NyRock® Rainscreen 032

Low lambda non-combustible stone wool insulation for ventilated facades

NyRock® Rainscreen 032 is a stone wool insulation product specifically developed for use within ventilated cladding systems, as well as sealed systems such as curtain walling.

Manufactured using patented technology, NyRock Rainscreen 032 has a more efficient fibre structure that increases the density of air pockets trapped within each slab. This results in an improved thermal performance when compared to traditional stone wool products.

Once installed, the product's high density works in combination with a factory-applied water repelling agent to give improved resistance to rain ingress during construction.

The product can be easily fitted around brackets and other awkward details, and when tightly butted, adjacent slabs effectively 'knit' together to provide a continuous insulating layer, reducing heat losses that would otherwise be caused by gaps.

For optimum thermal performance in framed structures, combine NyRock Rainscreen Slab 032 with Nyrock Frame Slab 032.

- Low thermal conductivity of 0.032 W/mK
- BBA pending
- Non-combustible Euroclass A1
- Independently tested acoustic benefits
- Water repellent yet breathable
- Stone wool is dimensionally stable and has been proven to provide the same performance for more than 55 years after installation.*
- Can be recycled and reprocessed, reducing landfill costs, with zero ODP and GWP.

Low lambda non-combustible insulation for use within facade systems.

NyRock Rainscreen Slab 032 is manufactured using patented NyRock technology for low lambda performance. In addition to thermal comfort, NyRock Rainscreen Slab provides independently-tested acoustic benefits.

FIW, Durability Project Mineral Wool (2016), "Conclusions and Outlook." Available via EURIMA (European Insulation Manufacturers Association) at https://www.eurima.org/uploads/ModuleXtender/Publications/168/2017-02-21_EURIMA-55YearsOfUse_Info_Sheet_V08_final.pdf

For more information visit rockwool.com/uk

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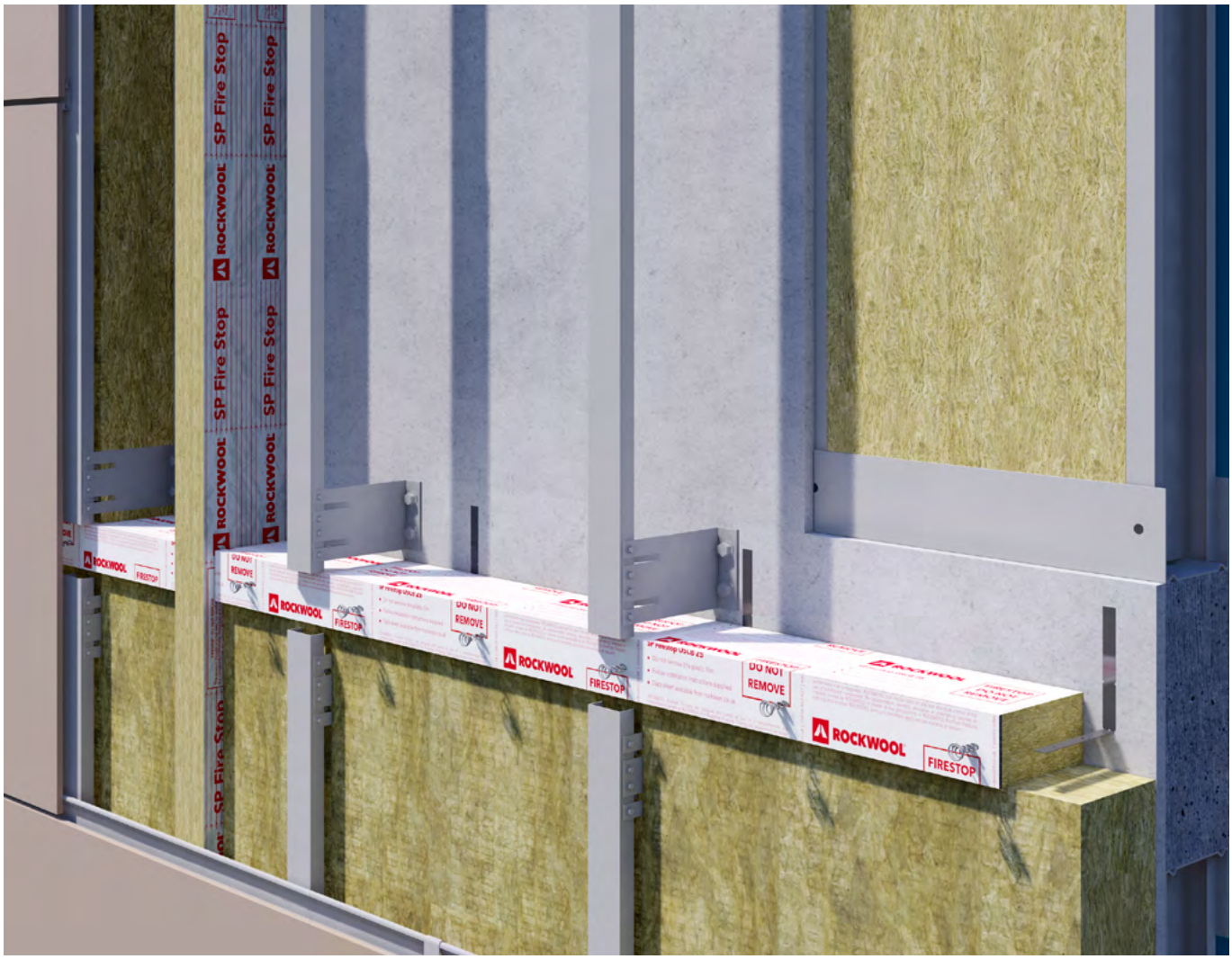
NYROCK® RAINSCREEN 032



APPLICATIONS

NyRock Rainscreen 032 is suitable for use on the following construction types:

- Steel frame, timber frame or masonry walls in conjunction with a cladding system;
- Steel frame or timber frame with a masonry outer leaf

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PERFORMANCE

Thermal performance

Thermal conductivity = 0.032 W/mK

Acoustic performance

As demonstrated by independent in-situ laboratory testing, NyRock Rainscreen 032 helps to reduce the transfer of airborne noise - with results for typical systems as high as Rw 60 dB.

Fire performance

Rated Euroclass A1 when assessed to EN 13501-1 using test data from reaction-to-fire tests.

Water resistance

ROCKWOOL stone wool repels liquid water due to its fibre orientation and the presence of water-repellent additives.

Condensation control

The vapour resistivity of ROCKWOOL mineral wool is 5.9MNs/gm. The slabs therefore reduce the risk of condensation, allowing natural drying-out of the structure.

U-values

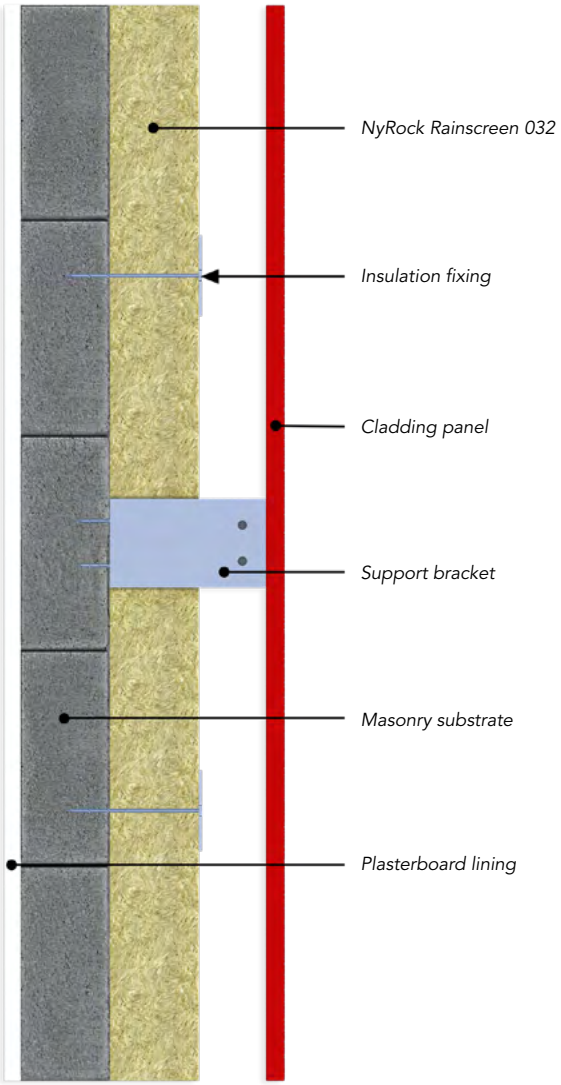
1. Cladding system in conjunction with concrete/masonry

NyRock Rainscreen 032 between metal bracket system on 150mm reinforced concrete (plasterboard on dabs).

NyRock Rainscreen 032 (mm)	U-Value (W/m²K)
110	0.30
115	0.29
120	0.28
125	0.27
130	0.26
135	0.25
145	0.24
150	0.23
160	0.22
170	0.21
180	0.20
190	0.19
200	0.18
215	0.17
230	0.16
245	0.15

Notes

- Tables based on pointloss scenarios where only the rainscreen brackets bridge the thermal insulation layer.
- U-values shown have been calculated with a thermal bridging allowance which has been determined using a 3-dimensional analysis in accordance with BR443. The system modelled included 8mm Rockpanel Rockclad and Ash & Lacey AXIAL brackets.



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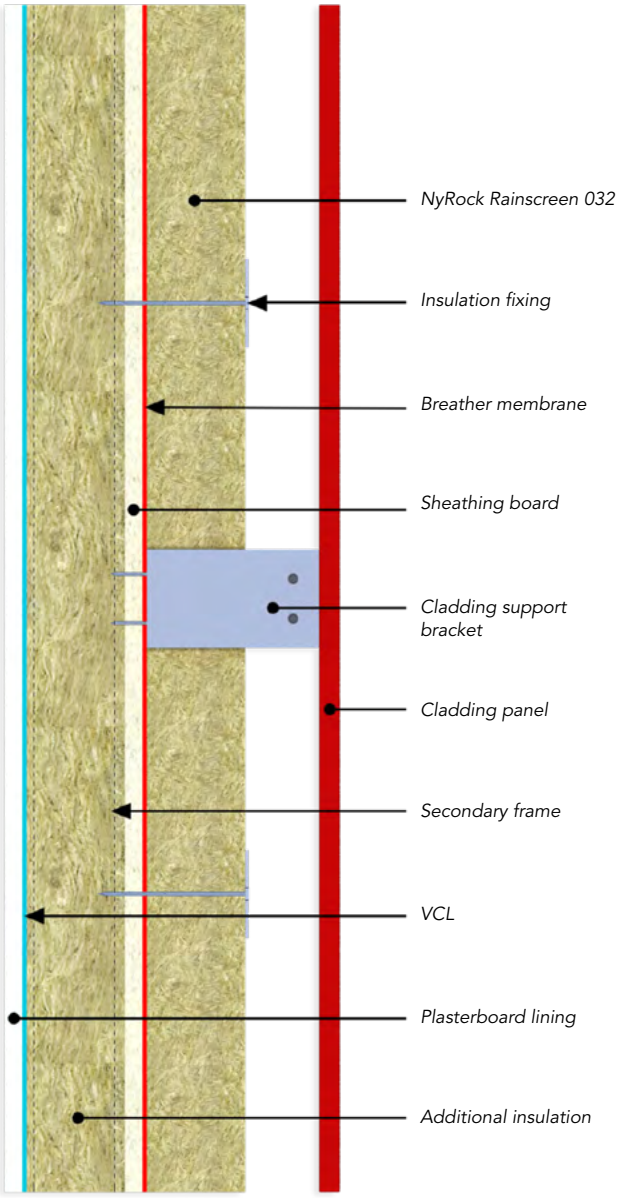
2. Cladding system in conjunction with steel frame filled with NyRock Frame Slab 032

NyRock Rainscreen 032 on 100mm deep metal studs at 600mm centres with 100mm NyRock Frame Slab 032 installed within the frame.

NyRock Rainscreen 032 (mm)	NyRock Frame Slab 032 (mm)	U-Value (W/m²K)
50	100	0.30
55	100	0.29
60	100	0.28
65	100	0.27
70	100	0.26
75	100	0.25
80	100	0.24
85	100	0.23
95	100	0.22
105	100	0.21
115	100	0.20
125	100	0.19
145	100	0.18
160	100	0.17
180	100	0.16
200	100	0.15

NyRock Rainscreen 032 on 150mm deep metal studs at 600mm centres with 150mm NyRock Frame Slab 032 installed within the frame.

NyRock Rainscreen 032 (mm)	NyRock Frame Slab 032 (mm)	U-Value (W/m²K)
50	150	0.26
55	150	0.25
60	150	0.24
65	150	0.23
70	150	0.22
80	150	0.21
90	150	0.20
100	150	0.19
110	150	0.18
125	150	0.17
150	150	0.16
170	150	0.15
190	150	0.14



Notes

- U-values shown have been calculated with a thermal bridging allowance which has been determined using a 3-dimensional analysis in accordance with BR443. The systems modelled included 8mm Rockpanel Rockclad and FastFrame rainscreen brackets

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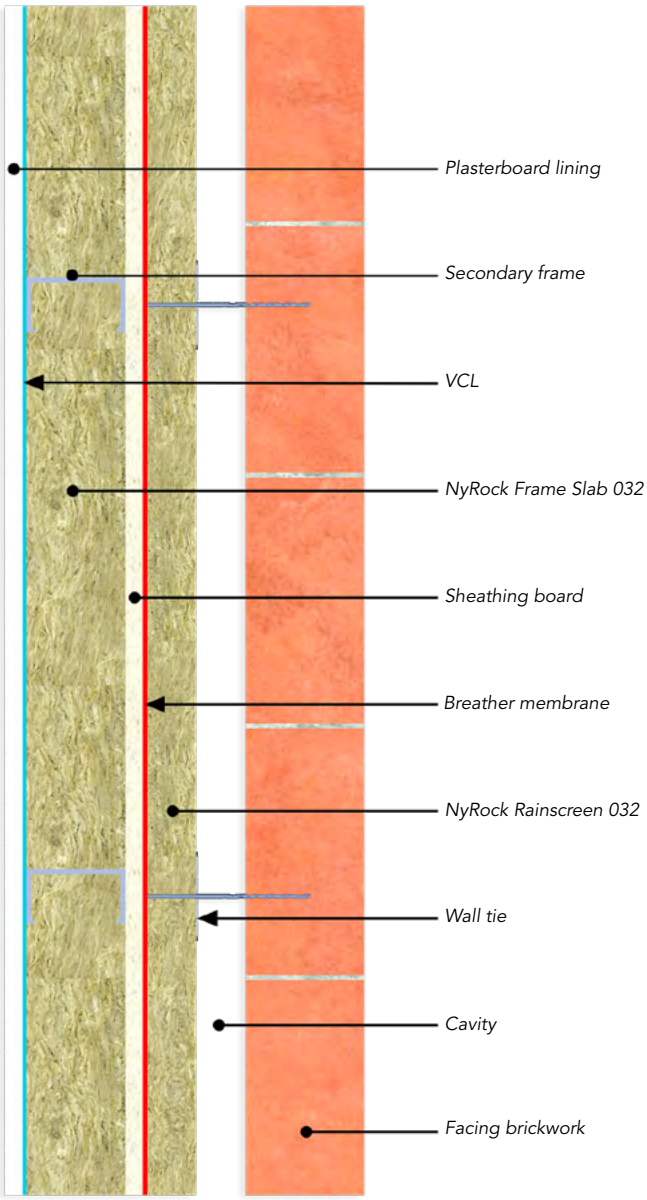
3. Masonry outer in conjunction with steel frame filled with NyRock Frame Slab 032

NyRock Rainscreen 032 on 100mm deep metal studs at 600mm centres with 100mm NyRock Frame Slab 032 installed within the frame.

NyRock Rainscreen 032 (mm)	NyRock Frame Slab 032 (mm)	U-Value (W/m²K)
50	100	0.26
75	100	0.22
100	100	0.18
125	100	0.16
150	100	0.14
180	100	0.13
200	100	0.12
235	100	0.10

NyRock Rainscreen 032 with channel restraint system on 100mm deep metal studs at 600mm centres with 140mm NyRock Frame Slab 032 installed within the frame.

NyRock Rainscreen 032 (mm)	NyRock Frame Slab 032 (mm)	U-Value (W/m²K)
50	140	0.25
75	140	0.21
100	140	0.17
125	140	0.15
150	140	0.13
180	140	0.12
200	140	0.11
235	140	0.10



Typical specification

The rainscreen insulation is to be NyRock Rainscreen 032 ..... mm thickness, as manufactured by ROCKWOOL Limited, Pencoed, Bridgend CF35 6NY, secured to the substrate with metal and polypropylene fixings in accordance with NyRock Rainscreen 032 data sheet.

Horizontal joints should be staggered and all joints tight butted.

Notes

- U-values shown have been calculated with a thermal bridging allowance which has been determined using a 3-dimensional analysis in accordance with BR443. The systems modelled included 8mm Rockpanel Rockclad and FastFrame rainscreen brackets

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PRODUCT INFORMATION

Length (mm)	Width (mm)	Standard thicknesses (mm)
1200 (Plain)	600	Available in a range of sizes between 50mm and 200mm. Please see current price list for availability.

STANDARDS AND APPROVALS

Certificate
BBA (British Board of Agrément) Certified for use in ventilated rainscreen cladding systems on both domestic and non-domestic buildings. Certificate no. 22/6417
NyRock Rainscreen 032 satisfies the requirements of BS EN 13162 – "Thermal insulation products for buildings. Factory made mineral wool (MW) products".

INSTALLATION

Work on site

NyRock Rainscreen 032 is supplied in shrink-wrapped polythene packs. Pallets are fitted with a waterproof hood that is suitable for outside storage.

The product can be easily cut and shaped using a sharp knife.

Fixings

A suggested fixing pattern is provided; however the adequacy of this or any other fixing pattern should be verified on a per-project basis through assessment by a suitably qualified individual.

The following non-exhaustive list of companies can supply fixings suitable for use with NyRock Rainscreen 032: Ejot, Fixfast, Fischer, ITW Construction Products, Hilti.

Exposure

It is recommended that the sequence of construction is programmed in such way that insulation is left exposed for as little time as possible.

While ROCKWOOL insulation is impregnated with a water repelling agent, and is resistant to wind and rain, it is not designed to offer indefinite protection to a substructure. Depending on the nature of the substrate, a protective membrane may be required. Such design issues will require assessment by a suitably qualified individual.

Subjecting NyRock Rainscreen 032 to any level of exposure is contingent on a visual inspection of the insulation prior to the installation of the cladding. In the unlikely event that any slabs have become physically damaged or otherwise contaminated, they should be replaced.

Once the weatherproof layer is installed, the resulting ventilated cavity will ensure that any wetted slabs will naturally dry out, regaining all of their original performance and properties.

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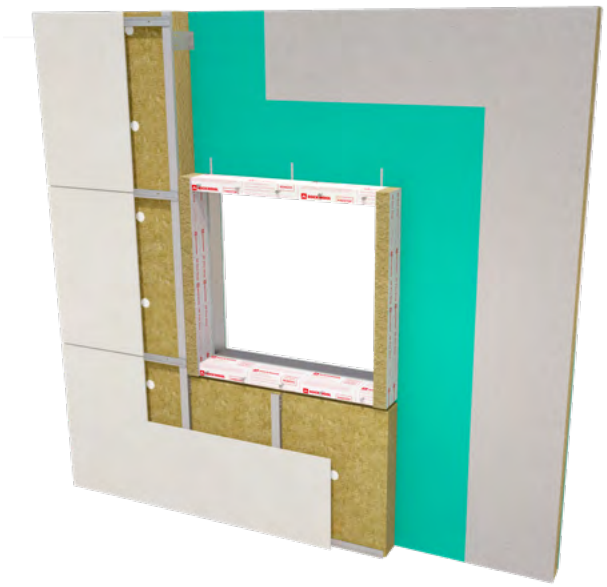
For use on steel frame, timber frame, or masonry walls in conjunction rainscreen cladding.

- Slabs should be close-butted at all vertical and horizontal joints. The horizontal joints of the insulation should be staggered in accordance with good practice.
- Fixings should have a minimum head diameter of 70 mm. A typical fixing pattern has three fixings per square metre with one metal fixing at the centre of every slab (see Figure 1).
- The product should be cut and tightly fitted around cladding support elements.
- For a typical installation, a breathable membrane is placed between the sheathing board and the product (see Figures 1 and 2). A VCL is placed between the plasterboard and the frame (see Figures 1 to 3).

Cavity barriers:

ROCKWOOL recommends the use of SP Firestop vertically and SP Firestop OSCB horizontally.



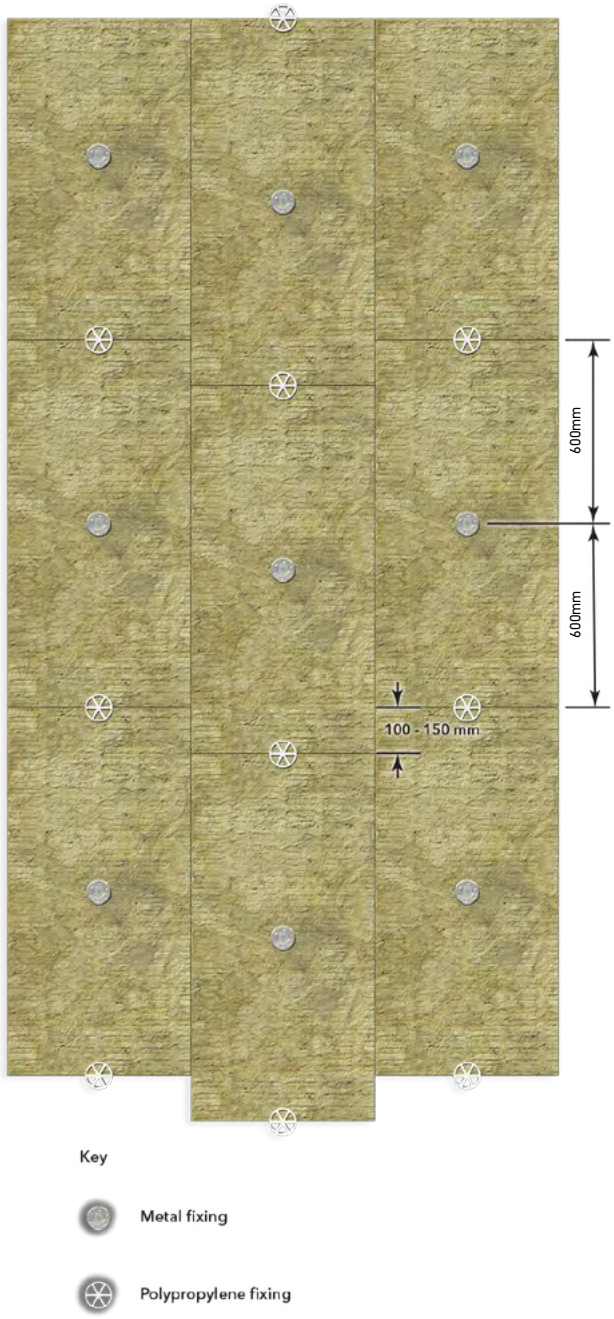


Figure 1

Typical fixing pattern with 3 fixings per square metre

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For use on steel frame or timber frame with a brick outer leaf.

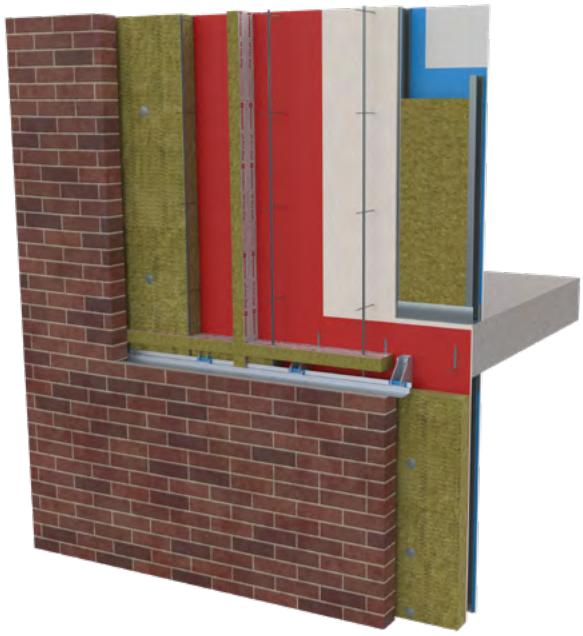
- The slabs should be close-butted at all vertical and horizontal joints, and at corners. The horizontal joints of the slabs should be staggered, in accordance with good practice.
- Slabs should be carefully cut to fit around any protrusions into the cavity.
- A VCL is placed between the plasterboard and the frame. A breathable membrane is placed between the sheathing board and the product—see Figure 1.
- The insulation should be installed to coincide with the frame, with retaining discs used in conjunction with the wall ties at no more than 600 mm horizontally and 450 mm vertically.
- After each section of the leading leaf is built, excess mortar should be removed from the cavity face and mortar droppings cleaned from exposed edges of the installed board, before installation of the next run of boards. Use of a cavity board or a cavity batten will protect the installed board edges and

Cavity barriers:

ROCKWOOL recommends the use of SP Firestop vertically and horizontally.

Masonry restrain systems:

NyRock Rainscreen 032 is compatible with masonry restraint systems. With such systems we recommend that insulation fixings are installed as per Figure 1. For information on available systems, please contact providers such as ACS Stainless or Ancon.



SPECIFICATION CLAUSES

ROCKWOOL NyRock Rainscreen 032 are associated with the following NBS clauses:

H11
110

H11
780

H92
776

P10
217

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DISCLAIMERS

ROCKWOOL Limited, its affiliates, its agents and employees and all persons acting on its or their behalf (collectively "ROCKWOOL"), disclaim any and all liability for any errors, inaccuracies or incompleteness contained in any datasheet or in any other disclosure relating to any product. Usage of the information remains under the sole responsibility of the purchaser and/or user.

ROCKWOOL makes no warranty, representation or guarantee regarding the information contained in the data sheet, the suitability of the products for any particular purposes or the continuing production of any product. To the maximum extent permitted by applicable law, ROCKWOOL disclaims (i) any and all liability arising out of the application, use of any product, misuse or inability to use the product (ii) any and all liability, including without limitation special, consequential or incidental damages, and (iii) any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.

Information contained in this data sheet is up-to-date as at the date of issue. As ROCKWOOL Limited cannot control or anticipate the conditions under which this product may be used, each user should review the information in specific context of the planned use. To the maximum extent permitted by law, ROCKWOOL Limited will not be responsible for damages of any nature resulting from the use or reliance upon the information contained in this data sheet. No express or implied warranties are given other than those implied by law.

SUPPORTING INFORMATION

For further information relating to any aspect of the FIREPRO range, please refer to the applicable ROCKWOOL standard details at **www.rockwool.com/uk** or contact the ROCKWOOL technical solution team on 01656 868490 or **technical.solutions@rockwool.com**.

SUSTAINABILITY

As an environmentally conscious company, ROCKWOOL promotes the sustainable production and use of insulation and is committed to a continuous process of environmental improvement.

All ROCKWOOL products provide outstanding thermal protection as well as four added benefits:

Fire resistance

Acoustic comfort

Sustainable materials

Durability

HEALTH & SAFETY

The safety of ROCKWOOL stone wool is confirmed by current UK and Republic of Ireland health & safety regulations and EU directive 97/69/EC:ROCKWOOL fibres are not classified as a possible human carcinogen.

A Material Safety Data Sheet is available and can be downloaded from **www.rockwool.com/uk** to assist in the preparation of risk assessments, as required by the Control of Substances Hazardous to Health Regulations (COSHH).

ENVIRONMENT

Made from a renewable and plentiful naturally occurring resource, ROCKWOOL insulation saves fuel costs and energy in use and relies on trapped air for its thermal properties.

ROCKWOOL insulation does not contain (and has never contained) gases that have ozone depletion potential (ODP) or global warming potential (GWP).

ROCKWOOL insulation is recyclable and can be transformed into new ROCKWOOL products. For waste ROCKWOOL material that may be generated during installation, we are happy to discuss the individual requirements of contractors and users considering returning these materials to our factory for recycling.