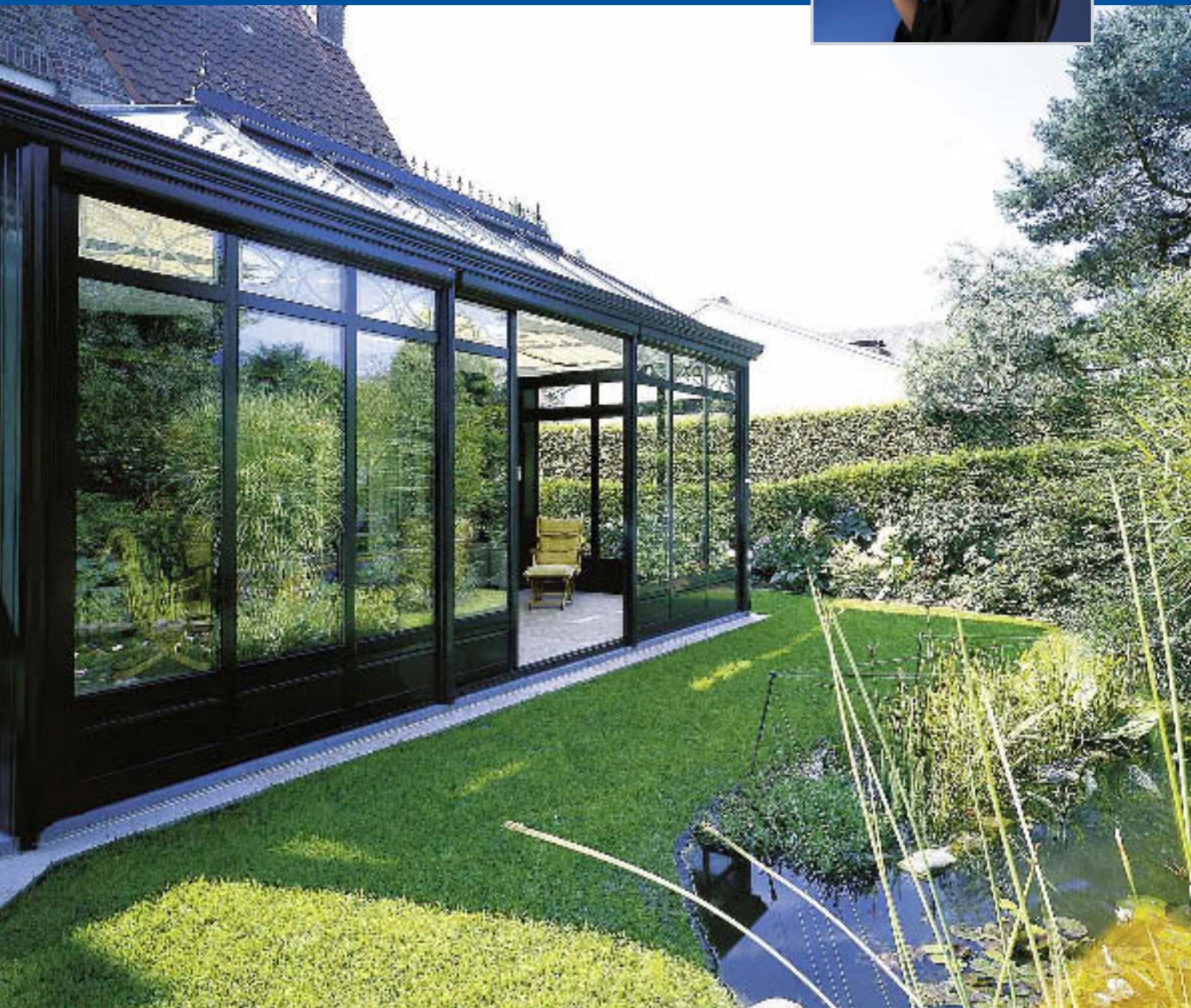


TOTAL COMFORT FOR YOUR CONSERVATORY

AIRTOP[®]



HOW TO ACHIEVE A COMFORTABLE LIVING ENVIRONMENT IN YOUR CONSERVATORY?

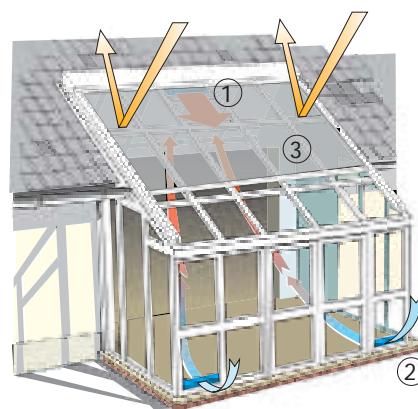
Building a conservatory to provide an extra living room will certainly add value to your property. However, ventilation and sun protection are an absolute necessity to maintain a healthy and comfortable living environment. This is not only the case in the summer months when the temperature rises, but also during the winter when ventilation is needed to prevent the build-up of condensation. RENSON offers the perfect solution which is compact, burglar proof, insect proof and rain proof. Furthermore, the system can function with one control (even during your absence) which means that the air in the room always remains fresh and the living environment feels more comfortable.



Total comfort = 1 + 2 + 3

An automatically controlled supply and extraction system, combined with external sunprotection, provides a perfect and comfortable living environment (even during your absence).

- 1 The Airtop II or Airtop de Luxe, for the extraction of hot/humid air
- 2 Natural window ventilation, for the supply of fresh air
- 3 Outside sun protection, for controlling the warmth of the sun



RENSON OFFERS YOU THE CORRECT SOLUTION:

1 Extraction:

- Airtop II Small - Airtop II Medium - Airtop II Large
- Airtop de Luxe 450 - Airtop de Luxe 715

2 Supply:

- TH 90 - THL 100 - THL 100V - THR 129 de Luxe

3 Sunprotection:

- Verandascreen - Varioscreen

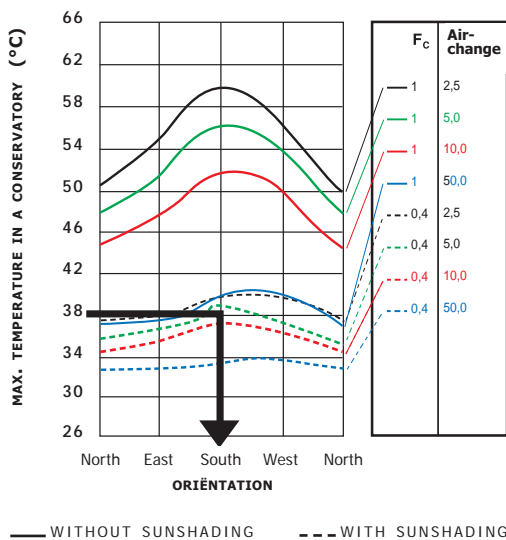




Basic principle: How to ventilate effectively?

The table below indicates the number of times that the air in a conservatory needs to be refreshed depending on its orientation. We have taken the example of a conservatory with double glazing. The table shows one example without any sun protection ($F_c = 1$) and one example with an external sun protection system ($F_c = 0,4$). $F_c = 0,4$ means that only 40% of the sunrays can enter the conservatory – the remaining heat and energy will need to be extracted.

The graph below shows the temperature in the conservatory without sun protection, depending on its orientation and quantity of air changes per hour.



CALCULATION-EXAMPLE

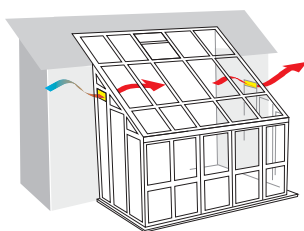
We have taken the example of a south facing conservatory with an external solar shading system, at a temperature of 32 degrees. Room temperatures higher than 38 degrees are uncomfortable for the inhabitants' and should not be exceeded – but how is this achieved?

Using the graph, we can see the intersection of the temperature line at 38 degrees on a south facing conservatory – at this point the graph indicates that the volume of air in the conservatory needs to be refreshed 7 or 8 times per hour to prevent the temperature rising above 38 degrees. However, it is advisable to allow for excess capacity, so we recommend 10 air changes per hour in this case.

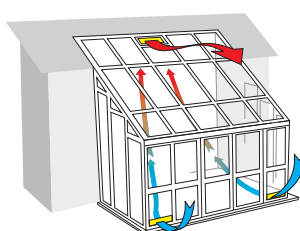
Conservatory ventilation means extraction and supply of air

There are a variety of ways to ventilate a conservatory :

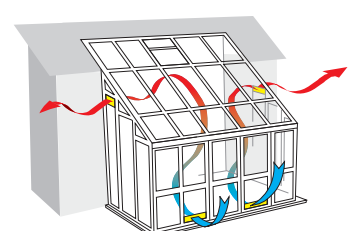
CROSS VENTILATION



ROOF VENTILATION



DIAGONAL VENTILATION

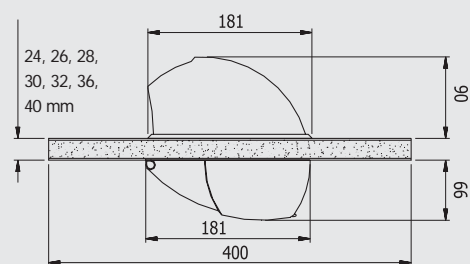


RENSON has the correct products for every situation.

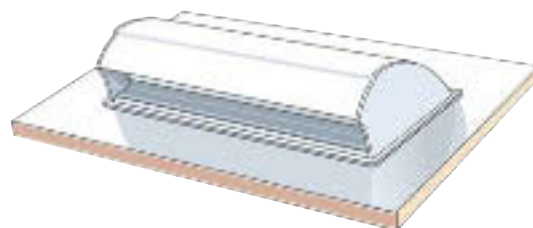
EXTRACTION

AIRTOP II SMALL , MEDIUM AND LARGE

- Easy and quick to install in timber, aluminium and PVC conservatories
- Can be installed in conservatory roofs with a minimum angle of 10° - or in the sidewalls
- Material: - Ventilator housing: AlMgSi 0,5 F 22
- White or black endcaps as standard (all colours possible in Acrylic paint)
- Panel: 2mm x 2mm aluminium plate and + PUR-foam
- Electronically controlled inside-and-outside flap
- Low maintenance
- Rainproof to EN12208
- CE - label



Mechanical extraction vents extract the hot and humid air from inside a room. In comparison with opening windows, mechanical extraction vents offer security against intruders and the possibility to control ventilation, thus conserving energy. They are also watertight and bug proof.



TECHNICAL DATA :

TYPE	Airtop Small	Airtop Medium	Airtop Large
Ventilation part BxH (mm)	495 x 181	585 x 181	735 x 181
External component	90	90	90
Internal component	66	66	66
<i>Standard panel</i>			
Width (mm)	700	1000	1200
Minimum saw size panel width	595	685	835
Height (mm)	400	400	400
Minimum saw size panel height	280	280	280
Thickness (mm)	24	24	24

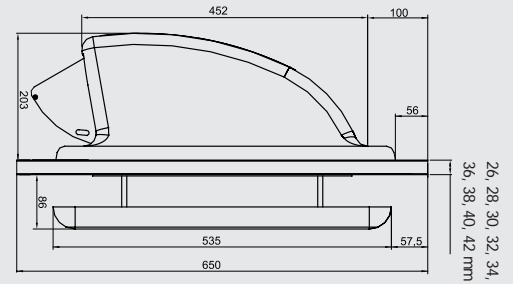
Other panel thicknesses (26, 28, 30, 32, 36 or 40 mm), sizes and forms on request.

K-value according to DIN4108 - W/m ² K	1,8	1,8	1,8
Air flow according to EN13141-1/DIN5167 - m ³ /h	170	240	300
Standard with 6m cable (7G x 1mm ²)			
Voltage (AC)	230	230	230
Capacity (W)	54	78	88
Power consumption (A)	0,4	0,63	0,7
Colour (standaard)	RAL 9010 (UK 9910), RAL 8019 On demand		
In all RAL colours available (also twin-colour)			

Subject to technical modifications

AT DE LUXE 450, AT DE LUXE 715

- Easy and quick to install in timber, aluminium and PVC conservatories
- Can be installed in conservatory roofs with a minimum angle of 10° - or in the sidewalls
- Material:
 - Body: Synthetic material
 - Sandwich panel with PUR foam composite
- Electronically controlled inside-and-outside flap
- Low maintenance
- CE - label



TECHNICAL DATA :

TYPE	AT de Luxe 450	AT de Luxe 715
Ventilation part BxH (mm)		
External component	203	203
Internal component	86	86
<i>Standard panel</i>		
Width (mm)	1000	1000
Minimum saw size panel width	790	790
Height (mm)	600	600
Minimum saw size panel height	600	600
Thickness (mm)	26	26
Other panel thicknesses (28, 30, 32, 34, 36, 38, 40 or 42 mm), sizes and forms on request.		
K-value according to DIN4108 - W/m ² K	1,6	1,6
Air flow according to EN13141-1/DIN5167 - m ³ /h	450	715
Standard with 6 m cable (7G x 1mm ²)		
Voltage (AC)	230	230
Capacity (W)	190	245
Power consumption (A)	0,84	1,2
Colour (Standard)	RAL 9010 (UK 9910)	
On demand also acrylic paint possible		

Subject to technical modifications

CONTROLS

Manual 3-step control (ATKS) – (ATKL)

- Adjustable in 3 steps for minimum, average and maximum ventilation
- Simple, manual control
- Surface mounted
- 1 control ATKS can control approx 20 Airtops II
- 1 control ATKL can control maximum 5 Airtops de Luxe



Temperature- and humidity-control (ATCOM)

- Combined control according to the temperature and humidity in the conservatory
- Used in combination with a 3-step control (ATKS/ATKL)
- Simple control
- Surface mounted



Automatic control (ATA2)

- Offers an intelligent solution with a weather station
- Main control unit with built-internal sensors (temperature and humidity)
- 4 external factors (wind, sun, rain and temperature)
- In addition to supply and extraction, there are also two output channels (e.g. for sun protection)
- It is possible to have a manual control mechanism
- Surface mounted



Automatic control (ATAL)

Similar control as ATA

But :

- No weather-station
- Outside parameter for temperature
- Inside parameter for temperature and humidity
- No extra output channels



SELECTION TABLES



Conservatories with external sun protection systems and a 6 or 10-fold air change.

Always combine supply and extraction.

6-FOLD / COMFORT

Volume conservatory L x W x H in m ³	Airtop II Small	Airtop II Medium	Airtop II Large	Airtop de Luxe 450	Airtop de Luxe 715	TH90 in meter	THR129 de Luxe
10 - 28	1	-	-	-	-	1,5	1 St.
29 - 40	-	1	-	-	-	2,2	2 St.
41 - 50	2	-	1	-	-	2,7	2 St.
51 - 75	-	2	-	1	-	4,1	2 St.
76 - 100	-	-	3	-	1	5,5	4 St.
101 - 150	-	-	-	2	-	8,2	6 St.
151 - 200	-	-	-	-	2	10,9	8 St.
> 200	on demand	on demand	on demand	on demand	on demand	on demand	on demand

Subject to technical modifications

10-FOLD / OPTIMAL

Volume conservatory L x W x H in m ³	Airtop II Small	Airtop II Medium	Airtop II Large	Airtop de Luxe 450	Airtop de Luxe 715	TH90 in meter	THR129 de Luxe
10 - 17	1	-	-	-	-	0,9	1 St.
18 - 24	-	1	-	-	-	1,3	2 St.
25 - 30	2	-	1	-	-	1,6	2 St.
31 - 45	-	2	-	1	-	2,5	2 St.
46 - 60	-	-	2	-	1	3,3	4 St.
61 - 90	-	-	-	2	-	4,9	6 St.
91 - 120	-	-	-	-	2	6,5	8 St.
> 120	on demand	on demand	on demand	on demand	on demand	on demand	on demand

Subject to technical modifications

INSTALLATION OF AIRTOP

Airtop II and AT Deluxe are always delivered with a panel. The panel is built in just like a glass panel.

Installation on a roof with a minimum angle of 10° or on lateral walls of a conservatory.



SUPPLY

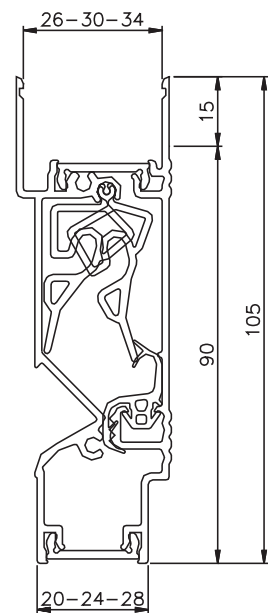
TH90

THERMALLY BROKEN VENT.

Due to its aesthetic design (very flat) it is possible to install the TH90 in every type of window (even sliding windows). This vent can be placed on top of the glass (execution 92.21) or at the bottom of the glass using the TH90PB (execution 92.31) as well as at transom level (execution 92.11).

TOTAL HEIGHT	105 mm
GLASS REDUCTION	90 mm
GLASS THICKNESS	20, 24, 28, 33 mm
AIR FLOW	Depends on the extraction of air
COLOURS	SAA, more than 150 RAL colours, also twin-colour available
MOTOR CONTROL (OPEN/CLOSE)	Available (230 V) Subject to technical modifications

Subject to technical modifications



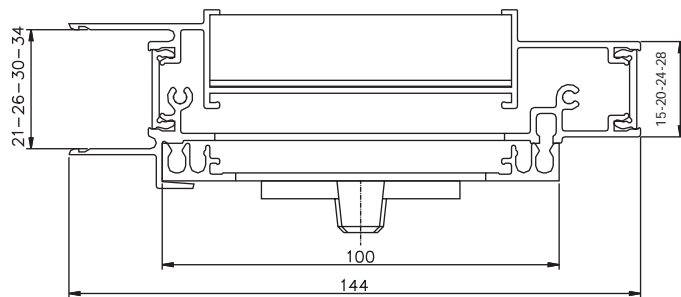
TH90PB



THL100 - THL100 v

THERMALLY-BROKEN SLIDING VENTILATOR.

THL100 is a thermally broken sliding ventilator, installed in a vertical (THL100 V) or horizontal position. This ventilator can be built in down the side of the glass (execution 65.21V) or between two transom profiles (execution 65.11V).



THL100 v

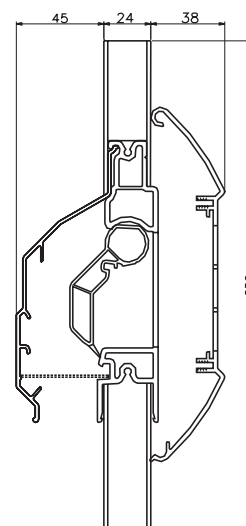
TOTAL HEIGHT	144 mm
GLASS REDUCTION	129 mm
GLASS THICKNESS	15, 20, 24 or 28 mm
AIR FLOW	Depends on the extraction of air
COLOURS	SAA, more then 150 RAL colours, also twin-colour available
MOTOR CONTROL (OPEN/CLOSE)	Available (230 V – 24V AC/DC optional)

Subject to technical modifications

THR129 de Luxe

THERMALLY-BROKEN VENT WITH PANEL

THR129 de Luxe is a natural supply vent with an excellent K-Value, built in a panel. The inner screen is removable and easy to clean.



THR129 de Luxe

EXTERNAL HOOD	45 mm
SIZE PANEL	1000 x 200 mm
MINIMUM SAW SIZE PANEL	730 mm
PANEL THICKNESS	24 mm
AIR FLOW	Depends on the extraction of air
K-VALUE	1,8 W/m ² K
COLOURS	SAA, more then 150 RAL colours, also twin-colour available
MOTOR CONTROL (OPEN/CLOSE)	Available (230 V)

Subject to technical modifications

EXTERNAL SUN PROTECTION



Verandascreen

The Verandascreen has been developed as an answer to the demand of installing a sun screen on horizontal and sloping conservatory roofs. Verandascreen is provided with an electrical control and has an exclusive device to maintain tension within the screen.



SCREEN WIDTH	from 1,25m to 4,50m
UNROLLED LENGTH	maximum 7,00m
SCREEN SURFACE	maximum 21m ²
BOX DEPTH	175 mm
MOTORS	unlimited coupling with 1 motor for 2 screens

Subject to technical modifications



Varioscreen

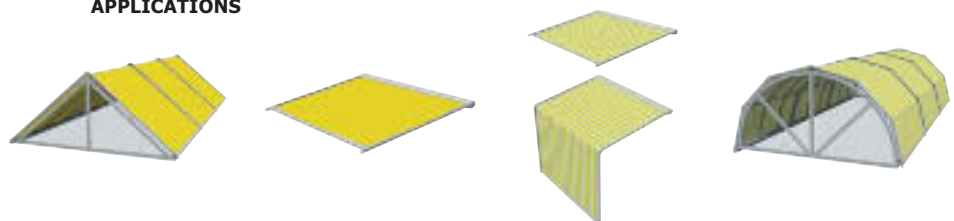
The Varioscreen system offers a solution to many queries regarding special applications of solar shading. It's possible to follow the outline of the glass using RENSON's unique track system. Varioscreen is the solution for the combination of vertical and sloping applications, arched and V-shaped conservatory roofs...

Electrical and automatic controls are available.

SCREEN WIDTH	from 1,25m to 4,50m (flat screens) or 4,00m (special forms)
UNROLLED LENGTH	maximum 6,00m
SCREEN SURFACE	maximum 24m ²
BOX DEPTH	145 mm, design form
MOTORS	unlimited coupling with 1 motor for 2 screens

Subject to technical modifications

APPLICATIONS



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.

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 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 powder coating installation, anodisation unit, PVC injection installation, PVC mould construction, assembly department and warehouse facilities are spread over a surface area of 5000 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.



Subject to technical modifications • RENSON corresponds with the EPR-demands

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 **RENSON**
INNOVATION IN VENTILATION