

# ACOUSTIC LOUVRE

1.4.1

SONIE GNB

ACOUSTICS

The acoustic louvre GNB is used for the attenuation of the static or dynamic ventilation, for frontage buildings.

Its manufacturing provides a double protection :

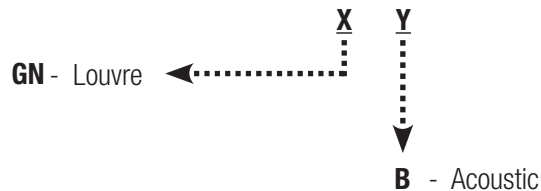
- Weather louvre, thanks to a special blade profile.
- Against the noise thanks to an insulating material located inside the blades.

Its short manufacturing depth enables to place it easily in your working environment while keeping a good acoustic efficiency.



Visual with the counter-frame mounting option

## CODIFICATION



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

## CONSTRUCTION

		Characteristics	Options
Frame	Material	Galvanised steel sheet	Stainless steel, painted or aluminium
	Thickness	1.2 mm	
	Width	300 mm	
	Assembly	By steel rivets	
Blades	Material	Galvanised steel	Stainless steel, painted or aluminium
	Thickness	0,8 mm	
	Assembly	By steel rivets	
Sound absorbant	Material	One block panels	
	Density	50 kg/m <sup>3</sup>	
	Protection	Anti-erosion glass silk	
Protection		Anti-bird wire mesh on the back side	
Options			Mounting counter-frame Flanges 50 mm

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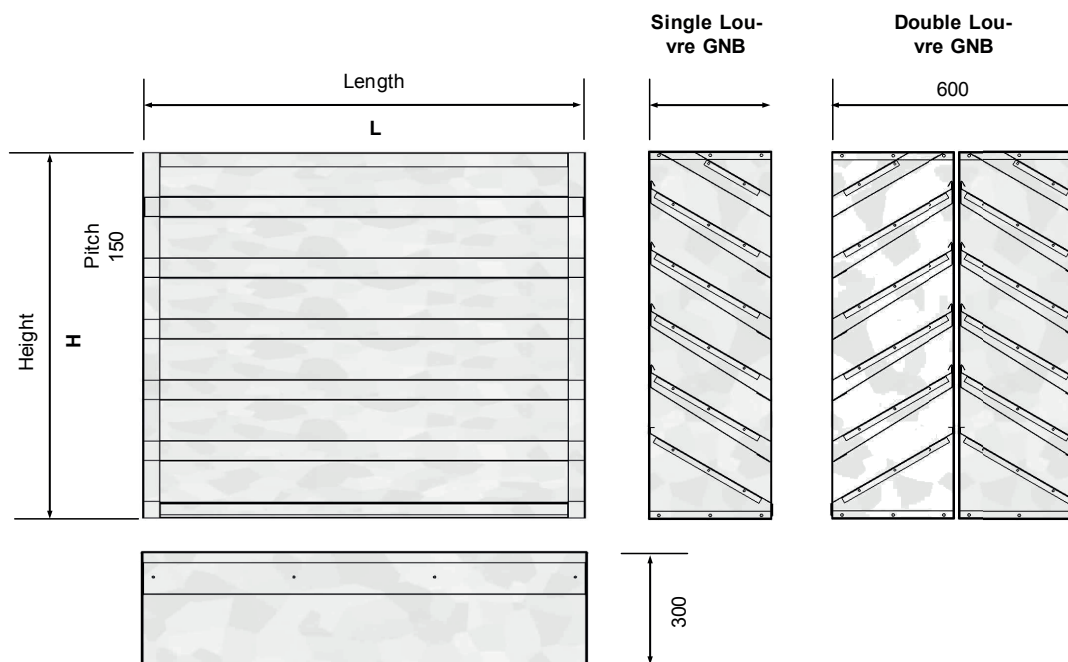
## SONIE GNB

### DIMENSIONS

Height H : from 450 mm to 2 400 mm with a pitch of 150 mm

Length L : from 400 mm to 1 800 mm with a pitch of 100 mm

Upper dimensions are made by juxtaposition of several elements. (Other dimensions on request)



### WEIGHT (kg)

	Length en mm															
	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	
450	10	13	17	17	21	24	25	28	31	32	35	39	39	43	46	
600	12	16	20	21	25	29	30	34	39	39	43	48	48	52	57	
750	14	19	24	25	30	35	36	41	46	47	52	57	57	62	67	
900	17	22	28	29	35	41	41	47	53	54	60	66	66	72	78	
1050	19	25	32	33	40	46	47	54	60	61	68	75	75	82	89	
1200	21	29	36	37	44	52	53	60	68	69	76	84	84	92	100	
1350	23	32	40	41	49	58	58	67	75	76	84	93	93	102	110	
1500	25	35	44	45	54	63	64	73	82	83	92	102	102	112	121	
1650	28	38	48	49	59	69	69	80	90	90	101	111	111	122	132	
1800	30	41	52	52	63	74	75	86	97	98	109	120	120	131	142	
1950	32	44	56	56	68	80	81	93	104	105	117	129	129	141	153	
2100	34	47	60	60	73	86	86	99	112	112	125	138	138	151	164	
2250	36	50	63	64	78	91	92	105	119	120	133	147	147	161	175	
2400	39	53	67	68	82	97	98	112	126	127	141	156	156	171	185	

### STATIC ATTENUATION OR INSERTION LOSS

Type of louvre	Insertion loss/ Frequencies								
	63	125	250	500	1000	2000	4000	8000	[Hz]
Single GNB	3	3	4	9	14	17	13	13	[dB]
Double GNB	4	5	6	13	25	27	21	23	[dB]

### REGENERATED NOISE

#### Single louvre

Front velocity (m/s)	Lw / Frequencies									Overall dB(A)
	63	125	250	500	1000	2000	4000	8000	[Hz]	
1.5	42	41	35	36	31	23	24	30	[dB]	37
2.0	50	46	43	40	42	39	30	30	[dB]	46
2.5	57	52	49	44	47	48	41	33	[dB]	53
3.0	63	58	54	49	51	53	50	40	[dB]	58
3.5	68	62	59	53	54	56	57	48	[dB]	62
4.0	73	67	62	57	56	59	62	53	[dB]	66
4.5	77	71	66	60	59	61	65	58	[dB]	69
5.0	79	74	69	63	61	63	67	63	[dB]	72

#### Double louvre

Front velocity (m/s)	Lw / Frequencies									Overall dB(A)
	63	125	250	500	1000	2000	4000	8000	[Hz]	
1.5	45	47	41	39	39	33	26	30	[dB]	37
2.0	53	54	48	45	47	47	38	32	[dB]	46
2.5	60	60	54	50	52	54	49	39	[dB]	53
3.0	66	65	60	54	56	58	58	47	[dB]	58
3.5	70	69	64	58	58	61	62	54	[dB]	62
4.0	74	73	67	62	61	64	66	59	[dB]	66
4.5	77	76	71	65	63	66	68	65	[dB]	69
5.0	80	78	73	68	65	69	70	68	[dB]	72

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## SONIE GNB

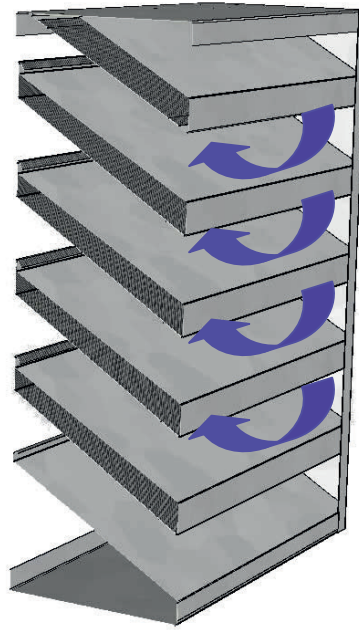
### AEREAULIC CHARACTERISTICS : AIR VELOCITY

The maximal front velocity used for air inlet is 2m/s. In air exhaust, it can reach 5m/s.

### AIR SECTION

It corresponds to the free open area on the louvre's height .

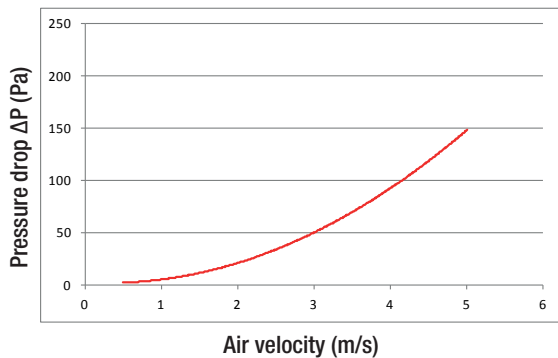
Height	% of air section
450	17%
600	25%
750	30%
900	33%
1050	36%
1200	38%
1350	39%
1500	40%
1650	41%
1800	42%
1950	42%
2100	43%
2250	43%
2400	44%



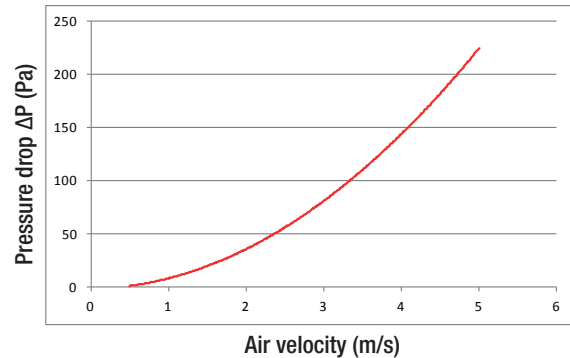
### PRESSURE DROP

Pressure drops (Pa) are given in air exhaust configuration according to face velocity.

**Single louvre**



**Double louvre**

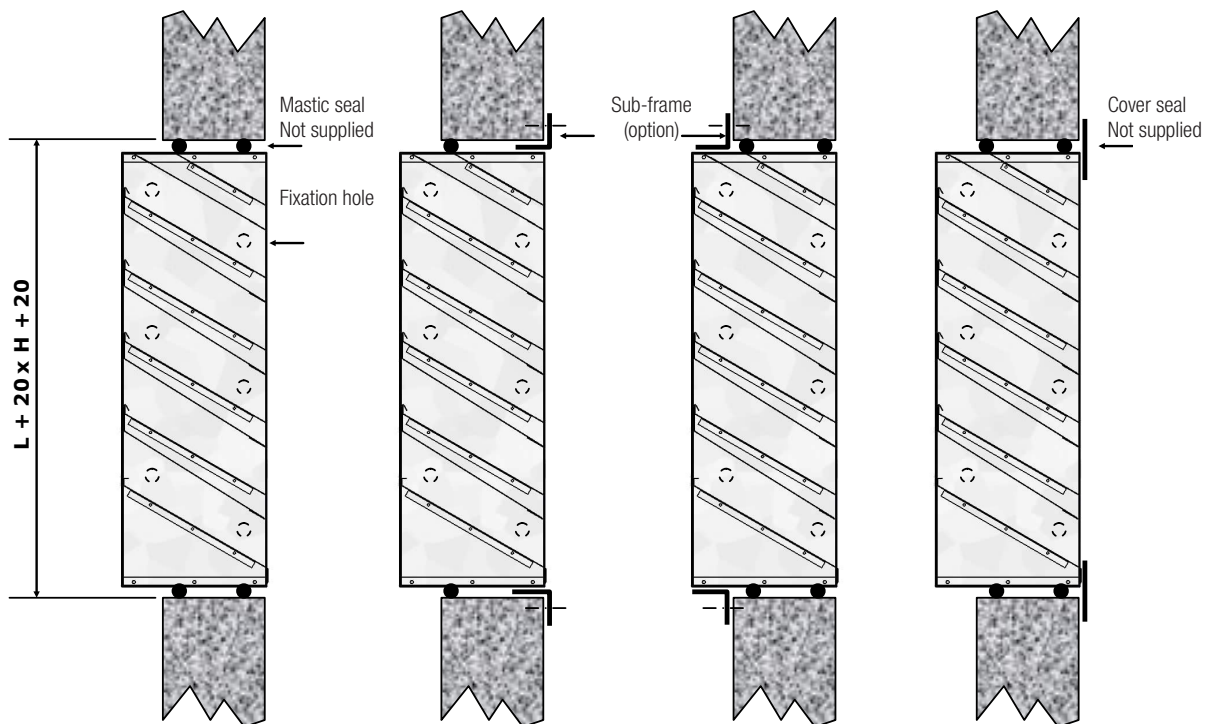


### INSTALLATION AND IMPLEMENTATION

Several fixing methods are possible :

- Lateral, thanks to the drilling on the height of the louvre made every 300 mm.
- With a mounting sub-frame, as a special option. The fixing is made on site with self drilling screws.
- With a cover seal (not supplied)

The size of the installation hole must be made with an opening dimension corresponding to  $L + 20$  mm  $H + 20$  mm



### ASSEMBLY

Louvres are assembled with lateral drillings.

