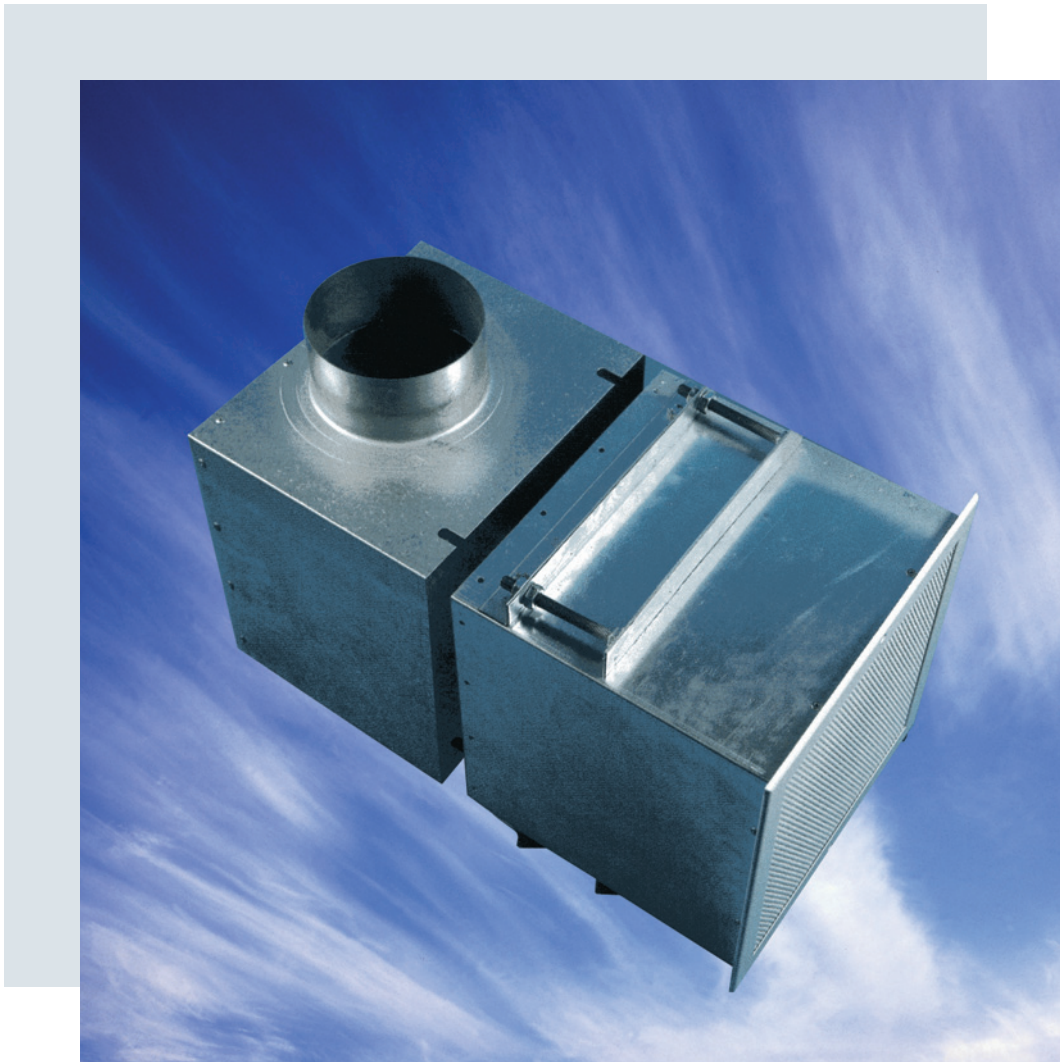


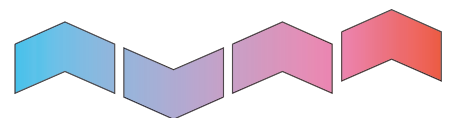
COLMAN

ENGINEERED AIR DISTRIBUTION

SECURITY GRILLES
G SERIES

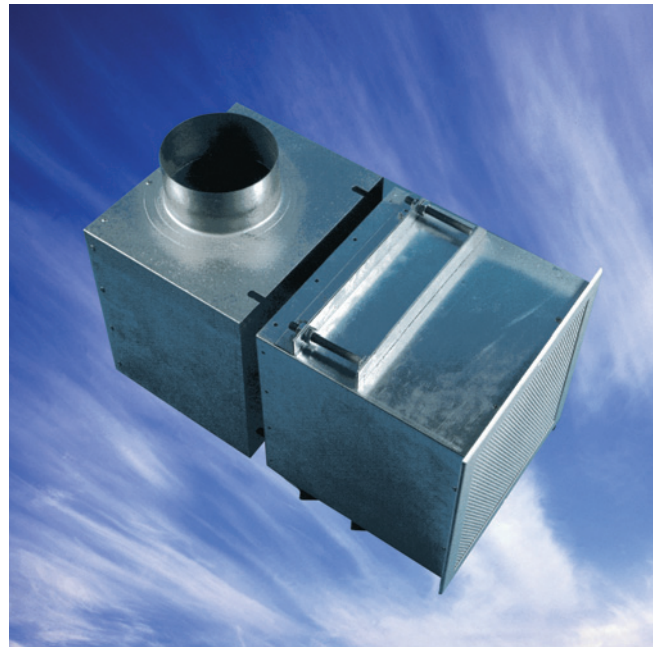


G
SERIES



G SERIES

SECURITY GRILLES



Application:

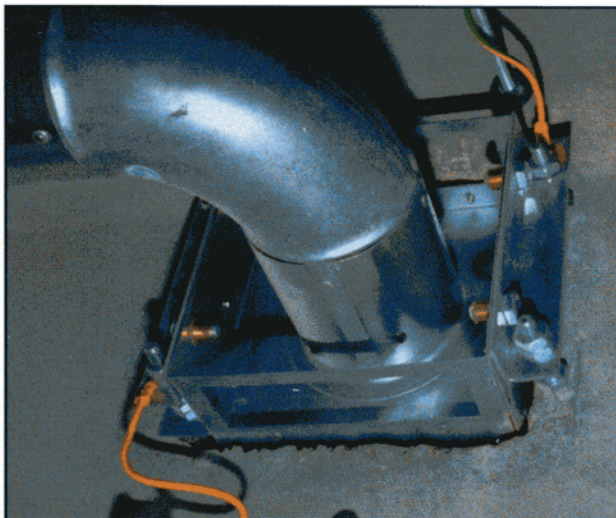
Colman Moducel model GSP is a robust, high quality Security Grille, designed for use as a supply or extract grille in applications such as Police Cells, Magistrates Courts, Prisons and Detention Centres, where tamperproof and vandal proof features are essential.

Description:

The GSP core, is manufactured from 3mm mild steel perforated plate, having 3mm dia holes on a 5mm pitch and equating to a free area of 37%, which is entrapped into a welded aluminium frame.

If required the grille can be supplied with an opposed blade volume control damper operable from the face by means of a 4mm A/F Allen key through a 4.5mm hole in the face plate.

GSP security grilles can be supplied with a galvanised steel sleeve and plenum box suitable for fixing through a compartment wall or ceiling. The plenum box can also be provided with a camera access hole (side entry spigot only).



Fixings:

Standard fixing for our range of GSP Security Grilles is via screw fixing through the face flange or neck, with each of these options the fixing screws are by others. When an optional sleeve and plenum box are required, then concealed fixing is achieved by the use of our standard jacking arrangement.

Finishes:

Security Grilles are available as standard, in powder coated RAL 9010 Matt White. Please refer to the product coding section within this brochure for a list of other standard finishes. Special finishes are available on request.

All diffusers are pre-treated utilising a six stage phosphate conversion process conforming to ISO 9171 prior to being powder coated in accordance with BS6496.

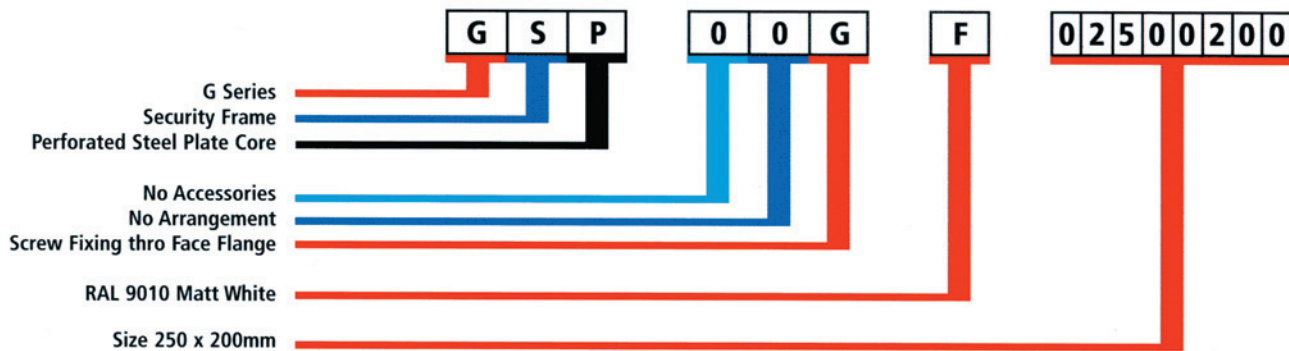
Options and Order Codes

Security Grilles

1	2 FRAME	3 CORE	4 ACCESSORIES	5 ARRANGEMENT	6 FIXING	7 FINISH
G			0 None	0 None	0 None	0 None - mill finish
	S Security Frame	P Steel Perforated plate (security)	V Face operated volume control damper X Face operated v.c.d powder coated matt black		A Screw fixing thro neck (screws by others) G Screw fixing thro face flange (screws by others)	F RAL 9010 Matt White 8 Matt Black C BS00E55 Gloss White H BS00E55 Satin D BS00E55 Matt E RAL 9010 Gloss G RAL 9010 Satin 3 RAL 9006 Silver 1 Special
	Note See Product data sheet for frame sizes					

Note: The items shown in red print above and below in the code example are the standard option for this product. Unless shown otherwise on any quotation or order the units will be supplied in the configuration.

Example of Order Codes

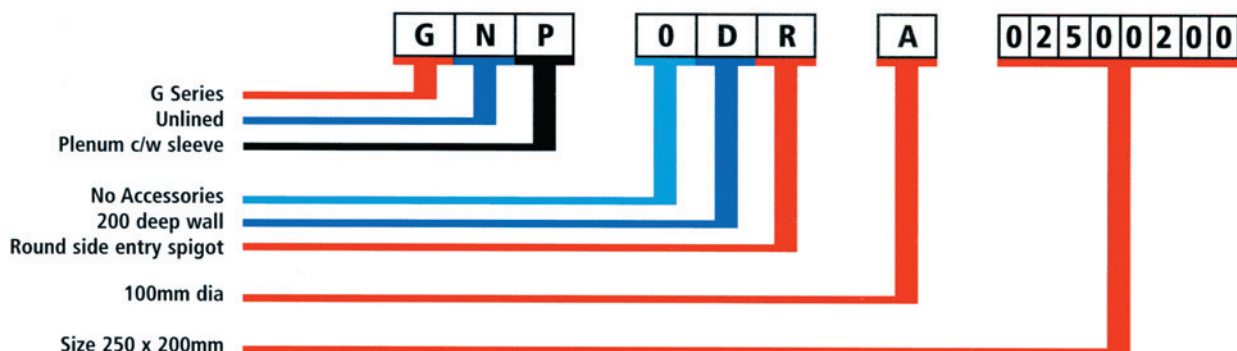


Security Plenums

1	2 LINING	3 INSTALLATIONS	4 ACCESSORIES	5 WALL DEPTH	6 SPIGOT TYPE	7 SPIGOT SIZE
G	N Unlined	S Sleeve	0 None	A 100mm Deep B 125mm Deep C 150mm Deep D 200mm Deep E 250mm Deep 1 Special	R Round side entry S Square side entry T Round top entry Y Square top entry	A 100mm B 125mm C 150mm D 200mm E 250mm
		P Plenum c/w sleeve C Plenum c/w sleeve and camera hole	P Powder coated matt black (internally only)	Note Sleeve depth equals wall depth plus 100mm		Note All spigots are 75mm deep as standard

Note: The items shown in red print above and below in the code example are the standard option for this product. Unless shown otherwise on any quotation or order the units will be supplied in the configuration.

Example of Order Codes



Performance Data

Data Basis -

Model GSP Security Grilles

1. Since these grilles are normally used in small acoustically hard room the air velocity through the diffusers should be limited to the values indicated in the selection chart in order to achieve a sound level of approximately NC35
2. As both supply and extract grilles effect the noise level the summ of the air volumes should be considered when establishing an acceptable velocity from the selection table. The grille core area can then be determined by dividing the required air volume by the already established acceptable face velocity.
3. It is essential that any damper in the diffuser assembly does not drop excessive pressure of more than 70% of the given pressure drop or there will be a substantial increase in noise level.
4. When used on extract the static pressure drop (Ps) will increase by the value of the velocity head in the extract ductwork connection.

Selection Example:

A small prison cell requiring 0.075m³/s on supply and 0.09m³/s on extract.

TOTAL VOLUME

$$=0.075 + 0.09 = 0.165\text{m}^3/\text{s}$$

MAXIMUM FACE VELOCITY

$$=1.5\text{m/s}$$

SUPPLY FACE VELOCITY

$$=0.075 \div 1.5 = 0.06\text{m}^2$$

EXTRACT FACE AREA

$$=0.09 \div 1.5 = 0.06\text{m}^2$$

POSSIBLE SELECTIONS

SUPPLY:250 x 250 (A = 0.051)

EXTRACT:300 x 250 (A = 0.062)

RESULTANT VELOCITIES

SUPPLY:0.075 ÷ 0.051 = 1.47m/s

EXTRACT:0.09 ÷ 0.062 = 1.45m/s

Core Area (m ²) - Model GSP						
Width (mm)	Height (mm)					
	75	100	150	200	250	300
150	.006	.009	.016	-	-	-
200	.008	.013	.022	.031	-	-
250	.011	.017	.028	.039	.051	-
300	.014	.021	.034	.048	.062	.076
350	.016	.024	.041	.057	.073	.089
400	.019	.028	.047	.066	.084	.103
450	.021	.032	.053	.074	.096	.117
500	.024	.036	.059	.083	.107	.131
550	.026	.039	.066	.092	.118	.144
600	.029	.043	.072	.101	.129	.158

Model GSP		
Total Air Volume m ³ /s	Face Velocity m/s	Pressure Drop Pa
Up To 0.04	2.0	20
0.055	1.9	18
0.07	1.8	16
0.095	1.7	14
0.125	1.6	13
0.165	1.5	11
0.22	1.4	10
0.29	1.3	8
0.38	1.2	7
0.50	1.1	6
0.65	1.0	5

Dimensional Data

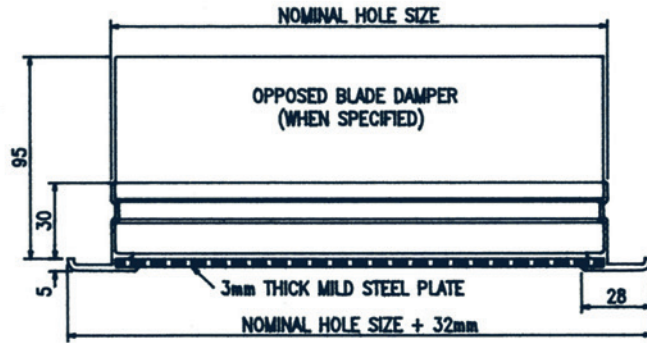
Security Grilles GSP

A security grille designed specifically for use in locations where vandalproof and tamperproof features are essential. The grille is manufactured using a 3mm thick mild steel plate with 3mm dia. holes on 5mm pitch captivated within an extruded aluminium frame.

Access to the damper operator (when specified) is by means of a 4mm A/F Allen Key through an enlarged hole in the faceplate.

Minimum size 150 x 75
Maximum size 600 x 600

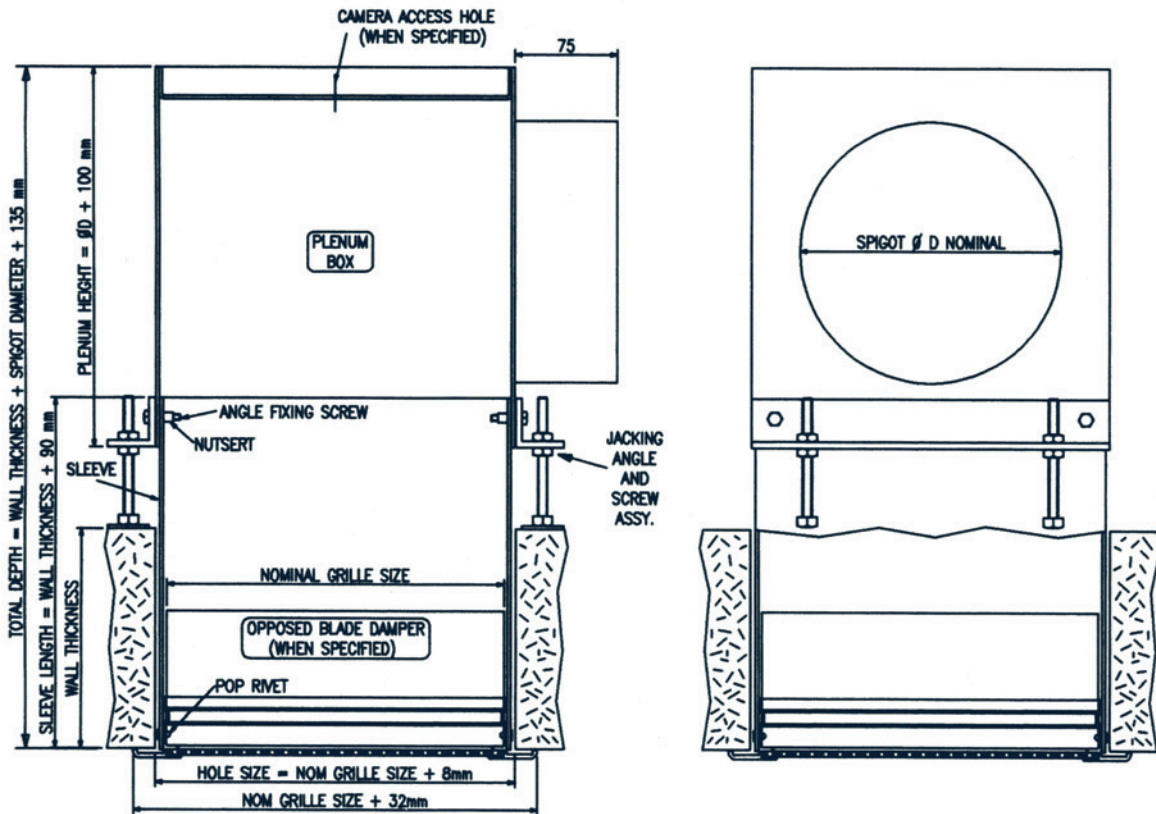
Free Area 37%



GSP and Plenum Box Assembly

The GSP security grille complete with galvanised steel sleeve and plenum box suitable through a compartment wall or ceiling.

The plenum box can be provided with a camera access hole, when specified.
(Applicable on side inlet only.)



VIEW ON SIDE

VIEW ON END

PRODUCT RANGES

GRILLES	DIFFUSERS	DISPLACEMENT
Linear Bar	Linear Slot	Ventilation
Ceiling	Louvre Face	
Sidewall	Sidewall	LOUVRES
Floor	Perforated Face	External
Computer Floor	Vee Face Two Way	Circular
Cill	Circular	Door
Single & Double Deflection	Swirl	Screens
Egg Crate	Ceiling	Penthouse
Hinged Core	Sidewall Fixed & Adjustable	Acoustic
Door Transfer	Jet Flow	
Security and Prison		



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