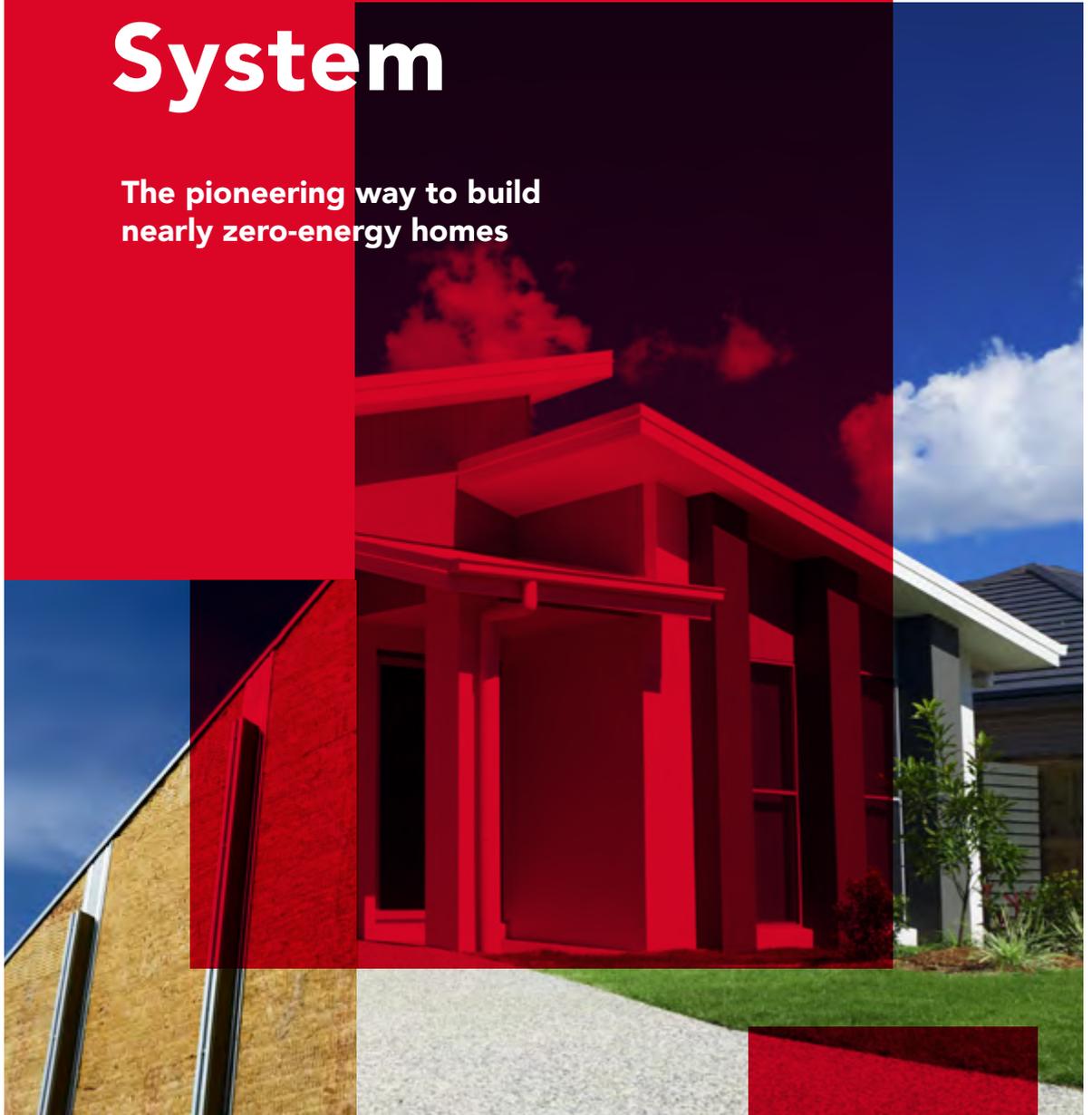


Rockzero System

The pioneering way to build
nearly zero-energy homes



IF YOU BUILD SOMETHING
IT SHOULD STAND FOR SOMETHING





Sustainability is now one of the defining issues of our times.

So when you build something, it should stand for something.

For millennia humans have built walls. For protection, comfort and privacy.

A wall's purpose is as important as the way it's built. And now they can finally stand for more.

Innovating for the planet's future. Building a sustainable way of living. Comforting our children's children.

We stand for the future. Pioneering new ways to build. Developing wall systems with stone wool insulation.

Building sustainable homes is now easier. Getting nearly zero-energy ratings is now easier. Protecting families for generations is now easier.

The world deserves better homes. We're here to help you build them.

Rockzero. Stand for something.



SO WHAT DO WE STAND FOR?



At ROCKWOOL, our purpose is to release the natural power of stone to enrich modern living so that we can preserve our resources and have the least possible impact on the environment.

We've spent 80 years reinventing the wall. Not the wheel, the wall.

Introducing our latest innovation, Rockzero: a pioneering new wall system that integrates the natural benefits of stone wool insulation with the structural support of the home. It's revolutionising the way homes are built.

With Rockzero, you can build homes with superior energy efficiency, fire protection and indoor comfort. They will deliver on energy performance as calculated. And they will be airtight, yet breathable.

Rockzero homes are also faster to build to standards that exceed local regulations and give long-lasting durability. This makes it easier to construct next-generation sustainable homes.

We stand for the future of affordable, sustainable buildings. We stand for peace of mind – built into the walls of every Rockzero home.





Meet the energy levels of tomorrow

Energy consumption has become one of the global issues of our time, and our homes are part of the challenge.

Buildings are responsible for around one-third of energy consumption and 20 percent of CO2 emissions. That rises to 50 percent in major global cities, with the majority of energy consumption going towards heating, cooling and ventilation.

Since these figures can only go up with our growing world population, we all have an opportunity to play our part and build more environmentally friendly housing with an affordable lifetime cost. And for this to happen, homeowners must have increased access to the financial and environmental benefits of sustainable homes.

That's why at ROCKWOOL we've created Rockzero. It's designed to meet the challenge of reducing energy consumption and building a sustainable future. As an innovator, you can use our high-quality wall system to change the way you build and improve energy performance without compromising your business model.

If homes are part of the challenge, our walls are part of the solution. With Rockzero, you're ready to meet the requirements of tomorrow – and protect future generations.



Nearly zero-energy homes that stand for the future

The future is energy efficiency. So when you build a home, it's important to use the most efficient and sustainable building methods and materials to guarantee low energy consumption from day one.

One of the best, most natural ways to effectively reduce energy consumption is stone wool insulation.

At ROCKWOOL, we've integrated this natural material in an exceptionally strong but lightweight structure to create the Rockzero wall system. Using Rockzero, you can quickly create a nearly zero-energy building that exceeds the toughest standards in terms of thermal insulation, sound insulation, health and sustainability.

By designing and building sustainable homes, you'll help to reduce energy costs. And because Rockzero is fully recyclable, you can rest assured that you're contributing to a brighter and safer future for homeowners and the planet.



Bringing the power of stone into the build

We're all familiar with the properties of stone – it's sustainable, non-flammable and resilient. Now all the strengths of stone can be built into the walls of every home with stone wool insulation – giving peace of mind to homebuilders and their customers.

Stone wool is produced using the same process that occurs during volcanic activity: heat creates nature's version of the strands we call stone wool, which is made of 97 percent natural stone and recycled materials.

With Rockzero, we've released the natural power of stone wool in a complete wall system. Since volcanic rock is so abundant in its natural state, it is highly sustainable and can address the world's most significant construction challenges.

By creating homes with the strengths of stone wool built-in you won't compromise on quality, value, functionality, design or the health of homeowners.

Stone wool is made from

97%

natural stone and recycled material.



The very practical advantages of our stone wool insulation:



Excellent thermal performance

Stone wool insulation saves energy by maintaining optimum indoor temperature and climate. Air pockets within the insulation keep hot air out in warmer climates and retain warm air in cold climates. This temperature maintenance can dramatically reduce heating, cooling and ventilation costs, and reduce a building's carbon footprint. As a result, you create more healthy, productive and cost-efficient living and working conditions.



Protect against fire

Stone doesn't burn. So stone wool insulation is extremely resilient to fire and works to isolate fire and prevent its spread across adjacent rooms. Tests show that our insulation can resist temperatures exceeding 1,000°C. It also does not contribute to the emission of significant quantities of toxic smoke, one of the major threats during fires.



Enhance acoustic comfort

Stone wool insulation provides excellent sound absorption to reduce unwanted noise significantly. This means you hear less noise from adjacent houses and rooms as well as other external influences. And since stone wool also prevents the spread of noise you make the whole neighbourhood quieter too.



Built for a lifetime

Stone wool has unique built-in robustness. Compression, impacts and changes in humidity don't affect its stability. It adapts to all types of irregularities, leaves no gaps in the insulation layer and keeps its shape with unchanged performance for a building's lifetime.



Buildings that breathe

Because of stone wool insulation's breathability, heat is retained while moisture is discharged, all in a natural way. And since there is very little organic material within the stone insulation fibres, the risk of fungus formation, mould and especially rot is drastically reduced.

Rockzero: build homes faster and more economically, without compromise

Compared to traditional building methods, Rockzero gives you a fast-track method to create high-quality sustainable homes.

The innovative wall system is modular and lightweight, which significantly reduces construction time since the system can be built on-site quickly, easily and reliably. As a result you can optimise the use of resources, and the business case for building homes can be met without compromise on performance, quality or design.

Sustainable home building is a very different prospect with the inherent strengths of Rockzero. Everything from thermal performance and fire safety to acoustics and air quality has been considered, created and consolidated in one compact wall system.

Our robust yet lightweight solution is designed to stand the test of time, with nearly zero-energy performance today and no compromise on future sustainability, for many years to come.

With Rockzero you don't have to change the way you build a home either. Building nearly zero-energy homes has never been easier with all of the technical and practical benefits of Rockzero:



Predictable calculations

Energy calculations are simple and fewer revisions are needed. The Rockzero wall system has built-in air tightness and most of the elements are based on high energy performing stone wool. This means the wall acts as one homogenous element, with no cold bridges, resulting in best-in-class energy performance – both on paper and in real life.



No energy constraints

The performance of Rockzero exceeds current and future energy regulations without the use of other energy sources and with no restrictions on the orientation of the building, or choice of primary heating source. This flexibility ensures an efficient build and sales process, leading to higher Return on Investment (ROI).



Total Cost of Ownership

Calculated energy performance can be undermined by additional solid components in the wall, especially around windows, doors and adjoining building parts. Rockzero has no thermal bridges, so it performs consistently, regardless of the building's layout. Also, stone wool insulation is robust and durable. It does not change its shape or form, creating unwanted gaps, so you will have predictable low energy and maintenance costs for decades and a low Total Cost of Ownership (TCO).



Design freedom

Rockzero's lightweight modular system gives architects and designers all the usual design choices for the interior construction and layout of the house. And the creative vision can include a bespoke finish with a variety of solutions such as cladding products or even cavity walls.



Load-bearing

Rockzero has an intelligent column design that integrates stone wool insulation with a relatively small amount of steel. This gives very high load-bearing capability – up to two-and-a-half floors high – whilst being thermally efficient. We're the easiest way to build low energy buildings with insulation as part of the load-bearing structure.



Lightweight and easy to install

The process of construction is significantly improved and simplified with Rockzero. There are no heavy materials to carry, mix, or lift. And our fast-to-assemble components deliver high-quality builds using known and traditional construction methods, so there's nothing new to learn.



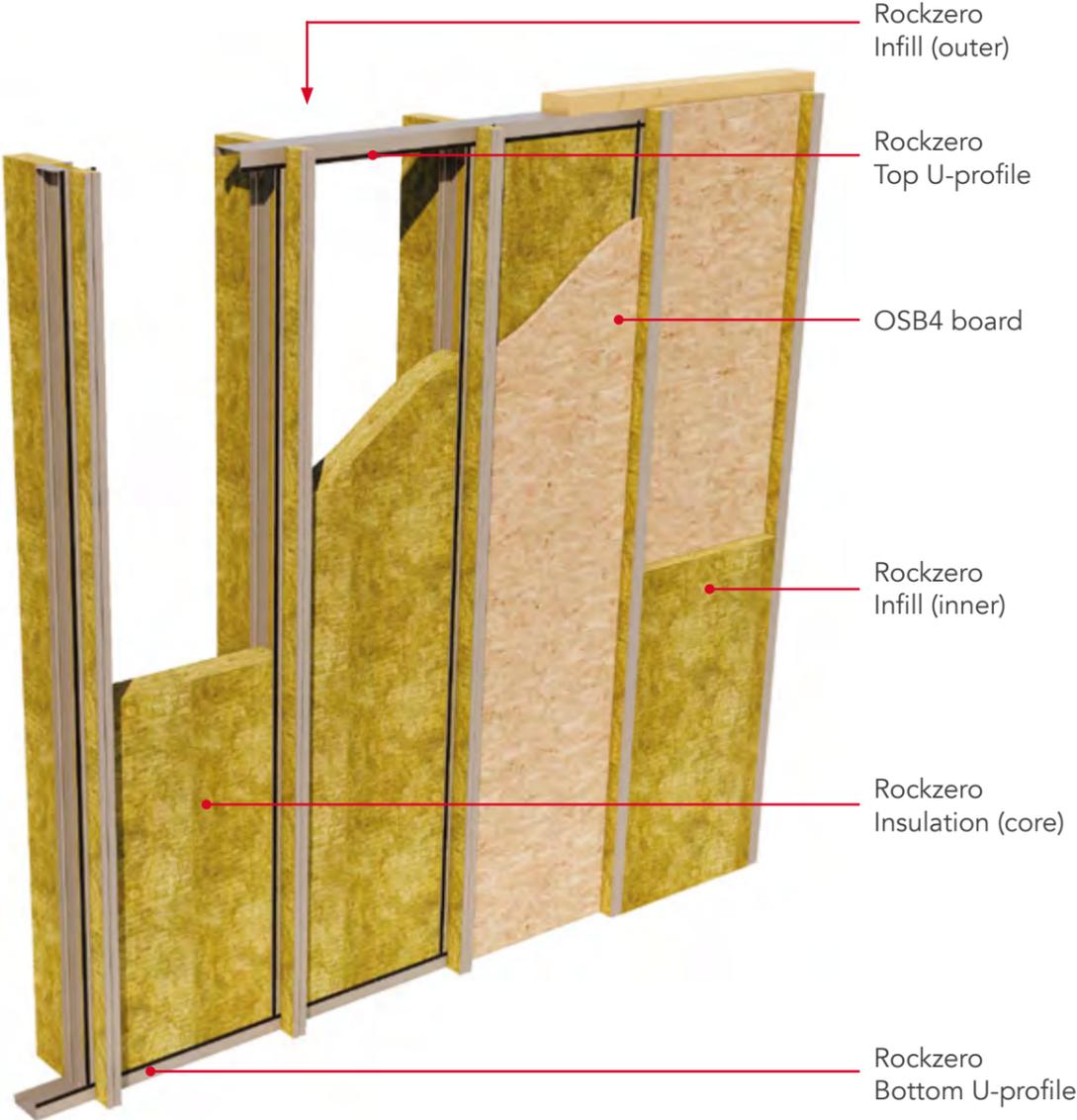
Optimised support

To make the building process as smooth as possible, we provide full support including design guidance from our construction experts, support for drafting building plans and much more. Just contact the Rockzero sales team, and we will tailor our support services to your needs.

A short introduction to the Rockzero system

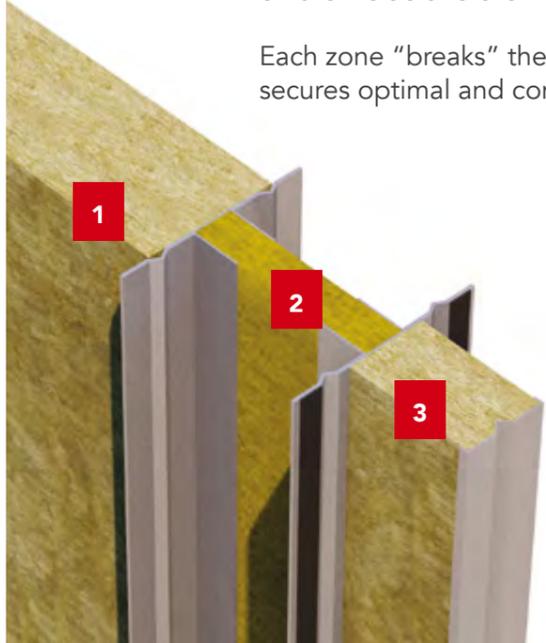
The Rockzero wall system is a unique combination of stone wool columns, ROCKWOOL insulation and airtight OSB4 boards on the inside.

This results in an outer wall with few components and a slim solution with optimal energy performance.



The key element of the Rockzero concept is a load-bearing stone wool column reinforced with steel. The Rockzero column contains a total of 3 zones; a structural zone in the centre, a service void for electric and plumber installations on the inside and the main insulation zone on the outside.

Each zone "breaks" the thermal bridges created by steel elements which secures optimal and consistent energy performance for the Rockzero wall.



- 1. Main insulation zone
- 2. A structural zone
- 3. Zone for running services

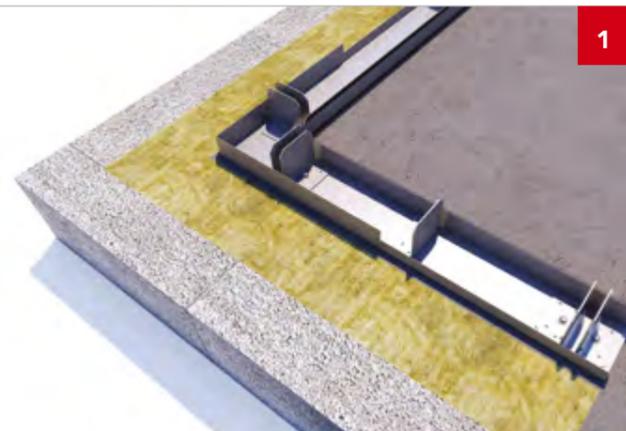
Basic installation steps

Rockzero is an innovative, lightweight and flexible solution that is straightforward to install. This pioneering new method uses known construction techniques to make the on-site build quicker and easier, while also helping to create a safer and tidier working environment. This minimises risk, takes away the need for specialist skills and is flexible enough to provide complete design freedom.

To demonstrate how easy this can be, we've highlighted some of the key stages of a build, with a short explanation of how the Rockzero wall system can be installed on-site.



Key components:
Bottom/Top U-profile
Column
Insulation (core)
Insulation Infill (inner)
Insulation Infill (outer)



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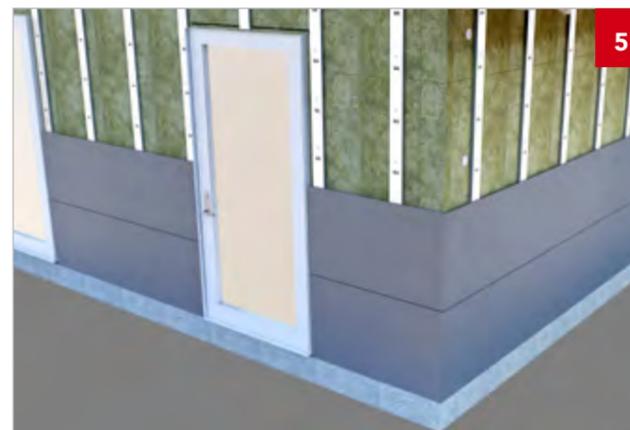
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Step 1:

You start by laying out the bottom U-profiles and setting the column bracket. The brackets define the position of the Rockzero columns and are used to fix them.

Step 2:

Rockzero columns are a key component of the system, as they incorporate many benefits of stone wool insulation and offer a load-bearing solution. Rockzero insulation is fitted between the column's flanges to stabilise them. Stone wool boards are rigid, robust and commonly used by professionals around the world. Continue setting the insulation and columns until you reach a corner or an opening. Finish the wall with a top U-profile and a wall plate to prepare for installation of common lightweight deck or roof constructions.

Step 3:

Window and door openings are easily created in the same way as traditional timber constructions. This gives maximum design flexibility and control.

Step 4:

Once all the columns are in place, mount airtight OSB4 boards and establish the service void. A service void makes it easy to install electric and pipe services in a safe and quick way.

Step 5:

Place Infill (outer) between all columns and mount the rain screen. Brick and many types of lightweight cladding are usable, to bring the exact architectural vision to life.

Rock is the new green

Modern living requires that we deliver energy efficiency and comfort sustainably. By integrating stone wool insulation into the walls of a home, Rockzero makes building a better tomorrow achievable today.

You will start from a position of sustainable strength. On average our natural stone wool contains more than 30 percent recycled material. And because stone wool can be recycled indefinitely, the Rockzero homes you build can be fully disassembled at the end of their lifetime to make new products.

Homeowners will enjoy the benefits of Rockzero for its lifetime too. Stone wool has long durability, so it won't need any maintenance or refurbishing a few years after construction. Our insulation makes a net positive carbon impact – saving 80 times the carbon emitted in its production through lifetime energy savings.

The innovative, modular design of Rockzero also means you can create more stylish sustainable homes thanks to its greater design freedom and different finishing choices.

Protect families for generations to come. Build more sustainable nearly zero-energy homes with the remarkable, recyclable properties of stone wool from ROCKWOOL.

Discover more about the benefits of Rockzero today.

Visit rockwoolgroup.com/rockzero

What the professionals say

"With the Rockzero wall system, the electrician and plumber can easily penetrate the stone wool spacer and fix cables without special tools for drilling. This saves a lot of time in the construction process."

Phillip Holbek, Carpenter at multi-disciplinary Danish building contractor, Mernild Byg

"The energy performance of the wall is typically specified by the architects. When new elements are added during the design process it is often difficult to maintain the specified energy performance without increasing the insulation thickness. The advantage of Rockzero is that the U-value is the same no matter the building layout. Even in corners and around windows, it's easy to calculate energy performance and maintain the thin construction."

Brian Hurup-Felby, Technical Advisor, Energy & Indoor Climate at Danish Energy Management & Esbensen

"The fact that the Rockzero wall system is demountable with dry connections and made with recyclable materials helps us support a circular economy in our projects."

Kim Dalgaard, Architect at Vandkunsten

"Even small changes in the building design require recalculating the energy performance and this can be very time consuming with traditional walls. A thermal bridge-free system like Rockzero saves us a lot of time on endless recalculations. This gives a high degree of design freedom and predictability of total energy performance."

Morten Bindslev, Technical Advisor, HVAC at Danish Energy Management & Esbensen

At the ROCKWOOL Group, we're committed to enriching the lives of everyone who experiences our solutions. Our expertise is perfectly suited to tackle many of today's biggest sustainability and development challenges, from energy consumption and noise pollution, to fire-resilience, water scarcity and flooding. Our range of products reflect the diverse needs of the world, while supporting our stakeholders in reducing their own carbon footprint.

Stone wool is a versatile material and forms the basis of all our businesses. With over 11,000 passionate colleagues in 39 countries, we're the world leader in stone wool solutions, from building insulation to acoustic ceilings; external cladding systems to horticultural solutions; engineered fibres for industrial use to insulation for the process industry – as well as marine and offshore.



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