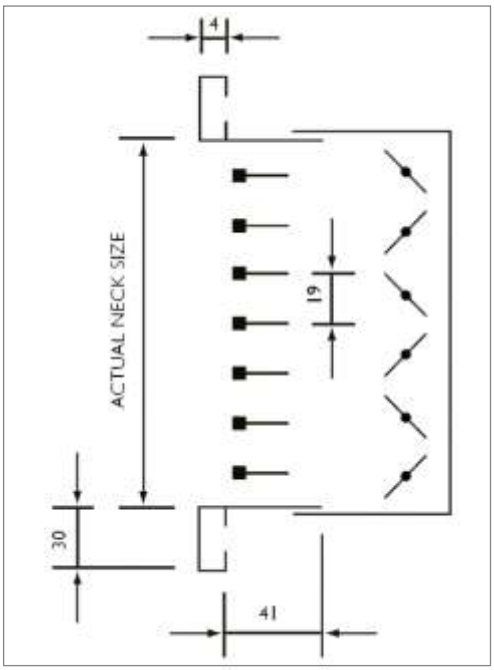
Supply Air Grilles - SD

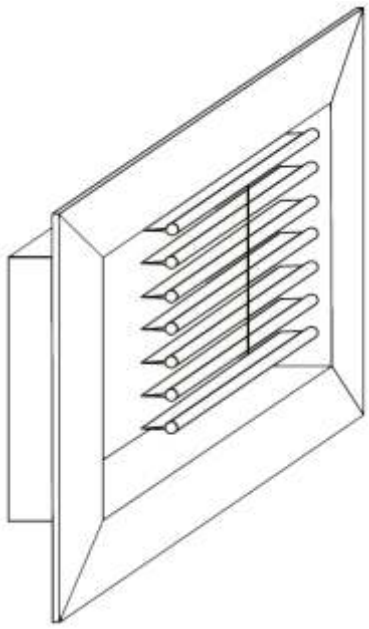
- These models have one set of individually adjustable blades on a horizontal plane to provide maximum throw requirements or on a vertical plane (on special request) to provide maximum spread adjustment.
- They are recommended for heating, cooling, and ventilating applications, generally mounted in a 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.

GRILLES
Supply Air Grilles - 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.

GRILLES

Performance Data DD-SD

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: $m^3/s = V \times Aj$

$V = C$

Performance Data DD-SD

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