

Introduction: 1500, 1800

The 1500 and 1800 architectural linear bar grilles are designed to provide a clean, strong, horizontal look while offering optimum performance. The availability of a variety of frames and finishes allow the grilles to blend, compliment, or contrast with the ceiling, sidewall, sill, or floor installations. These grilles can be used on supply or return portions of heating, cooling or ventilation systems. The 1500/1800 series linear bar grille is an excellent choice for installation in soffit/sill applications where airflow is required to wash over a window.

MODELS

1500 - Supply or Return Linear Bar Grille for Ceiling, Sidewall, or Sill Applications

1800 - Supply or Return Linear Bar Grille with Lay-in, Removable Core for Floor Applications

FEATURES

- Available with 0° blade deflection, 1/2" bar spacing, And 7/32" blade thickness.
- Available with 0° blade deflection, 7/16" bar spacing, And 7/32" blade thickness.
- Available with 15° blade deflection, 1/2" bar spacing, And 7/32" blade thickness.
- Available with 30° blade deflection, 7/16" bar spacing, And 7/32" blade thickness.
- Extruded aluminum construction.
- Section lengths range from 6" to 72" long; units longer than 72" will consist of sections butted together.
- Widths range from 2" to 24" (Model 1500 Series) and 2" to 12" (Model 1800 Series).

ACCESSORIES

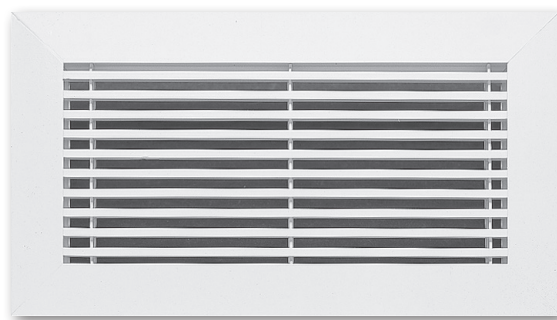
- Optional Mitered Corners (Models 1500MC & 1800MC)
- Optional Blank-off Strips
- Optional Linear Straightening Grid (Model LSG)
- Optional Access Door (Model 1500 Series Only)
- Optional Damper

OPTION

- Curving

FINISHES

- Standard finish is #44 British White. (Model 1500 Series)
- Standard finish is #10 Alumican. (Model 1800 Series)
- Optional finishes available.
- Optional anodizing available.



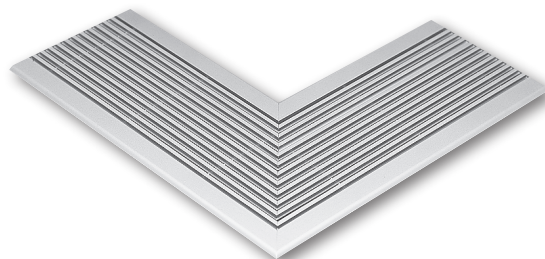
Model 1500



Corresponding mitered corner for Model 1500. WO construction shown.



Model 1800

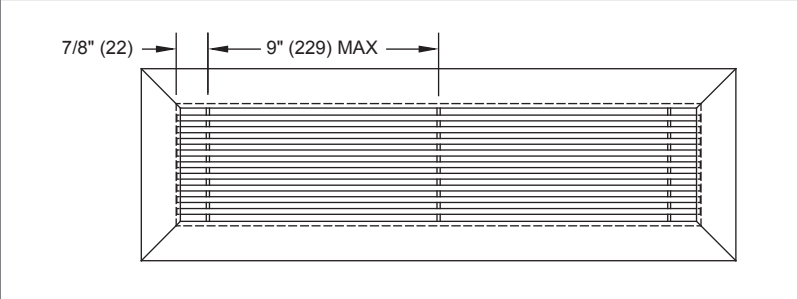


Corresponding mitered corner for Model 1800. CO construction shown.

1500, 1800 | 7/32" Blade Thickness

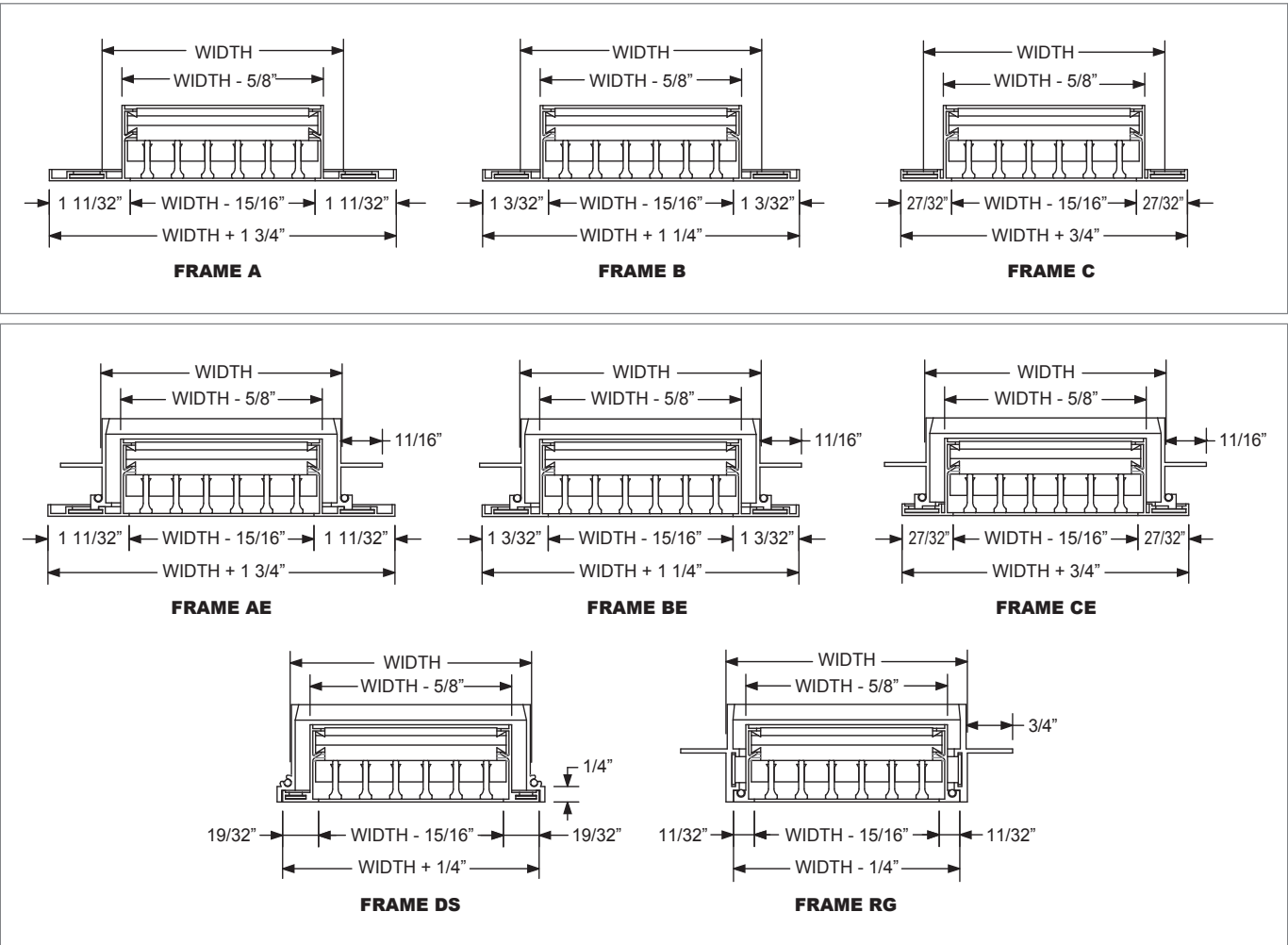
1500 Dimensional Information & Frame Styles

1500 FACE VIEW FOR FRAME STYLES A, B, C, AE, BE, CE, DS, & RG



NOTES: Dimensions in parentheses are mm. For 1500 grille length and width dimensional information, see table on page K1-5.

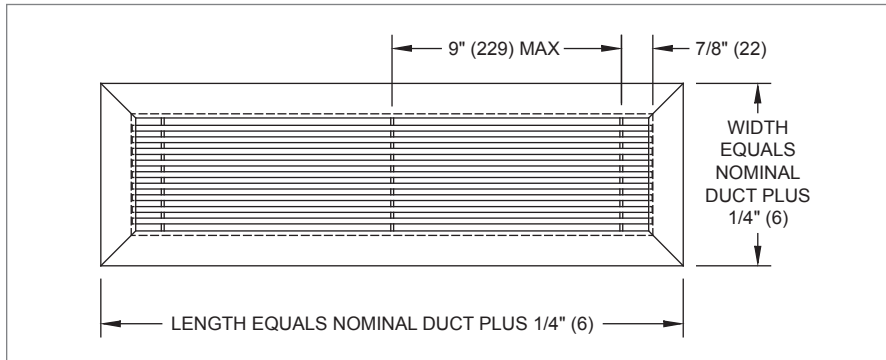
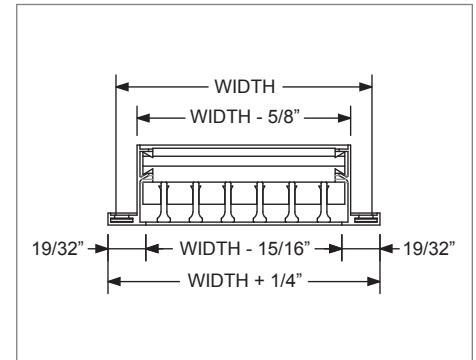
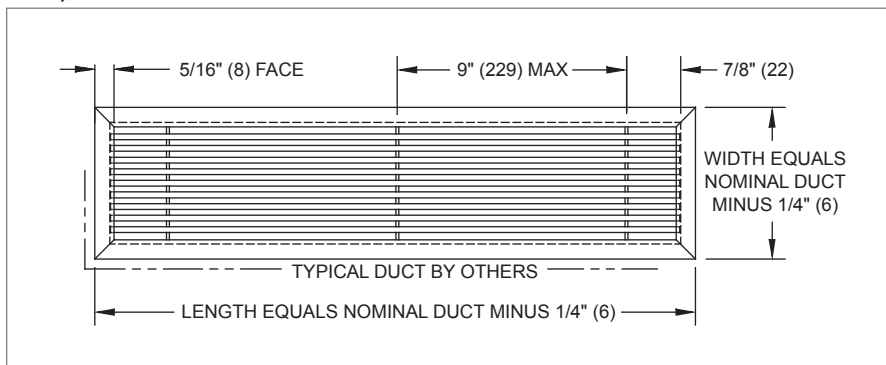
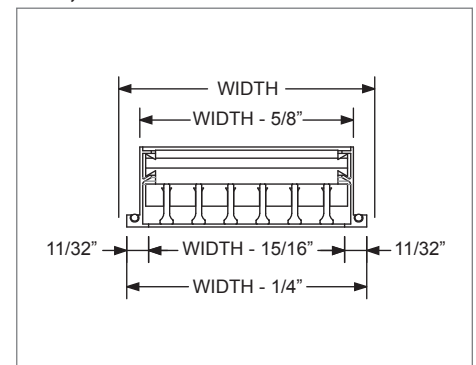
1500, FRAME STYLES A, B, C, AE, BE, CE, DS, & RG



NOTE: Dimensions in parentheses are mm.

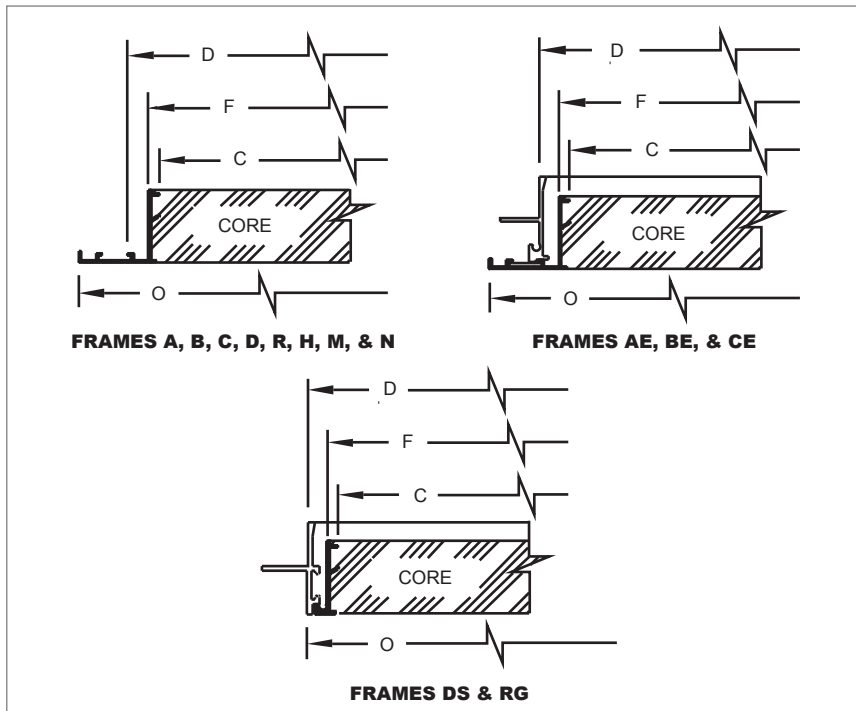
1
5
0
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1
8
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0

1500 Dimensional Information & Frame Styles

1500, FACE VIEW FOR FRAME STYLE D

1500, FRAME STYLE D

1500, FACE VIEW FOR FRAME STYLE R

1500, FRAME STYLE R


NOTE: Dimensions in parentheses are mm.

1500, 1800 Dimensional Information

1500, 1800, LENGTH & WIDTH DIMENSIONAL DETAIL


Frame	Frame Length	Overall Dimension	Core Opening Length
	F	O	C
A	D - 5/8"	D + 1 3/4"	D - 3/4"
B	D - 5/8"	D + 1 1/4"	D - 3/4"
C	D - 5/8"	D + 3/4"	D - 3/4"
D	D - 5/8"	D + 1/4"	D - 3/4"
R	D - 5/8"	D - 1/4"	D - 3/4"
AE	D	D + 1 3/4"	D - 3/8"
BE	D	D + 1 1/4"	D - 3/8"
CE	D	D + 3/4"	D - 3/8"
DS	D	D + 7/16"	D - 3/4"
RG	D	D	D - 3/4"
H	D	D + 2 1/4"	D - 3/8"
M	D	D + 1 5/8"	D - 3/8"
N	D	D	D - 3/8"

NOTES:

Lengths based on end caps mounted on each end.
 D = Nominal duct dimension length/width
 (or ordered length)

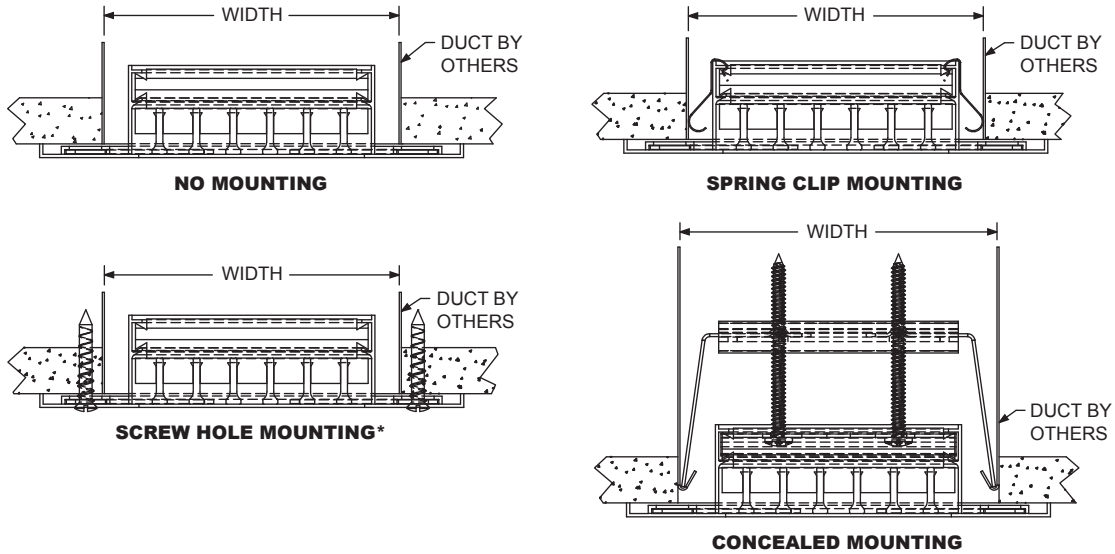
F = Actual overall neck dimension length/width

O = Overall face dimension length/width

C = Actual core opening length/width

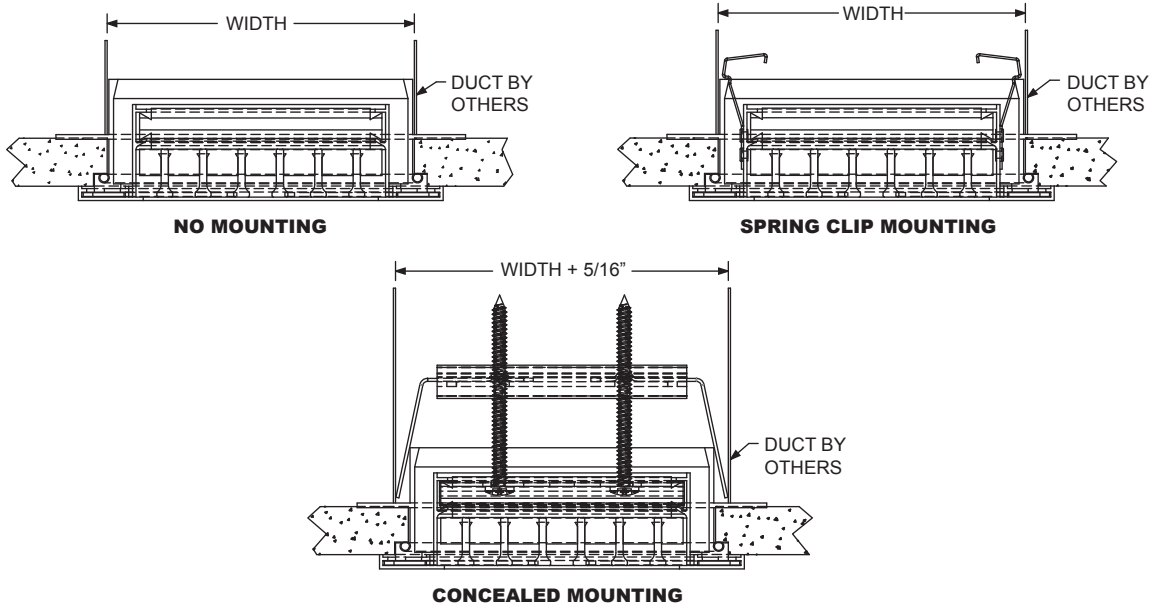
1500 Mounting Options

1500, MOUNTING OPTIONS FOR FRAME STYLES A, B, C, & D



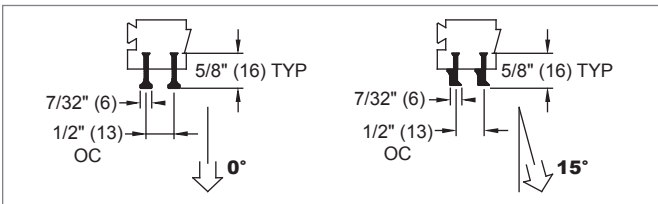
NOTES: All fastening methods for Frame R are provided by others. * Frame D not available with screw hole mounting.

1500, MOUNTING OPTIONS FOR FRAME STYLES AE, BE, CE, DS, & RG



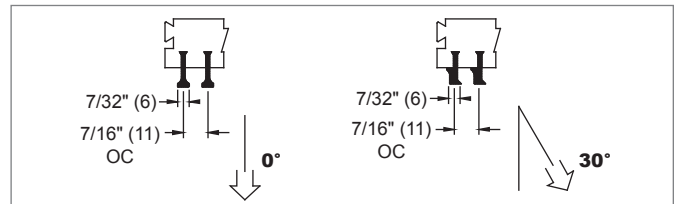
1500 Deflection Patterns

1500, NORMAL AIR DEFLECTION PATTERN (N)



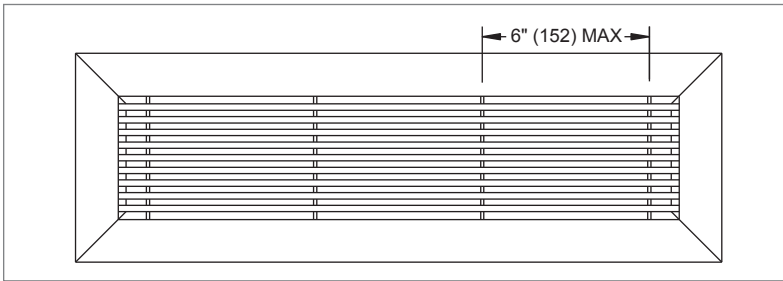
NOTE: Dimensions in parentheses are mm.

1500, PENCIL PROOF AIR DEFLECTION PATTERN (P)



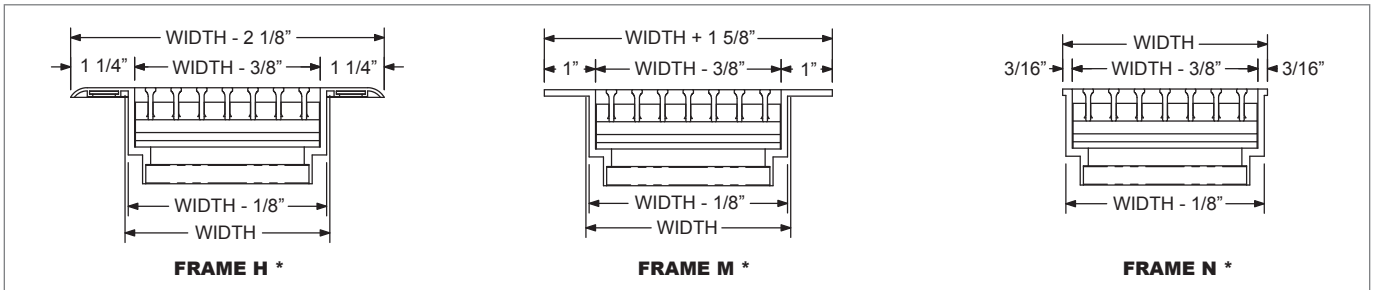
1800 Dimensional Information & Frame Styles

1800, FACE VIEW FOR FRAME STYLES H, M, & N



NOTES: Dimensions in parentheses are mm. For 1800 grille length and width dimensional information, see table on page K1-5.

1800, FRAME STYLES H, M, & N

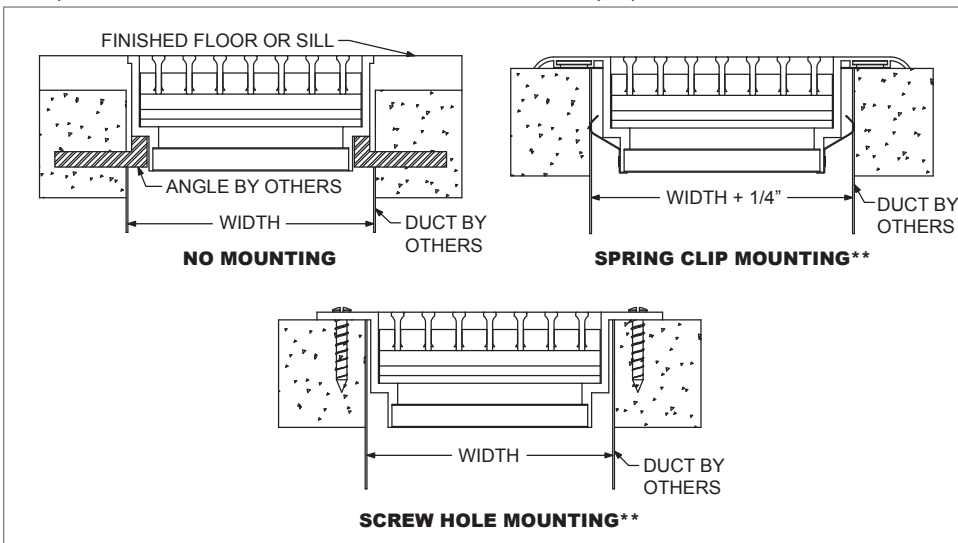


NOTES: Dimensions in parentheses are mm. Nominal duct equals ordered size.

* Suggested floor opening for Frame H, M, and N is nominal duct size plus 1/16" (1.5).

1800 Mounting Options

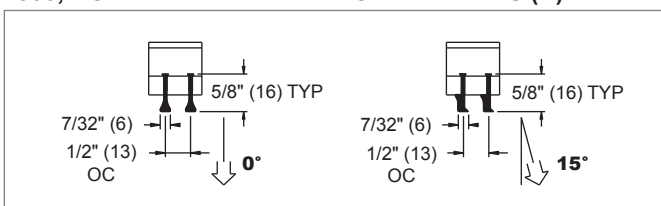
1800, MOUNTING OPTIONS FOR FRAME STYLES H, M, & N



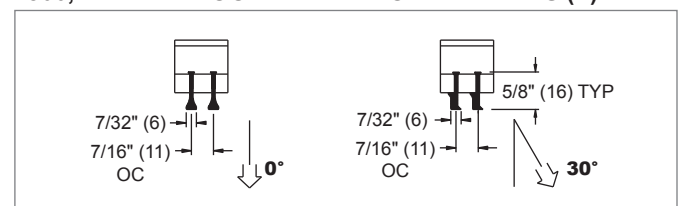
NOTES: Dimensions in parentheses are mm. ** Not available for Frame N.

1800 Deflection Patterns

1800, NORMAL AIR DEFLECTION PATTERNS (N)



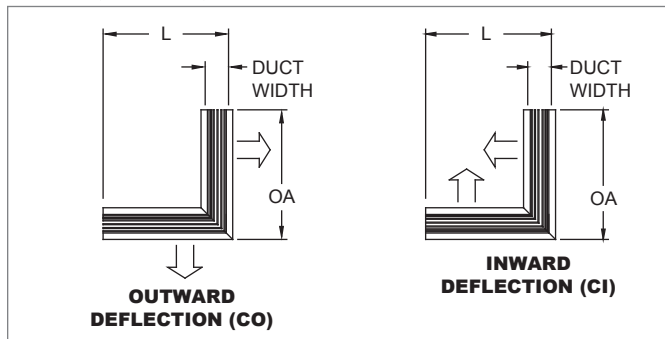
1800, PENCIL PROOF DEFLECTION PATTERNS (P)



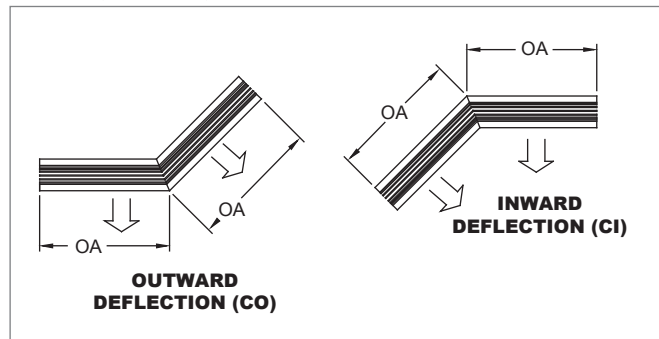
NOTE: Dimensions in parentheses are mm.

Mitered Corner (1500MC, 1800MC) Deflection Patterns

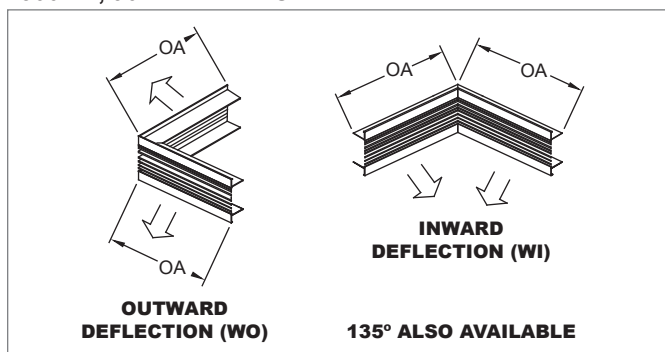
1500MC, 1800MC, 90° DEFLECTION PATTERN



1500MC, 1800MC, 135° DEFLECTION PATTERN



1500MC, 90° DEFLECTION PATTERN



Mitered Corner (1500MC, 1800MC) Dimensional Information

1500, OVERALL DIMENSIONS FOR FRAME STYLES

Duct Width	Duct L	Frames									
		A	B	C	D	R	AE	BE	CE	DS	RG
2" - 4" (51 - 102)	12" (305)	12 7/8" (327)	12 5/8" (321)	12 3/8" (314)	12 1/8" (308)	11 7/8" (302)	13 3/16" (335)	12 15/16" (329)	12 5/8" (321)	12 3/16" (310)	12" (305)
4 1/2" - 12" (114 - 305)	18" (457)	18 7/8" (479)	18 5/8" (473)	18 3/8" (467)	18 1/8" (460)	17 7/8" (454)	19 3/16" (487)	18 15/16" (481)	18 5/8" (473)	18 3/16" (462)	18" (457)

1800, OVERALL DIMENSIONS FOR FRAME STYLES

Duct Width	Duct L	Frames		
		H	M	N
2" - 4" (51 - 102)	12" (305)	12 7/8" (327)	12 13/16" (325)	12" (305)
3" - 4" (76 - 102)	12" (305)	-	-	-
4 1/2" - 12" (114 - 305)	18" (457)	18 7/8" (479)	18 13/16" (478)	18" (457)

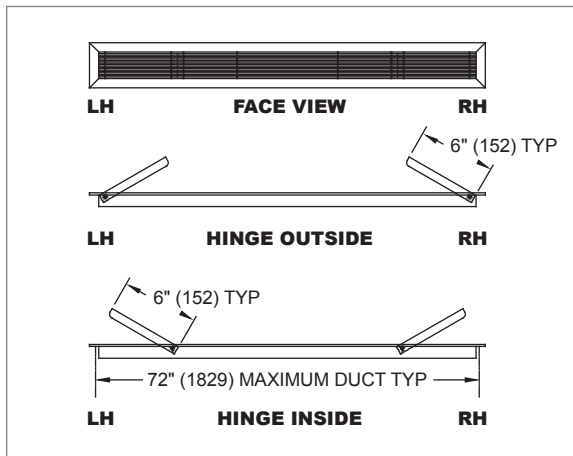
1800, MAXIMUM FLOOR LOADING

Model	Blade	Spacing	Maximum Vertical Distributed Load	Maximum Vertical Live Load	Maximum Horizontal Load
			lbs/in ²	lbs/ft ²	lbs
1800 Normal	1/4" (6)	1/2" (13)	250	250	50
1800 Pencil Proof	1/4" (6)	7/16" (11)	250	250	50

NOTES: Dimensions in parentheses are mm. Dash indicates not available.

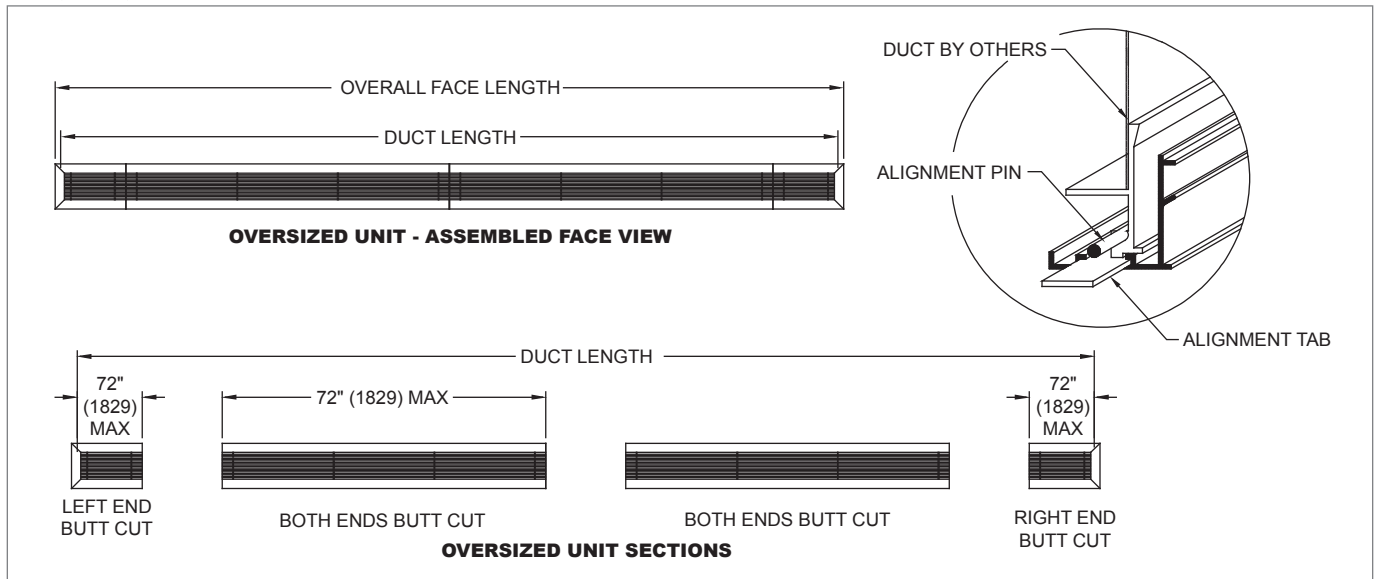
1500, 1800 Access Doors & Oversized Units

1500, ACCESS DOOR OPTION



NOTES: Dimensions in parentheses are mm. Linear bar access doors provide open area approximately 5" (127) long by a width determined by the specified unit width. Access doors are not available with the 1800 models.

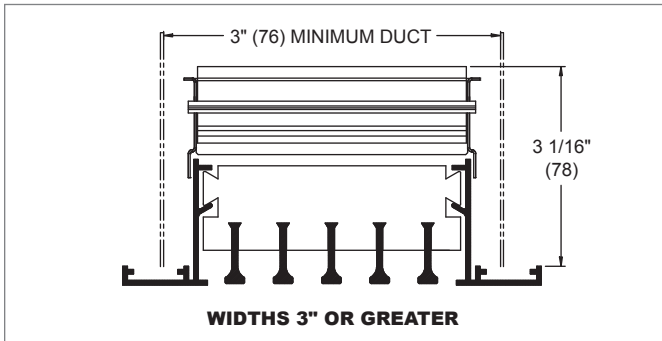
1500, 1800, OVERSIZED UNIT DIMENSIONAL DETAIL



NOTES: Dimensions in parentheses are mm. Oversized units are assembled with the minimum number of sections based on a maximum individual duct length of 72". Alignment tabs and pins are provided to facilitate assembly. Alignment tabs and pins are not available with Frames M and N.

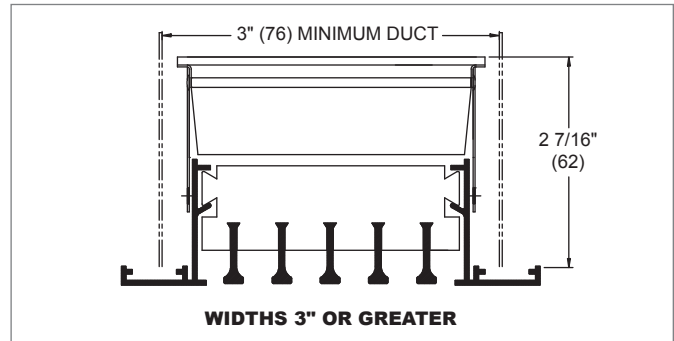
1500, 1800 Accessories

LINEAR OPPOSED BLADE DAMPER (LOBD)



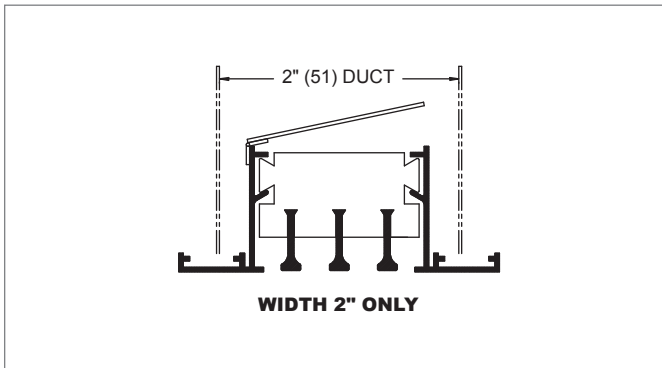
NOTES: Dimensions in parentheses are mm.
Do not use with Frames DS and RG.
Do not use with concealed mounting.

LINEAR STRAIGHTENING GRID (LSG)



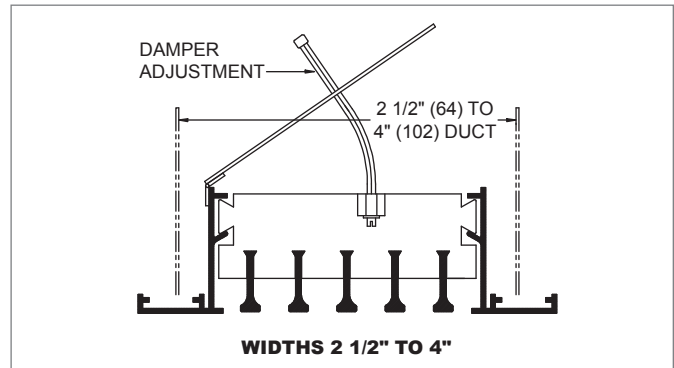
NOTES: Dimensions in parentheses are mm.
Do not use with Frames M, N, or R.
Do not use with spring clip mounting.

SINGLE BLADE DAMPER (SBD)



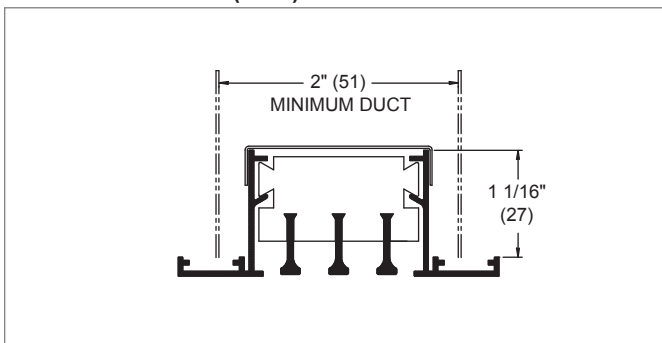
NOTES: Dimensions in parentheses are mm.
Do not use with Frames H, M, N, DS, or RG.
Do not use with concealed mounting.
Do not use with widths greater than 2" (51).

SINGLE BLADE DAMPER (SBD)



NOTES: Dimensions in parentheses are mm.
Do not use with Frames H, M, N, DS, or RG.
Do not use with concealed mounting.

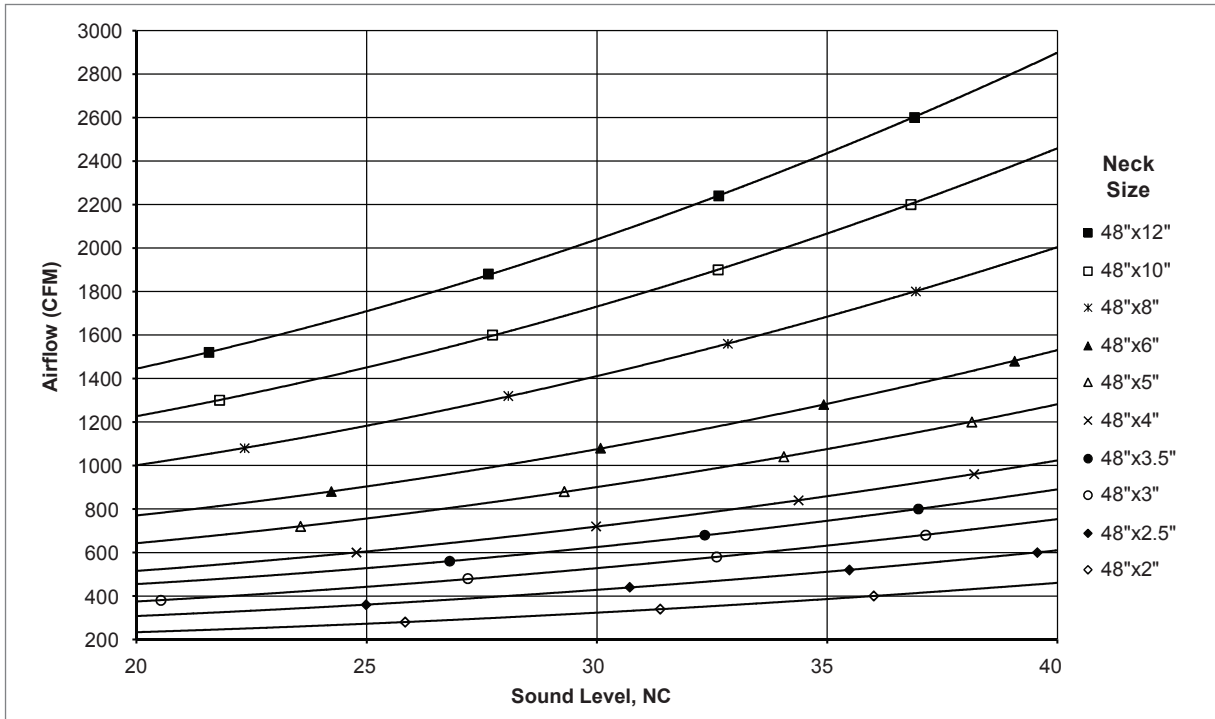
BLANK-OFF STRIP (BOS)



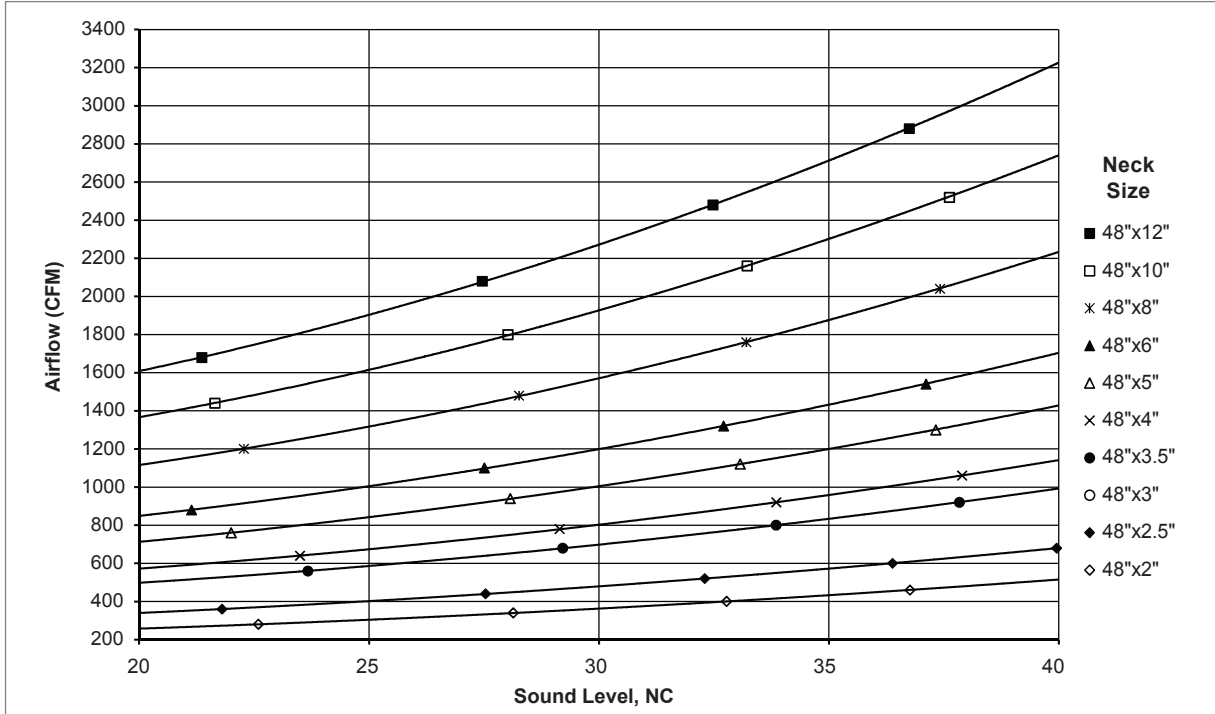
NOTES: Dimensions in parentheses are mm.
Do not use with spring clip mounting.

1500, 1800 Reference Charts

AIRFLOW VS. NC LEVEL: 1500, 1800, 0° DEFLECTION, 7/32" BARS, 1/2" BAR SPACING, 48" LENGTH

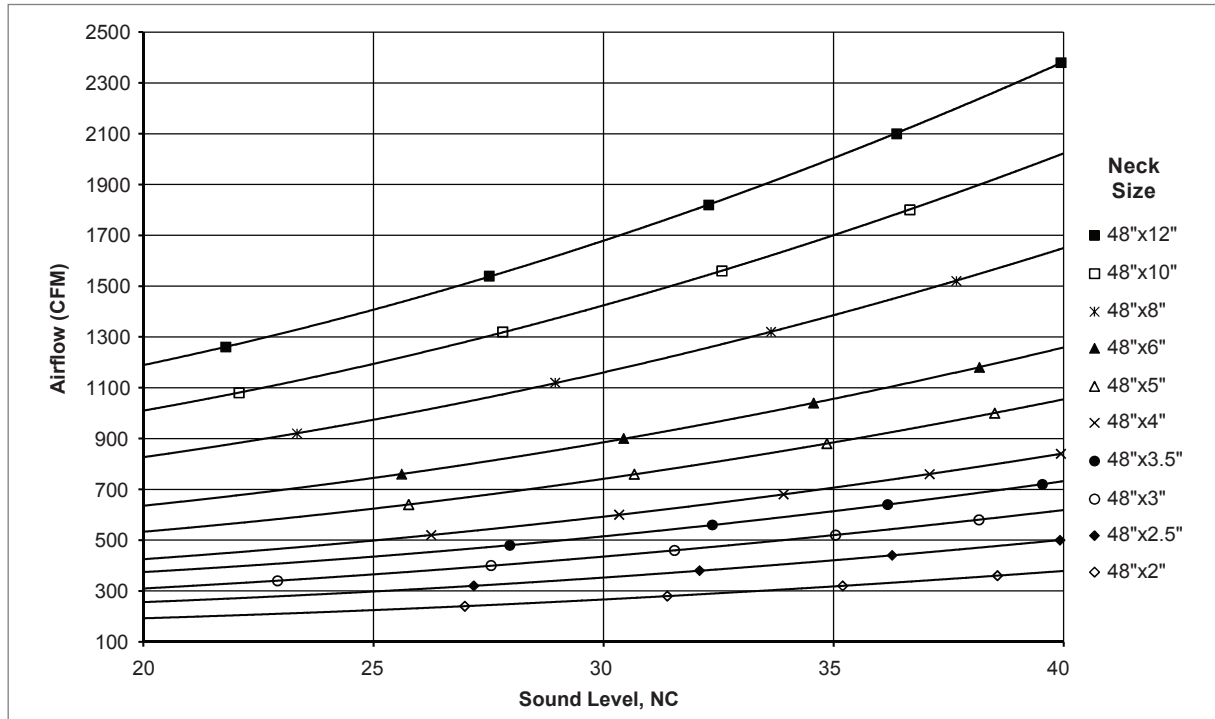


AIRFLOW VS. NC LEVEL: 1500, 1800, 0° DEFLECTION, 7/32" BARS, 7/16" BAR SPACING, 48" LENGTH

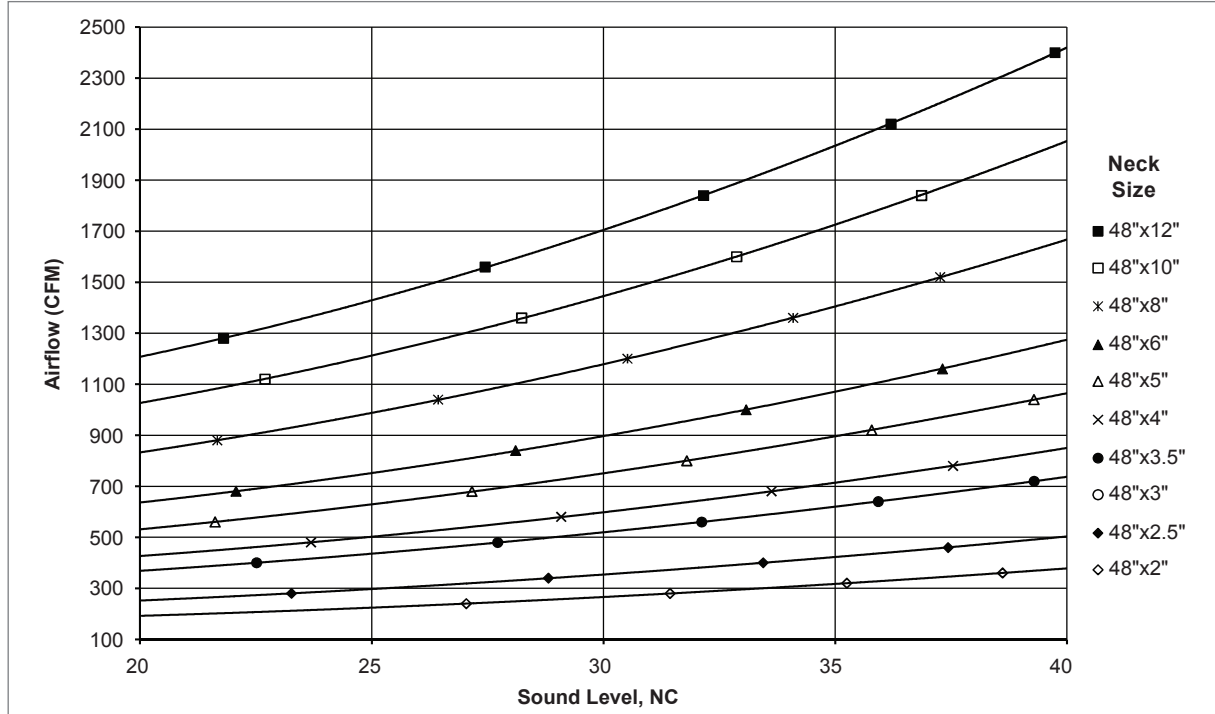


1500, 1800 Reference Charts

AIRFLOW VS. NC LEVEL: 1500, 1800, 15° DEFLECTION, 7/32" BARS, 1/2" BAR SPACING, 48" LENGTH



AIRFLOW VS. NC LEVEL: 1500, 1800, 30° DEFLECTION, 7/32" BARS, 7/16" BAR SPACING, 48" LENGTH



LINEAR BAR GRILLES

1500-1800

1500, 1800 Performance Data

IP/METRIC DATA: 1500, 1800, 0° DEFLECTION, 7/32" BARS, 1/2" BAR SPACING (NO DAMPER)

	IP Data					Metric Data									
Nom. Duct	Air Flow	Press Pv	Perpendicular Throw	NC	Nom. Duct	Air Flow	Press Pv	Perpendicular Throw	Octave Band, dB						
in	CFM/ft	"WG	ft		mm	L/s/m	Pa	m	2	3	4	5	6	7	
2"	40	0.042	7-10-18	-	51	6.2	10.4	2.1-3.1-5.5	32	33	21	-	-	-	
	55	0.079	9-14-21	-		8.5	19.6	2.9-4.3-6.5	37	39	31	18	12	-	
	70	0.128	12-17-24	26		10.9	31.8	3.7-5.2-7.3	42	44	38	28	21	17	
	85	0.188	15-19-27	31		13.2	46.8	4.4-5.7-8.1	45	47	43	35	29	24	
	100	0.260	17-20-29	36		15.5	64.8	5.1-6.2-8.7	48	50	48	42	35	30	
	115	0.344	18-22-31	40		17.9	85.7	5.4-6.6-9.4	50	53	52	47	40	35	
	130	0.440	19-23-33	43		20.2	109.6	5.8-7.1-10.0	52	55	56	52	45	39	
2 1/2"	50	0.033	7-11-20	-	64	7.8	8.3	2.2-3.3-6.2	32	33	19	-	-	-	
	70	0.065	10-15-24	-		10.9	16.2	3.1-4.6-7.3	37	39	29	16	-	-	
	90	0.108	13-19-27	25		14.0	26.8	3.9-5.9-8.3	41	44	37	26	19	16	
	110	0.161	16-21-30	31		17.1	40.0	4.8-6.5-9.2	45	47	42	33	27	23	
	130	0.224	19-23-33	35		20.2	55.9	5.7-7.1-10.0	48	50	47	40	33	29	
	150	0.299	20-25-35	40		23.3	74.4	6.2-7.6-10.7	50	53	52	46	39	34	
	170	0.384	22-27-38	43		26.4	95.6	6.6-8.1-11.4	52	55	55	51	43	38	
3"	70	0.039	9-13-24	-	76	10.9	9.8	2.7-4.0-7.3	34	35	23	-	-	-	
	95	0.073	12-18-28	21		14.7	18.1	3.7-5.5-8.5	39	41	32	19	13	-	
	120	0.116	15-22-32	27		18.6	28.8	4.6-6.8-9.6	43	45	39	28	22	18	
	145	0.169	18-25-35	33		22.5	42.1	5.6-7.4-10.5	46	49	44	36	29	25	
	170	0.232	22-27-38	37		26.4	57.8	6.6-8.1-11.4	49	52	49	42	35	30	
	195	0.306	23-28-40	41		30.3	76.1	7.1-8.6-12.2	51	54	53	47	40	35	
	220	0.389	25-30-43	44		34.2	96.8	7.5-9.2-13.0	53	57	56	52	45	39	
3 1/2"	80	0.034	9-14-26	-	89	12.4	8.6	2.8-4.2-7.8	34	35	22	-	-	-	
	110	0.065	13-19-30	-		17.1	16.2	3.8-5.7-9.2	39	41	31	17	12	-	
	140	0.105	16-24-34	27		21.7	26.3	4.9-7.3-10.4	43	45	38	27	21	17	
	170	0.155	19-27-38	32		26.4	38.7	5.9-8.1-11.4	46	49	44	35	28	24	
	200	0.215	23-29-41	37		31.0	53.6	7.0-8.7-12.4	49	52	49	41	34	30	
	230	0.285	25-31-44	41		35.7	70.9	7.7-9.4-13.3	52	54	53	47	40	35	
	260	0.364	27-33-46	44		40.4	90.5	8.1-10.0-14.1	54	57	56	52	44	39	
4"	90	0.031	9-14-27	-	102	14.0	7.8	2.9-4.3-8.3	34	35	21	-	-	-	
	120	0.055	13-19-32	-		18.6	13.8	3.8-5.8-9.6	38	40	30	15	-	-	
	150	0.087	16-24-35	25		23.3	21.6	4.8-7.2-10.7	42	44	36	24	18	15	
	180	0.125	19-27-39	30		27.9	31.1	5.8-8.3-11.7	45	48	41	31	25	21	
	210	0.170	22-29-42	34		32.6	42.3	6.7-9.0-12.7	48	50	46	37	31	26	
	240	0.222	25-32-45	38		37.3	55.2	7.7-9.6-13.6	50	53	50	42	36	31	
	270	0.281	27-33-47	42		41.9	69.9	8.3-10.2-14.4	52	55	53	47	40	35	
5"	100	0.023	9-14-28	-	127	15.5	5.6	2.8-4.2-8.4	32	33	17	-	-	-	
	140	0.044	13-19-34	-		21.7	11.0	3.9-5.9-10.4	38	39	27	12	-	-	
	180	0.073	17-25-39	24		27.9	18.2	5.0-7.5-11.7	42	44	35	22	16	13	
	220	0.109	20-30-43	29		34.2	27.1	6.1-9.2-13.0	45	47	41	29	23	20	
	260	0.152	24-33-46	34		40.4	37.9	7.3-10.0-14.1	48	50	45	36	30	26	
	300	0.203	28-35-50	38		46.6	50.5	8.4-10.7-15.2	50	53	50	42	35	31	
	340	0.260	31-38-53	42		52.8	64.8	9.3-11.4-16.1	53	55	53	47	40	35	
6"	120	0.021	10-15-30	-	152	18.6	5.3	3.0-4.5-9.0	32	33	18	-	-	-	
	170	0.043	14-21-38	-		26.4	10.6	4.3-6.4-11.4	38	40	28	12	-	-	
	220	0.071	18-27-43	24		34.2	17.8	5.5-8.3-13.0	43	44	35	22	16	13	
	270	0.108	22-33-47	30		41.9	26.8	6.8-10.2-14.4	46	48	41	30	24	21	
	320	0.151	26-36-51	35		49.7	37.6	8.0-11.1-15.7	49	51	46	37	30	26	
	370	0.202	31-39-55	39		57.4	50.3	9.3-11.9-16.8	51	54	50	43	36	31	
	420	0.260	34-42-59	43		65.2	64.8	10.4-12.7-17.9	53	56	54	48	41	36	
8"	150	0.017	10-16-32	-	203	23.3	4.3	3.0-4.8-9.6	32	32	16	-	-	-	
	210	0.034	15-22-42	-		32.6	8.5	4.5-6.7-12.7	38	39	26	-	-	-	
	270	0.056	19-28-47	22		41.9	14.0	5.8-8.6-14.4	42	43	33	19	13	11	
	330	0.084	23-35-52	28		51.2	21.0	7.0-10.6-15.9	45	47	39	27	21	18	
	390	0.118	27-40-57	33		60.5	29.3	8.3-12.2-17.3	48	50	44	33	27	23	
	450	0.157	32-43-61	37		69.9	39.0	9.6-13.1-18.6	50	53	48	39	32	28	
	510	0.201	36-46-65	40		79.2	50.1	10.9-14.0-19.8	53	55	52	44	37	33	

NOTE: See pages K1-14 and K1-20 for correction factors and notes.

1500, 1800 Performance Data

IP/METRIC DATA: 1500, 1800, 0° DEFLECTION, 7/32" BARS, 1/2" BAR SPACING (NO DAMPER)

	IP Data					Metric Data									
Nom. Duct	Air Flow	Press	Perpendicular	NC	Nom. Duct	Air Flow	Press	Perpendicular	Octave Band, dB						
		Pv	Throw					Pv	Throw						
in	CFM/ft	"WG	ft		mm	L/s/m	Pa	m	2	3	4	5	6	7	
10"	175	0.015	9-16-33	-	254	27.2	3.6	2.8-5.0-9.9	31	32	14	-	-	-	
	250	0.030	16-23-46	-		38.8	7.4	4.7-7.1-13.8	37	38	25	-	-	-	
	325	0.050	20-30-52	22		50.5	12.5	6.1-9.2-15.8	42	43	32	17	12	-	
	400	0.076	25-37-58	28		62.1	18.9	7.5-11.3-17.5	45	47	38	26	20	17	
	475	0.107	29-44-63	33		73.7	26.7	9.0-13.4-19.1	48	50	43	32	26	23	
	550	0.144	34-48-67	37		85.4	35.8	10.4-14.5-20.5	51	53	48	38	32	28	
	625	0.186	39-51-72	40		97.0	46.2	11.8-15.5-21.9	53	55	52	43	37	32	
12"	200	0.013	9-17-34	-	305	31.0	3.2	2.7-5.1-10.3	31	31	13	-	-	-	
	290	0.027	16-24-49	-		45.0	6.7	5.0-7.4-14.9	37	38	24	-	-	-	
	380	0.046	21-32-56	22		59.0	11.6	6.5-9.7-17.1	42	43	32	17	11	-	
	470	0.071	26-40-62	28		73.0	17.7	8.0-12.1-19.0	46	47	38	25	19	17	
	560	0.101	31-47-68	33		86.9	25.1	9.6-14.4-20.7	49	51	43	32	26	23	
	650	0.136	37-52-73	37		100.9	33.8	11.1-15.8-22.3	51	53	48	38	32	28	
	740	0.176	42-55-78	41		114.9	43.8	12.7-16.8-23.8	53	56	52	43	36	32	
14"	240	0.013	10-19-37	-	356	37.3	3.3	3.1-5.7-11.3	32	32	15	-	-	-	
	340	0.027	18-26-53	-		52.8	6.7	5.4-8.0-16.1	38	39	25	-	-	-	
	440	0.045	23-34-60	22		68.3	11.2	6.9-10.4-18.4	42	44	32	17	11	-	
	540	0.068	28-42-67	28		83.8	16.8	8.5-12.8-20.3	46	47	38	25	19	16	
	640	0.095	33-50-73	33		99.4	23.6	10.1-15.1-22.1	49	51	43	31	25	22	
	740	0.127	38-55-78	37		114.9	31.6	11.7-16.8-23.8	51	53	47	37	31	27	
	840	0.163	44-59-83	40		130.4	40.7	13.2-17.9-25.4	53	56	51	42	36	32	
16"	250	0.011	9-18-36	-	406	38.8	2.7	2.7-5.5-11.0	31	31	12	-	-	-	
	375	0.025	18-27-54	-		58.2	6.1	5.5-8.3-16.5	38	39	24	-	-	-	
	500	0.044	24-36-64	22		77.6	10.9	7.3-11.0-19.6	43	44	32	17	11	-	
	625	0.068	30-45-72	28		97.0	17.0	9.2-13.8-21.9	46	48	39	25	20	17	
	750	0.098	36-54-79	34		116.4	24.5	11.0-16.5-24.0	50	52	44	33	27	23	
	875	0.134	42-60-85	38		135.8	33.3	12.8-18.3-25.9	52	54	49	39	32	29	
	1000	0.175	48-64-91	42		155.2	43.6	14.7-19.6-27.7	54	57	53	44	38	33	
18"	300	0.012	11-20-41	-	457	46.6	3.1	3.2-6.2-12.4	33	33	14	-	-	-	
	450	0.028	20-31-61	-		69.9	6.9	6.2-9.3-18.6	39	40	26	-	-	-	
	600	0.049	27-41-70	24		93.1	12.3	8.3-12.4-21.4	44	46	35	19	14	12	
	750	0.077	34-51-79	31		116.4	19.1	10.3-15.5-24.0	48	50	41	28	23	20	
	900	0.111	41-61-86	36		139.7	27.6	12.4-18.6-26.2	51	53	47	35	29	26	
	1050	0.151	48-66-93	40		163.0	37.5	14.5-20.0-28.3	54	56	51	42	35	31	
	1200	0.197	54-70-100	44		186.3	49.0	16.6-21.4-30.3	56	58	55	47	40	36	
20"	400	0.018	16-26-52	-	508	62.1	4.4	4.9-7.8-15.7	36	36	20	-	-	-	
	525	0.030	23-34-66	-		81.5	7.5	6.9-10.3-20.0	41	42	28	-	-	-	
	650	0.046	28-42-73	24		100.9	11.5	8.5-12.7-22.3	44	45	34	19	13	11	
	775	0.066	33-50-80	29		120.3	16.4	10.1-15.2-24.4	47	49	39	26	20	17	
	900	0.089	39-58-86	33		139.7	22.1	11.8-17.6-26.2	50	52	44	32	26	23	
	1025	0.115	44-65-92	37		159.1	28.7	13.4-19.8-28.0	52	54	48	37	31	27	
	1150	0.145	49-69-98	40		178.5	36.2	15.0-21.0-29.7	54	56	51	41	35	31	
24"	500	0.019	19-29-59	-	610	77.6	4.7	5.8-8.9-17.8	37	38	22	-	-	-	
	650	0.032	25-38-73	-		100.9	7.9	7.7-11.6-22.3	42	43	30	12	-	-	
	800	0.048	31-47-81	25		124.2	12.0	9.5-14.3-24.7	45	47	36	20	15	13	
	950	0.068	37-56-89	30		147.5	16.9	11.3-16.9-27.0	48	50	41	27	21	19	
	1100	0.091	43-64-95	35		170.8	22.7	13.1-19.6-29.0	51	52	45	33	27	24	
	1250	0.118	49-72-102	38		194.1	29.3	14.9-21.9-30.9	53	55	49	38	32	28	
	1400	0.147	55-76-108	41		217.3	36.7	16.6-23.1-32.7	55	57	52	42	36	32	

LENGTH & NC CORRECTION FACTORS

Active Length	2	4	8	10	12
Throw Correction (Multiply)	0.72	1.0	1.5	1.7	1.8
Active Length	2	4	6	8	10
NC Throw Correction (Add)	-3.0	0.0	2.0	3.0	5.0

NOTES: When the diffuser is used as a return, increase the NC by (4) and the negative static pressure, which is (0.8) times the listed total pressure shown. See additional notes on page K1-20.

1500, 1800 Performance Data

IP/METRIC DATA: 1500, 1800, 0° DEFLECTION, 7/32" BARS, 7/16" BAR SPACING (NO DAMPER)

	IP Data					Metric Data									
Nom. Duct	Air Flow	Press Pv	Perpendicular Throw	NC	Nom. Duct	Air Flow	Press Pv	Perpendicular Throw	Octave Band, dB						
in.	CFM/ft	"WG	ft		mm	L/s/m	Pa	m	2	3	4	5	6	7	
2"	40	0.053	7-11-18	-	51	6.2	13.3	2.1-3.2-5.5	29	30	18	-	-	-	
	55	0.101	10-15-21	-		8.5	25.2	2.9-4.4-6.5	34	36	27	15	-	-	
	70	0.164	12-17-24	23		10.9	40.8	3.7-5.2-7.3	38	41	34	24	18	14	
	85	0.241	15-19-27	28		13.2	60.1	4.5-5.7-8.1	42	44	40	32	25	21	
	100	0.334	17-20-29	33		15.5	83.2	5.1-6.2-8.7	44	47	45	38	32	27	
	115	0.442	18-22-31	37		17.9	110.1	5.4-6.6-9.4	47	50	49	44	37	31	
	130	0.565	19-23-33	40		20.2	140.7	5.8-7.1-10.0	49	52	53	49	41	36	
2 1/2"	50	0.043	7-11-20	-	64	7.8	10.6	2.2-3.4-6.2	28	30	16	-	-	-	
	70	0.084	10-15-24	-		10.9	20.8	3.1-4.7-7.3	34	36	26	12	-	-	
	90	0.138	13-19-27	22		14.0	34.4	4.0-5.9-8.3	38	40	33	22	16	13	
	110	0.206	16-21-30	28		17.1	51.4	4.9-6.5-9.2	42	44	39	30	24	20	
	130	0.288	19-23-33	32		20.2	71.8	5.8-7.1-10.0	45	47	44	37	30	25	
	150	0.384	20-25-35	36		23.3	95.5	6.2-7.6-10.7	47	50	48	43	36	30	
	170	0.493	22-27-38	40		26.4	122.7	6.6-8.1-11.4	49	52	52	48	40	35	
3"	60	0.037	8-12-22	-	76	9.3	9.2	2.4-3.5-6.8	28	29	15	-	-	-	
	85	0.075	11-16-27	-		13.2	18.6	3.3-5.0-8.1	34	36	26	11	-	-	
	110	0.125	14-21-30	22		17.1	31.1	4.3-6.5-9.2	39	41	33	21	15	12	
	135	0.188	17-24-33	27		21.0	46.8	5.3-7.2-10.2	42	44	39	30	23	19	
	160	0.264	21-26-36	32		24.8	65.8	6.3-7.8-11.1	45	48	44	36	30	25	
	185	0.353	23-28-39	36		28.7	87.9	6.9-8.4-11.9	47	50	48	42	35	30	
	210	0.455	24-29-42	40		32.6	113.3	7.3-9.0-12.7	49	53	52	47	40	34	
3 1/2"	80	0.044	9-14-26	-	89	12.4	11.0	2.8-4.2-7.8	31	32	19	-	-	-	
	110	0.084	13-19-30	-		17.1	20.8	3.9-5.8-9.2	36	38	28	14	-	-	
	140	0.135	16-24-34	24		21.7	33.7	4.9-7.3-10.4	40	42	35	24	18	14	
	170	0.200	20-27-38	29		26.4	49.7	6.0-8.1-11.4	43	46	41	32	25	21	
	200	0.276	23-29-41	34		31.0	68.8	7.1-8.7-12.4	46	49	46	38	31	27	
	230	0.365	25-31-44	38		35.7	91.0	7.7-9.4-13.3	48	51	50	44	37	32	
	260	0.467	27-33-46	41		40.4	116.2	8.1-10.0-14.1	50	54	53	48	41	36	
4"	90	0.040	10-14-27	-	102	14.0	10.0	2.9-4.4-8.3	31	32	18	-	-	-	
	125	0.077	13-20-32	-		19.4	19.2	4.0-6.1-9.8	36	38	28	14	-	-	
	160	0.127	17-26-36	23		24.8	31.5	5.2-7.8-11.1	40	42	35	23	17	14	
	195	0.188	21-28-40	29		30.3	46.8	6.3-8.6-12.2	44	46	41	31	25	21	
	230	0.262	25-31-44	34		35.7	65.1	7.4-9.4-13.3	46	49	45	38	31	26	
	265	0.347	27-33-47	38		41.1	86.5	8.2-10.1-14.2	49	52	50	43	36	31	
	300	0.445	29-35-50	41		46.6	110.8	8.7-10.7-15.2	51	54	53	48	41	36	
5"	100	0.029	9-14-28	-	127	15.5	7.2	2.8-4.2-8.5	29	30	14	-	-	-	
	145	0.061	13-20-35	-		22.5	15.1	4.1-6.1-10.5	35	37	25	-	-	-	
	190	0.104	18-26-40	22		29.5	26.0	5.4-8.0-12.1	40	42	33	21	15	12	
	235	0.160	22-31-44	28		36.5	39.8	6.6-9.5-13.4	43	45	39	29	23	19	
	280	0.227	26-34-48	33		43.5	56.4	7.9-10.4-14.6	46	49	44	36	29	25	
	325	0.305	30-37-52	37		50.5	76.0	9.1-11.2-15.8	49	51	49	42	35	30	
	370	0.396	32-39-55	41		57.4	98.6	9.7-11.9-16.8	51	54	53	47	40	35	
6"	110	0.023	9-14-28	-	152	17.1	5.7	2.7-4.2-8.4	28	28	12	-	-	-	
	165	0.052	14-21-37	-		25.6	12.8	4.2-6.3-11.2	35	36	24	-	-	-	
	220	0.092	18-28-43	21		34.2	22.8	5.6-8.4-13.0	39	41	32	19	13	-	
	275	0.143	23-34-48	28		42.7	35.7	7.0-10.3-14.5	43	45	39	28	22	18	
	330	0.206	28-37-52	33		51.2	51.4	8.4-11.2-15.9	46	49	44	35	28	24	
	385	0.281	32-40-56	37		59.8	69.9	9.8-12.1-17.2	49	52	48	41	34	30	
	440	0.367	35-43-60	41		68.3	91.3	10.6-13.0-18.4	51	54	52	46	39	34	
8"	160	0.025	11-17-34	-	203	24.8	6.3	3.4-5.2-10.3	30	31	15	-	-	-	
	230	0.053	16-24-44	-		35.7	13.1	4.9-7.4-13.3	36	37	25	-	-	-	
	300	0.089	21-32-50	22		46.6	22.3	6.5-9.7-15.2	41	42	33	20	14	11	
	370	0.136	26-39-55	28		57.4	33.9	8.0-11.9-16.8	44	46	39	28	22	19	
	440	0.192	31-43-60	33		68.3	47.9	9.5-13.0-18.4	47	49	44	35	28	25	
	510	0.258	36-46-65	37		79.2	64.3	11.0-14.0-19.8	49	52	49	41	34	30	
	580	0.334	40-49-69	41		90.0	83.2	12.2-14.9-21.1	52	54	52	46	39	34	

NOTE: See pages K1-16 and K1-20 for correction factors and notes.

1500, 1800 Performance Data

IP/METRIC DATA: 1500, 1800, 0° DEFLECTION, 7/32" BARS, 7/16" BAR SPACING (NO DAMPER)

	IP Data					Metric Data									
Nom. Duct	Air Flow	Press	Perpendicular	NC	Nom. Duct	Air Flow	Press	Perpendicular	Octave Band, dB						
		Pv	Throw				Pv	Throw							
in.	CFM/ft	"WG	ft		mm	L/s/m	Pa	m	2	3	4	5	6	7	
10"	180	0.020	10-17-34	-	254	27.9	4.9	3.1-5.1-10.3	29	29	12	-	-	-	
	270	0.044	17-25-47	-		41.9	11.1	5.1-7.7-14.4	36	37	24	-	-	-	
	360	0.079	23-34-55	22		55.9	19.7	6.8-10.3-16.6	41	42	32	18	13	-	
	450	0.124	28-42-61	28		69.9	30.8	8.6-12.8-18.6	44	46	39	27	21	18	
	540	0.178	34-47-67	33		83.8	44.3	10.3-14.4-20.3	47	50	44	34	28	22	
	630	0.242	39-51-72	38		97.8	60.3	12.0-15.5-22.0	50	52	49	40	34	30	
	720	0.316	45-55-77	41		111.8	78.8	13.6-16.6-23.5	52	55	53	46	39	34	
12"	220	0.020	11-19-37	-	305	34.2	5.0	3.4-5.7-11.4	30	30	13	-	-	-	
	320	0.042	18-27-51	-		49.7	10.5	5.5-8.3-15.7	36	37	24	-	-	-	
	420	0.073	24-36-59	21		65.2	18.1	7.2-10.9-17.9	41	42	32	17	12	-	
	520	0.112	29-44-66	27		80.7	27.8	9.0-13.4-20.0	44	46	38	26	20	17	
	620	0.159	35-51-72	32		96.3	39.5	10.7-15.4-21.8	47	49	43	33	27	23	
	720	0.214	41-55-77	37		111.8	53.3	12.4-16.6-23.5	50	52	48	39	32	28	
	820	0.277	46-58-82	40		127.3	69.1	14.1-17.7-25.1	52	55	51	44	37	33	
14"	225	0.015	9-18-35	-	356	34.9	3.7	2.8-5.4-10.7	28	28	-	-	-	-	
	350	0.036	18-27-54	-		54.3	9.1	5.6-8.3-16.4	35	36	23	-	-	-	
	475	0.067	25-37-63	21		73.7	16.7	7.5-11.3-19.1	41	42	31	16	11	-	
	600	0.107	31-47-70	28		93.1	26.7	9.5-14.3-21.4	45	46	38	26	20	17	
	725	0.156	38-55-77	33		112.6	38.9	11.5-16.7-23.6	48	50	44	33	27	24	
	850	0.215	44-59-84	38		132.0	53.5	13.5-18.0-25.5	50	53	48	40	33	29	
	975	0.283	51-64-90	41		151.4	70.4	15.5-19.3-27.3	53	55	52	45	38	34	
16"	250	0.014	9-18-36	-	406	38.8	3.5	2.8-5.5-11.1	28	28	-	-	-	-	
	390	0.034	19-28-57	-		60.5	8.5	5.8-8.6-17.3	35	36	22	-	-	-	
	530	0.063	26-39-66	21		82.3	15.7	7.8-11.7-20.1	41	42	31	16	-	-	
	670	0.101	33-49-74	27		104.0	25.1	9.9-14.9-22.6	45	46	38	25	19	16	
	810	0.147	39-58-82	33		125.7	36.7	12.0-17.6-24.9	48	50	43	33	27	23	
	950	0.203	46-63-89	37		147.5	50.5	14.0-19.1-27.0	50	53	48	39	33	29	
	1090	0.267	53-67-95	41		169.2	66.4	16.1-20.4-28.9	53	55	52	44	38	33	
18"	300	0.016	11-21-41	-	457	46.6	3.9	3.3-6.3-12.5	30	30	11	-	-	-	
	440	0.034	20-30-60	-		68.3	8.5	6.1-9.2-18.3	36	37	23	-	-	-	
	580	0.059	27-40-69	20		90.0	14.7	8.1-12.1-21.1	41	42	31	15	-	-	
	720	0.091	33-49-77	27		111.8	22.7	10.0-15.0-23.5	44	46	37	24	18	15	
	860	0.130	39-59-84	32		133.5	32.3	11.9-17.9-25.7	47	49	42	31	25	21	
	1000	0.176	46-64-91	36		155.2	43.7	13.9-19.6-27.7	50	52	47	37	30	27	
	1140	0.228	52-69-97	40		177.0	56.8	15.8-20.9-29.5	52	54	50	42	35	31	
20"	325	0.015	11-21-42	-	508	50.5	3.7	3.3-6.4-12.8	29	30	11	-	-	-	
	500	0.035	22-32-64	-		77.6	8.8	6.6-9.9-19.6	37	38	24	-	-	-	
	675	0.064	29-44-75	22		104.8	16.0	8.9-13.3-22.7	42	43	32	17	12	-	
	850	0.102	37-55-84	29		132.0	25.4	11.2-16.8-25.5	46	47	39	26	20	18	
	1025	0.148	44-65-92	34		159.1	36.9	13.5-19.8-28.0	49	51	45	34	28	24	
	1200	0.203	52-70-100	38		186.3	50.5	15.8-21.4-30.3	51	54	49	40	34	30	
	1375	0.266	59-75-107	42		213.5	66.3	18.1-22.9-32.4	54	56	53	45	39	34	
24"	350	0.012	9-21-41	-	610	54.3	2.9	2.9-6.3-12.6	28	28	-	-	-	-	
	550	0.029	22-32-65	-		85.4	7.3	6.6-9.9-19.7	36	37	22	-	-	-	
	750	0.054	29-44-79	21		116.4	13.5	9.0-13.5-24.0	41	42	31	15	-	-	
	950	0.087	37-56-89	27		147.5	21.7	11.4-17.0-27.0	45	47	38	24	18	16	
	1150	0.128	45-68-98	33		178.5	31.8	13.8-20.6-29.7	48	50	43	32	26	22	
	1350	0.176	53-75-106	37		209.6	43.8	16.1-22.7-32.1	51	53	48	38	32	28	
	1550	0.232	61-80-113	41		240.6	57.8	18.5-24.4-34.4	53	56	52	43	37	33	

LENGTH & NC CORRECTION FACTORS

Active Length	2	4	8	10	12
Throw Correction (Multiply)	0.72	1.0	1.5	1.7	1.8
Active Length	2	4	6	8	10
NC Throw Correction (Add)	-3.0	0.0	2.0	3.0	5.0

NOTES: When the diffuser is used as a return, increase the NC by (4) and the negative static pressure, which is (0.8) times the listed total pressure shown. See additional notes on page K1-20.

1500, 1800 Performance Data

IP/METRIC DATA: 1500, 1800, 15° DEFLECTION, 7/32" BARS, 1/2" BAR SPACING (NO DAMPER)

	IP Data					Metric Data									
Nom. Duct	Air Flow	Press Pv	Perpendicular Throw	NC	Nom. Duct	Air Flow	Press Pv	Perpendicular Throw	Octave Band, dB						
in	CFM/ft	"WG	ft		mm	L/s/m	Pa	m	2	3	4	5	6	7	
2"	40	0.050	7-11-18	-	51	6.2	12.5	2.2-3.3-5.5	38	39	27	11	-	-	
	50	0.078	9-14-20	22		7.8	19.5	2.7-4.1-6.2	41	43	33	20	14	11	
	60	0.113	11-16-22	27		9.3	28.1	3.3-4.8-6.8	45	47	39	27	21	18	
	70	0.153	13-17-24	31		10.9	38.2	3.8-5.2-7.3	47	49	43	33	27	23	
	80	0.200	14-18-26	35		12.4	49.9	4.4-5.5-7.8	49	52	47	38	32	28	
	90	0.254	16-19-27	39		14.0	63.1	4.8-5.9-8.3	51	54	51	43	36	32	
	100	0.313	17-20-29	42		15.5	77.9	5.1-6.2-8.7	53	56	54	47	40	35	
2 1/2"	50	0.040	8-11-20	-	64	7.8	9.9	2.3-3.5-6.2	37	38	25	-	-	-	
	65	0.067	10-15-23	21		10.1	16.8	3.0-4.5-7.1	42	43	33	18	13	-	
	80	0.102	12-18-26	27		12.4	25.4	3.7-5.5-7.8	45	47	39	27	21	17	
	95	0.144	14-20-28	32		14.7	35.9	4.4-6.0-8.5	48	50	44	33	27	23	
	110	0.193	17-21-30	36		17.1	48.1	5.1-6.5-9.2	50	53	48	39	33	28	
	125	0.250	19-23-32	40		19.4	62.1	5.6-6.9-9.8	53	55	52	44	37	33	
	140	0.313	20-24-34	43		21.7	77.9	6.0-7.3-10.4	55	57	55	49	42	37	
3"	70	0.047	9-14-24	-	76	10.9	11.8	2.8-4.2-7.3	40	41	29	12	-	-	
	85	0.070	11-17-27	23		13.2	17.4	3.4-5.2-8.1	43	45	34	20	14	12	
	100	0.097	13-20-29	28		15.5	24.1	4.0-6.1-8.7	46	48	39	26	21	17	
	115	0.128	15-22-31	32		17.9	31.8	4.7-6.6-9.4	48	50	43	32	26	22	
	130	0.163	17-23-33	35		20.2	40.7	5.3-7.1-10.0	50	52	47	37	30	27	
	145	0.203	19-25-35	38		22.5	50.6	5.9-7.4-10.5	52	54	50	41	35	30	
	160	0.247	21-26-36	41		24.8	61.6	6.4-7.8-11.1	54	56	53	45	38	34	
3 1/2"	80	0.041	10-14-26	-	89	12.4	10.3	2.9-4.4-7.8	39	41	27	-	-	-	
	100	0.065	12-18-29	23		15.5	16.1	3.7-5.5-8.7	43	45	34	19	14	11	
	120	0.093	14-22-32	28		18.6	23.2	4.4-6.6-9.6	46	48	39	27	21	18	
	140	0.127	17-24-34	32		21.7	31.6	5.1-7.3-10.4	49	51	44	33	27	23	
	160	0.166	19-26-36	36		24.8	41.2	5.8-7.8-11.1	51	53	48	38	32	28	
	180	0.210	22-27-39	40		27.9	52.2	6.6-8.3-11.7	53	56	51	43	36	32	
	200	0.259	23-29-41	43		31.0	64.4	7.1-8.7-12.4	55	58	54	47	40	35	
4"	90	0.038	10-15-27	-	102	14.0	9.3	3.0-4.5-8.3	39	40	27	-	-	-	
	110	0.056	12-18-30	21		17.1	14.0	3.7-5.5-9.2	43	44	33	17	12	-	
	130	0.078	14-22-33	26		20.2	19.5	4.4-6.5-10.0	45	47	37	24	18	15	
	150	0.104	17-25-35	30		23.3	25.9	5.0-7.5-10.7	48	50	42	29	24	20	
	170	0.134	19-27-38	34		26.4	33.3	5.7-8.1-11.4	50	52	45	34	28	25	
	190	0.167	21-28-40	37		29.5	41.6	6.4-8.5-12.1	52	54	49	39	32	29	
	210	0.204	23-29-42	40		32.6	50.8	7.0-9.0-12.7	53	56	51	43	36	32	
5"	100	0.027	10-14-29	-	127	15.5	6.7	2.9-4.4-8.7	38	38	23	-	-	-	
	130	0.046	13-19-33	-		20.2	11.4	3.8-5.7-10.0	42	43	31	14	-	-	
	160	0.069	15-23-36	26		24.8	17.3	4.7-7.0-11.1	46	47	37	22	17	14	
	190	0.098	18-27-40	31		29.5	24.3	5.6-8.3-12.1	48	50	42	29	23	20	
	220	0.131	21-30-43	35		34.2	32.6	6.4-9.2-13.0	51	53	46	35	29	25	
	250	0.169	24-32-46	39		38.8	42.1	7.3-9.8-13.8	53	55	50	40	34	30	
	280	0.212	27-34-48	42		43.5	52.9	8.2-10.4-14.6	55	57	53	45	38	34	
6"	120	0.026	10-16-31	-	152	18.6	6.4	3.2-4.7-9.5	38	39	23	-	-	-	
	155	0.043	13-20-36	-		24.1	10.6	4.1-6.1-10.9	42	43	31	14	-	-	
	190	0.064	16-25-40	26		29.5	15.9	5.0-7.5-12.1	46	47	37	22	16	14	
	225	0.090	19-29-43	30		34.9	22.4	5.9-8.9-13.1	49	50	41	28	23	20	
	260	0.120	23-33-46	35		40.4	29.9	6.8-10.0-14.1	51	53	46	34	28	25	
	295	0.154	26-35-49	38		45.8	38.4	7.8-10.6-15.0	53	55	49	39	33	29	
	330	0.193	29-37-52	41		51.2	48.1	8.7-11.2-15.9	55	57	53	44	37	33	
8"	130	0.016	9-14-29	-	203	20.2	3.9	2.6-4.4-8.7	35	35	17	-	-	-	
	180	0.030	13-20-39	-		27.9	7.5	4.0-6.0-11.7	41	41	27	-	-	-	
	230	0.049	17-25-44	23		35.7	12.3	5.1-7.7-13.3	45	46	34	18	13	11	
	280	0.073	21-31-48	29		43.5	18.2	6.3-9.4-14.6	48	50	40	26	20	18	
	330	0.101	24-36-52	34		51.2	25.2	7.4-11.1-15.9	51	53	45	32	26	23	
	380	0.134	28-40-56	38		59.0	33.5	8.5-12.1-17.1	53	55	49	38	32	28	
	430	0.172	32-42-60	41		66.8	42.8	9.6-12.8-18.1	55	58	52	43	36	32	

NOTE: See pages K1-18 and K1-20 for correction factors and notes.

1500, 1800 Performance Data

IP/METRIC DATA: 1500, 1800, 15° DEFLECTION, 7/32" BARS, 1/2" BAR SPACING (NO DAMPER)

	IP Data					Metric Data									
Nom. Duct	Air Flow	Press	Perpendicular	NC	Nom. Duct	Air Flow	Press	Perpendicular	Octave Band, dB						
		Pv	Throw					Pv							
in	CFM/ft	"WG	ft		mm	L/s/m	Pa	m	2	3	4	5	6	7	
10"	150	0.013	8-15-29	-	254	23.3	3.2	2.4-4.5-8.9	34	35	15	-	-	-	
	210	0.025	14-20-41	-		32.6	6.3	4.2-6.2-12.5	40	41	25	-	-	-	
	270	0.042	18-26-47	22		41.9	10.4	5.3-8.0-14.4	44	45	33	16	11	-	
	330	0.062	21-32-52	28		51.2	15.5	6.5-9.8-15.9	48	49	38	24	18	16	
	390	0.087	25-38-57	33		60.5	21.6	7.7-11.6-17.3	51	52	43	30	24	22	
	450	0.116	29-43-61	37		69.9	28.8	8.9-13.1-18.6	53	55	48	36	30	27	
	510	0.149	33-46-65	40		79.2	37.0	10.1-14.0-19.8	55	57	51	41	35	31	
12"	175	0.012	8-15-31	-	305	27.2	2.9	2.4-4.7-9.4	35	35	15	-	-	-	
	245	0.023	14-22-43	-		38.0	5.8	4.4-6.6-13.2	40	41	25	-	-	-	
	315	0.038	19-28-51	22		48.9	9.5	5.6-8.5-15.5	44	45	32	15	-	-	
	385	0.057	23-34-56	28		59.8	14.3	6.9-10.4-17.2	48	49	38	23	17	15	
	455	0.080	27-40-61	32		70.6	19.9	8.2-12.2-18.7	51	52	43	29	24	21	
	525	0.107	31-46-66	36		81.5	26.5	9.4-14.1-20.0	53	55	47	35	29	26	
	595	0.137	35-50-70	40		92.4	34.1	10.7-15.1-21.3	55	57	51	40	34	30	
14"	200	0.011	8-16-33	-	356	31.0	2.8	2.5-5.0-9.9	35	35	15	-	-	-	
	280	0.022	15-23-46	-		43.5	5.4	4.6-6.9-13.9	40	41	25	-	-	-	
	360	0.036	20-29-55	22		55.9	9.0	5.9-8.9-16.6	45	46	32	14	-	-	
	440	0.054	24-36-60	27		68.3	13.4	7.3-10.9-18.4	48	49	38	22	17	15	
	520	0.075	28-42-66	32		80.7	18.8	8.6-12.9-20.0	51	52	43	29	23	21	
	600	0.100	33-49-70	36		93.1	25.0	9.9-14.9-21.4	53	55	47	34	29	26	
	680	0.129	37-53-75	40		105.6	32.1	11.2-16.1-22.8	55	57	51	39	33	30	
16"	250	0.013	10-19-38	-	406	38.8	3.3	3.1-5.8-11.5	37	37	18	-	-	-	
	340	0.024	17-26-52	-		52.8	6.1	5.2-7.8-15.7	42	42	27	-	-	-	
	430	0.039	22-33-60	23		66.8	9.7	6.6-9.9-18.1	46	47	34	16	11	-	
	520	0.057	26-39-66	29		80.7	14.2	8.0-12.0-20.0	49	50	39	24	18	16	
	610	0.078	31-46-71	33		94.7	19.5	9.4-14.1-21.6	52	53	44	30	24	22	
	700	0.103	35-53-76	37		108.7	25.7	10.8-16.2-23.1	54	56	48	36	30	27	
	790	0.131	40-57-81	41		122.6	32.7	12.2-17.4-24.6	56	58	51	40	34	31	
18"	300	0.015	12-21-43	-	457	46.6	3.7	3.7-6.5-13.0	38	38	20	-	-	-	
	400	0.026	19-29-57	-		62.1	6.5	5.8-8.7-17.4	43	44	28	-	-	-	
	500	0.041	24-36-64	25		77.6	10.2	7.2-10.8-19.6	47	48	35	18	13	11	
	600	0.059	29-43-70	30		93.1	14.7	8.7-13.0-21.4	50	51	40	25	20	18	
	700	0.081	33-50-76	34		108.7	20.1	10.1-15.2-23.1	52	54	45	31	26	23	
	800	0.105	38-57-81	38		124.2	26.2	11.6-17.4-24.7	55	57	49	36	31	28	
	900	0.133	43-61-86	42		139.7	33.1	13.0-18.6-26.2	57	59	52	41	35	32	
20"	400	0.021	18-27-54	-	508	62.1	5.3	5.5-8.2-16.4	42	42	26	-	-	-	
	510	0.034	23-34-65	23		79.2	8.5	7.0-10.5-19.8	46	47	33	15	-	-	
	620	0.051	28-42-72	28		96.3	12.6	8.5-12.7-21.8	49	50	39	22	17	15	
	730	0.070	33-49-78	33		113.3	17.5	10.0-15.0-23.6	52	53	43	29	23	21	
	840	0.093	38-57-83	37		130.4	23.2	11.5-17.3-25.4	54	56	47	34	29	26	
	950	0.119	43-63-89	40		147.5	29.7	13.0-19.1-27.0	56	58	51	39	33	30	
	1060	0.148	48-66-94	44		164.6	36.9	14.5-20.1-28.5	58	60	54	44	37	34	
24"	450	0.018	18-28-55	-	610	69.9	4.6	5.4-8.4-16.8	41	42	24	-	-	-	
	570	0.029	23-35-69	21		88.5	7.3	7.1-10.7-20.9	45	46	31	12	-	-	
	690	0.043	28-42-76	27		107.1	10.7	8.6-12.9-23.0	48	49	37	20	15	13	
	810	0.059	33-50-82	31		125.7	14.8	10.1-15.1-24.9	51	52	42	26	21	19	
	930	0.078	38-57-88	35		144.4	19.5	11.6-17.4-26.7	53	55	46	32	26	24	
	1050	0.100	43-65-93	39		163.0	24.8	13.1-19.6-28.3	55	57	49	37	31	28	
	1170	0.124	48-70-98	42		181.6	30.8	14.6-21.2-29.9	57	59	52	41	35	32	

LENGTH & NC CORRECTION FACTORS

Active Length	2	4	8	10	12
Throw Correction (Multiply)	0.72	1.0	1.5	1.7	1.8
Active Length	2	4	6	8	10
NC Throw Correction (Add)	-3.0	0.0	2.0	3.0	5.0

NOTES: When the diffuser is used as a return, increase the NC by (4) and the negative static pressure, which is (0.8) times the listed total pressure shown. See additional notes on page K1-20.

1500, 1800 Performance Data

IP/METRIC DATA: 1500, 1800, 30° DEFLECTION, 7/32" BARS, 7/16" BAR SPACING (NO DAMPER)

	IP Data					Metric Data									
Nom. Duct	Air Flow	Press Pv	Perpendicular Throw	NC	Nom. Duct	Air Flow	Press Pv	Perpendicular Throw	Octave Band, dB						
in.	CFM/ft	"WG	ft		mm	L/s/m	Pa	m	2	3	4	5	6	7	
2"	40	0.053	7-11-18	-	51	6.2	13.3	2.2-3.3-5.5	38	39	27	11	-	-	
	50	0.084	9-13-20	22		7.8	20.8	2.7-4.1-6.2	42	43	33	20	14	11	
	60	0.120	11-16-22	27		9.3	30.0	3.3-4.8-6.8	45	47	39	27	21	18	
	70	0.164	13-17-24	31		10.9	40.8	3.8-5.2-7.3	47	49	43	33	27	23	
	80	0.214	14-18-26	35		12.4	53.3	4.4-5.5-7.8	49	52	47	38	32	28	
	90	0.271	16-19-27	39		14.0	67.4	4.8-5.9-8.3	51	54	51	43	36	32	
	100	0.334	17-20-29	42		15.5	83.2	5.1-6.2-8.7	53	56	54	47	40	35	
2 1/2"	40	0.027	6-9-18	-	64	6.2	6.8	1.9-2.8-5.5	33	34	18	-	-	-	
	55	0.052	8-13-21	-		8.5	12.8	2.6-3.8-6.5	39	40	28	12	-	-	
	70	0.084	11-16-24	23		10.9	20.8	3.3-4.9-7.3	43	44	35	21	15	13	
	85	0.123	13-19-27	29		13.2	30.7	4.0-5.7-8.1	46	48	40	29	23	19	
	100	0.171	15-20-29	33		15.5	42.5	4.7-6.2-8.7	49	51	45	35	29	25	
	115	0.226	18-22-31	37		17.9	56.2	5.4-6.6-9.4	51	54	49	41	34	30	
	130	0.288	19-23-33	41		20.2	71.8	5.8-7.1-10.0	53	56	53	46	39	34	
3"	50	0.026	7-10-20	-	76	7.8	6.4	2.1-3.1-6.2	34	35	19	-	-	-	
	65	0.044	9-13-23	-		10.1	10.9	2.7-4.0-7.1	38	39	26	-	-	-	
	80	0.066	11-16-26	21		12.4	16.4	3.3-5.0-7.8	42	43	32	17	12	-	
	95	0.093	13-19-28	26		14.7	23.2	3.9-5.9-8.5	45	46	37	24	18	15	
	110	0.125	15-21-30	30		17.1	31.1	4.5-6.5-9.2	47	49	42	30	24	21	
	125	0.161	17-23-32	34		19.4	40.1	5.2-6.9-9.8	49	52	45	35	29	25	
	140	0.202	19-24-34	37		21.7	50.4	5.8-7.3-10.4	51	54	49	40	33	29	
3 1/2"	60	0.025	7-11-22	-	89	9.3	6.2	2.3-3.4-6.8	34	35	19	-	-	-	
	80	0.044	10-15-26	-		12.4	11.0	3.0-4.5-7.8	39	40	27	-	-	-	
	100	0.069	12-19-29	23		15.5	17.2	3.8-5.6-8.7	43	44	34	19	14	11	
	120	0.099	15-22-32	28		18.6	24.8	4.5-6.8-9.6	46	48	39	26	20	17	
	140	0.135	17-24-34	32		21.7	33.7	5.3-7.3-10.4	49	51	44	32	26	23	
	160	0.177	20-26-36	36		24.8	44.0	6.0-7.8-11.1	51	53	47	38	31	27	
	180	0.224	22-27-39	39		27.9	55.7	6.8-8.3-11.7	53	55	51	42	36	32	
4"	70	0.024	8-12-24	-	102	10.9	6.0	2.4-3.6-7.3	35	35	19	-	-	-	
	95	0.045	11-16-28	-		14.7	11.1	3.3-4.9-8.5	40	41	28	11	-	-	
	120	0.071	14-20-32	24		18.6	17.7	4.2-6.2-9.6	44	45	35	20	15	12	
	145	0.104	17-25-35	29		22.5	25.9	5.0-7.4-10.5	47	49	40	28	22	19	
	170	0.143	19-27-38	34		26.4	35.6	5.9-8.1-11.4	50	52	45	34	28	24	
	195	0.188	22-28-40	38		30.3	46.8	6.7-8.6-12.2	52	54	49	40	33	29	
	220	0.239	25-30-43	41		34.2	59.6	7.5-9.2-13.0	54	57	53	44	38	33	
5"	80	0.019	8-12-24	-	127	12.4	4.6	2.4-3.6-7.3	34	34	16	-	-	-	
	110	0.035	11-16-30	-		17.1	8.7	3.3-5.0-9.2	39	40	26	-	-	-	
	140	0.057	14-21-34	22		21.7	14.1	4.3-6.4-10.4	43	44	33	17	12	-	
	170	0.084	17-25-38	27		26.4	20.8	5.2-7.7-11.4	46	48	38	25	19	16	
	200	0.116	20-29-41	32		31.0	28.8	6.1-8.7-12.4	49	51	43	31	25	22	
	230	0.153	23-31-44	36		35.7	38.1	7.0-9.4-13.3	51	54	47	37	30	27	
	260	0.195	26-33-46	39		40.4	48.7	7.9-10.0-14.1	53	56	51	41	35	31	
6"	90	0.015	8-12-24	-	152	14.0	3.8	2.3-3.7-7.4	33	33	14	-	-	-	
	130	0.032	12-18-33	-		20.2	8.0	3.6-5.3-10.0	39	40	25	-	-	-	
	170	0.055	15-23-38	22		26.4	13.6	4.7-7.0-11.4	44	45	33	17	12	-	
	210	0.084	19-28-42	28		32.6	20.8	5.8-8.6-12.7	47	49	39	25	20	17	
	250	0.118	23-32-46	33		38.8	29.5	6.8-9.8-13.8	50	52	44	32	26	23	
	290	0.159	26-35-49	37		45.0	39.7	7.9-10.5-14.9	52	55	49	38	32	28	
	330	0.206	30-37-52	41		51.2	51.4	9.0-11.2-15.9	55	57	52	43	37	33	
8"	140	0.019	11-16-32	-	203	21.7	4.9	3.3-4.9-9.8	36	36	19	-	-	-	
	180	0.032	14-21-39	-		27.9	8.0	4.2-6.3-11.7	40	41	27	-	-	-	
	220	0.048	17-25-43	22		34.2	12.0	5.1-7.7-13.0	44	45	32	16	11	-	
	260	0.067	20-30-46	26		40.4	16.7	6.1-9.1-14.1	46	48	37	22	17	15	
	300	0.089	23-35-50	31		46.6	22.3	7.0-10.5-15.2	49	51	41	28	22	20	
	340	0.115	26-38-53	34		52.8	28.6	7.9-11.4-16.1	51	53	45	33	27	24	
	380	0.144	29-40-56	37		59.0	35.7	8.9-12.1-17.1	53	55	48	37	31	28	

NOTE: See pages K1-18 and K1-20 for correction factors and notes.

1500, 1800 Performance Data

IP/METRIC DATA: 1500, 1800, 30° DEFLECTION, 7/32" BARS, 7/16" BAR SPACING (NO DAMPER)

Nom. Duct	IP Data			NC	Nom. Duct	Metric Data			Octave Band, dB						
	Air Flow	Press Pv	Perpendicular Throw			Air Flow	Press Pv	Perpendicular Throw							
in.	CFM/ft	"WG	ft		mm	L/s/m	Pa	m	2	3	4	5	6	7	
10"	160	0.016	10-16-33	-	254	24.8	3.9	3.1-5.0-9.9	35	35	17	-	-	-	
	220	0.030	15-22-43	-		34.2	7.4	4.6-6.8-13.0	41	41	26	-	-	-	
	280	0.048	19-29-48	23		43.5	11.9	5.8-8.7-14.6	45	46	33	17	12	-	
	340	0.071	23-35-53	28		52.8	17.6	7.0-10.6-16.1	48	49	39	24	19	16	
	400	0.098	27-41-58	33		62.1	24.3	8.3-12.4-17.5	51	52	44	31	25	22	
	460	0.129	31-44-62	37		71.4	32.2	9.5-13.3-18.8	53	55	48	36	30	27	
12"	520	0.165	35-46-66	40	305	80.7	41.1	10.8-14.1-20.0	55	57	51	41	35	31	
	180	0.013	10-17-33	-		27.9	3.3	3.0-5.1-10.2	35	35	15	-	-	-	
	250	0.026	15-23-46	-		38.8	6.4	4.7-7.1-13.8	40	41	25	-	-	-	
	320	0.042	20-30-51	22		49.7	10.5	6.0-9.0-15.7	44	45	32	15	-	-	
	390	0.063	24-36-57	27		60.5	15.6	7.3-11.0-17.3	48	49	38	23	17	15	
	460	0.087	28-43-62	32		71.4	21.7	8.7-13.0-18.8	50	52	43	29	24	21	
14"	530	0.116	33-47-66	36	356	82.3	28.9	10.0-14.2-20.1	53	55	47	35	29	26	
	600	0.149	37-50-70	40		93.1	37.0	11.3-15.2-21.4	55	57	51	40	34	30	
	200	0.012	9-17-34	-		31.0	3.0	2.9-5.2-10.4	34	34	14	-	-	-	
	285	0.024	16-24-49	-		44.2	6.0	4.9-7.4-14.8	40	41	25	-	-	-	
	370	0.041	21-32-55	22		57.4	10.1	6.4-9.6-16.8	45	46	32	15	-	-	
	455	0.062	26-39-61	28		70.6	15.3	7.9-11.8-18.7	48	50	38	23	18	16	
16"	540	0.087	31-46-67	33	406	83.8	21.6	9.4-14.0-20.3	51	53	43	30	24	22	
	625	0.116	36-51-72	37		97.0	28.9	10.8-15.5-21.9	54	55	48	36	30	27	
	710	0.150	41-54-77	41		110.2	37.3	12.3-16.5-23.3	56	58	51	41	35	31	
	220	0.011	9-18-35	-		34.2	2.7	2.8-5.3-10.7	34	34	14	-	-	-	
	320	0.023	17-26-51	-		49.7	5.7	5.2-7.8-15.5	40	41	25	-	-	-	
	420	0.040	22-34-59	22		65.2	9.9	6.8-10.2-17.9	45	46	33	15	-	-	
18"	520	0.061	28-41-66	28	457	80.7	15.1	8.4-12.6-20.0	49	50	39	23	18	16	
	620	0.086	33-49-72	33		96.3	21.5	10.0-15.0-21.8	52	53	44	30	25	22	
	720	0.116	38-55-77	38		111.8	29.0	11.6-16.6-23.5	54	56	48	36	30	27	
	820	0.151	44-58-82	41		127.3	37.6	13.3-17.7-25.1	56	58	52	41	35	32	
	240	0.010	9-18-36	-		37.3	2.5	2.8-5.5-11.0	34	34	13	-	-	-	
	350	0.022	18-26-53	-		54.3	5.4	5.3-8.0-16.0	40	41	24	-	-	-	
20"	460	0.037	23-35-62	22	508	71.4	9.2	7.0-10.5-18.8	45	46	32	14	-	-	
	570	0.057	29-43-69	28		88.5	14.2	8.7-13.0-20.9	49	50	38	23	17	15	
	680	0.081	34-51-75	33		105.6	20.2	10.3-15.5-22.8	52	53	44	30	24	21	
	790	0.110	40-57-81	37		122.6	27.3	12.0-17.4-24.6	54	56	48	36	30	27	
	900	0.142	45-61-86	41		139.7	35.4	13.7-18.6-26.2	56	58	52	41	35	31	
	250	0.009	8-18-36	-	610	38.8	2.2	2.6-5.4-10.8	33	33	12	-	-	-	
24"	375	0.020	18-27-53	-		58.2	4.9	5.4-8.1-16.2	40	41	23	-	-	-	
	500	0.035	24-36-64	22		77.6	8.8	7.2-10.8-19.6	45	46	32	14	-	-	
	625	0.055	30-44-72	28		97.0	13.7	9.0-13.5-21.9	49	50	38	22	17	15	
	750	0.079	36-53-79	33		116.4	19.7	10.8-16.2-24.0	52	53	44	30	24	22	
	875	0.108	41-60-85	38		135.8	26.9	12.6-18.3-25.9	54	56	48	36	30	27	
	1000	0.141	47-64-91	41		155.2	35.1	14.4-19.6-27.7	57	59	52	41	35	32	
24"	300	0.009	9-19-39	-	610	46.6	2.2	2.8-5.9-11.8	34	34	12	-	-	-	
	440	0.019	19-28-57	-		68.3	4.7	5.8-8.7-17.3	40	41	23	-	-	-	
	580	0.033	25-38-69	21		90.0	8.1	7.6-11.4-21.1	45	46	31	13	-	-	
	720	0.050	31-47-77	28		111.8	12.5	9.4-14.2-23.5	49	50	38	21	16	14	
	860	0.071	37-56-84	33		133.5	17.8	11.3-16.9-25.7	52	53	43	28	23	21	
	1000	0.097	43-64-91	37		155.2	24.1	13.1-19.6-27.7	54	56	47	34	29	26	
24"	1140	0.126	49-69-97	41	610	177.0	31.3	14.9-20.9-29.5	56	58	51	39	33	30	

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 10⁻¹² Watts. Dash in space denotes a NC or dB value of less than 10. Nominal duct is duct width. Data was obtained from tests conducted in accordance with ANSI/ASHRAE Standard 70, ISO Standard 5219, and ISO Standard 3741. 1800 Maximum width is 12" (305). See Krueger's selection program for performance data not shown, including octave band data.

1500 Suggested Specification & Configuration

1. SERIES: (XXXX)

1500 - Aluminum Linear Bar Grille (7/32" Bars)

2. LENGTH: CANNOT EXCEED WIDTH (XXX.XXX)

6" - 999" in 1/16" increments

3. WIDTH: (XX.XX)

2" - 24" in 1/4" increments

4. BAR SPACING: (X)

N - Normal 1/2"

P - Pencil Proof 7/16"

5. DEFLECTION: (XX)

0, 15°, or 30° *

6. FRAME: (XX)

CODE

A - 1 1/4"

B - 1"

C - 3/4"

D - 1/2"

R - 1/4"

PLASTER

AE - 1 1/4"

BE - 1"

CE - 3/4"

DS - 1/2"

RG - 1/4"

7. MOUNTING: (XX) (XX) ***

00 - None

01 - Spring Clip

02 - Surface Mount Concealed **

03 - Screw Hole Mounting

8. END BORDER: (X)

0 - End Cap Both Sides

B - Both Ends Butt Cut

L - Left End Butt Cut

R - Right End Butt Cut

9. DAMPER: (XX)

00 - No Damper

01 - Steel LOBD

15 - Aluminum LOBD

10. ACCESSORIES: (XX) (XX)

0 - No Accessories

B - Blank-off Strip

L - Linear Straightening Grid

AD - Access Door

11. FINISH: (XX) †

01 - Mill

10 - Alumican

35 - Black

44 - British White

Lengths greater than 72" are in multiple sections.

* 30° Deflection only available with pencil proof bar spacing.

15° Deflection only available with normal bar spacing.

** Concealed mounting not available with damper.

*** All mounting for Frame R is by others.

† Clear and Bronze anodizing available.

1500

The linear bar grille shall be Krueger model 1500 with 7/32" thick fixed bars at 0° or 15° deflection spaced on 1/2" centers or 7/32" thick fixed bars at 0° or 30° deflection spaced on 7/16" centers (pencil proof).

The 1500 shall be constructed of extruded aluminum with the maximum single length of 72". Units longer than 72" shall be provided in multiple sections and assembled with alignment strips or pins provided by the manufacturer yielding a continuous linear appearance. When end pieces require an end cap, the end cap must be mitered and mechanically attached to the linear frame. Screw attachment of end caps will not be accepted.

The 1500 linear bar core shall be locked to the extruded aluminum frame with the fixed deflection bars running parallel to the longest dimension. Support bars for the core must not exceed 9" on center spacing.

Optional linear opposed blade damper (LOBD) shall be constructed of heavy gage steel (aluminum also available as 5LOBD). Damper shall be operable from the face of the grille.

Optional curving of linear bar grilles to a minimum of 72" radius is available upon request.

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.

SAMPLE CONFIGURATION: 1500 - 64x4.50 - N - 0 - A - 03 - 0 - 01 - 0 - 0 - 44

1800 Suggested Specification & Configuration

1800

The linear floor bar grille shall be Krueger model 1800 with 7/32" thick fixed bars at 0° or 15° deflection spaced on 1/2" centers or 7/32" thick fixed bars at 0° or 30° deflection spaced on 7/16" centers (pencil proof).

The 1800 shall be constructed of extruded aluminum with the maximum single length of 72". Units longer than 72" shall be provided in multiple sections. When end pieces require an end cap, the end cap must be mitered and welded to the linear frame. Screw attachment of end caps will not be accepted.

The 1800 linear bar core shall be removable with the fixed deflection bars running parallel to the longest dimension. Support bars for the core must not exceed 6" on center spacing.

Optional linear opposed blade damper (LOBD) shall be constructed of heavy gage steel (aluminum also available as 5LOBD). Damper shall be operable from the face of the grille.

Optional curving of linear bar grilles to a minimum of 72" radius is available upon request.

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 #10 Alumican 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)**
1800 - Aluminum Linear Bar Floor Grille (7/32" Bars)
- 2. LENGTH: WIDTH CANNOT EXCEED (XXX.XXX)**
6" - 999" in 1/16" Increments
- 3. WIDTH: (XX.XX)**
2" - 12" in 1/4" Increments
- 4. BAR SPACING: (X)**
N - Normal 1/2"
P - Pencil Proof 7/16"
- 5. DEFLECTION: (XX)**
0, 15°, or 30° *
- 6. FRAME: (X)**
H - 1 1/4"
M - 1"
N - 3/16"
- 7. MOUNTING: (XX)**
00 - None
01 - Spring Clip **
03 - Screw Hole Mounting **
- 8. END BORDER: (X)**
0 - End Cap Both Sides
B - Both Ends Butt Cut
L - Left End Butt Cut
R - Right End Butt Cut
- 9. DAMPER: (XX) †**
00 - No Damper
01 - Steel LOBD
15 - Aluminum LOBD
- 10. ACCESSORIES: (X) (X)**
0 - No Accessories
B - Blank-off Strip
L - Linear Straightening Grid
- 11. FINISH: (XX) ‡**
01 - Mill
10 - Alumican
35 - Black
44 - British White

Lengths greater than 72" are in multiple sections.

* 30° Deflection only available with pencil proof bar spacing.

15° Deflection only available with normal bar spacing.

** Fastening methods not available with Frame N.

† Damper available for widths 3" or greater.

‡ Clear and Bronze anodizing available.

SAMPLE CONFIGURATION: 1800 - 50x3 - P - 30 - H - 03 - 0 - 00 - 0 - 0 - 10