



EXTERNAL INDUSTRIAL GRILLES 50 mm PITCH

GI
SERIES

OVERVIEW, CHARACTERISTICS,
AND MOUNTING SYSTEM

OVERVIEW :

GI series 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.

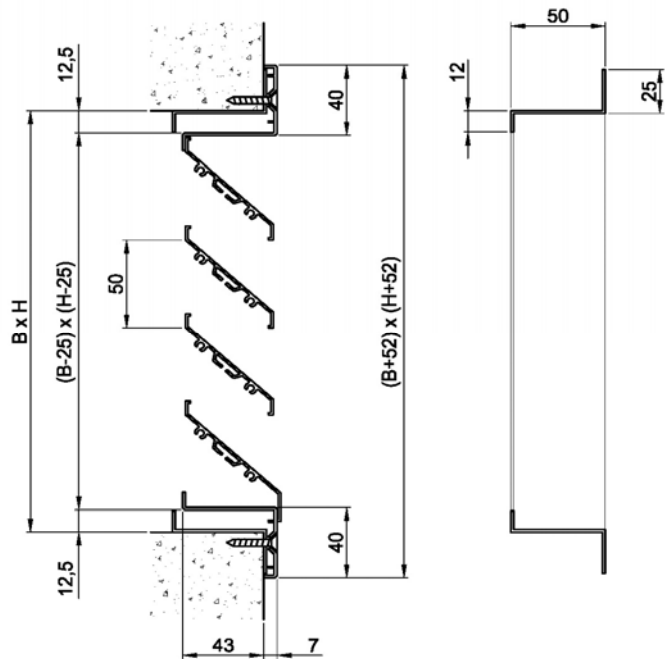
Mounting frame

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

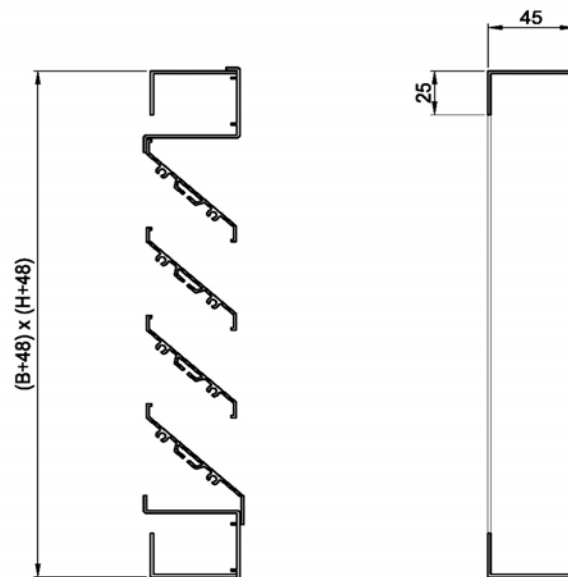
Finishing

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

GI + TC Figure no. 1



GI + TC4 Figure no. 2



MOUNTING SYSTEMS :

Figure n° 1 : Grille (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 : Grille (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).



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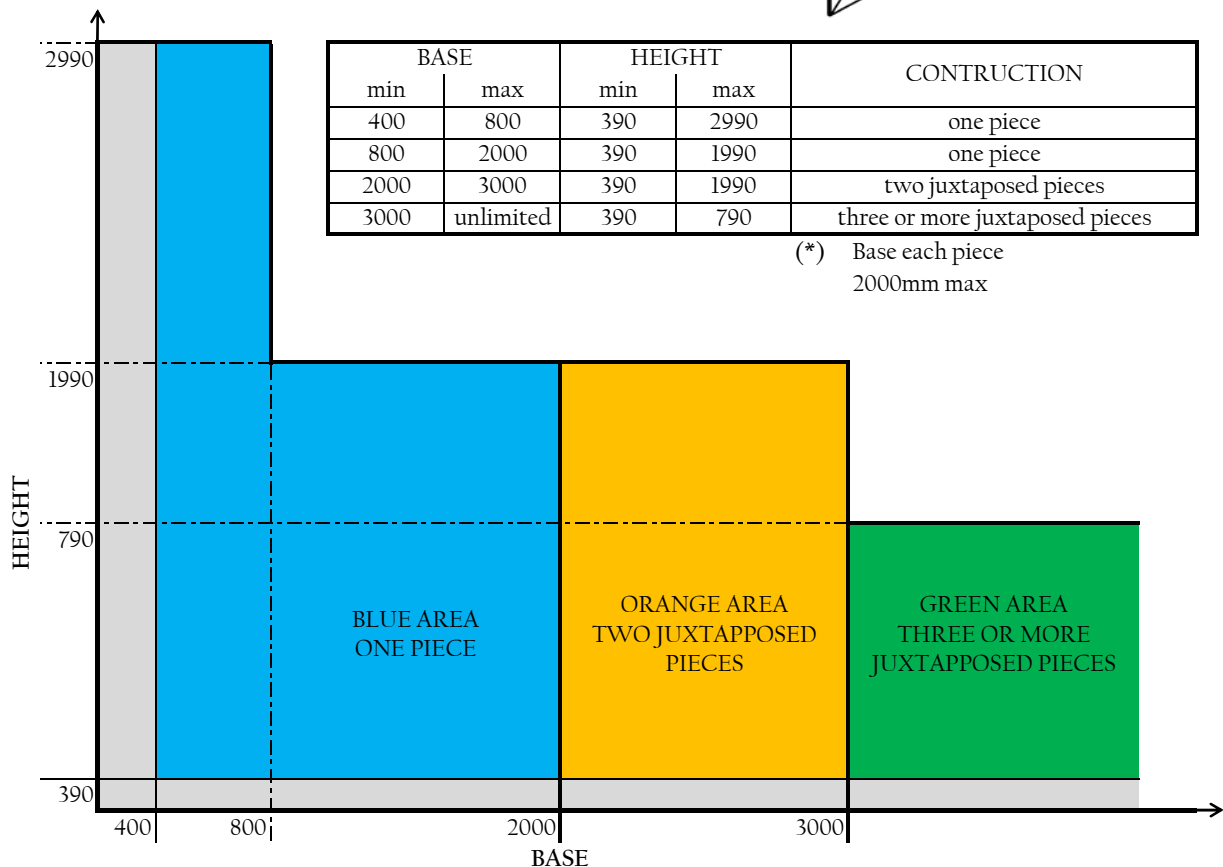
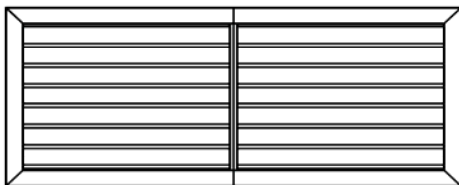
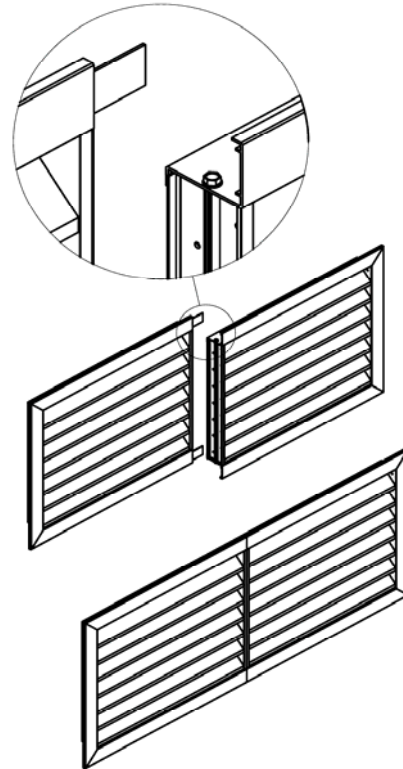
GREAT DIMENSIONS

The grids GI model with width greater than 2000mm are realized juxtaposing two or more elements in accordance with the attached diagram.

To realize the sides of approach a special profile particularly thin is used.

The use of the thin profile in substitution of the frame one allows many advantages including:
negligible reduction of the air passage;
ease of assembly;
perfect alignment between the parts;
improved aesthetic results.

For heights up to 780mm the grille composition allows to achieve any

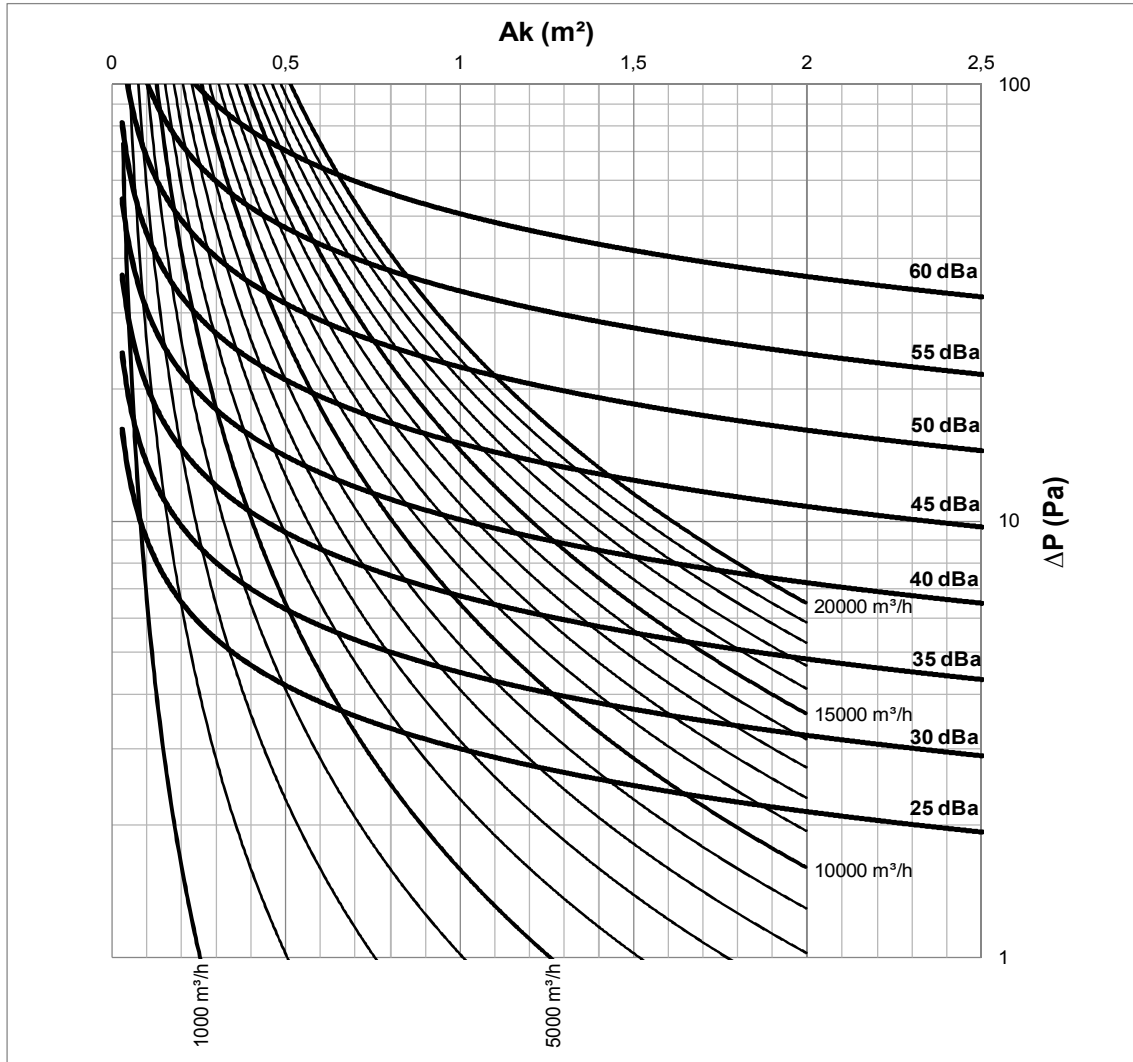




EXTERNAL INDUSTRIAL GRILLES 50 mm PITCH

PERFORMANCE

GI
SERIES



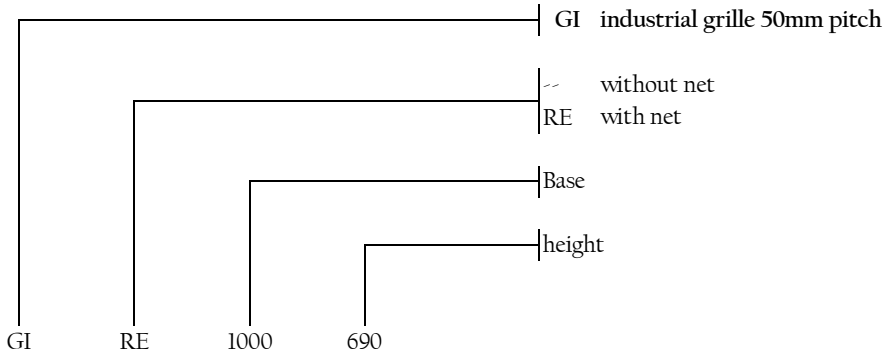
		Ak values (m ²)								
H (mm)	L (mm)									
	400	600	800	1000	1200	1400	1600	1800	2000	
290	0,0355	0,0555	0,0755	0,0955	0,1155	0,1355	0,1555	0,1755	0,1955	
390	0,0533	0,0833	0,1133	0,1433	0,1733	0,2033	0,2333	0,2633	0,2933	
490	0,0710	0,1110	0,1510	0,1910	0,2310	0,2710	0,3110	0,3510	0,3910	
590	0,0888	0,1388	0,1888	0,2388	0,2888	0,3388	0,3888	0,4388	0,4888	
690	0,1065	0,1665	0,2265	0,2865	0,3465	0,4065	0,4665	0,5265	0,5865	
790	0,1243	0,1943	0,2643	0,3343	0,4043	0,4743	0,5443	0,6143	0,6843	
890	0,1420	0,2220	0,3020	0,3820	0,4620	0,5420	0,6220	0,7020	0,7820	
990	0,1598	0,2498	0,3398	0,4298	0,5198	0,6098	0,6998	0,7898	0,8798	
1190	0,1953	0,3053	0,4153	0,5253	0,6353	0,7453	0,8553	0,9653	1,0753	
1390	0,2308	0,3608	0,4908	0,6208	0,7508	0,8808	1,0108	1,1408	1,2708	
1590	0,2663	0,4163	0,5663	0,7163	0,8663	1,0163	1,1663	1,3163	1,4663	
1790	0,3018	0,4718	0,6418	0,8118	0,9818	1,1518	1,3218	1,4918	1,6618	
1990	0,3373	0,5273	0,7173	0,9073	1,0973	1,2873	1,4773	1,6673	1,8573	



EXTERNAL INDUSTRIAL GRILLES
50 mm PITCH

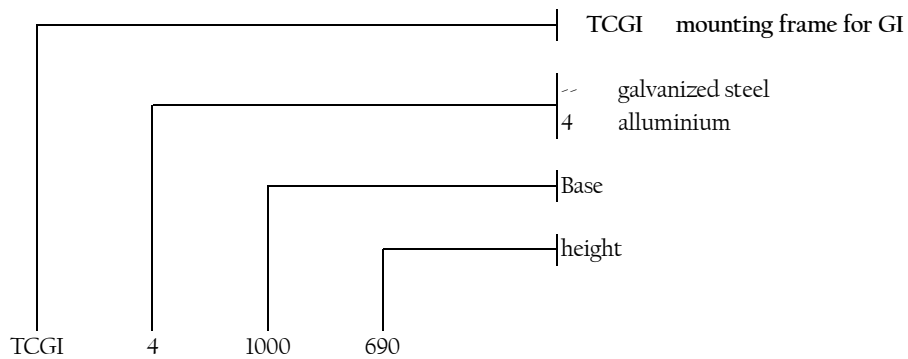
GI
SERIES

PERFORMANCE



Standard bases
400
600
800
1000
1200
1400
1600
1800
2000

Standard Heights
390
490
590
690
790
890
990
1190
1390
1590
1790
1990





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 :

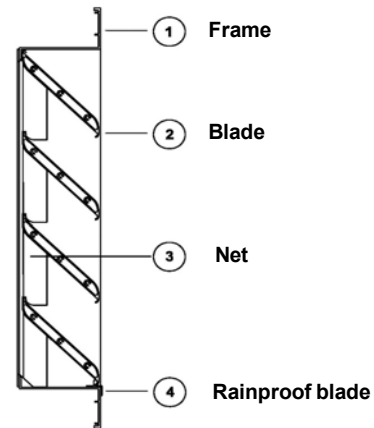
Frame: in extruded aluminium, 50 mm wide, with rounded edges, built in four parts with the joints hidden under the frame during machine assembly.

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.



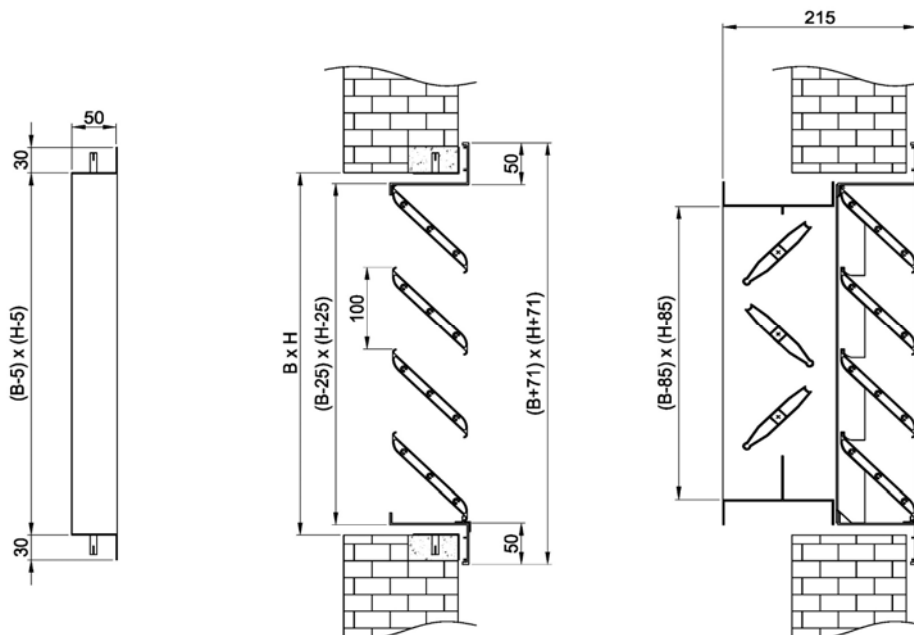
SUPPLYABLE SIZES :

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 m²

Please check availability and supplyability when requesting over measures.





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).

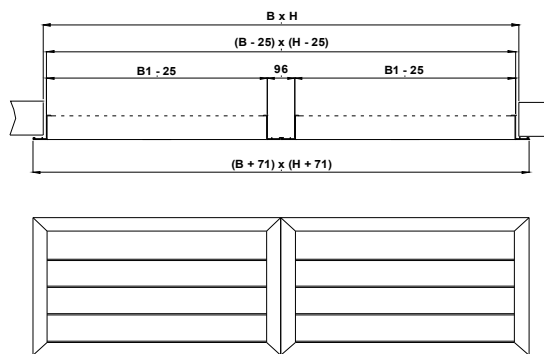
The nominal dimensions BxH of the standard composed grille are shown in the below table with the relative number of sections (2 or 3).

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

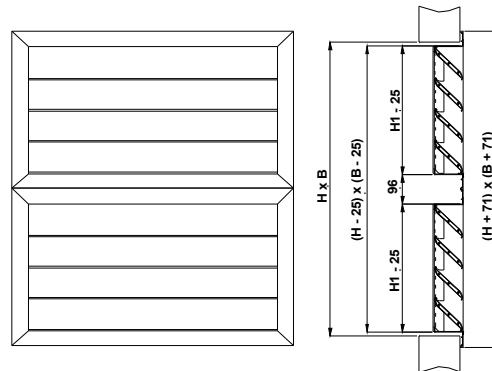
B	n _B	B l
2070	2	1000
2270	2	1100
2470	2	1200
2670	2	1300
2870	2	1400
3070	2	1500
3270	2	1600
3470	2	1700
3670	2	1800
3870	2	1900
4070	2	2000
4041	3	1300
4341	3	1400
4641	3	1500
4941	3	1600
5241	3	1700
5541	3	1800
5841	3	1900
6141	3	2000

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 B l 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 H l 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	H l
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
B l x H l	Single grille - nominal dimensions
B l-25 x H l-25	Single grille - P. A. dimensions
B l+71 x H l+71	Single grille - E. C. dimensions



EXTERNAL INDUSTRIAL GRILLES
100 mm PITCH

GL
SERIES

EFFECTIVE AREA
Ak [m²]

	3040	0,544	0,701	0,859	1,016	1,174	1,332	1,489	1,647	1,804	1,962	
	2940	0,525	0,677	0,829	0,981	1,134	1,286	1,438	1,590	1,742	1,894	2,046
	2840	0,506	0,653	0,800	0,946	1,093	1,240	1,386	1,533	1,680	1,827	1,973
	2740	0,487	0,629	0,770	0,911	1,053	1,194	1,335	1,476	1,618	1,759	1,900
	2640	0,469	0,605	0,740	0,876	1,012	1,148	1,284	1,420	1,555	1,691	1,827
	2540	0,450	0,580	0,711	0,841	0,972	1,102	1,232	1,363	1,493	1,624	1,754
	2440	0,431	0,556	0,681	0,806	0,931	1,056	1,181	1,306	1,431	1,556	1,681
	2340	0,412	0,532	0,652	0,771	0,891	1,010	1,130	1,249	1,369	1,488	1,608
	2240	0,394	0,508	0,622	0,736	0,850	0,964	1,078	1,192	1,307	1,421	1,535
	2140	0,375	0,484	0,592	0,701	0,810	0,918	1,027	1,136	1,244	1,353	1,462
	2040	0,356	0,459	0,563	0,666	0,769	0,872	0,976	1,079	1,182	1,285	1,389
	1940	0,337	0,435	0,533	0,631	0,729	0,827	0,924	1,022	1,120	1,218	1,316
HEIGHT	1840	0,319	0,411	0,503	0,596	0,688	0,781	0,873	0,965	1,058	1,150	1,242
	1740	0,300	0,387	0,474	0,561	0,648	0,735	0,822	0,909	0,996	1,082	1,169
	1640	0,281	0,363	0,444	0,526	0,607	0,689	0,770	0,852	0,933	1,015	1,096
	1540	0,262	0,339	0,415	0,491	0,567	0,643	0,719	0,795	0,871	0,947	1,023
	1440	0,244	0,314	0,385	0,456	0,526	0,597	0,668	0,738	0,809	0,879	0,950
	1340	0,225	0,290	0,355	0,421	0,486	0,551	0,616	0,681	0,747	0,812	0,877
	1240	0,206	0,266	0,326	0,386	0,445	0,505	0,565	0,625	0,684	0,744	0,804
	1140	0,187	0,242	0,296	0,350	0,405	0,459	0,514	0,568	0,622	0,677	0,731
	1040	0,169	0,218	0,267	0,315	0,364	0,413	0,462	0,511	0,560	0,609	0,658
	940	0,150	0,193	0,237	0,280	0,324	0,367	0,411	0,454	0,498	0,541	0,585
	840	0,131	0,169	0,207	0,245	0,283	0,321	0,359	0,397	0,436	0,474	0,512
	740	0,112	0,145	0,178	0,210	0,243	0,276	0,308	0,341	0,373	0,406	0,439
	640	0,094	0,121	0,148	0,175	0,202	0,230	0,257	0,284	0,311	0,338	0,365
	540	0,075	0,097	0,118	0,140	0,162	0,184	0,205	0,227	0,249	0,271	0,292
	440	0,056	0,073	0,089	0,105	0,121	0,138	0,154	0,170	0,187	0,203	0,219
	340	0,037	0,048	0,059	0,070	0,081	0,092	0,103	0,114	0,124	0,135	0,146
240	0,019	0,024	0,030	0,035	0,040	0,046	0,051	0,057	0,062	0,068	0,073	
	400	500	600	700	800	900	1000	1100	1200	1300	1400	
	BASE											

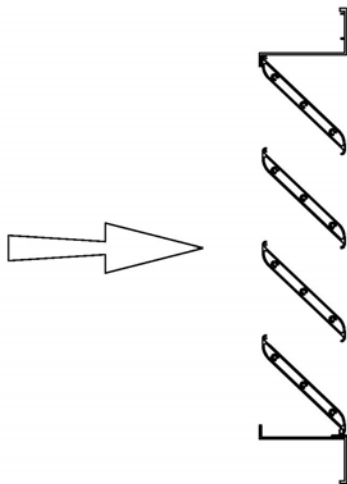
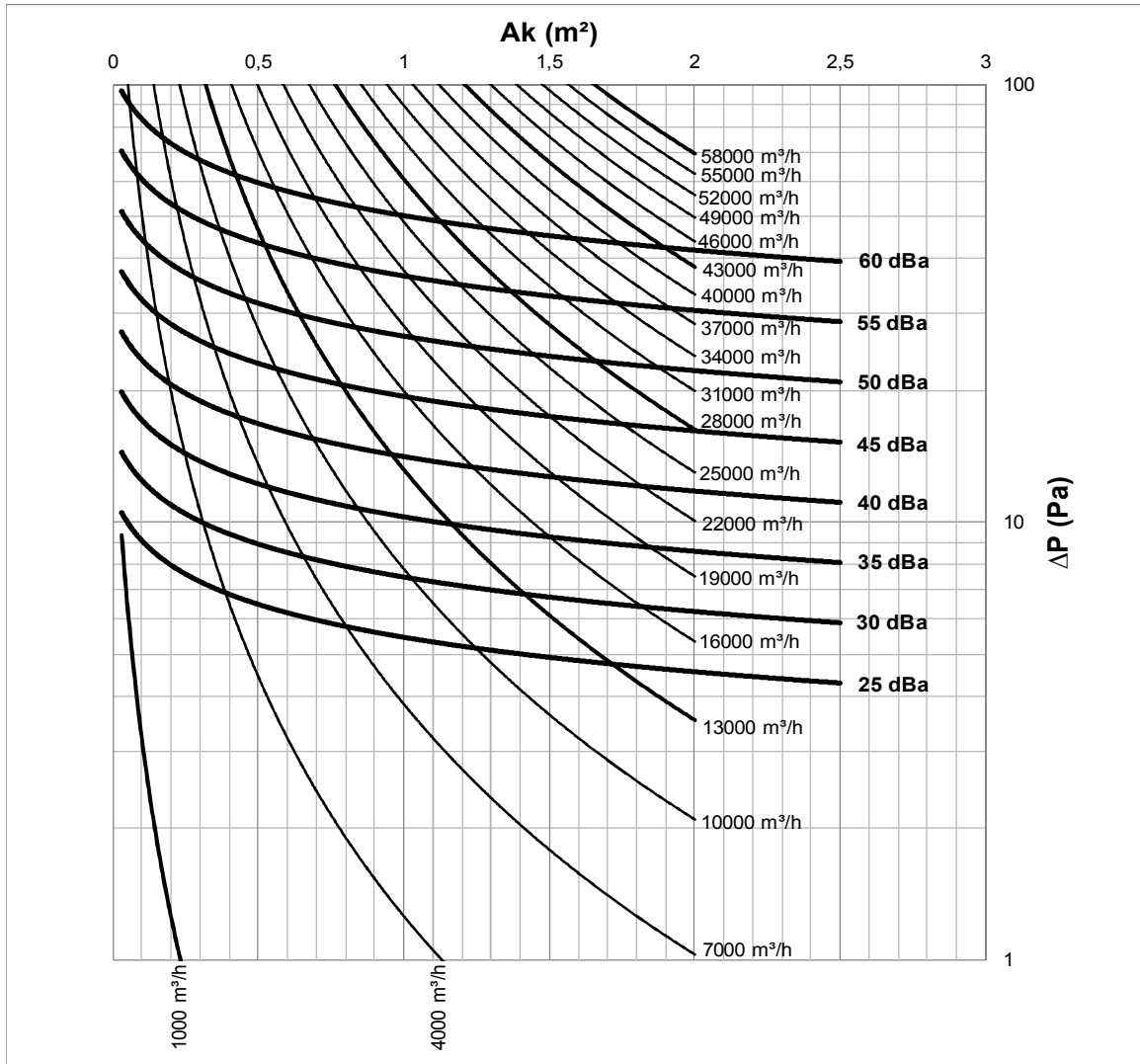
	2740	2,042										
	2640	1,963										
	2540	1,885	2,015									
	2440	1,806	1,931	2,056								
	2340	1,727	1,847	1,967								
	2240	1,649	1,763	1,877	1,991							
	2140	1,570	1,679	1,788	1,896	2,005						
	2040	1,492	1,595	1,698	1,802	1,905	2,008					
	1940	1,413	1,511	1,609	1,707	1,805	1,902	2,000				
	1840	1,335	1,427	1,520	1,612	1,704	1,797	1,889	1,982			
	1740	1,256	1,343	1,430	1,517	1,604	1,691	1,778	1,865	1,952		
HEIGHT	1640	1,178	1,259	1,341	1,422	1,504	1,585	1,667	1,748	1,830	1,911	
	1540	1,099	1,175	1,251	1,328	1,404	1,480	1,556	1,632	1,708	1,784	1,860
	1440	1,021	1,091	1,162	1,233	1,303	1,374	1,445	1,515	1,586	1,657	1,727
	1340	0,942	1,007	1,073	1,138	1,203	1,268	1,334	1,399	1,464	1,529	1,594
	1240	0,864	0,924	0,983	1,043	1,103	1,163	1,222	1,282	1,342	1,402	1,461
	1140	0,785	0,840	0,894	0,948	1,003	1,057	1,111	1,166	1,220	1,274	1,329
	1040	0,707	0,756	0,805	0,853	0,902	0,951	1,000	1,049	1,098	1,147	1,196
	940	0,628	0,672	0,715	0,759	0,802	0,846	0,889	0,932	0,976	1,019	1,063
	840	0,550	0,588	0,626	0,664	0,702	0,740	0,778	0,816	0,854	0,892	0,930
	740	0,471	0,504	0,536	0,569	0,602	0,634	0,667	0,699	0,732	0,765	0,797
	640	0,393	0,420	0,447	0,474	0,501	0,528	0,556	0,583	0,610	0,637	0,664
	540	0,314	0,336	0,358	0,379	0,401	0,423	0,445	0,466	0,488	0,510	0,531
	440	0,236	0,252	0,268	0,284	0,301	0,317	0,333	0,350	0,366	0,382	0,399
	340	0,157	0,168	0,179	0,190	0,201	0,211	0,222	0,233	0,244	0,255	0,266
	240	0,079	0,084	0,089	0,095	0,100	0,106	0,111	0,117	0,122	0,127	0,133
		1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
	BASE											



EXTERNAL INDUSTRIAL GRILLES
100 mm PITCH

GL
SERIES

PERFORMANCE IN EXPULSION

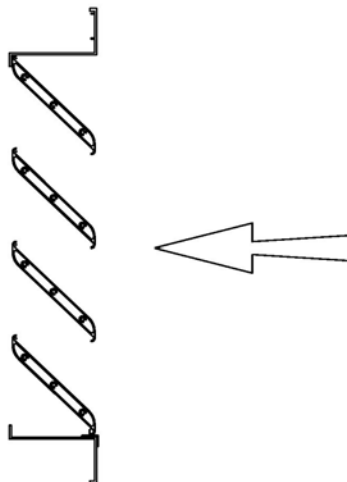
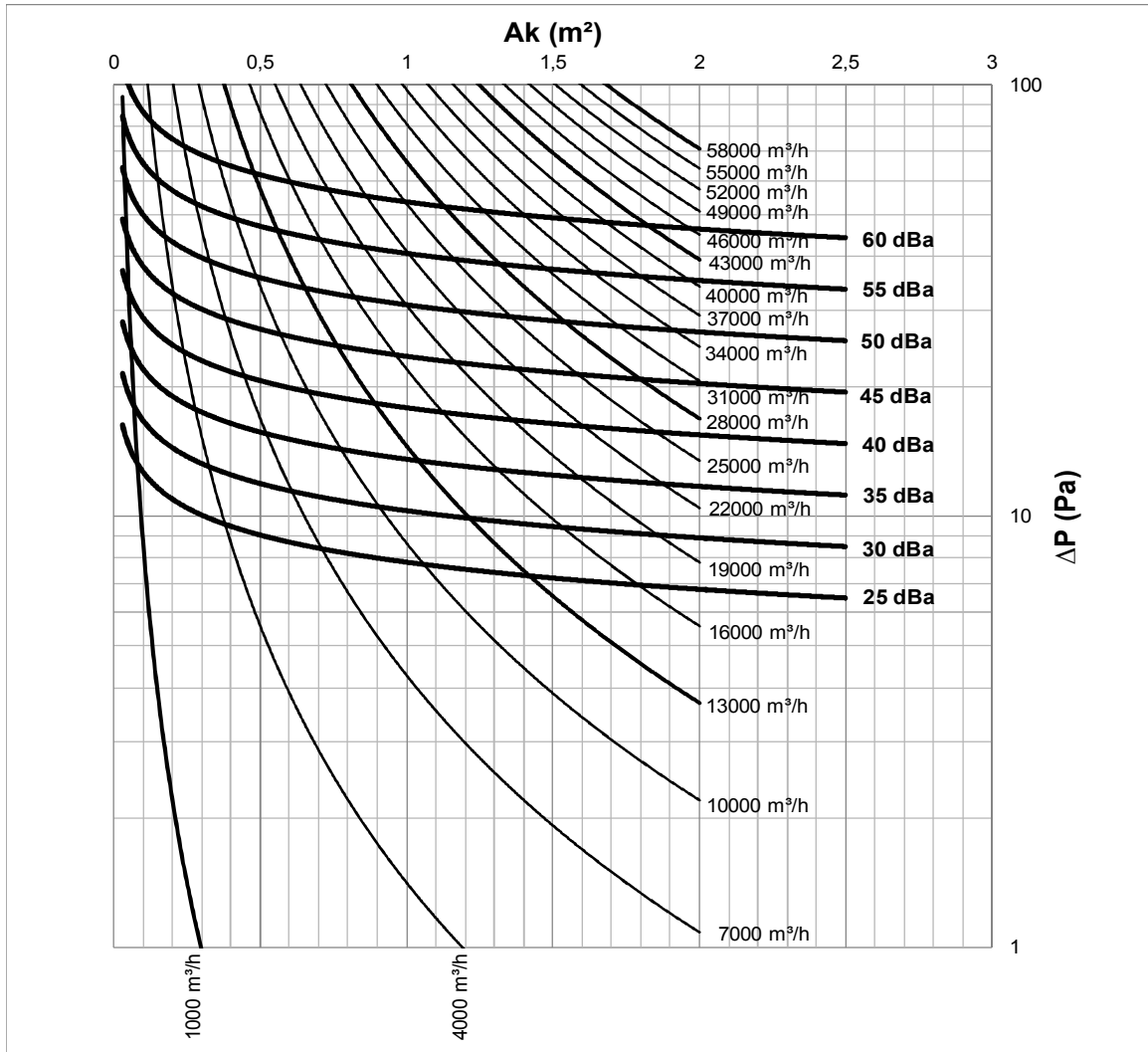




EXTERNAL INDUSTRIAL GRILLES
100 mm PITCH

GL
SERIES

PERFORMANCE IN INJECTION

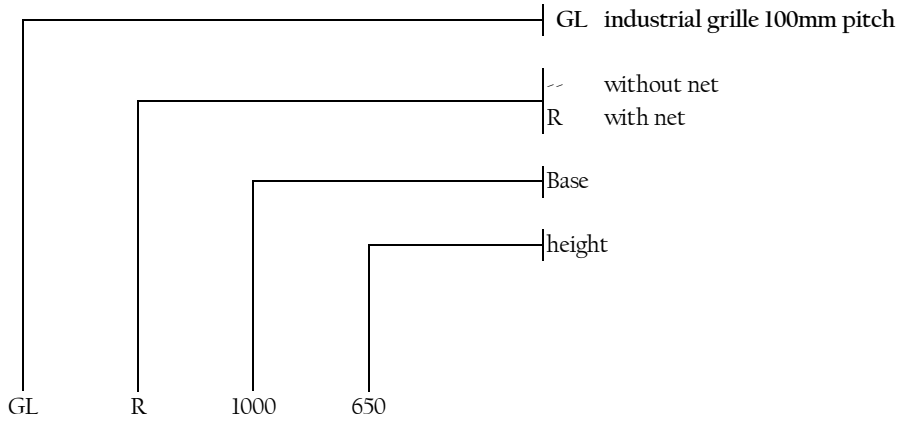




EXTERNAL INDUSTRIAL GRILLES
100 mm PITCH

GL
SERIES

HOW TO ORDER



Standard Bases
600
800
1000
1200
1400
1600
1800
2000

Standard Heights
640
840
1040
1240
1440
1640
1840
2040



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

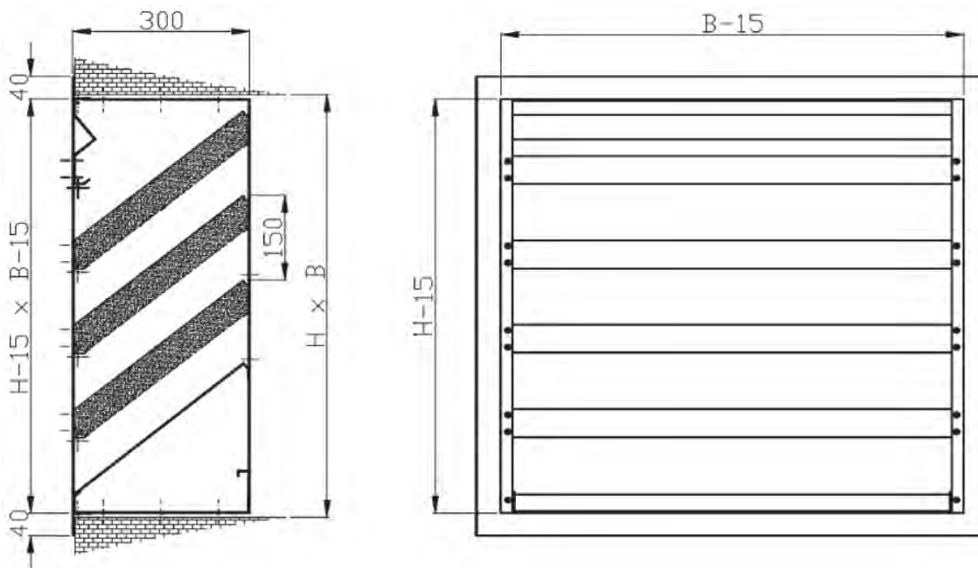
40 mm in in galvanised steel sheet 15/10 (GAZ), or in natural aluminium (GAL), 1,5mm thick. Blades: 150mm pitch.

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 :

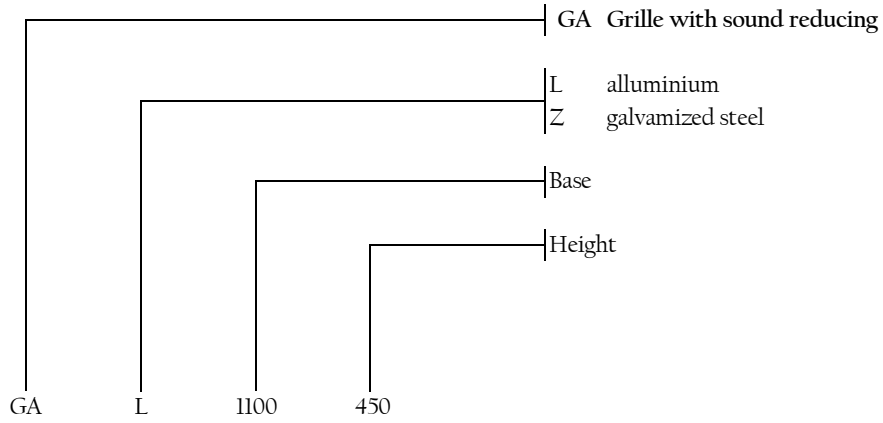
The 3 m/s limit is in conjunction with the dragging of the water droplets. The laboratory tests have highlighted how up to this speed, the water droplets fall along the frame by gravity but for speeds between 3,2 and 3,5 m/s, the drops tend to rise along the frame and pass throw the grille. This is accentuated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



EXTERNAL GRILLES WITH SOUND REDUCING

GA
SERIES

HOW TO ORDER



Standard bases
300
400
450
500
600
700
750
800
900
1000
1050
1100
1200
1300
1350
1400
1500
1600
1650
1700
1800
1900
1950

Standard heights
450
600
750
900
1050
1200
1350
1500
1650
1800
1950

