

AFCS80 / AFCS85

Return Grille | Architectural, Curved Blade



INTRODUCTION

The AFCS80/AFCS85 return grilles are designed to fit most common commercial and architectural applications. The AFCS80 offers fixed curved blades with 3/4" blade spacing and 45° deflection. The AFCS85 offers fixed curved blades with 1/2" blade spacing and 30° deflection. Both grilles have a 1 1/4" flange. The curved blades enhance the overall look of the face of the grille resulting in a clean appearance.

MODELS

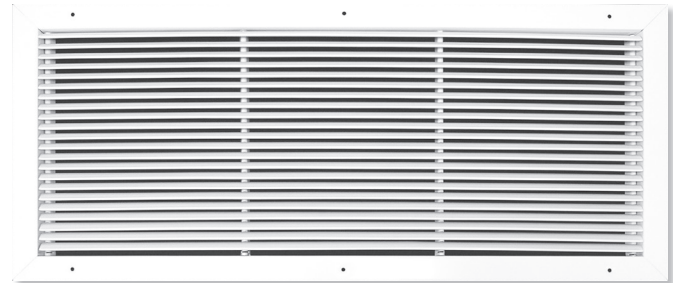
- AFCS80 - Curved blade return grille with 3/4" blade spacing and 45° deflection
- AFCS85 - Curved blade return grille with 1/2" blade spacing and 30° deflection

FEATURES

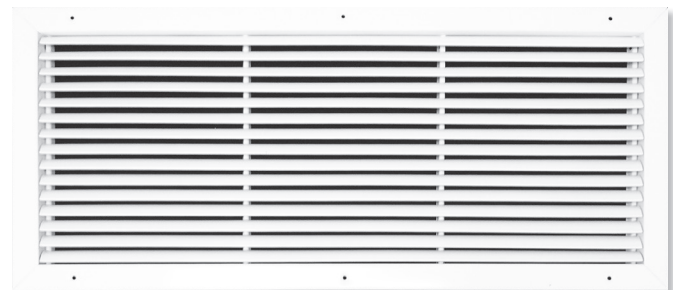
- Horizontal or vertical front blades
- Curved blades
- Steel construction
- Standard finish is #44 British White
- Optional finishes available

ACCESSORIES

- Steel opposed blade damper (model OBD)
- Steel painted opposed blade damper (model POBD)
- Aluminum opposed blade damper (model 5OBD)
- Plaster frame (model 8PF)
- 1" or 2" filter frame - Minimum size is 8"x8" and maximum size is 48"x36" (model 5FF)
- Insect screen - 1/16" mesh
- Debris screen - 1/4" mesh

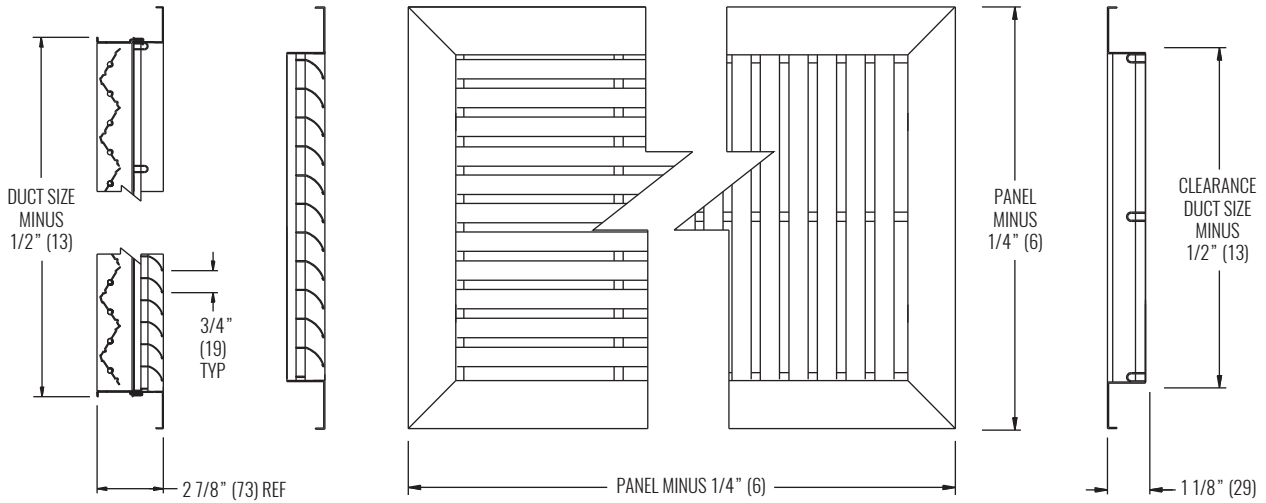


AFCS85, 30° Deflection



AFCS80, 45° Deflection

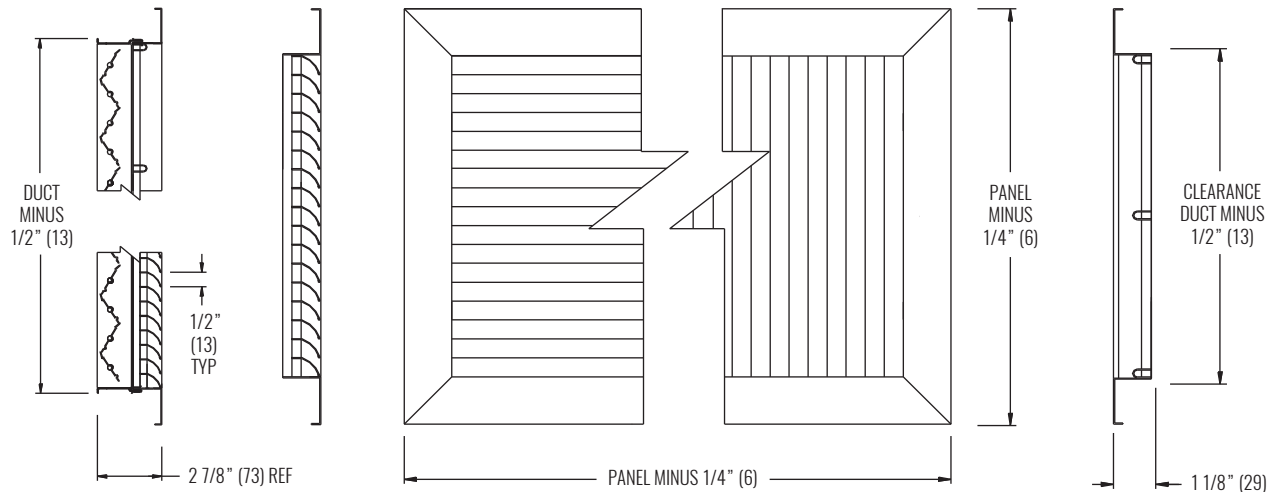
DIMENSIONAL DATA | AFCS80 | 45° DEFLECTION



**FACE, SIDE, AND CROSS SECTION VIEWS
(FRAME 23 SHOWN)**

NOTE: Dimensions in parentheses are mm.

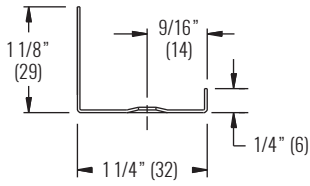
DIMENSIONAL DATA | AFCS85 | 30° DEFLECTION



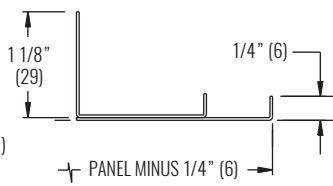
**FACE, SIDE, AND CROSS SECTION VIEWS
(FRAME 23 SHOWN)**

NOTE: Dimensions in parentheses are mm.

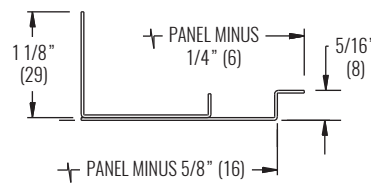
DIMENSIONAL DATA | FRAMES & MOUNTINGS



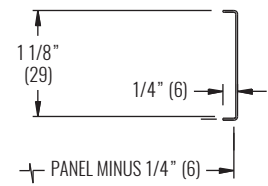
**FRAME 22,
SURFACE MOUNT**



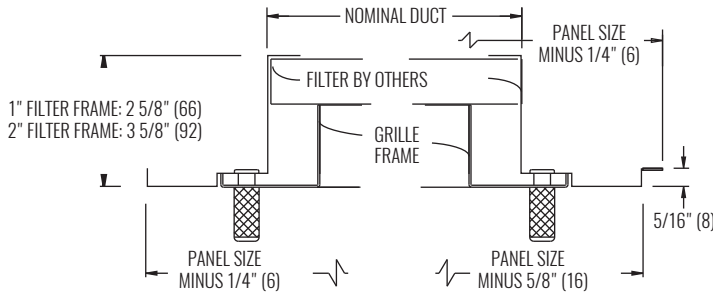
**FRAME 23,
LAY-IN T-BAR**



**FRAME 98,
NARROW-T**

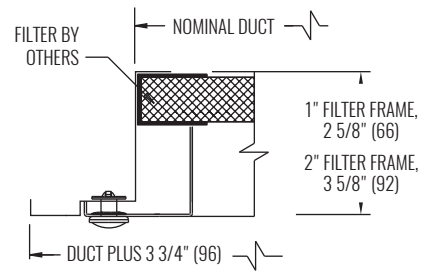


**FRAME FTB
CHANNEL FRAME**

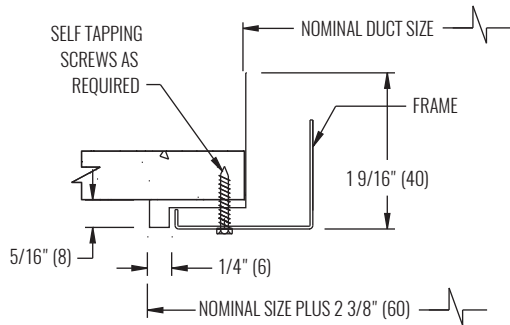


**FILTER FRAME MOUNT
KNURLED KNOB, FRAME 23**

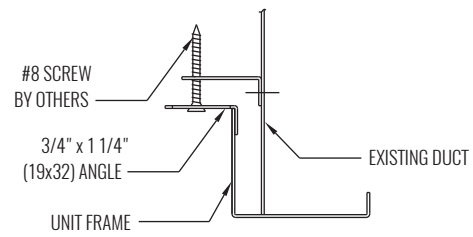
**FILTER FRAME MOUNT
KNURLED KNOB, FRAME 98**



**FILTER FRAME MOUNT
1/4 TURN FASTENER, FRAME 22**



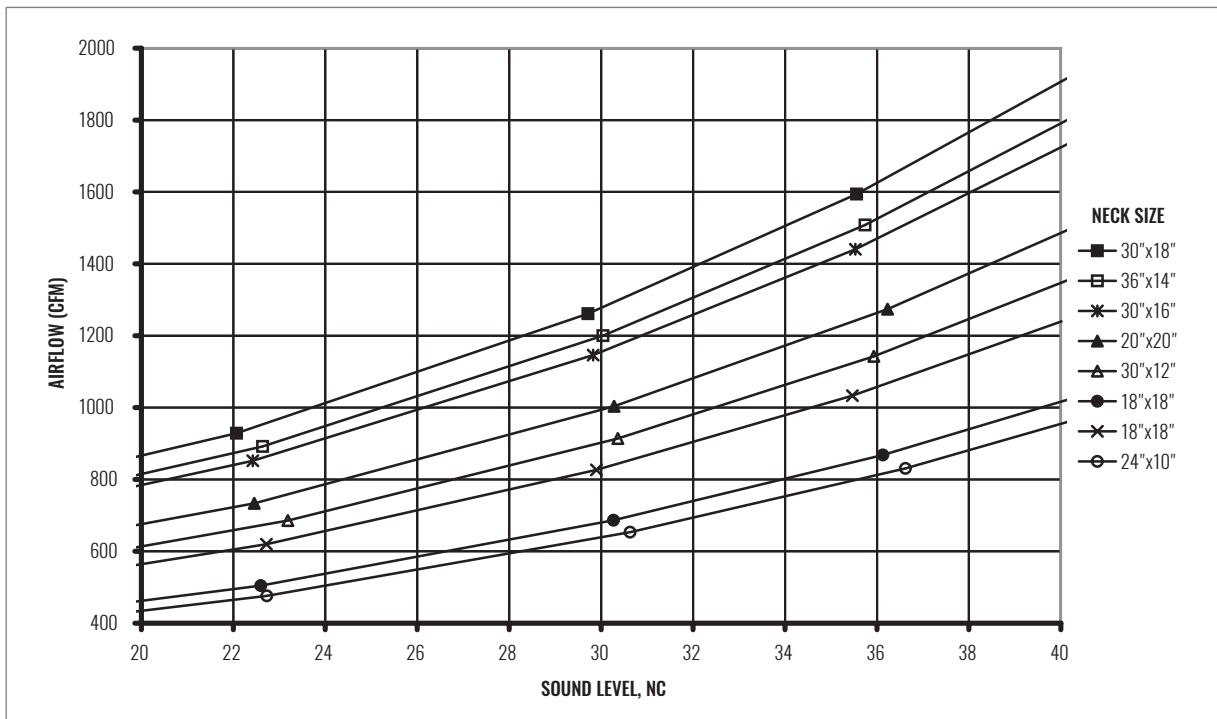
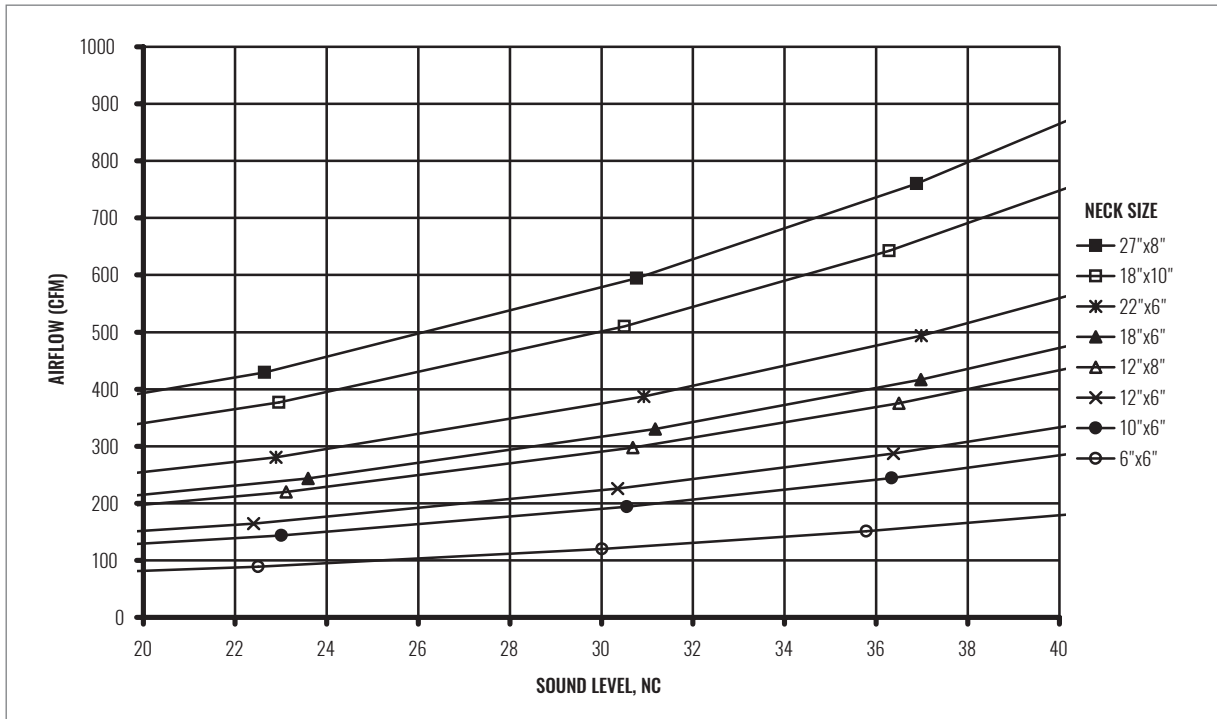
PLASTER FRAME



CONCEALED MOUNTING

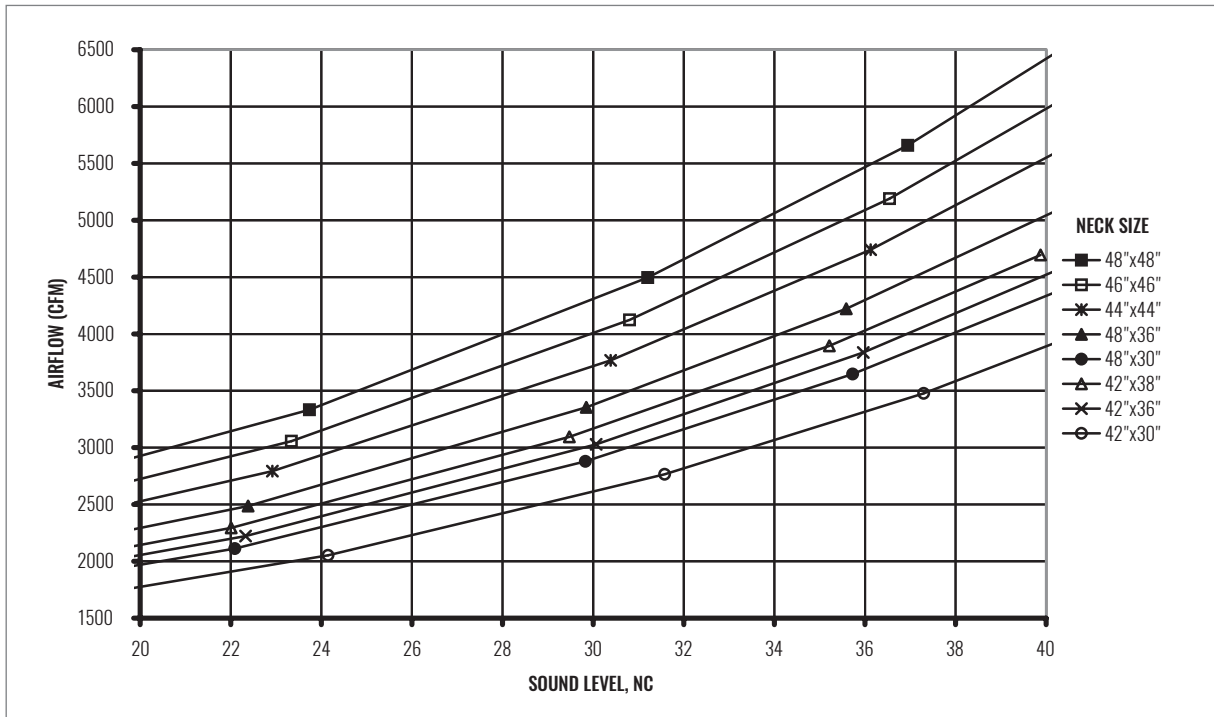
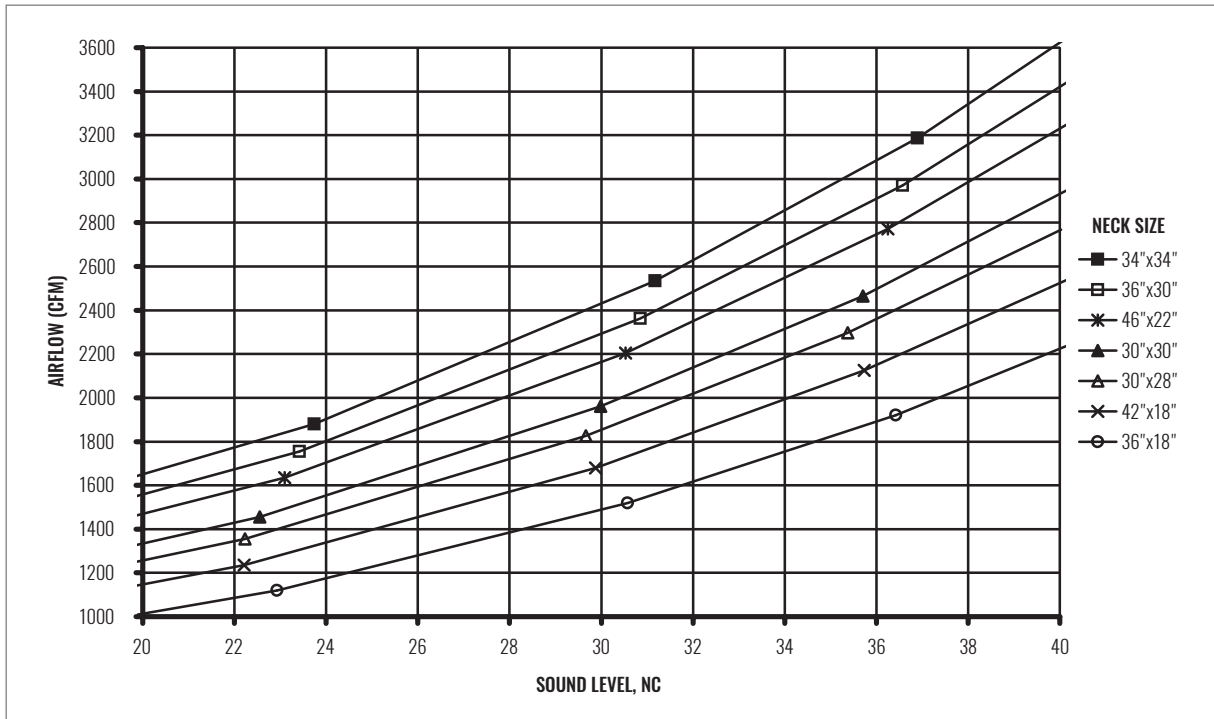
NOTE: Dimensions in parentheses are mm.

SOUND CHARTS | AFCS80 | 45° DEFLECTION (NO DAMPER)



GRILLES | RETURN

SOUND CHARTS | AFCS80 | 45° DEFLECTION (NO DAMPER)



PERFORMANCE DATA | AFC80 | 45° 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		
6" x 6"	0.25	300	57	-0.42	12	152 x 152	0.02	1.52	27	-10.5	26	30	30	12	-	-		
		463	89	-1.01	23			2.35	42	-25.1	34	39	39	27	22	19		
		625	120	-1.84	30			3.18	56	-45.8	39	45	46	38	34	29		
		788	151	-2.92	36			4.00	71	-72.7	43	50	51	46	42	37		
		950	182	-4.25	40			4.83	86	-105.8	47	53	55	53	50	44		
10" x 6"	0.42	275	93	-0.36	12	254 x 152	0.04	1.40	44	-8.9	27	31	30	12	-	-		
		425	143	-0.85	23			2.16	68	-21.2	35	40	40	27	22	19		
		575	194	-1.56	31			2.92	92	-38.8	40	46	46	38	33	29		
		725	244	-2.47	36			3.68	115	-61.6	44	50	51	46	42	37		
		875	295	-3.60	41			4.45	139	-89.7	47	54	56	53	49	44		
12" x 6"	0.50	250	103	-0.29	11	305 x 152	0.05	1.27	48	-7.3	26	30	29	-	-	-		
		400	164	-0.75	22			2.03	77	-18.8	34	39	39	26	21	18		
		550	226	-1.42	30			2.79	106	-35.5	40	46	46	37	33	29		
		700	287	-2.31	36			3.56	136	-57.4	44	50	52	46	42	37		
		850	349	-3.40	41			4.32	165	-84.7	48	54	56	53	49	44		
12" x 8"	0.67	250	142	-0.29	12	305 x 203	0.06	1.27	67	-7.3	27	31	30	11	-	-		
		388	219	-0.71	23			1.97	104	-17.6	35	40	40	27	21	18		
		525	297	-1.30	31			2.67	140	-32.3	40	46	47	37	33	29		
		663	375	-2.07	36			3.37	177	-51.4	45	51	52	45	42	36		
		800	453	-3.01	41			4.06	214	-75.0	48	54	56	52	49	43		
18" x 6"	0.75	250	157	-0.29	13	457 x 152	0.07	1.27	74	-7.3	28	31	31	12	-	-		
		388	244	-0.71	24			1.97	115	-17.6	35	40	40	27	22	19		
		525	330	-1.30	31			2.67	156	-32.3	41	46	47	38	33	29		
		663	417	-2.07	37			3.37	197	-51.4	45	51	52	46	42	37		
		800	503	-3.01	42			4.06	237	-75.0	48	55	56	53	49	43		
22" x 6"	0.92	225	174	-0.24	11	559 x 152	0.09	1.14	82	-5.9	27	30	29	-	-	-		
		363	281	-0.62	23			1.84	133	-15.4	35	40	40	26	20	17		
		500	387	-1.18	31			2.54	183	-29.3	41	46	47	37	32	28		
		638	494	-1.91	37			3.24	233	-47.6	45	51	52	46	42	37		
		775	600	-2.83	42			3.94	283	-70.4	49	55	56	53	49	43		
18" x 10"	1.25	220	244	-0.23	12	457 x 254	0.12	1.12	115	-5.7	28	31	30	-	-	-		
		340	377	-0.54	23			1.73	178	-13.6	35	40	40	25	20	17		
		460	510	-1.00	30			2.34	241	-24.8	41	46	46	36	31	27		
		580	643	-1.58	36			2.95	303	-39.4	45	51	51	44	40	35		
		700	776	-2.31	41			3.56	366	-57.4	48	55	56	51	47	42		
27" x 8"	1.50	200	264	-0.19	11	686 x 203	0.14	1.02	125	-4.7	27	30	29	-	-	-		
		325	430	-0.50	23			1.65	203	-12.4	35	40	39	25	19	16		
		450	595	-0.95	31			2.29	281	-23.7	41	46	47	36	31	27		
		575	760	-1.56	37			2.92	359	-38.8	46	51	52	45	41	36		
		700	925	-2.31	42			3.56	437	-57.4	49	55	56	52	48	42		
24" x 10"	1.67	200	299	-0.19	11	610 x 254	0.15	1.02	141	-4.7	27	30	29	-	-	-		
		319	476	-0.48	23			1.62	225	-11.9	36	40	40	25	19	16		
		438	653	-0.90	31			2.22	308	-22.4	41	46	47	36	31	27		
		556	831	-1.46	37			2.83	392	-36.3	45	51	52	44	40	35		
		675	1008	-2.14	41			3.43	476	-53.4	49	55	56	51	47	42		
16" x 16"	1.78	200	323	-0.19	11	406 x 406	0.17	1.02	152	-4.7	28	31	30	-	-	-		
		313	505	-0.46	23			1.59	238	-11.4	35	40	39	24	18	16		
		425	686	-0.85	30			2.16	324	-21.2	41	46	46	35	30	26		
		538	868	-1.36	36			2.73	410	-33.9	45	51	51	43	39	34		
		650	1050	-1.99	41			3.30	495	-49.5	49	55	56	50	46	41		
18" x 18"	2.25	200	413	-0.19	13	457 x 457	0.21	1.02	195	-4.7	29	32	31	-	-	-		
		300	620	-0.42	23			1.52	293	-10.5	36	40	40	24	18	15		
		400	827	-0.75	30			2.03	390	-18.8	41	46	46	34	29	25		
		500	1033	-1.18	35			2.54	488	-29.3	45	50	51	42	38	33		
		600	1240	-1.69	40			3.05	585	-42.2	48	54	55	48	45	39		

NOTE: See notes on page J1-103.

AFCS80 / AFCS85

Return Grille | Architectural, Curved Blade



PERFORMANCE DATA | AFCS80 | 45° 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	ft²	FPM	CFM	"WG	mm		m²	m/s	L/s	Pa								
30" x 12"	2.50	200	457	-0.19	13	762 x 305	0.23	1.02	216	-4.7	29	32	31	-	-	-		
		300	686	-0.42	23			1.52	324	-10.5	36	40	40	25	19	16		
		400	914	-0.75	30			2.03	431	-18.8	41	46	46	35	30	26		
		500	1143	-1.18	36			2.54	539	-29.3	45	51	51	43	38	33		
		600	1371	-1.69	40			3.05	647	-42.2	48	54	55	49	45	40		
20" x 20"	2.78	180	463	-0.15	11	508 x 508	0.26	0.91	219	-3.8	28	31	29	-	-	-		
		285	733	-0.38	22			1.45	346	-9.5	36	40	39	23	17	15		
		390	1004	-0.72	30			1.98	474	-17.8	41	46	46	34	29	25		
		495	1274	-1.15	36			2.51	601	-28.7	46	51	51	43	38	34		
		600	1544	-1.69	41			3.05	729	-42.2	49	55	56	50	46	40		
30" x 16"	3.33	180	558	-0.15	12	762 x 406	0.31	0.91	263	-3.8	28	31	30	-	-	-		
		275	852	-0.36	22			1.40	402	-8.9	36	40	39	23	17	14		
		370	1146	-0.64	30			1.88	541	-16.0	41	46	46	34	28	24		
		465	1440	-1.02	36			2.36	680	-25.3	45	51	51	42	37	32		
		560	1735	-1.48	40			2.84	819	-36.8	49	54	55	48	44	39		
36" x 14"	3.50	180	584	-0.15	12	914 x 356	0.33	0.91	276	-3.8	29	32	30	-	-	-		
		275	892	-0.36	23			1.40	421	-8.9	36	40	40	23	17	14		
		370	1200	-0.64	30			1.88	566	-16.0	41	46	46	34	28	25		
		465	1508	-1.02	36			2.36	712	-25.3	45	51	51	42	37	32		
		560	1816	-1.48	40			2.84	857	-36.8	49	54	55	48	44	39		
30" x 18"	3.75	170	596	-0.14	11	762 x 457	0.35	0.86	281	-3.4	28	31	29	-	-	-		
		265	929	-0.33	22			1.35	438	-8.2	36	40	39	22	16	14		
		360	1261	-0.61	30			1.83	595	-15.2	41	46	46	33	28	24		
		455	1594	-0.97	36			2.31	752	-24.3	45	51	51	41	37	32		
		550	1927	-1.42	40			2.79	910	-35.5	49	54	55	48	44	39		
36" x 18"	4.50	170	718	-0.14	12	914 x 457	0.42	0.86	339	-3.4	29	31	30	-	-	-		
		265	1119	-0.33	23			1.35	528	-8.2	36	40	40	23	17	14		
		360	1520	-0.61	31			1.83	717	-15.2	42	47	47	34	29	25		
		455	1921	-0.97	36			2.31	907	-24.3	46	51	52	42	38	33		
		550	2322	-1.42	41			2.79	1096	-35.5	49	55	56	49	45	39		
42" x 18"	5.25	160	791	-0.12	11	1067 x 457	0.49	0.81	373	-3.0	28	31	29	-	-	-		
		250	1235	-0.29	22			1.27	583	-7.3	36	40	39	22	16	13		
		340	1680	-0.54	30			1.73	793	-13.6	42	46	46	33	27	24		
		430	2125	-0.87	36			2.18	1003	-21.7	46	51	51	41	36	32		
		520	2570	-1.27	40			2.64	1213	-31.7	49	55	55	48	44	38		
30" x 28"	5.83	160	886	-0.12	12	762 x 711	0.54	0.81	418	-3.0	29	31	30	-	-	-		
		245	1356	-0.28	22			1.24	640	-7.0	36	40	39	22	16	13		
		330	1827	-0.51	30			1.68	862	-12.8	41	46	46	32	27	23		
		415	2297	-0.81	35			2.11	1084	-20.2	46	51	51	40	36	31		
		500	2768	-1.18	40			2.54	1306	-29.3	49	54	55	47	43	37		
30" x 30"	6.25	160	951	-0.12	12	762 x 762	0.58	0.81	449	-3.0	29	32	30	-	-	-		
		245	1456	-0.28	23			1.24	687	-7.0	36	40	39	22	16	13		
		330	1961	-0.51	30			1.68	925	-12.8	42	46	46	33	27	24		
		415	2466	-0.81	36			2.11	1164	-20.2	46	51	51	41	36	31		
		500	2971	-1.18	40			2.54	1402	-29.3	49	55	55	47	43	38		
46" x 22"	7.03	160	1068	-0.12	12	1168 x 559	0.65	0.81	504	-3.0	29	32	31	-	-	-		
		245	1636	-0.28	23			1.24	772	-7.0	37	41	40	23	17	14		
		330	2204	-0.51	31			1.68	1040	-12.8	42	47	46	33	28	24		
		415	2771	-0.81	36			2.11	1308	-20.2	46	51	52	41	37	32		
		500	3339	-1.18	41			2.54	1576	-29.3	50	55	56	48	44	38		
36" x 30"	7.50	160	1146	-0.12	13	914 x 762	0.70	0.81	541	-3.0	30	32	31	-	-	-		
		245	1754	-0.28	23			1.24	828	-7.0	37	41	40	23	17	14		
		330	2363	-0.51	31			1.68	1115	-12.8	42	47	47	34	28	24		
		415	2971	-0.81	37			2.11	1402	-20.2	47	52	52	42	37	32		
		500	3580	-1.18	41			2.54	1690	-29.3	50	55	56	48	44	39		

NOTE: See notes on page J1-103.

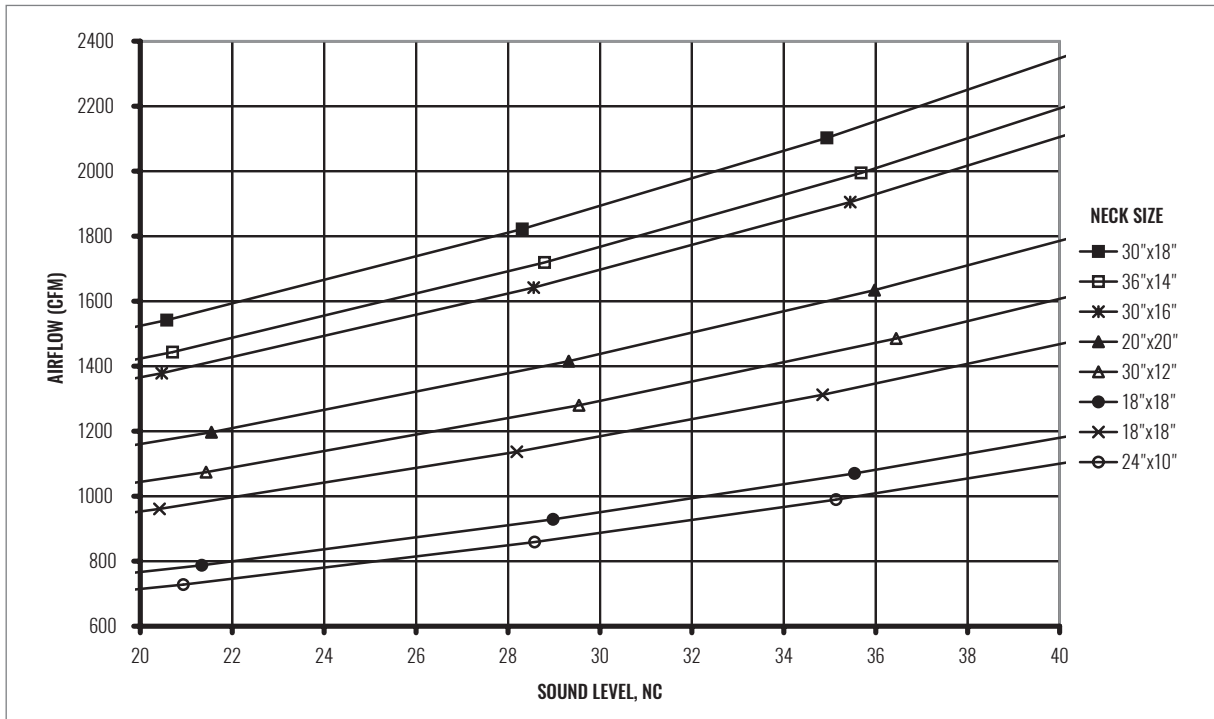
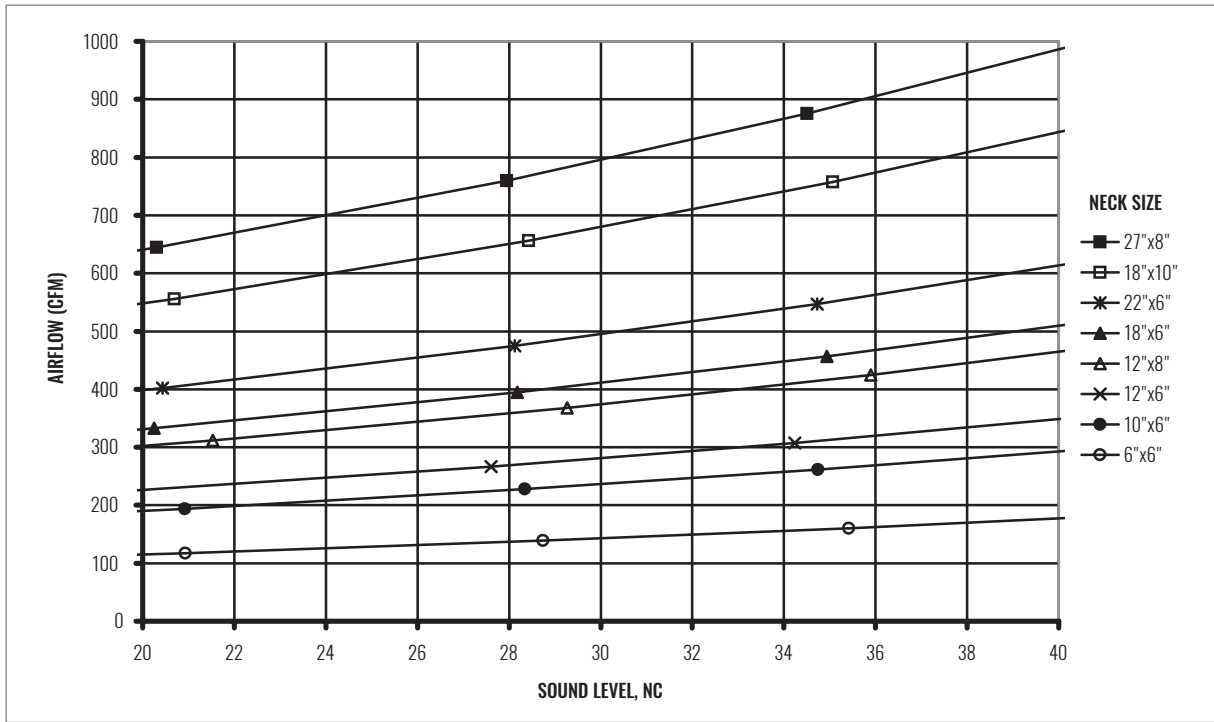
PERFORMANCE DATA | AFCS80 | 45° DEFLECTION (NO DAMPER)

		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	160	1228	-0.12	13	864 x 864	0.75	0.81	580	-3.0	30	33	31	-	-	-		
		245	1881	-0.28	24			1.24	888	-7.0	37	41	41	24	17	14		
		330	2534	-0.51	31			1.68	1196	-12.8	43	47	47	34	29	25		
		415	3186	-0.81	37			2.11	1504	-20.2	47	52	52	42	37	33		
		500	3839	-1.18	42			2.54	1812	-29.3	50	56	56	49	45	39		
42" x 30"	8.75	160	1341	-0.12	14	1067 x 762	0.81	0.81	633	-3.0	30	33	32	-	-	-		
		245	2053	-0.28	24			1.24	969	-7.0	38	42	41	24	18	15		
		330	2765	-0.51	32			1.68	1305	-12.8	43	48	47	35	29	25		
		415	3477	-0.81	37			2.11	1641	-20.2	47	52	52	43	38	33		
		500	4189	-1.18	42			2.54	1977	-29.3	51	56	57	49	45	39		
48" x 30"	10.00	140	1344	-0.09	11	1219 x 762	0.93	0.71	634	-2.3	28	31	29	-	-	-		
		220	2111	-0.23	22			1.12	997	-5.7	36	40	39	21	14	12		
		300	2879	-0.42	30			1.52	1359	-10.5	42	46	46	32	26	22		
		380	3647	-0.68	36			1.93	1721	-16.9	46	51	51	40	35	31		
		460	4415	-1.00	40			2.34	2084	-24.8	50	55	55	47	43	37		
42" x 36"	10.50	140	1414	-0.09	11	1067 x 914	0.98	0.71	667	-2.3	29	31	29	-	-	-		
		220	2221	-0.23	22			1.12	1048	-5.7	37	40	39	21	15	12		
		300	3029	-0.42	30			1.52	1430	-10.5	42	47	46	32	26	23		
		380	3837	-0.68	36			1.93	1811	-16.9	46	51	51	40	35	31		
		460	4645	-1.00	41			2.34	2192	-24.8	50	55	55	47	43	37		
42" x 38"	11.08	140	1494	-0.09	11	1067 x 965	1.03	0.71	705	-2.3	29	31	30	-	-	-		
		215	2294	-0.22	22			1.09	1083	-5.4	36	40	39	21	14	12		
		290	3094	-0.40	29			1.47	1460	-9.9	42	46	46	31	25	22		
		365	3895	-0.63	35			1.85	1838	-15.6	46	51	51	39	34	30		
		440	4695	-0.91	40			2.24	2216	-22.7	49	55	55	46	41	36		
48" x 36"	12.00	140	1619	-0.09	12	1219 x 914	1.11	0.71	764	-2.3	29	32	30	-	-	-		
		215	2487	-0.22	22			1.09	1174	-5.4	37	40	39	21	14	12		
		290	3354	-0.40	30			1.47	1583	-9.9	42	46	46	32	26	22		
		365	4222	-0.63	36			1.85	1992	-15.6	46	51	51	40	35	30		
		440	5089	-0.91	40			2.24	2402	-22.7	50	55	55	46	42	36		
44" x 44"	13.44	140	1819	-0.09	12	1118 x 1118	1.25	0.71	858	-2.3	30	32	30	-	-	-		
		215	2793	-0.22	23			1.09	1318	-5.4	37	41	40	22	15	12		
		290	3767	-0.40	30			1.47	1778	-9.9	43	47	46	32	26	23		
		365	4741	-0.63	36			1.85	2238	-15.6	47	52	51	40	35	31		
		440	5716	-0.91	41			2.24	2697	-22.7	50	55	56	47	42	37		
46" x 46"	14.69	140	1991	-0.09	13	1168 x 1168	1.37	0.71	939	-2.3	30	33	31	-	-	-		
		215	3057	-0.22	23			1.09	1443	-5.4	38	41	40	22	16	13		
		290	4124	-0.40	31			1.47	1946	-9.9	43	47	47	33	27	23		
		365	5190	-0.63	37			1.85	2449	-15.6	47	52	52	41	36	31		
		440	6256	-0.91	41			2.24	2953	-22.7	50	56	56	47	43	37		
48" x 48"	16.00	140	2171	-0.09	13	1219 x 1219	1.49	0.71	1024	-2.3	30	33	31	-	-	-		
		215	3333	-0.22	24			1.09	1573	-5.4	38	42	41	23	16	13		
		290	4496	-0.40	31			1.47	2122	-9.9	43	48	47	33	27	24		
		365	5659	-0.63	37			1.85	2671	-15.6	47	52	52	41	36	31		
		440	6822	-0.91	42			2.24	3219	-22.7	51	56	56	48	43	38		

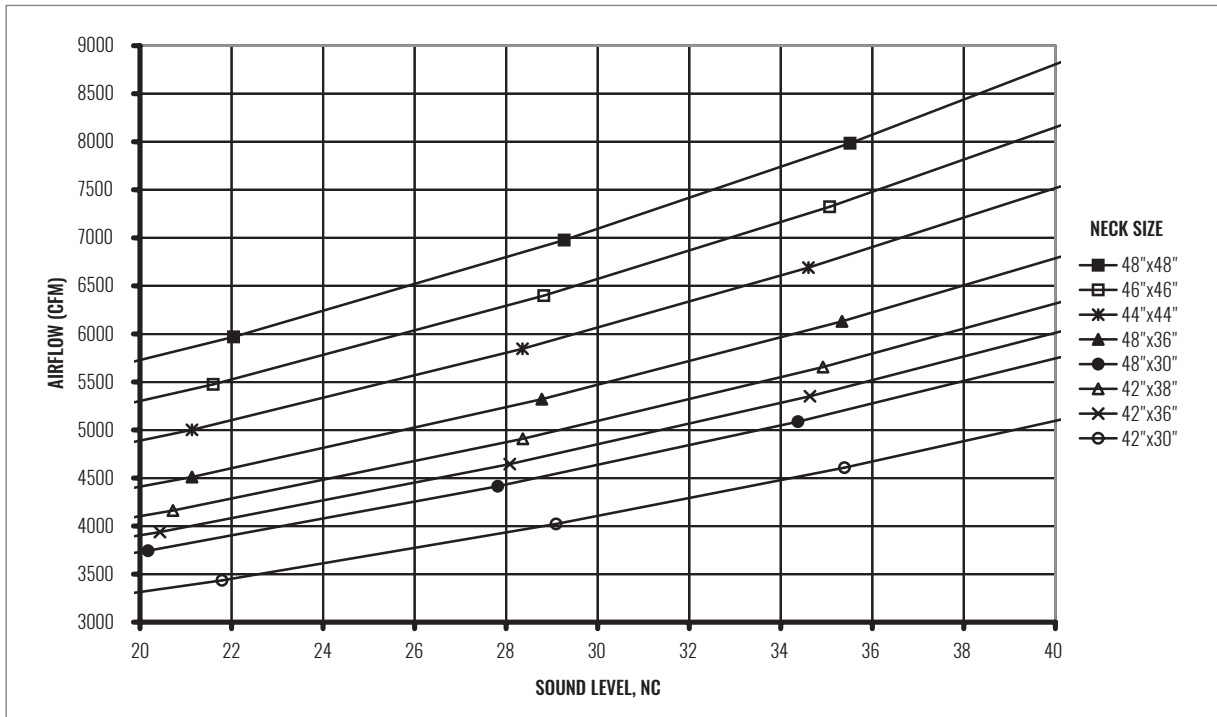
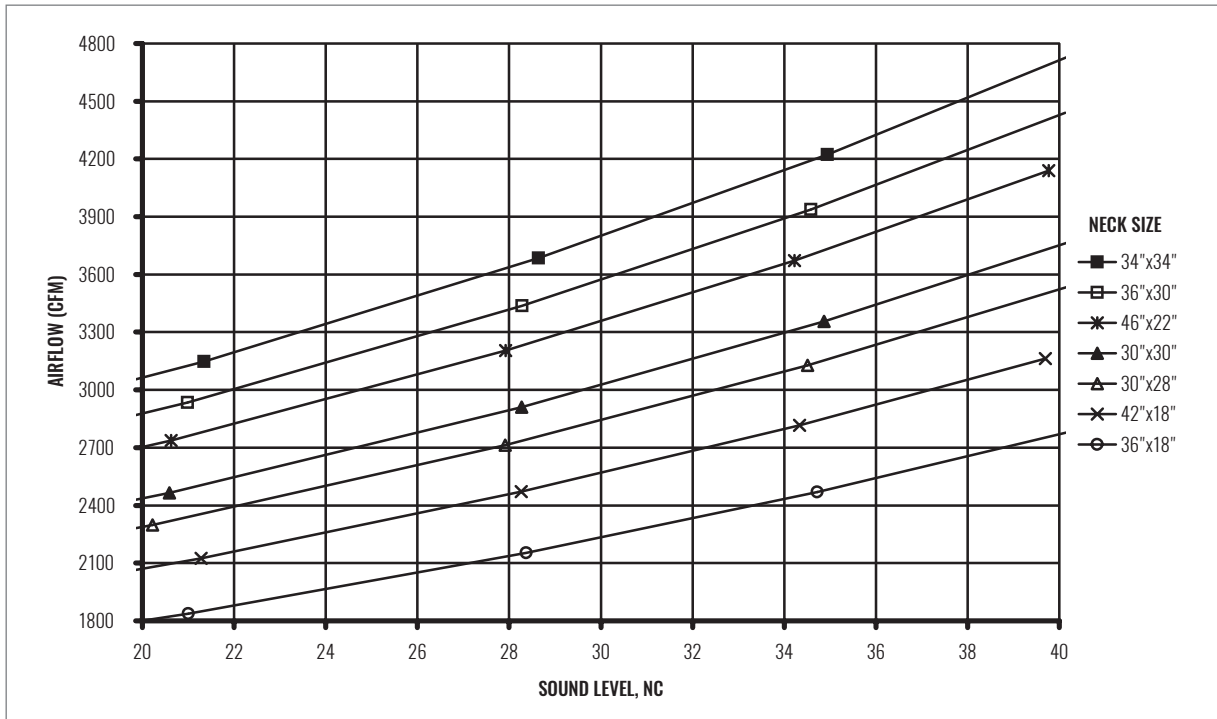
NOTES: NC values are based on octave band 2 - 7 sound power levels minus a room absorption of 10dB, re 10⁻¹² Watts. Dash in space denotes a NC or dB value of less than 10. Data was obtained from tests conducted in accordance with ANSI/ASHRAE Standard 70, ISO Standard 5219, and ISO Standard 3741. See Krueger's selection program for performance data not shown, including octave band data.

GRILLES | RETURN

SOUND CHARTS | AFCS85 | 30° DEFLECTION (NO DAMPER)



SOUND CHARTS | AFCS85 | 30° DEFLECTION (NO DAMPER)



GRILLES | RETURN

AFCS80 / AFCS85

Return Grille | Architectural, Curved Blade



PERFORMANCE DATA | AFCS85 | 30° 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	500	96	-0.049	12	152 x 152	0.02	2.54	45	-12.1	23	28	29	16	11	-		
		613	117	-0.073	21			3.11	55	-18.2	31	36	37	28	23	20		
		725	139	-0.102	29			3.68	65	-25.4	37	43	44	38	34	29		
		838	160	-0.136	35			4.25	76	-33.9	42	49	50	46	43	38		
		950	182	-0.175	41			4.83	86	-43.7	47	54	56	54	51	45		
10" x 6"	0.42	475	160	-0.044	12	254 x 152	0.04	2.41	76	-10.9	24	29	29	16	11	-		
		575	194	-0.064	21			2.92	92	-16.0	31	37	37	27	23	19		
		675	228	-0.089	28			3.43	107	-22.0	37	43	44	37	33	28		
		775	261	-0.117	35			3.94	123	-29.1	42	48	50	45	41	36		
		875	295	-0.149	40			4.45	139	-37.0	46	53	55	52	49	43		
12" x 6"	0.50	450	185	-0.039	11	305 x 152	0.05	2.29	87	-9.8	23	28	28	14	-	-		
		550	226	-0.059	20			2.79	106	-14.6	30	36	36	26	21	17		
		650	267	-0.082	28			3.30	126	-20.4	36	42	43	36	32	27		
		750	308	-0.109	34			3.81	145	-27.2	42	48	49	44	41	35		
		850	349	-0.140	40			4.32	165	-35.0	46	53	54	52	48	42		
12" x 8"	0.67	450	255	-0.039	12	305 x 203	0.06	2.29	120	-9.8	24	29	29	16	11	-		
		550	312	-0.059	22			2.79	147	-14.6	32	37	38	28	23	19		
		650	368	-0.082	29			3.30	174	-20.4	38	44	45	38	34	29		
		750	425	-0.109	36			3.81	200	-27.2	43	49	51	46	42	37		
		850	481	-0.140	42			4.32	227	-35.0	48	54	56	53	50	44		
18" x 6"	0.75	430	270	-0.036	11	457 x 152	0.07	2.18	128	-8.9	23	28	28	14	-	-		
		529	333	-0.054	20			2.69	157	-13.5	31	36	36	26	21	17		
		628	395	-0.077	28			3.19	186	-19.1	37	43	44	36	32	27		
		726	457	-0.102	35			3.69	216	-25.5	42	49	50	45	41	36		
		825	519	-0.132	41			4.19	245	-32.9	47	54	55	52	49	43		
22" x 6"	0.92	425	329	-0.035	11	559 x 152	0.09	2.16	155	-8.7	24	28	28	14	-	-		
		519	402	-0.052	20			2.64	190	-13.0	31	36	37	26	21	17		
		613	475	-0.073	28			3.11	224	-18.2	37	43	44	36	32	27		
		706	547	-0.097	35			3.59	258	-24.1	42	48	50	44	41	35		
		800	620	-0.124	40			4.06	293	-31.0	47	53	55	52	48	42		
18" x 10"	1.25	410	454	-0.033	11	457 x 254	0.12	2.08	214	-8.1	24	29	28	14	-	-		
		501	555	-0.049	21			2.55	262	-12.2	31	37	37	26	21	17		
		593	657	-0.068	28			3.01	310	-17.0	37	43	44	36	32	27		
		684	758	-0.091	35			3.47	358	-22.6	43	49	50	44	41	35		
		775	859	-0.117	41			3.94	405	-29.1	47	54	55	52	48	42		
27" x 8"	1.50	400	529	-0.031	11	686 x 203	0.14	2.03	249	-7.7	24	28	28	14	-	-		
		488	644	-0.046	20			2.48	304	-11.5	31	36	36	25	20	17		
		575	760	-0.064	28			2.92	359	-16.0	37	43	43	35	31	26		
		663	876	-0.085	35			3.37	413	-21.2	42	48	49	43	40	34		
		750	991	-0.109	40			3.81	468	-27.2	47	53	54	51	47	41		
24" x 10"	1.67	400	597	-0.031	12	610 x 254	0.15	2.03	282	-7.7	24	29	29	14	-	-		
		488	728	-0.046	21			2.48	344	-11.5	32	37	37	26	21	17		
		575	859	-0.064	29			2.92	405	-16.0	38	43	44	36	31	27		
		663	989	-0.085	35			3.37	467	-21.2	43	49	50	44	40	35		
		750	1120	-0.109	41			3.81	529	-27.2	47	54	55	51	48	42		
16" x 16"	1.78	400	646	-0.031	12	406 x 406	0.17	2.03	305	-7.7	25	29	29	15	-	-		
		488	787	-0.046	21			2.48	372	-11.5	32	37	37	26	22	18		
		575	929	-0.064	29			2.92	438	-16.0	38	44	44	36	32	27		
		663	1070	-0.085	36			3.37	505	-21.2	43	49	50	45	41	35		
		750	1211	-0.109	41			3.81	572	-27.2	48	54	55	52	49	42		
18" x 18"	2.25	380	785	-0.028	11	457 x 457	0.21	1.93	371	-7.0	24	28	28	13	-	-		
		465	961	-0.042	20			2.36	453	-10.5	31	36	37	25	20	16		
		550	1137	-0.059	28			2.79	536	-14.6	38	43	44	35	31	26		
		635	1312	-0.078	35			3.23	619	-19.5	43	49	50	43	40	34		
		720	1488	-0.101	41			3.66	702	-25.1	47	54	55	51	47	41		

NOTE: See notes on page J1-108.

PERFORMANCE DATA | AFCS85 | 30° 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		
30" x 12"	2.50	380	868	-0.28	12	762 x 305	0.23	1.93	410	-7.0	24	29	29	14	-	-		
		470	1074	-0.43	21			2.39	507	-10.7	32	37	37	26	21	17		
		560	1280	-0.61	30			2.84	604	-15.2	39	44	45	37	32	27		
		650	1485	-0.82	36			3.30	701	-20.4	44	50	51	45	42	36		
		740	1691	-1.06	42			3.76	798	-26.5	49	55	56	53	50	43		
20" x 20"	2.78	380	978	-0.28	12	508 x 508	0.26	1.93	462	-7.0	25	29	29	14	-	-		
		465	1197	-0.42	22			2.36	565	-10.5	32	37	37	26	21	17		
		550	1415	-0.59	29			2.79	668	-14.6	38	44	45	36	32	27		
		635	1634	-0.78	36			3.23	771	-19.5	44	50	51	45	41	35		
30" x 16"	3.33	360	1115	-0.25	11	762 x 406	0.31	1.83	526	-6.3	24	28	28	12	-	-		
		445	1378	-0.38	20			2.26	651	-9.6	32	36	36	25	20	16		
		530	1642	-0.55	29			2.69	775	-13.6	38	43	44	35	31	26		
		615	1905	-0.74	35			3.12	899	-18.3	43	49	50	44	40	34		
		700	2168	-0.95	41			3.56	1023	-23.7	48	54	55	52	48	42		
36" x 14"	3.50	360	1168	-0.25	11	914 x 356	0.33	1.83	551	-6.3	24	28	28	13	-	-		
		445	1443	-0.38	21			2.26	681	-9.6	32	37	37	25	20	16		
		530	1719	-0.55	29			2.69	811	-13.6	38	44	44	35	31	26		
		615	1995	-0.74	36			3.12	941	-18.3	44	49	50	44	40	35		
30" x 18"	3.75	360	1261	-0.25	11	762 x 457	0.35	1.83	595	-6.3	24	29	28	13	-	-		
		440	1542	-0.38	21			2.24	728	-9.4	32	37	37	25	20	16		
		520	1822	-0.53	28			2.64	860	-13.1	38	43	44	35	30	25		
		600	2102	-0.70	35			3.05	992	-17.4	43	49	50	43	39	34		
		680	2383	-0.90	41			3.45	1124	-22.4	48	54	55	50	47	41		
36" x 18"	4.50	360	1520	-0.25	12	914 x 457	0.42	1.83	717	-6.3	25	29	29	14	-	-		
		435	1837	-0.37	21			2.21	867	-9.2	32	37	37	25	20	16		
		510	2154	-0.51	28			2.59	1016	-12.6	38	43	44	35	30	25		
		585	2470	-0.67	35			2.97	1166	-16.6	43	49	49	43	39	33		
42" x 18"	5.25	360	1779	-0.25	13	1067 x 457	0.49	1.83	840	-6.3	26	30	30	15	-	-		
		430	2125	-0.36	21			2.18	1003	-8.9	32	37	37	25	20	16		
		500	2471	-0.49	28			2.54	1166	-12.1	38	43	43	34	30	25		
		570	2817	-0.63	34			2.90	1329	-15.7	43	48	49	42	38	32		
		640	3163	-0.80	40			3.25	1493	-19.8	47	53	54	49	45	39		
30" x 28"	5.83	340	1882	-0.22	11	762 x 711	0.54	1.73	888	-5.6	24	28	28	12	-	-		
		415	2297	-0.33	20			2.11	1084	-8.3	32	36	36	24	19	15		
		490	2712	-0.47	28			2.49	1280	-11.6	38	43	43	34	29	24		
		565	3127	-0.62	35			2.87	1476	-15.4	43	49	49	42	38	32		
30" x 30"	6.25	340	2020	-0.22	11	762 x 762	0.58	1.73	953	-5.6	25	29	28	13	-	-		
		415	2466	-0.33	21			2.11	1164	-8.3	32	37	37	24	19	15		
		490	2911	-0.47	28			2.49	1374	-11.6	38	43	43	34	30	25		
		565	3357	-0.62	35			2.87	1584	-15.4	43	49	49	43	38	33		
		640	3803	-0.80	41			3.25	1795	-19.8	48	54	55	50	46	40		
46" x 22"	7.03	340	2270	-0.22	12	1168 x 559	0.65	1.73	1071	-5.6	25	29	29	13	-	-		
		410	2738	-0.33	21			2.08	1292	-8.1	32	37	37	24	19	15		
		480	3205	-0.45	28			2.44	1513	-11.1	38	43	43	34	29	24		
		550	3673	-0.59	34			2.79	1733	-14.6	43	48	49	42	37	32		
36" x 30"	7.50	340	2434	-0.22	12	914 x 762	0.70	1.73	1149	-5.6	25	30	29	14	-	-		
		410	2936	-0.33	21			2.08	1385	-8.1	32	37	37	25	19	15		
		480	3437	-0.45	28			2.44	1622	-11.1	38	43	43	34	29	24		
		550	3938	-0.59	35			2.79	1859	-14.6	43	49	49	42	38	32		
		620	4439	-0.75	40			3.15	2095	-18.6	47	53	54	49	45	39		

NOTE: See notes on page J1-108.

AFCS80 / AFCS85

Return Grille | Architectural, Curved Blade



PERFORMANCE DATA | AFCS85 | 30° 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	340	2610	-0.22	13	864 x 864	0.75	1.73	1232	-5.6	26	30	29	14	-	-	
		410	3148	-0.33	21			2.08	1486	-8.1	33	37	37	25	20	16	
		480	3685	-0.45	29			2.44	1739	-11.1	38	44	44	34	30	25	
		550	4223	-0.59	35			2.79	1993	-14.6	43	49	49	42	38	33	
		620	4760	-0.75	40			3.15	2246	-18.6	48	54	55	49	46	39	
42" x 30"	8.75	340	2849	-0.22	13	1067 x 762	0.81	1.73	1344	-5.6	26	30	30	14	-	-	
		410	3435	-0.33	22			2.08	1621	-8.1	33	38	38	26	20	16	
		480	4022	-0.45	29			2.44	1898	-11.1	39	44	44	35	30	25	
		550	4608	-0.59	35			2.79	2175	-14.6	44	49	50	43	39	33	
		620	5195	-0.75	41			3.15	2452	-18.6	48	54	55	50	46	40	
48" x 30"	10.00	320	3071	-0.20	11	1219 x 762	0.93	1.63	1449	-5.0	25	29	28	12	-	-	
		390	3743	-0.30	20			1.98	1767	-7.4	32	36	36	23	18	14	
		460	4415	-0.41	28			2.34	2084	-10.2	38	43	43	33	28	23	
		530	5087	-0.55	34			2.69	2401	-13.6	43	49	49	41	37	32	
		600	5759	-0.70	40			3.05	2718	-17.4	48	53	54	49	45	39	
42" x 36"	10.50	320	3231	-0.20	11	1067 x 914	0.98	1.63	1525	-5.0	25	29	28	12	-	-	
		390	3938	-0.30	20			1.98	1859	-7.4	32	37	36	24	18	14	
		460	4645	-0.41	28			2.34	2192	-10.2	38	43	43	33	29	24	
		530	5352	-0.55	35			2.69	2526	-13.6	43	49	49	42	38	32	
		600	6059	-0.70	40			3.05	2859	-17.4	48	54	54	49	45	39	
42" x 38"	11.08	320	3415	-0.20	12	1067 x 965	1.03	1.63	1612	-5.0	25	29	28	12	-	-	
		390	4162	-0.30	21			1.98	1964	-7.4	32	37	37	24	19	14	
		460	4908	-0.41	28			2.34	2317	-10.2	38	43	44	34	29	24	
		530	5655	-0.55	35			2.69	2669	-13.6	43	49	49	42	38	32	
		600	6402	-0.70	41			3.05	3022	-17.4	48	54	55	49	46	39	
48" x 36"	12.00	320	3701	-0.20	12	1219 x 914	1.11	1.63	1747	-5.0	25	29	29	13	-	-	
		390	4511	-0.30	21			1.98	2129	-7.4	33	37	37	24	19	15	
		460	5321	-0.41	29			2.34	2511	-10.2	39	44	44	34	29	24	
		530	6130	-0.55	35			2.69	2893	-13.6	44	49	50	42	38	33	
		600	6940	-0.70	41			3.05	3275	-17.4	48	54	55	50	46	40	
44" x 44"	13.44	320	4157	-0.20	13	1118 x 1118	1.25	1.63	1962	-5.0	26	30	29	13	-	-	
		385	5001	-0.29	21			1.96	2360	-7.2	33	37	37	24	19	15	
		450	5846	-0.39	28			2.29	2759	-9.8	38	43	43	33	29	24	
		515	6690	-0.52	35			2.62	3157	-12.8	43	49	49	41	37	31	
		580	7534	-0.65	40			2.95	3556	-16.3	48	53	54	48	45	38	
46" x 46"	14.69	320	4550	-0.20	13	1168 x 1168	1.37	1.63	2147	-5.0	26	30	30	14	-	-	
		385	5474	-0.29	22			1.96	2584	-7.2	33	38	37	25	20	15	
		450	6399	-0.39	29			2.29	3020	-9.8	39	44	44	34	29	24	
		515	7323	-0.52	35			2.62	3456	-12.8	44	49	50	42	38	32	
		580	8247	-0.65	41			2.95	3892	-16.3	48	54	55	49	45	39	
48" x 48"	16.00	320	4961	-0.20	13	1219 x 1219	1.49	1.63	2341	-5.0	27	31	30	14	-	-	
		385	5969	-0.29	22			1.96	2817	-7.2	33	38	38	25	20	16	
		450	6977	-0.39	29			2.29	3293	-9.8	39	44	44	34	30	25	
		515	7985	-0.52	36			2.62	3768	-12.8	44	50	50	42	38	32	
		580	8992	-0.65	41			2.95	4244	-16.3	48	54	55	49	46	39	

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
AFCS80, AFCS85

The return grille shall be a Krueger model AFCS80 (3/4" blade spacing) or AFCS85 (1/2" blade spacing). This grille must have curved blades resulting in a fixed deflection of 45° for the AFCS80 or 30° for the AFCS85. The curved blades shall be constructed of no less than 20 gage steel. 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 no less than 20 gage steel 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.

PERFORMANCE

The manufacturer shall provide published performance data for the grille. The grille 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: (XXXXXX)

AFCS80 - Curved blade, 3/4" blade spacing, 45° deflection, steel return grille

AFCS85 - Curved blade, 1/2" blade spacing, 30° deflection, steel return grille

2. PATTERN: (X)

H - Horizontal front blades

V - Vertical front blades

3. WIDTH: (XX) *

6" - 240" in 1/4" increments

4. HEIGHT: (XX) *

4" - 240" in 1/4" increments

5. FRAME STYLE: (XXX)

F22 - Surface mount

F23 - Lay-in T-bar

F98 - Narrow-T

FTB - Channel frame *

6. PANEL: (XX)x(XX)

NONE 24"x24"

24"x12" 48"x24"

7. FASTENING METHOD: (XX)

00 - No screw holes

01 - Standard screw holes

02 - Concealed mounting **

03 - Knurled knob ‡

08 - 1/4 turn fasteners ‡

8. DAMPER: (XX)

00 - No damper

01 - Steel opposed blade damper (model OBD)

15 - Aluminum opposed blade damper (model 5OBD)

9. ACCESSORIES: (XX) (XX)

00 - No accessories IS - Insect screen, 1/16" mesh ◊

01 - Plaster frame DS - Debris screen, 1/4" mesh ◊

04 - 1" filter frame ◊◊

05 - 2" filter frame ◊◊

10. FINISH: (XX)

01 - Mill

10 - Alumican

35 - Black

44 - British White

* Maximum grille size is 240"x96" or 96"x240".

FTB channel frame not available on grilles larger than 48"x48".

** Concealed mounting not available on grilles larger than 36"x36" or patterns H or V.

‡ Knurled knob and 1/4 turn fasteners only available with filter frame accessories.

◊ Accessories IS and DS available on sizes up to 48"x48".

◊◊ Accessories 04 and 05 available on sizes 8"x8" to 48"x36".

SAMPLE CONFIGURATION: AFCS80 - V - 24x24 - F22 - 12"x24" - 01 - 01 - 00 - 44