



EXTERNAL WEATHER LOUVRE PITCH 50 mm.

GI
SERIES

OVERVIEW, CHARACTERISTICS,
AND MOUNTING SYSTEM

OVERVIEW :

GI series external weather louvre are grilles with fixed horizontal blades inclined 49°. These components are designed for mounting in outside walls and they are suitable for both fresh air supply and exhaust. For outside applications is suggested the mounting of bird net.

CHARACTERISTICS :

Frame

Extruded aluminium, width 40 mm, rounded corners.

Blades

Extruded aluminium with pitch 50 mm. fixed to the frame by 4 union points.

Transversal reinforcement

It's mounted only on grilles with dimension B upper than 1200 mm.

Calibrating gate

Galvanized sheet steel, contrast moving blades.

Mounting frame

Galvanized sheet steel for mounting on wall or on light structures; extruded aluminium as spacer.

Finishing

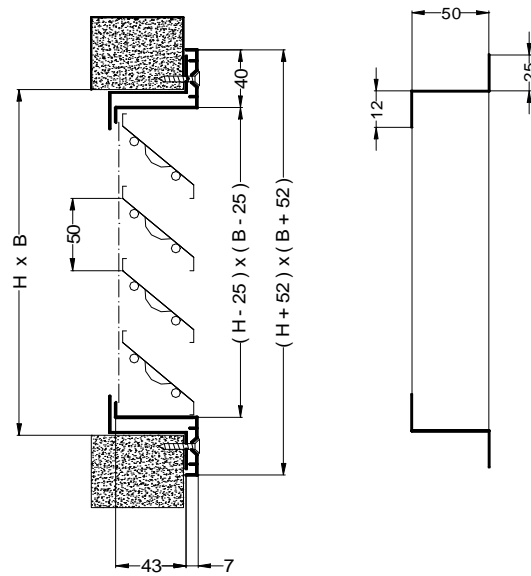
Anodized aluminium or painted aluminium colour white RAL 9010 (epoxy powder treatment)

MOUNTING SYSTEMS :

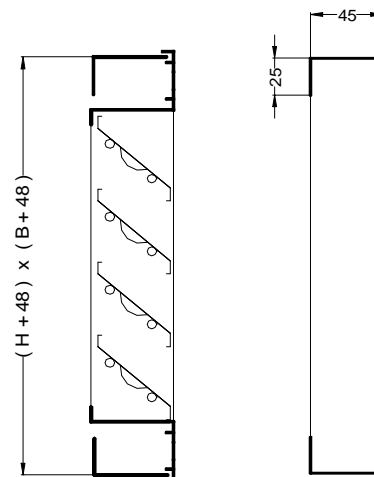
Figure n° 1 : External weather louvre (mod. GI) is positioned on steel mounting frame (mod. TC GI) and both are fixed on the wall by self-threading screws.

Figure n° 2 : External weather louvre (mod. GI) is positioned on aluminium mounting frame (mod. TC4 GI), designed for special application that requires to mount the grille spaced from the wall surface (or panels on air treatment units).

GI + TC Figure no. 1



GI + TC4 Figure no. 2





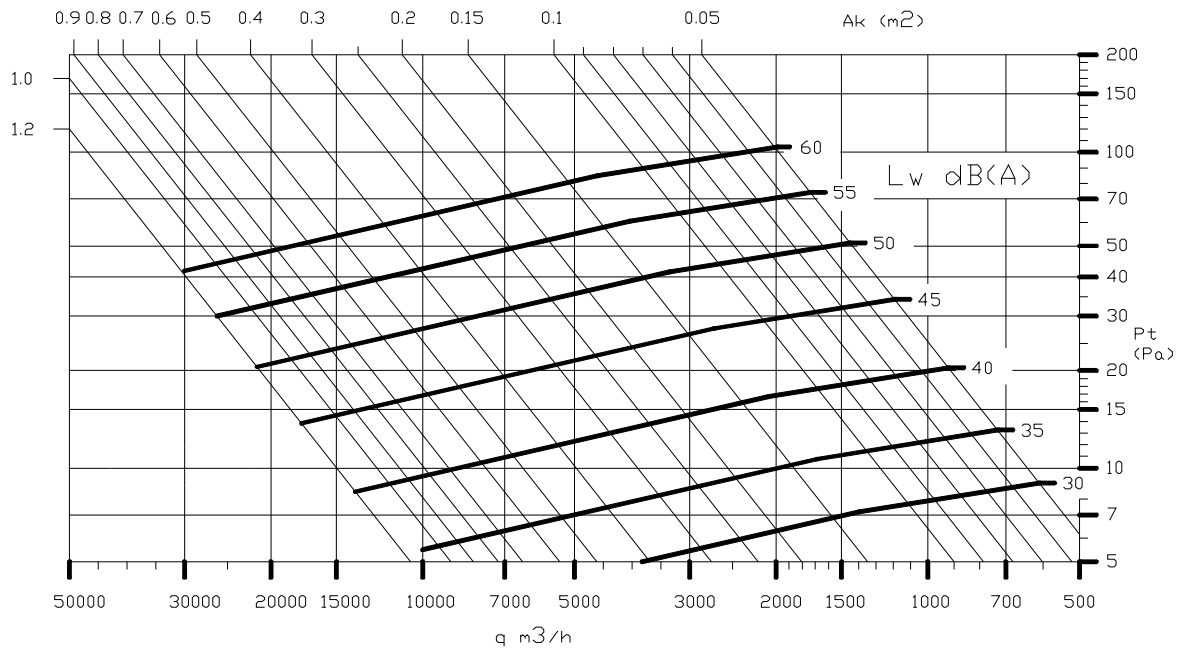
EXTERNAL WEATHER LOUVRE
PITCH 50 mm.

GI
SERIES

PERFORMANCE

The below diagram shows the total pressure and acoustic level as a function of air flow rate

Q = Extract air flow rate (m³/h) Pt = Total pressure (Pa)
Ak = Area factor UTR (m²) L_A = Acoustic level (dB(A))









| Ak values (m ²) | | | | | | | | | |
|-----------------------------|--------|-------|-------|-------|-------|-------|-------|-------|-------|
| H (mm) | L (mm) | | | | | | | | |
| | 400 | 600 | 800 | 1000 | 1200 | 1400 | 1600 | 1800 | 2000 |
| 290 | 0,036 | 0,056 | 0,076 | 0,096 | 0,116 | 0,136 | 0,156 | 0,176 | 0,196 |
| 390 | 0,053 | 0,083 | 0,113 | 0,143 | 0,173 | 0,203 | 0,233 | 0,263 | 0,293 |
| 490 | 0,071 | 0,111 | 0,151 | 0,191 | 0,231 | 0,271 | 0,311 | 0,351 | 0,391 |
| 590 | 0,089 | 0,139 | 0,189 | 0,239 | 0,289 | 0,339 | 0,389 | 0,439 | 0,489 |
| 690 | 0,107 | 0,167 | 0,227 | 0,287 | 0,347 | 0,407 | 0,467 | 0,527 | 0,587 |
| 790 | 0,124 | 0,194 | 0,264 | 0,334 | 0,404 | 0,474 | 0,544 | 0,614 | 0,684 |
| 890 | 0,142 | 0,222 | 0,302 | 0,382 | 0,462 | 0,542 | 0,622 | 0,702 | 0,782 |
| 990 | 0,160 | 0,250 | 0,340 | 0,430 | 0,520 | 0,610 | 0,700 | 0,790 | 0,880 |
| 1190 | 0,195 | 0,305 | 0,415 | 0,525 | 0,635 | 0,745 | 0,855 | 0,965 | 1,075 |
| 1390 | 0,231 | 0,361 | 0,491 | 0,621 | 0,751 | 0,881 | 1,011 | 1,141 | 1,271 |
| 1590 | 0,266 | 0,416 | 0,566 | 0,716 | 0,866 | 1,016 | 1,166 | 1,316 | 1,466 |
| 1790 | 0,302 | 0,472 | 0,642 | 0,812 | 0,982 | 1,152 | 1,322 | 1,492 | 1,662 |
| 1990 | 0,337 | 0,527 | 0,717 | 0,907 | 1,097 | 1,287 | 1,477 | 1,667 | 1,857 |

| ACOUSTIC POWER (L _A) AT THE DISTANCE x (m). (L _A) = L _w - K (dB) | | | | | | | |
|---|----|----|----|----|----|----|----|
| Distance (m) | 1 | 2 | 3 | 4 | 5 | 7 | 10 |
| K (dB) | 5 | 12 | 15 | 16 | 18 | 22 | 25 |
| | 20 | 28 | 30 | | | | |



TC GI EXTERNAL WEATHER LOUVRE
MOUNTINGFRAMES
RE GI METALNETS







TC GI
SERIES

| NOMINAL SIZES |  |  |  | NOMINAL SIZES |  |  |  |
|---------------|---|---|---|---------------|---|---|---|
| B x H | TC GI steel mounting frame | TC4 GI aluminium mounting frame box | RE GI net | B x H | TC GI steel mounting frame | TC4 GI aluminium mounting frame box | RE GI net |
| 400 | X | X | X | 400 | X | X | X |
| 600 | X | X | X | 600 | X | X | X |
| 800 | X | X | X | 800 | X | X | X |
| 1000 | X | X | X | 1000 | X | X | X |
| 1200 390 | X | X | X | 1200 690 | X | X | X |
| 1400 | X | X | X | 1400 | X | X | X |
| 1600 | X | X | X | 1600 | X | X | X |
| 1800 | X | X | X | 1800 | X | X | X |
| 2000 | X | X | X | 2000 | X | X | X |
| 400 | X | X | X | 400 | X | X | X |
| 600 | X | X | X | 600 | X | X | X |
| 800 | X | X | X | 800 | X | X | X |
| 1000 | X | X | X | 1000 | X | X | X |
| 1200 490 | X | X | X | 1200 790 | X | X | X |
| 1400 | X | X | X | 1400 | X | X | X |
| 1600 | X | X | X | 1600 | X | X | X |
| 1800 | X | X | X | 1800 | X | X | X |
| 2000 | X | X | X | 2000 | X | X | X |
| 400 | X | X | X | 400 | X | X | X |
| 600 | X | X | X | 600 | X | X | X |
| 800 | X | X | X | 800 | X | X | X |
| 1000 | X | X | X | 1000 | X | X | X |
| 1200 590 | X | X | X | 1200 890 | X | X | X |
| 1400 | X | X | X | 1400 | X | X | X |
| 1600 | X | X | X | 1600 | X | X | X |
| 1800 | X | X | X | 1800 | X | X | X |
| 2000 | X | X | X | 2000 | X | X | X |



TC GI EXTERNAL WEATHER LOUVRE
MOUNTINGFRAMES
RE GI METALNETS

TC GI
SERIES

| NOMINAL SIZES |  |  |  | NOMINAL SIZES |  |  |  |
|---------------|---|---|---|---------------|---|---|---|
| B x H | TC GI steel mounting frame | TC4 GI aluminium mounting frame box | RE GI net | B x H | TC GI steel mounting frame | TC4 GI aluminium mounting frame box | RE GI net |
| 400 | X | X | X | 400 | X | X | X |
| 600 | X | X | X | 600 | X | X | X |
| 800 | X | X | X | 800 | X | X | X |
| 1000 | X | X | X | 1000 | X | X | X |
| 1200 | X | X | X | 1200 | X | X | X |
| 1400 | X | X | X | 1400 | X | X | X |
| 1600 | X | X | X | 1600 | X | X | X |
| 1800 | X | X | X | 1800 | X | X | X |
| 2000 | X | X | X | 2000 | X | X | X |
| 400 | X | X | X | 400 | X | X | X |
| 600 | X | X | X | 600 | X | X | X |
| 800 | X | X | X | 800 | X | X | X |
| 1000 | X | X | X | 1000 | X | X | X |
| 1200 | X | X | X | 1200 | X | X | X |
| 1400 | X | X | X | 1400 | X | X | X |
| 1600 | X | X | X | 1600 | X | X | X |
| 1800 | X | X | X | 1800 | X | X | X |
| 2000 | X | X | X | 2000 | X | X | X |
| 400 | X | X | X | 400 | X | X | X |
| 600 | X | X | X | 600 | X | X | X |
| 800 | X | X | X | 800 | X | X | X |
| 1000 | X | X | X | 1000 | X | X | X |
| 1200 | X | X | X | 1200 | X | X | X |
| 1400 | X | X | X | 1400 | X | X | X |
| 1600 | X | X | X | 1600 | X | X | X |
| 1800 | X | X | X | 1800 | X | X | X |
| 2000 | X | X | X | 2000 | X | X | X |

TC GI Steel mounting frame for GI
TC4 GI Aluminium mounting frame for GI
RE GI Net for GI

Example: TC GI 1000x690
Steel mounting frame for grille pitch 50 mm. Nominal sizes 1000x690.



EXTERNAL GRILLES WITH SOUND REDUCING

GA
SERIES

OVERVIEW CHARACTERISTICS

OVERVIEW :

The GA series represents a range of aspiration and grilles for external installations with fixed angled blades. They are used for the induction of external air, for the expulsion of the unwanted air in the closed environment, where the reduction in noise levels is required. It is recommended that for these grilles, a mesh be used to prevent from birds entering the grilles.

CHARACTERISTICS :

Frame

in galvanised steel sheet 15/10 (GAZ), or in natural aluminium (GAL), 1,5mm thick. Blades: 150mm pitch with a particular profile for the inclusion of the noise attenuation material, in galvanised steel sheet 15/10 (GAZ), or in natural aluminium (GAL), 1,5mm thick. Blades: 150mm pitch.

Sound absorbing material

Glass wool with a 55kg/m³ density with a micro stretched protection mesh.

Flange

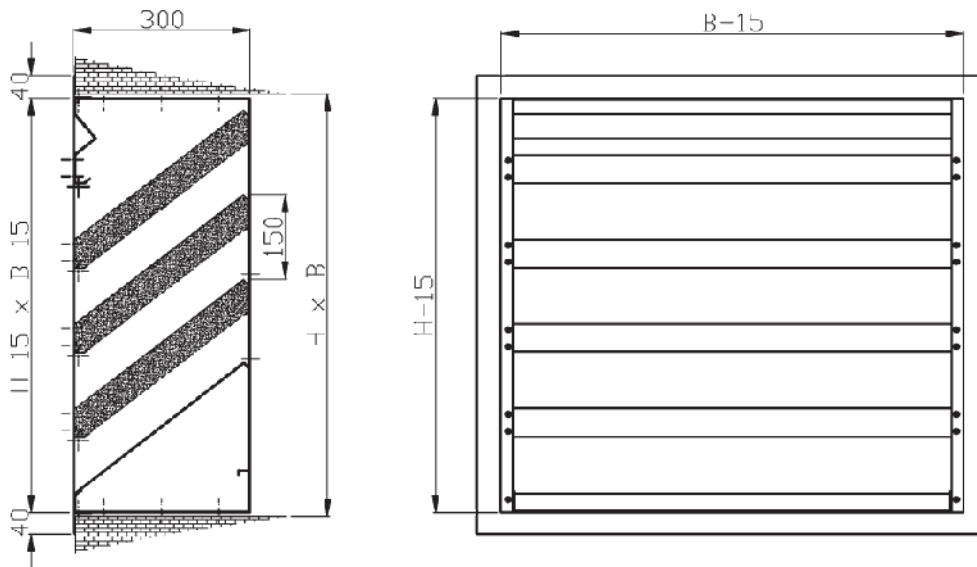
40 mm in in galvanised steel sheet 15/10 (GAZ), or in natural aluminium (GAL), 1,5mm thick. Blades: 150mm pitch.

Accessories

Anti bird protection mesh.

Finish

Double, varnished, anodised (only GAL).



DIMENSIONS :

The nominal values for "B" vary from 300 [mm] to 1950 [mm] with intervals of 150 [mm].
The nominal values for "H" vary from 450 [mm] to 1950 [mm] with intervals of 150 [mm].



EXTERNAL GRILLES WITH SOUND REDUCING

PERFORMANCE

GA
SERIES

DAMPING :

| FrequenCY [Hz] | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 |
|-----------------------|-----|-----|-----|------|------|------|------|
| Simple execution [dB] | 6 | 8 | 10 | 14 | 18 | 16 | 15 |
| Double execution [dB] | 8 | 14 | 16 | 26 | 33 | 28 | 27 |

PRESSURE LOSSES :

| Speed* [m/s] | 1 | 1,5 | 2 | 2,5 | 3 |
|------------------------|---|-----|----|-----|----|
| Tot pressure loss [Pa] | 7 | 16 | 28 | 46 | 66 |

*Speed [m/s] referred to section (B - 35) x (H - 215)

Pressure loss tested in according to UNI CTI 8728 - Test report Istituto Giordano N. 136363

Acoustic data tested in according to EN ISO 11691 - Test report Istituto Giordano N. 149876

ATTENTION :

The 3 m/s limit is in conjunction with the dragging of the water droplets. The laboratory tests have highlighted how up to this speed, the water droplets fall along the frame by gravity but for speeds between 3,2 and 3,5 m/s, the drops tend to rise along the frame and pass throw the grille. This is accentuated with speeds above 3,7 m/s.



EXTERNAL GRILLES WITH SOUND REDUCING

GA SERIES

PERFORMANCE

| B | H | GAZ | GAL |
|------|-----|-----|-----|
| 300 | 450 | X | X |
| 400 | | X | X |
| 450 | | X | X |
| 500 | | X | X |
| 600 | | X | X |
| 700 | | X | X |
| 750 | | X | X |
| 800 | | X | X |
| 900 | | X | X |
| 1000 | | X | X |
| 1050 | | X | X |
| 1100 | | X | X |
| 1200 | | X | X |
| 1300 | | X | X |
| 1350 | | X | X |
| 1400 | | X | X |
| 1500 | | X | X |
| 1600 | | X | X |
| 1650 | | X | X |
| 1700 | X | X | |
| 1800 | X | X | |
| 1900 | X | X | |
| 1950 | X | X | |
| 300 | 600 | X | X |
| 400 | | X | X |
| 450 | | X | X |
| 500 | | X | X |
| 600 | | X | X |
| 700 | | X | X |
| 750 | | X | X |
| 800 | | X | X |
| 900 | | X | X |
| 1000 | | X | X |
| 1050 | | X | X |
| 1100 | | X | X |
| 1200 | | X | X |
| 1300 | | X | X |
| 1350 | | X | X |
| 1400 | | X | X |
| 1500 | | X | X |
| 1600 | | X | X |
| 1650 | | X | X |
| 1700 | X | X | |
| 1800 | X | X | |
| 1900 | X | X | |
| 1950 | X | X | |

| B | H | GAZ | GAL |
|------|-----|-----|-----|
| 300 | 750 | X | X |
| 400 | | X | X |
| 450 | | X | X |
| 500 | | X | X |
| 600 | | X | X |
| 700 | | X | X |
| 750 | | X | X |
| 800 | | X | X |
| 900 | | X | X |
| 1000 | | X | X |
| 1050 | | X | X |
| 1100 | | X | X |
| 1200 | | X | X |
| 1300 | | X | X |
| 1350 | | X | X |
| 1400 | | X | X |
| 1500 | | X | X |
| 1600 | | X | X |
| 1650 | | X | X |
| 1700 | X | X | |
| 1800 | X | X | |
| 1900 | X | X | |
| 1950 | X | X | |
| 300 | 900 | X | X |
| 400 | | X | X |
| 450 | | X | X |
| 500 | | X | X |
| 600 | | X | X |
| 700 | | X | X |
| 750 | | X | X |
| 800 | | X | X |
| 900 | | X | X |
| 1000 | | X | X |
| 1050 | | X | X |
| 1100 | | X | X |
| 1200 | | X | X |
| 1300 | | X | X |
| 1350 | | X | X |
| 1400 | | X | X |
| 1500 | | X | X |
| 1600 | | X | X |
| 1650 | | X | X |
| 1700 | X | X | |
| 1800 | X | X | |
| 1900 | X | X | |
| 1950 | X | X | |

| B | H | GAZ | GAL |
|------|------|-----|-----|
| 300 | 1050 | X | X |
| 400 | | X | X |
| 450 | | X | X |
| 500 | | X | X |
| 600 | | X | X |
| 700 | | X | X |
| 750 | | X | X |
| 800 | | X | X |
| 900 | | X | X |
| 1000 | | X | X |
| 1050 | | X | X |
| 1100 | | X | X |
| 1200 | | X | X |
| 1300 | | X | X |
| 1350 | | X | X |
| 1400 | | X | X |
| 1500 | | X | X |
| 1600 | | X | X |
| 1650 | | X | X |
| 1700 | X | X | |
| 1800 | X | X | |
| 1900 | X | X | |
| 1950 | X | X | |
| 300 | 1200 | X | X |
| 400 | | X | X |
| 450 | | X | X |
| 500 | | X | X |
| 600 | | X | X |
| 700 | | X | X |
| 750 | | X | X |
| 800 | | X | X |
| 900 | | X | X |
| 1000 | | X | X |
| 1050 | | X | X |
| 1100 | | X | X |
| 1200 | | X | X |
| 1300 | | X | X |
| 1350 | | X | X |
| 1400 | | X | X |
| 1500 | | X | X |
| 1600 | | X | X |
| 1650 | | X | X |
| 1700 | X | X | |
| 1800 | X | X | |
| 1900 | X | X | |
| 1950 | X | X | |



EXTERNAL GRILLES WITH SOUND REDUCING

GA SERIES

SUPPLIABLE MEASURES

| B | H | GAZ | GAL |
|------|------|-----|-----|
| 300 | | X | X |
| 400 | | X | X |
| 450 | | X | X |
| 500 | | X | X |
| 600 | | X | X |
| 700 | | X | X |
| 750 | | X | X |
| 800 | | X | X |
| 900 | | X | X |
| 1000 | | X | X |
| 1050 | | X | X |
| 1100 | 1350 | X | X |
| 1200 | | X | X |
| 1300 | | X | X |
| 1350 | | X | X |
| 1400 | | X | X |
| 1500 | | X | X |
| 1600 | | X | X |
| 1650 | | X | X |
| 1700 | | X | X |
| 1800 | | X | X |
| 1900 | | X | X |
| 1950 | | X | X |
| 300 | | X | X |
| 400 | | X | X |
| 450 | | X | X |
| 500 | | X | X |
| 600 | | X | X |
| 700 | | X | X |
| 750 | | X | X |
| 800 | | X | X |
| 900 | | X | X |
| 1000 | | X | X |
| 1050 | | X | X |
| 1100 | 1500 | X | X |
| 1200 | | X | X |
| 1300 | | X | X |
| 1350 | | X | X |
| 1400 | | X | X |
| 1500 | | X | X |
| 1600 | | X | X |
| 1650 | | X | X |
| 1700 | | X | X |
| 1800 | | X | X |
| 1900 | | X | X |
| 1950 | | X | X |

| B | H | GAZ | GAL |
|------|------|-----|-----|
| 300 | | X | X |
| 400 | | X | X |
| 450 | | X | X |
| 500 | | X | X |
| 600 | | X | X |
| 700 | | X | X |
| 750 | | X | X |
| 800 | | X | X |
| 900 | | X | X |
| 1000 | | X | X |
| 1050 | | X | X |
| 1100 | 1650 | X | X |
| 1200 | | X | X |
| 1300 | | X | X |
| 1350 | | X | X |
| 1400 | | X | X |
| 1500 | | X | X |
| 1600 | | X | X |
| 1650 | | X | X |
| 1700 | | X | X |
| 1800 | | X | X |
| 1900 | | X | X |
| 1950 | | X | X |
| 300 | | X | X |
| 400 | | X | X |
| 450 | | X | X |
| 500 | | X | X |
| 600 | | X | X |
| 700 | | X | X |
| 750 | | X | X |
| 800 | | X | X |
| 900 | | X | X |
| 1000 | | X | X |
| 1050 | | X | X |
| 1100 | 1800 | X | X |
| 1200 | | X | X |
| 1300 | | X | X |
| 1350 | | X | X |
| 1400 | | X | X |
| 1500 | | X | X |
| 1600 | | X | X |
| 1650 | | X | X |
| 1700 | | X | X |
| 1800 | | X | X |
| 1900 | | X | X |
| 1950 | | X | X |

| B | H | GAZ | GAL |
|------|------|-----|-----|
| 300 | | X | X |
| 400 | | X | X |
| 450 | | X | X |
| 500 | | X | X |
| 600 | | X | X |
| 700 | | X | X |
| 750 | | X | X |
| 800 | | X | X |
| 900 | | X | X |
| 1000 | | X | X |
| 1050 | | X | X |
| 1100 | 1950 | X | X |
| 1200 | | X | X |
| 1300 | | X | X |
| 1350 | | X | X |
| 1400 | | X | X |
| 1500 | | X | X |
| 1600 | | X | X |
| 1650 | | X | X |
| 1700 | | X | X |
| 1800 | | X | X |
| 1900 | | X | X |
| 1950 | | X | X |

GAZ External grilles in galvanised steel with flange

GAL External grille in aluminium with flange

??? x ??? Base times height BxH in mm

Example: GAZ 1200x900
External grille in galvanised steel sheet 300mm thick, 150 mm pitch complete with 40mm flange.
Nominal dimensions 1200x900.



EXTERNAL INDUSTRIAL GRILLES 100 mm PITCH

GL
SERIES

OVERVIEW

OVERVIEW :

The GL series is represented by a range of grilles for injection and extraction with fixed blades angled at 49°. Used for the injection of air from the external environment and for the extraction of unwanted air to the outside. It is recommended that for the external use of these grilles, a mesh should be used to prevent birds from passing through the units.

CHARACTERISTICS :

Frame: in extruded aluminium, 50 mm wide, with rounded edges, built in four parts with the joints hidden under the frame during machine assembly.

Blades: In extruded aluminium with 100mm high blade, attached to the internal frame on four points of assembly.

Damper: optional accessory built entirely in aluminium with multiple blades with counter movement.

Counterframe : Made from galvanised steel sheet for mounting to walls of light structures.

Finishing : The grilles are made in anodised natural aluminium.

RAL colours from table, on request.

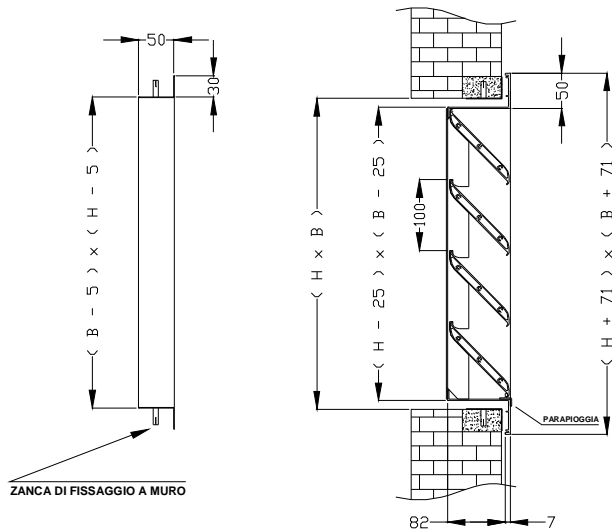
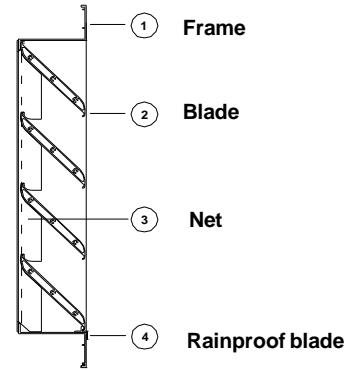
SUPPLYABLE SIZES :

Minimum: 300 x 240

Maximum: 2.000 x 2.040

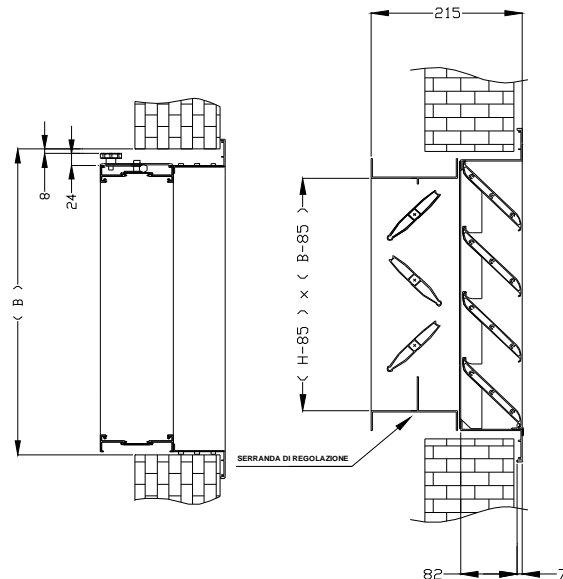
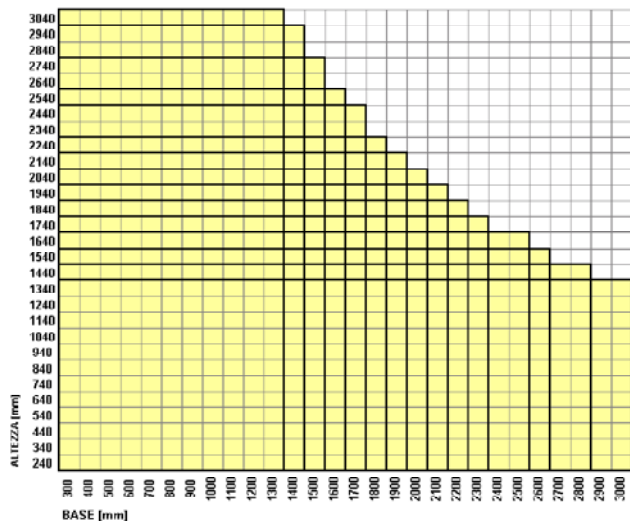
It is possible to supply grilles with one of the two sides (B or H) larger than the maximum sizes (up to 3000 mm) but no bigger than 4 mq

Please check availability and suppliability when requesting over measures.



SPECIAL ASSEMBLY WITH REGULATION DAMPER WITH 100 PITCH :

MAXIMUM COMBINATIONS :





EXTERNAL INDUSTRIAL GRILLES 100 mm PITCH

GL
SERIES

GRILLE COMPOSITIONS

CONSTRUCTION OF COMPOSED GRILLES :

The GL series are made from multiple panels depending both on the height and base where one of the two exceeds 2 metres in length and the section axed 4 m² (i.e. the measure are outside the standard measurements).

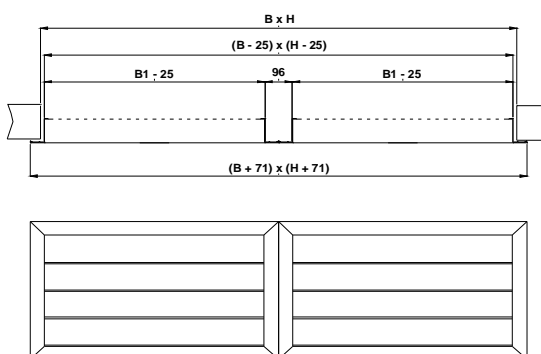
The nominal dimensions BxH of the standard composed grille are shown in the below table with the relative number of sections (2 or 3).

The standard composed grille is that where it is composed from single grilles with standard sizes. The assembly of the composed grilles is the responsibility of the supplier.

BASE DIMENSIONS

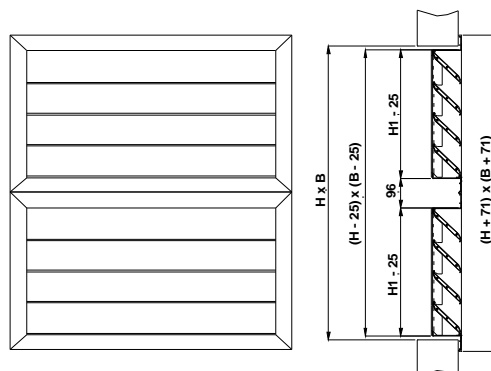
| B | n _B | B1 |
|------|----------------|------|
| 2070 | 2 | 1000 |
| 2270 | 2 | 1100 |
| 2470 | 2 | 1200 |
| 2670 | 2 | 1300 |
| 2870 | 2 | 1400 |
| 3070 | 2 | 1500 |
| 3270 | 2 | 1600 |
| 3470 | 2 | 1700 |
| 3670 | 2 | 1800 |
| 3870 | 2 | 1900 |
| 4070 | 2 | 2000 |
| 4041 | 3 | 1300 |
| 4341 | 3 | 1400 |
| 4641 | 3 | 1500 |
| 4941 | 3 | 1600 |
| 5241 | 3 | 1700 |
| 5541 | 3 | 1800 |
| 5841 | 3 | 1900 |
| 6141 | 3 | 2000 |

GRILLE COMPOSITION IN 2 HORIZONTAL



The horizontal grille composition is done considering the nominal dimensions for B in the above table, to which corresponds the number of subdivisions of the base (n_B), the nominal dimension B1 of the single grille.

GRILLE COMPOSITION IN 2 VERTICAL PARTS



The vertical composition of the grille is done taking into account the nominal dimensions of H in the above table, that is in relation to the number of different subdivisions of the base (n_H), the nominal dimension H1 of the single grille. Differently to the base dimension B, that for H does not allow for dimensions different to those indicated due to construction restrictions dictated by the particular solution adopted.

HEIGHT DIMENSIONS

| H | n _H | H1 |
|------|----------------|------|
| 2150 | 2 | 1040 |
| 2350 | 2 | 1140 |
| 2550 | 2 | 1240 |
| 2750 | 2 | 1340 |
| 2950 | 2 | 1440 |
| 3150 | 2 | 1540 |
| 3350 | 2 | 1640 |
| 3550 | 2 | 1740 |
| 3750 | 2 | 1840 |
| 3950 | 2 | 1940 |
| 4150 | 2 | 2040 |
| 4161 | 3 | 1340 |
| 4461 | 3 | 1440 |
| 4761 | 3 | 1540 |
| 5061 | 3 | 1640 |
| 5361 | 3 | 1740 |
| 5661 | 3 | 1840 |
| 5961 | 3 | 1940 |
| 6261 | 3 | 2040 |

LEGEND

| | |
|----------------|--------------------------------------|
| B x H | Composed grille - nominal dimensions |
| B-25 x H-25 | Composed grille - P. A. dimensions |
| B+71 x H+71 | Composed grille - E. C. dimensions |
| n _B | n° of fields in the base B division |
| n _H | n° fields in the height H division |
| B1 x H1 | Single grille - nominal dimensions |
| B1-25 x H1-25 | Single grille - P. A. dimensions |
| B1+71 x H1+71 | Single grille - E. C. dimensions |



EXTERNAL INDUSTRIAL GRILLES
100 mm PITCH

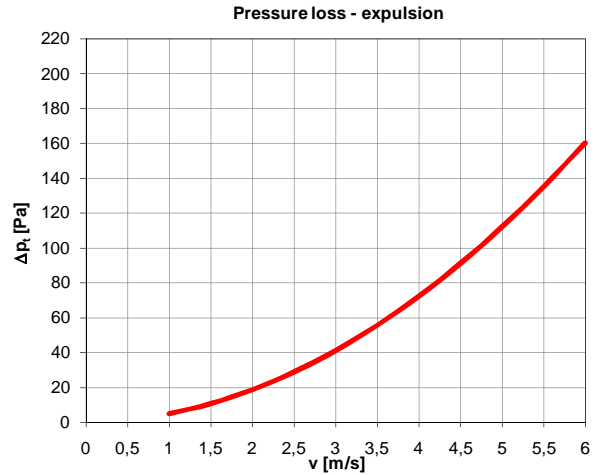
GL
SERIES

PERFORMANCE IN EXPULSION

The diagrams refer to function of the grille in expulsion. The graphs show the total pressure loss as a function of the speed of the air passing through the unit and the sound level as a result of the speed of the air flow through the unit.

LEGEND :

- v [m/s] Speed of the air flow in the nominal section
- A [m²] nominal section
- Δp_t [Pa] Total pressure loss
- L_w [dB] Noise power level



| A m ² | v m/s | Δp_t Pa | L _{wa} dba | f Hz | | | | | | | |
|---------------------|----------|--------------------|------------------------|------|-----|-----|-----|------|------|------|------|
| | | | | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 |
| 0,5 | 2 | 18 | 38 | 40 | 40 | 39 | 37 | 32 | 27 | 16 | 6 |
| 0,5 | 3 | 41 | 50 | 49 | 51 | 51 | 49 | 45 | 41 | 32 | 22 |
| 0,5 | 4 | 72 | 59 | 55 | 59 | 59 | 57 | 55 | 51 | 43 | 33 |
| 0,5 | 5 | 112 | 67 | 59 | 65 | 65 | 64 | 62 | 59 | 52 | 41 |
| 1 | 2 | 18 | 41 | 43 | 43 | 42 | 40 | 35 | 30 | 19 | 9 |
| 1 | 3 | 41 | 53 | 52 | 54 | 54 | 52 | 48 | 44 | 35 | 25 |
| 1 | 4 | 72 | 62 | 58 | 62 | 62 | 60 | 58 | 54 | 46 | 36 |
| 1 | 5 | 112 | 70 | 62 | 68 | 68 | 67 | 65 | 62 | 55 | 44 |
| 2 | 2 | 18 | 44 | 46 | 46 | 45 | 43 | 38 | 33 | 22 | 12 |
| 2 | 3 | 41 | 56 | 55 | 57 | 57 | 55 | 51 | 47 | 38 | 28 |
| 2 | 4 | 72 | 65 | 61 | 65 | 65 | 63 | 61 | 57 | 49 | 39 |
| 2 | 5 | 112 | 73 | 65 | 71 | 71 | 70 | 68 | 65 | 58 | 47 |
| 4 | 2 | 18 | 47 | 49 | 49 | 48 | 46 | 41 | 36 | 25 | 15 |
| 4 | 3 | 41 | 59 | 58 | 60 | 60 | 58 | 54 | 50 | 41 | 31 |
| 4 | 4 | 72 | 68 | 64 | 68 | 68 | 66 | 64 | 60 | 52 | 42 |
| 4 | 5 | 112 | 76 | 68 | 74 | 74 | 73 | 71 | 68 | 61 | 50 |



**EXTERNAL INDUSTRIAL GRILLES
100 mm PITCH**

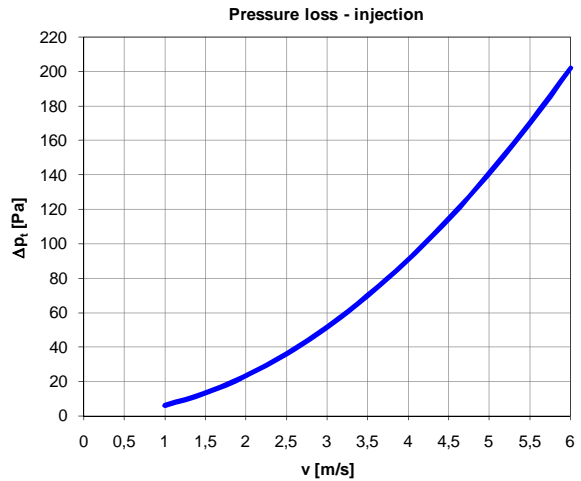
**GL
SERIES**

PERFORMANCE IN INJECTION

The diagrams refer to function of the grille in injection. The graphs show the total pressure loss as a function of the speed of the air passing through the unit and the sound level as a result of the speed of the air flow through the unit.

LEGEND :

- v [m/s] Speed of the air flow in the nominal section
- A [m²] Nominal section
- Δp_t [Pa] Total pressure loss
- L_w [dB] Noise power level



| A m ² | v m/s | Δp_t Pa | L _{wa} dba | f Hz | | | | | | | |
|---------------------|----------|--------------------|------------------------|------|-----|-----|-----|------|------|------|------|
| | | | | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 |
| 0,5 | 2 | 23 | 39 | 38 | 39 | 39 | 38 | 34 | 28 | 20 | 7 |
| 0,5 | 3 | 52 | 52 | 46 | 49 | 50 | 50 | 48 | 43 | 36 | 26 |
| 0,5 | 4 | 91 | 62 | 52 | 56 | 58 | 59 | 58 | 54 | 47 | 39 |
| 0,5 | 5 | 141 | 76 | 61 | 66 | 69 | 71 | 72 | 69 | 62 | 57 |
| 1 | 2 | 23 | 42 | 41 | 42 | 42 | 41 | 37 | 31 | 23 | 10 |
| 1 | 3 | 52 | 55 | 49 | 52 | 53 | 53 | 51 | 46 | 39 | 29 |
| 1 | 4 | 91 | 65 | 55 | 59 | 61 | 62 | 61 | 57 | 50 | 42 |
| 1 | 5 | 141 | 79 | 64 | 69 | 72 | 74 | 75 | 72 | 65 | 60 |
| 2 | 2 | 23 | 45 | 44 | 45 | 45 | 44 | 40 | 34 | 26 | 13 |
| 2 | 3 | 52 | 58 | 52 | 55 | 56 | 56 | 54 | 49 | 41 | 32 |
| 2 | 4 | 91 | 68 | 58 | 62 | 64 | 65 | 64 | 60 | 53 | 45 |
| 2 | 5 | 141 | 82 | 67 | 72 | 75 | 77 | 78 | 75 | 68 | 63 |
| 4 | 2 | 23 | 48 | 47 | 48 | 48 | 47 | 43 | 37 | 29 | 16 |
| 4 | 3 | 52 | 61 | 55 | 58 | 59 | 59 | 57 | 52 | 44 | 35 |
| 4 | 4 | 91 | 71 | 61 | 65 | 67 | 68 | 67 | 63 | 56 | 48 |
| 4 | 5 | 141 | 85 | 70 | 75 | 78 | 80 | 81 | 78 | 71 | 66 |



EXTERNAL INDUSTRIAL GRILLES
100 mm PITCH

GL
SERIES

EXAMPLE

EXAMPLE :

An expulsion grille with 100 pitch, 1.600 x 1.200 through which 20.000 m³/h of air transit.

Determine firstly:

- Pressure losses
- Octave sound power levels
- Sound power levels
- Sound power level compounded in A

Nominal section

$$A = B \times H = 1,6 \times 1,2 = 1,92 [m^2]$$

Speed of the air through the nominal section

$$v = \frac{Q}{A} = \frac{20.000 \left[\frac{m^3}{h} \right]}{1.92 [m^2]} = \frac{20.000 \left[\frac{m^3}{3.600 s} \right]}{1.92 [m^2]} = 2.89 \left[\frac{m}{s} \right]$$

Is obtained from table

ΔP 41 Pa

Lwa 56dba


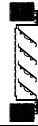
| | | | | | | | | | |
|----|-----|----|-----|-----|-----|------|------|------|------|
| f | Hz | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 |
| Lw | dBa | 55 | 57 | 57 | 55 | 51 | 47 | 38 | 28 |


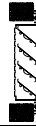


EXTERNAL INDUSTRIAL GRILLES
100 mm PITCH

GL
SERIES

CODES

| Nominal dimension |  |  |
|-------------------|---|---|
| B x H | GL | GL R |
| 600 | X | X |
| 800 | X | X |
| 1000 | X | X |
| 1200 | X | X |
| 1400 | X | X |
| 1600 | X | X |
| 1800 | X | X |
| 2000 | X | X |
| 600 | X | X |
| 800 | X | X |
| 1000 | X | X |
| 1200 | X | X |
| 1400 | X | X |
| 1600 | X | X |
| 1800 | X | X |
| 2000 | X | X |
| 600 | X | X |
| 800 | X | X |
| 1000 | X | X |
| 1200 | X | X |
| 1400 | X | X |
| 1600 | X | X |
| 1800 | X | X |
| 2000 | X | X |
| 600 | X | X |
| 800 | X | X |
| 1000 | X | X |
| 1200 | X | X |
| 1400 | X | X |
| 1600 | X | X |
| 1800 | X | X |
| 2000 | X | X |

| Nominal dimensions |  |  |
|--------------------|---|---|
| B x H | GL | GL R |
| 600 | X | X |
| 800 | X | X |
| 1000 | X | X |
| 1200 | X | X |
| 1400 | X | X |
| 1600 | X | X |
| 1800 | X | X |
| 2000 | X | X |
| 600 | X | X |
| 800 | X | X |
| 1000 | X | X |
| 1200 | X | X |
| 1400 | X | X |
| 1600 | X | X |
| 1800 | X | X |
| 2000 | X | X |
| 600 | X | X |
| 800 | X | X |
| 1000 | X | X |
| 1200 | X | X |
| 1400 | X | X |
| 1600 | X | X |
| 1800 | X | X |
| 2000 | X | X |
| 600 | X | X |
| 800 | X | X |
| 1000 | X | X |
| 1200 | X | X |
| 1400 | X | X |
| 1600 | X | X |
| 1800 | X | X |
| 2000 | X | X |

GL 100 mm pitch grille
R Net

Example: GL R 1000x640
100 mm pitch grill with net.
Nominal dimensions 1000x640.