

180, 5180, 180M, 5180M Performance Data: Horizontal Throw

SQUARE METRIC DATA: 180, 5180, 180M, 5180M (WITH OBD/MULTILOUVER)

	Neck Vel	Total Pres	Air Flow	NC	Throw Direction				Octave Band, dB						
					1-Way Throw	2-Way Throw	3-Way Throw	4-Way Throw							
					m	m	m	m	2	3	4	5	6	7	
					m/s	Pa	L/s								
152 x 152	1.02	6.1	24	-	1.3 - 1.9 - 3.9	1.1 - 1.7 - 3.4	1.0 - 1.5 - 2.9	0.9 - 1.4 - 2.7	-	13	19	17	12	-	
	1.52	13.7	35	18	1.9 - 2.9 - 5.8	1.7 - 2.5 - 5.1	1.5 - 2.2 - 4.4	1.4 - 2.0 - 4.1	18	23	29	27	22	17	
	2.03	24.3	47	25	2.6 - 3.9 - 7.7	2.3 - 3.4 - 6.8	1.9 - 2.9 - 5.8	1.8 - 2.7 - 5.4	25	30	36	34	29	24	
	2.54	38.0	59	31	3.2 - 4.8 - 9.6	2.8 - 4.2 - 8.5	2.4 - 3.6 - 7.3	2.3 - 3.4 - 6.8	31	36	42	40	35	30	
	3.05	54.7	71	35	3.9 - 5.8 - 10.5	3.4 - 5.1 - 10.0	2.9 - 4.4 - 8.7	2.7 - 4.1 - 7.9	36	41	47	45	40	35	
	3.56	74.4	83	39	4.5 - 6.8 - 11.4	3.9 - 5.9 - 10.8	3.4 - 5.1 - 9.7	3.2 - 4.7 - 8.5	40	45	51	49	44	39	
	4.06	97.2	94	43	5.2 - 7.7 - 12.2	4.5 - 6.8 - 11.6	3.9 - 5.8 - 10.3	3.6 - 5.4 - 9.1	43	48	54	52	47	42	
203 x 203	1.02	5.3	42	-	1.5 - 2.2 - 4.4	1.3 - 1.9 - 3.8	1.1 - 1.6 - 3.3	1.0 - 1.5 - 3.1	-	12	18	16	11	-	
	1.52	11.9	63	18	2.2 - 3.3 - 6.6	1.9 - 2.9 - 5.7	1.6 - 2.5 - 4.9	1.5 - 2.3 - 4.6	17	22	28	26	21	16	
	2.03	21.1	84	25	2.9 - 4.4 - 8.8	2.6 - 3.8 - 7.7	2.2 - 3.3 - 6.6	2.0 - 3.1 - 6.1	24	29	35	33	28	23	
	2.54	33.0	105	31	3.6 - 5.5 - 10.9	3.2 - 4.8 - 9.6	2.7 - 4.1 - 8.2	2.6 - 3.8 - 7.7	30	35	41	39	34	29	
	3.05	47.5	126	36	4.4 - 6.6 - 13.1	3.8 - 5.7 - 11.5	3.3 - 4.9 - 9.8	3.1 - 4.6 - 9.2	35	40	46	44	39	34	
	3.56	64.7	147	40	5.1 - 7.7 - 15.2	4.5 - 6.7 - 13.4	3.8 - 5.7 - 11.5	3.6 - 5.4 - 10.7	39	44	50	48	43	38	
	4.06	84.5	168	43	5.8 - 8.8 - 16.2	5.1 - 7.7 - 15.3	4.4 - 6.6 - 13.1	4.1 - 6.1 - 12.2	42	47	53	51	46	41	
254 x 254	1.02	4.9	66	-	1.6 - 2.4 - 4.9	1.4 - 2.1 - 4.3	1.2 - 1.8 - 3.6	1.1 - 1.7 - 3.4	-	11	17	15	-	-	
	1.52	10.9	98	18	2.4 - 3.6 - 7.3	2.1 - 3.2 - 6.4	1.8 - 2.7 - 5.5	1.7 - 2.6 - 5.1	17	22	28	26	21	16	
	2.03	19.5	131	26	3.2 - 4.9 - 9.7	2.8 - 4.3 - 8.5	2.4 - 3.6 - 7.3	2.3 - 3.4 - 6.8	24	29	35	33	28	23	
	2.54	30.4	164	31	4.1 - 6.1 - 12.2	3.5 - 5.3 - 10.6	3.0 - 4.6 - 9.1	2.8 - 4.3 - 8.5	30	35	41	39	34	29	
	3.05	43.8	197	36	4.9 - 7.3 - 14.6	4.3 - 6.4 - 12.8	3.6 - 5.5 - 10.9	3.4 - 5.1 - 10.2	34	39	45	43	38	33	
	3.56	59.6	229	40	5.7 - 8.5 - 17.0	5.0 - 7.4 - 14.9	4.3 - 6.4 - 12.8	4.0 - 6.0 - 11.9	38	43	49	47	42	37	
	4.06	77.8	262	43	6.5 - 9.7 - 19.5	5.7 - 8.5 - 17.0	4.9 - 7.3 - 14.6	4.5 - 6.8 - 13.6	42	47	53	51	46	41	
305 x 305	1.02	4.6	94	-	1.8 - 2.7 - 5.3	1.6 - 2.3 - 4.7	1.3 - 2.0 - 4.0	1.2 - 1.9 - 3.7	-	11	17	15	-	-	
	1.52	10.4	142	19	2.7 - 4.0 - 8.0	2.3 - 3.5 - 7.0	2.0 - 3.0 - 6.0	1.9 - 2.8 - 5.6	17	22	28	26	21	16	
	2.03	18.4	189	26	3.5 - 5.3 - 10.6	3.1 - 4.7 - 9.3	2.7 - 4.0 - 8.0	2.5 - 3.7 - 7.5	24	29	35	33	28	23	
	2.54	28.8	236	32	4.4 - 6.7 - 13.3	3.9 - 5.8 - 11.6	3.3 - 5.0 - 10.0	3.1 - 4.7 - 9.3	30	35	41	39	34	29	
	3.05	41.5	283	37	5.3 - 8.0 - 16.0	4.7 - 7.0 - 14.0	4.0 - 6.0 - 12.0	3.7 - 5.6 - 11.2	35	40	46	44	39	34	
	3.56	56.5	330	41	6.2 - 9.3 - 18.6	5.4 - 8.2 - 16.3	4.7 - 7.0 - 14.0	4.3 - 6.5 - 13.0	39	44	50	48	43	38	
	4.06	73.8	378	44	7.1 - 10.6 - 21.3	6.2 - 9.3 - 18.6	5.3 - 8.0 - 16.0	5.0 - 7.5 - 14.9	42	47	53	51	46	41	
356 x 356	1.02	4.4	128	-	1.9 - 2.9 - 5.8	1.7 - 2.5 - 5.0	1.4 - 2.2 - 4.3	1.3 - 2.0 - 4.0	-	11	17	15	-	-	
	1.52	10.0	193	18	2.9 - 4.3 - 8.6	2.5 - 3.8 - 7.6	2.2 - 3.2 - 6.5	2.0 - 3.0 - 6.1	17	22	28	26	21	16	
	2.03	17.8	257	26	3.8 - 5.8 - 11.5	3.4 - 5.0 - 10.1	2.9 - 4.3 - 8.6	2.7 - 4.0 - 8.1	24	29	35	33	28	23	
	2.54	27.7	321	31	4.8 - 7.2 - 14.4	4.2 - 6.3 - 12.6	3.6 - 5.4 - 10.8	3.4 - 5.0 - 10.1	30	35	41	39	34	29	
	3.05	40.0	385	36	5.8 - 8.6 - 17.3	5.0 - 7.6 - 15.1	4.3 - 6.5 - 13.0	4.0 - 6.1 - 12.1	35	40	46	44	39	34	
	3.56	54.4	450	40	6.7 - 10.1 - 20.2	5.9 - 8.8 - 17.6	5.0 - 7.6 - 15.1	4.7 - 7.1 - 14.1	39	44	50	48	43	38	
	4.06	71.0	514	44	7.7 - 11.5 - 23.1	6.7 - 10.1 - 20.2	5.8 - 8.6 - 17.3	5.4 - 8.1 - 16.1	42	47	53	51	46	41	
406 x 406	1.02	4.3	168	-	2.1 - 3.1 - 6.2	1.8 - 2.7 - 5.4	1.5 - 2.3 - 4.6	1.4 - 2.2 - 4.3	-	11	17	15	-	-	
	1.52	9.7	252	20	3.1 - 4.6 - 9.3	2.7 - 4.1 - 8.1	2.3 - 3.5 - 7.0	2.2 - 3.2 - 6.5	17	22	28	26	21	16	
	2.03	17.3	336	27	4.1 - 6.2 - 12.4	3.6 - 5.4 - 10.8	3.1 - 4.6 - 9.3	2.9 - 4.3 - 8.7	24	29	35	33	28	23	
	2.54	27.0	420	33	5.2 - 7.7 - 15.5	4.5 - 6.8 - 13.5	3.9 - 5.8 - 11.6	3.6 - 5.4 - 10.8	30	35	41	39	34	29	
	3.05	38.8	503	38	6.2 - 9.3 - 18.5	5.4 - 8.1 - 16.2	4.6 - 7.0 - 13.9	4.3 - 6.5 - 13.0	35	40	46	44	39	34	
	3.56	52.9	587	42	7.2 - 10.8 - 21.6	6.3 - 9.5 - 18.9	5.4 - 8.1 - 16.2	5.0 - 7.6 - 15.1	39	44	50	48	43	38	
	4.06	69.1	671	45	8.2 - 12.4 - 24.7	7.2 - 10.8 - 21.6	6.2 - 9.3 - 18.5	5.8 - 8.7 - 17.3	42	47	53	51	46	41	
457 x 457	1.02	4.2	212	-	2.2 - 3.3 - 6.6	1.9 - 2.9 - 5.8	1.6 - 2.5 - 4.9	1.5 - 2.3 - 4.6	-	11	17	15	-	-	
	1.52	9.5	319	18	3.3 - 4.9 - 9.9	2.9 - 4.3 - 8.6	2.5 - 3.7 - 7.4	2.3 - 3.5 - 6.9	17	22	28	26	21	16	
	2.03	16.9	425	25	4.4 - 6.6 - 13.2	3.8 - 5.8 - 11.5	3.3 - 4.9 - 9.9	3.1 - 4.6 - 9.2	24	29	35	33	28	23	
	2.54	26.4	531	31	5.5 - 8.2 - 16.5	4.8 - 7.2 - 14.4	4.1 - 6.2 - 12.3	3.8 - 5.8 - 11.5	30	35	41	39	34	29	
	3.05	38.0	637	35	6.6 - 9.9 - 19.8	5.8 - 8.6 - 17.3	4.9 - 7.4 - 14.8	4.6 - 6.9 - 13.8	35	40	46	44	39	34	
	3.56	51.7	743	39	7.7 - 11.5 - 23.0	6.7 - 10.1 - 20.2	5.8 - 8.6 - 17.3	5.4 - 8.1 - 16.1	39	44	50	48	43	38	
	4.06	67.6	850	43	8.8 - 13.2 - 26.3	7.7 - 11.5 - 23.0	6.6 - 9.9 - 19.8	6.1 - 9.2 - 18.4	42	47	53	51	46	41	
508 x 508	1.02	4.2	262	-	2.3 - 3.5 - 7.0	2.0 - 3.1 - 6.1	1.7 - 2.6 - 5.2	1.6 - 2.4 - 4.9	-	-	16	14	-	-	
	1.52	9.3	393	21	3.5 - 5.2 - 10.5	3.1 - 4.6 - 9.2	2.6 - 3.9 - 7.8	2.4 - 3.7 - 7.3	15	20	26	24	19	14	
	2.03	16.6	524	28	4.6 - 7.0 - 13.9	4.1 - 6.1 - 12.2	3.5 - 5.2 - 10.5	3.3 - 4.9 - 9.8	23	28	34	32	27	22	
	2.54	25.9	655	34	5.8 - 8.7 - 17.4	5.1 - 7.6 - 15.3	4.4 - 6.5 - 13.1	4.1 - 6.1 - 12.2	29	34	40	38	33	28	
	3.05	37.4	787	39	7.0 - 10.5 - 20.9	6.1 - 9.2 - 18.3	5.2 - 7.8 - 15.7	4.9 - 7.3 - 14.6	33	38	44	42	37	32	
	3.56	50.8	918	43	8.1 - 12.2 - 24.4	7.1 - 10.7 - 21.4	6.1 - 9.2 - 18.3	5.7 - 8.5 - 17.1	37	42	48	46	41	36	
	4.06	66.4	1049	46	9.3 - 13.9 - 27.9	8.1 - 12.2 - 24.4	7.0 - 10.5 - 20.9	6.5 - 9.8 - 19.5	41	46	52	50	45	40	

SUPPLY GRILLES

180 - 180M

NOTE: See notes and correction factors on page I1-16.

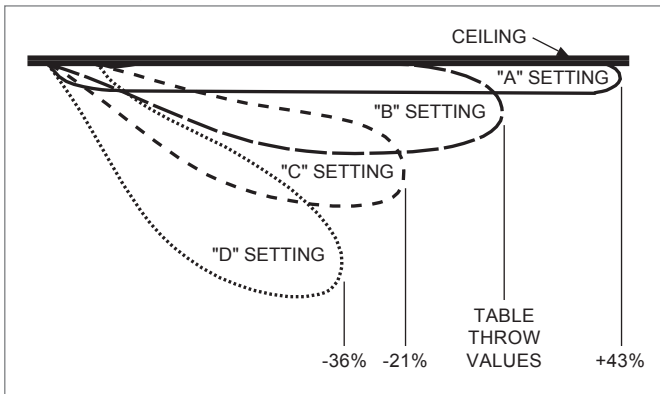
180, 5180, 180M, 5180M Performance Data: Horizontal Throw

SQUARE METRIC DATA: 180, 5180, 180M, 5180M (WITH OBD/MULTILOUVER)

	Neck Vel	Total Pres	Air Flow	NC	Throw Direction				Octave Band, dB						
					1-Way Throw	2-Way Throw	3-Way Throw	4-Way Throw	2	3	4	5	6	7	
					m	m	m	m							
610 x 610	1.02	4.0	378	-	2.2 - 3.9 - 7.7	1.9 - 3.4 - 6.7	1.6 - 2.9 - 5.8	1.5 - 2.7 - 5.4	-	-	16	14	-	-	
	1.52	9.1	566	17	3.9 - 5.8 - 11.6	3.4 - 5.1 - 10.1	2.9 - 4.3 - 8.7	2.7 - 4.0 - 8.1	16	21	27	25	20	15	
	2.03	16.2	755	24	5.1 - 7.7 - 15.4	4.5 - 6.7 - 13.5	3.9 - 5.8 - 11.6	3.6 - 5.4 - 10.8	23	28	34	32	27	22	
	2.54	25.3	944	30	6.4 - 9.6 - 19.3	5.6 - 8.4 - 16.9	4.8 - 7.2 - 14.5	4.5 - 6.7 - 13.5	29	34	40	38	33	28	
	3.05	36.4	1133	35	7.7 - 11.6 - 23.1	6.7 - 10.1 - 20.2	5.8 - 8.7 - 17.3	5.4 - 8.1 - 16.2	34	39	45	43	38	33	
	3.56	49.5	1321	39	9.0 - 13.5 - 27.0	7.9 - 11.8 - 23.6	6.7 - 10.1 - 20.2	6.3 - 9.4 - 18.9	38	43	49	47	42	37	
4.06	64.7	1510	42	10.3 - 15.4 - 30.8	9.0 - 13.5 - 27.0	7.7 - 11.6 - 23.1	7.2 - 10.8 - 21.6	41	46	52	50	45	40		
762 x 762	1.02	3.9	590	12	2.0 - 4.4 - 8.7	1.8 - 3.8 - 7.6	1.5 - 3.3 - 6.5	1.4 - 3.1 - 6.1	-	-	16	14	-	-	
	1.52	8.9	885	23	4.4 - 6.5 - 13.1	3.8 - 5.7 - 11.5	3.3 - 4.9 - 9.8	3.1 - 4.6 - 9.2	16	21	27	25	20	15	
	2.03	15.8	1180	30	5.8 - 8.7 - 17.5	5.1 - 7.6 - 15.3	4.4 - 6.5 - 13.1	4.1 - 6.1 - 12.2	23	28	34	32	27	22	
	2.54	24.6	1475	36	7.3 - 10.9 - 21.8	6.4 - 9.6 - 19.1	5.5 - 8.2 - 16.4	5.1 - 7.6 - 15.3	29	34	40	38	33	28	
	3.05	35.5	1770	40	8.7 - 13.1 - 26.2	7.6 - 11.5 - 22.9	6.5 - 9.8 - 19.6	6.1 - 9.2 - 18.3	34	39	45	43	38	33	
	3.56	48.3	2065	44	10.2 - 15.3 - 30.6	8.9 - 13.4 - 26.7	7.6 - 11.5 - 22.9	7.1 - 10.7 - 21.4	38	43	49	47	42	37	
4.06	63.1	2360	48	11.6 - 17.5 - 34.9	10.2 - 15.3 - 30.6	8.7 - 13.1 - 26.2	8.2 - 12.2 - 24.5	41	46	52	50	45	40		
914 x 914	1.02	3.9	850	13	1.9 - 4.3 - 9.7	3.6 - 5.5 - 11.0	3.1 - 4.7 - 9.4	2.9 - 4.4 - 8.8	-	11	17	15	-	-	
	1.52	8.7	1274	23	4.3 - 7.3 - 14.5	5.5 - 8.3 - 16.5	4.7 - 7.1 - 14.1	4.4 - 6.6 - 13.2	16	21	27	25	20	15	
	2.03	15.5	1699	31	6.5 - 9.7 - 19.4	7.3 - 11.0 - 22.0	6.3 - 9.4 - 18.9	5.9 - 8.8 - 17.6	23	28	34	32	27	22	
	2.54	24.2	2124	37	8.1 - 12.1 - 24.2	9.2 - 13.8 - 27.5	7.9 - 11.8 - 23.6	7.3 - 11.0 - 22.0	29	34	40	38	33	28	
	3.05	34.9	2549	41	9.7 - 14.5 - 29.1	11.0 - 16.5 - 33.0	9.4 - 14.1 - 28.3	8.8 - 13.2 - 26.4	34	39	45	43	38	33	
	3.56	47.5	2973	45	11.3 - 16.9 - 33.9	12.8 - 19.3 - 38.5	11.0 - 16.5 - 33.0	10.3 - 15.4 - 30.8	38	43	49	47	42	37	
4.06	62.0	3398	49	12.9 - 19.4 - 38.7	14.7 - 22.0 - 44.0	12.6 - 18.9 - 37.7	11.7 - 17.6 - 35.2	41	46	52	50	45	40		

NOTES: Throw values are given for terminal velocities of 0.75, 0.50, and 0.25 m/s. Throw values are given for isothermal conditions. 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. The throw values given for 1-Way Throw is for [Total L/s] L/s per side. The throw values given for 2-Way Throw is for [(Total L/s)/2] L/s per side. The throw values given for 3-Way Throw is for [(Total L/s)/3] L/s per side. The throw values given for 4-Way Throw is for [(Total L/s)/4] L/s per side. See Krueger's selection software for performance data not shown, including octave band data.

180 SERIES, BLADE SETTING & THROW DETAIL



NOTE: Reference page I1-3 for blade setting detail.

Correction Factor (with OBD)			
Blade Setting	Throws (Multiply)	Ps (Multiply)	NC (Add)
A	1.43	1.30	+2
B	1.00	1.00	+0
C	0.79	0.72	-3
D	0.64	0.52	-4

Correction Factor (without OBD)			
Blade Setting	Throws (Multiply)	Ps (Multiply)	NC (Add)
A	1.43	1.20	+0
B	1.00	0.85	-3
C	0.70	0.61	-4
D	0.64	0.33	-6

SUPPLY GRILLES

1
8
0
-
1
8
0
M

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180, 5180, 180M, 5180M Performance Data: Horizontal Throw**RECTANGULAR METRIC DATA: 180, 5180, 180M, 5180M (WITH OBD/MULTILOUVER)**

	Performance			NC	Throw Direction				Octave Band, dB						
	Neck Vel	Total Pres	Air Flow		1-Way Throw	2-Way Throw	3-Way Throw	4-Way Throw	2	3	4	5	6	7	
	m/s	Pa	L/s		m	m	m	m							
102 x 152	1.016	7.0	16	-	0.6 - 0.9 - 1.7	0.4 - 0.6 - 1.2	0.4 - 0.6 - 1.3	0.4 - 0.6 - 1.2	-	15	21	19	14	-	
	1.524	15.9	24	18	0.9 - 1.3 - 2.6	0.6 - 0.9 - 1.8	0.6 - 1.0 - 1.9	0.6 - 0.9 - 1.8	20	25	31	29	24	19	
	2.032	28.2	31	25	1.1 - 1.7 - 3.4	0.8 - 1.2 - 2.4	0.9 - 1.3 - 2.6	0.8 - 1.2 - 2.4	27	32	38	36	31	26	
	2.54	44.0	39	31	1.4 - 2.1 - 4.3	1.0 - 1.5 - 3.0	1.1 - 1.6 - 3.2	1.0 - 1.5 - 3.0	33	38	44	42	37	32	
	3.048	63.4	47	36	1.7 - 2.6 - 5.1	1.2 - 1.8 - 3.6	1.3 - 1.9 - 3.8	1.2 - 1.8 - 3.6	38	43	49	47	42	37	
	3.556	86.3	55	40	2.0 - 3.0 - 6.0	1.4 - 2.1 - 4.2	1.5 - 2.2 - 4.5	1.4 - 2.1 - 4.2	42	47	53	51	46	41	
4.064	112.8	63	43	2.3 - 3.4 - 6.8	1.6 - 2.4 - 4.8	1.7 - 2.6 - 5.1	1.6 - 2.4 - 4.8	45	50	56	54	49	44		
102 x 203	1.016	6.6	21	-	0.6 - 0.9 - 1.8	0.7 - 1.0 - 2.0	0.5 - 0.7 - 1.4	0.4 - 0.6 - 1.3	-	14	20	18	13	-	
	1.524	14.8	31	18	0.9 - 1.4 - 2.7	1.0 - 1.5 - 3.0	0.7 - 1.0 - 2.0	0.6 - 1.0 - 1.9	20	25	31	29	24	19	
	2.032	26.3	42	25	1.2 - 1.8 - 3.6	1.3 - 2.0 - 4.0	0.9 - 1.4 - 2.7	0.8 - 1.3 - 2.5	27	32	38	36	31	26	
	2.54	41.1	52	31	1.5 - 2.3 - 4.5	1.7 - 2.5 - 5.0	1.1 - 1.7 - 3.4	1.1 - 1.6 - 3.2	33	38	44	42	37	32	
	3.048	59.1	63	36	1.8 - 2.7 - 5.4	2.0 - 3.0 - 6.0	1.4 - 2.0 - 4.1	1.3 - 1.9 - 3.8	38	43	49	47	42	37	
	3.556	80.5	73	40	2.1 - 3.2 - 6.3	2.3 - 3.5 - 7.0	1.6 - 2.4 - 4.8	1.5 - 2.2 - 4.4	42	47	53	51	46	41	
4.064	105.1	84	43	2.4 - 3.6 - 7.2	2.6 - 4.0 - 7.5	1.8 - 2.7 - 5.4	1.7 - 2.5 - 5.1	45	50	56	54	49	44		
102 x 254	1.016	6.3	26	-	0.6 - 1.0 - 1.9	0.6 - 0.8 - 1.7	0.5 - 0.7 - 1.4	0.4 - 0.7 - 1.3	-	14	20	18	13	-	
	1.524	14.2	39	18	1.0 - 1.4 - 2.9	0.8 - 1.3 - 2.5	0.7 - 1.1 - 2.1	0.7 - 1.0 - 2.0	20	25	31	29	24	19	
	2.032	25.2	52	26	1.3 - 1.9 - 3.8	1.1 - 1.7 - 3.3	1.0 - 1.4 - 2.9	0.9 - 1.3 - 2.7	27	32	38	36	31	26	
	2.54	39.4	66	31	1.6 - 2.4 - 4.8	1.4 - 2.1 - 4.2	1.2 - 1.8 - 3.6	1.1 - 1.7 - 3.3	33	38	44	42	37	32	
	3.048	56.8	79	36	1.9 - 2.9 - 5.7	1.7 - 2.5 - 5.0	1.4 - 2.1 - 4.3	1.3 - 2.0 - 4.0	38	43	49	47	42	37	
	3.556	77.2	92	40	2.2 - 3.3 - 6.7	1.9 - 2.9 - 5.8	1.7 - 2.5 - 5.0	1.6 - 2.3 - 4.7	42	47	53	51	46	41	
4.064	100.9	105	44	2.5 - 3.8 - 7.6	2.2 - 3.3 - 6.7	1.9 - 2.9 - 5.7	1.8 - 2.7 - 5.3	45	50	56	54	49	44		
102 x 305	1.016	6.1	31	-	0.7 - 1.0 - 2.0	0.6 - 0.9 - 1.7	0.5 - 0.7 - 1.5	0.5 - 0.7 - 1.4	-	15	21	19	14	-	
	1.524	13.8	47	19	1.0 - 1.5 - 3.0	0.9 - 1.3 - 2.6	0.7 - 1.1 - 2.2	0.7 - 1.0 - 2.1	20	25	31	29	24	19	
	2.032	24.6	63	26	1.3 - 2.0 - 4.0	1.2 - 1.7 - 3.5	1.0 - 1.5 - 3.0	0.9 - 1.4 - 2.8	28	33	39	37	32	27	
	2.54	38.4	79	32	1.7 - 2.5 - 5.0	1.5 - 2.2 - 4.4	1.2 - 1.9 - 3.7	1.2 - 1.7 - 3.5	34	39	45	43	38	33	
	3.048	55.2	94	36	2.0 - 3.0 - 6.0	1.7 - 2.6 - 5.2	1.5 - 2.2 - 4.5	1.4 - 2.1 - 4.2	38	43	49	47	42	37	
	3.556	75.2	110	40	2.3 - 3.5 - 7.0	2.0 - 3.1 - 6.1	1.7 - 2.6 - 5.2	1.6 - 2.4 - 4.9	42	47	53	51	46	41	
4.064	98.2	126	44	2.7 - 4.0 - 8.0	2.3 - 3.5 - 7.0	2.0 - 3.0 - 6.0	1.9 - 2.8 - 5.6	46	51	57	55	50	45		
102 x 356	1.016	6.0	37	-	0.8 - 1.2 - 2.3	0.5 - 0.8 - 1.6	0.6 - 0.9 - 1.7	0.5 - 0.8 - 1.6	-	15	21	19	14	-	
	1.524	13.6	55	19	1.2 - 1.7 - 3.5	0.8 - 1.2 - 2.5	0.9 - 1.3 - 2.6	0.8 - 1.2 - 2.4	21	26	32	30	25	20	
	2.032	24.1	73	26	1.6 - 2.3 - 4.7	1.1 - 1.6 - 3.3	1.2 - 1.7 - 3.5	1.1 - 1.6 - 3.3	28	33	39	37	32	27	
	2.54	37.6	92	32	1.9 - 2.9 - 5.8	1.4 - 2.1 - 4.1	1.5 - 2.2 - 4.4	1.4 - 2.0 - 4.1	34	39	45	43	38	33	
	3.048	54.2	110	37	2.3 - 3.5 - 7.0	1.6 - 2.5 - 4.9	1.7 - 2.6 - 5.2	1.6 - 2.4 - 4.9	39	44	50	48	43	38	
	3.556	73.8	128	41	2.7 - 4.1 - 8.2	1.9 - 2.9 - 5.8	2.0 - 3.1 - 6.1	1.9 - 2.9 - 5.7	42	47	53	51	46	41	
4.064	96.4	147	44	3.1 - 4.7 - 9.3	2.2 - 3.3 - 6.6	2.3 - 3.5 - 7.0	2.2 - 3.3 - 6.5	46	51	57	55	50	45		
102 x 406	1.016	5.9	42	-	0.7 - 1.1 - 2.2	0.6 - 0.9 - 1.9	0.5 - 0.8 - 1.6	0.5 - 0.8 - 1.5	-	15	21	19	14	-	
	1.524	13.4	63	19	1.1 - 1.6 - 3.2	0.9 - 1.4 - 2.8	0.8 - 1.2 - 2.4	0.8 - 1.1 - 2.3	21	26	32	30	25	20	
	2.032	23.8	84	26	1.4 - 2.2 - 4.3	1.3 - 1.9 - 3.8	1.1 - 1.6 - 3.2	1.0 - 1.5 - 3.0	28	33	39	37	32	27	
	2.54	37.1	105	32	1.8 - 2.7 - 5.4	1.6 - 2.4 - 4.7	1.3 - 2.0 - 4.0	1.3 - 1.9 - 3.8	34	39	45	43	38	33	
	3.048	53.5	126	37	2.2 - 3.2 - 6.5	1.9 - 2.8 - 5.7	1.6 - 2.4 - 4.8	1.5 - 2.3 - 4.5	39	44	50	48	43	38	
	3.556	72.8	147	41	2.5 - 3.8 - 7.5	2.2 - 3.3 - 6.6	1.9 - 2.8 - 5.7	1.8 - 2.6 - 5.3	43	48	54	52	47	42	
4.064	95.0	168	44	2.9 - 4.3 - 8.6	2.5 - 3.8 - 7.5	2.2 - 3.2 - 6.5	2.0 - 3.0 - 6.0	46	51	57	55	50	45		
102 x 457	1.016	5.9	47	-	0.7 - 1.1 - 2.2	0.6 - 1.0 - 1.9	0.6 - 0.8 - 1.7	0.5 - 0.8 - 1.6	11	16	22	20	15	-	
	1.524	13.2	71	19	1.1 - 1.7 - 3.3	1.0 - 1.5 - 2.9	0.8 - 1.2 - 2.5	0.8 - 1.2 - 2.3	21	26	32	30	25	20	
	2.032	23.5	94	27	1.5 - 2.2 - 4.4	1.3 - 1.9 - 3.9	1.1 - 1.7 - 3.3	1.0 - 1.6 - 3.1	29	34	40	38	33	28	
	2.54	36.7	118	32	1.9 - 2.8 - 5.6	1.6 - 2.4 - 4.9	1.4 - 2.1 - 4.2	1.3 - 1.9 - 3.9	34	39	45	43	38	33	
	3.048	52.9	142	37	2.2 - 3.3 - 6.7	1.9 - 2.9 - 5.8	1.7 - 2.5 - 5.0	1.6 - 2.3 - 4.7	39	44	50	48	43	38	
	3.556	72.0	165	41	2.6 - 3.9 - 7.8	2.3 - 3.4 - 6.8	1.9 - 2.9 - 5.8	1.8 - 2.7 - 5.4	43	48	54	52	47	42	
4.064	94.0	189	45	3.0 - 4.4 - 8.9	2.6 - 3.9 - 7.8	2.2 - 3.3 - 6.7	2.1 - 3.1 - 6.2	47	52	58	56	51	46		
102 x 508	1.016	5.8	52	-	0.8 - 1.1 - 2.3	0.7 - 1.0 - 2.0	0.6 - 0.9 - 1.7	0.5 - 0.8 - 1.6	-	14	20	18	13	-	
	1.524	13.1	79	20	1.1 - 1.7 - 3.4	1.0 - 1.5 - 3.0	0.9 - 1.3 - 2.6	0.8 - 1.2 - 2.4	20	25	31	29	24	19	
	2.032	23.3	105	27	1.5 - 2.3 - 4.6	1.3 - 2.0 - 4.0	1.1 - 1.7 - 3.4	1.1 - 1.6 - 3.2	27	32	38	36	31	26	
	2.54	36.4	131	33	1.9 - 2.9 - 5.7	1.7 - 2.5 - 5.0	1.4 - 2.1 - 4.3	1.3 - 2.0 - 4.0	33	38	44	42	37	32	
	3.048	52.4	157	37	2.3 - 3.4 - 6.9	2.0 - 3.0 - 6.0	1.7 - 2.6 - 5.1	1.6 - 2.4 - 4.8	38	43	49	47	42	37	
	3.556	71.3	184	41	2.7 - 4.0 - 8.0	2.3 - 3.5 - 7.0	2.0 - 3.0 - 6.0	1.9 - 2.8 - 5.6	42	47	53	51	46	41	
4.064	93.2	210	45	3.0 - 4.6 - 9.1	2.7 - 4.0 - 8.0	2.3 - 3.4 - 6.9	2.1 - 3.2 - 6.4	45	50	56	54	49	44		

SUPPLY GRILLES

1
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180, 5180, 180M, 5180M Performance Data: Horizontal Throw
RECTANGULAR METRIC DATA: 180, 5180, 180M, 5180M (WITH OBD/MULTILOUVER)

	Neck Vel	Total Pres	Air Flow	NC	Throw Direction				Octave Band, dB						
					1-Way Throw	2-Way Throw	3-Way Throw	4-Way Throw	2	3	4	5	6	7	
					m	m	m	m							
152 x 762	1.016	4.9	118	-	1.9-2.9-5.8	1.7-2.5-5.1	1.5-2.2-4.4	1.4-2.0-4.1	11	16	22	20	15	-	
	1.524	11.0	177	20	2.9-4.4-8.7	2.5-3.8-7.6	2.2-3.3-6.5	2.0-3.1-6.1	21	26	32	30	25	20	
	2.032	19.6	236	27	3.9-5.8-11.6	3.4-5.1-10.2	2.9-4.4-8.7	2.7-4.1-8.1	28	33	39	37	32	27	
	2.54	30.6	295	33	4.8-7.3-14.5	4.2-6.4-12.7	3.6-5.4-10.9	3.4-5.1-10.2	34	39	45	43	38	33	
	3.048	44.0	354	38	5.8-8.7-17.4	5.1-7.6-15.3	4.4-6.5-13.1	4.1-6.1-12.2	39	44	50	48	43	38	
	3.556	59.9	413	42	6.8-10.2-20.3	5.9-8.9-17.8	5.1-7.6-15.3	4.7-7.1-14.2	43	48	54	52	47	42	
4.064	78.3	472	45	7.7-11.6-23.2	6.8-10.2-20.3	5.8-8.7-17.4	5.4-8.1-16.3	46	51	57	55	50	45		
203 x 254	1.016	5.1	52	-	1.5-2.3-4.6	1.3-2.0-4.0	1.2-1.7-3.5	1.1-1.6-3.2	-	13	19	17	12	-	
	1.524	11.4	79	18	2.3-3.5-6.9	2.0-3.0-6.1	1.7-2.6-5.2	1.6-2.4-4.8	19	24	30	28	23	18	
	2.032	20.3	105	25	3.1-4.6-9.2	2.7-4.0-8.1	2.3-3.5-6.9	2.2-3.2-6.5	26	31	37	35	30	25	
	2.54	31.7	131	31	3.8-5.8-11.5	3.4-5.0-10.1	2.9-4.3-8.7	2.7-4.0-8.1	32	37	43	41	36	31	
	3.048	45.6	157	36	4.6-6.9-13.8	4.0-6.1-12.1	3.5-5.2-10.4	3.2-4.8-9.7	37	42	48	46	41	36	
	3.556	62.1	184	40	5.4-8.1-16.1	4.7-7.1-14.1	4.0-6.1-12.1	3.8-5.7-11.3	41	46	52	50	45	40	
4.064	81.1	210	43	6.2-9.2-18.1	5.4-8.1-16.1	4.6-6.9-13.8	4.3-6.5-12.9	44	49	55	53	48	43		
203 x 305	1.016	4.9	63	-	1.6-2.4-4.8	1.4-2.1-4.2	1.2-1.8-3.6	1.1-1.7-3.4	-	14	20	18	13	-	
	1.524	11.1	94	18	2.4-3.6-7.2	2.1-3.2-6.3	1.8-2.7-5.4	1.7-2.5-5.1	19	24	30	28	23	18	
	2.032	19.7	126	26	3.2-4.8-9.7	2.8-4.2-8.4	2.4-3.6-7.2	2.3-3.4-6.8	27	32	38	36	31	26	
	2.54	30.8	157	31	4.0-6.0-12.1	3.5-5.3-10.6	3.0-4.5-9.1	2.8-4.2-8.4	32	37	43	41	36	31	
	3.048	44.4	189	36	4.8-7.2-14.5	4.2-6.3-12.7	3.6-5.4-10.9	3.4-5.1-10.1	37	42	48	46	41	36	
	3.556	60.4	220	40	5.6-8.4-16.9	4.9-7.4-14.8	4.2-6.3-12.7	3.9-5.9-11.8	41	46	52	50	45	40	
4.064	78.9	252	44	6.4-9.7-19.3	5.6-8.4-16.9	4.8-7.2-14.5	4.5-6.8-13.5	45	50	56	54	49	44		
203 x 356	1.016	4.8	73	-	1.7-2.5-5.0	1.5-2.2-4.4	1.3-1.9-3.8	1.2-1.8-3.5	-	14	20	18	13	-	
	1.524	10.9	110	18	2.5-3.8-7.5	2.2-3.3-6.6	1.9-2.8-5.7	1.8-2.6-5.3	19	24	30	28	23	18	
	2.032	19.4	147	26	3.3-5.0-10.0	2.9-4.4-8.8	2.5-3.8-7.5	2.3-3.5-7.0	27	32	38	36	31	26	
	2.54	30.3	184	32	4.2-6.3-12.6	3.7-5.5-11.0	3.1-4.7-9.4	2.9-4.4-8.8	33	38	44	42	37	32	
	3.048	43.6	220	36	5.0-7.5-15.1	4.4-6.6-13.2	3.8-5.7-11.3	3.5-5.3-10.5	37	42	48	46	41	36	
	3.556	59.3	257	40	5.9-8.8-17.6	5.1-7.7-15.4	4.4-6.6-13.2	4.1-6.2-12.3	41	46	52	50	45	40	
4.064	77.5	294	44	6.7-10.0-20.1	5.9-8.8-17.6	5.0-7.5-15.1	4.7-7.0-14.1	45	50	56	54	49	44		
203 x 406	1.016	4.8	84	-	1.7-2.6-5.2	1.5-2.3-4.6	1.3-2.0-3.9	1.2-1.8-3.6	-	14	20	18	13	-	
	1.524	10.7	126	19	2.6-3.9-7.8	2.3-3.4-6.8	2.0-2.9-5.9	1.8-2.7-5.5	20	25	31	29	24	19	
	2.032	19.1	168	26	3.5-5.2-10.4	3.0-4.6-9.1	2.6-3.9-7.8	2.4-3.6-7.3	27	32	38	36	31	26	
	2.54	29.8	210	32	4.3-6.5-13.0	3.8-5.7-11.4	3.3-4.9-9.8	3.0-4.6-9.1	33	38	44	42	37	32	
	3.048	43.0	252	37	5.2-7.8-15.6	4.6-6.8-13.7	3.9-5.9-11.7	3.6-5.5-10.9	38	43	49	47	42	37	
	3.556	58.5	294	41	6.1-9.1-18.2	5.3-8.0-15.9	4.6-6.8-13.7	4.2-6.4-12.7	42	47	53	51	46	41	
4.064	76.4	336	44	6.9-10.4-20.8	6.1-9.1-18.2	5.2-7.8-15.6	4.9-7.3-14.6	45	50	56	54	49	44		
203 x 457	1.016	4.7	94	-	1.8-2.7-5.4	1.6-2.3-4.7	1.3-2.0-4.0	1.3-1.9-3.8	-	14	20	18	13	-	
	1.524	10.6	142	19	2.7-4.0-8.1	2.3-3.5-7.0	2.0-3.0-6.0	1.9-2.8-5.6	20	25	31	29	24	19	
	2.032	18.9	189	26	3.6-5.4-10.7	3.1-4.7-9.4	2.7-4.0-8.1	2.5-3.8-7.5	27	32	38	36	31	26	
	2.54	29.5	236	32	4.5-6.7-13.4	3.9-5.9-11.7	3.4-5.0-10.1	3.1-4.7-9.4	33	38	44	42	37	32	
	3.048	42.5	283	37	5.4-8.1-16.1	4.7-7.0-14.1	4.0-6.0-12.1	3.8-5.6-11.3	38	43	49	47	42	37	
	3.556	57.8	330	41	6.3-9.4-18.8	5.5-8.2-16.4	4.7-7.0-14.1	4.4-6.6-13.2	42	47	53	51	46	41	
4.064	75.6	378	44	7.2-10.7-21.5	6.3-9.4-18.8	5.4-8.1-16.1	5.0-7.5-15.0	45	50	56	54	49	44		
203 x 508	1.016	4.7	105	-	1.8-2.8-5.5	1.6-2.4-4.8	1.4-2.1-4.1	1.3-1.9-3.9	-	15	21	19	14	-	
	1.524	10.5	157	19	2.8-4.1-8.3	2.4-3.6-7.3	2.1-3.1-6.2	1.9-2.9-5.8	20	25	31	29	24	19	
	2.032	18.7	210	27	3.7-5.5-11.0	3.2-4.8-9.7	2.8-4.1-8.3	2.6-3.9-7.7	28	33	39	37	32	27	
	2.54	29.3	262	32	4.6-6.9-13.8	4.0-6.0-12.1	3.5-5.2-10.4	3.2-4.8-9.7	33	38	44	42	37	32	
	3.048	42.1	315	37	5.5-8.3-16.6	4.8-7.3-14.5	4.1-6.2-12.4	3.9-5.8-11.6	38	43	49	47	42	37	
	3.556	57.3	367	41	6.4-9.7-19.3	5.6-8.5-16.9	4.8-7.3-14.5	4.5-6.8-13.5	42	47	53	51	46	41	
4.064	74.9	420	44	7.4-11.0-22.1	6.4-9.7-19.3	5.5-8.3-16.6	5.2-7.7-15.5	45	50	56	54	49	44		
203 x 762	1.016	4.6	157	-	2.1-3.1-6.2	1.8-2.7-5.4	1.5-2.3-4.6	1.4-2.2-4.3	11	16	22	20	15	-	
	1.524	10.3	236	20	3.1-4.6-9.3	2.7-4.1-8.1	2.3-3.5-7.0	2.2-3.2-6.5	21	26	32	30	25	20	
	2.032	18.2	315	28	4.1-6.2-12.4	3.6-5.4-10.8	3.1-4.6-9.3	2.9-4.3-8.7	29	34	40	38	33	28	
	2.54	28.5	393	33	5.2-7.7-15.5	4.5-6.8-13.5	3.9-5.8-11.6	3.6-5.4-10.8	34	39	45	43	38	33	
	3.048	41.1	472	38	6.2-9.3-18.5	5.4-8.1-16.2	4.6-7.0-13.9	4.3-6.5-13.0	39	44	50	48	43	38	
	3.556	55.9	551	42	7.2-10.8-21.6	6.3-9.5-18.9	5.4-8.1-16.2	5.0-7.6-15.1	43	48	54	52	47	42	
4.064	73.0	629	45	8.2-12.4-24.7	7.2-10.8-21.6	6.2-9.3-18.5	5.8-8.7-17.3	46	51	57	55	50	45		

SUPPLY GRILLES

180 Series - 180M

NOTE: See notes and correction factors on page I1-23.

180, 5180, 180M, 5180M Performance Data: Horizontal Throw

RECTANGULAR METRIC DATA: 180, 5180, 180M, 5180M (WITH OBD/MULTILOUVER)

					Throw Direction				Octave Band, dB						
	Neck Vel	Total Pres	Air Flow	NC	1-Way Throw	2-Way Throw	3-Way Throw	4-Way Throw	2	3	4	5	6	7	
	m/s	Pa	L/s		m	m	m	m	2	3	4	5	6	7	
203 x 914	1.016	4.5	189	-	2.4 - 3.5 - 7.1	2.1 - 3.1 - 6.2	1.8 - 2.6 - 5.3	1.6 - 2.5 - 4.9	11	16	22	20	15	-	
	1.524	10.2	283	21	3.5 - 5.3 - 10.6	3.1 - 4.6 - 9.3	2.6 - 4.0 - 7.9	2.5 - 3.7 - 7.4	22	27	33	31	26	21	
	2.032	18.1	378	28	4.7 - 7.1 - 14.1	4.1 - 6.2 - 12.3	3.5 - 5.3 - 10.6	3.3 - 4.9 - 9.9	29	34	40	38	33	28	
	2.54	28.3	472	34	5.9 - 8.8 - 17.6	5.1 - 7.7 - 15.4	4.4 - 6.6 - 13.2	4.1 - 6.2 - 12.3	35	40	46	44	39	34	
	3.048	40.7	566	38	7.1 - 10.6 - 21.2	6.2 - 9.3 - 18.5	5.3 - 7.9 - 15.9	4.9 - 7.4 - 14.8	39	44	50	48	43	38	
	3.556	55.4	661	42	8.2 - 12.3 - 24.7	7.2 - 10.8 - 21.6	6.2 - 9.3 - 18.5	5.8 - 8.6 - 17.3	43	48	54	52	47	42	
4.064	72.4	755	46	9.4 - 14.1 - 28.2	8.2 - 12.3 - 24.7	7.1 - 10.6 - 21.2	6.6 - 9.9 - 19.8	47	52	58	56	51	46		
254 x 305	1.016	4.7	79	-	1.6 - 2.4 - 4.9	1.4 - 2.1 - 4.3	1.2 - 1.8 - 3.6	1.1 - 1.7 - 3.4	-	14	20	18	13	-	
	1.524	10.7	118	18	2.4 - 3.6 - 7.3	2.1 - 3.2 - 6.4	1.8 - 2.7 - 5.5	1.7 - 2.6 - 5.1	19	24	30	28	23	18	
	2.032	18.9	157	26	3.2 - 4.9 - 9.7	2.8 - 4.3 - 8.5	2.4 - 3.6 - 7.3	2.3 - 3.4 - 6.8	27	32	38	36	31	26	
	2.54	29.6	197	32	4.1 - 6.1 - 12.2	3.5 - 5.3 - 10.6	3.0 - 4.6 - 9.1	2.8 - 4.3 - 8.5	33	38	44	42	37	32	
	3.048	42.6	236	36	4.9 - 7.3 - 14.6	4.3 - 6.4 - 12.8	3.6 - 5.5 - 10.9	3.4 - 5.1 - 10.2	37	42	48	46	41	36	
	3.556	58.0	275	40	5.7 - 8.5 - 17.0	5.0 - 7.4 - 14.9	4.3 - 6.4 - 12.8	4.0 - 6.0 - 11.9	41	46	52	50	45	40	
4.064	75.8	315	44	6.5 - 9.7 - 19.4	5.7 - 8.5 - 17.0	4.9 - 7.3 - 14.6	4.5 - 6.8 - 13.6	45	50	56	54	49	44		
254 x 356	1.016	4.6	92	-	1.7 - 2.6 - 5.2	1.5 - 2.3 - 4.5	1.3 - 1.9 - 3.9	1.2 - 1.8 - 3.6	-	14	20	18	13	-	
	1.524	10.5	138	19	2.6 - 3.9 - 7.8	2.3 - 3.4 - 6.8	1.9 - 2.9 - 5.8	1.8 - 2.7 - 5.4	20	25	31	29	24	19	
	2.032	18.6	184	26	3.5 - 5.2 - 10.4	3.0 - 4.5 - 9.1	2.6 - 3.9 - 7.8	2.4 - 3.6 - 7.2	27	32	38	36	31	26	
	2.54	29.0	229	32	4.3 - 6.5 - 12.9	3.8 - 5.7 - 11.3	3.2 - 4.9 - 9.7	3.0 - 4.5 - 9.1	33	38	44	42	37	32	
	3.048	41.8	275	37	5.2 - 7.8 - 15.5	4.5 - 6.8 - 13.6	3.9 - 5.8 - 11.6	3.6 - 5.4 - 10.9	38	43	49	47	42	37	
	3.556	56.9	321	41	6.0 - 9.1 - 18.1	5.3 - 7.9 - 15.9	4.5 - 6.8 - 13.6	4.2 - 6.3 - 12.7	42	47	53	51	46	41	
4.064	74.4	367	44	6.9 - 10.4 - 20.7	6.0 - 9.1 - 18.1	5.2 - 7.8 - 15.5	4.8 - 7.2 - 14.5	45	50	56	54	49	44		
254 x 406	1.016	4.6	105	-	1.8 - 2.7 - 5.5	1.6 - 2.4 - 4.8	1.4 - 2.1 - 4.1	1.3 - 1.9 - 3.8	-	14	20	18	13	-	
	1.524	10.3	157	19	2.7 - 4.1 - 8.2	2.4 - 3.6 - 7.2	2.1 - 3.1 - 6.2	1.9 - 2.9 - 5.7	20	25	31	29	24	19	
	2.032	18.3	210	26	3.6 - 5.5 - 10.9	3.2 - 4.8 - 9.6	2.7 - 4.1 - 8.2	2.6 - 3.8 - 7.7	27	32	38	36	31	26	
	2.54	28.6	262	32	4.6 - 6.8 - 13.7	4.0 - 6.0 - 12.0	3.4 - 5.1 - 10.3	3.2 - 4.8 - 9.6	33	38	44	42	37	32	
	3.048	41.2	315	37	5.5 - 8.2 - 16.4	4.8 - 7.2 - 14.4	4.1 - 6.2 - 12.3	3.8 - 5.7 - 11.5	38	43	49	47	42	37	
	3.556	56.1	367	41	6.4 - 9.6 - 19.1	5.6 - 8.4 - 16.7	4.8 - 7.2 - 14.4	4.5 - 6.7 - 13.4	42	47	53	51	46	41	
4.064	73.3	420	44	7.3 - 10.9 - 21.9	6.4 - 9.6 - 19.1	5.5 - 8.2 - 16.4	5.1 - 7.7 - 15.3	45	50	56	54	49	44		
254 x 610	1.016	4.4	157	-	2.2 - 3.2 - 6.5	1.9 - 2.8 - 5.7	1.6 - 2.4 - 4.9	1.5 - 2.3 - 4.5	-	15	21	19	14	-	
	1.524	10.0	236	20	3.2 - 4.9 - 9.7	2.8 - 4.2 - 8.5	2.4 - 3.6 - 7.3	2.3 - 3.4 - 6.8	21	26	32	30	25	20	
	2.032	17.7	315	27	4.3 - 6.5 - 13.0	3.8 - 5.7 - 11.3	3.2 - 4.9 - 9.7	3.0 - 4.5 - 9.1	28	33	39	37	32	27	
	2.54	27.7	393	33	5.4 - 8.1 - 16.2	4.7 - 7.1 - 14.2	4.0 - 6.1 - 12.1	3.8 - 5.7 - 11.3	34	39	45	43	38	33	
	3.048	39.9	472	38	6.5 - 9.7 - 19.4	5.7 - 8.5 - 17.0	4.9 - 7.3 - 14.6	4.5 - 6.8 - 13.6	39	44	50	48	43	38	
	3.556	54.3	551	42	7.6 - 11.3 - 22.7	6.6 - 9.9 - 19.8	5.7 - 8.5 - 17.0	5.3 - 7.9 - 15.9	43	48	54	52	47	42	
4.064	71.0	629	45	8.6 - 13.0 - 25.9	7.6 - 11.3 - 22.7	6.5 - 9.7 - 19.4	6.0 - 9.1 - 18.1	46	51	57	55	50	45		
254 x 762	1.016	4.4	197	-	2.4 - 3.6 - 7.1	2.1 - 3.1 - 6.2	1.8 - 2.7 - 5.3	1.7 - 2.5 - 5.0	11	16	22	20	15	-	
	1.524	9.9	295	20	3.6 - 5.3 - 10.7	3.1 - 4.7 - 9.3	2.7 - 4.0 - 8.0	2.5 - 3.7 - 7.5	21	26	32	30	25	20	
	2.032	17.5	393	28	4.7 - 7.1 - 14.2	4.2 - 6.2 - 12.5	3.6 - 5.3 - 10.7	3.3 - 5.0 - 10.0	29	34	40	38	33	28	
	2.54	27.4	492	34	5.9 - 8.9 - 17.8	5.2 - 7.8 - 15.6	4.4 - 6.7 - 13.3	4.2 - 6.2 - 12.5	35	40	46	44	39	34	
	3.048	39.4	590	38	7.1 - 10.7 - 21.4	6.2 - 9.3 - 18.7	5.3 - 8.0 - 16.0	5.0 - 7.5 - 14.9	39	44	50	48	43	38	
	3.556	53.6	688	42	8.3 - 12.5 - 24.9	7.3 - 10.9 - 21.8	6.2 - 9.3 - 18.7	5.8 - 8.7 - 17.4	43	48	54	52	47	42	
4.064	70.1	787	46	9.5 - 14.2 - 28.5	8.3 - 12.5 - 24.9	7.1 - 10.7 - 21.4	6.6 - 10.0 - 19.9	47	52	58	56	51	46		
254 x 914	1.016	4.3	236	-	2.6 - 3.8 - 7.7	2.2 - 3.4 - 6.7	1.9 - 2.9 - 5.8	1.8 - 2.7 - 5.4	11	16	22	20	15	-	
	1.524	9.8	354	21	3.8 - 5.8 - 11.5	3.4 - 5.0 - 10.1	2.9 - 4.3 - 8.7	2.7 - 4.0 - 8.1	22	27	33	31	26	21	
	2.032	17.4	472	28	5.1 - 7.7 - 15.4	4.5 - 6.7 - 13.5	3.8 - 5.8 - 11.5	3.6 - 5.4 - 10.8	29	34	40	38	33	28	
	2.54	27.1	590	34	6.4 - 9.6 - 19.2	5.6 - 8.4 - 16.8	4.8 - 7.2 - 14.4	4.5 - 6.7 - 13.5	35	40	46	44	39	34	
	3.048	39.1	708	39	7.7 - 11.5 - 23.1	6.7 - 10.1 - 20.2	5.8 - 8.7 - 17.3	5.4 - 8.1 - 16.2	40	45	51	49	44	39	
	3.556	53.2	826	43	9.0 - 13.5 - 26.9	7.9 - 11.8 - 23.6	6.7 - 10.1 - 20.2	6.3 - 9.4 - 18.9	44	49	55	53	48	43	
4.064	69.5	944	46	10.3 - 15.4 - 30.8	9.0 - 13.5 - 26.9	7.7 - 11.5 - 23.1	7.2 - 10.8 - 21.5	47	52	58	56	51	46		
305 x 356	1.016	4.5	110	-	1.9 - 2.8 - 5.6	1.6 - 2.4 - 4.9	1.4 - 2.1 - 4.2	1.3 - 1.9 - 3.9	-	14	20	18	13	-	
	1.524	10.2	165	19	2.8 - 4.2 - 8.3	2.4 - 3.7 - 7.3	2.1 - 3.1 - 6.3	1.9 - 2.9 - 5.8	20	25	31	29	24	19	
	2.032	18.1	220	26	3.7 - 5.6 - 11.1	3.2 - 4.9 - 9.7	2.8 - 4.2 - 8.3	2.6 - 3.9 - 7.8	27	32	38	36	31	26	
	2.54	28.3	275	32	4.6 - 7.0 - 13.9	4.1 - 6.1 - 12.2	3.5 - 5.2 - 10.4	3.2 - 4.9 - 9.7	33	38	44	42	37	32	
	3.048	40.7	330	37	5.6 - 8.3 - 16.7	4.9 - 7.3 - 14.6	4.2 - 6.3 - 12.5	3.9 - 5.8 - 11.7	38	43	49	47	42	37	
	3.556	55.4	385	41	6.5 - 9.7 - 19.5	5.7 - 8.5 - 17.0	4.9 - 7.3 - 14.6	4.5 - 6.8 - 13.6	42	47	53	51	46	41	
4.064	72.4	440	44	7.4 - 11.1 - 22.3	6.5 - 9.7 - 19.5	5.6 - 8.3 - 16.7	5.2 - 7.8 - 15.6	45	50	56	54	49	44		

SUPPLY GRILLES

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M NOTE: See notes and correction factors on page I1-23.

180, 5180, 180M, 5180M Performance Data: Horizontal Throw
RECTANGULAR METRIC DATA: 180, 5180, 180M, 5180M (WITH OBD/MULTILOUVER)

	Neck Vel	Total Pres	Air Flow	NC	Throw Direction				Octave Band, dB						
					1-Way Throw	2-Way Throw	3-Way Throw	4-Way Throw	2	3	4	5	6	7	
					m	m	m	m							
					m/s	Pa	L/s								
305 x 508	1.016	4.4	157	-	2.2 - 3.2 - 6.5	1.9 - 2.8 - 5.6	1.6 - 2.4 - 4.8	1.5 - 2.3 - 4.5	-	15	21	19	14	-	
	1.524	9.8	236	20	3.2 - 4.8 - 9.7	2.8 - 4.2 - 8.5	2.4 - 3.6 - 7.3	2.3 - 3.4 - 6.8	21	26	32	30	25	20	
	2.032	17.5	315	27	4.3 - 6.5 - 12.9	3.8 - 5.6 - 11.3	3.2 - 4.8 - 9.7	3.0 - 4.5 - 9.0	28	33	39	37	32	27	
	2.54	27.3	393	33	5.4 - 8.1 - 16.1	4.7 - 7.1 - 14.1	4.0 - 6.0 - 12.1	3.8 - 5.6 - 11.3	34	39	45	43	38	33	
	3.048	39.4	472	38	6.5 - 9.7 - 19.4	5.6 - 8.5 - 16.9	4.8 - 7.3 - 14.5	4.5 - 6.8 - 13.5	39	44	50	48	43	38	
	3.556	53.6	551	42	7.5 - 11.3 - 22.6	6.6 - 9.9 - 19.8	5.6 - 8.5 - 16.9	5.3 - 7.9 - 15.8	43	48	54	52	47	42	
305 x 610	1.016	4.3	189	-	2.3 - 3.5 - 7.0	2.0 - 3.0 - 6.1	1.7 - 2.6 - 5.2	1.6 - 2.4 - 4.9	11	16	22	20	15	-	
	1.524	9.7	283	20	3.5 - 5.2 - 10.4	3.0 - 4.6 - 9.1	2.6 - 3.9 - 7.8	2.4 - 3.7 - 7.3	21	26	32	30	25	20	
	2.032	17.3	378	27	4.6 - 7.0 - 13.9	4.1 - 6.1 - 12.2	3.5 - 5.2 - 10.4	3.2 - 4.9 - 9.7	28	33	39	37	32	27	
	2.54	27.0	472	33	5.8 - 8.7 - 17.4	5.1 - 7.6 - 15.2	4.4 - 6.5 - 13.1	4.1 - 6.1 - 12.2	34	39	45	43	38	33	
	3.048	38.9	566	38	7.0 - 10.4 - 20.9	6.1 - 9.1 - 18.3	5.2 - 7.8 - 15.7	4.9 - 7.3 - 14.6	39	44	50	48	43	38	
	3.556	52.9	661	42	8.1 - 12.2 - 24.4	7.1 - 10.7 - 21.3	6.1 - 9.1 - 18.3	5.7 - 8.5 - 17.1	43	48	54	52	47	42	
305 x 914	1.016	4.2	283	11	2.7 - 4.1 - 8.3	2.3 - 3.6 - 7.2	2.0 - 3.1 - 6.2	1.9 - 2.9 - 5.8	12	17	23	21	16	11	
	1.524	9.5	425	21	4.1 - 6.2 - 12.4	3.6 - 5.4 - 10.9	3.1 - 4.7 - 9.3	2.9 - 4.3 - 8.7	22	27	33	31	26	21	
	2.032	16.9	566	29	5.5 - 8.3 - 16.5	4.8 - 7.2 - 14.5	4.1 - 6.2 - 12.4	3.9 - 5.8 - 11.6	30	35	41	39	34	29	
	2.54	26.4	708	34	6.9 - 10.3 - 20.7	6.0 - 9.1 - 18.1	5.2 - 7.8 - 15.5	4.8 - 7.2 - 14.5	35	40	46	44	39	34	
	3.048	38.0	850	39	8.3 - 12.4 - 24.8	7.2 - 10.9 - 21.7	6.2 - 9.3 - 18.6	5.8 - 8.7 - 17.4	40	45	51	49	44	39	
	3.556	51.8	991	43	9.7 - 14.5 - 29.0	8.4 - 12.7 - 25.3	7.2 - 10.9 - 21.7	6.8 - 10.1 - 20.3	44	49	55	53	48	43	
356 x 457	1.016	4.3	165	-	2.2 - 3.3 - 6.6	1.9 - 2.9 - 5.8	1.6 - 2.5 - 4.9	1.5 - 2.3 - 4.6	-	15	21	19	14	-	
	1.524	9.7	248	20	3.3 - 4.9 - 9.9	2.9 - 4.3 - 8.6	2.5 - 3.7 - 7.4	2.3 - 3.5 - 6.9	21	26	32	30	25	20	
	2.032	17.3	330	27	4.4 - 6.6 - 13.1	3.8 - 5.8 - 11.5	3.3 - 4.9 - 9.9	3.1 - 4.6 - 9.2	28	33	39	37	32	27	
	2.54	27.1	413	33	5.5 - 8.2 - 16.4	4.8 - 7.2 - 14.4	4.1 - 6.2 - 12.3	3.8 - 5.8 - 11.5	34	39	45	43	38	33	
	3.048	39.0	496	38	6.6 - 9.9 - 19.7	5.8 - 8.6 - 17.3	4.9 - 7.4 - 14.8	4.6 - 6.9 - 13.8	39	44	50	48	43	38	
	3.556	53.0	578	42	7.7 - 11.5 - 23.0	6.7 - 10.1 - 20.1	5.8 - 8.6 - 17.3	5.4 - 8.1 - 16.1	43	48	54	52	47	42	
356 x 610	1.016	4.2	220	-	2.5 - 3.7 - 7.4	2.2 - 3.2 - 6.5	1.9 - 2.8 - 5.6	1.7 - 2.6 - 5.2	11	16	22	20	15	-	
	1.524	9.5	330	20	3.7 - 5.6 - 11.1	3.2 - 4.9 - 9.7	2.8 - 4.2 - 8.3	2.6 - 3.9 - 7.8	21	26	32	30	25	20	
	2.032	16.9	440	28	4.9 - 7.4 - 14.8	4.3 - 6.5 - 13.0	3.7 - 5.6 - 11.1	3.5 - 5.2 - 10.4	29	34	40	38	33	28	
	2.54	26.5	551	34	6.2 - 9.3 - 18.5	5.4 - 8.1 - 16.2	4.6 - 7.0 - 13.9	4.3 - 6.5 - 13.0	35	40	46	44	39	34	
	3.048	38.1	661	38	7.4 - 11.1 - 22.2	6.5 - 9.7 - 19.5	5.6 - 8.3 - 16.7	5.2 - 7.8 - 15.6	39	44	50	48	43	38	
	3.556	51.9	771	42	8.6 - 13.0 - 25.9	7.6 - 11.4 - 22.7	6.5 - 9.7 - 19.5	6.1 - 9.1 - 18.2	43	48	54	52	47	42	
356 x 914	1.016	4.1	330	11	2.6 - 4.4 - 8.8	2.3 - 3.9 - 7.7	2.0 - 3.3 - 6.6	1.8 - 3.1 - 6.2	12	17	23	21	16	11	
	1.524	9.3	496	21	4.4 - 6.6 - 13.2	3.9 - 5.8 - 11.6	3.3 - 5.0 - 9.9	3.1 - 4.6 - 9.2	22	27	33	31	26	21	
	2.032	16.6	661	29	5.9 - 8.8 - 17.6	5.1 - 7.7 - 15.4	4.4 - 6.6 - 13.2	4.1 - 6.2 - 12.3	30	35	41	39	34	29	
	2.54	25.9	826	35	7.3 - 11.0 - 22.0	6.4 - 9.6 - 19.3	5.5 - 8.3 - 16.5	5.1 - 7.7 - 15.4	36	41	47	45	40	35	
	3.048	37.3	991	39	8.8 - 13.2 - 26.4	7.7 - 11.6 - 23.1	6.6 - 9.9 - 19.8	6.2 - 9.2 - 18.5	40	45	51	49	44	39	
	3.556	50.8	1156	43	10.3 - 15.4 - 30.8	9.0 - 13.5 - 27.0	7.7 - 11.6 - 23.1	7.2 - 10.8 - 21.6	44	49	55	53	48	43	
406 x 457	1.016	4.3	189	-	2.3 - 3.5 - 6.9	2.0 - 3.0 - 6.1	1.7 - 2.6 - 5.2	1.6 - 2.4 - 4.9	-	15	21	19	14	-	
	1.524	9.6	283	20	3.5 - 5.2 - 10.4	3.0 - 4.6 - 9.1	2.6 - 3.9 - 7.8	2.4 - 3.6 - 7.3	21	26	32	30	25	20	
	2.032	17.1	378	27	4.6 - 6.9 - 13.9	4.0 - 6.1 - 12.1	3.5 - 5.2 - 10.4	3.2 - 4.9 - 9.7	28	33	39	37	32	27	
	2.54	26.7	472	33	5.8 - 8.7 - 17.4	5.1 - 7.6 - 15.2	4.4 - 6.5 - 13.0	4.0 - 6.1 - 12.1	34	39	45	43	38	33	
	3.048	38.4	566	38	6.9 - 10.4 - 20.8	6.1 - 9.1 - 18.2	5.2 - 7.8 - 15.6	4.9 - 7.3 - 14.6	39	44	50	48	43	38	
	3.556	52.3	661	42	8.1 - 12.1 - 24.3	7.1 - 10.6 - 21.3	6.1 - 9.1 - 18.2	5.7 - 8.5 - 17.0	43	48	54	52	47	42	
406 x 508	1.016	4.2	210	-	2.4 - 3.6 - 7.3	2.1 - 3.2 - 6.3	1.8 - 2.7 - 5.4	1.7 - 2.5 - 5.1	11	16	22	20	15	-	
	1.524	9.5	315	20	3.6 - 5.4 - 10.9	3.2 - 4.8 - 9.5	2.7 - 4.1 - 8.2	2.5 - 3.8 - 7.6	21	26	32	30	25	20	
	2.032	16.9	420	28	4.8 - 7.3 - 14.5	4.2 - 6.3 - 12.7	3.6 - 5.4 - 10.9	3.4 - 5.1 - 10.2	29	34	40	38	33	28	
	2.54	26.5	524	33	6.0 - 9.1 - 18.1	5.3 - 7.9 - 15.9	4.5 - 6.8 - 13.6	4.2 - 6.3 - 12.7	34	39	45	43	38	33	
	3.048	38.1	629	38	7.3 - 10.9 - 21.8	6.3 - 9.5 - 19.0	5.4 - 8.2 - 16.3	5.1 - 7.6 - 15.2	39	44	50	48	43	38	
	3.556	51.8	734	42	8.5 - 12.7 - 25.4	7.4 - 11.1 - 22.2	6.3 - 9.5 - 19.0	5.9 - 8.9 - 17.8	43	48	54	52	47	42	

NOTE: See notes and correction factors on page I1-23.

180, 5180, 180M, 5180M Performance Data: Horizontal Throw

RECTANGULAR METRIC DATA: 180, 5180, 180M, 5180M (WITH OBD/MULTILOUVER)

	Neck Vel	Total Pres	Air Flow	NC	Throw Direction				Octave Band, dB						
					1-Way Throw	2-Way Throw	3-Way Throw	4-Way Throw	2	3	4	5	6	7	
					m	m	m	m							
406 x 610	1.016	4.2	252	-	2.6-3.9-7.8	2.3-3.4-6.9	2.0-2.9-5.9	1.8-2.7-5.5	11	16	22	20	15	-	
	1.524	9.4	378	21	3.9-5.9-11.7	3.4-5.1-10.3	2.9-4.4-8.8	2.7-4.1-8.2	22	27	33	31	26	21	
	2.032	16.7	503	28	5.2-7.8-15.7	4.6-6.9-13.7	3.9-5.9-11.7	3.7-5.5-11.0	29	34	40	38	33	28	
	2.54	26.1	629	34	6.5-9.8-19.6	5.7-8.6-17.1	4.9-7.3-14.7	4.6-6.9-13.7	35	40	46	44	39	34	
	3.048	37.6	755	38	7.8-11.7-23.5	6.9-10.3-20.6	5.9-8.8-17.6	5.5-8.2-16.4	39	44	50	48	43	38	
	3.556	51.2	881	42	9.1-13.7-27.4	8.0-12.0-24.0	6.9-10.3-20.6	6.4-9.6-19.2	43	48	54	52	47	42	
4.064	66.8	1007	46	10.4-15.7-31.3	9.1-13.7-27.4	7.8-11.7-23.5	7.3-11.0-21.9	47	52	58	56	51	46		
406 x 762	1.016	16.5	315	11	2.6-4.3-8.6	2.3-3.8-7.5	2.0-3.2-6.5	1.8-3.0-6.0	12	17	23	21	16	11	
	1.524	9.3	472	21	4.3-6.5-12.9	3.8-5.6-11.3	3.2-4.8-9.7	3.0-4.5-9.0	22	27	33	31	26	21	
	2.032	16.5	629	29	5.7-8.6-17.2	5.0-7.5-15.1	4.3-6.5-12.9	4.0-6.0-12.1	30	35	41	39	34	29	
	2.54	25.8	787	34	7.2-10.8-21.5	6.3-9.4-18.8	5.4-8.1-16.1	5.0-7.5-15.1	35	40	46	44	39	34	
	3.048	37.1	944	39	8.6-12.9-25.8	7.5-11.3-22.6	6.5-9.7-19.4	6.0-9.0-18.1	40	45	51	49	44	39	
	3.556	50.5	1101	43	10.0-15.1-30.1	8.8-13.2-26.4	7.5-11.3-22.6	7.0-10.5-21.1	44	49	55	53	48	43	
4.064	66.0	1259	46	11.5-17.2-34.4	10.0-15.1-30.1	8.6-12.9-25.8	8.0-12.1-24.1	47	52	58	56	51	46		
406 x 914	1.016	4.1	378	11	2.6-4.7-9.3	2.3-4.1-8.1	2.0-3.5-7.0	1.8-3.3-6.5	12	17	23	21	16	11	
	1.524	9.2	566	22	4.7-7.0-14.0	4.1-6.1-12.2	3.5-5.2-10.5	3.3-4.9-9.8	23	28	34	32	27	22	
	2.032	16.4	755	29	6.2-9.3-18.6	5.4-8.1-16.3	4.7-7.0-14.0	4.3-6.5-13.0	30	35	41	39	34	29	
	2.54	25.6	944	35	7.8-11.6-23.3	6.8-10.2-20.4	5.8-8.7-17.4	5.4-8.1-16.3	36	41	47	45	40	35	
	3.048	36.8	1133	39	9.3-14.0-27.9	8.1-12.2-24.4	7.0-10.5-20.9	6.5-9.8-19.5	40	45	51	49	44	39	
	3.556	50.1	1321	43	10.9-16.3-32.6	9.5-14.2-28.5	8.1-12.2-24.4	7.6-11.4-22.8	44	49	55	53	48	43	
4.064	65.4	1510	47	12.4-18.6-37.2	10.9-16.3-32.6	9.3-14.0-27.9	8.7-13.0-26.1	48	53	59	57	52	47		
457 x 508	1.016	4.2	236	-	2.5-3.8-7.6	2.2-3.3-6.7	1.9-2.9-5.7	1.8-2.7-5.3	11	16	22	20	15	-	
	1.524	9.4	354	20	3.8-5.7-11.4	3.3-5.0-10.0	2.9-4.3-8.6	2.7-4.0-8.0	21	26	32	30	25	20	
	2.032	16.7	472	28	5.1-7.6-15.2	4.4-6.7-13.3	3.8-5.7-11.4	3.6-5.3-10.7	29	34	40	38	33	28	
	2.54	26.2	590	34	6.3-9.5-19.0	5.6-8.3-16.7	4.8-7.1-14.3	4.4-6.7-13.3	35	40	46	44	39	34	
	3.048	37.7	708	38	7.6-11.4-22.8	6.7-10.0-20.0	5.7-8.6-17.1	5.3-8.0-16.0	39	44	50	48	43	38	
	3.556	51.3	826	42	8.9-13.3-26.7	7.8-11.7-23.3	6.7-10.0-20.0	6.2-9.3-18.7	43	48	54	52	47	42	
4.064	67.0	944	46	10.2-15.2-30.5	8.9-13.3-26.7	7.6-11.4-22.8	7.1-10.7-21.3	47	52	58	56	51	46		
457 x 610	1.016	4.1	283	-	2.6-4.1-8.2	2.3-3.6-7.2	2.0-3.1-6.2	1.8-2.9-5.8	11	16	22	20	15	-	
	1.524	9.3	425	21	4.1-6.2-12.3	3.6-5.4-10.8	3.1-4.6-9.3	2.9-4.3-8.6	22	27	33	31	26	21	
	2.032	16.5	566	28	5.5-8.2-16.4	4.8-7.2-14.4	4.1-6.2-12.3	3.8-5.8-11.5	29	34	40	38	33	28	
	2.54	25.8	708	34	6.9-10.3-20.6	6.0-9.0-18.0	5.1-7.7-15.4	4.8-7.2-14.4	35	40	46	44	39	34	
	3.048	37.2	850	39	8.2-12.3-24.7	7.2-10.8-21.6	6.2-9.3-18.5	5.8-8.6-17.3	40	45	51	49	44	39	
	3.556	50.6	991	43	9.6-14.4-28.8	8.4-12.6-25.2	7.2-10.8-21.6	6.7-10.1-20.1	44	49	55	53	48	43	
4.064	66.1	1133	46	11.0-16.4-32.9	9.6-14.4-28.8	8.2-12.3-24.7	7.7-11.5-23.0	47	52	58	56	51	46		
457 x 914	1.016	4.0	425	11	2.6-4.9-9.8	2.3-4.3-8.5	2.0-3.7-7.3	1.8-3.4-6.8	12	17	23	21	16	11	
	1.524	9.1	637	22	4.9-7.3-14.7	4.3-6.4-12.8	3.7-5.5-11.0	3.4-5.1-10.3	23	28	34	32	27	22	
	2.032	16.2	850	29	6.5-9.8-19.5	5.7-8.5-17.1	4.9-7.3-14.7	4.6-6.8-13.7	30	35	41	39	34	29	
	2.54	25.3	1062	35	8.1-12.2-24.4	7.1-10.7-21.4	6.1-9.2-18.3	5.7-8.5-17.1	36	41	47	45	40	35	
	3.048	36.4	1274	40	9.8-14.7-29.3	8.5-12.8-25.6	7.3-11.0-22.0	6.8-10.3-20.5	41	46	52	50	45	40	
	3.556	49.6	1487	44	11.4-17.1-34.2	10.0-15.0-29.9	8.5-12.8-25.6	8.0-12.0-23.9	45	50	56	54	49	44	
4.064	64.7	1699	47	13.0-19.5-39.1	11.4-17.1-34.2	9.8-14.7-29.3	9.1-13.7-27.4	48	53	59	57	52	47		
508 x 610	1.016	4.1	315	11	2.6-4.3-8.6	2.3-3.8-7.5	2.0-3.2-6.4	1.8-3.0-6.0	12	17	23	21	16	11	
	1.524	9.2	472	21	4.3-6.4-12.9	3.8-5.6-11.3	3.2-4.8-9.7	3.0-4.5-9.0	22	27	33	31	26	21	
	2.032	16.4	629	28	5.7-8.6-17.2	5.0-7.5-15.0	4.3-6.4-12.9	4.0-6.0-12.0	29	34	40	38	33	28	
	2.54	25.6	787	34	7.2-10.7-21.5	6.3-9.4-18.8	5.4-8.1-16.1	5.0-7.5-15.0	35	40	46	44	39	34	
	3.048	36.9	944	39	8.6-12.9-25.8	7.5-11.3-22.6	6.4-9.7-19.3	6.0-9.0-18.0	40	45	51	49	44	39	
	3.556	50.2	1101	43	10.0-15.0-30.1	8.8-13.2-26.3	7.5-11.3-22.6	7.0-10.5-21.0	44	49	55	53	48	43	
4.064	65.5	1259	46	11.5-17.2-34.4	10.0-15.0-30.1	8.6-12.9-25.8	8.0-12.0-24.1	47	52	58	56	51	46		
508 x 914	1.016	4.0	472	12	2.6-5.1-10.2	2.3-4.5-8.9	1.9-3.8-7.7	1.8-3.6-7.1	13	18	24	22	17	12	
	1.524	9.0	708	22	5.1-7.7-15.3	4.5-6.7-13.4	3.8-5.7-11.5	3.6-5.4-10.7	23	28	34	32	27	22	
	2.032	16.0	944	29	6.8-10.2-20.4	6.0-8.9-17.9	5.1-7.7-15.3	4.8-7.1-14.3	30	35	41	39	34	29	
	2.54	25.1	1180	35	8.5-12.8-25.5	7.4-11.2-22.3	6.4-9.6-19.1	6.0-8.9-17.9	36	41	47	45	40	35	
	3.048	36.1	1416	40	10.2-15.3-30.6	8.9-13.4-26.8	7.7-11.5-23.0	7.1-10.7-21.4	41	46	52	50	45	40	
	3.556	49.1	1652	44	11.9-17.9-35.7	10.4-15.6-31.3	8.9-13.4-26.8	8.3-12.5-25.0	45	50	56	54	49	44	
4.064	64.2	1888	47	13.6-20.4-40.8	11.9-17.9-35.7	10.2-15.3-30.6	9.5-14.3-28.6	48	53	59	57	52	47		

SUPPLY GRILLES

180 Series

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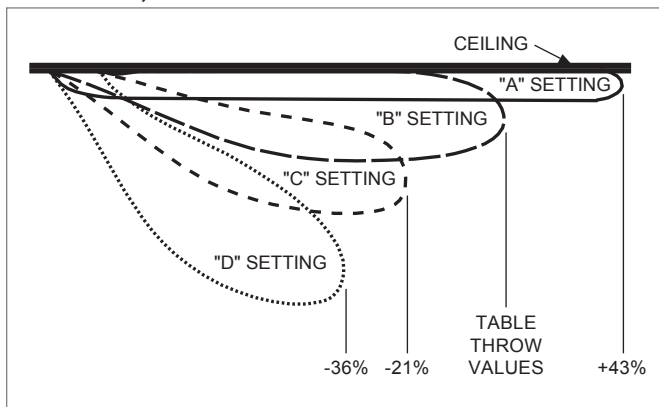
NOTE: See notes and correction factors on page I1-23.

180, 5180, 180M, 5180M Performance Data: Horizontal Throw
RECTANGULAR METRIC DATA: 180, 5180, 180M, 5180M (WITH OBD/MULTILOUVER)

	Neck Vel	Total Pres	Air Flow	NC	Throw Direction				Octave Band, dB						
					1-Way Throw	2-Way Throw	3-Way Throw	4-Way Throw	2	3	4	5	6	7	
					m	m	m	m							
610 x 762	1.016	4.0	472	12	2.6 - 5.1 - 10.2	2.3 - 4.5 - 8.9	1.9 - 3.8 - 7.6	1.8 - 3.6 - 7.1	13	18	24	22	17	12	
	1.524	9.0	708	22	5.1 - 7.6 - 15.3	4.5 - 6.7 - 13.4	3.8 - 5.7 - 11.5	3.6 - 5.4 - 10.7	23	28	34	32	27	22	
	2.032	16.0	944	29	6.8 - 10.2 - 20.4	5.9 - 8.9 - 17.8	5.1 - 7.6 - 15.3	4.8 - 7.1 - 14.3	30	35	41	39	34	29	
	2.54	25.0	1180	35	8.5 - 12.7 - 25.5	7.4 - 11.2 - 22.3	6.4 - 9.6 - 19.1	5.9 - 8.9 - 17.8	36	41	47	45	40	35	
	3.048	35.9	1416	40	10.2 - 15.3 - 30.6	8.9 - 13.4 - 26.8	7.6 - 11.5 - 22.9	7.1 - 10.7 - 21.4	41	46	52	50	45	40	
	3.556	48.9	1652	44	11.9 - 17.8 - 35.7	10.4 - 15.6 - 31.2	8.9 - 13.4 - 26.8	8.3 - 12.5 - 25.0	45	50	56	54	49	44	
4.064	63.9	1888	47	13.6 - 20.4 - 40.8	11.9 - 17.8 - 35.7	10.2 - 15.3 - 30.6	9.5 - 14.3 - 28.5	48	53	59	57	52	47		
610 x 914	1.016	4.0	566	12	2.6 - 5.5 - 11.0	2.3 - 4.8 - 9.6	1.9 - 4.1 - 8.3	1.8 - 3.9 - 7.7	13	18	24	22	17	12	
	1.524	8.9	850	22	5.5 - 8.3 - 16.5	4.8 - 7.2 - 14.5	4.1 - 6.2 - 12.4	3.9 - 5.8 - 11.6	23	28	34	32	27	22	
	2.032	15.8	1133	30	7.3 - 11.0 - 22.0	6.4 - 9.6 - 19.3	5.5 - 8.3 - 16.5	5.1 - 7.7 - 15.4	31	36	42	40	35	30	
	2.54	24.7	1416	36	9.2 - 13.8 - 27.6	8.0 - 12.1 - 24.1	6.9 - 10.3 - 20.7	6.4 - 9.6 - 19.3	37	42	48	46	41	36	
	3.048	35.6	1699	40	11.0 - 16.5 - 33.1	9.6 - 14.5 - 28.9	8.3 - 12.4 - 24.8	7.7 - 11.6 - 23.1	41	46	52	50	45	40	
	3.556	48.5	1982	44	12.9 - 19.3 - 38.6	11.3 - 16.9 - 33.8	9.6 - 14.5 - 28.9	9.0 - 13.5 - 27.0	45	50	56	54	49	44	
4.064	63.3	2265	48	14.7 - 22.0 - 44.1	12.9 - 19.3 - 38.6	11.0 - 16.5 - 33.1	10.3 - 15.4 - 30.9	49	54	60	58	53	48		
762 x 914	1.016	3.9	708	13	2.6 - 5.8 - 12.1	2.2 - 5.1 - 10.6	1.9 - 4.3 - 9.1	1.8 - 4.0 - 8.5	14	19	25	23	18	13	
	1.524	8.8	1062	23	5.8 - 9.1 - 18.2	5.1 - 8.0 - 15.9	4.3 - 6.8 - 13.6	4.0 - 6.4 - 12.7	24	29	35	33	28	23	
	2.032	15.6	1416	30	8.1 - 12.1 - 24.2	7.1 - 10.6 - 21.2	6.1 - 9.1 - 18.2	5.7 - 8.5 - 17.0	31	36	42	40	35	30	
	2.54	24.4	1770	36	10.1 - 15.1 - 30.3	8.8 - 13.3 - 26.5	7.6 - 11.4 - 22.7	7.1 - 10.6 - 21.2	37	42	48	46	41	36	
	3.048	35.2	2124	41	12.1 - 18.2 - 36.3	10.6 - 15.9 - 31.8	9.1 - 13.6 - 27.3	8.5 - 12.7 - 25.4	42	47	53	51	46	41	
	3.556	47.9	2478	45	14.1 - 21.2 - 42.4	12.4 - 18.6 - 37.1	10.6 - 15.9 - 31.8	9.9 - 14.8 - 29.7	46	51	57	55	50	45	
4.064	62.5	2832	48	16.2 - 24.2 - 48.5	14.1 - 21.2 - 42.4	12.1 - 18.2 - 36.3	11.3 - 17.0 - 33.9	49	54	60	58	53	48		

SUPPLY GRILLES

NOTES: Throw values are given for terminal velocities of 0.75, 0.50, and 0.25 m/s. Throw values are given for isothermal conditions. 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. The throw values given for 1-Way Throw is for [Total L/s] L/s per side. The throw values given for 2-Way Throw is for [(Total L/s)/2] L/s per side. The throw values given for 3-Way Throw is for [(Total L/s)/3] L/s per side. The throw values given for 4-Way Throw is for [(Total L/s)/4] L/s per side. See Krueger's selection software for performance data not shown, including octave band data.

180 SERIES, BLADE SETTING & THROW DETAIL


NOTE: Reference page I1-3 for blade setting detail.

Correction Factor (with OBD)			
Blade Setting	Throws (Multiply)	Ps (Multiply)	NC (Add)
A	1.43	1.30	+2
B	1.00	1.00	+0
C	0.79	0.72	-3
D	0.64	0.52	-4

Correction Factor (without OBD)			
Blade Setting	Throws (Multiply)	Ps (Multiply)	NC (Add)
A	1.43	1.20	+0
B	1.00	0.85	-3
C	0.70	0.61	-4
D	0.64	0.33	-6