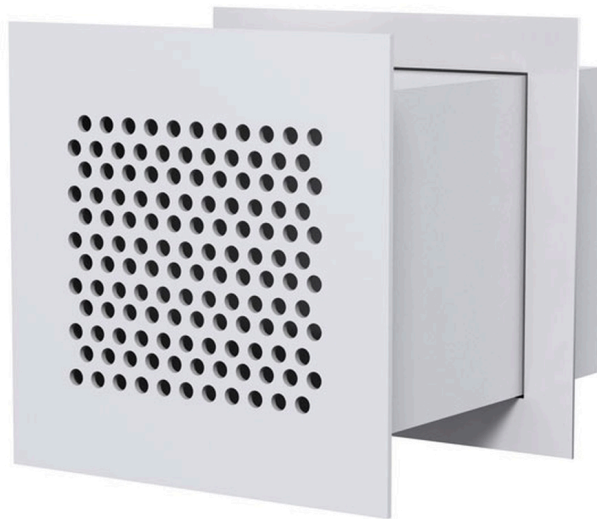




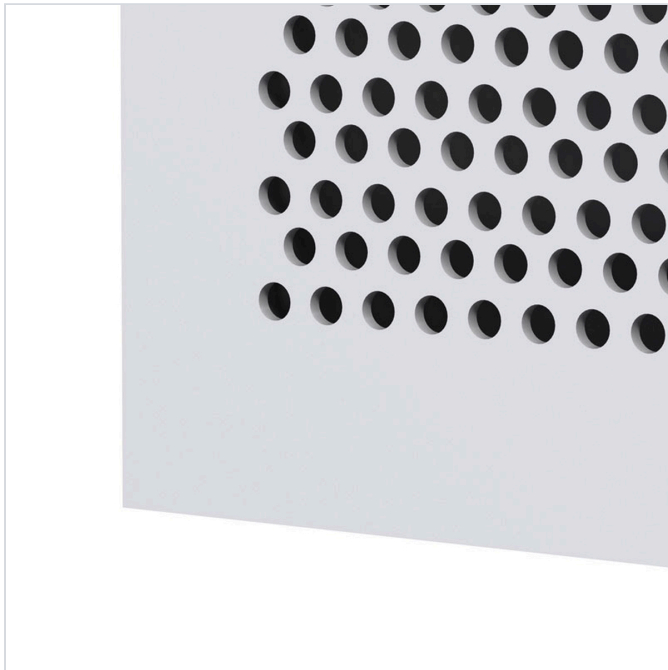
MAXIMUM SECURITY · PERFORATED FACE

SECURITY GRILLE

An all-welded perforated-face steel grille with an integral wall sleeve — one of the most robust security grille styles for supply and return air in secure areas.

01 OVERVIEW

The **GSG-P** is an all-welded, maximum-security perforated-face grille built to survive secure and unsupervised spaces. The heavy-gauge perforated steel face and integral welded wall sleeve resist the tampering, disassembly and damage that defeat conventional grilles, while the open perforation pattern keeps free area high and pressure drop low for both supply and return duties.



GSG-P · perforated face grille with integral welded wall sleeve

ALL-WELDED CONSTRUCTION

Single-piece welded steel with no removable face fasteners.

INTEGRAL WALL SLEEVE

Moves fastening to the protected side of the wall.

HIGH FREE AREA

Open perforation keeps pressure drop low, supply and return.

MAXIMUM SECURITY

Heavy-gauge face resists vandalism, misuse and access.

TYPICAL APPLICATIONS

Security grilles reduce unwanted access to ductwork where supervision is minimal and vandalism or misuse is a risk — **correctional facilities, psychiatric & secure hospitals, rest stops, park facilities, schools, and sports & public venues.**

02 SPECIFICATIONS & CONSTRUCTION

SPECIFICATION

FACEPLATE

Perforated hot-rolled steel · CV/H0 Ø2 mm @ 4 mm pitch or
CV/MJ Ø3 mm @ 5 mm pitch

FACE PLATE THICKNESS

3 · 5 · 6 mm hot-rolled steel

SLEEVE

5 mm hot-rolled steel · stitch- or continuously-welded seams

CONSTRUCTION

All-welded, with integral wall sleeve

MOUNTING

Angle for field welding · bent-out flanges for pour-in-place

MATERIAL

Steel · aluminium · 304 stainless steel

SIZE (W × H)

150 × 150 mm to 750 × 750 mm

DUTY

Supply and return

FINISH

Powder coat RAL 9010 white(std) · galvanized · mill · stainless

INTEGRAL SLEEVE & MOUNTING



Integral welded sleeve shown with optional 4-sided mounting frame
(shipped loose for field welding)

OPTIONS

Wire mesh(WM) · 4-sided mounting frame(25 × 25 × 3 mm HR
steel angle) · barrier bars · damper · transfer grille

TRANSFER GRILLE

Same perforated face on both ends of the sleeve, for poured-
in-place openings

WHERE IT IS USED



Correctional facilities

Cells, holding & detention



Secure hospitals

Psychiatric & controlled wards



Schools & campuses

Institutional buildings



Sports & public venues

Arenas, courts, civic



Transit & rest stops

Minimal-staffing spaces



Any at-risk opening

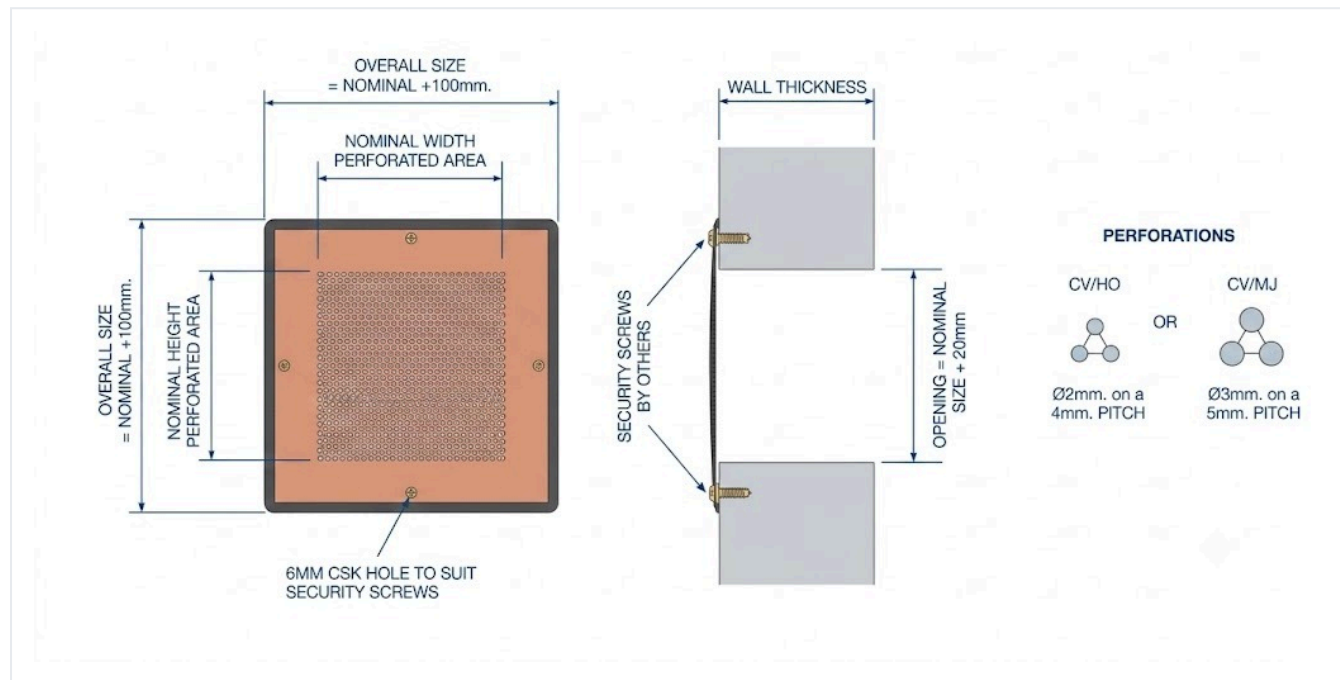
Vandalism / misuse risk

03 MOUNTING & CONFIGURATIONS

Standard build configurations, from a face-only grille to a fully ducted, damper-controlled assembly. Perforation options: **CV/HO** Ø2 mm on a 4 mm pitch or **CV/MJ** Ø3 mm on a 5 mm pitch.

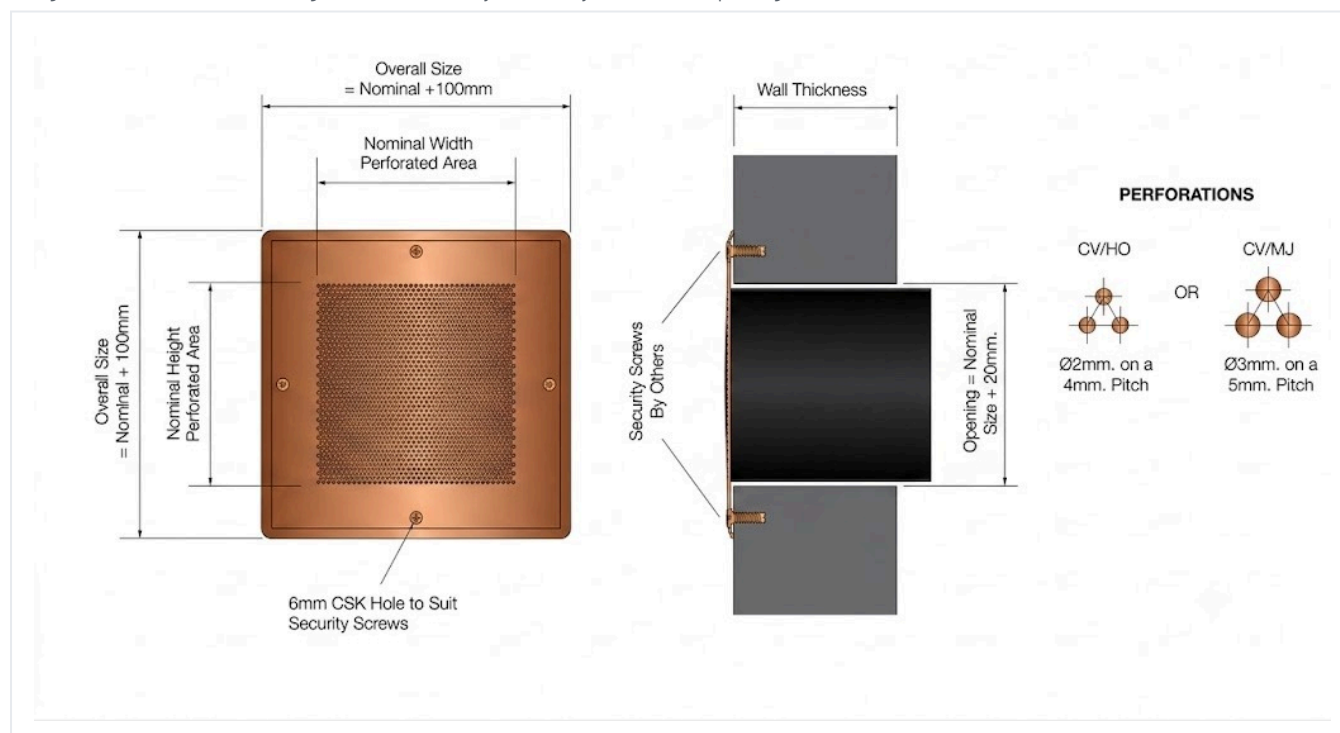
CONFIGURATION 0 — FRONT GRILLE ONLY

Grille face fixed with 6 mm CSK security screws (by others). Overall size = nominal + 100 mm · wall opening = nominal size + 20 mm.



CONFIGURATION 1 — FRONT GRILLE + STUB DUCT

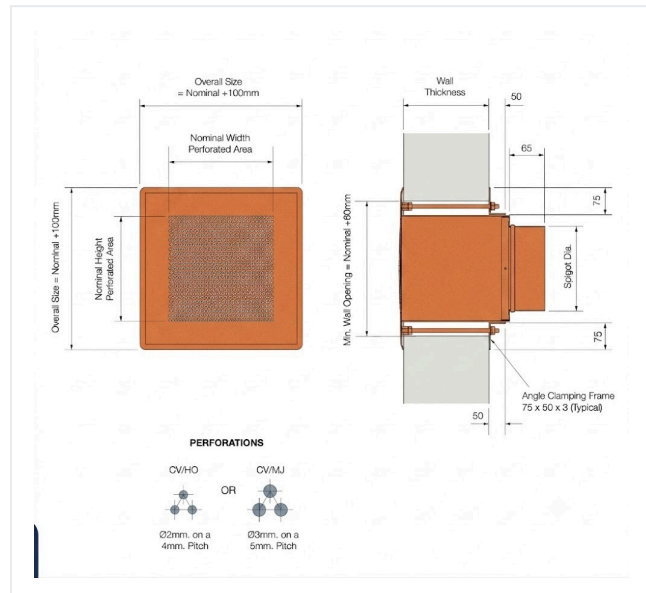
Integral stub duct (sleeve) through the wall; security screws by others. Wall opening = nominal size + 20 mm.



03 CONFIGURATIONS (CONT.)

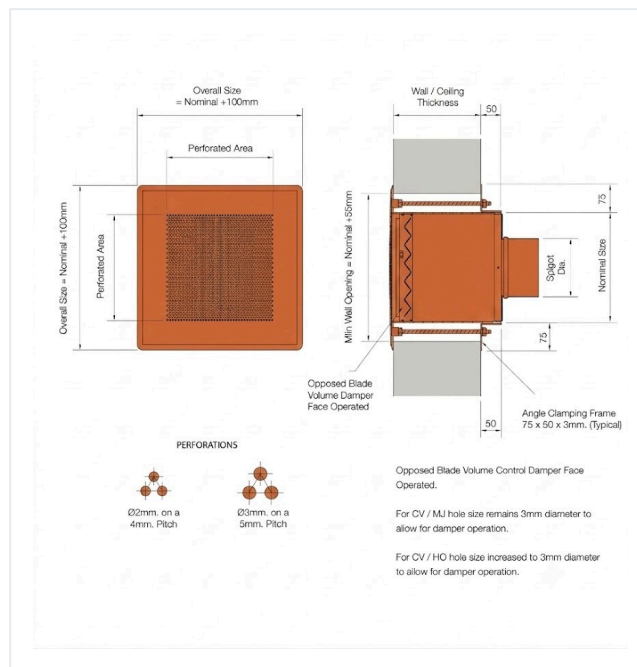
CONFIGURATION 2

Front grille + stub duct + angle clamping frame (75 × 50 × 3 mm) + circular spigot connection. Min. wall opening = nominal + 80 mm.



CONFIGURATION 3

Front grille + stub duct + angle clamping frame + circular spigot + face-operated opposed-blade volume control damper. Min. wall opening = nominal + 55 mm; Ø3 mm perforation to allow damper operation.



CONFIGURATION NOTES

- Overall face size = nominal + 100 mm (Config 0-2); face fixed with 6 mm CSK special-key screws.
- Circular spigot sized to the connecting duct diameter.

- Angle clamping frame 75 × 50 × 3 mm secures the assembly for through-wall builds.
- Confirm wall thickness (K), spigot diameter and perforation (CV/HO or CV/MJ) on the project submittal.

04 PERFORMANCE · SUPPLY

PERFORMANCE DATA — GSG-P · SUPPLY

Size (mm)	—	0.5	1.0	1.5	2.0	2.5	3.0	3.6	4.1	4.6
Neck velocity (m/s) →		0.5	1.0	1.5	2.0	2.5	3.0	3.6	4.1	4.6
150 × 150	ΔP (Pa)	1.2	5.0	11	20	32	45	62	81	102
	Flow (L/s)	12	24	35	47	59	71	83	94	106
	NR	—	—	—	—	16	22	27	31	35
	Throw (m)	1.2-1.8-3.4	2.4-3.4-4.6	3.4-4.0-5.5	3.7-4.6-6.4	4.3-5.2-7.3	4.6-5.5-7.9	4.9-6.1-8.5	5.2-6.4-9.1	5.5-7.0-9.8
200 × 200	ΔP (Pa)	1.0	4.0	9.0	16	25	36	49	64	81
	Flow (L/s)	21	42	63	84	105	126	147	168	189
	NR	—	—	—	—	16	22	27	31	35
	Throw (m)	1.5-2.4-4.3	3.4-4.3-6.1	4.3-5.2-7.3	4.9-6.1-8.5	5.5-6.7-9.8	6.1-7.3-10.7	6.7-7.9-11.3	7.0-8.5-12.2	7.3-9.1-12.8
250 × 250	ΔP (Pa)	0.7	3.2	7.5	13	21	30	41	53	67
	Flow (L/s)	33	66	98	131	164	197	229	262	295
	NR	—	—	—	—	16	22	27	32	35
	Throw (m)	2.1-3.0-5.5	4.0-5.5-7.6	5.5-6.7-9.4	6.1-7.6-10.7	7.0-8.5-12.2	7.6-9.4-13.1	8.2-10.1-14.3	8.8-10.7-15.2	9.4-11.6-16.2
300 × 300	ΔP (Pa)	0.7	2.7	6.5	11	18	26	35	46	58
	Flow (L/s)	47	94	142	189	236	283	330	378	425
	NR	—	—	—	—	16	22	27	32	36
	Throw (m)	2.4-3.7-6.4	4.6-6.4-9.1	6.4-7.9-11.3	7.3-9.1-12.8	8.2-10.4-14.3	9.1-11.3-15.8	9.8-12.2-17.1	10.7-12.8-18.3	11.3-13.7-19.5
350 × 350	ΔP (Pa)	0.7	2.5	5.7	10.0	16	23	31	40	51
	Flow (L/s)	64	128	193	257	321	386	450	514	578
	NR	—	—	—	—	17	22	28	32	36
	Throw (m)	2.7-4.0-7.6	5.5-7.6-10.7	7.6-9.1-13.1	8.8-10.7-14.9	9.8-11.9-16.8	10.7-13.1-18.6	11.6-14.0-19.8	12.2-14.9-21.3	13.1-16.2-22.6
400 × 400	ΔP (Pa)	0.5	2.2	5.0	9.0	14	20	28	36	46
	Flow (L/s)	84	168	252	336	420	504	587	671	755
	NR	—	—	—	—	17	23	28	32	36
	Throw (m)	2.7-4.6-8.5	6.1-8.5-12.2	8.5-10.7-14.9	10.1-12.2-17.4	11.3-13.7-19.2	12.2-14.9-21.0	13.1-16.2-22.9	14.0-17.4-24.4	14.9-18.3-25.9
450 × 450	ΔP (Pa)	0.5	2.0	4.7	8.2	13	18	25	33	42
	Flow (L/s)	106	212	319	425	531	637	743	850	956
	NR	—	—	—	—	17	23	28	32	36
	Throw (m)	3.0-5.2-9.8	6.7-9.8-13.7	9.8-11.9-16.8	11.3-13.7-19.5	12.5-15.2-21.6	13.7-16.8-23.8	14.9-18.3-25.6	15.8-19.5-27.4	16.8-20.7-29.0
500 × 500	ΔP (Pa)	0.5	2.0	4.2	7.5	12	17	23	30	38
	Flow (L/s)	131	262	393	524	656	787	917	1049	1180
	NR	—	—	—	—	17	23	28	32	36
	Throw (m)	3.7-5.5-10.7	7.3-10.7-15.2	10.7-13.1-18.6	12.5-15.2-21.6	14.0-17.1-24.1	15.2-18.6-26.5	16.5-20.1-28.7	17.7-21.6-30.5	18.6-22.9-32.3
550 × 550	ΔP (Pa)	0.5	1.7	4.0	7.0	11	16	21	28	35
	Flow (L/s)	159	317	476	634	793	952	1110	1269	1428
	NR	—	—	—	—	17	23	28	32	36
	Throw (m)	3.7-6.1-11.9	7.9-11.9-16.8	11.9-14.6-20.4	13.7-16.8-23.8	15.2-18.6-26.5	16.8-20.4-29.0	18.0-22.3-31.4	19.5-23.8-33.5	20.4-25.3-35.7
600 × 600	ΔP (Pa)	0.5	1.5	3.7	6.5	10	14	20	26	33
	Flow (L/s)	189	378	566	755	944	1133	1321	1510	1699
	NR	—	—	—	—	17	23	28	32	36
	Throw (m)	3.7-6.4-12.8	8.5-12.8-18.3	12.8-15.8-22.3	14.9-18.3-25.9	16.8-20.4-29.0	18.3-22.3-31.7	19.8-24.1-34.1	21.0-25.9-36.6	22.3-27.4-38.7
650 × 650	ΔP (Pa)	0.5	1.5	3.5	6.0	9.5	14	19	24	31
	Flow (L/s)	221	443	665	886	1108	1329	1551	1773	1994
	NR	—	—	—	—	17	23	28	32	36
	Throw (m)	4.0-7.0-14.0	9.4-14.0-19.8	14.0-17.1-24.4	16.2-19.8-28.0	18.0-22.3-31.4	19.8-24.4-34.4	21.3-26.2-37.2	22.9-28.0-39.6	24.4-29.9-42.1
700 × 700	ΔP (Pa)	0.2	1.5	3.2	5.7	9.0	13	17	23	29
	Flow (L/s)	257	514	771	1028	1285	1542	1799	2056	2313
	NR	—	—	—	—	17	23	28	32	36
	Throw (m)	4.3-7.3-14.9	10.1-14.9-21.3	14.9-18.6-26.2	17.4-21.3-30.2	19.5-23.8-33.8	21.3-26.2-36.9	23.2-28.3-39.9	24.7-30.2-42.7	26.2-32.0-45.1
750 × 750	ΔP (Pa)	0.2	1.2	3.0	5.5	8.5	12	16	22	27
	Flow (L/s)	295	590	885	1180	1475	1770	2065	2360	2655
	NR	—	—	—	—	17	23	28	33	36
	Throw (m)	4.3-7.9-15.8	10.7-15.8-22.9	15.8-19.8-28.0	18.6-22.9-32.3	20.7-25.6-36.3	22.9-28.0-39.6	24.7-30.2-42.7	26.5-32.3-45.7	28.0-34.4-48.5

Tested per EN 12238 (air terminal devices). Airflow L/s · total pressure Pa · sound NR · throw m. Throw values are the distances to terminal velocities 0.75 / 0.50 / 0.25 m/s. “—” indicates NR below 15. Values converted to SI; final ratings subject to Gerhman EN 12238 verification.

05 RETURN & ORDERING

PERFORMANCE DATA — GSG-P · RETURN

Size (mm)	—	0.5	0.8	1.0	1.3	1.5	1.8	2.0	2.5	3.0
Neck velocity (m/s) →		0.5	0.8	1.0	1.3	1.5	1.8	2.0	2.5	3.0
Neg. static pressure (Pa)		1.7	3.7	6.7	10	15	20	27	42	60
150 × 150	Flow (L/s)	12	18	24	30	35	42	47	59	71
	NR	—	—	—	—	—	—	—	22	28
200 × 200	Flow (L/s)	21	32	42	52	63	74	84	105	126
	NR	—	—	—	—	—	—	—	22	28
250 × 250	Flow (L/s)	33	49	66	82	98	115	131	164	197
	NR	—	—	—	—	—	—	—	22	28
300 × 300	Flow (L/s)	47	71	94	118	142	165	189	236	283
	NR	—	—	—	—	—	—	15	22	28
350 × 350	Flow (L/s)	64	96	128	160	193	225	257	321	386
	NR	—	—	—	—	—	—	15	23	28
400 × 400	Flow (L/s)	84	126	168	210	252	294	336	420	504
	NR	—	—	—	—	—	—	15	23	29
450 × 450	Flow (L/s)	106	160	212	266	319	372	425	531	637
	NR	—	—	—	—	—	—	16	23	29
500 × 500	Flow (L/s)	131	197	262	328	393	459	524	656	787
	NR	—	—	—	—	—	—	16	23	29
550 × 550	Flow (L/s)	159	238	317	396	476	555	634	793	952
	NR	—	—	—	—	—	—	16	23	29
600 × 600	Flow (L/s)	189	283	378	472	566	661	755	944	1133
	NR	—	—	—	—	—	—	16	23	29
650 × 650	Flow (L/s)	221	332	443	554	665	775	886	1108	1329
	NR	—	—	—	—	—	—	16	23	29
700 × 700	Flow (L/s)	257	386	514	642	771	900	1028	1285	1542
	NR	—	—	—	—	—	—	16	23	29
750 × 750	Flow (L/s)	295	443	590	738	885	1033	1180	1475	1770
	NR	—	—	—	—	—	—	16	23	29

Tested per EN 12238. Airflow L/s · negative static pressure Pa · sound NR. “—” indicates NR below 15. Values converted to SI; final ratings subject to Gerhman EN 12238 verification.

HOW TO SPECIFY — MODEL CODE

GSG-P MODEL	—	600×600 W × H (MM)	—	STL MATERIAL	—	MF MOUNT/OPT	—	PC FINISH
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Example: **GSG-P-600×600-STL-MF-PC** — perforated face, 600 × 600 mm, steel, 4-sided mounting frame, powder-coated.

MATERIAL STL steel · ALU aluminium · SST 304 stainless

FINISH PC powder · GV galvanized · ML mill · SS stainless

MOUNT/OPT MF frame · WM wire mesh · BB barrier bars · DP damper · TG transfer

FACE PLATE CV/HO Ø2/4 or CV/MJ Ø3/5 · 3-6 mm steel

SELECTION NOTES

- Size the grille on neck(duct) dimensions; frame the opening per the mounting method.
- Sleeve extends past the wall surface where ductwork is attached.

- Supporting structure to carry grille weight designed and supplied by others.
- Seal gaps around the sleeve with a high-quality security sealant.



Engineered ventilation and air-management products for demanding environments.

PRODUCT

Security Grille · GSG-P

Maximum Security Perforated Face Grille · All-Welded · Integral Sleeve

Gerhman Global GmbH

www.gerhman.com

Continuous product improvement is our policy; specifications may change without notice. Security grilles are supplied to order — confirm dimensions, material and finish with your Gerhman representative before ordering. Performance data per EN 12238; final ratings subject to verification. Not all options are available in every market.

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