

Paroc Group







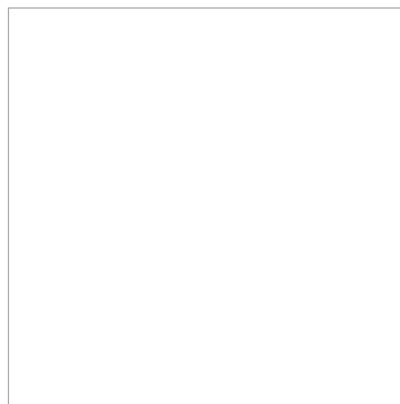
Sustainable Development

A safe, natural environment

Stone, born deep in the bowels of the earth, is an abundant natural resource and a versatile raw material. Since the beginning of time, it has been used for manufacturing tools, hearths, buildings and structures that have lasted from one generation to another.

The unique properties of stone and the demanding Nordic weather conditions have inspired Paroc to develop insulation solutions that improve people's quality of life and make their environment safe and comfortable.

Stone wool, made from nature's own stone material, is non-combustible, safe and durable. When making stone wool, the selected stone material is first melted, and then fiberized into wool containing plenty of air. The result is an ecological and economic insulation material that has unique properties, insulating both heat and sound.



IEA 5 House, Pietarsaari (Finland)

The goal of low energy construction is to achieve significant savings in energy consumption. Paroc's expertise and the long service life and efficient insulation properties of stone wool convinced the International Energy Agency (IEA) of OECD to select Paroc as the insulation supplier for the low-energy house built in Finland. The one-family house, built in 1994, is part of an IEA programme, the aim of which is to promote the development of structures and houses that consume very little energy and utilise the sun's radiation.

The energy-technological functioning of the low-energy house was monitored in 1994-1996. Heating the house consumed less than 20% of the energy that similar new, one-family houses consume on an average. The majority of the energy efficiency is due to the thick and durable stone wool insulation.



Tall Oil Fractionation Plant, Forchem Oy, Rauma (Finland)

The operation of Forchem Oy, refining raw tall oil, is based on environmentally friendly processes. The company actively charts significant environmental impacts of its operation and takes environmental viewpoints into consideration when planning new projects.

When designing the Rauma production plant, the latest technology and expertise of the sector were utilised. One of Forchem's aims was sensible waste recycling and low energy consumption. Paroc was selected as the supplier of technical insulation for the Forchem production plant, as Paroc's stone wool products support Forchem's ecological viewpoint with their long service life, recyclability and energy-saving properties.



Natural Choice

Stone wool is made of stone

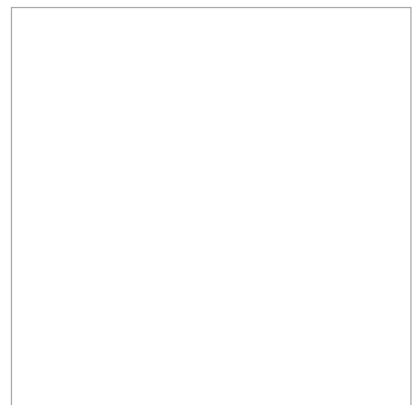
Paroc stone wool is made of nature's own stone material. Of the stone wool, 95-99 percent consists of molten and fiberized stone, into which binders are added during the manufacturing process. As a result, durable stone wool is produced that insulates both heat and sound.

Stone wool saves energy and very efficiently reduces ecological burdens caused by energy production and consumption. The amount of energy used for its production is saved more than 100-fold during the life cycle of the application. A building insulated with stone wool and thus having a low energy consumption, is a practical environmental action.

Forum Palace, Vilnius (Lithuania)

The Forum Palace is a leisure centre located in the heart of the quickly developing Vilnius. The owner of the Forum Palace, the NBA basketball player, Sarunas Marciulionis, wanted to build a centre in which one can feel at home and relax. The centre includes a concert hall, restaurants, pubs and clubs, and it offers its visitors various exercise and refreshment opportunities.

Due to the multiple applications of the building, the Paroc stone wool was selected as the insulation solution. Stone wool is extremely suitable for the insulation of large public buildings, as it is famous for its fire safety, soundproofing properties and energy efficiency. In addition to the excellent product and swift installation, Paroc's ability to provide added value to its customers and to deliver comprehensive insulation solutions – reliably and expertly – was appreciated.



Extension of Thermal Power Plant Panna fem, Västerås (Sweden)

The Paroc products are eminently suitable for the demanding requirements of industrial construction. Designing the buildings is challenging, and the development work and choices of material are to a large extent guided by technical and economical issues. Paroc sandwich panels were selected for the new building of the Västerås Stads Kraftvärmeverk thermal power plant because of their total economy, variety and applicability.

Furthermore, the appearance of the plant had to be modern. It had to reflect a durable exterior and yet be pure and commanding. The aesthetically attractive and detailed Paroc Panels met these requirements very well.



Economic Investment

Insulating reduces heating costs

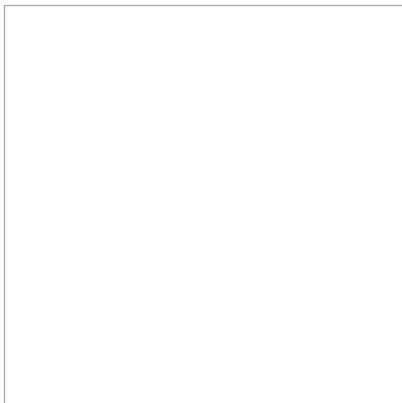
Insulating is economically sound. It provides energy efficiency and reduces heating and cooling costs. Functional and durable thermal insulation optimises the investment and operating costs of heating and cooling systems, increasing the resale value of the property. A single investment pays for itself many times over.

Stone wool is a strong and durable building material. With Paroc's expertise, an optimal insulation solution can be designed for each project, creating savings in building costs and improving the cost-efficiency of the completed unit. The installation of correctly designed insulation solutions is easy, and the building can be quickly put into productive use.

Fortum Oil Refining, Porvoo Oil Refinery (Finland)

For decades, in co-operation with refinery subcontractors, Paroc has been involved in the insulation of oil tanks and piping and the construction of various technical facilities for Fortum's Porvoo oil refinery. In addition to strong product properties, a material supplier is expected to have versatile expertise to meet the demanding conditions of an oil refinery.

When it comes to the special requirements of a refinery, the personal and fire safety properties of the products are crucial in product selection. Paroc's strong ability to prove that their stone wool insulation products and sandwich panels are non-combustible, and that their products are durable and suitable for the special conditions of an oil refinery have convinced the customer and the subcontractor to select Paroc insulation and panel system solutions time and time again.



Cruise Ship Navigator of the Seas, the Caribbean Sea

The close and long cooperation between Paroc and Kvaerner Masa-Yards Oy has added to Paroc's understanding of the customer's special requirements and operating methods.

In the increasingly fierce competition in the marine sector, the importance of a skilled and reliable partner becomes ever more important. Products must be of a high quality, support the customer's production method and naturally meet the requirements of the general classification institutions and authorities of the sector. Fire safety is also important, especially when dealing with ships accommodating several thousands of passengers.

The specially made Paroc thermal and fire insulation products can be found for example in the hull and cabin structures and other interior features of the Navigator of the Seas cruise ship of Royal Caribbean Cruises Ltd. The ship, cruising in the Caribbean, is one of the largest cruise ships in the world, with accommodation for almost 4,000 passengers.



Fireproof Insulation

Stone does not burn

Using fireproof insulation material makes everyday life more carefree. Stone wool is made of stone that does not ignite or burn. As well as insulating heat and sound, it also efficiently insulates and restrains fire. In addition to traditional construction, stone wool is used in very demanding projects in order to increase fire safety. These projects include ships, building lifts, airports, fireplaces and chimneys as well as large production and warehouse buildings.

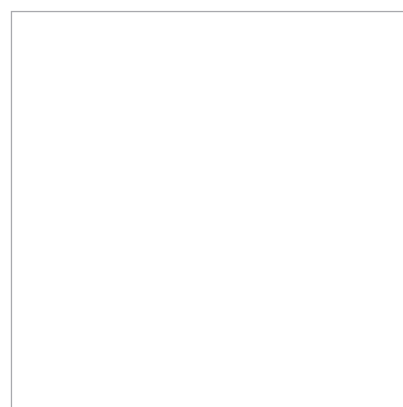
The fire safety of buildings is one of the basic requirements for everyday operation. Paroc stone wool is a reliable choice for protecting lives and property. It lasts and insulates even in the most demanding conditions.



Arla Dairy, Götene (Sweden)

Approximately 60,000 tons of cheese and 30,000 tons of butterproducts pass through the Arla Götene dairy every year. Milk products are stored and refined at the dairy facilities; therefore, the hygiene, washability and suitability for the needs of the food industry were among the most important requirements during the construction stage.

The inside and outside walls of the dairy building and other interior panels were ordered from Paroc. In Paroc Panels and other insulation products, the customer especially appreciated the smooth and finished surfaces that make the continuous cleaning of the facility easier. Furthermore, the customer found the moisture resistance of the insulation products and panels very important.



Puijonkartano Allergy House, Kuopio (Finland)

The goal of the nationwide Pulmonary Association Heli in cooperation with the regional association in Kuopio (Kuopion Seudun Hengitysyhdistys) was to build a residential house for allergic people and people with respiratory diseases, in which the indoor air would be clean and the flats dustless, odourless and easy to clean.

In preparation for the project, a study was made charting the emission of building materials and their effects on indoor air. Also, insulating materials were examined, and the material causing the least emissions, Paroc stone wool, was selected as the insulation material.

The construction work was performed in as clean and dry conditions as possible. The result of the construction work was the Puijonkartano block of flats, in which the quality of the indoor air was monitored for three years. The studies showed that building materials have a significant effect on the quality of indoor air: In Puijonkartano, the quality of indoor air is significantly better than in traditionally built buildings.





For A Good Environment

Stone wool insulates and protects

Due to its versatile applications, stone wool offers a healthy and safe environment. It protects from cold, heat, sound, humidity and draught. Furthermore, it guarantees good and healthy indoor air.

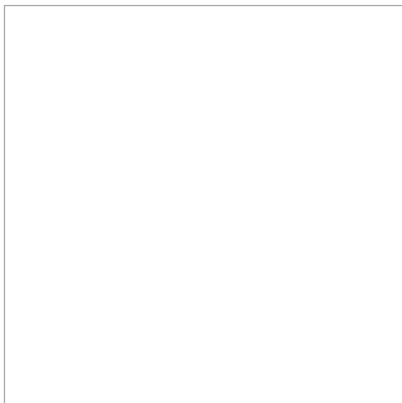
Stone wool does not cause noxious emissions in the indoor air of buildings. The natural stone used as raw material is a moisture-resistant material, in which, as studies have shown, mould and bacteria do not thrive. Paroc stone wool is a durable choice for a good environment.



Hotel Rezydent, Sopot (Poland)

At Sopot, Poland, Paroc's durable and high-quality stone wool insulation was selected as the insulation material for an exceptional hotel building project. When selecting the insulation material, attention was paid not only to high quality but especially to the formability, versatile application and soundproofing capabilities of the insulation material. Furthermore, the material had to be suitable for use as a substructure of the façade rendering. Only stone wool met the requirements set for the insulation solution of this demanding building project.

As the result of the building project, the luxurious Hotel Rezydent was built. It imitates the architecture of the 19th century and merges well into its historical surroundings. The hotel provides its customers with quality and professional service. The same properties are also required from the supplier of the insulation material.



Saku Suurhall, Tallinn (Estonia)

Saku Suurhall is the most recent and largest multi-purpose arena in Tallinn, with an auditorium for approximately 10,000 people. Concerts and sports events are organised in the arena, and it is also possible to use for different kinds of exercise. The arena received international publicity in 2002, when the European Song Contest was held there.

In the Saku Suurhall building project, Paroc was the main supplier of sandwich panels and insulation material as well as the technical adviser for insulation solutions. Paroc Panels glitter on the arena façades. In the flat roof, a special ventilated thermal insulation solution developed by Paroc is used and perforated Paroc Acoustic Panels are employed in the interior decoration. The quality and versatile applications of the Paroc products and easy co-operation were commended by the customer.





Reliable Quality

Decades of experience

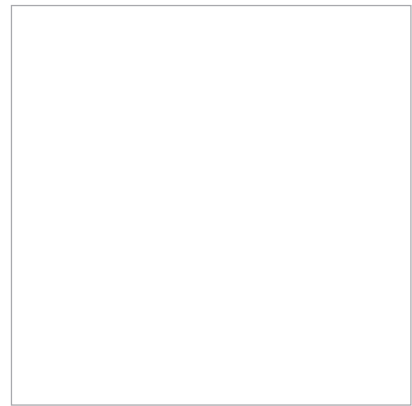
Nature's own stone is a high-quality building material. Working stone and utilising it efficiently in building processes require knowledge and skills. The expertise comes from years of experience and from a desire to meet customers' changing requirements.

Mineral wool has been industrially manufactured for approximately 100 years, mainly for thermal insulation and fire protection purposes. Paroc's product development has continued for more than six decades and has turned mineral wool into Paroc stone wool, known for its quality, reliability and versatile applications.

National Theatre of Finland, Helsinki (Finland)

The National Theatre of Finland was renovated in honour of its centenary in autumn 2002. During the renovation, the building and technical insulation were replaced together with the fire curtain that, according to the fire regulations, is needed for isolating the large auditorium spaces from the stage. Also, the air conditioning of the auditorium was replaced.

Paroc acted as the supplier of renovation insulation and as the technical expert and innovator of the fire curtain structures. According to a new application, non-combustible Paroc Panels were fastened on both sides of the steel frame structure of the curtain. The result was a unique fire curtain; its materials were light but sufficiently rigid to withstand the strong pressure on the structure in a fire. The air conditioning solution for the auditorium was also developed and implemented in a new way in cooperation with the customer.



Väro Bruk, Södra Cell AB (Sweden)

Södra Cell is one of the world's leading producers of wood raw material and pulp. The company invests in environmentally friendly production capacity that utilises the best possible technology. The Väro pulp factory is especially known as the pioneer of chlorine-free pulp manufacturing.

Paroc is the reliable insulation supplier for the Väro pulp factory. The special conditions and polymorphous technical solutions of the pulp factory set exact requirements on the suppliers of building and insulation materials. In particular, the recovery boilers and piping require technical insulation products to protect them so that they can withstand high temperatures and humidity. It was found that due to its formability, environmental friendliness and safety, Paroc stone wool is very suitable for insulating these objects. The correct solutions were developed in a long-term cooperation with the customer and Andritz, a global supplier of boilers.



A Step Ahead of Others

Patented technology

Paroc offers the most comprehensive selection in Europe for insulation needs. The innovations and patented manufacturing technologies continue to make the product range more versatile and provide possibilities for making the production and use of stone wool more efficient and for lengthening its life cycle. The sustainable development is guided by the recyclability and positive environmental effects of stone wool.

Starting the production of stone wool was a major innovation of its time, on which it is good to build products of the future. Paroc has undertaken to develop and produce stone wool products and insulation solutions that meet people's requirements today and tomorrow.



Insulation Expert

Paroc Group in brief



Paroc is one of the leading stone wool insulation manufacturers in Europe. It develops and manufactures stone wool products and provides solutions, such as sandwich panels and technical insulation, in order to meet people's requirements and to make their lives and environment safe and pleasant. The most important applications of the products are thermal, sound and fire insulation.



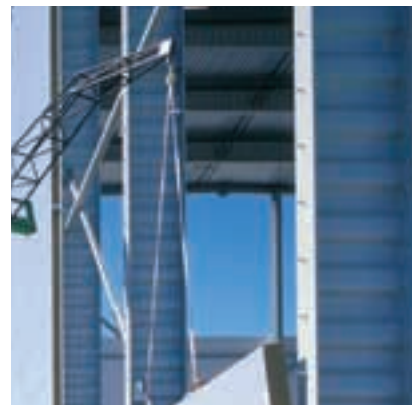
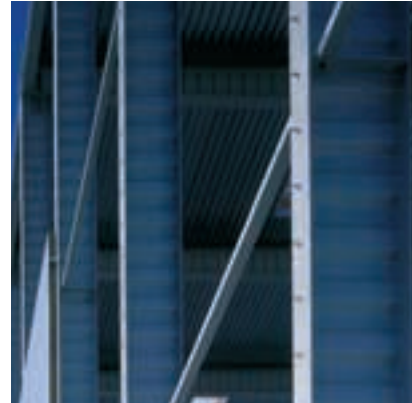
Paroc is continuously developing its operation. The goal of the company is to grow profitably and to develop into the most innovative supplier of stone wool products and added-value solutions in Europe. Paroc's success is based on knowing the customers' requirements and on active and unprejudiced research and development work.

Paroc's extensive product and service range develops and becomes more versatile in cooperation with our customers. Paroc building insulation and panels and the insulation for technical systems and equipment are versatile, easy-to-adapt and expandable solutions that are suitable for insulating individual houses as well as the most demanding commercial and industrial buildings.

Paroc building insulation products are suitable both for new building projects and for renovating buildings. The building insulation is mainly used for the thermal, fire and sound insulation of exterior walls, roofs, ceilings, base and intermediate floors and partition walls.

Paroc technical insulation is used for thermal, fire, sound and condensation insulation in building technique, industrial process equipment and piping, industrial products and ship structures.

Paroc Panels are steel-faced lightweight panels with a core material of stone wool. Paroc Panels are used for façades, partition walls and ceilings in public, commercial and industrial buildings.



Paroc's History

2000s

- Paroc's growth and internationalisation continue in Europe.

1990s

- Paroc Group becomes independent.
- Expanding to the Baltic countries and Poland.

1980s

- Manufacture of sandwich panels is started.
- Market position becomes stronger in the Nordic countries.
- The name Paroc is registered for the first time.

1970s

- The red-striped packages are launched.

1950s

- Manufacture of pipe and equipment insulation is started.
- Manufacture of stone wool is started in Finland.

1930s

- Manufacture of stone wool is started in Sweden (not yet a part of Paroc).





The information in this brochure represents the sole and comprehensive description of the condition of the product and its technical properties. However, the content of this brochure does not mean granting a commercial guarantee. In so far as the product is used in an area of use which is not provided for in this brochure, we cannot warrant its suitability for said area of use unless the suitability was expressly confirmed by us upon request. This brochure replaces all previous brochures. As a result of constant further development of our products we reserve the right to make alterations and adaptations to brochures.

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