ACOUSTIC LOUVRE

SONIE GNB

The **SONIE GNB** acoustic louvre is designed for reducing the ventilation noises on the front of the buildings or to isolate a wall.

Its shallow depth, also with a double mounting, enables to integrate it easily in the building project environment while ensuring an high acoustic attenuation thanks to the sound insulating material inside the blades.

More, its blades with rounded profile will ensure a nice aesthetic and design.

CODIFICATION

X → **GN** – Louvre

Y → **B** – Acoustic

For particular cases, it is possible to improve the acoustic attenuation by placing two GNB louvres back to back. (double louvre).

CONSTRUCTION

		Caracteristics	Options
Frame	Material	Galvanised steel sheet	Stailess steel 304L or 316L, painted steel (RAL standard)
	Thickness	1.2 mm	
	Width	150 mm	300 mm for double louvres
	Assembly	Zinc plated steel rivets	Stainless steel rivets
Blades	Material	Galvanised steel sheet Stainless steel 304L or 316L, painted steel (RAL standard)	
	Thickness	1 mm	
	Assembly	Zinc plated steel rivets	Stainless steel rivets
Sound absorbant	Material	non-hydrophilic one block panels	-
	Density	24 kg/m^3 +/- 10%	
	Thickness	50 mm	
	Protection	Glass silk on mineral wool + perforated metal sheet	
Protection		Anti-birds mesh on the back	
Mounting		Mounting counter-frame with 50 mm flanges	

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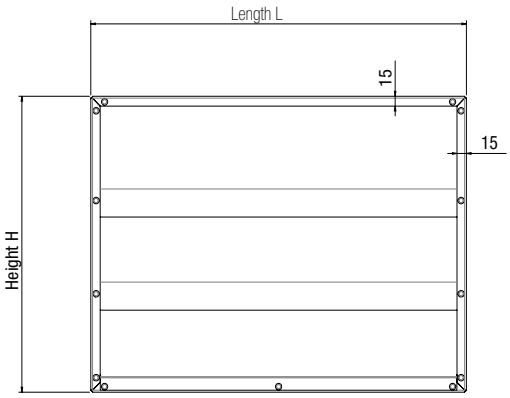
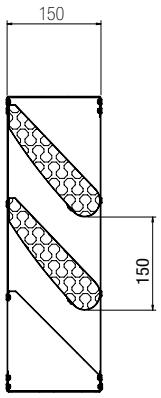
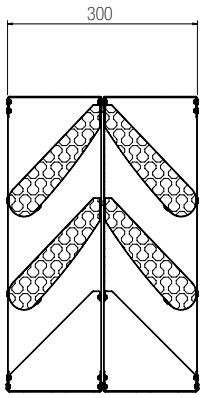
DIMENSIONS

Height H from 450 mm to 2400 mm
Length L from 400 mm to 1800 mm
Heights are with a pitch of 150 mm and 100 mm for the lengths (Other dimensions on request).
The upper dimensions are made by juxtaposition of several elements.





Single louvre



Double louvre

WEIGHT (KG) for a one piece louvre

H \ L	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800
450	6	7	9	10	11	12	13	14	15	17	18	19	20	21	22
600	8	9	11	12	14	15	17	18	20	21	23	24	25	27	28
750	10	11	13	15	17	19	20	22	24	26	27	29	31	33	34
900	11	13	16	18	20	22	24	26	28	30	32	34	36	38	40
1050	13	16	18	20	23	25	27	30	32	35	37	39	42	44	46
1200	15	18	20	23	26	28	31	34	36	39	42	44	47	50	53
1350	17	20	23	26	29	32	35	38	41	44	47	50	53	56	59
1500	18	22	25	28	32	35	38	41	45	48	51	55	58	61	65
1650	20	24	27	31	35	38	42	45	49	53	56	60	63	67	71
1800	22	26	30	34	38	41	45	49	53	57	61	65	69	73	77
1950	24	28	32	36	40	45	49	53	57	62	66	70	74	79	83
2100	26	31	36	41	46	51	55	60	65	70	75	80	84	89	94
2250	28	33	39	44	49	54	59	64	69	74	80	85	90	95	100
2400	30	35	41	46	52	57	63	68	74	79	84	90	95	101	106

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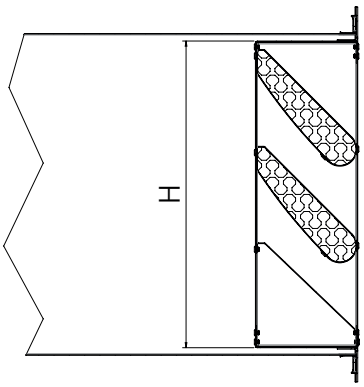
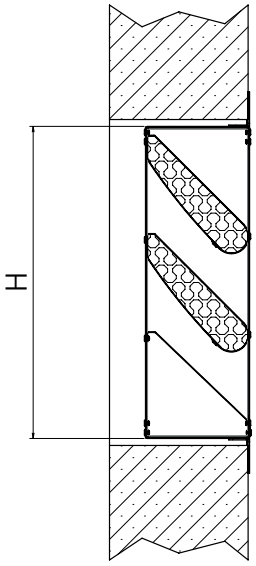
ACOUSTIC CHARACTERISTICS

Installation in intake and exhaust duct



Surface installation air intake and exhaust



STATIC ATTENUATION IN DUCT OR INSERTION LOSSES

Acoustic performances have been tested by an independent laboratory according to ISO 7235 : 2009.

	Insertion losses / Frequencies (Hz)								
	63	125	250	500	1000	2000	4000	8000	
Single GNB	6	7	8	11	15	17	16	17	[dB]
Double GNB	7	8	9	16	27	27	26	29	[dB]

SOUND ATTENUATION INDEX R in dB

Acoustic performances have been tested by an independent laboratory according to ISO 151186-1 : 2004

	Insertion losses / Frequencies (Hz)								
	125	250	500	1000	2000	4000	8000		Rw(C,Ctr)
Single GNB	3	3	6	11	14	13	15	[dB]	10(0;-2)
Double GNB	3	5	11	21	24	23	27	[dB]	16(-1;-4)

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FLOW NOISES (Lw en dB)

Acoustic performances have been tested by an independent laboratory according to ISO 7235 : 2009 on GNB L1000 mm x H 900 mm louvre

Airflow flowing sounds Lw in dB

CTTM CENTRE DE TRANSFERT DE TECHNOLOGIE DU MANS

Intake single louvre

Face velocity (m/s)	Frequencies (Hz)								Global dB	Global dB (A)	Pressure drop Pa
	63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz			
1	40	31	18	17	10	12	17	25	40	25	4
2	52	44	39	38	35	26	21	24	53	40	19
3	59	51	50	56	52	42	36	30	62	56	46
4	67	62	59	64	64	57	51	44	71	67	92

Exhaust single louvre

Face velocity (m/s)	Frequencies (Hz)								Global dB	Global dB (A)	Pressure drop Pa
	63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz			
1	39	31	18	14	9	12	17	25	40	25	4
2	52	47	41	44	43	34	23	25	54	46	21
3	68	51	50	53	54	49	40	32	69	57	49
4	72	61	58	59	61	57	51	43	73	64	94

Exhaust/intake air double louvres

Front velocity (m/s)	Frequencies (Hz)								Global dB	Global dB (A)	Pressure drop Pa
	63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz			
1	44	36	34	32	28	16	17	25	45	33	9
2	59	53	53	52	53	47	37	29	62	56	43
3	71	63	63	61	62	58	52	45	73	66	97

ISO 9001 14001 Certified

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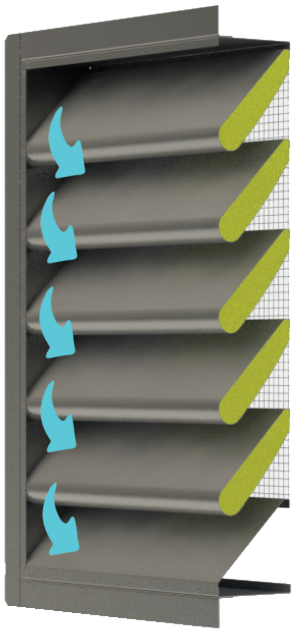
AERAULIC CHARACTERISTICS : AIR VELOCITY

The maximal front velocity used for air inlet is 3 m/s. Over 3 m/s, the weather protection is no longer guaranteed. In air exhaust, it can reach 5 m/s.

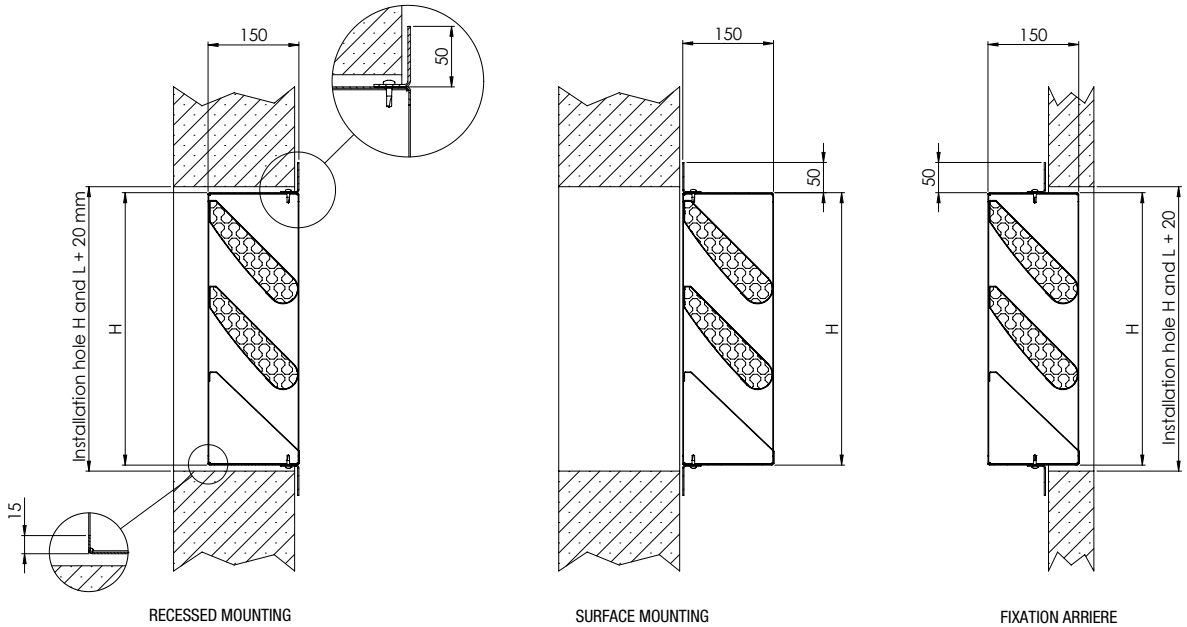
Here is the free open area depending on the louvre's height .

Height in mm	% of air section
450	22 %
600	25 %
750	27 %
900	28 %
1050	29 %
1200	29 %
1350	30 %
1500	30 %
1650	30 %
1800	31 %
1950	31 %
2100	31 %
2250	31 %
2400	31 %



INSTALLATION AND IMPLEMENTATION

Several fixing methods are possible:
With a mounting frame provided. It is fixed on site using self-tapping screws
Installation hole must be provided with an opening dimension of L + 20 mm x H + 20 mm



RECESSED MOUNTING

SURFACE MOUNTING

FIXATION ARRIERE

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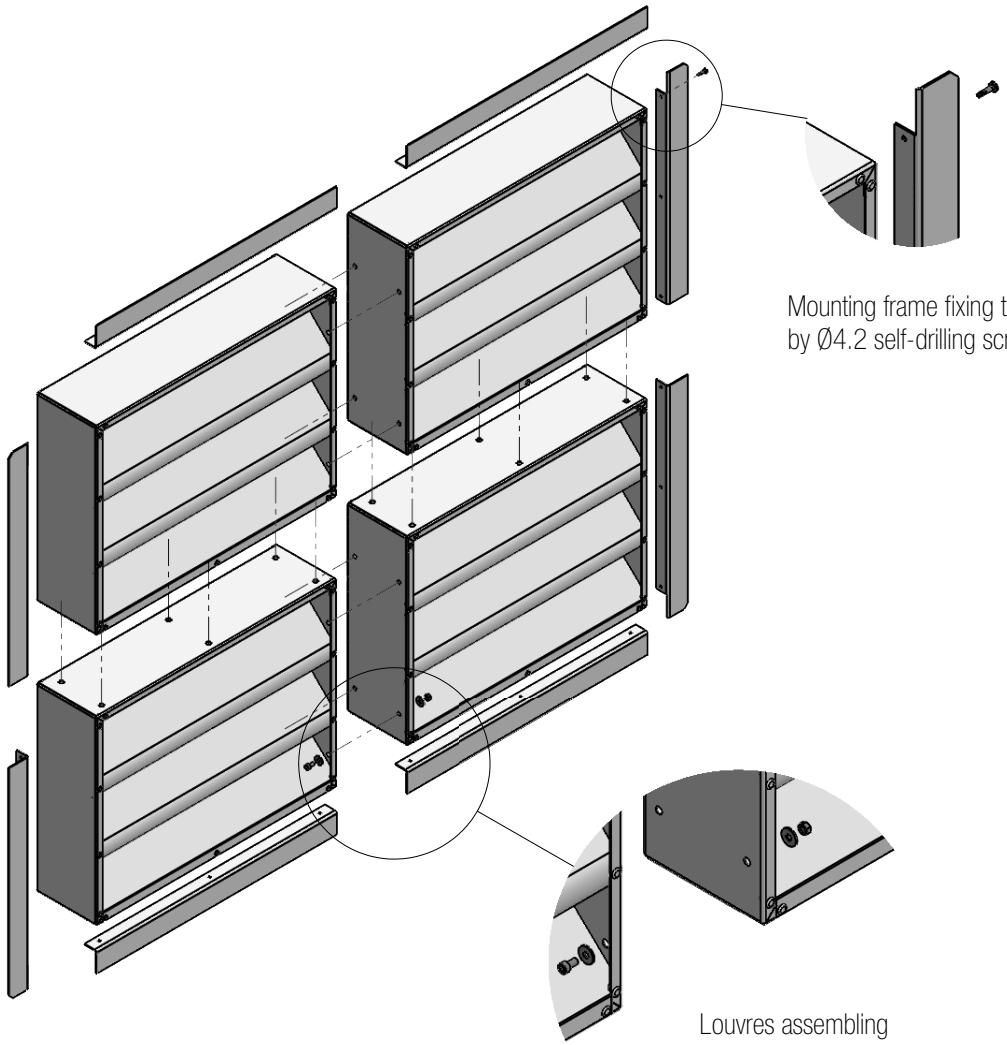
ASSEMBLY OF SEVERAL LOUVRES

Louvres are assembled using the side holes.



Mounting frame fixing to the required position
by Ø4.2 self-drilling screws (included)

Louvres assembling
by M6 bolts (included)

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