

Ingeniería y Construcción del Perfil S.A C/Nou, 16 (P.I. Mas del Polio) Tel. 96 121 1778 Fax. 96 121 1504 www.incoperfil.com email: comercial@incoperfil.com

STATIC VENTILATION

BASIC CONCEPTS

Thanks to our ventilation system, having a healthy environment at work will no longer be a problem. It is a fact that proper ventilation increases the health and the performance.

What we get with STATIC VENTILATION:

1º Renovation of the foul air. This is an essential aspect to avoid potential risks, such as chronical illnesses.

2°. Evacuation of the heat produced during the industrial activity or the radiation. This results in a reduction of the temperature and therefore a better working environment.

3°. Ameliorate the higrometry of the factory, reducing the moist and therefore the condensations.

OPERATION

- a) THERMAL ENERGY: Air rises when its density decreases, and the bigger the difference in the temperature that propels it, the faster it will rise.
- b) PIEZOMETRIC ENERGY: The difference in height that exist in the building due to the presence of the openings at the lower part of the building and at the upper part of it, creates a pressure difference that helps the ascent of the air.
- c) OUTSIDE WIND : The shape of the vent placed at the roof creates a depression that boosts the air release.

The airflow calculation values are illustrative and will always depend on the external and internal conditions of any specific moment.

INGENIERÍA Y CONSTRUCCIÓN DEL PERFIL

Ingeniería y Construcción del Perfil S.A C/Nou, 16 (P.I. Mas del Polio) Tel. 96 121 1778 Fax. 96 121 1504 www.incoperfil.com email: comercial@incoperfil.com

Product	Features

MODEL	А	В	С	D	Weight kg/ml (estimation)	V	Н
G-250	615	500	250	270	14	48	35
G-500	1285	920	500	550	35	100	75
G-915	2290	1500	915	965	100	165	100

Dimmensions in milimeters

Note : V and H are the components of the ventilator's own weight and the wind's pressure at 140 km / h in kg/ml $\,$

Exhaust Capacity

Temperature difference	Piezometric Height	G-250	G-500	G-915	
	(H) mt	Exit flo	w m ³ /mii	nute per	
		MI of the ventilator			
	6	13,30	26,20	53,60	
	8	14,50	28,30	52,50	
5°	10	16,80	33,10	63,70	
	12	18,20	36,02	68,60	
	6	18,00	35,40	66,80	
	8	19,20	38,10	73,30	
10°	10	21,60	42,90	84,60	
	12	24,20	48,00	97,10	
	6	21,80	43,10	85,90	
	8	24,10	47,30	93,60	
15°	10	26,20	51,90	101,20	
	12	29,80	58,50	115,00	



Note: The airflow values are illustrative and are influenced by its location and by the external and internal conditions of each moment. To obtain a correct operation, the air inlet (at the lower part of the building) should be 1.5 times bigger than the ventilation's outlet surface.

FACILE INSTALLATION

G-250 Model is supplied assembled in units of 2, 3, 4, 5 and 6 meters. The can be installed separately or joined together.

G-500 and G-915 Model are supplied dismantled in 4 meters long units.

Options :

- Anti-bird netting.
- Manual record of remote opening and closing

Material features:

- Galvanized, Z275. (UNE 36130, EN 10142)
- Prelaquered in polyester 25 microns (UNE 36150, EN 10169)
- Other finishing available upon request.
- Base formed by galvanized platens.

INCOPERFIL[®] INGENIERÍA Y CONSTRUCCIÓN DEL PERFIL

Ingeniería y Construcción del Perfil S.A C/Nou, 16 (P.I. Mas del Polio) Tel. 96 121 1778 Fax. 96 121 1504 www.incoperfil.com email: comercial@incoperfil.com

				to require the real
rane renewars		The activity.		
I disto i offortato			accorang	le legalatione

ACTIVITY	N REN./ H	ACTIVITY	N REN./ H
Warehouse	2 à 6	Light foundy	12 à 15
Offices	4 à 8	Paper mill	8 à 20
Workshop	6	Swimming pools	15 à 25
Markets	4 à 8	Thermal power station	12 à 30
Omnisport halls	4 à 8	Painting workshop	20 à 50
U. Bottling	10 à 15	Glass factories	30 à 50

EXAMPLE :

Data :

Activity :warehouseDimensions :87 x 25 mPiezometric height :H= 8 mTemperature difference :ti-te (°C) : 5 °C



In accordance with the table of renewals per hour depending on the activity, we obtain the number of renovations per hour, in this case, as we are talking about a warehouse, we choose the average value of 4 rev./h:

- Taking into account the temperature difference of 5°C and a piezometric height of 8 m, the output flow is 14.50 m3 / min per linear meter of the fan, according to the G-250 model extraction table.
- We calculate the VOLUME OF AIR TO BE RENEWED : (building volume) x number of rev./hour = (87 x 25 x 8) x 4 = 69.600 m³/hour
- 3) To obtain the required extraction in m3 / min, we divide by 60: hour

$$\frac{69.600 \frac{m3}{heure}}{60} = 1.160 \frac{m3}{minute}$$

 Lastly, the extraction volume calculated in point 3 is divided by the output flow, obtained in point 1

$$\frac{1.160 \frac{m3}{min}}{14.50 \frac{m3}{min} * ml} = 80 ML$$

Solution: 80 ml of FAN G-250 mm

The solution is correct, and then the plant has a length of 87 ml, in the case that the ventilation length is greater than the plant length, it will be necessary to repeat the calculation with the model G-500 mm.





Ingeniería y Construcción del Perfil S.A C/Nou, 16 (P.I. Mas del Polio) Tel. 96 121 1778 Fax. 96 121 1504 www.incoperfil.com email: comercial@incoperfil.com

STATIC VENTILATION

G-250 / G-500 / G-915



- Renewal of stale air
- Evacuate the heat produced in industrial activity or radiation
- Condensation elimination



-250 / G-500 Model



- - Temperature adjustment
- - No pollution
- - No consumption
- No need for Maintenance

