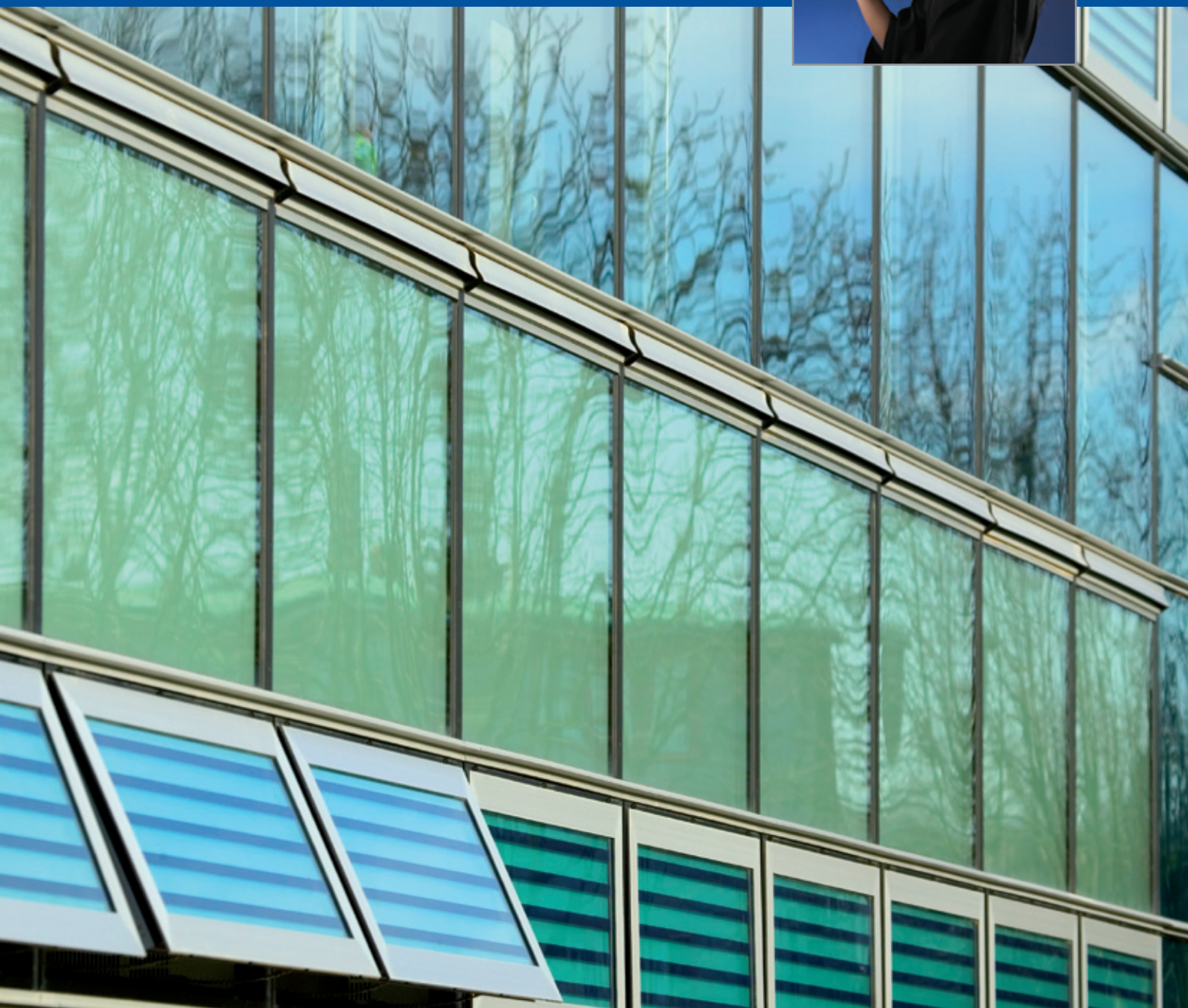
RENSON
INNOVATION IN VENTILATION

AESTHETIC NATURAL VENTILATION WITH A HIGH ACOUSTIC PERFORMANCE

ACOUSTIC VENTILATION SOLUTIONS



CONTENTS

INTRODUCTION

The level and frequency of noise as well as the level of the non recognisable background sound should be taken into account when designing a sufficient sound absorbing facade. Not only the level of the external noise may vary but also the frequency. Fast traffic sounds are different than the lower motor noise of buses and other slow driving urban traffic. The sound of airplanes and trains has yet another sound. This highlights the difficulties for low tone sound reductions when designing a facade.

In the UK there are no building regulations relating to Acoustics, however Local Authority Planning Departments will set standards for some buildings. They will use the guide lines laid down in B.S. 8233 and also P.P.G. 24.

RENSON, the specialist in acoustic ventilation

As a specialist in natural ventilation RENSON develops products which offer a solution for these issues. Our extensive R&D department has all of the latest technologies in order to accomplish the necessary analysis and tests.

- Our own acoustic test lab (in cooperation with WTCB)
- Test acoustic material and sound production measurements
- Definition of the product and material characteristic ventilation free area measurements
- Water- and windtightness
- Computer simulation
- Rapid prototyping

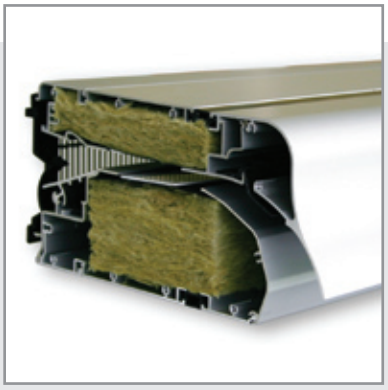
Our technical and quotation department support specific customer needs and convert them to an appropriate product request. They also offer an accurate advice concerning the use of the product according to the acoustic and air technical demands.

Acoustic performance definitions

$D_{n,e,w}$ = weighted element-normalized level difference, is used to characterise small elements like ventilators.
C = spectrum correction term for pink noise, is always added to $D_{n,e,w}$ when the source of the noise is fast traffic.
C_{tr} = spectrum correction term for traffic noise, is always added to $D_{n,e,w}$ when the source of the noise is regular citytraffic.

ACOUSTIC PERFORMANCE TABLE: REQUIRED SOUND ABSORPTION LEVELS

	Sound reduction $D_{n,e,w}$ $(C;C_{tr})$ open (dB)		**Page**
VENTILATORS	29 (0;-1)	THK90AK	14
	33 (-1;-2)	AK80/4	12
	35 (-1;-3)	Sonovent® V	8
	37 (0;-1)	771AK/686N	16
	37 (-1;-3)	Sonovent® Small 25 mm	4
	37 (-1;-3)	Sonovent® D Small	9
	39 (0;-2)	Invisivent® AK39	10
	39 (-1;-4)	Sonovent® Medium 25 mm	4
	39 (-1;-4)	Sonovent® D Medium	9
	40 (-1;-2)	771AK/787AK	16
	40 (-1;-2)	Aerovent AK (771AK/788P)	16
	40 (-1;-3)	Sonovent® Small 20 mm	4
	41 (-1;-2)	Sonovent® Small 15 mm	4
	41 (-1;-3)	Invisivent® AK41	10
	41 (-1;-3)	AK80/3	12
	41 (-2;-6)	Sonovent® Large 25 mm	4
	43 (0;-3)	Sonovent® Medium 20 mm	4
	44 (-1;-4)	AK80/2	12
	44 (-2;-6)	Sonovent® Large 20 mm	4
	45 (-2;-6)	Sonovent® Medium 15 mm	4
	45 (-2;-6)	Sonovent® Xlarge 25 mm	4
	46 (-1;-5)	Sonovent® Small 10 mm	4
	46 (-2;-6)	Sonovent® Xlarge 20 mm	4
	47 (0;-3)	AK80/1	12
	48 (-2;-6)	Sonovent® Medium 10 mm	4
	49 (-2;-5)	Invisivent® AK49	10
	49 (-2;-7)	Sonovent® Large 15 mm	4
	50 (-2;-6)	Sonovent® Large 10 mm	4
	53 (-2;-6)	Sonovent® Xlarge 15 mm	4
	56 (-2;-6)	Sonovent® Xlarge 10 mm	4
LOUVRES	33 (0;-1)	Silendo®	17
	Sound reduction R_w $(C;C_{tr})$ open (dB)		**Page**
	7 (0;-2)	445/86	20
	7 (0;-2)	Linius® L.060AC	22
	8 (-1;-2)	468AK/1	19
	8 (-1;-2)	468AK/2	18
	11 (0;-1)	445/150	21
	11 (0;-1)	Linius® L.150AC	22
	16 (-1;-3)	445/300	21
	19 (-1;-4)	445B/1025	23

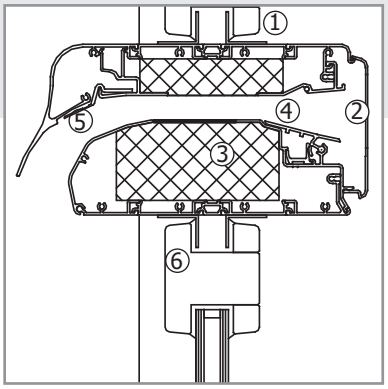


INTRODUCTION

RENSON has developed the SONOVENT®
to meet two aspects of living comfort :

Physical comfort :
fresh and healthy air without draughts

Acoustic comfort :
up to 50 dB sound reduction



SECTION DETAILS

① Aluminium ventilation box with thermal bridges
② Cleanable because of the removable inner profile
③ Acoustic elements are removable from the inside
④ Inner flap for ventilation control
⑤ Self regulating element: avoids draughts and saves energy
⑥ Frame profile

ADVANTAGES

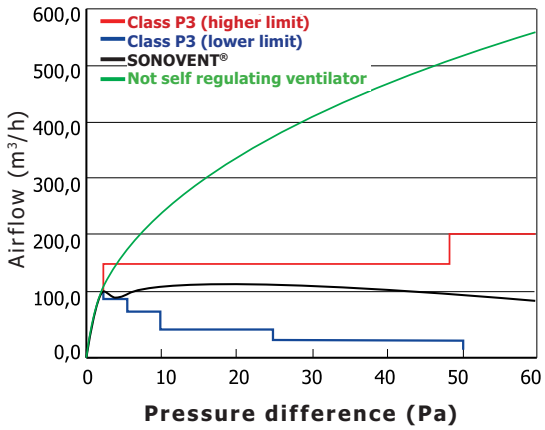
- Hidden installation possible for a maximum respect of the architecture
- Self regulating ventilation (class P3) in order to avoid draughts and to minimize energy losses
- Secure ventilation with closed windows : insect-, burglar- and rainproof
- Thermally broken profiles. These thermal bridges can be positioned according to the type and installation
- Easy to maintain because of the removable parts
- Integrated solution for acoustics and ventilation
- Can be glazed into windows and curtain walling

Sonovent® XL Madejski Academy (UK)
arch.: Broadway & Malyan

A NEW STANDARD IN ACOUSTIC VENTILATION

The SONOVENT® combines the best air sound insulation with the most comfortable ventilation by means of a self regulating element which reduces the air inlet even by the smallest air pressure on the facade. According to this patented principle the SONOVENT® avoids draughts and saves energy.

Relation airflow pressure drop of RENSON SONOVENT® according to the SIGHT report PO30007-07-02.



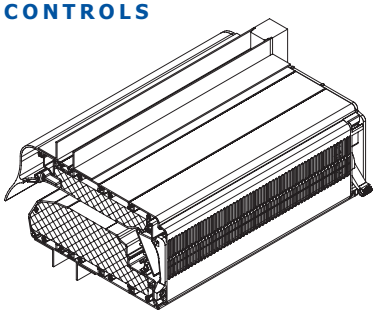
MATERIAL

Profiles : aluminium AlMgSi 0.5 (according to DIN 1748)
Finishing : only powdercoated in any RAL or Syntha Pulvin® colour (dual colour possible)
Endcaps in ASA polymer type Luran S (colourfast, weather- and UV-resistant)

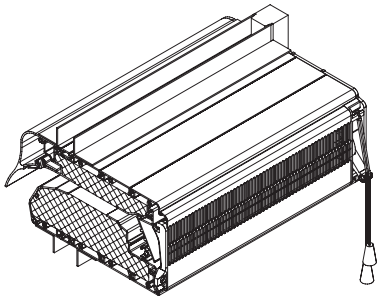
DIMENSIONS

Height : 105mm
Glass reduction : 135 mm
Glass thickness : 20, 24, 28 & 32 mm as standard.
Other thicknesses available on demand.

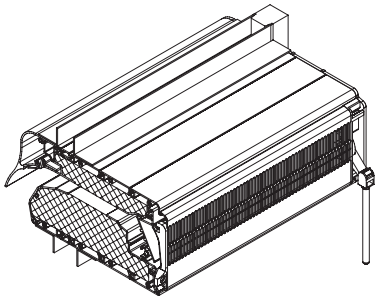
CONTROLS



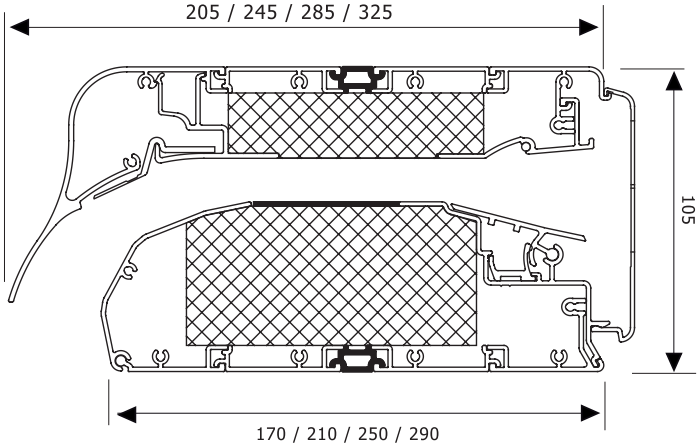
manual control



cord control

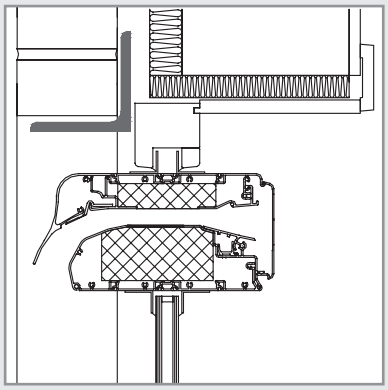


rod control
(hook-up)

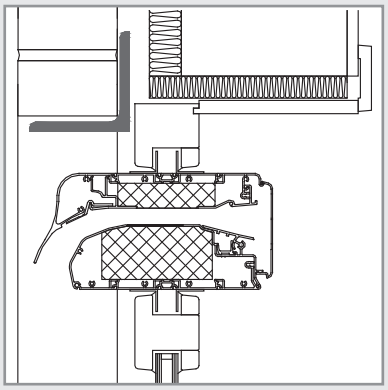


AVAILABLE MODELS

Four types of the SONOVENT® are available : Small, Medium, Large and XLarge. Each type has 4 free area possibilities (air slot : 10, 15, 20 or 25 mm). This comes up to a total of 16 alternatives in total, which means that each situation of noise nuisance can be solved.
The SONOVENT® is always made to measure with a maximum length of 2000 mm.



Installation on glass



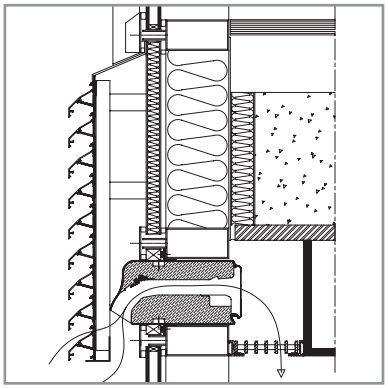
Installation between profiles

APPLICATIONS

- On all types of window frames : aluminium, timber and PVC
- Can be used for new building as well as for renovation
- For residential dwellings as well as hospitals, offices, schools and many other commercial applications
- can be installed on glass, between profiles (at transom) or on the windowframe.

SPECIAL APPLICATION FOR CURTAIN WALLING

Hidden installation in a ventilated panel of a curtain wall system. By varying the length the required airflow together with the necessary acoustic performances can be reached.



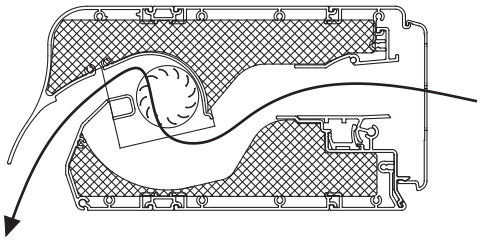
TECHNICAL SPECIFICATIONS

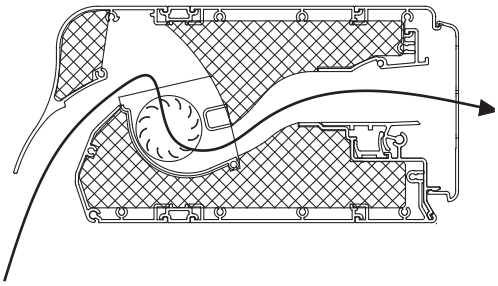
	Small	Medium	Large	Xlarge
AIR FLOW				
Airflow at 2 Pa				
Air slot 10 mm	50,2 $m^3/h/m$	49,5 $m^3/h/m$	45,7 $m^3/h/m$	40,8 $m^3/h/m$
15 mm	83,7 $m^3/h/m$	75,0 $m^3/h/m$	72,2 $m^3/h/m$	61,0 $m^3/h/m$
20 mm	90,0 $m^3/h/m$	94,2 $m^3/h/m$	90,7 $m^3/h/m$	87,9 $m^3/h/m$
25 mm	95,6 $m^3/h/m$	96,3 $m^3/h/m$	94,5 $m^3/h/m$	92,4 $m^3/h/m$
Airflow at 2 Pa				
Air slot 10 mm	14,0 l/s/m	13,8 l/s/m	12,7 l/s/m	11,3 l/s/m
15 mm	23,3 l/s/m	20,8 l/s/m	20,1 l/s/m	17,0 l/s/m
20 mm	25,0 l/s/m	26,2 l/s/m	25,2 l/s/m	24,4 l/s/m
25 mm	26,6 l/s/m	26,7 l/s/m	26,3 l/s/m	25,7 l/s/m
Airflow at 1 Pa				
Air slot 10 mm	14,0 l/s/m	13,8 l/s/m	12,7 l/s/m	11,3 l/s/m
15 mm	23,3 l/s/m	20,8 l/s/m	20,1 l/s/m	17,0 l/s/m
20 mm	25,0 l/s/m	26,2 l/s/m	25,2 l/s/m	24,4 l/s/m
25 mm	26,6 l/s/m	26,7 l/s/m	26,3 l/s/m	25,7 l/s/m
Equivalent area				
Air slot 10 mm	17756 mm^2/m	17509 mm^2/m	16153 mm^2/m	14427 mm^2/m
15 mm	29593 mm^2/m	26511 mm^2/m	25524 mm^2/m	21578 mm^2/m
20 mm	31813 mm^2/m	33292 mm^2/m	32059 mm^2/m	31073 mm^2/m
25 mm	33786 mm^2/m	34032 mm^2/m	33416 mm^2/m	32676 mm^2/m
COMFORT				
Sound reduction in open position $D_{n,e,w}$ ($C;C_{tr}$) in dB:		(EN ISO 140-10, EN ISO 717-1)		
Air slot 10 mm	46 (-1,-5) dB	48 (-2;-6) dB	50 (-2;-6) dB	56 (-2;-6) dB
15 mm	41 (-1;-2) dB	45 (2;-6) dB	49 (-2;-7) dB	53 (-2;-6) dB
20 mm	40 (-1;-3) dB	43 (0;-3) dB	44 (-2;-6) dB	46 (-2;-6) dB
25 mm	37 (-1;-3) dB	39 (-1;-4) dB	41 (-2;-6) dB	45 (-2;-6) dB
Sound reduction in closed position $D_{n,e,w}$ ($C;C_{tr}$) in dB:		(EN ISO 140-10, EN ISO 717-1)		
Air slot 10 mm	n.p.d.			
15 mm				
20 mm				
25 mm				
Self regulating	yes (class P3)			
TECHNICAL CHARACTERISTICS :		(EN 13141-1)		
U-value	4,5 W/m^2K	4,6 W/m^2K	4,6 W/m^2K	4,7 W/m^2K
Watertightness (closed position)	650Pa			
Windtightness	650Pa			

Information SONOVENT® based on Sight report PO30007-07-02
RENSON reserves the right to add technical modifications to the concerned products.

MECHANICAL VENTILATOR

This mechanical ventilator, provided with an electrical motor (24V), has an air flow of maximum 220m³/h/m. The SONOVENT® V is only available as 1 type : Small and two models (one for extraction and one for supply). The ventilator is efficient for the supply of fresh air and the extraction of consumed air (not suitable as kitchen or bathroom extractor). The ventilator starts to work automatically when opening the flap and is controllable by means of a variable speed controller. The mechanical parts and the acoustic insulation are removable from the interior.





TECHNICAL SPECIFICATIONS

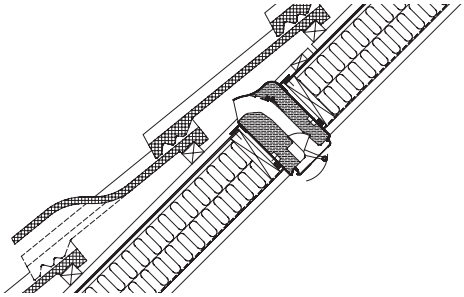
	SONOVENT® V
AIRFLOW	
Supply	220 m³/h/m
Supply	61,11 l/s/m
Extraction	220 m³/h/m
Extraction	61,11 l/s/m
COMFORT	
Sound reduction $D_{n,e,w}$ ($C;C_{tr}$)	(EN ISO 140-10, EN ISO 717-1)
- in open position	35 (-1;-3) dB
- in closed position	n.p.d.
TECHNICAL CHARACTERISTICS	
U-value	4,5 W/m²K
Watertightness (closed position)	650 Pa
Windtightness	600 Pa

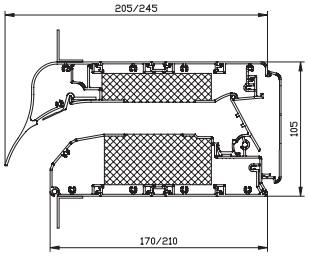
self-regulating ventilator for rooms under roof with a superior sound absorption

SONOVENT® D

SPECIAL APPLICATIONS FOR VENTILATION IN ROOMS UNDER ROOF

It is sometimes not easy to reach the ventilation standards for rooms under roof which can not be equipped of vertical windows. The ventilation slots of roof windows do not provide enough air flow and opening windows is acoustically not interesting. Extra protection for rain and insects can also be required.
This is why a SONOVENT® D is the best solution for installation in the roof segment with ventilation tiles. This hidden installation assures total watertightness in closed position up to 650 pa and in open position up to 100 Pa. The SONOVENT® D is available in two types (Small, Medium) and can be installed from the inside as from the outside when building the roof.





TECHNICAL SPECIFICATIONS

	Small	Medium
AIRFLOW		
2 Pa	100,8 m^3/h/m (tiles) • 86,3 m^3/h/m (slats)	
2 Pa	28,0 l/s/m (tiles) • 24,0 l/s/m (slats)	
1 Pa	28,0 l/s/m (tiles) • 24,0 l/s/m (slats)	
Equivalent area	33786 mm^2/m	34032 mm^2/m
COMFORT		
Sound reduction $D_{n,e,w}$ ($C;C_{tr}$)	(EN ISO 140-10, EN ISO 717-1)	
- in open position	37 (-1;-3) dB	39 (-1;-4) dB
- in closed position	n.p.d.	n.p.d.
Self regulating	yes (class P3)	
TECHNICAL CHARACTERISTICS		
U-value	4,5 W/m^2K	
Watertightness (closed position)	650 Pa	
Windtightness	650 Pa	

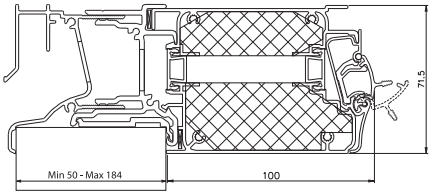
INTRODUCTION

To give the INVISIVENT® (see our 'window ventilators' catalogue) an acoustic performance, there are three different acoustic extension boxes developed. Like the regular INVISIVENT® the INVISIVENT® AK is available in 3 different types, depending on the depth of the windowframe (aluminium, timber or uPVC) ranging from 50 till 185 mm and combined with the 3 different acoustic boxes (different airflows, depth 100 mm), the INVISIVENT® AK range exists out of 9 models.
The perforated inner profile performs as an insect mesh and is fully removable for cleaning purposes.
The airflow can be controlled manually by means of an internal tiplever in 5 stepped settings open/close and 3 intermediate positions). In open position, the incoming airflow is directed upwards.

The INVISIVENT® AK is the most discrete acoustic vent worldwide and is installed above the windowframe, this results in a maximum light penetration.

MATERIAL

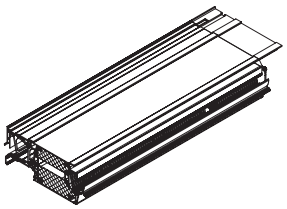
Inside and outside profile : aluminium AlMgSi 0.5 (according to DIN 1748)
finishing : satin anodised or powdercoated in any RAL or Syntha Pulvin® colour (dual colour possible).
Endcaps in ASA polymer type Luran S (colourfast, weather- and UV-resistant)
Endcaps are also available in any colour upon request (dual colour possible)

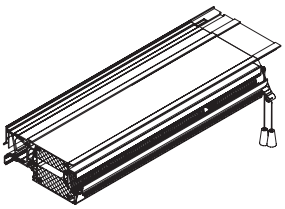


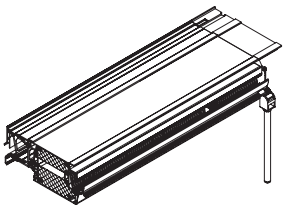
DIMENSIONS

Glass reduction : 0 mm
Overall height : 59 mm
3 types are available depending on the width of the windowframe :
INVISIVENT® : 50 - 64 mm, 65 - 79 mm, 80 - 94 mm
INVISIVENT® XL : 95 - 109 mm, 110 - 124 mm, 125 - 139 mm
INVISIVENT® XXL : 140 - 154 mm, 155 - 169 mm, 170 - 185 mm

CONTROLS

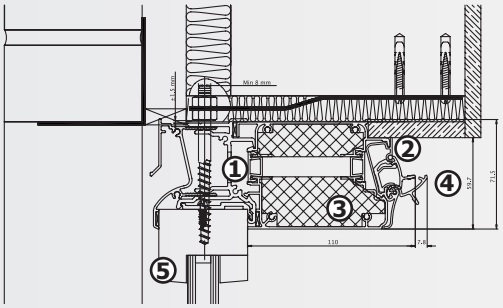

manual control


cord control

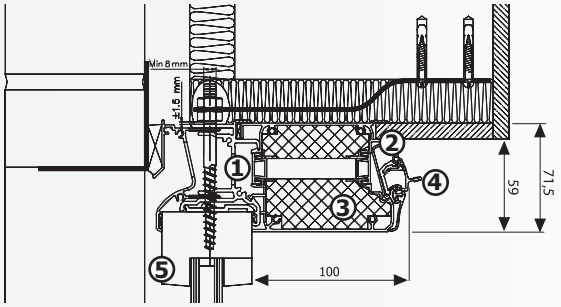

rod control
(hook-up)

AVAILABILITY

Only custom made (made to measure) INVISIVENT®AK are available.



Section detail
UK window



Section detail
continental window

SECTION DETAILS

① Aluminium box with thermal bridges
② Cleanable because of the removable inner profile
③ Sound absorbing acoustic material
④ Inner flap in order to control the ventilation level
⑤ Window profile

ADVANTAGES

Hidden installation possible for maximum respect of the architecture.
Secure ventilation with closed windows; insect-, burglar- and rainproof.
Thermally broken profiles.

OPTIONS

There is a slot at the inner side which allows a finishing profile or a plaster board to 10 mm.
For thicker finishing profiles, plasterboards or plastering, an optional aluminium profile can be provided.

TECHNICAL SPECIFICATIONS

	INVISIVENT® AK39	INVISIVENT® AK41	INVISIVENT® AK49
AIRFLOW			
2 Pa	33,3 m^3/h/m	15,7 m^3/h/m	9,0 m^3/h/m
2 Pa	9,2 l/s/m	4,4 l/s/m	2,5 l/s/m
1 Pa	6,5 l/s/m	3,1 l/s/m	1,8 l/s/m
Equivalent area	8311 mm^2/m	3922 mm^2/m	2241 mm^2/m
COMFORT			
Sound reduction $D_{n,e,w}$ ($C;C_{tr}$)	(EN ISO 140-10, EN ISO 717-1)		
- in open position	39 (0;-2) dB	41 (-1;-3) dB	49 (-2;-5) dB
- in closed position	48 (0;-2) dB	46 (-1;-2) dB	57 (-1;-3) dB
Self regulating	no		
TECHNICAL CHARACTERISTICS			
U-value	4,5 W/m^2K		
Watertightness (closed position)	650 Pa		
Windtightness	650 Pa		

AK80

compact acoustic window vent

(this product is not in accordance with the UK regulations)

INTRODUCTION

The AK80 is a thermally broken acoustic vent with a pleasing compact design. Four different types are developed and according to the type a different airflow and sound absorption is defined. The AK80 is available for installation on glass, at transom or overframe. The AK80 is applicable on all types of window frames : aluminium, timber and uPVC.

MATERIAL

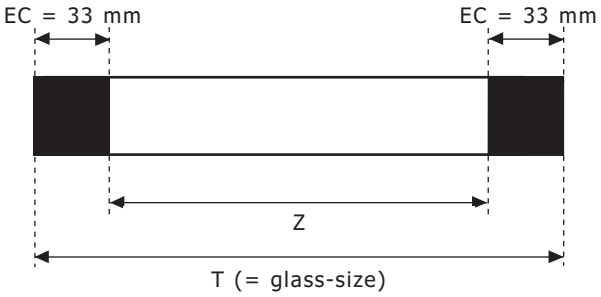
Inside and outside profile : aluminium AlMgSi 0.5 (according to DIN 1748)
finishing : satin anodised or powdercoated in any RAL colour (dual colour possible)
Endcaps in ASA polymer type Luran S (colourfast, weather- and UV-resistant)
Endcaps are in black, grey or white

DIMENSIONS

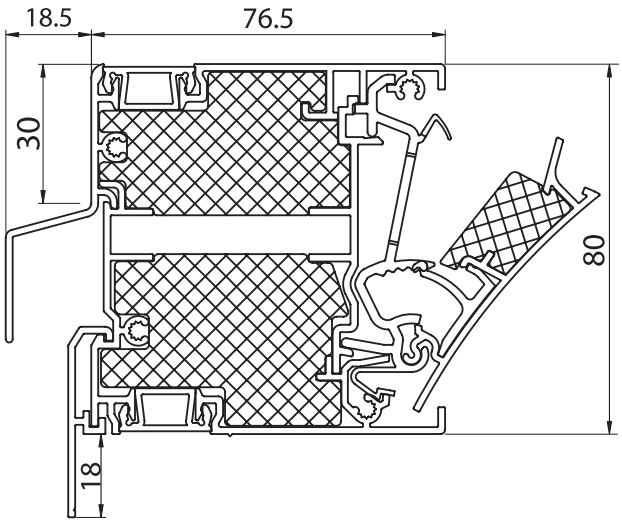
Glass reduction : 80 mm
Height : 83 mm
Glass thickness : variable between 22 and 42 mm

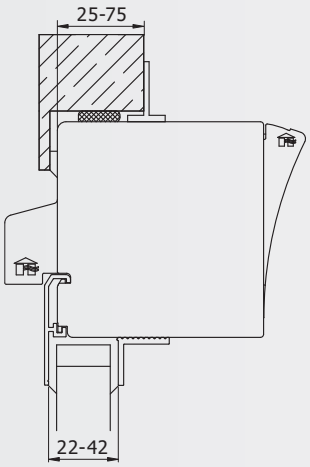
ASSEMBLY

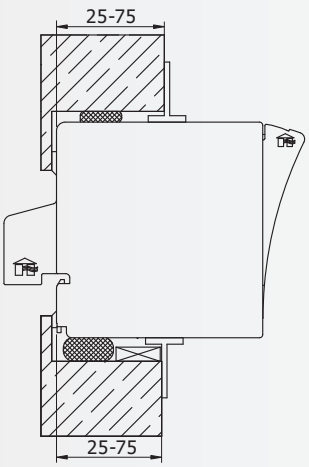
Developed for fabrication from bar lengths (6000 mm) or made to measure (max. 2000 mm)
Cut ventilator to size from a bar length, fix endcaps (1 L + 1 R)
Overall dimension of the ventilator (T) = extrusion length (Z) + (2x endcaps (EC))

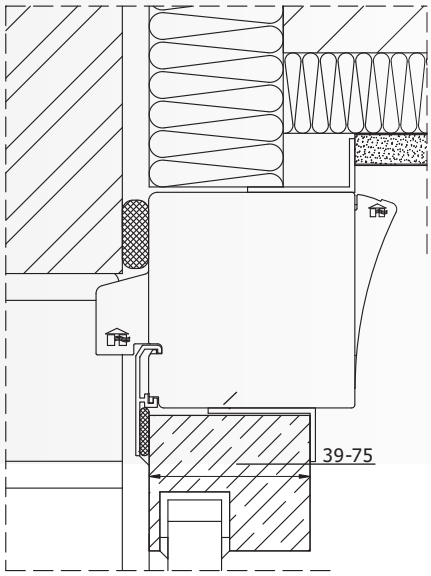


SECTION DETAILS









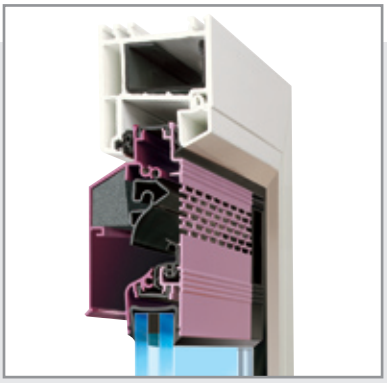
TECHNICAL SPECIFICATIONS

	AK80/1*	AK80/2**	AK80/3**	AK80/4**
AIRFLOW				
2 Pa	5,9 $m^3/h/m$	9,0 $m^3/h/m$	10,4 $m^3/h/m$	34,9 $m^3/h/m$
2 Pa	1,6 l/s/m	2,5 l/s/m	2,9 l/s/m	9,7 l/s/m
1 Pa	1,2 l/s/m	1,7 l/s/m	2,0 l/s/m	6,9 l/s/m
Equivalent area	1488 mm^2/m	2163 mm^2/m	2545 mm^2/m	8780 mm^2/m
COMFORT				
Sound reduction $D_{n,e,w}$ ($C;C_{tr}$)	(EN ISO 140-10, EN ISO 717-1)			
- in open position	47 (0;-3) dB	44 (-1;-4) dB	41 (-1;-3) dB	33 (-1;-2) dB
- in closed position	51 (-1;-3) dB	n.p.d.		
Self regulating	No			
TECHNICAL CHARACTERISTICS	(EN 13141-1)			
U-value	2,2 W/m^2K			
Watertightness (closed position)	650 Pa			
Windtightness	650 Pa			
CONTROLS	manual, cord or rod (hook-up)			

* Information based on IFT reports 104327447/1 & 16432744/1.

** Information based on Sight report.

Renson reserves the right to add technical modifications to the concerned products.



INTRODUCTION

Aluminium thermally broken flapvent with an acoustic hood for all types of windows (aluminium, timber or uPVC).
The THK90AK has an external hood for excellent weather protection, installed in this hood is a sound reducing material. The THK 90 AK is aesthetically similar to the THK90 and the AR90. (See our 'Window ventilators' catalogue)

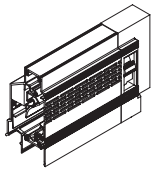
MATERIAL

Inside and outside profile : aluminium AlMgSi 0.5 (according to DIN 1748)
Finishing : satin anodised or powdercoated in any RAL or Syntha Pulvin® colour (dual colour possible)
Endcaps in ASA polymer type Luran S (colourfast, weather- and UV-resistant)
Endcaps are in black or white but also available in other colours upon request.

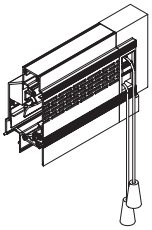
DIMENSIONS

Glass reduction : 90 mm
Height : 105 mm
Glass thickness : 20, 24 & 28 mm

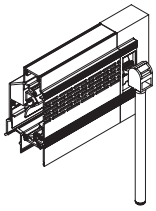
CONTROLS



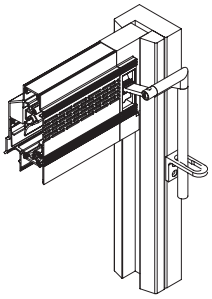
manual control



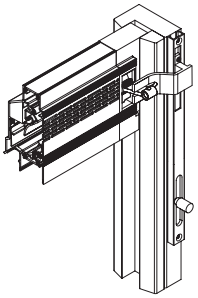
cord control



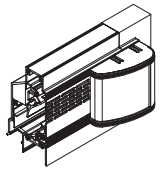
rod control
(hook-up)



rod control
(with transmission)



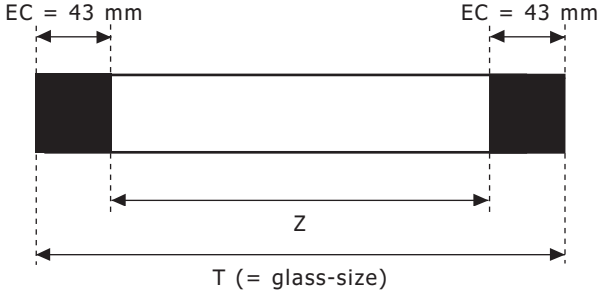
rod control
(with sliding knob)



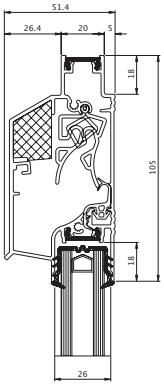
motor control

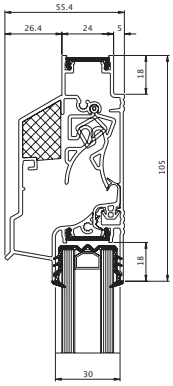
ASSEMBLY

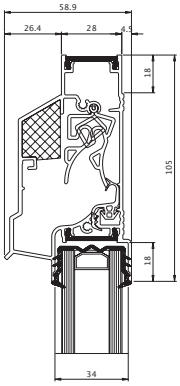
Developed for fabrication from bar lengths (6000 mm) or made to measure (max. 2500 mm)
Cut ventilator to size from a bar length, fix endcaps (1 L + 1 R)
We advise use of glazing gasket RENSON nr 039 or nr 034 (20-28 mm) for installation
Overall dimension of the ventilator (T) = extrusion length (Z) + (2x endcaps (EC))



SECTION DETAILS







TECHNICAL SPECIFICATIONS

	THK90AK
AIRFLOW	
2 Pa	57,9 $m^3/h/m$
2 Pa	16,1 l/s/m
1 Pa	11,6 l/s/m
Equivalent area	14736 mm^2/m
COMFORT	
Sound reduction $D_{n,e,w}$ ($C;C_{tr}$)	(EN ISO 140-10, EN ISO 717-1)
- in open position	29 (0;-1) dB
- in closed position	45 (0;-2) dB
Self regulating	no
TECHNICAL CHARACTERISTICS	
U-value	3,9 W/m^2K
Watertightness (closed position)	650 Pa
Windtightness	650 Pa

INTRODUCTION

The 771AK is developed as a draught-free high performance acoustic slotvent. This slotvent is equipped with a selfregulating flap which allows a constant airflow at different wind speeds.

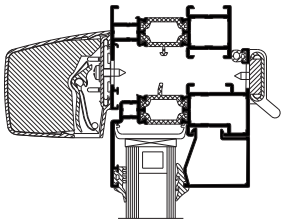
APPLICATIONS

- For aluminium, uPVC and timber windows
- For new-built as well as refurbishment

PRODUCT

Materials : Aluminium AlMgSi 0,5
Surface treatment : Anodised or powdercoated in any RAL-colour
Endcaps : ASA type Luran S - white or black
Control : No control on the 686N
Screws : A2 Philips Stainless Steel 3,5 x 9 mm

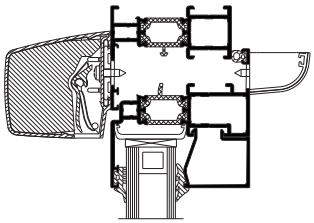
COMBINATIONS



771AK + 787 AK : Selfregulating controllable ventilation

(UK solution)

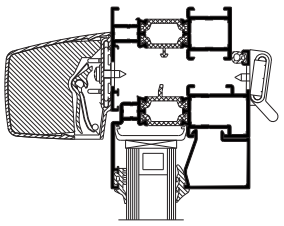
Height : 771AK = 52,6 mm, 787AK = 33 mm
Installation height : 771AK = 38,5 mm, 787AK = 28 mm
Depth : 771AK = 52 mm, 787AK = 15 mm



771AK + 686 N : Selfregulating permanent ventilation

(this product is not in accordance with the UK regulations)

Height : 771AK = 52,6 mm, 686N = 19 mm
Installation height : 771AK = 38,5 mm, 686N = 19 mm
Depth : 771AK = 52 mm, 686N = 28 mm



AEROVENT AK (771AK + 788P) : Selfregulating trickle ventilation

(this product is not in accordance with the UK regulations)

Height : 771AK = 52,6 mm, 788P = 33 mm
Installation height : 771AK = 38,5 mm, 788P = 28 mm
Depth : 771AK = 52 mm, 788P = 15mm

TECHNICAL SPECIFICATIONS

Type	Equivalent area (mm^2)	Airflow 2Pa (m^3/h)	Slot size	Length exterior part (mm)	Length interior part (mm)	Sound reduction $D_{n,e,w}$ ($C;C_{tr}$)
771AK/787AK	3471	14	2 x (172 x 12)	415	475 (type 787AK)	40 (-1;-2) dB
771AK/686N	3116	12	2 x (172 x 12)	415	475 (type 686N)	37 (0;-1) dB
Aerovent AK	3471	14	2 x (172 x 12)	415	475 (type 788P)	40 (-1;-2) dB

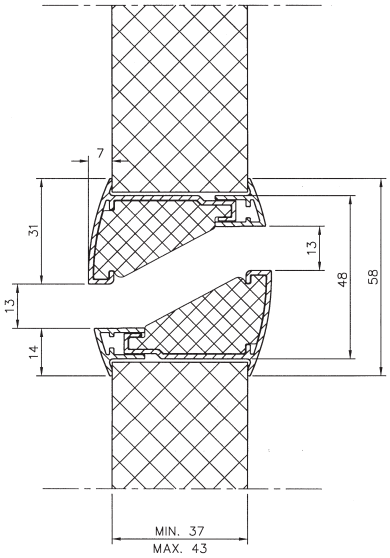
TRANSIT LOUVRE (permanent, non controllable)

Acoustic louvres are essential for residential as well as non-residential project applications.
According to the application two different types can be used :

- The compact SILENDO model, mainly used for residential purposes
- The louvre 468AK/2, more common in the non-residential sector where larger air flow rates are required

acoustic door louvre

SILENDO®



PRODUCT

- Louvre manufactured of aluminium profiles Al Mg Si 0.5 with PVC endcaps
- Louvre has been provided with acoustic absorbing material
- Air flow in "chicane" shape
- Finish : anodised 20µm or powdercoated RAL 60-70µm
- Hidden fixing

APPLICATIONS

- Acoustic louvre for interior doors
- Main applications : residential buildings, lavatories, hotelrooms, …

TECHNICAL CHARACTERISTICS

- Louvre convenient for doors with a depth of 37 to 43 mm
- Sound reduction : $D_{n,e,w}$ (C,C_{tr}) = 32 (0;-2) dB
- Visual free area : 22%

APPLICATIONS

W x H (mm)	Air flow (m³/h at 2Pa)	Air flow (dm³/s at 1Pa)
425 x 48	25	4,9

PRODUCT

- Louvre manufactured of aluminium profiles Al Mg Si 0.5
- The blades are filled with sound absorbing material
- Labyrinth style blades
- Finishing : anodised 20µ or powder coated RAL 60 - 70µ

468AK/2 - front view

468AK/2 - back view

APPLICATIONS

- Acoustic louvre for interior doors
- Main applications : hospitals, schools, dressing rooms of sport complexes …

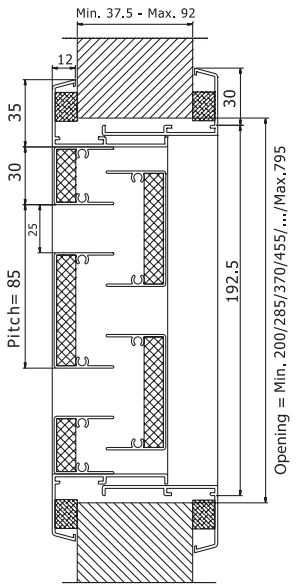
TECHNICAL CHARACTERISTICS

- Louvre suitable for doors with a depth of 37 to 43 mm
- Pitch : 85 mm
- Minimum dimensions : 200 x 193 mm H
- Maximum dimensions : 788 x 788 mm H
- Sound reduction : R_w (C; C_{tr}) = 8 (-1;-2) dB
- Fixing screws included
- Visual free area : 29%
- Physical free area : 29%

STANDARD MEASURES

W x H (mm)	Air flow (m³/h at 2Pa)	Air flow (dm³/s at 1Pa)
292 x 193	25	-
382 x 278	50	10
432 x 363	75	-
452 x 448	100	20

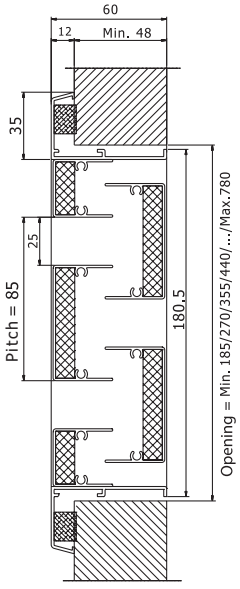
- Other measures on demand. Height has to be a multiple of 85 mm.



468AK/2

468AK/1 - front view

468AK/1 - back view



468AK/1

PRODUCT

- Louvre manufactured of aluminium profiles Al Mg Si 0.5
- The blades are filled with sound absorbing material
- Labyrinth style blades
- Finish : anodised 20µm or powder coated RAL 60 - 70µm

APPLICATIONS

- Acoustic louvre for wall applications
- Main applications : hospitals, schools, dressing rooms of sport centres, …
- Made to measure, no standard measures

TECHNICAL CHARACTERISTICS

- Louvre with building depth of 38 mm
- Flange size : 30mm
- Pitch : 85 mm
- Minimum dimensions : 200 x 181 mm H
- Maximum dimensions : 776 x 776 mm H
- Sound reduction : R_w (C; C_{tr}) = 8 (-1;-2) dB
- Fixing screws included
- Visual free area : 29%
- Physical free area : 29%

INTRODUCTION

The RENSON louvre type 445/86 has small, aesthetic blades filled with acoustic non-combustible mineral wool. This results into a superb sound absorption and excellent airflow. The louvre is applicable for ventilation, cooling and heating installations as well as car parks, technical rooms and industrial buildings.

MATERIAL

Made of extruded aluminium sections AlMgSi 0.5. The blades are filled with sound absorbing mineral wool (non combustible). The bottom side of each blade exist of a perforated plate for sound absorption.
Bird mesh 6 x 6 mm in stainless steel 304 18/8 or 10 x 10 mm on request ; insect mesh 2.3 x 2.3 mm on request.
Finishing : anodised : SAA or bronze (20 micron) or powdercoated in RAL-colours (60-70 micron).

TECHNICAL CHARACTERISTICS

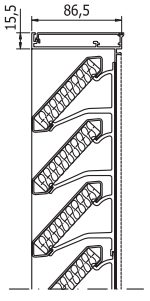
Depth to fit : 90 mm
Flange size : 60 mm
Minimum sizes : 300 x 300 mm
Sound reduction : R_w (C; C_{tr}) = 6 (-1;-2) dB
Visual free area : 77 %
Brackets nr. 429 are supplied as standard
Louvres bigger than 3 m² need a backstructure

APPLICATIONS

- Ventilation, cooling and heating installations
- Car parks
- Industrial sector

OPTIONS

- Water channel
- Drainage profile
- Flangeless frame (**)
- 24 mm equal leg to glaze into the window profile (***)



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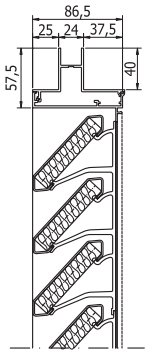
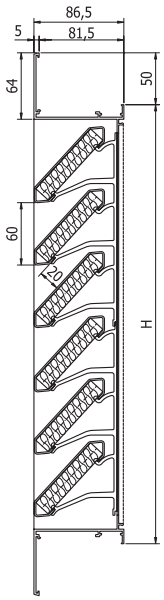


(***)



445/150 and 445/300

PRODUCT

- The blades are filled with acoustic mineral wool (non-combustible) with a perforated panel at the bottom for sound absorption
- Insect mesh in stainless steel 6 x 6 mm
- Finish : powder coated RAL 60 - 70 µm

APPLICATIONS

- Ventilation systems, cooling or heating installations
- Car parks
- Industrial applications
- Made to measure

TECHNICAL CHARACTERISTICS

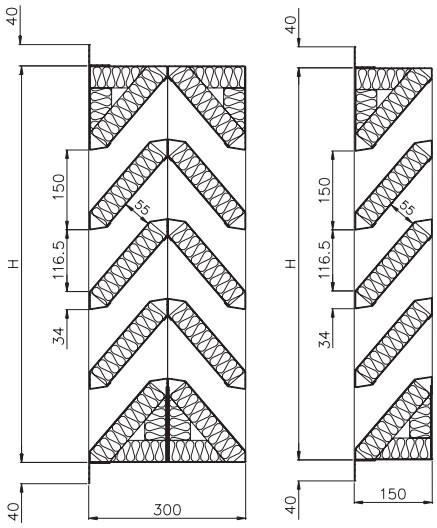
Characteristics of the blades

Type	150	300
Blade	single	double
Building depth (mm)	150	300
Minimal height (mm)	300	300
Pitch (mm)	150	150
Minimal width (mm)	300	300
Weight (kg/m²)	39	53
Sound reduction R_w ($C;C_{tr}$)	11 (0;-1)	16 (-1;-3)

Visual free area : 77 %

Physical free area : 35 %

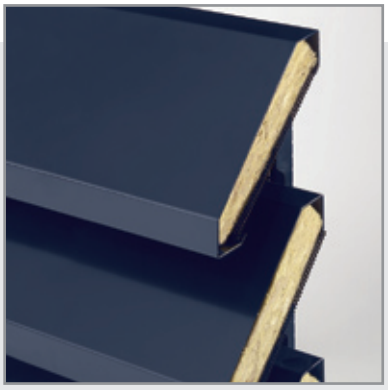
Thermal mass of the mineral wool : 50 kg/m³



MADE TO MEASURE

According to your specific needs our R&D department calculates the type and the measures of the louvre, free of charge. Required data for calculations :

- Required dB(A) performance
- dB produced by the source of the noise
- Distance between the source of the noise and the louvre
- Noise spectrum
- Available area (B x H)
- Air flow rate



PRODUCT

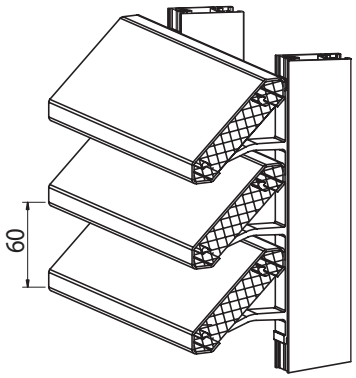
- The blades are filled with sound absorbing mineral wool (non combustible) with a perforated panel for sound absorption at the bottom
- Insect screen in stainless steel 6 x 6 mm
- Finish : powder coated RAL 60 - 70 µm

APPLICATIONS

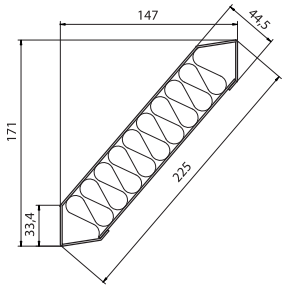
- Ventilation systems, cooling or heating installations
- Carparks
- Industrial applications
- Applications in doors is not recommended

TECHNICAL CHARACTERISTICS

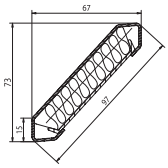
Type	L.150AC	L.060AC
Maximum length of blade (mm)	3000	6000
Pitch (mm)	150	60
Depth of blade (mm)	147	67
Height of blade	171	73
K-factor	14,24	9,22
Visual free area (%)	77	76
Physical free area (%)	35	34
Thermal mass of the mineral wool (Kg/m³)	50	50
Maximum span between 2 mullions (mm)	1200	1600
Sound reduction R_w ($C;C_{tr}$) in dB	11 (0;-1)	6 (-1;-2)



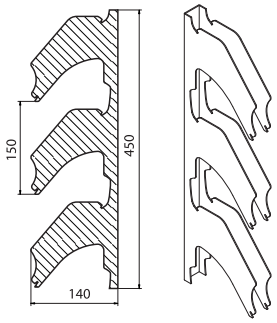
Blade



Blade

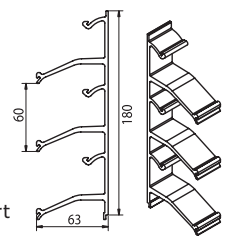


L.150AC

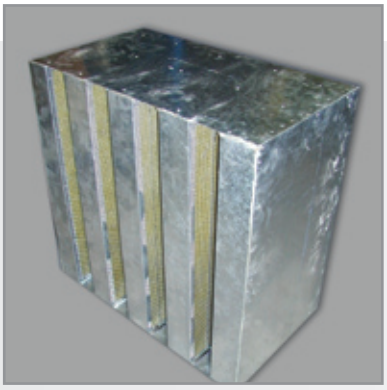


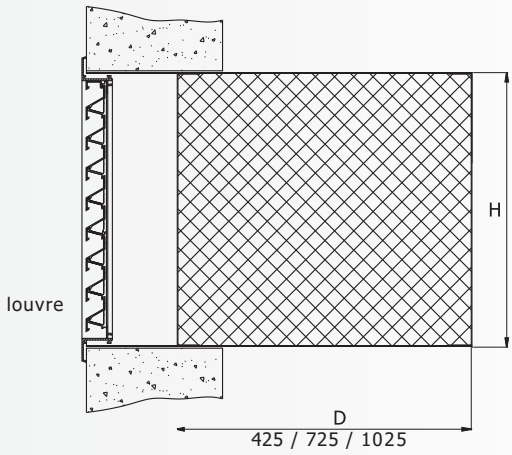
Blade support

L.060AC



Blade support





PRODUCT

- Units are assembled from galvanised steel with mineral wool (non-combustible)
- To be combined with RENSON Louvre type 411, 421, 425 & 451 (see Louvre catalogue for more details)
- Finish of the aluminium louvre : anodised 20 µm or powder coated RAL 60 - 70 µm

APPLICATIONS

- Ventilation of installations which require an extremely high sound reduction
- All louvres are manufactured to your specific requirements

SOUND ABSORPTION

R : mean values per octave band ($1m^2$)

f (Hz)	125	250	500	1000	2000	4000
445B/1025	5	8	15	21	21	18

Testreport DE 631X838 according to ISO140-10

R_w ($C;C_{tr}$) : 19 (-1;-4)

MADE TO MEASURE

According to your specific needs our R&D department calculates the type and the measures of the louvre free of charge. Required data for calculations :

- Required dB(A) performance
- dB produced by the source of the noise
- Distance between the source of the noise and the louvre
- Acoustic spectrum
- Available area (W x H)
- Also available as 425 and 725 mm deep.
  Estimated Rw-values* : 425 mm : 3dB, 725 mm : 13 dB

* The official acoustic report is not yet available

RENSON, YOUR PARTNER IN NATURAL VENTILATION AND SOLAR SHADING

RENSON, WITH ITS RICH TRADITION IN INNOVATION AND EXPERIENCE SINCE 1909, IS PROFILING ITSELF AS AN UNDISPUTED MARKET LEADER IN NATURAL VENTILATION AND SOLAR SHADING. SINCE 2003, OUR HEAD QUARTERS HAVE BEEN LOCATED NEXT TO THE E17 KORTRIJK - GENT MOTORWAY IN WAREGEM (BELGIUM). THIS REMARKABLE BUILDING IS A REAL AND WORKING MODEL OF OUR HEALTHY BUILDING CONCEPT AND IS A PROTOTYPE EXHIBITING OUR TECHNOLOGICAL STRENGTHS.

RENSON headquarters (BE)

A HEALTHY INTERNAL CLIMATE IS RENSON'S PRIORITY AND THIS IS FAR MORE THAN JUST A TREND. WE DEVELOP AND COMMERCIALISE PRODUCTS THAT CONTRIBUTE TO LOWER ENERGY CONSUMPTION. IN THIS WAY, RENSON PROVIDES AN IMPORTANT LINK TOWARDS THE REGULATION APPLICATIONS FROM THE KYOTO CLIMATE TREATY.

RENSON headquarters (BE)

RENSON HAS IT ALL

• Our multidisciplinary R&D department is co-operating with leading European research organizations. The outcome is a complete range of innovative concepts and products.

• Our automatically powdercoating installation, anodisation unit, PVC injection installation, PVC mould construction, assembly department and warehouse facilities are spread over a surface area of 75.000 m². Thanks to its consequent vertical integration, RENSON delivers high quality products.

• RENSON's head quarters, sales and marketing department are in Belgium, but we also have plants and offices in France and the UK. RENSON also has a sales structure beyond the European borders.

• The diversity and capability from RENSON's project team are our warranty for correct solutions for each individual building project. The creation of constructive long term relationships with construction specialists is our priority.

RENSON (UK) Maidstone

Conditional technical changes • The most recent edition of the brochure can be downloaded on www.renson.eu

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