			3.43	1033	-22.9	53	48	37	29	24	21	
		838	2716	-1.42	37			4.25	1282	-35.3	59	54	47	36	27	25	
30" x 18"	3.75	350	1226	-0.25	12	762 x 457	0.35	1.78	579	-6.2	35	31	-	-	14	-	
		513	1796	-0.53	23			2.60	848	-13.2	46	41	26	21	20	17	
		675	2365	-0.92	31			3.43	1116	-22.9	53	49	38	29	24	22	
		838	2935	-1.42	38			4.25	1385	-35.3	59	55	47	36	28	26	
		1000	3504	-2.02	43			5.08	1654	-50.3	64	60	55	42	30	29	
36" x 18"	4.50	350	1478	-0.25	13	914 x 457	0.42	1.78	698	-6.2	36	32	-	-	15	11	
		488	2059	-0.48	23			2.48	972	-11.9	45	41	25	20	20	17	
		625	2639	-0.79	30			3.18	1246	-19.6	52	48	35	28	24	21	
		763	3220	-1.17	36			3.87	1520	-29.2	57	53	44	34	27	25	
42" x 18"	5.25	350	1729	-0.25	14	1067 x 457	0.49	1.78	816	-6.2	31	27	-	-	11	-	
		488	2409	-0.48	23			2.48	1137	-11.9	40	36	20	16	16	12	
		625	3088	-0.79	31			3.18	1458	-19.6	47	43	31	23	19	17	
		763	3768	-1.17	36			3.87	1778	-29.2	53	48	39	30	23	20	
		900	4447	-1.64	41			4.57	2099	-40.7	57	53	46	35	25	23	
30" x 28"	5.83	350	1937	-0.25	14	762 x 711	0.54	1.78	914	-6.2	37	33	12	11	16	12	
		488	2698	-0.48	24			2.48	1273	-11.9	46	42	26	21	21	18	
		625	3459	-0.79	31			3.18	1633	-19.6	53	49	37	29	25	22	
		763	4221	-1.17	37			3.87	1992	-29.2	58	54	45	35	28	26	
30" x 30"	6.25	350	2079	-0.25	15	762 x 762	0.58	1.78	981	-6.2	37	33	12	11	17	12	
		488	2896	-0.48	24			2.48	1367	-11.9	46	42	26	22	22	18	
		625	3713	-0.79	31			3.18	1753	-19.6	53	49	37	29	25	23	
		763	4530	-1.17	37			3.87	2138	-29.2	59	54	45	36	29	26	
		900	5347	-1.64	42			4.57	2524	-40.7	63	59	52	41	31	29	
46" x 22"	7.03	300	2003	-0.18	11	1168 x 559	0.65	1.52	945	-4.5	34	29	-	-	15	-	
		450	3005	-0.41	22			2.29	1418	-10.2	45	41	23	20	21	17	
		600	4007	-0.73	31			3.05	1891	-18.1	53	48	36	29	25	22	
		750	5008	-1.14	37			3.81	2364	-28.3	59	54	45	36	29	26	
36" x 30"	7.50	300	2148	-0.18	11	914 x 762	0.70	1.52	1014	-4.5	34	30	-	-	15	-	
		438	3133	-0.39	22			2.22	1478	-9.6	44	40	22	19	21	17	
		575	4117	-0.67	30			2.92	1943	-16.6	52	48	34	28	25	22	
		713	5102	-1.02	36			3.62	2408	-25.5	58	53	43	34	28	26	
		850	6086	-1.46	41			4.32	2872	-36.3	62	58	51	40	31	29	

NOTE: See notes on page J1-40.

S80 / S580 / S85 / S585 SERIES



Return Grille | Single, Fixed Deflection

PERFORMANCE DATA | S85, S585 | 0° 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 ²	FPM	CFM	"WG	mm		m ²	m/s	L/s	Pa								
34" x 34"	8.03	300	2303	-0.18	11	864 x 864	0.75	1.52	1087	-4.5	27	23	-	-	-	-		
		425	3263	-0.36	21			2.16	1540	-9.1	37	33	15	12	14	-		
		550	4223	-0.61	29			2.79	1993	-15.2	44	40	26	20	18	15		
		675	5182	-0.92	35			3.43	2446	-22.9	50	45	34	26	21	18		
		800	6142	-1.29	40			4.06	2899	-32.2	54	50	42	31	24	21		
42" x 30"	8.75	300	2514	-0.18	12	1067 x 762	0.81	1.52	1186	-4.5	35	30	-	-	16	11		
		425	3561	-0.36	22			2.16	1681	-9.1	44	40	22	19	21	17		
		550	4608	-0.61	29			2.79	2175	-15.2	51	47	33	27	25	22		
		675	5656	-0.92	35			3.43	2669	-22.9	57	53	42	33	28	26		
		800	6703	-1.29	40			4.06	3164	-32.2	61	57	49	38	31	29		
48" x 30"	10.00	300	2879	-0.18	12	1219 x 762	0.93	1.52	1359	-4.5	35	31	-	-	16	11		
		425	4079	-0.36	22			2.16	1925	-9.1	45	41	22	20	22	18		
		550	5279	-0.61	30			2.79	2491	-15.2	52	48	33	27	26	22		
		675	6478	-0.92	36			3.43	3057	-22.9	57	53	42	34	29	26		
		800	7678	-1.29	41			4.06	3624	-32.2	62	58	49	39	31	29		
42" x 36"	10.50	300	3029	-0.18	12	1067 x 914	0.98	1.52	1430	-4.5	36	31	-	-	17	11		
		425	4292	-0.36	23			2.16	2025	-9.1	45	41	23	20	22	18		
		550	5554	-0.61	30			2.79	2621	-15.2	52	48	34	28	26	23		
		675	6816	-0.92	36			3.43	3217	-22.9	58	53	42	34	29	26		
		800	8078	-1.29	41			4.06	3812	-32.2	62	58	50	39	32	29		
42" x 38"	11.08	300	3201	-0.18	13	1067 x 965	1.03	1.52	1511	-4.5	27	23	-	-	-	-		
		425	4535	-0.36	23			2.16	2140	-9.1	37	32	14	11	14	-		
		550	5869	-0.61	30			2.79	2770	-15.2	44	40	25	19	18	14		
		675	7203	-0.92	36			3.43	3399	-22.9	49	45	34	26	21	18		
		800	8536	-1.29	41			4.06	4029	-32.2	54	50	41	31	23	21		
48" x 36"	12.00	300	3470	-0.18	13	1219 x 914	1.11	1.52	1638	-4.5	36	32	-	-	17	12		
		425	4916	-0.36	23			2.16	2320	-9.1	46	41	23	20	22	18		
		550	6362	-0.61	31			2.79	3002	-15.2	53	48	34	28	26	23		
		675	7807	-0.92	36			3.43	3685	-22.9	58	54	43	35	30	27		
		800	9253	-1.29	41			4.06	4367	-32.2	63	59	50	40	32	30		
44" x 44"	13.44	270	3507	-0.15	11	1118 x 1118	1.25	1.37	1655	-3.7	34	30	-	-	16	11		
		403	5228	-0.33	22			2.04	2468	-8.1	45	40	21	19	22	18		
		535	6950	-0.58	30			2.72	3280	-14.4	52	48	34	28	26	23		
		668	8671	-0.90	37			3.39	4092	-22.4	58	54	43	35	30	27		
		800	10392	-1.29	42			4.06	4904	-32.2	63	59	51	40	33	31		
46" x 46"	14.69	270	3839	-0.15	11	1168 x 1168	1.37	1.37	1812	-3.7	34	30	-	-	16	11		
		403	5723	-0.33	22			2.04	2701	-8.1	45	41	22	20	23	18		
		535	7607	-0.58	31			2.72	3590	-14.4	53	49	34	28	27	24		
		668	9491	-0.90	37			3.39	4479	-22.4	59	55	43	35	30	28		
		800	11375	-1.29	42			4.06	5369	-32.2	64	60	51	41	33	31		
48" x 48"	16.00	270	4186	-0.15	11	1219 x 1219	1.49	1.37	1976	-3.7	34	30	-	-	17	11		
		403	6240	-0.33	23			2.04	2945	-8.1	45	41	22	20	23	19		
		535	8295	-0.58	31			2.72	3915	-14.4	53	49	34	29	27	24		
		668	10349	-0.90	37			3.39	4884	-22.4	59	55	44	36	31	28		
		800	12403	-1.29	43			4.06	5854	-32.2	64	60	52	41	33	31		

NOTES: NC values are based on octave band 2 - 7 sound power levels minus a room absorption of 10dB, re 10⁻¹² 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.

ENGINEERING SPECIFICATION & CONFIGURATION

S80, S580

The return grille shall be a Krueger model S80 (steel) or S580 (aluminum). This grille must have 35° deflection (H and V models) or 0° deflection (HZ and VZ models) blades on 3/4" centers made of 22 gage steel (S80) or roll formed aluminum (S580). The blades must be held in place by mullions placed behind the grille and welded to the frame. The frame of the grille must be constructed of 22 gage steel (S80) or roll formed aluminum with minimum 0.032" thickness (S580) for sizes less than and equal to 24"x24" and extruded aluminum with nominal thickness 0.040 - 0.050" for sizes greater than 24"x24" with countersunk screw holes. This frame must also produce a border of 1 1/4" around all sides of the grille with mitered corners.

Optional damper shall be available made of heavy gage steel (OBD) or aluminum (5OBD) and operable from the face of the return grille.

S85, S585

The return grille shall be a Krueger model S85 (steel) or S585 (aluminum). This grille must have 35° deflection (H and V models) or 0° deflection (HZ and VZ models) blades on 1/2" centers made of 22 gage steel (S85) or roll formed aluminum (S585). The blades must be held in place by mullions placed behind the grille and welded to the frame. The frame of the grille must be constructed of 22 gage steel (S85) or roll formed aluminum with minimum 0.032" thickness (S585) for sizes less than and equal to 24"x24" and extruded aluminum with nominal thickness 0.040 - 0.050" for sizes greater than 24"x24" with countersunk screw holes. This frame must also produce a border of 1 1/4" around all sides of the grille with mitered corners.

Optional damper shall be available made of heavy gage steel (OBD/POBD) or aluminum (5OBD) and operable from the face of the return grille.

PERFORMANCE

The manufacturer shall provide published (printed or electronic) performance data for the diffuser. Performance data shall include 2 - 7 octave band sound power levels. The diffuser shall be tested in accordance to the data standards at the time of product introduction or ANSI/ASHRAE Standard 70.

FINISH

The paint finish shall be #44 British White and be an anodic acrylic paint, baked at 315°F for 30 minutes. The paint thickness shall be 0.8 - 1.0 mils, gloss at 60° per ASTM D523-89 of 50 - 85%, pencil hardness per ASTM D3363-92A of HB - H, crosshatch adhesion per ASTM D3359-83 of 4B - 5B, impact per ASTM D2794-93 of direct impact >100 in/lb and reverse impact >80 in/lb, salt spray per ASTM B117-9048 of 96 hours, humidity per ASTM D2247-92 of >500 hours and water soak per ASTM D870-92 of 250 hours.

1. SERIES: (XXXX)

- S80 - Single fixed deflection, 3/4" spacing, steel return grille
- S580 - Single fixed deflection, 3/4" spacing, aluminum return grille
- S85 - Single fixed deflection, 1/2" spacing, steel return grille
- S585 - Single fixed deflection, 1/2" spacing, aluminum return grille

2. PATTERN: (XX)

- H - 35° horizontal front blades
- V - 35° vertical front blades
- HZ - 0° horizontal front blades
- VZ - 0° vertical front blades

3. WIDTH: (XX)*

- 6" - 240" in 1/4" increments

4. HEIGHT: (XX)*

- 4" - 240" in 1/4" increments

5. FRAME: (XXX)

- F22 - Surface mount
- F23 - Lay-in T-bar
- F98 - Narrow-T **

6. PANEL: (XX)x(XX)

- | | |
|---------|---------|
| NONE | 24"x12" |
| 24"x24" | 48"x24" |

7. FASTENING METHOD: (XX)

- 00 - No screw holes
- 01 - Standard screw holes
- 02 - Concealed fastening
- 03 - Knurled knob ***
- 08 - 1/4 turn fasteners ***

8. DAMPER: (XX)

- 00 - No damper
- 01 - Steel opposed blade damper (model OBD)
- 13 - Painted opposed blade damper (model POBD)
- 15 - Aluminum opposed blade damper (model 5OBD)

9. ACCESSORIES: (XX) (XX)

- 00 - No accessories
- 01 - Plaster frame
- 04 - 1" filter ***
- 05 - 2" filter ***

10. FINISH: (XX)

- | | |
|------------|--------------------|
| 01 - Mill | 10 - Alumican |
| 35 - Black | 44 - British White |

* Maximum single piece unit size is 240"x96" or 96"x240".

** Frame 98 only available with 24"x24" and 24"x12" panel.

*** Knurled knob and 1/4 turn fastening methods are only available with filter frame accessories.

SAMPLE CONFIGURATION: S80 - HZ - 10x12 - F22 - NONE - 01 - 15 - 00 - 00 - 01