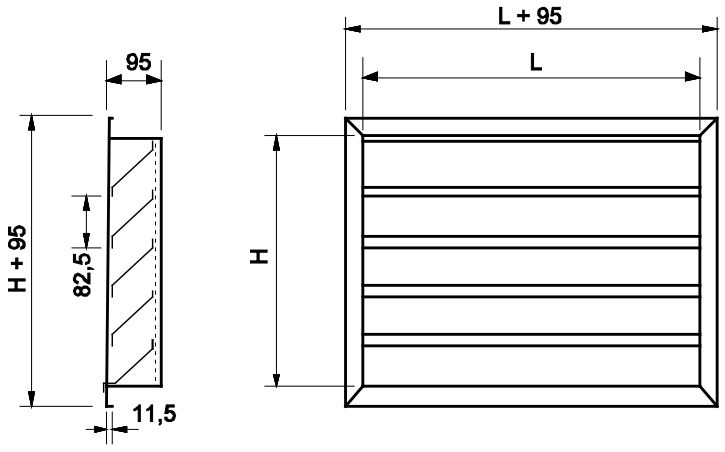
WEATHER LOUVRE

GH

The GH weather louvre can be used as air intake or air exhaust.
It is assembled on the front of buildings and is dedicated to HVAC commercial applications.

CHARACTERISTICS

		Standard	Option
Construction	Frame	Galvanized steel sheet, 95mm width Flanges of 47,5mm, undrilled	Stainless steel, raw or painted aluminum. F2A standard drilling
	Blades	Galvanized steel sheet, 95 mm width, thickness 0.8 mm (L >1895 mm thickness 1.5 mm)	Stainless steel, raw or painted aluminum
	Mesh	Anti-bird mesh in galvanized steel 12,7 x 12,7 mm	Mesh in stainless steel Without mesh
Operating velocity		Air exhaust : up to 5 m/s Air intake : up to 2,5 m/s	
Dimensions		Height from 340 to 1990 mm Length from 395 to 1995 mm at a pitch of 100 mm Air section H x L limited at 4 m^2	Height up to 2750 mm Length up to 2495 mm Intermediate dimensions on request *Horizontal and vertical assembly for an air section over 4 m^2 (on request)*
Installation holes		(H + 15 mm) x (L + 15 mm)	
Miscallenous			Sub-frame Assembly with a damper Assembly with a backdraught damper Assembly with a filtering frame



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F2A Equipementier en traitement de l'air

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WEIGHT (Kg)

H \ L	395	595	695	895	1095	1295	1495	1695	1995
400	8	10	11	13	15	17	19	21	23
600	9	12	14	16	18	21	23	26	28
1000	13	16	19	22	25	29	32	36	39
1200	15	18	22	25	28	33	36	41	44
1600	19	23	28	33	37	43	47	53	57
1800	28	36	45	53	61	71	79	90	97
1990	31	39	50	58	66	78	86	98	106

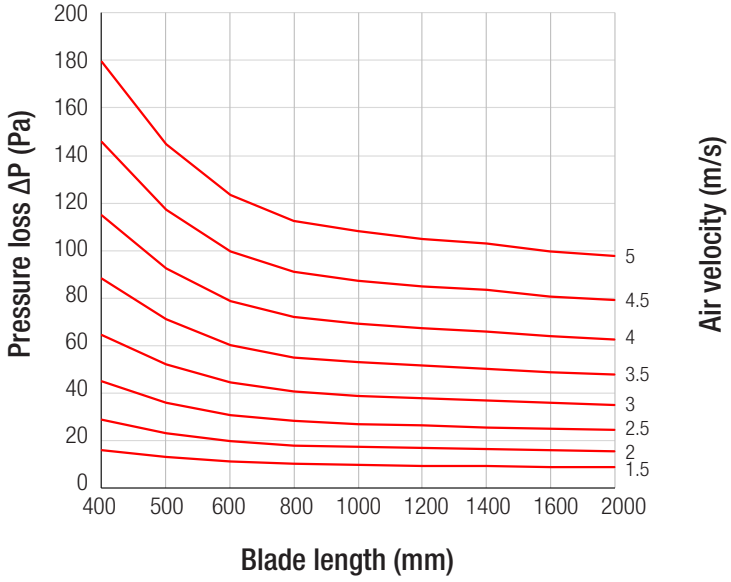
SELECTION

Airflow (m^3/h) and free area velocity between the blades (m/s) **for a face velocity of 2.5 m/s.**

	395		595		695		895		1095		1295		1495		1695		1995	
400	1422	5.2	2142	5.2	2502	5.2	3222	5.2	3942	5.2	4662	5.2	5382	5.2	6102	5.2	7182	5.2
600	2133	4.2	3213	4.2	3753	4.2	4833	4.2	5913	4.2	6993	4.2	8073	4.2	9153	4.2	10773	4.2
800	2844	4.2	4284	4.2	5004	4.2	6444	4.2	7884	4.2	9324	4.2	10764	4.2	12204	4.2	14364	4.2
1000	3555	4.2	5355	4.2	6255	4.2	8055	4.2	9855	4.2	11655	4.2	13455	3.6	15255	3.6	17955	3.6
1200	4266	4.2	6426	4.2	7506	4.2	9666	4.2	11826	4.2	13986	4.2	16146	3.6	18306	3.6	21546	3.6
1400	4977	4.2	7497	4.2	8757	4.2	11277	3.6	13797	3.6	16317	3.6	18837	3.6	21357	3.6	25137	3.6
1600	5688	3.6	8568	3.6	10008	3.6	12888	3.6	15768	3.6	18648	3.6	21528	3.6	24408	3.6	28728	3.6
1800	6399	3.6	9639	3.6	11259	3.6	14499	3.6	17739	3.6	20979	3.6	24219	3.6	27459	3.6	32319	3.6
1990	7074	3.6	10656	3.6	12447	3.6	16029	3.6	19611	3.6	23193	3.6	26775	3.6	30357	3.6	35730	3.6

PRESSURE LOSSES

The pressure loss can be read below, according to the face velocity.



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REGENERATED NOISES

The acoustic performances of our louvres have been tested in an independent laboratory (CTTM) according to ISO 7235: 2009 standard.

Air flow noise Lw in dB

Air velocity (m/s)	Frequency (Hz)								
	63	125	250	500	1000	2000	4000	8000	Global
2	56.3	56.8	54	49.7	53.1	47.9	40.7	33.1	61.8
4	75	70.5	72.8	71.4	73.2	72.6	73.1	69.2	81.6
6	78.4	74.4	78.7	79.7	78.5	76.6	75.8	72	86.4

Datas are given for a louvre 750 x 500 mm.

From these data, you can calculate the regenerated noise of a louvre of different dimensions by applying the formula below for every frequency band:

$$Lw_{63} = x_{63} + 10 \log \left(\frac{S}{0.375} \right)$$

X_{63} = Air flow noise for a louvre 750 x 700 mm at 63 Hz (in dB) for a given air velocity => read the data in the table
S = Louvre section (in m^2).
Lw_{63} = Air flow noise required at 63 Hz (in dB) for a given air velocity.

Example – Calculation of regenerated noise for a louvre GH 500 x 500 mm (HxL)

Louvre section : S = 0.5 x 0.5 = **0.25 m²**

Calculation of the regenerated noise at 63Hz for an **air velocity of 4 m/s**:

$$Lw_{63} = 75 + 10 \log \left(\frac{0.25}{0.375} \right) = 73.2 \text{ dB}$$

Value in the table at a frequency of 63Hz and for an air velocity of 4 m/s

Repeat this calculation rules to get the regenerated noise for all frequencies (63Hz - 8kHz)..

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