

en



Ventilation & Sun Control

ARCHITECTURAL GRILLES



NATURAL COMFORT INSIDE



DUCO
Ventilation & Sun Control

An optimal indoor climate is healthy and gives a good feeling. Duco developed its Green Building Solution for this reason where basic ventilation, intensive ventilation and solar protection are combined. This enables us to guarantee an optimum air quality and

thermal comfort, for both residential and non-residential housing. And that with a minimum of energy consumption. Because Duco's solutions are natural and energy efficient. They give homes and non-domestic buildings an aesthetic added value. The result : **Natural Comfort Inside.**

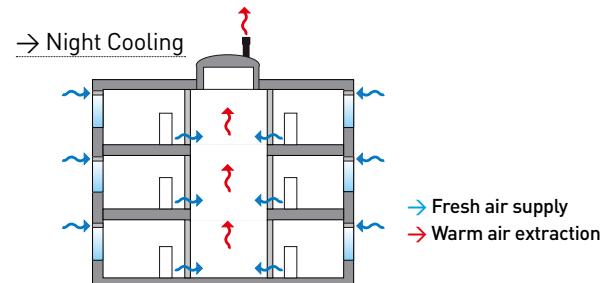
→ Table of contents

Intensive ventilation	4-11
Products	
DucoGrille SOLID	12-21
DucoGrille Solid G 30Z	12
DucoGrille Solid F 30Z	14
DucoGrille Solid M 30Z	16
DucoGrille Solid MR 30Z	18
DucoGrille Solid ++ G 30Z	20
DucoGrille CLASSIC	22-37
DucoGrille Classic G 20Z	24
DucoGrille Classic G 20V	25
DucoGrille Classic G 50Z	26
DucoGrille Classic G 50S	27
DucoGrille Classic G 50/75Z	28
DucoGrille Classic G 50/75S	29
DucoGrille Classic N 50Z	30
DucoGrille Classic N 50S	31
DucoGrille Classic N 50/75Z	32
DucoGrille Classic N 50/75S	33
DucoGrille Classic G 70S	34
DucoGrille Classic G 70V	35
DucoGrille Classic F 20Z	36
DucoGrille Classic F 20V	37
DucoGrille CLOSE	38-42
DucoGrille Close 35Z	38
DucoGrille Close 85Z	40
DucoGrille Close M 100	42
Dimensions and fixing options	45
Technical values overview	46
Product overview	interior flap
Order info bespoke items	exterior flap

Maintaining a pleasant indoor climate in a **natural** way

Functional and pleasing to the eye

Duco window and wall louvres combine intensive ventilation with a considerable aesthetic added value. With a large variety in shapes and shades, Duco offers architects many recessed and surface mounting options. The wall louvres enable straightforward fitting and come as standard with an insect screen. Duco offers a full range of window and wall louvres starting from our standard Classic louvres, including our closable Close louvres right up to our exceptionally sturdy vandal-proof and burglar proof Solid wall louvres.



Ideal for night cooling

Duco window and wall louvres have been designed for continuous and intensive ventilation. It is for this reason that they are particularly suited for night cooling: a maximum amount of cool night time air is brought in at night. This cool air is then stored in the thermal mass such as concrete elements. This delays the heating-up process during the day. Those who combine this ventilation system with a sun control system will have the perfect solution for hot summer days. In short, Duco combines two natural products in order to maintain optimum indoor temperature.

- intensive ventilation
- Ideal for night cooling
- applications
- Burglar-proof and
- vandal resistant

→ Colour

Each type of louvre contained in this product brochure is available in silver anodized (SAA), all standard RAL colours and metallic RAL colours. Special colours are available on request.



→ Three types

Duco louvres are suitable for window and wall mounting. Three options are available to you :

1. DucoGrille Solid

Glazed-in window or recessed mounted wall louvres consisting of **mounted stacked Z-shaped blades**. They are very sturdy louvres that are vandal-proof. The DucoGrille Solid++ is certified for burglar-resistance to European Classification Class 2.

2. DucoGrille Classic

Glazed-in window or recessed mounted wall louvres with aluminium blade profiles clipped onto the plastic blade holders using the patented Duco Turn and Click system. A wide range of **blade profiles** is available.

3. DucoGrille Close

Glazed-in window or recessed mounted wall louvres that are **closable** and either manually or electrically operated.

→ Any building situation

Duco has an extensive range of natural air intake louvres for both new build and renovation projects. We offer a range of louvres appropriate to each situation :

Glazed-in window louvre

(suited for aluminium, timber and PVCu window frames)

Recessed mounting wall louvre

(with or without flange)

Surface mounted wall louvre

(ideally suited for covering round or rectangular apertures)

→ Insect or vermin screen

DucoGrille Solid: The perforated blade profiles act as an insect screen :

P1: Small diameter mesh

P2: Large diameter mesh + standard stainless steel insect screen.

NP: Zero mesh size (100% screening louvre)

DucoGrille Classic and DucoGrille Close:

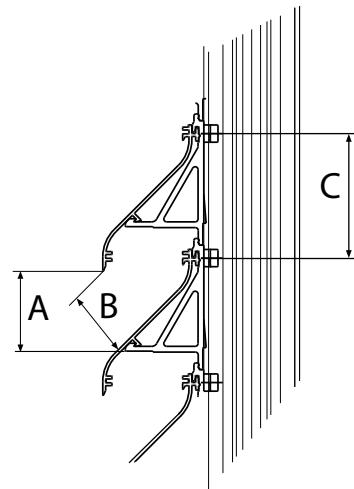
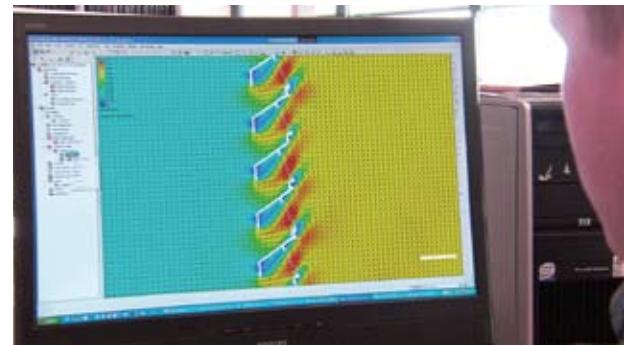
Supplied as standard with stainless steel insect-proof mesh: 2,3 x 2,3 mm. Alternatively, 6 x 6 mm or 20 x 20 mm meshes are available.



→ Air flow

You choose a type of louvre because you like it and because it provides the desired or required air flow. Two methods can be used for making the right choice (see below). In this respect, it is essential that the figures available have proved reliable. The Duco consultants will be happy to work with you to help you with your calculations.

- A = largest air flow area
- B = smallest air flow area
- C = blade pitch



1. Free open area (percentage rule)

The free open area or percentage rule is based either on the method of physical free area or the method of visual free area.

A. Physical free area

$$\text{PHYSICAL FREE AREA} = \frac{\text{smallest air flow area (B)}}{\text{blade pitch (C)}}$$

Use this method to :

→ Calculate louvre size (gross louvre open area) when a minimum net free open area is being asked for.

$$\text{GROSS LOUVRE OPEN AREA} = \frac{\text{net free open area}}{\text{physical free area}}$$

Example

Desired net free open area : 0,035 m²

Desired type of louvre : DucoGrille Solid 30Z P2 (physical free area of 48%)

$$\text{GROSS LOUVRE OPEN AREA} = \frac{0,035 \text{ m}^2}{0,48} = 0,073 \text{ m}^2.$$

If we want a louvre to be 200 mm in width, then the louvre height is 365 mm (0,073/0,200).

→ Calculate the net free open area when the louvre size has already been determined.

$$\text{NET FREE OPEN AREA} = \text{GROSS SURFACE} \times \text{PHYSICAL FREE AREA}$$

Example

Desired louvre open area : 200 mm (W) x 365 mm (H) (= 0,073 m²)

Desired type of louvre : DucoGrille Solid 30Z P2 (physical free area of 48%)

Net free open area : 0,073 m² x 0,48 = 0,035 m²

B. Visual free area

$$\text{VISUAL FREE AREA} = \frac{\text{largest air-flow surface (A)}}{\text{blade pitch (C)}}$$

The visual free area uses the largest open area rather than the smallest open area. This use however is to be discouraged as the visual free area is no benchmark for the effective free area.

2. K factor

The K factor is a value that indicates **the aerodynamic resistance of the louvre to the air flow**. This factor is used when the dimensions of the continuous louvre system should be identified based on air velocity and air flow rate.

Unlike the previously mentioned free open area, the K factor takes into account the differing air pressure at the louvre intake and exhaust faces.

$$K = \frac{Ps \text{ (pressure drop across the louvre in Pa)}}{\rho \text{ (air density)} \times V \text{ (air velocity)}}$$

Any louvre fitted in an opening will interfere with the free flow of air. In order to determine this resistance, the K factor needs to be calculated. When developing a louvre, the K factor is determined using a computer simulation model (EFD) first and then tested. The K factor for air intake and exhaust for each type of louvre is tabulated in the overview table at the end of this product brochure . Additionally, the associated coefficient (C) is given as well, which indicates the ratio of the effective flow area through a louvre to the theoretical air flow. A distinction is made between :

- 'Ce': for the resistance to air flow at the air inlet (Entry Loss Coefficient).
- 'Cd': for the resistance to air flow at the air outlet (Discharge Loss Coefficient).



Use this method to :

→ Calculate the louvre surface based upon the differential air pressure and air flow rate :

- a. Select a type of louvre from the table based on the K factor (K).
- b. Determine the maximum differential air pressure across the louvre in Pa (ps).
$$Ps = K \text{ (K factor)} \times \rho \text{ (air density)} \times V \text{ (air velocity)}^2$$
- c. Determine the required air flow rate (Q)
- d. Calculate air velocity (V)

$$V_{of} = \sqrt{\frac{ps \text{ (pressure drop across the louvre in Pa)}}{K \text{ (K factor)} \times \rho \text{ (air density)*}}}$$

* = fixed value = 0,6

- e. Calculate the surface of the louvre (A)

$$A = \frac{Q \text{ (air flow rate through the louvre in m}^3\text{/s)}}{V \text{ (air velocity through the louvre in m/s)}}$$

Example

What should be the size of a DucoGrille Solid 30Z P2 when the maximum pressure drop that can be accommodated is 25 Pa at an air flow rate of 2500 l/s ?

Air velocity :

$$V_{of} = \sqrt{\frac{25}{13 \times 0,6}} = 1,79 \text{ m/s}$$

Surface :

$$A = \frac{2500}{1,79} = 1,40 \text{ m}^2$$

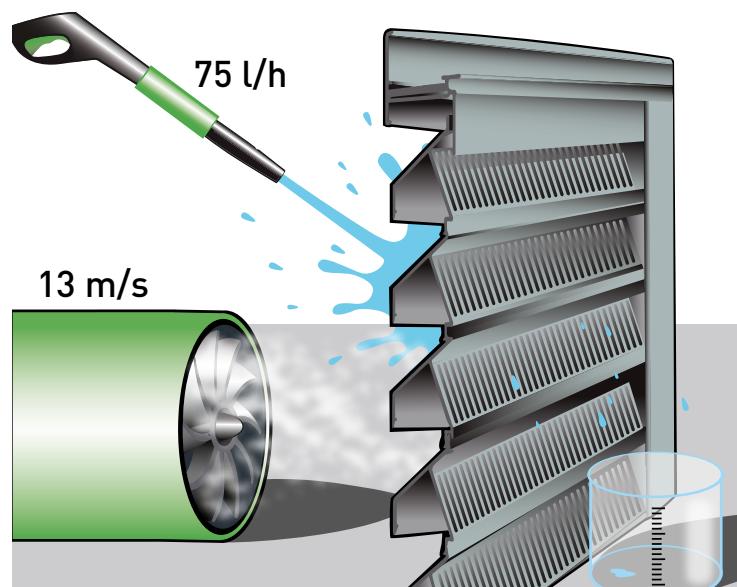
→ Water repellent efficiency

The extent to which a louvre is repellent to water on the one hand and its water tightness on the other can only be verified through testing. BSRIA is an European leading-edge independent research organisation in water tightness tests of building products. The tests have been designed in conjunction with HEVAC (Heating, Ventilating and Air Conditioning Manufacturers Association). All DucoGrille louvres presented in this brochure have been BSRIA tested.

When tested, the louvre was subjected to a simulated rainfall of 75 litres per hour and a wind speed of 13 m/s (see diagram). The louvre was then assigned a class in relation to the air velocity and the % of water tightness :

Water tightness (%)

- | | |
|-----------|------------|
| → Class A | 100 – 99% |
| → Class B | 98,5 – 95% |
| → Class C | 94,9 – 80% |
| → Class D | < 80% |



“ SERVICE PLEASE ”



At Duco, we will be happy to assist you in making the right choice in the selection of a wall or window louvre and the required calculations.



→ www.duco.eu

- Professional intersection planes and fitting drawings.
- Specification service : specification text for each type of louvre.
- Fitting and installation instructions on request.

→ Certificates

- Each type of Duco louvre is guaranteed for 10 years.
- Test reports and certificates are available on request.

→ Easy to order and very quick to deliver



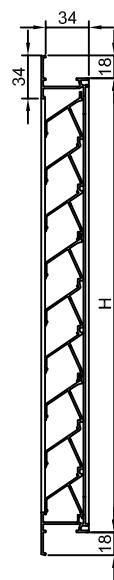


DucoGrille Solid G 30Z

The DucoGrille Solid G 30Z is a recessed mounted wall louvre manufactured from extruded aluminium profiles. The perforated blade profiles act as an insect screen (2 types of perforations). The Z shaped blade ensures a robust design.

Exploded
view of
DucoGrille
Solid G 30Z

→ Solid G 30Z



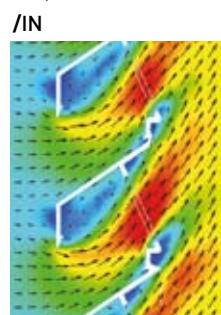
Technical Specifications



	P1	P2	NP
- Fitting depth:	34,4 mm	34,4 mm	34,4 mm
- Blade pitch:	37,5 mm	37,5 mm	37,5 mm
- Frame flange:	18,2 mm	18,2 mm	18,2 mm
- Visual free area:	60%	86%	0%
- Physical free area:	34%	48%	0%
- Insect screen:	Perforated blade profiles as insect screen	Standard: Stainless steel mesh 2,3 x 2,3 mm Optional: Stainless steel mesh 6 x 6 mm or 20 x 20 mm	100% screening louvre

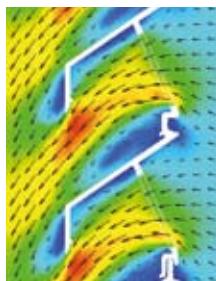
EFD Simulation

P1 (small diameter mesh)



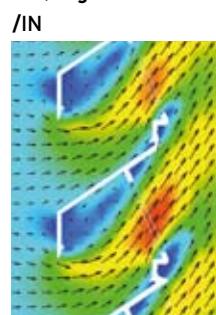
K-factor
Intake: 17,70
Ce: 0,24

/IN



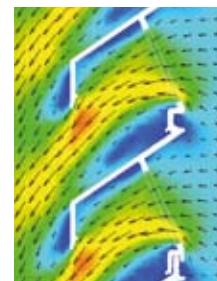
K-factor
Exhaust: 19,13
Cd: 0,23

P2 (large diameter mesh)



K-factor
Intake: 12,85
Ce: 0,28

/IN



K-factor
Exhaust: 12,90
Cd: 0,28

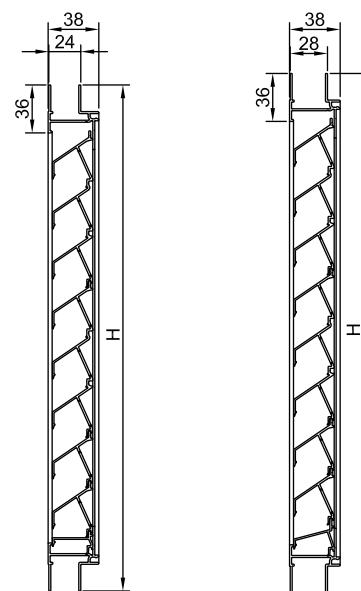


DucoGrille Solid F 30Z

The DucoGrille Solid F 30Z is an architectural window louvre manufactured from extruded aluminium. The stackable blades guarantee a unique robustness. The perforated blade profiles act as an insect screen (2 types of perforations). The Z shaped blade ensures a robust design.

Exploded
view of
DucoGrille
Solid F 30Z

→ Solid F 30Z/24 → Solid F 30Z/28



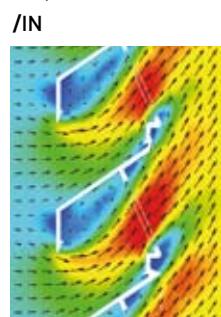
Technical Specifications



	P1	P2	NP
- Framework width:	38 mm	38 mm	38 mm
- Blade pitch:	37,5 mm	37,5 mm	37,5 mm
- Flange width:	24 or 28 mm	24 or 28 mm	24 or 28 mm
- Visual free area:	60%	86%	0%
- Physical free area:	34%	48%	0%
- Insect screen:	Perforated blade profiles as insect screen	Standard: Stainless steel mesh 2,3 x 2,3 mm Optional: Stainless steel mesh 6 x 6 mm or 20 x 20 mm	100% screening louvre

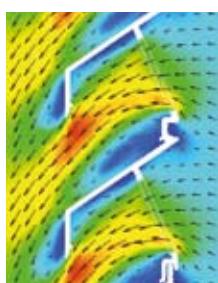
EFD Simulation

P1 (small diameter mesh)



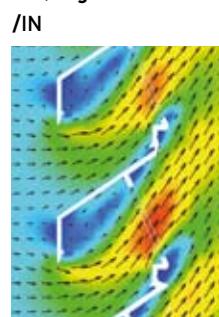
K-factor
Intake: 17,70
Ce: 0,24

/IN



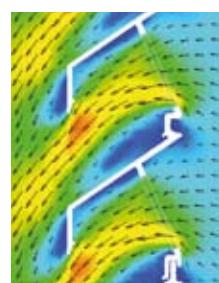
K-factor
Exhaust: 19,13
Cd: 0,23

P2 (large diameter mesh)



K-factor
Intake: 12,85
Ce: 0,28

/IN



K-factor
Exhaust: 12,90
Cd: 0,28

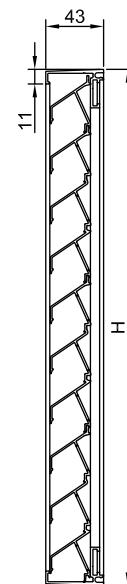


DucoGrille Solid M 30Z

The DucoGrille Solid M 30Z is a surface mounted wall louvre manufactured from extruded aluminium profiles. The stackable blades guarantee a unique robustness. The perforated blade profiles act as an insect screen (2 types of perforations). The Z shaped blade ensures a robust design.

Exploded
view of
DucoGrille
Solid M 30Z

→ Solid M 30Z



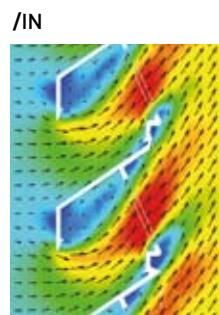
Technical Specifications



	P1	P2	NP
- Framework width:	43,0 mm	43,0 mm	43,0 mm
- Blade pitch:	37,5 mm	37,5 mm	37,5 mm
- Visual free area:	60%	86%	0%
- Physical free area:	34%	48%	0%
- Insect screen:	Perforated blade profiles as insect screen	Standard: Stainless steel mesh 2,3 x 2,3 mm Optional: Stainless steel mesh 6 x 6 mm or 20 x 20 mm	100% screening louvre

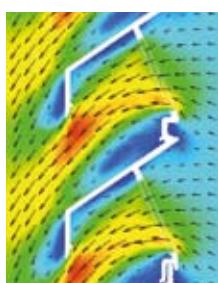
EFD Simulation

P1 (small diameter mesh)



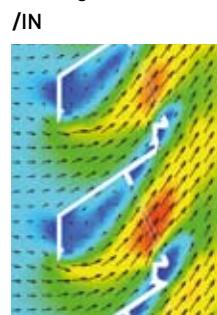
K-factor
Intake: 17,70
Ce: 0,24

/IN



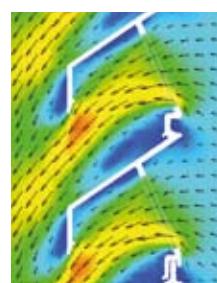
K-factor
Exhaust: 19,13
Cd: 0,23

P2 (large diameter mesh)



K-factor
Intake: 12,85
Ce: 0,28

/IN



K-factor
Exhaust: 12,90
Cd: 0,28

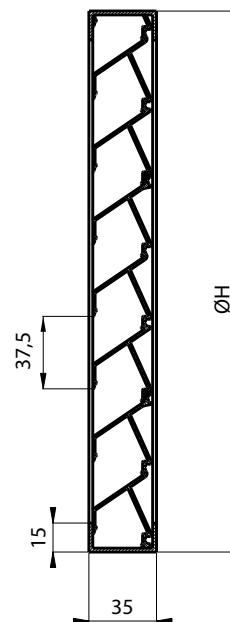


DucoGrille Solid MR 30Z

The DucoGrille Solid MR 30Z is a round, surface mounted wall louvre manufactured from extruded aluminium profiles. The stackable blades guarantee a unique robustness. The perforated blade profiles act as an insect screen (2 types of perforations). The Z shaped blade ensures a robust design.

Exploded view of
DucoGrille
Solid MR 30Z

→ Solid MR 30Z



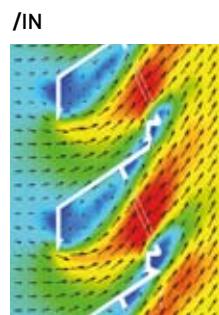
Technical Specifications



	P1	P2	NP
- Framework width:	35,0 mm	35,0 mm	35,0 mm
- Blade pitch:	37,5 mm	37,5 mm	37,5 mm
- Visual free area:	60%	86%	0%
- Physical free area:	34%	48%	0%
- Insect screen:	Perforated blade profiles as insect screen	Standard: Stainless steel mesh 2,3 x 2,3 mm Optional: Stainless steel mesh 6 x 6 mm or 20 x 20 mm	100% screening louvre

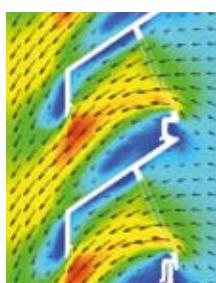
EFD simulation

P1 (small diameter mesh)



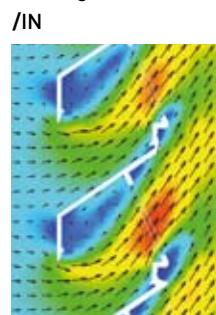
K-factor
Intake: 17,70
Ce: 0,24

/IN



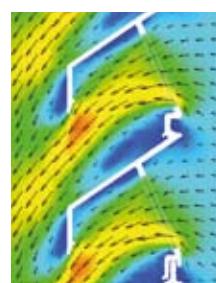
K-factor
Exhaust: 19,13
Cd: 0,23

P2 (large diameter mesh)



K-factor
Intake: 12,85
Ce: 0,28

/IN



K-factor
Exhaust: 12,90
Cd: 0,28



DucoGrille Solid ++ G 30Z

The DucoGrille Solid ++ G 30Z is a recessed mounted wall louvre manufactured from extruded aluminium profiles. The stackable blades are supported by a reinforced framework. This makes the louvre **burglar resistant to security class 2**, in accordance with the European standard. The perforated blade profiles act as an insect screen. The Z shaped blade ensures a robust design.

→ **Burglar resistant to security class 2**

Exploded view of
DucoGrille
Solid ++ G 30Z

The DucoGrille Solid ++ G 30Z has successfully passed all the tests as laid down in the preliminary standards “Burglar resistance Construction products” prEN 1627 up to prEN 1630 for burglar resistance Class 2 :

- prEN 1627 “Burglar resistance construction products – Requirements and classification”
- prEN 1628 “Burglar resistance construction products – Test method for the determination of resistance under static loading”
- prEN 1629 “Burglar resistance construction products – Test method for the determination of resistance under dynamic loading”
- prEN 1630 “Burglar resistance construction products – Test method for the determination of resistance to manual burglary attempts”

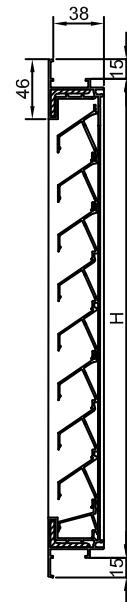
Technical Specifications



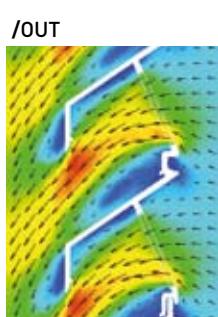
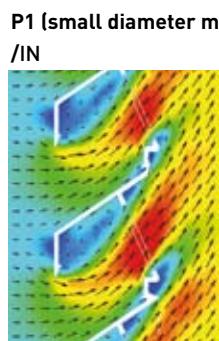
P1

- Fitting depth:	38,4 mm
- Blade pitch:	37,5 mm
- Frame flange:	15 mm
- Visual free area:	60%
- Physical free area:	34%
- Insect screen:	Perforated blade profiles as insect screen

→ Solid ++ G 30Z



EFD Simulation



K-factor	
Intake: 17,70	
Ce: 0,24	

K-factor	
Exhaust: 19,13	
Cd: 0,23	

Burglar resistant to security class 2



The complete test report (DE 651 XG 815 – CAR 8175) is available on request.

The Cube, Almere (The Netherlands)

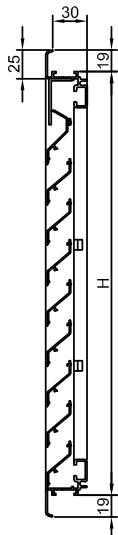
DucoGrille Classic G 20Z & F 20Z







→ Classic G 20Z



DucoGrille Classic G 20Z

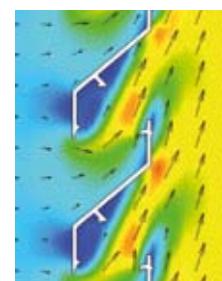
The DucoGrille Classic G 20Z is a recessed mounted wall louvre manufactured from extruded aluminium profiles. The Turn and Click system ensures quick and easy assembly. An insect screen is fitted as standard. The Z shaped blade ensures a tight design.

Technical Specifications

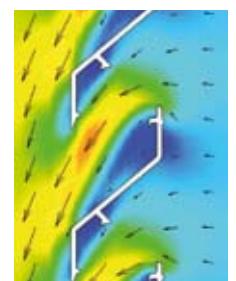
- Fitting depth:	30 mm
- Blade pitch:	35 mm
- Frame flange:	19 mm
- Visual free area:	63%
- Physical free area:	41%
- Insect screen:	Standard: Stainless steel mesh 2,3 x 2,3 mm
	Optional: Stainless steel mesh 6 x 6 mm (vermin screen) Stainless steel mesh 20 x 20 mm (bird guard)

EFD Simulation

IN



OUT



K-factor

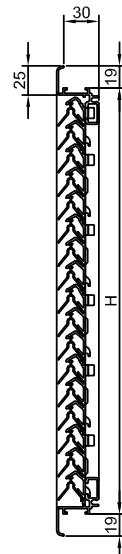
Intake: 22,73
Ce: 0,21

K-factor

Exhaust: 30,52
Cd: 0,18



→ Classic G 20V



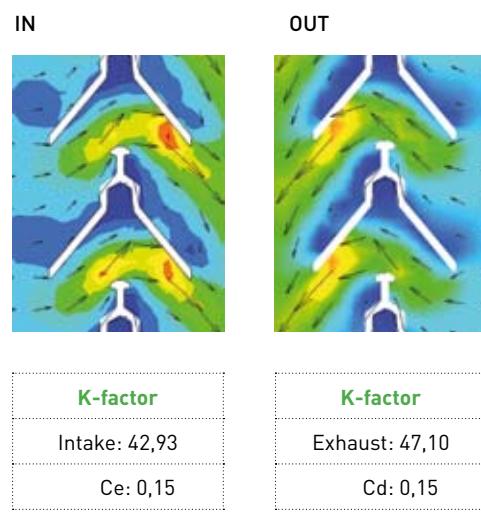
DucoGrille Classic G 20V

The DucoGrille Classic G 20V is a recessed mounted wall louvre manufactured from extruded aluminium profiles. The Turn and Click system ensures quick and easy assembly. An insect screen is fitted as standard. The unique V shaped blade ensures an aesthetic added value.

Technical Specifications

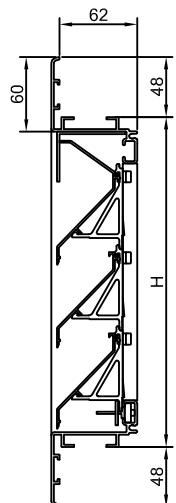
- Fitting depth:	30 mm
- Blade pitch:	35 mm
- Frame flange:	19 mm
- Visual free area:	95%
- Physical free area:	34%
- Insect screen:	Standard: Stainless steel mesh 2,3 x 2,3 mm Optional: Stainless steel mesh 6 x 6 mm (vermin screen) Stainless steel mesh 20 x 20 mm (bird guard)

EFD Simulation





→ Classic G 50Z



DucoGrille Classic G 50Z

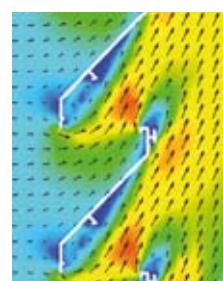
The DucoGrille Classic G 50Z is a recessed mounted wall louvre manufactured from extruded aluminium profiles. The Turn and Click system ensures quick and easy assembly. An insect screen is fitted as standard. The Z shaped aerofoil blade ensures a tight design..

Technical Specifications

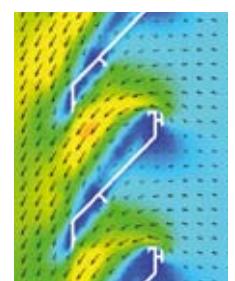
- Fitting depth:	62 mm
- Blade pitch:	65 mm
- Frame flange:	48 mm
- Visual free area:	75%
- Physical free area:	47%
- Insect screen:	Standard: Stainless steel mesh 2,3 x 2,3 mm
	Optional: Stainless steel mesh 6 x 6 mm (vermin screen) Stainless steel mesh 20 x 20 mm (bird guard)

EFD Simulation

IN



OUT

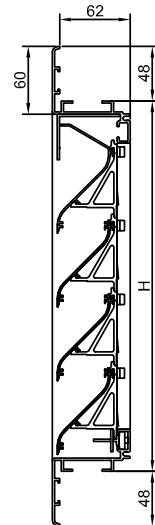


K-factor
Intake: 19,00
Ce: 0,23

K-factor
Exhaust: 25,17
Cd: 0,20



→ Classic G 50S



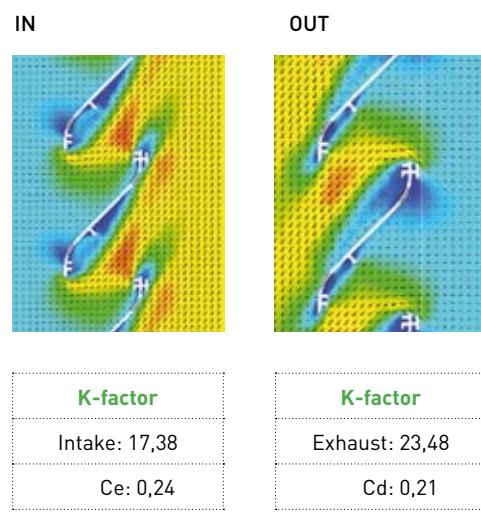
DucoGrille Classic G 50S

The DucoGrille Classic G 50S is a recessed mounted wall louvre manufactured from extruded aluminium profiles. The Turn and Click system ensures quick and easy assembly. An insect screen is fitted as standard. The unique S shaped blade ensures a stylish design.

Technical Specifications

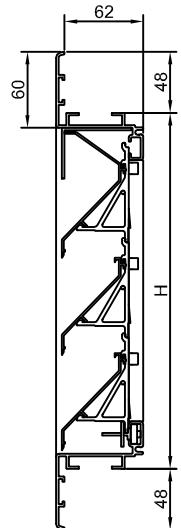
- Fitting depth:	62 mm
- Blade pitch:	65 mm
- Frame flange:	48 mm
- Visual free area:	75%
- Physical free area:	47%
- Insect screen:	Standard: Stainless steel mesh 2,3 x 2,3 mm Optional: Stainless steel mesh 6 x 6 mm (vermin screen) Stainless steel mesh 20 x 20 mm (bird guard)

EFD Simulation





→ Classic G 50/75Z



DucoGrille Classic G 50/75Z

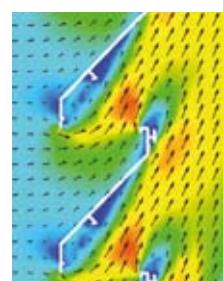
The DucoGrille Classic G 50/75Z is a recessed mounted wall louvre manufactured from extruded aluminium profiles. The Turn and Click system ensures quick and easy assembly. An insect screen is fitted as standard. The Z shaped blade ensures a tight design.

Technical Specifications

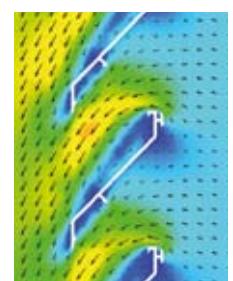
- Fitting depth:	62 mm
- Blade pitch:	75 mm
- Frame flange:	48 mm
- Visual free area:	80%
- Physical free area:	49%
- Insect screen:	Standard: Stainless steel mesh 2,3 x 2,3 mm Optional: Stainless steel mesh 6 x 6 mm (vermin screen) Stainless steel mesh 20 x 20 mm (bird guard)

EFD Simulation

IN



OUT



K-factor

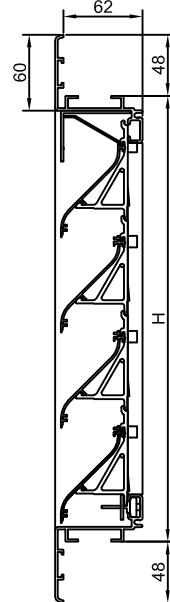
Intake: 9,00
Ce: 0,33

K-factor

Exhaust: 13,87
Cd: 0,27



→ Classic G 50/75S



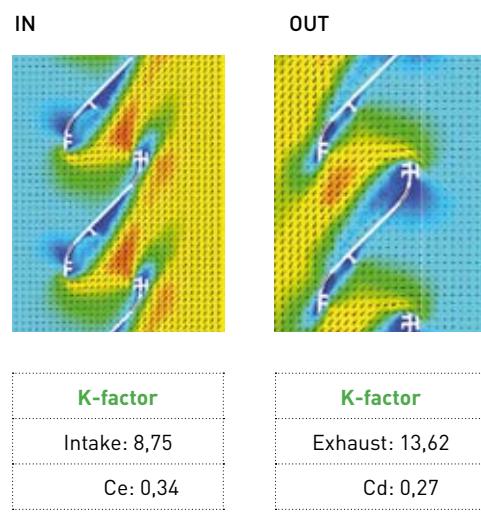
DucoGrille Classic G 50/75S

The DucoGrille Classic G 50/75S is a recessed mounted wall louvre manufactured from extruded aluminium profiles. The Turn and Click system ensures quick and easy assembly. An insect screen is fitted as standard. The S shaped blade ensures a tight design.

Technical Specifications

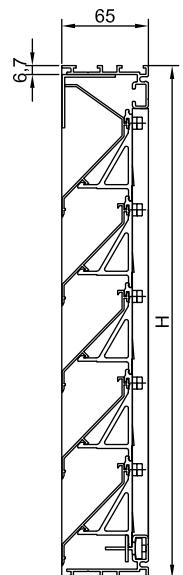
- Fitting depth:	62 mm
- Blade pitch:	75 mm
- Frame flange:	48 mm
- Visual free area:	80%
- Physical free area:	49%
- Insect screen:	Standard: Stainless steel mesh 2,3 x 2,3 mm Optional: Stainless steel mesh 6 x 6 mm (vermin screen) Stainless steel mesh 20 x 20 mm (bird guard)

EFD Simulation





→ Classic N 50Z



DucoGrille Classic N 50Z

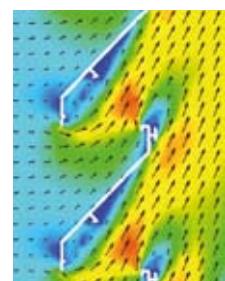
The DucoGrille Classic N 50Z is a recessed mounted wall louvre manufactured from extruded aluminium profiles. The Turn and Click system ensures quick and easy assembly. An insect screen is fitted as standard. The Z shaped blade ensures a tight design.

Technical Specifications

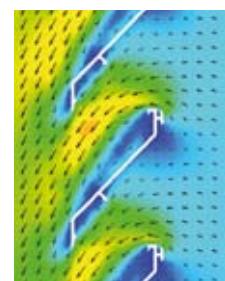
- Fitting depth:	65 mm
- Blade pitch:	65 mm
- Frame flange:	0 mm
- Visual free area:	75%
- Physical free area:	47%
- Insect screen:	Standard: Stainless steel mesh 2,3 x 2,3 mm Optional: Stainless steel mesh 6 x 6 mm (vermin screen) Stainless steel mesh 20 x 20 mm (bird guard)

EFD Simulation

IN



OUT

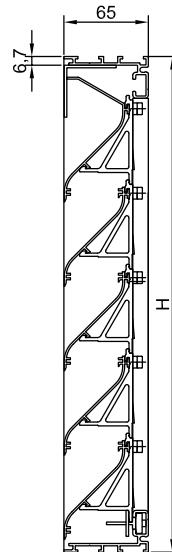


K-factor
Intake: 19,00
Ce: 0,23

K-factor
Exhaust: 25,17
Cd: 0,20



→ Classic N 50S



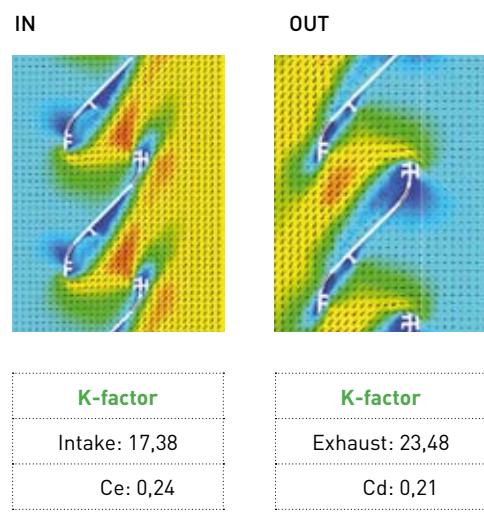
DucoGrille Classic N 50S

The DucoGrille Classic N 50S is a recessed mounted wall louvre manufactured from extruded aluminium profiles. The Turn and Click system ensures quick and easy assembly. An insect screen is fitted as standard. The unique S shaped blade ensures a stylish design.

Technical Specifications

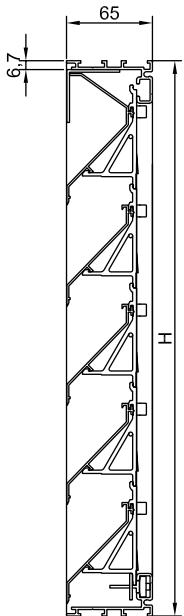
- Fitting depth:	65 mm
- Blade pitch:	65 mm
- Frame flange:	0 mm
- Visual free area:	75%
- Physical free area:	47%
- Insect screen:	Standard: Stainless steel mesh 2,3 x 2,3 mm Optional: Stainless steel mesh 6 x 6 mm (vermin screen) Stainless steel mesh 20 x 20 mm (bird guard)

EFD Simulation





→ Classic N 50/75Z



DucoGrille Classic N 50/75Z

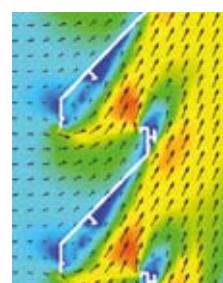
The DucoGrille Classic N 50/75Z is a recessed mounted wall louvre manufactured from extruded aluminium profiles. The Turn and Click system ensures quick and easy assembly. An insect screen is fitted as standard. The Z shaped blade ensures a tight design.

Technical Specifications

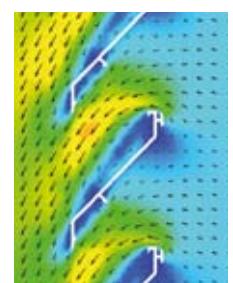
- Fitting depth:	65 mm
- Blade pitch:	75 mm
- Frame flange:	0 mm
- Visual free area:	80%
- Physical free area:	49%
- Insect screen:	Standard: Stainless steel mesh 2,3 x 2,3 mm Optional: Stainless steel mesh 6 x 6 mm (vermin screen) Stainless steel mesh 20 x 20 mm (bird guard)

EFD Simulation

IN



OUT

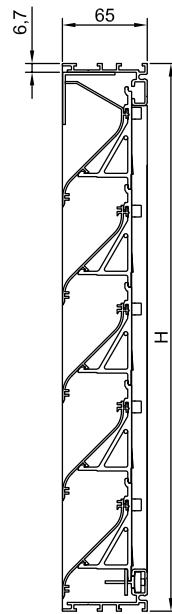


K-factor
Intake: 9,00
Ce: 0,33

K-factor
Exhaust: 13,87
Cd: 0,27



→ Classic N 50/75S



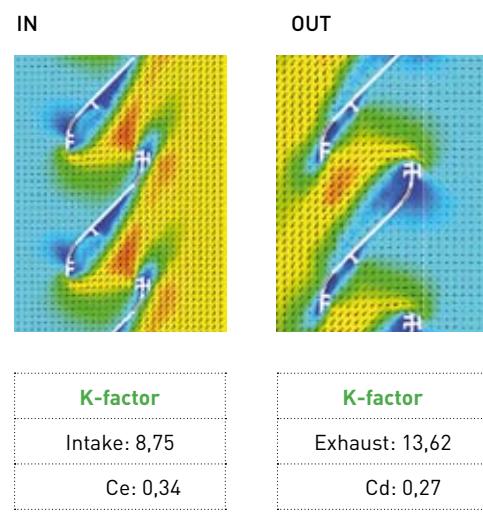
DucoGrille Classic N 50/75S

The DucoGrille Classic N 50/75S is a recessed mounted wall louvre manufactured from extruded aluminium profiles. The Turn and Click system ensures quick and easy assembly. An insect screen is fitted as standard. The unique S shaped blade ensures a stylish design.

Technical Specifications

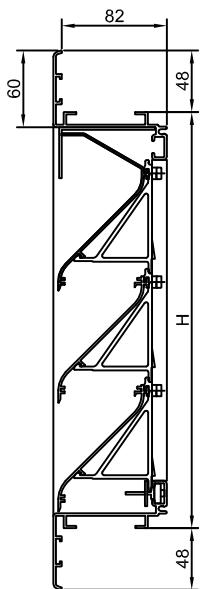
- Fitting depth:	65 mm
- Blade pitch:	75 mm
- Frame flange:	0 mm
- Visual free area:	80%
- Physical free area:	49%
- Insect screen:	Standard: Stainless steel mesh 2,3 x 2,3 mm Optional: Stainless steel mesh 6 x 6 mm (vermin screen) Stainless steel mesh 20 x 20 mm (bird guard)

EFD Simulation





→ Classic G 70S



DucoGrille Classic G 70S

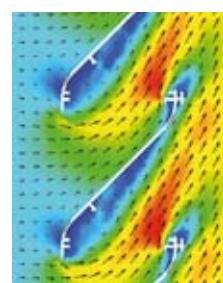
The DucoGrille Classic G 70S is a recessed mounted wall louvre manufactured from extruded aluminium profiles. The Turn and Click system ensures quick and easy assembly. An insect screen is fitted as standard. The unique S shaped blade ensures a stylish design.

Technical Specifications

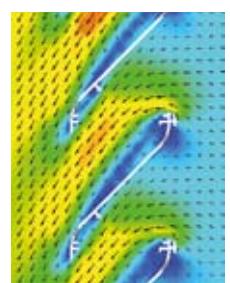
- Fitting depth:	82 mm
- Blade pitch:	85 mm
- Frame flange:	48 mm
- Visual free area:	79%
- Physical free area:	47%
- Insect screen:	Standard: Stainless steel mesh 2,3 x 2,3 mm Optional: Stainless steel mesh 6 x 6 mm (vermin screen) Stainless steel mesh 20 x 20 mm (bird guard)

EFD Simulation

IN



OUT

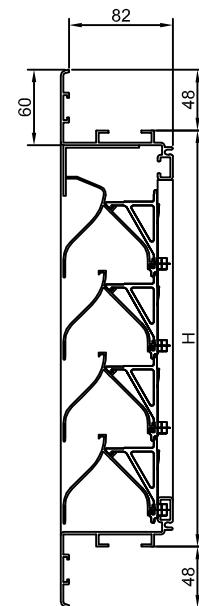


K-factor
Intake: 16,80
Ce: 0,24

K-factor
Exhaust: 18,00
Cd: 0,24



→ Classic G 70V



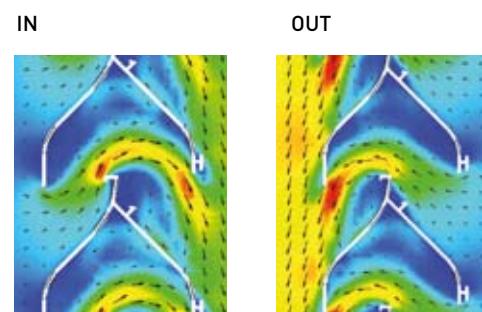
DucoGrille Classic G 70V

The DucoGrille Classic G 70V is a recessed mounted wall louvre manufactured from extruded aluminium profiles. The Turn and Click system ensures quick and easy assembly. An insect screen is fitted as standard. The unique V shaped blade ensures a lower water penetration rate and makes the louvre penetration-proof and difficult to look through from the outside.

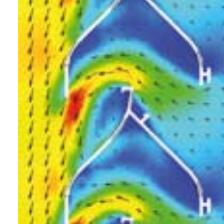
Technical Specifications

- Fitting depth:	82 mm
- Blade pitch:	65 mm
- Frame flange:	48 mm
- Visual free area:	65%
- Physical free area:	36%
- Insect screen:	Standard: Stainless steel mesh 2,3 x 2,3 mm Optional: Stainless steel mesh 6 x 6 mm (vermin screen) Stainless steel mesh 20 x 20 mm (bird guard)

EFD Simulation



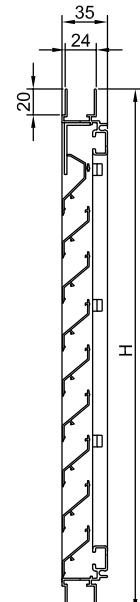
K-factor
Intake: 72,79
Ce: 0,12



K-factor
Exhaust: 83,88
Cd: 0,11



→ Classic F 20Z



DucoGrille Classic F 20Z

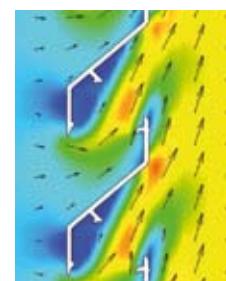
The DucoGrille Classic F 20Z is a glazed-in window louvre manufactured from extruded aluminium profiles. The Turn and Click system ensures quick and easy assembly. An insect screen is fitted as standard. The Z shaped blade ensures a tight design.

Technical Specifications

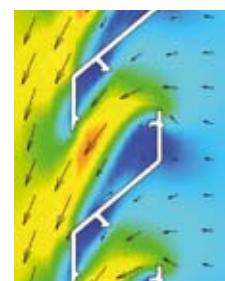
- Framework width:	35 mm
- Blade pitch:	35 mm
- Flange width:	24 mm
- Visual free area:	63%
- Physical free area:	41%
- Insect screen:	Standard: Stainless steel mesh 2,3 x 2,3 mm
	Optional: Stainless steel mesh 6 x 6 mm (vermin screen) Stainless steel mesh 20 x 20 mm (bird guard)

EFD Simulation

IN



OUT

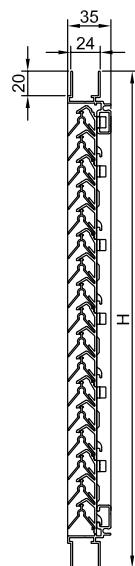


K-factor
Intake: 22,73
Ce: 0,21

K-factor
Exhaust: 30,52
Cd: 0,18



→ Classic F 20V



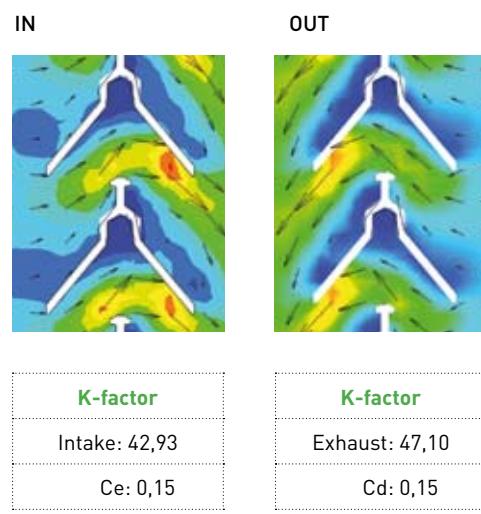
DucoGrille Classic F 20V

The DucoGrille Classic F 20V is a glazed-in window louvre manufactured from extruded aluminium profiles. The Turn and Click system ensures quick and easy assembly. An insect screen is fitted as standard. The unique V shaped blade ensures a better water repellent efficiency and makes the louvre penetration-proof and difficult to look through from the outside.

Technical Specifications

- Framework width	35 mm
- Blade pitch:	20 mm
- Flange width:	24 mm
- Visual free area:	95%
- Physical free area:	34%
- Insect screen:	Standard: Stainless steel mesh 2,3 x 2,3 mm Optional: Stainless steel mesh 6 x 6 mm (vermin screen) Stainless steel mesh 20 x 20 mm (bird guard)

EFD Simulation

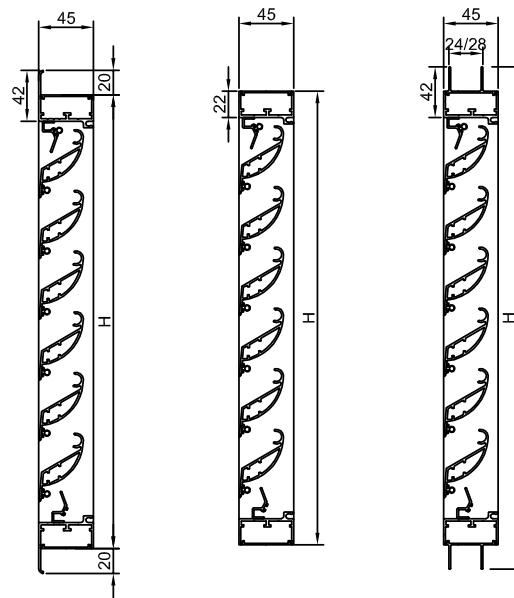




DucoGrille Close 35Z

The DucoGrille Close G 35Z and N 35Z are closable recessed mounted wall louvres made from extruded aluminium profiles. The DucoGrille Close is also available as a closable window louvre (F 35Z), ideally suited for Night Cooling. The unique Z shaped blades provide adjustable ventilation available in manual or electric operation.

[→ Close G 35Z](#) [→ Close N 35Z](#) [→ Close F 35Z](#)



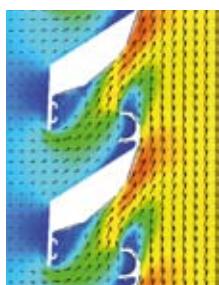
Technical Specifications



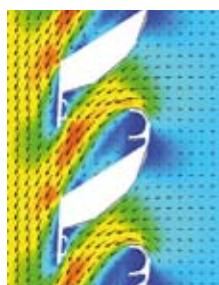
Types of DucoGrille Close	G 35Z	N 35Z	F 35Z
- Fitting depth:	45 mm	45 mm	-
- Blade pitch:	50 mm	50 mm	50 mm
- Flange width:	-	-	24 or 28 mm
- Visual free area:	51%	51%	51%
- Physical free area:	39%	39%	39%
- Minimum height (manual operation)	224 mm	224 mm	264 mm
- Minimum height (electrical operation)	524 mm	524 mm	564 mm
- Insect screen:	Standard: Stainless steel mesh 2,3 x 2,3 mm Optional: Stainless steel mesh 6 x 6 mm (vermin screen) Stainless steel mesh 20 x 20 mm (bird guard)	Standard: Stainless steel mesh 2,3 x 2,3 mm Optional: Stainless steel mesh 6 x 6 mm (vermin screen) Stainless steel mesh 20 x 20 mm (bird guard)	Standard: Stainless steel mesh 2,3 x 2,3 mm Optional: Stainless steel mesh 6 x 6 mm (vermin screen) Stainless steel mesh 20 x 20 mm (bird guard)

EFD Simulation

IN



OUT



K-factor
Intake: 30,38
Ce: 0,18

K-factor
Exhaust: 23,67
Cd: 0,21

Lockable operation



Manual operation in steps



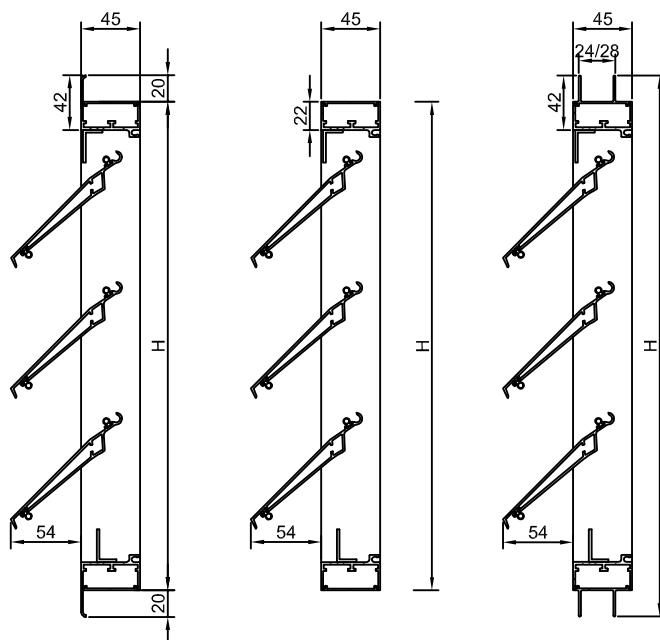
DucoGrille Close 85Z

The DucoGrille Close G 85Z and N 85Z are closable recessed mounted wall louvres made from extruded aluminium profiles. The DucoGrille Close is also available as a closable window louvre (F 85Z), ideally suited for Night Cooling. The unique Z shaped blades provide adjustable ventilation available in manual or electric operation.

→ Close G 85Z

→ Close N 85Z

→ Close F 85Z

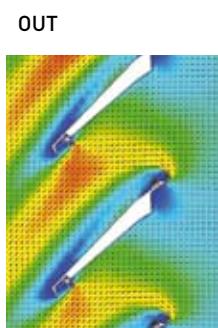
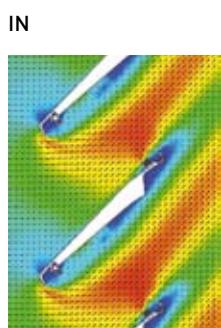


Technical Specifications



Types of DucoGrille Close	G 85Z	N 85Z	F 85Z
- Fitting depth:	45 mm	45 mm	-
- Blade pitch:	50 mm	50 mm	50 mm
- Flange width:	-	-	24 or 28 mm
- Visual free area:	89%	89%	89%
- Physical free area:	58%	58%	58%
- Minimum height (manual operation)	374 mm	374 mm	414 mm
- Minimum height (electrical operation)	574 mm	574 mm	614 mm
- Insect screen:	Standard: Stainless steel mesh 2,3 x 2,3 mm Optional: Stainless steel mesh 6 x 6 mm (vermin screen) Stainless steel mesh 20 x 20 mm (bird guard)	Standard: Stainless steel mesh 2,3 x 2,3 mm Optional: Stainless steel mesh 6 x 6mm (vermin screen) Stainless steel mesh 20 x 20 mm (bird guard)	Standard: Stainless steel mesh 2,3 x 2,3 mm Optional: Stainless steel mesh 6 x 6 mm (vermin screen) Stainless steel mesh 20 x 20 mm (bird guard)

EFD Simulation



K-factor
Intake: 6,63
Ce: 0,39

K-factor
Exhaust: 7,46
Cd: 0,37

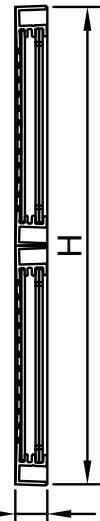
Lockable operation



Manual operation in steps



→ Close M 100



DucoGrille Close M 100

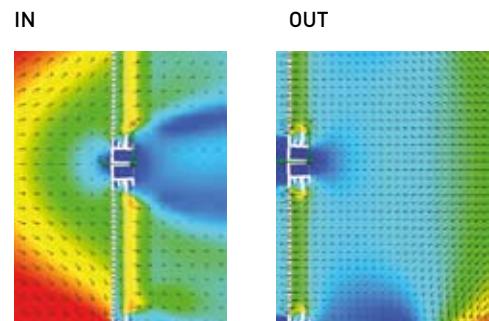
The DucoGrille Close M 100 is a closable surface mounted internal louvre manufactured from extruded aluminium profiles. The plastic slide valves allow for adjustable ventilation. The DucoGrille Close M 100 is available as standard in heights of 200 mm and 300 mm and in widths up to 1,000 mm maximum.

Technical Specifications

- Framework width:	13 mm
- Visual free area:	28%
- Physical free area:	28%
- Louvre height:	200 mm or 300 mm
- Louvre width:	max. 1000 mm
- Insect screen:	Small diameter mesh serves as insect screen
- Open area:	

Standard size	Open area (in cm ²)
200 x 200	112
300 x 300	252
Air flow rate at 1Pa (in m ³ /h)	Air flow rate at 2Pa (in m ³ /h)
19,76	27,96
44,48	62,90

EFD Simulation



K-factor
Intake: 88,43
Ce: 0,11

K-factor
Exhaust: 89,43
Cd: 0,11



Residential building, Koksijde (Belgium)

DucoGrille Solid MR 30Z



VMM, Aalst (Belgium)
DucoGrille Solid M 30Z

→ Dimensions

The DucoGrille Solid and DucoGrille Classic are available in all sizes. (Width x Height in mm)

The DucoGrille Close series louvres are available in a number of fixed heights only, because of the blade pitch.

Minimum dimensions :

DucoGrille Solid: 200 x 200 mm

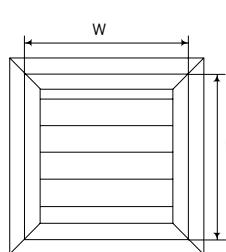
DucoGrille Classic G 20Z / G 20V / F 20Z / F 20V: 200 x 200 mm

All other DucoGrille Classic series louvres : 300 x 300 mm

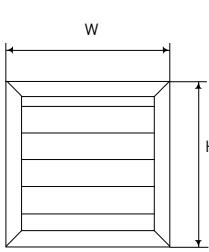
DucoGrille Close: Minimum size is dependent on manual or electric operation (see tabulated values)

DucoGrille types G, N & M: WxH = mounting dimensions

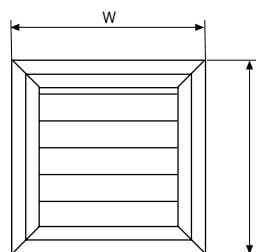
DucoGrille type F: W x H = overall sizes



G series recessed
mounting wall louvre



N & M series surface
mounting wall louvre



F series overall sizes

→ Fixing options

DucoGrille Solid

G 30Z:

Fixing lugs included as standard.

Allow 5 mm tolerance (all round) between the wall opening and the fixing frame.

M 30Z en MR 30Z:

Screws and wall plugs are supplied as standard.

F 30Z:

Mounting in the window frame.

DucoGrille Classic

For all G and N series

Fixing lugs

recessed mounted louvres:

included as standard. Allow 5 mm tolerance (all round) between the wall opening and the fixing frame.

For all F series window louvres :

mounting in the window profile.

DucoGrille Close

G 35Z / N 35Z / G 85Z / N 85Z:

Fixing lugs included as standard.

Allow 5 mm tolerance (all round) between the wall opening and the fixing frame.

F 35Z and F 85Z:

Mounting in the window frame.

M 100:

Screws and wall plugs are supplied as standard.

Tabulated values for wall and window louvres

	FITTING DEPTH [MM]	FRAME WIDTH [MM]	BLADE PITCH [MM]	FRAME FLANGE [MM]	FLANGE WIDTH [MM]	WATER REPELLENT EFFICIENCY [WITH INSECT SCREEN FITTED]					
						v = 0 m·s					
→ DUCOGRILLE SOLID											
Recessed mounted wall louvre											
DucoGrille Solid G 30Z P1	34,4		37,5	18		C[91,11]					
DucoGrille Solid G 30Z P2	34,4		37,5	18		B[96,09]					
DucoGrille Solid G 30Z NP	34,4		37,5	18							
Window louvre											
DucoGrille Solid F 30/24 Z P1		38	37,5		24	C[91,11]					
DucoGrille Solid F 30/24 Z P2		38	37,5		24	B[96,09]					
DucoGrille Solid F 30/24 Z NP		38	37,5		24						
DucoGrille Solid F 30/28 Z P1		38	37,5		28	C[91,11]					
DucoGrille Solid F 30/28 Z P2		38	37,5		28	B[96,09]					
DucoGrille Solid F 30/28 Z NP		38	37,5		28						
Surface mounted wall louvre											
DucoGrille Solid M 30Z P1		43	37,5			C[91,11]					
DucoGrille Solid M 30Z P2		43	37,5			B[96,09]					
DucoGrille Solid M 30Z NP		43	37,5								
Round surface mounted wall louvre											
DucoGrille Solid MR 30Z P1		35	37,5			C[91,11]					
DucoGrille Solid MR 30Z P2		35	37,5			B[96,09]					
DucoGrille Solid MR 30Z NP		35	37,5								
→ DUCOGRILLE SOLID ++											
Recessed mounted wall louvre											
DucoGrille Solid '++' G 30Z P1	38,4		37,5	15		C[91,11]					
→ DUCOGRILLE CLASSIC											
Recessed mounted wall louvre											
DucoGrille Classic G 20Z	30		35	19		C[94,87%]					
DucoGrille Classic G 20V	30		20	19		A[99,0%]					
DucoGrille Classic G 50Z	62		65	48		B					
DucoGrille Classic G 50S	62		65	48		B					
DucoGrille Classic G 50/75Z	62		75	48		B[98,6%]					
DucoGrille Classic G 50/75S	62		75	48		B[98,6%]					
DucoGrille Classic N 50Z	65		65	0		B					
DucoGrille Classic N 50S	65		65	0		B					
DucoGrille Classic N 50/75Z	65		75	0		B[98,6%]					
DucoGrille Classic N 50/75S	65		75	0		B[98,6%]					
DucoGrille Classic G 70S	82		85	48		B					
DucoGrille Classic G 70V	82		65	48		A					
Window louvre											
DucoGrille Classic F 20Z		35	35		24	C					
DucoGrille Classic F 20V		35	20		24	A[99,0%]					
→ DUCOGRILLE CLOSE											
Recessed mounted wall louvre DucoGrille Close G 35Z	42		50			{B}98,25%					
Recessed mounted wall louvre DucoGrille Close N 35Z	42		50			{B}98,25%					
Window louvre DucoGrille Close F 35/24 Z		45	50		24	{B}98,25%					
Window louvre DucoGrille Close F 35/28 Z		45	50		28	{B}98,25%					
Recessed mounting wall louvre DucoGrille Close G 85Z	42		100	20							
Recessed mounting wall louvre DucoGrille Close N 85Z	42		100								
Window louvre DucoGrille Close F 85/24 Z		45	100		24						
Window louvre DucoGrille Close F 85/28 Z		45	100		28						
Surface mounted wall louvre DucoGrille Close M100		13		20							

					INSECT SCREEN				
v = 0.5 m·s	v = 1 m·s	v = 1.5 m·s	v = 2 m·s	v = 2.5 m·s	mesh size P1	mesh size P2	SS insect screen 2,3x2,3mm	SS insect screen 6x6mm	SS insect screen 20x20mm
C{83,47}	D{77,65}	D	D	D	S	-	-	-	-
B{95,90}	C{93,53}	C{87,57}	D{67,28}	D	-	S	S	0	0
					-	-	-	-	-
C{83,47}	D{77,65}	D	D	D	S	-	-	-	-
B{95,90}	C{93,53}	C{87,57}	D{67,28}	D	-	S	S	0	0
					-	-	-	-	-
C{83,47}	D{77,65}	D	D	D	S	-	-	-	-
B{95,90}	C{93,53}	C{87,57}	D{67,28}	D	-	S	S	0	0
					-	-	-	-	-
C{83,47}	D{77,65}	D	D	D	S	-	-	-	-
B{95,90}	C{93,53}	C{87,57}	D{67,28}	D	-	S	S	0	0
					-	-	-	-	-
C{83,47}	D{77,65}	D	D	D	S	-	-	-	-
B{95,90}	C{93,53}	C{87,57}	D{67,28}	D	-	S	S	0	0
					-	-	-	-	-
C{83,47}	D{77,65}	D	D	D	S	-	-	-	-
B{95,90}	C{93,53}	C{87,57}	D{67,28}	D	-	S	S	0	0
					-	-	-	-	-
C{93,15%}	D	D{75,4%}	D	D	-	-	S	0	0
B	B{91,5%}	C	C	D	-	-	S	0	0
B{96,55%}	C{94,09%}	C{91,71%}	D	D	-	-	S	0	0
B{96,55%}	C{94,09%}	C{91,71%}	D	D	-	-	S	0	0
C	C{94,7%}	C	C{82,2%}	D	-	-	S	0	0
C	C{94,7%}	C	C{82,2%}	D	-	-	S	0	0
B{96,77%}	C{93,47%}	C{90,53%}	D	D	-	-	S	0	0
B{96,77%}	C{93,47%}	C{90,53%}	D	D	-	-	S	0	0
C	C{94,7%}	C	C{82,2%}	D	-	-	S	0	0
C	C{94,7%}	C	C{82,2%}	D	-	-	S	0	0
C	C{94,27%}	C	C{84,90%}	D	-	-	S	0	0
B{98,98%}	B{95,53%}	C{80,43%}	D	D	-	-	S	0	0
					-	-	-	-	-
C{93,15%}	D	D{75,4%}	D	D	-	-	S	0	0
B	B{91,5%}	C	C	D	-	-	S	0	0
					-	-	-	-	-
{B}96,52%	{C}88,82%	{D}39,83%	D	D	-	-	S	0	0
{B}96,52%	{C}88,82%	{D}39,83%	D	D	-	-	S	0	0
{B}96,52%	{C}88,82%	{D}39,83%	D	D	-	-	S	0	0
{B}96,52%	{C}88,82%	{D}39,83%	D	D	-	-	S	0	0
					-	-	S	0	0
					-	-	S	0	0
					-	-	S	0	0
					-	-	S	0	0

"S" : Standard | "0" : Optional

Product survey

	VISUAL FREE AREA (%)	PHYSICAL FREE AREA (%)	K FACTOR FRESH AIR INTAKE	K FACTOR FRESH AIR INTAKE	CE	CD	page
→ DUCOGRILLE SOLID							
Recessed mounting wall louvre							12
DucoGrille Solid G 30Z P1	60	34	17,70	19,13	0,24	0,23	
DucoGrille Solid G 30Z P2	86	48	12,85	12,90	0,28	0,28	
DucoGrille Solid G 30Z NP	0	0					
Window louvre							14
DucoGrille Solid F 30/24 Z P1	60	34	17,70	19,13	0,24	0,23	
DucoGrille Solid F 30/24 Z P2	86	48	12,85	12,90	0,28	0,28	
DucoGrille Solid F 30/24 Z NP	0	0					
DucoGrille Solid F 30/28 Z P1	60	34	17,70	19,13	0,24	0,23	
DucoGrille Solid F 30/28 Z P2	86	48	12,85	12,90	0,28	0,28	
DucoGrille Solid F 30/28 Z NP	0	0					
Surface mounting wall louvre							16
DucoGrille Solid M 30Z P1	60	34	17,70	19,13	0,24	0,23	
DucoGrille Solid M 30Z P2	86	48	12,85	12,90	0,28	0,28	
DucoGrille Solid M 30Z NP	0	0					
Round surface mounting wall louvre							18
DucoGrille Solid MR 30Z P1	60	34	17,70	19,13	0,24	0,23	
DucoGrille Solid MR 30Z P2	86	48	12,85	12,90	0,28	0,28	
DucoGrille Solid MR 30Z NP	0	0					
→ DUCOGRILLE SOLID ++							
Recessed mounting wall louvre							20
DucoGrille Solid '++' G 30Z P1	60	34	17,70	19,13	0,24	0,23	
→ DUCOGRILLE CLASSIC							
Recessed mounting wall louvre							
DucoGrille Classic G 20Z	63	41	22,73	30,52	0,21	0,18	24
DucoGrille Classic G 20V	95	34	42,93	47,10	0,15	0,15	25
DucoGrille Classic G 50Z	75	47	19,00	25,17	0,23	0,20	26
DucoGrille Classic G 50S	75	47	17,38	23,48	0,24	0,21	27
DucoGrille Classic G 50/75Z	80	49	9,00	13,87	0,33	0,27	28
DucoGrille Classic G 50/75S	80	49	8,75	13,62	0,34	0,27	29
DucoGrille Classic N 50Z	75	47	19,00	25,17	0,23	0,20	30
DucoGrille Classic N 50S	75	47	17,38	23,48	0,24	0,21	31
DucoGrille Classic N 50/75Z	80	49	9,00	13,87	0,33	0,27	32
DucoGrille Classic N 50/75S	80	49	8,75	13,62	0,34	0,27	33
DucoGrille Classic G 70S	79	47	16,80	18,00	0,24	0,24	34
DucoGrille Classic G 70V	65	36	72,79	83,88	0,12	0,11	35
Window louvre							
DucoGrille Classic F 20Z	63	41	22,73	30,52	0,21	0,18	36
DucoGrille Classic F 20V	95	34	42,93	47,10	0,15	0,15	37
→ DUCOGRILLE CLOSE							
Recessed mounting wall louvre DucoGrille Close G 35Z	51	39	30,38	23,67	0,18	0,21	38
Recessed mounting wall louvre DucoGrille Close N 35Z	51	39	30,38	23,67	0,18	0,21	38
Window louvre DucoGrille Close F 35/24 Z	51	39	30,38	23,67	0,18	0,21	38
Window louvre DucoGrille Close F 35/28 Z	51	39	30,38	23,67	0,18	0,21	38
Recessed mounting wall louvre DucoGrille Close G 85Z	89	58	6,63	7,46	0,39	0,37	40
Recessed mounting wall louvre DucoGrille Close N 85Z	89	58	6,63	7,46	0,39	0,37	40
Window louvre DucoGrille Close F 85/24 Z	89	58	6,63	7,46	0,39	0,37	40
Window louvre DucoGrille Close F 85/28 Z	89	58	6,63	7,46	0,39	0,37	40
Surface mounting wall louvre DucoGrille Close M 100	28	28	88,43	89,43	0,11	0,11	42

Please contact one of our Specialist Dealers or our project department Duco 'Ventilation & Sun Control' to obtain commercial and technical assistance (calculations, specifiers texts, fitting instructions,...)

Tel.: 0032-58 33 00 66 - Fax: 0032-58 33 00 67 - E-mail: info@duco.eu - We inspire at www.duco.eu

→ Ordering info bespoke items

DucoGrille Solid

→ G 30Z and Solid '++' G 30Z

Louvre size : Size of louvre (without flange)

Or specify clearance dimension (wall aperture), with :

Ordering dimensions : Width (-10 mm clearance) x Height (-10 mm clearance) of the wall aperture

→ M 30Z and F 30Z

Ordering dimensions : Overall width x overall height of the louvre.

→ MR 30Z

Ordering dimensions : Louvre diameter

Minimum: 300 mm – Maximum: 1,000 mm

DucoGrille Classic

→ For all G and N series recessed mounting louvres :

Louvre size : Louvre size (without flange), or specify clearance dimension (wall aperture), with :

Ordering dimensions : Width (-10 mm clearance) x Height (-10 mm clearance) of the wall aperture

→ For all F series window louvres :

Ordering dimensions : Overall width x overall height of the louvre.

DucoGrille Close

→ General for DucoGrille Close 35Z & 85Z :

Take account of fixed blade pitch.

Indicate the desired control (manual or electric)

Select a controls location (LH – centre – RH)

→ F 35Z / F 85Z

Ordering dimensions : Overall width x overall height of the louvre.

→ N 35Z / G 35Z / N 85Z / G 85Z

Louvre size : Size of louvre (without flange),

Or specify clearance dimension (wall aperture), with :

Ordering dimensions : Width (-10 mm clearance) x Height (-10 mm clearance) of the wall aperture

→ M 100

Ordering dimensions : Overall width x overall height of the louvre.

