DD-SD Performance Data

Normal Size			200 x 100			250 x 100			300 x 100 200 x 150			400 x 100 250 x 150			500 x 100 300 x 150			350 x 150 250 x 200		
Core Area Ca(m)			0.015			0.02			0.024			0.032			0.038			0.044		
	Deflection		0°	22½°	45°	0°	22½°	45°	0°	22½°	45°	0°	22½°	45°	0°	22½°	45°	0°	22½°	45°
m^3/s	Aj	(m^2)	0.011	0.01	0.008	0.014	0.014	0.011	0.018	0.017	0.013	0.023	0.022	0.017	0.028	0.027	0.021	0.032	0.031	0.024
0.024	Tp THROW VEL NES	(Pa) (m) (m/s) dB	1.72 2.1-4.0 1.97 *	2.12 1.5-3.01 2.18 *	8.48 2-2.1 4.36 *	1.11 1.7-3.6 1.58 *	1.39 1.4-2.7 1.76 *	5.74 0.9-2.2 3.59 *												
0.036	Tp THROW VEL NES	(Pa) (m) (m/s) dB	3.87 3-4.8 2.95 *	4.77 2.4-3.61 3.27 *	19.09 8-2.7 6.65 *	2.5 2.7-4.9 2.37 *	3.11 2.1-3.7 2.64 *	12.92 1.5-2.7 5.39 *	1.74 2.4-4.9 1.98 *	2.18 1.8-3.7 2.21 *	9.33 1.3-2.6 4.58 *	1.14 2.1-4.3 1.6 *	1.45 1.6-3.2 1.8 *	6.78 1.3-2.3 3.9 *						
0.047	Tp THROW VEL NES	(Pa) (m) (m/s) dB	6.6 4-5.6 3.85 *	8.13 3-4.2 4.27 *	32.53 2.1-3 8.55 *	4.25 3.6-5.3 3.09 *	5.3 2.7-4.3 3.45 *	22.03 2.1-3.1 7.03 *	2.97 3.6-5 2.58 *	3.72 2.5-4.3 2.89 *	15.9 1.8-3 5.97 *	1.94 2.7-5.5 2.08 *	2.74 2.05-4.3 2.36 *	11.56 1.6-3.1 5.09 *	1.32 2.4-5.2 1.72 *	1.69 1.8-4.1 1.95 *	7.65 1.2-2.7 4.14 *			
0.060	Tp THROW VEL NES	(Pa) (m) (m/s) dB	10.76 4.3-6.5 4.91 17	13.25 3.4-4.9 5.45 18		6.93 4.3-6.4 3.94 *	8.63 3.5-5 4.4 *	35.9 2.5-3.7 8.98 *	4.84 4-6.1 3.29 *	6.06 3-4.6 3.69 *	25.9 2.2-3.5 7.63 *	3.16 3.4-6.5 2.66 *	4.03 2.4-4.9 3.01 *	18.85 1.8-3.7 6.5 *	2.15 3-6.1 2.2 *	2.76 2.4-4.6 2.49 *	12.46 1.8-3.4 5.29 *	1.74 3.1-6.2 1.97 *	2.13 2.4-4.6 2.19 *	8.58 1.8-3.4 4.39 *
0.070	Tp THROW VEL NES	(Pa) (m) (m/s) dB	14.64 4.9-6.5 5.73 23	18.04 3.7-5.5 6.36 24		9.44 4.9-7 4.6 18.4	11.75 3.7-5.5 5.14 19		6.58 4.8-7 3.84 *	8.25 3.7-7 4.3 *	35.26 2.7 8.9 *	4.3 4.2-6.7 3.11 *	5.48 3.4-5.2 3.51 *	26.65 2.3-3.7 7.59 *	2.93 4-6.7 2.56 *	3.76 3-5.2 2.9 *	16.96 2-3.8 6.17 *	2.36 3.7-6.8 2.3 *	2.9 2.7-5.2 2.55 *	11.68 2.1-3.7 5.12 *
0.083	Tp THROW VEL NES	(Pa) (m) (m/s) dB	20.58 5.2-7.6 6.8 28	25.36 4-5.8 7.55 29		13.27 5.2-7.3 5.46 19	16.52 4-5.3 6.09 21		9.25 5-7.2 4.56 *	11.6 4-5.4 5.1 *		6.04 4-7.2 3.68 *	7.71 3.6-5 4.16 *	36.06 2.7-4 9 *	4.12 4.2-7.2 3.04 *	5.28 3.4-5.4 3.44 *	23.85 2.4-4 7.32 *	3.32 4-7.3 2.73 *	4.07 3.1-5.4 3.02 *	16.41 2.1-4 6.07 *
0.095	Tp THROW VEL NES	(Pa) (m) (m/s) dB				17.38 5.4-7.9 6.25 24	21.64 4.3-6.1 6.97 25		12.12 5.4-7.9 5.22 18	15.2 4.3-6.1 5.84 19		7.91 5.4-8 4.21 *	10.1 4.3-6.1 4.76 *		5.4 5.2-7.9 3.48 *	6.92 6.4 3.94 *	31.24 2.6-4.2 8.37 *	4.35 4.9-8 3.13 *	5.33 3.7-6 3.46 *	21.5 2.7-4.2 6.95 *
0.106	Tp THROW VEL NES	(Pa) (m) (m/s) dB				21.64 6.1-8.5 6.97 29	26.94 4.5-6.7 7.78 30		15.09 5.8-8.5 5.82 23	18.93 4.5-6.7 6.52 24		9.85 5.8-8.5 4.7 16	12.58 4.5-6.7 5.31 17		6.72 5.7-8.4 3.88 *	8.61 4.5-6.7 4.4 *	38.89 3-4.6 9.34 *	5.42 5.5-8.8 3.49 *	6.64 4.2-6.8 3.86 *	26.77 3-4.5 7.75 *
0.118	Tp THROW VEL NES	(Pa) (m) (m/s) dB				26.81 6.4-8.8 7.76 35	33.38 4.9-6.6 8.66 36		18.71 6-8.9 6.48 25	23.45 4.5-6.7 7.26 26		12.21 6-8.9 5.23 18	15.59 4.6-6.6 5.91 19		8.33 6-9.0 4.32 *	10.67 4.7-6.8 4.89 *		6.71 6-9.0 3.88 *	8.23 4.7-6.7 4.3 *	33.18 3.4-4.9 8.63 *
0.131	Tp THROW VEL NES	(Pa) (m) (m/s) dB							23.05 6.7-9.5 7.19 29	28.91 5.1-7.3 8.06 30		15.08 6-4.9 5.81 21	19.21 5-7.0 6.57 22		10.26 6.4-9.5 4.8 17	13.15 5-7.3 5.43 23		8.27 6.7-9 4.31 *	10.14 5.2-7 4.77 *	40-89 3.7-51 9.58 *
0.141	Tp THROW VEL NES	(Pa) (m) (m/s) dB							26.71 7-9.8 7.74 34	33.49 5.5-7.5 8.67 35		17.43 6.7-9.9 6.25 24	22.25 5.1-7.6 7.07 25		11.89 6.7-9.9 5.17 19	15.24 5-7.5 5.85 19		9.58 6.7-10 4.64 17	11.75 5.7-5 5.14 20	
0.165	Tp THROW VEL NES	(Pa) (m) (m/s) dB										23.87 7-10.3 7.32 29	30.47 5.6-8.2 8.27 30		16.28 7.3-10.4 6.05 24	20.86 5.4-8 6.84 25		13.12 7.3-10.4 5.43 20	16.09 5.4-8 6.01 21	
0.187	Tp THROW VEL NES	(Pa) (m) (m/s) dB										39.4 8-11.3 9.4 35	39.14 6-8.5 9.37 36		26.88 8-11.3 7.77 28	26.8 6.85 7.76 29		21.67 8-11.3 6.97 24	20.67 6-8.6 6.81 25	
0.212	Tp THROW VEL NES	(Pa) (m) (m/s) dB													33.31 8.5-12 8.65 33	34.44 6.7-9 8.79 34		26.85 8.5-12 7.76 28	26.57 6.7-9 7.72 29	
0.236	Tp THROW VEL NES	(Pa) (m) (m/s) dB													40.74 8.9-12.7 9.56 38	42.68 6.7-9.8 9.79 39		32.84 8.9-12.9 8.59 32	32.92 6.7-9.9 8.6 33	
0.261	Tp THROW VEL NES	(Pa) (m) (m/s) dB																38.88 9-13.5 9.34 37	40.27 7-10.5 9.51 38	

NS = sound rating from sound power data assuming RA=8dB
CA = core area in m
Aj = effective area of throw in m/
Tp = static pressure + the duct velocity pressure in Pa.
Throw = distance to point of max. air stream velocity at 0.5/s and /to 0.25m/s

DD-SD Performance Data

Normal Size			300 x 400 800 x 150			300 x 250 375 x 200 500 x 150			300 x 100 200 x 150 450 x 200 600 x 150			350 x 300 420 x 250 525 x 200 700 x 150			400 x 300 400 x 250 600 x 200			450 x 350 525 x 300 750 x 200 750 x 200		
	Core Area Ca(m^2)		0.01			0.08			0.09			0.11			0.012			0.016		
	Deflection		0°	22½°	45°	0°	22½°	45°	0°	22½°	45°	0°	22½°	45°	0°	22½°	45°	0°	22½°	45°
m^3/s	Aj	(m^2)	0.07	0.064	0.03	0.045	0.04	0.019	0.054	0.048	0.022	0.062	0.056	0.026	0.071	0.064	0.03	0.093	0.083	0.038
0.07	Tp THROW VEL NES	(Pa) (m) (m/s) dB	0.43 3.4-6.4 0.98 *	0.54 2.4-4.9 1.1 *	2.5 1.8-3.8 3.27 *															
0.083	Tp THROW VEL NES	(Pa) (m) (m/s) dB	0.6 3.7-7.3 1.16 *	0.75 3-5.6 1.3 *	3.51 2.1-4 2.81 *	1.53 3.5-6.8 1.85 *	1.9 2.5-5.2 2.07 *	8.58 1.8-3.8 4.39 *												
0.095	Tp THROW VEL NES	(Pa) (m) (m/s) dB	0.79 4.3-8 1.33 *	0.99 3.5-6.2 1.49 *	4.6 2.5-4.3 3.21 *	2 4-7.6 2.12 *	2.49 3-5.8 2.36 *	11.25 2.1-4.3 5.02 *	1.4 3.7-7.3 1.77 *	1.74 2.7-5.5 1.98 *	7.97 2.1-4 4.23 *									
0.047	Tp THROW VEL NES	(Pa) (m) (m/s) dB	0.98 5-8.2 1.48 *	1.23 3.4-6.7 1.66 *	5.73 2.4-4.6 3.59 *	2.5 4.4-8.5 2.37 *	3.1 3.4-6.7 2.64 *	14 2.4-4.5 5.61 *	1.74 4.-7.9 1.97 *	2.17 3-6.0 2.2 *	9.92 2-4.3 4.72 *	1.28 3.8-7.4 1.69 *	1.6 2.8-5.5 1.89 *	7.4 2.1-4 4.07 *						
0.118	Tp THROW VEL NES	(Pa) (m) (m/s) dB	1.21 5-6.9 1.65 *	1.52 4.4-6.5 1.85 *	7.1 3-5.0 3.99 *	3.09 5-9.0 2.63 *	3.84 3.8-6.9 2.94 *	17.35 2.7-5 6.24 *	2.15 4.7-9 2.2 *	2.68 3.7-6.8 2.45 *	12.3 2.7-5 5.25 *	1.58 4.4-8.2 1.89 *	1.98 3.4-6.4 2.11 *	9.17 2.4-4.6 4.54 *						
0.131	Tp THROW VEL NES	(Pa) (m) (m/s) dB	1.5 5-8.9 1.83 *	1.87 4.6-7 2.05 *	8.75 3-5.2 4.43 *	3.81 5.2-9 2.95 *	4.73 4-7.0 3.26 *	21.38 2.8-5.2 6.93 *	2.65 5-9.7 2.44 *	3.31 3.7-7.3 2.72 *	15.15 2.7-5.2 5.83 *	1.95 4-6.9 2.09 *	2.44 3.7-7 2.34 *	11.3 2.4-5.2 8.04 *	1.51 4.3-8.3 1.84 *	1.86 3-5.2 2.9 *	16.96 2-3.8 6.17 *			
0.165	Tp THROW VEL NES	(Pa) (m) (m/s) dB	2.37 7.3-10.3 2.31 17	2.97 5.5-8.2 2.58 18	13.88 3.7-51 5.58 23	6.05 6.7-10.4 3.68 *	7.51 5.2-7.8 4.11 *	33.93 3.7-5.8 8.73 *	4.21 6.1-10.4 3.07 *	5.25 4.6-7.9 3.43 *	24.04 3.4-5.8 7.35 *	3.1 5.9-10.4 2.64 *	3.87 4.6-7.8 2.95 *	17.92 3-5.9 6.34 *	2.4 5.2-10.4 2.32 *	2.95 4-8.0 2.57 *	13.52 2.4-4.6 4.37 *	1.4 4.6-9.6 1.77 *	1.74 3.7-7.3 1.97 *	8.21 2.4-5.2 4.29 *
0.187	Tp THROW VEL NES	(Pa) (m) (m/s) dB	3.05 8-11.3 2.62 20	3.82 6-8.6 2.93 21	17.82 4.3-6 6.32 26	7.77 8-11.3 4.18 16	9.65 6-8.6 4.65 17	43.58 4.3-6 9.89 22	5.41 7-11.0 3.48 *	6.74 5.6-8.5 3.89 *	30.88 4-6.1 8.33 *	3.98 6.7-11.3 2.99 *	4.97 5.2-8.5 3.34 *	23.02 3.7-6.1 7.19 *	3.08 6.1-11.3 2.63 *	3.79 4.6-8.5 2.92 *	17.37 3.4-6.1 6.24 *	1.8 5.1-10.3 2.01 *	2.23 4-8.0 2.24 *	10.54 2.7-5.8 4.86 *
0.206	Tp THROW VEL NES	(Pa) (m) (m/s) dB	3.92 8.1-12 2.97 23	4.91 6.5-9.1 3.32 24		9.98 8.5-11.9 4.73 19	12.4 6.7-9 5.28 20		6.95 8-12.0 3.95 *	8.66 6-9.0 4.41 *	39-69 4.3-6.4 9.44 *	5.11 7.6-12 3.39 *	6.39 5.8-9.1 3.79 *	29.59 4.3-6.4 8.15 *	3.95 6.7-12 2.98 *	4.87 5.2-9 3.31 *	22.33 3.7-6.4 7.08 *	2.31 6-12.0 2.28 *	2.86 4.6-9 2.54 *	13.55 3.4-6.4 5.51 *
0.236	Tp THROW VEL NES	(Pa) (m) (m/s) dB	4.86 8.8-12.5 3.33 27	6.08 6.6-10 3.7 28		12.37 8.8-12.6 5.27 22	15.37 6.7-10 5.87 23		8.61 8.9-12.6 4.4 17	10.73 6.7-9.7 4.91 18		6.34 8.3-12.6 3.77 *	7.92 6.5-10 4.22 *	36.67 4.6-7.1 9.07 *	4.9 7.3-12.6 3.32 *	6.04 5.6-10 3.68 *	27.67 4-7.0 7.88 *	2.87 6.7-12.6 2.54 *	3.55 5.2-10 2.82 *	16.79 3.7-7 6.14 *
0.261	Tp THROW VEL NES	(Pa) (m) (m/s) dB	5.94 9-13.0 3.65 30	7.44 7-10.0 4.09 31		15.13 9-13.0 5.83 24	18.79 7-10.1 6.5 25		10.53 9.1-13.1 4.86 20	13.13 7-10.1 5.43 21		7.75 9.1-13.1 4.17 16	9.69 7-10.1 4.66 17		5.99 8.3-13.2 3.6 *	7.38 5-10.2 4.07 *	33.84 4.7-7.4 8.72 *	3.5 7.4-13.2 2.8 *	4.34 5.6-10.2 3.12 *	20.53 4.1-7.4 6.79 *
0.284	Tp THROW VEL NES	(Pa) (m) (m/s) dB	7.03 9.9-13.8 3.97 32	8.81 7.7-10.8 4.45 33		17.91 9.6-13.8 6.34 27	22.25 7.3-10.7 7.07 28		12.47 9.9-13.8 5.29 22	15.53 7-10.7 5.91 23		9.18 9.9-14 4.54 19	11.47 7.6-10.7 5.07 20		7.1 8.9-13.7 3.99 *	8.74 6.8-10.8 4.43 *	40.07 5-7.7 9.48 *	4.15 7.4-13.2 3.05 *	5.14 6-10.6 3.4 *	24.31 4.4-7.7 7.39 *
0.331	Tp THROW VEL NES	(Pa) (m) (m/s) dB	9.55 10-14.9 4.63 38	11.97 8-11.6 5.18 39		24.33 10.4-15 7.39 32	30.23 8-11.7 8.24 33		16.94 10.4-15 6.17 26	21.12 8-11.7 6.88 27		12.46 10.4-15 5.29 23	15.58 8-1.7 5.91 24		9.64 10.7-15 4.65 18	11.88 8.3-11.6 5.16 19		5.64 9-15.0 3.56 *	6.98 7-11.7 3.96 *	33.02 5.3-8.3 8.61 *
0.380	Tp THROW VEL NES	(Pa) (m) (m/s) dB				32.07 11.2-16 8.48 37	39.84 8.6-12 9.46 38		22.32 11.4-16.8 7.08 31	27.83 8.6-12.3 7.9 32		16.43 11-16.0 6.07 27	20.53 8.6-12.3 6.79 28		12.7 11.4-16 5.34 22	15.65 8.6-12.4 5.93 23		7.43 10.7-16 4.08 17	9.2 8.3-12.3 4.55 18	43.52 5.8-8.9 9.88 23
0.424	Tp THROW VEL NES	(Pa) (m) (m/s) dB							27.79 12-16.0 7.9 35	34.65 9-2.8 8.82 36		20.45 12-16.0 6.78 31	25.56 9.1-12.8 7.57 31		15.82 11.7-17 5.96 25	19.49 8.9-12.8 6.61 26		9.25 11.7-17 4.56 17	11.46 9-12.9 5.07 21	
0.473	Tp THROW VEL NES	(Pa) (m) (m/s) dB							34.58 12.6-18 8.81 39	43.12 9.8-14 9.84 40		25.45 12.6-17.8 7.56 35	31.81 9.9-13.8 8.45 36		19.68 12.5-17 6.65 28	24.25 9.9-13.8 7.36 39		11.51 12.6-17.8 5.08 23	14.26 9.9-13.8 5.6 24	

	0°	22½°	45°
Aj Register with OBD	.73 CA	.70 CA	.55 CA
Aj Register without OBD	.79 CA	.74 CA	.58 CA
Throw	100 %	77 % of Straight	55 % of straight
C pressure Coeff.	1.341	1.315	1.305
Basic Formulae:	$m^3/s = V \times Aj$ $V = C$		

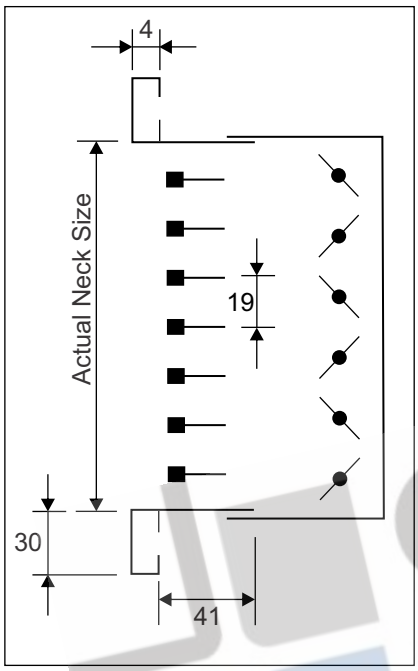
SD

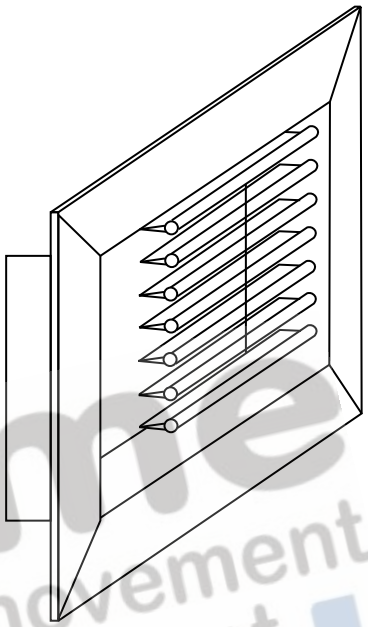
- These models have one set of individually adjustable blades on a horizontal plane to provide maximum throw requirements or on a vertical plane (on special request) to provide maximum spread adjustment.
- They are recommended for heating, cooling, and ventilating applications, generally mounted in a high sidewall bulkhead or duct when wither spread or throw only is important.
- The grilles are provided with or without an opposed blade damper.
- The adjustable blades are spaced at 19mm, but fixed blades with 13, 21 and 26mm spacing can be offered at special request.

GENERAL SPECIFICATIONS

- All models feature one set of individually adjustable blades of extruded aluminium set in a 20, 30 or 50mm extruded aluminium frame.
- An optional extra opposed blade damper is constructed of extruded aluminium blades can be supplied on request.
- All models can have a powder coated surface finish preceded by five stage preparation process of cleaning, phosphatising and drying.
- Other colours are available on request.
- Grilles can also be supplied in natural anodized finish.

SD





TYPE SD: Single Deflection Supply Air Grille manufactured of extruded type 50S anodising grade aluminium with individually adjustable horizontal louvers held in place by starlock washers and wire.

Optical Accessories

OBD	=	Opposed Blade Damper
PC	=	Punched counter sunk holes
CF	=	Concealed Fixing

Frame Options

30mm Standard
20mm
50mm

Finish Options

NA	=	Natural Anodised
EPC	=	Epoxy Powder Coating

Ordering Procedure: Example

Ref	Qty	Size (L x H)	Type	Access	Frame	Finish	Special Instructions
1	9	700 x 350	SD	OBD	20	NA	PC

Note:
(1) Dimensions given are for opening size into which grille will fit (i.e Normal Duct Size)
(2) If code "OS" is entered under SPECIAL INSTRUCTIONS, then dimensions given are over flange.