

REZNOR®

Trusted Heating Solutions

Product Overview



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Option 1 Sales

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reznorsales@nortek.com

Pricing, orders and quotes

Technical designs & support (pre-sales)

Spares

3

Option 3 Service

serviceuk.hvac@nortek.com

Report a breakdown

Annual servicing

Warranty call outs

Arrange commissioning

2

Option 2 Post Sales Technical Support

technicalsupport.hvac@nortek.com

Installation support

Wiring advice

Trouble shooting

4

Option 4 Accounts

Credit limit advice

Opening a new account

Invoice queries

Website and library

Did you know Reznor has extensive online resources available for you? Find the latest updates and product news on www.reznor.eu

You can now access **technical literature** and information on **spare parts** for Reznor, AmbiRad, NordairNiche, Benson and AirBloc units at literature.reznor.eu



Spares - View and order online

We have now launched a new easy to use online spares platform called **Empress**. This contains spare parts for all Nortek branded products, past and present, including Reznor, Ambirad, Benson and Airbloc.

Visit www.EmpressHVAC.com to order now.



facebook.com/ReznorHVAC



[@ReznorUK](https://twitter.com/ReznorUK)



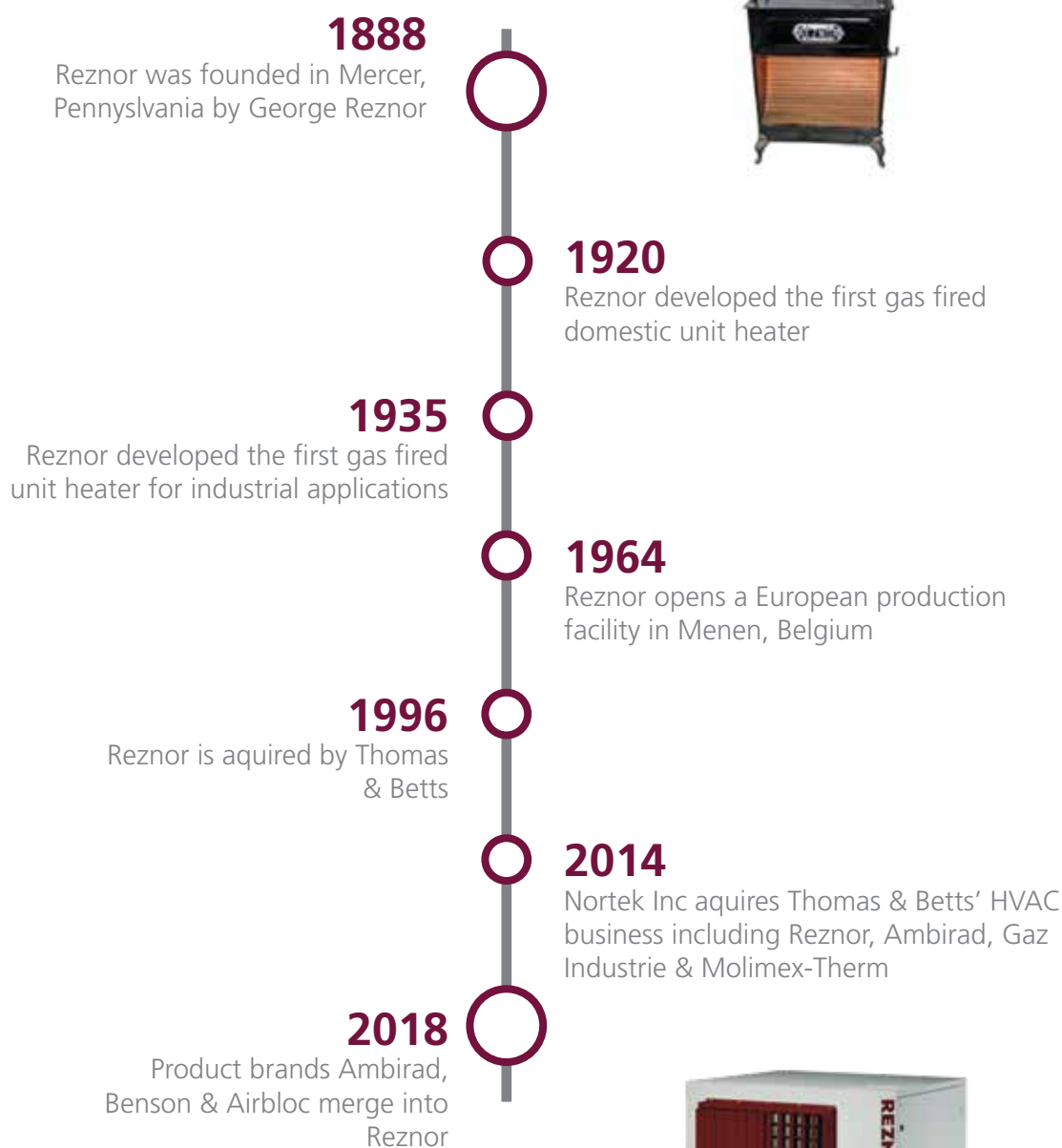
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For 130 years, Reznor has gone from strength to strength, consistently evolving to better serve it's customers and maintain its position as a leading provider of heating, cooling and ventilation solutions.

Since the early days as the favoured producer of gas fired stoves for heating residential homes, Reznor has evolved to be the preferred name in industrial and commercial HVAC solutions



RHeco

Gas fired low NOx, condensing unit heater. Five sizes available, 25 to 94kW output.

- Up to 109% (ncv)
- Class 5 NOx emissions
- Pre-mix burner
- Modulating burner with 5:1 turndown ratio



ErP Lot 21
Seasonal Efficiency
& NOx compliant



UDSA

Gas fired, room sealed unit heater. Fifteen sizes available, 11 to 146kW output.

- Titanium stabilised aluminised steel heat exchanger.
- Patented single burner combustion system
- Modulating burner down to 50% output
- Vertical discharge models available on some sizes



UDSB

Gas fired, room sealed unit heater suitable for use with ducting on the outlet. Nine sizes available, 11 to 64kW output.

- Titanium stabilised aluminised steel heat exchanger.
- Patented single burner combustion system
- Modulating burner down to 50% output



SDH

Gas fired heating & ventilation unit suitable for internal use. Seven sizes available, 26 to 97kW output.

- Stainless steel heat exchanger.
- Patented single burner combustion system
- Modulating burner down to 50% output
- EC Plug fan fitted
- Cooling coil optional
- Three SHH condensing versions available (55, 80 & 99kW)



RDH

Gas fired heating & ventilation unit suitable for external use. Seven sizes available, 26 to 97kW output.

- Stainless steel heat exchanger.
- Patented single burner combustion system
- Modulating burner down to 50% output
- EC Plug fan fitted
- Cooling coil optional
- Three RHH condensing versions available (55, 80 & 99kW)



PVE

Gas fired, floorstanding room sealed heater. Six sizes available, 35 to 146kW output.

- Titanium stabilised aluminised steel heat exchanger.
- Patented single burner combustion system
- Modulating burner down to 50% output
- Ducted or nozzled outlet versions



FSE

Floorstanding cabinet heater. Eight sizes available, 39 to 300kW output.

- Available for use on Gas, LPG, Oil or Kerosene.
- Stainless steel combustion chamber exchanger.
- Riello forced draught burner
- Two stage high/low burner
- Ducted or nozzled outlet versions



RHC & RHCLN

Gas fired heating coils for use in AHU's or ducted systems where a supply air fan already exists.

- RHC - Eighteen sizes available in two styles from 24 to 200kW output.
- RHCLN (Low NOx condensing) Six sizes available from 28 to 115kW output.



VSXO

Gas fired high efficiency radiant U tube heater. Seven sizes available, 25 to 50kW input.

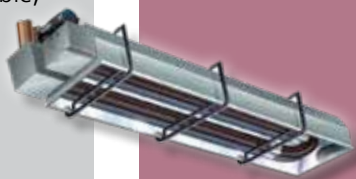
- Features recuperative heat exchanger
- Styling and performance kit
- Optional end caps



VSX

Gas fired high efficiency radiant U tube heater. Nine sizes available, 20 to 50kW input.

- Features recuperative heat exchanger



VSUTE

Gas fired radiant U tube heater. Eight sizes available, 15 to 48kW input.

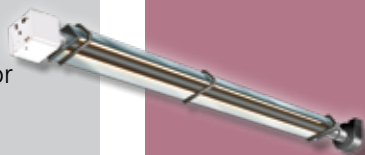
- Aluminised steel reflector and end caps
- Models available for 'Herringbone' use.



VSLIE

Gas fired linear radiant tube heater. Eight sizes available, 15 to 48kW input.

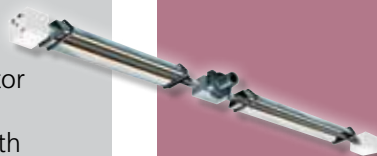
- Aluminised steel reflector and end caps
- Models available for 'Herringbone' use.
- Six models available with extended length.



VSDLLE

Gas fired double linear radiant tube heater. Eight sizes available, 30 to 100kW input.

- Aluminised steel reflector and end caps
- Six models available with extended length.



SCR-ECO

Gas fired radiant plaque heater. Four sizes available, 7 to 40kW input.



Nor-Ray-Vac

Gas fired continuous radiant tube heating system. Six burners available, 12 to 46kW input.

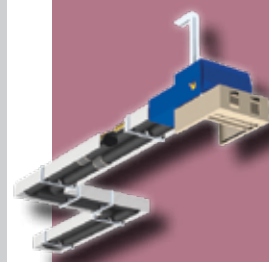
- Stoichiometric or 'perfect' combustion.
- Up to 3 x 46kW burners per leg
- Up to 27m between burners. (dependent upon burner size).
- Single wall mounted vacuum fan.



Sonning² OHA

Gas fired continuous radiant tube heating system. Nine sizes available, 50 to 400kW input.

- Single externally mounted burner.
- Tube lengths from 35 to 250m.
- High efficiency modulating model available.



Sorrento

Electric radiant heater for external use. Three sizes available, 1.5 to 4.5kW input.

- Wall brackets included.
- IP24 rated.



Apollo

Electric radiant heater for internal use. Four sizes available, 1.5 to 9.0kW input.

- Six configurations.
- Three phase models available.



Titan

Electric radiant heater for internal use. One size available - 3.0kW input.

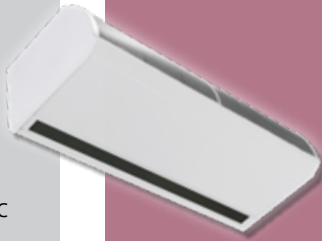
- Static has a floorstanding mount.
- Mobile models are fitted with castors.
- Both models fitted with ant-tilt device to prevent accidents.



GS

Surface mounted air curtain for commercial use. Three sizes, 1.0m, 1.5m & 2.0m wide.

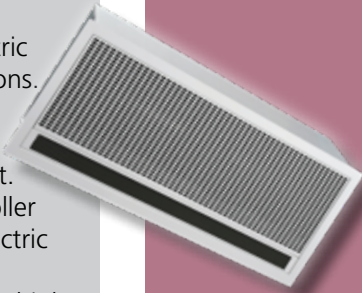
- Ambient (no heat), electric heat & LPHW heat versions.
- Three speed fan.
- Uniform distribution of air via honeycomb outlet.
- SmartElec energy controller fitted as standard on electric heat models.
- Covers doors up to 4.0m high.
- Optional emergency exit sign (illuminated).



GR

Recessed mounted air curtain for commercial use. Three sizes, 1.0m, 1.5m & 2.0m wide.

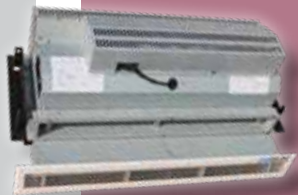
- Ambient (no heat), electric heat & LPHW heat versions.
- Three speed fan.
- Uniform distribution of air via honeycomb outlet.
- SmartElec energy controller fitted as standard on electric heat models.
- Covers doors up to 4.0m high.
- Optional emergency exit sign (illuminated).



GB

Bulkhead mounted air curtain for commercial use. Three sizes, 1.0m, 1.5m & 2.0m wide.

- Ambient (no heat), electric heat & LPHW heat versions.
- Three speed fan.
- Uniform distribution of air via honeycomb outlet.
- SmartElec energy controller fitted as standard on electric heat models.
- Covers doors up to 4.0m high.
- Optional emergency exit sign (illuminated).



AC Mini

Surface mounted air curtain for commercial use. Three sizes, 0.6m, 0.8m & 1.0m wide.

- Electrically heated (3 to 6kW)
- Single phase supply.
- Covers doors up to 2.5m high.



ACR Mini

Recessed mounted air curtain for commercial use. Three sizes, 0.6m, 0.8m & 1.0m wide.

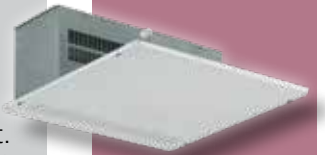
- Electrically heated (3 to 6kW)
- Single phase supply.
- Covers doors up to 2.5m high.



ACT

Ceiling tile mounted air heater for commercial use. Three sizes, 3 to 6kW.

- Electrically heated.
- Single phase supply.
- Up to 3.5m mounting height.
- Recessed or surface mounted models available



AB

Surface mounted air curtain for industrial use. Nine sizes, 1.75 to 6.75m wide.

- Ambient (no heat), electric heat, gas heat & LPHW heat versions.
- Heat outputs from 18 to 210kW.
- Covers doors up to 6.0m high.
- Vertical models available (not gas heat versions).



RTU

High efficiency packaged rooftop air conditioning unit. Twenty seven sizes available, with cooling capacities from 20 to 300kW.

- Cooling only models.
- Cooling & heat pump models.
- Optional supplementary gas heat.
- Optional heat recovery.
- Low noise variable speed condensor fans.



ColdAir

Evaporative cooling systems for industrial & commercial applications. Six models available, with cooling capacities from 15 to 30kW.

- Wall or roof mounted versions.
- Consumes up to 80% less energy than conventional cooling systems.
- No refrigerants used.



Air Induction Systems

AirMix

High induction air distribution duct system for industrial & commercial applications.

- Lightweight & easy to install.
- Diameters from 0.25m to 1.25m.
- Up to 16m mounting height.
- Twelve colours available.



Smitsair

High induction air distribution nozzles for industrial & large open commercial spaces.

- Alternative to traditional grilles.
- Air velocities of 10 to 30m/s.
- Easy to fit and individually adjustable.



Ancillaries

DS

Destraification fans for industrial & commercial use. Four sizes available 3,000m³/h to 9,000m³/h.

- Thermostat fitted as standard
- Frost protection version available (less thermostat).
- Mounting heights up to 18m.
- Energy savings up to 30% achieved (with correctly size destratification fan system) when working in conjunction with a warm air heating system.



Smartcom³

Self contained intelligent control system for warm air & radiant heating systems.

- Self adapting optimised start with auto pre-heat adjustment
- Time & temperature control
- Standard model for on/off burners.
- Advanced model for high/low or modulating burner.
- Network control on advanced model.





Derby County Football Club

First heated concourse in the UK

When Mel Morris bought into Derby County Football Club in May 2014 he not only bought into the club but into the loyal fan base too. Being a lifelong Rams supporter himself he was conscious of the important contribution that fans provide to a football club.

Pride Park is home to 30,000 fans on match days and the importance of providing a warm and comfortable environment for spectators was paramount to Mr Morris, especially with more and more families attending games and the winter months being so cold. The heated concourse is thought to be the first one in the UK and has received a very warm welcome from fans with the club receiving some very positive feedback verbally and through social media. It has been an excellent valuable initiative adding to the enjoyment of a match day experience.

Over the last three years numerous improvements have been made to the club with the most recent being the £1m stadium upgrade which includes a new PA system, a state of the art, UEFA grade lighting system, a new £300,000 pitch with under soil heating with a mix of real and artificial grass and a new heating system in the concourses of the North, East and South stands, paid for by Mel Morris himself.

Derby County Spokesman Paul Tyrrell said: "We are continuously looking for ways to improve the level of service and quality of the match day experience for our supporters. Many enhancements have been made to Pride Park recently and our decision to introduce a new heating system in our concourses

was a vital element of this upgrade programme.

"The heating system is one of the first to be introduced to stadia in the UK and are we delighted with it. Importantly, our supporters will feel the benefit of it for many seasons to come." Mr Tyrrell added.

Reznor were able to work with Pegasus, to provide the ideal heating solution for Derby FC.

The concourse is open to the pitch, therefore the outside air would constantly infiltrate into the area. The Reznor Nor-Ray-Vac system was ideal as the system transfers energy by means of electromagnetic waves, hence passes through the air without heating it. This system heat surfaces rather than the air, meaning an increased efficiency. Another major benefit to radiant heat is to be able to create an environment



Technical Summary:

Product: Reznor Nor-Ray-Vac system, suspended at 6m

Arrangement: Burners in two zones with two discharge flue points

Controllers: Smartcom³

without stuffiness.

The Nor-Ray-Vac system was designed and implemented by local contractors Pegasus, and provides blanket heat coverage of the concourse, eliminating any cold spots and has an estimated potential fuel saving of 25% over an equivalent warm air system in this type of environment.

As the concourse is situated underneath the stadium seats, the versatility of the system design meant the flue was able to be installed horizontally through the exterior walls. With the installation covering the North, West and Family Stands the total system installed comprised nine LR burners suspended at 6m high and two unitary Vision U Tube radiant heaters. The Family Stand and West Stand are situated at either end of the pitch and each are arranged in two temperature zones controlled by Reznor SmartCom³ with just two discharge flue points. The North Stand has four temperature zones providing flexibility when segregating the stand when the club increases the away fans allocation.

When a Nor-Ray-Vac system is initially designed Reznor consider the following criteria to form the basis of each particular design:

- equivalent warm air system in this type of environment
- Heat loss of the building for the required thermal environment
- Local climate conditions
- Type of activity in the building
- Specific architecture features relating to the structure

Benefits of Radiant Heat / Nor Ray Vac in this environment:

- Radiant tube heaters, mounted overhead, produce infrared radiant heat that is directed downward by a reflector. The infrared heat passes through the air without heating it and falls on people, floors and equipment below by creating a comfortable all round radiant warmth at low level, without wastefully heating the

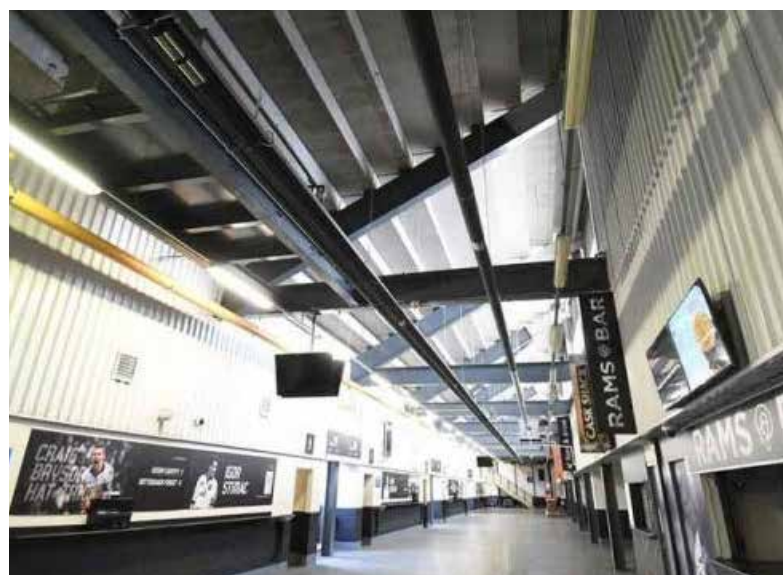
whole volume of the building or the roof space.

- Radiant heat warms objects and surfaces, increasing the mean radiant temperature and reducing the body's loss of heat to its surroundings. In addition by eliminating air movement, convective loss of heat from the body will also be reduced.
- A rapid response time is ideal to combat structure changed ambient conditions.

Radiant tube space heating is proven to meet the HVAC challenge posed by the open environment of football stadiums, reducing fuel consumption without affecting comfort levels to deliver sustainable cost savings over the long term.

Installation Summary:

- Derby County Football club invested in a Reznor Nor-Ray-Vac continuous radiant tube system
- Uniform blanket heat coverage minimised any effect of cold spots
- Highly efficient with rapid heat recovery times
- Zoning capabilities produces considerable fuel economies and cost reductions
- Comfortable environmental temperature with approx. 5°C lower air temperature
- Potential savings of 25% over an equivalent warm air system in this type of environment.



Dimensions:

North stand – Length: 112m, Width: 7.5m
 West Stand – Length: 70m, Width: 7.5m
 Family Stand – Length: 70m, Width: 7.5m

The heated concourse is thought to be the first one in the UK and has received a very warm welcome from fans, with the club receiving some very positive feedback verbally and through social media.



Sambreville Fire Station

In December 2016, the fire service of Zone Val de Sambre celebrated the official opening of its new fire station in Sambreville, Belgium. It was the culmination of a 10 year and €6.7 million project. The new fire station has a large hall of 2400 m² for the engines and vehicles, 2700 m² of office space including the dispatch centre, a crisis control room and meeting rooms, along with a gym, a catering area and other facilities for the firefighters.

The Context

The station houses 128 professional and voluntary firefighters, 22 ambulance personnel, 21 higher officers, 29 sub officers, 6 officers and 6 administrative employees. The fire station serves six municipalities with a total population of 88,000. Every year, 2,500 fire interventions and 4,000 ambulance interventions are carried out. The location of the new building was a strategic choice, near estates that accommodate companies in the chemical industry such as Solvay.

Moreover, the new fire station is located next to the training centre for the fire brigades of the province of Namur. This enables the Zone Val de Sambre station and the training centre to contribute to, as well as benefit from each other.

It was not enough to improve training. Local municipalities and Fire Service leadership also wanted to reduce emergency response time, better maintain equipment and offer more comfort to personnel. "Here we have a building that combines operational, administrative, technical and

logistic services. This means that the heating system had to be equally flexible," says Marc Gailly, Sales Agent for Belgian Reznor distributor Molimex-therm. "The firefighters need a convenient place to work in, cook their meals, stay in shape and have a shower. The ambulance area and garage must be comfortable and the main hall required a minimum temperature of 5°C".

Efficiency was an absolute prerequisite in all of this. "What the customer wanted is a building that offers comfort and at the same time meets the standards for passive houses," says Consulting Engineer Valentin Hauthot, from CSD Ingénieurs. "Maximum energy efficiency was the main priority, not only for individual HVAC units but for the heating system as a whole."



Technical Summary:

Product: Reznor RHeco condensing, low NO_x warm air heaters

Equipment Total of 5 RHeco units installed,
3 x 50 & 2 x 25
6 No destratification fans

Therefore, Molimex-therm, together with contractor Techniterm, had to supply a flexible and efficient solution, more specifically high efficiency heating for large spaces.

Reznor's gas fired unit heaters combined with destratification fans proved to be the perfect solution for large spaces. In the main hall, Techniterm installed three Reznor RHeco 50 gas fired unit heaters. Two RHeco 25 unit heaters were foreseen for the ambulance area and garage.

Reznor's high efficiency RHeco is a unit heater with some of the lowest NO_x and CO₂ emissions on the market today: under 25 ppm; NO_x class 5.

These fully condensing gas fired heaters have a thermal efficiency of 109% NCV at partial load and 100% at full load.

"The Reznor RHeco is an excellent choice for passive-type buildings," says Sales Manager Wim Ros of Nortek Global HVAC Belgium. "Unit heaters are the most efficient and ecological option to heat large spaces. What's more, the RHeco not only complies with the European ErP directives that came into force in January 2018, but also with the even stricter requirements of the 2021 ErP directive"

In conventional unit heaters, some of the energy from the combusted gas and air mixture is lost in the flue gases that are vented outdoors. In the RHeco however, these flue gases are led through a secondary heat exchanger, in which the flue gases condense to below the dew point. When water vapour, which naturally occurs in flue gases, condenses, its latent heat will also be transferred to the heat exchanger and thereby to the air flow from the unit heater. Hence, less energy is needed to heat up the space.

To further improve the efficiency of the warm air heating system, six Reznor destratification fans push risen warm air from the space under the roof back to the ground level. By recirculating air, temperature gradients are reduced.



With destratification fans, energy loss through the roof is avoided, and warm-up time will be significantly reduced.

Meanwhile the fire station has been in use for a few years and the final evaluation is positive.

"The building fully meets customer requirements in terms of comfort as well as for energy efficiency", according to Valentin Hauthot of CSD Ingénieurs. "What's more, it is the first low energy fire station of its kind."

The fire station's Logistics Manager Steve Laloux is impressed by the energy performance of the building. "The first Winter was quite mild meaning we hardly had to turn the heating on, however it is wise to calculate in a margin. In Winter in the South of Belgium, temperatures can drop to -15°C.

Compared to a traditional fire station we are saving 50% on our energy bill, and I am convinced we can go even 25% more efficient."

Efficiency: Up to 109% (ncv)
Emissions: <25ppm NO_x
NO_x Class:- 5

"Compared to a traditional fire station we are saving 50% on our energy bill, and I am convinced we can go even 25% more efficient."



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