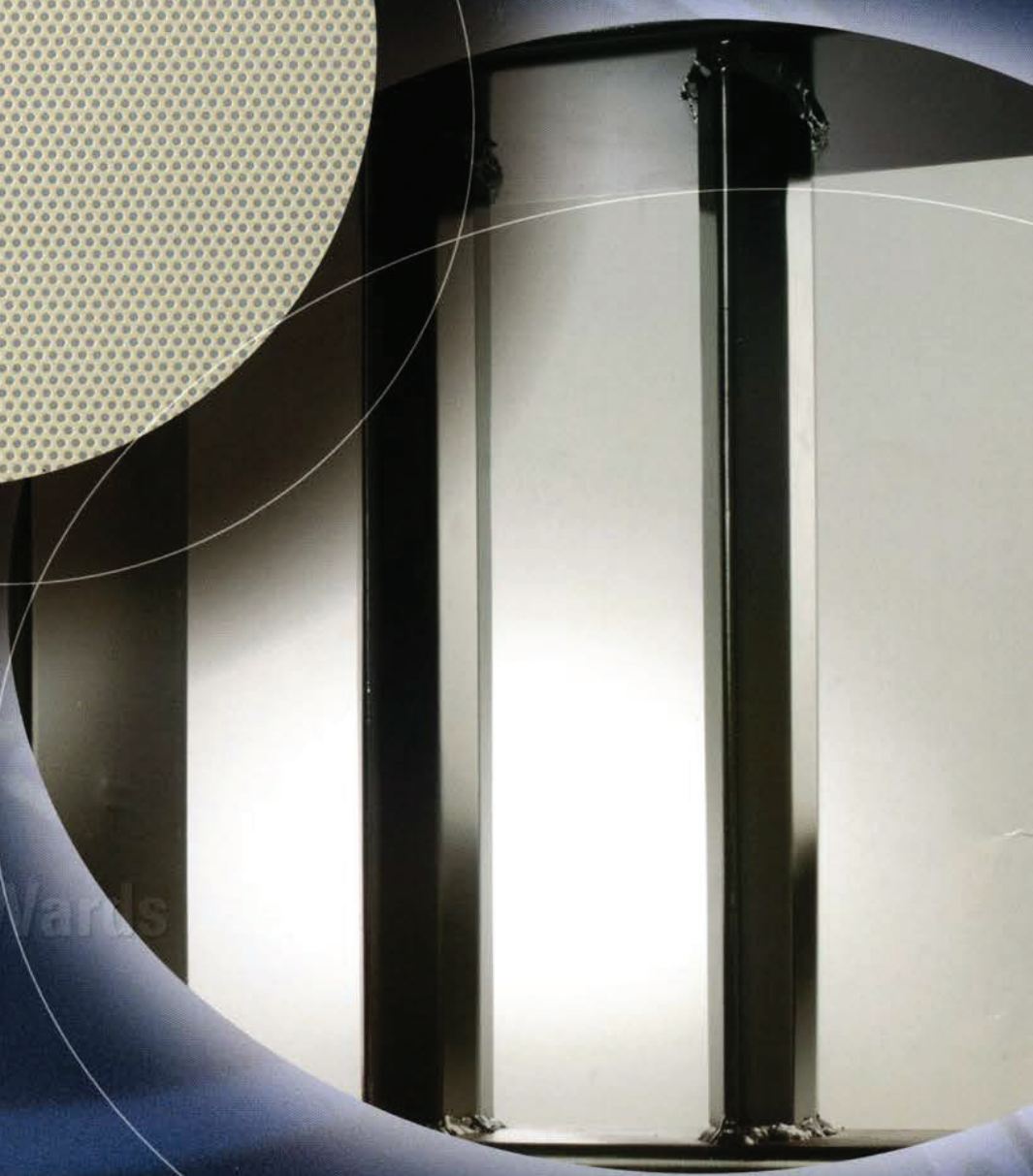


PERFORATED SECURITY AIR GRILLES



Prison Cells



Hospital
Psychiatric Wards

Courthouse
Holding Cells



S W Hart & Co

SW Hart security diffusers provide reliable and quiet ventilating or conditioning air distribution through tamper and vandal proof perforated steel plates. These perforated grilles are secured by heavy gauge frames and mounting assemblies with built in security features.



FEATURES:

- Robust tamper-proof construction
- Secured in place by poured concrete or can be fixed into concrete duct, brick or masonry walls and security doors
- Smooth attractive finish
- Custom arrangements or finishes

APPLICATIONS:

- Prison cells
- Courthouse holding and transfer cells
- Hospital psychiatric wards

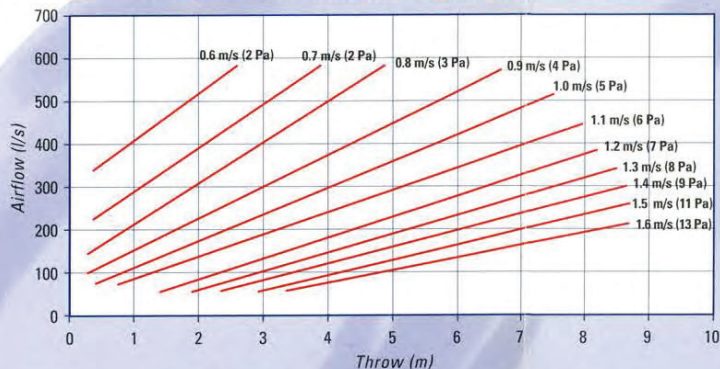
OPTIONS:

- Opposed blade adjustable balancing dampers
- Cushion heads
- Internal security bars with airfoil profile

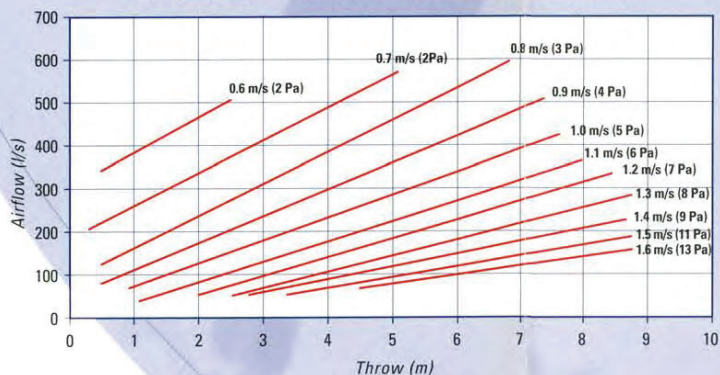
CONSTRUCTION MATERIAL OPTIONS:

- Mild steel:
- Cadmium plated
- Powder Coated
- Galvanised
- Stainless steel
- Various thicknesses, 1.6 to 3mm
- Standard Perforations:
 - 3.25mm diameter x 4.78 centres (41% free area)
 - 6.35mm diameter x 9.55 centres (40% free area)
- Other perforation options on request

THROW & PRESSURE DROP - VERTICAL DISCHARGE



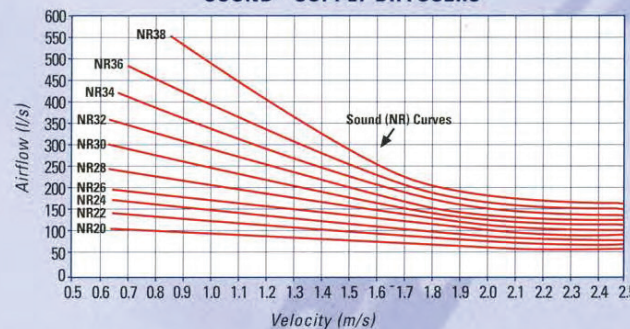
THROW & PRESSURE DROP - HORIZONTAL DISCHARGE



Notes:
 Velocity based on face area of perforated surface, dimension A x B (see Grille Face Plate Drawing)
Testing conditions: Room air temperature 19°C, test air temperature 17°C.
 Throw based on a terminal velocity of 0.25m/s

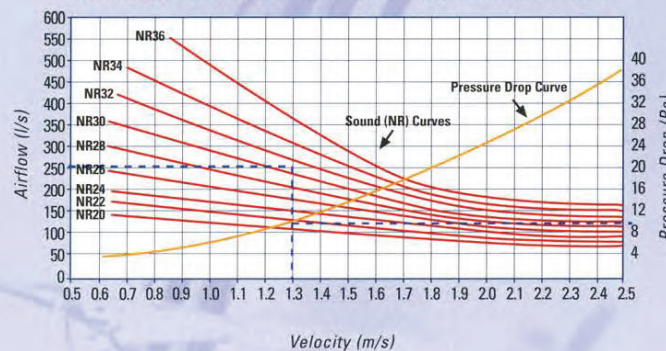


SOUND - SUPPLY DIFFUSERS



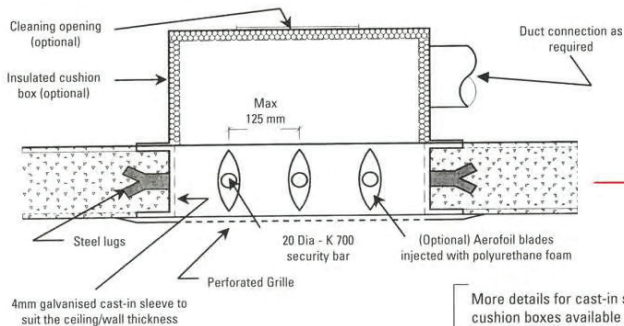
NR ratings based on a room absorption of 10 dB

SOUND & PRESSURE DROP - EXHAUST/RETURN GRILLES

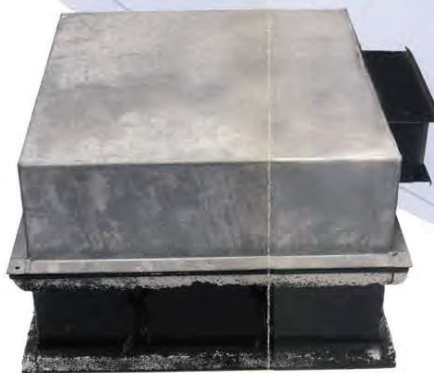


Example - - - -
 Airflow: 260 lps
 Grille Size: 400 x 500
 Velocity: 1.3 m/s
 Sound: NR32
 Pressure Drop: 10 Pa

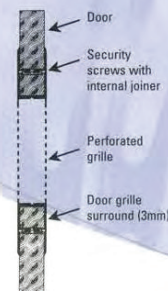
SUPPLY AIR GRILLE ASSEMBLY



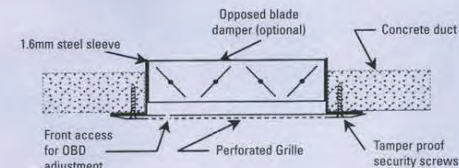
More details for cast-in sleeves and cushion boxes available on request



DOOR GRILLE



SUPPLY OR RETURN GRILLE WITH OBD





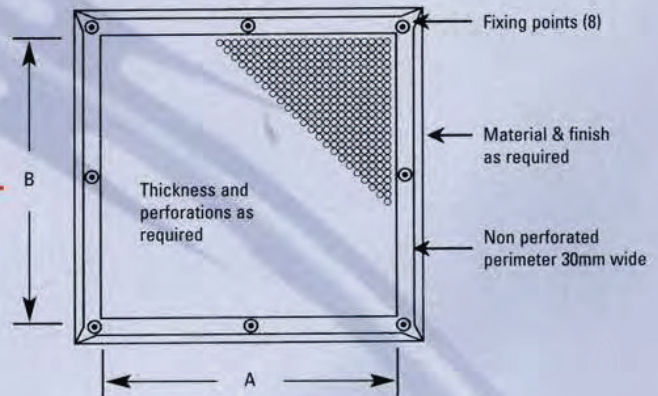
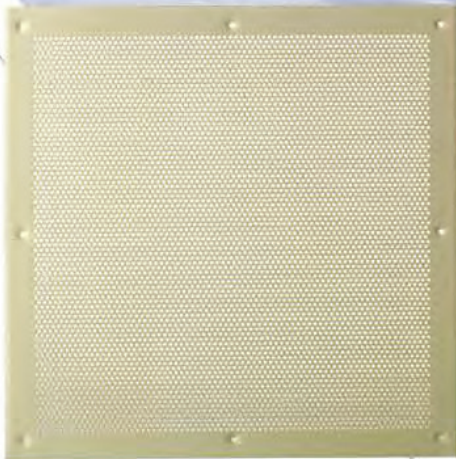
PERFORATED SECURITY AIR GRILLES

VELOCITY LOOKUP TABLE

Airflow (l/s)	100 x 200, 150 x 150	100 x 400, 200 x 200, 150 x 250	100 x 600, 150 x 400, 200 x 300, 250 x 250	100 x 800, 150 x 550, 200 x 400, 250 x 350	150 x 800, 200 x 500, 250 x 400, 350 x 300	250 x 550, 300 x 500, 300 x 450, 350 x 400	250 x 650, 300 x 550, 350 x 400	250 x 700, 300 x 600, 350 x 450, 400 x 400	300 x 650, 350 x 550, 400 x 450	300 x 750, 350 x 650, 400 x 500, 450 x 450	300 x 800, 400 x 600, 450 x 500	300 x 850, 400 x 650, 500 x 500	300 x 950, 400 x 750, 500 x 550	300 x 1000, 400 x 800, 500 x 600	300 x 1200, 400 x 900, 500 x 700, 600 x 600	300 x 1350, 400 x 1000, 500 x 800, 600 x 650	400 x 1500, 400 x 1150, 500 x 900, 600 x 650	400 x 1250, 500 x 1000, 600 x 850, 700 x 700	Sample Face Dimensions	
600									2.5	2.3	2.1	2.0	1.7	1.5	1.3	1.2				
550									2.5	2.3	2.1	2.0	1.8	1.6	1.4	1.2	1.1			
500								2.5	2.3	2.1	1.9	1.8	1.7	1.4	1.3	1.1	1.0			
450							2.5	2.3	2.0	1.9	1.7	1.6	1.5	1.3	1.1	1.0	0.9			
400						2.5	2.2	2.0	1.8	1.7	1.5	1.4	1.3	1.1	1.0	0.9	0.8			
350					2.5	2.1	1.9	1.8	1.6	1.5	1.3	1.3	1.2	1.0	0.9	0.8	0.7			
300				2.5	2.1	1.8	1.6	1.4	1.3	1.1	1.0	1.0	0.9	0.8	0.7	0.6	0.5			
250			2.5	2.0	1.7	1.4	1.3	1.1	1.0	0.9	0.8	0.8	0.7	0.7	0.6	0.5	0.4	0.4		
200		2.5	1.9	1.5	1.3	1.1	0.9	0.8	0.8	0.7	0.6	0.6	0.5	0.5	0.4	0.4	0.3	0.3		
150		2.5	1.7	1.3	1.0	0.8	0.7	0.6	0.6	0.5	0.5	0.4	0.4	0.3	0.3	0.3	0.2	0.2		
100	2.5	1.7	1.3	1.0	0.8	0.7	0.6	0.6	0.5	0.5	0.4	0.4	0.4	0.3	0.3	0.3	0.2	0.2		
50	1.3	0.8	0.6	0.5	0.4	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1		
25	1.3	0.6	0.4	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1		
Area (m ²)	0.02	0.04	0.06	0.08	0.1	0.12	0.14	0.16	0.18	0.2	0.22	0.24	0.26	0.28	0.3	0.25	0.4	0.45	0.5	

- Face Velocity (m/s)

GRILLE FACE PLATE



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