

Product description

Rockpanel Lines² are panels with a tongue and groove edge suitable for horizontal application in ventilated constructions. The innovative products are a durable and low maintenance alternative to wooden or plastic tongue-and-grooved products. Lines² panels are available in a small S and an extra wide XL version, which can be installed mechanically with a hidden fixing.

Application

The products are suitable for renovation as well as new construction and can be used in residential and non-residential building in various areas of construction. Rockpanel Lines² can only be used in ventilated constructions.

Typical application areas include:

- facade cladding / rainscreen cladding
- along the roofline
- detailing

Product advantages

Rockpanel board material is as workable as wood and as durable as stone, and in addition:

- light in weight
- can easily be cut to size on-site
- cut edges do not need to be treated
- temperature and weather-resistant
- dimensionally stable
- fire safe
- fully recyclable
- low in maintenance

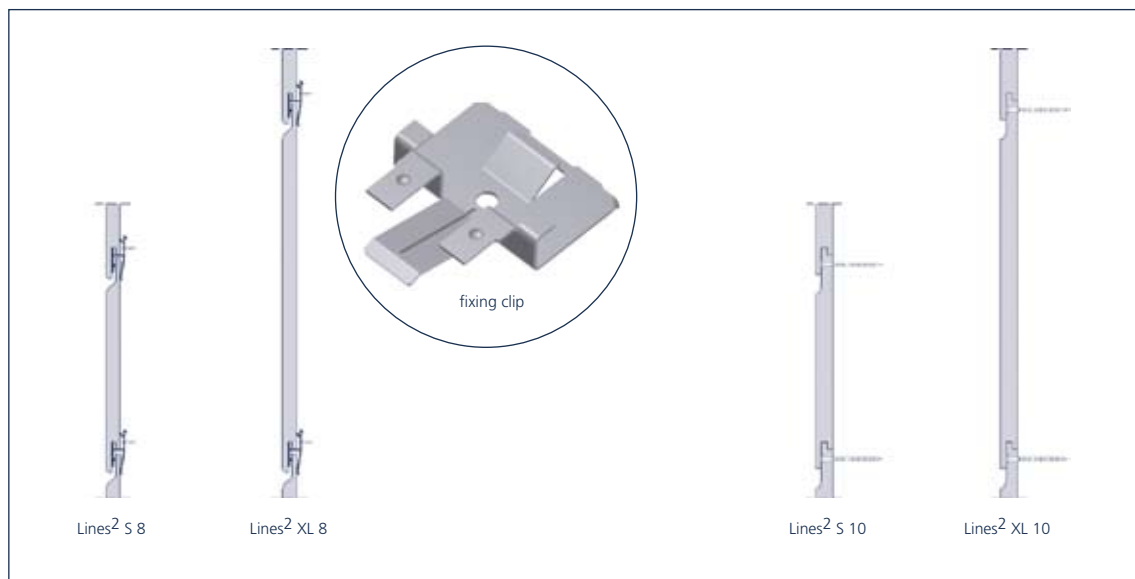
Product range

Rockpanel Lines² are deliverable from stock in a standard range of colours as well as Natural and primed versions. Other RAL/NCS colours can be produced, with a minimum order size of 100 m². For the current standard colour range please consult our website: www.rockpanel.co.uk.

Properties

Version

Rockpanel Lines² is available in 2 sizes, S and XL and 2 panel thicknesses, 8 and 10 mm. Rockpanel has developed a special fixing clip for the Lines² S 8 and Lines² XL 8. The Lines² S 10 and Lines² XL 10 can be installed using nails or flat-top screws, a method that has been used for many years.



Dimensions and tolerances of Lines²

	Lines ² S 8	Lines ² XL 8	Lines ² S 10	Lines ² XL 10
Panel thickness (mm)	8	8	10	10
Panel width (mm)	164	295	164	295
Working width (mm)	151 (fixed) 156 (demountable*)	282 (fixed) 287 (demountable*)	146	277
Panel length (mm)	3050	3050	3050	3050
Thickness tolerance (mm)	+0,5/-0,5	+0,5/-0,5	+0,5/-0,5	+0,5/-0,5
Width tolerance (mm)	+0,5/-0,5	+0,5/-0,5	+0,5/-0,5	+0,5/-0,5
Length tolerance (mm)	+2/-2	+2/-2	+2/-2	+2/-2

* With Lines² installed in a demountable fashion, each panel can be secured horizontally and vertically. Even when the panels are secured they still can be replaced individually. If horizontal secured fixing is used, automatically a small vertical joint will be applied between the panels.

Material properties

PROPERTIES	VALUE	UNIT	STANDARD
MECHANICAL PROPERTIES			
Modules of elasticity (average)	4015	N/mm ²	EN 310
Characteristic bending strength (f ₀₅)	≥ 27	N/mm ²	EN 310 and EN 1058
OPTICAL PROPERTIES			
Colour stability Lines ² after 3000 hours Xenon test*	4	Greyscales	ISO 105 A02
PHYSICAL PROPERTIES			
Density nominal	1050+ -150	kg/m ³	
Nominal area density:			
- Lines ² 8 mm:	8,4	kg/m ²	
- Lines ² 10 mm:	10,5	kg/m ²	
Water uptake via the sawn edge after 28 days:			
- At 20° C and 65% RH	< 1,3	%	
- At 2° C and 90% RH	< 0,2	%	
DIMENSIONAL STABILITY			
- Linear expansion coefficient by temperature change	0,011	mm/(m°K)	EN 438-2
- Dimensional stability length/width per 23°C/50% RF change 23°/95% RF	0,302	mm/m (after 4 days)	

* The Natural version darkens under the influence of natural elements such as sunlight, wind, precipitation and environmental factors. The final effect is dependent on elements at the micro-level. Therefore the exact effect and the uniformity cannot be predicted. For more information on the weathering process, see the Rockpanel Natural product datasheet. The colour stability of Lines² basic (primed panels) depends on the coating system used.

Handling

Ventilated facade systems

Rockpanel Lines² is suitable for use as facade cladding in ventilated constructions. In this type of facade, the outer facade is constructed as a cavity wall with an inner and outer layer, so that a ventilated space is created between facade cladding and construction. Rockpanel Lines² is suitable for horizontal application.

Fixing

Rockpanel Lines² is available in 2 versions (different thicknesses), which cannot be used in combination with each other.

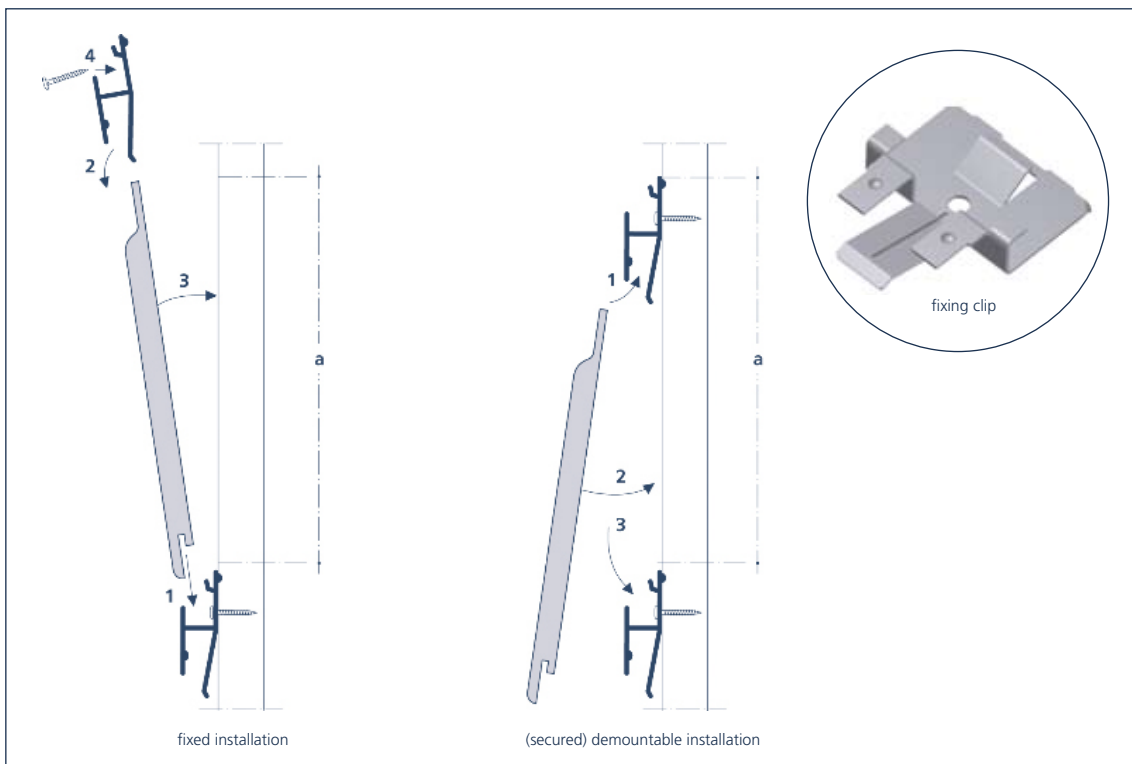
- Lines² 8: 8 mm panel, which can be fixed in a innovative and safe way (optimized ventilation)
- Lines² 10: 10 mm panel for fixing in a traditional way

Innovative installation: Lines² S 8 / Lines² XL 8

To make the fixing of tongue-and-groove panels easier and safer, Rockpanel has developed an innovative new clip. The clip ensures that the supporting structure is ventilated more effectively, reducing damp retention and thus increasing the structure's durability.

Flexible mounting using the clip

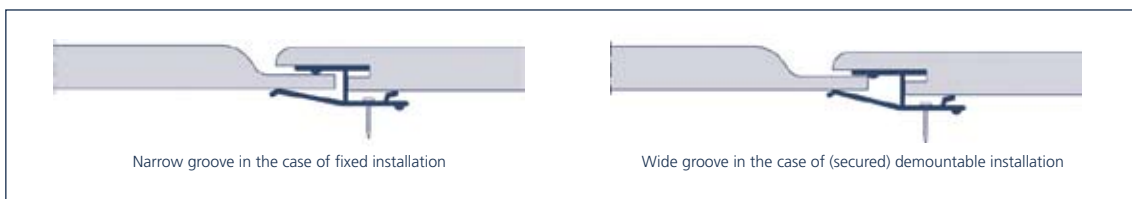
With the innovative clip developed by Rockpanel, you can choose between a fixed and demountable installation of Lines² S 8 and Lines² XL 8 tongue-and-groove panels. For demountable installation, the tongue-and-groove board is simply inserted into the clip so that each panel can be removed separately.



Clip distance (a)

	Fixed installation	(Secured) demountable installation
Lines ² S 8	151 mm	156 mm
Lines ² XL 8	282 mm	287 mm

Mounting of Lines² S 8 and Lines² XL 8 is either with a fixed or demountable attachment, depending on the clip spacing used. Variations of this can be achieved with the working sheet width of 151-156 mm for Lines² S 8 and of 282-287 mm for Lines² XL 8.



The possibility of working with a variable working height offers two advantages:

1. To achieve an effective wall design, the working width can be adjusted according to the height of the wall.
2. Using the variations, different groove widths can be created, meaning even greater variation in the interplay of lines.

Traditional installation: Lines² S 10 / Lines² XL 10

The Lines² 10 tongue-and-groove panels can be fixed invisibly by means of Rockpanel ring shanked nails or flat-top screws, which results in an attractive traditional groove effect.

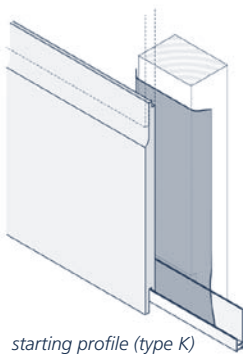
Fixing

Lines² 10 can be fixed mechanically using:

- Rockpanel ring shanked nails (stainless steel AISI 316 quality) 2.1/2.3 x 27 hp. For an even better result Rockpanel recommends pre-drilling of the tongue with a steel drill Ø 3mm.
- Stainless-steel flat-top screws 3.5*30 mm. The tongue should be pre-drilled with a steel drill Ø 3.5 mm and the hole for the flat-top screw head should be sunk with a countersink bore. The top of the screw head should be level with the surface of the tongue. Tension in the mounting of the tongue can be avoided by tightening to an appropriate level and by ensuring they are driven in to the batten in a true fashion.

Connection at ground level

For easy connection at ground level, a Rockpanel starting profile (type K) can be used for placement of the lowest section of Rockpanel Lines².

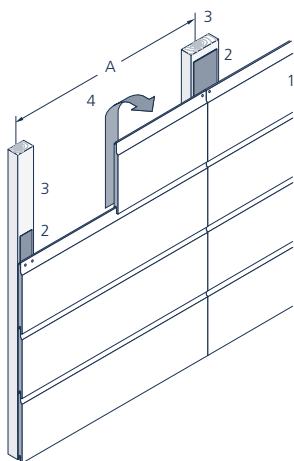


starting profile (type K)

Ventilation

The structure at the rear must be ventilated with ventilation openings of at least 5000 mm²/m¹ on the upper and lower side of the cladding. This can be done with a 5 mm continuous opening or equivalent slots.

When using the clip to fix Lines² S 8 and Lines² XL 8, protection of the timber battens with weather-resistant joint tape isn't necessary. In this case, the timber battens should be in accordance with BS 5268-2 : 2002 and preservative treated in accordance with BS 5268-5 : 1989 and BS 8417 : 2003.

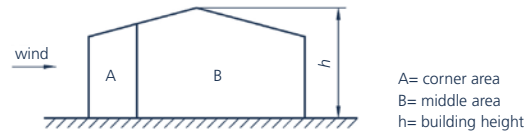


- 1 Rockpanel Lines²
- 2 Weather-resistant joint sealing strip (only for Lines² 10)
- 3 Timber battens dimensions 34 x 45 mm resp. 34 x 70 mm at joints (minimum thickness 28 mm)
- A Maximum distance between supports: (see tables page 5)
- 4 Ventilation

Fixing distances

When determining the subframe the following should be kept in mind:

- wind loading, based on location and building height
- the maximum fixing centres for the boards
- the applied Lines²
- the applied fixings
- legal requirements
- static spread of the loads (field span)



For more information on the maximum building height on which the Rockpanel Lines² can be applied, please contact Rockpanel.

Joints and board connections

In horizontal use of Rockpanel Lines², horizontal seams are automatically covered by the overlaid board and no additional finishing of the seam is necessary. On vertical framework, weather-resistant joint tape should be applied to protect the framework.

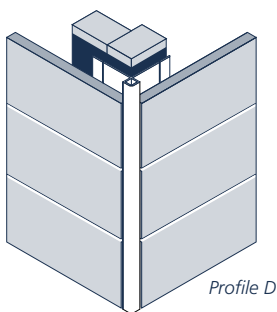
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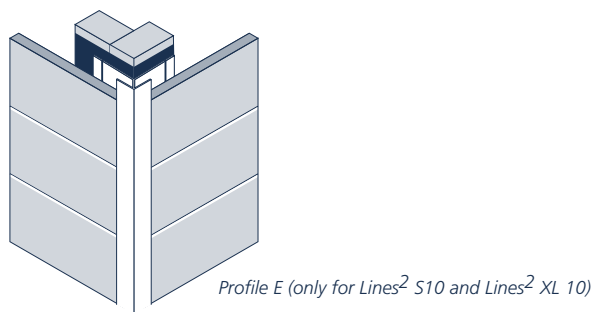
The dimensions of the timber battens should be at least 34 x 70 mm at the joints and 34 x 45 mm at intermediate supports (minimum thickness 28 mm).

In panel joints and seams, take account of the following.

- Rockpanel is dimensionally stable and therefore resistant to changes in length and width. When constructing keep in mind that other materials can expand.
- Boards assembly and building tolerances play an important role in the joint detail.



Profile D



Profile E (only for Lines² S10 and Lines² XL 10)

Workability

Sawing

When working with Rockpanel products, the same guidelines hold, as a rule, as for wood products.

- hand saw, e.g. a hardpoint hand saw
- circular saw, e.g. a fine-toothed hard metal saw blade
- Jigsaw, e.g. a fine-toothed metal saw or a saw blade with tungsten granules

Therefore it can be easily detailed on site, making flawless, optimal finishing a simple matter.

Drilling

Rockpanel recommends pre-drilling by using flat headed screws or manual nailing.

Edge finishing

Rockpanel board material is resistant to the elements and does not delaminate or rot. Cut edges do not need to be treated. Chamfering can be done easily by using a leftover strip of Rockpanel to lightly sand the edge with the non-painted side. The sides can be painted for aesthetic reasons.

Storage

Rockpanel is moisture resistant. Nevertheless it is recommended that the board material be stored on a flat pallet in dry, flat, frost-free and protected conditions. Never stack more than 2 pallets on top of each other. It is not advisable to slide the panels over each other; they should be raised for handling. Protective foam sheets should also be laid between the boards to protect the surface layer after, for example, machining.

Maintenance

Rockpanel Lines² is durable as stone, resistant to temperature and weather influences, and therefore low-maintenance. The colours remain stable and the board material maintains its original freshness and appearance for a long time.*

It is recommended that the boards be maintained from time to time by cleaning them with water. If desired, the board material can be cleaned with, for example, a car shampoo or an all-purpose cleaner, diluted as indicated on the packaging.

** The Natural version discolours under the influence of natural elements such as sunlight, wind, precipitation and environmental factors. For more information on the weathering process, see the Rockpanel Natural Product datasheet.*

Specifications and CAD drawings

Specifications and CAD drawings can be downloaded from www.rockpanel.co.uk.

Availability

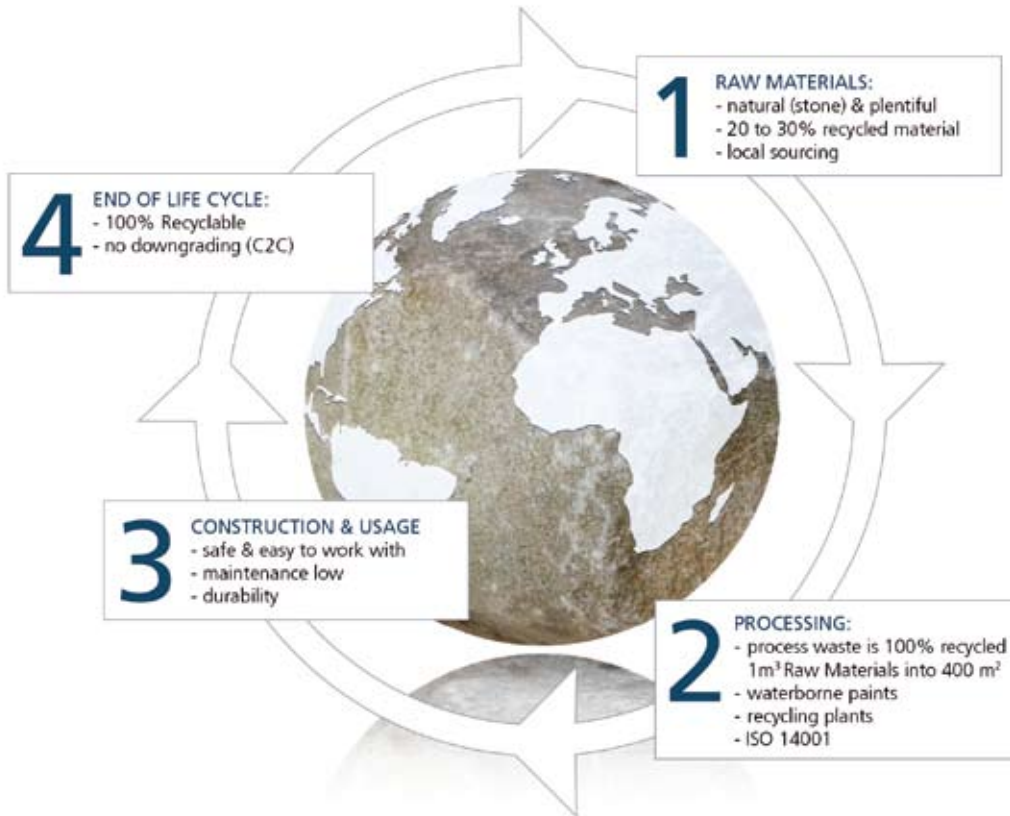
Consult the dealer locator on www.rockpanel.co.uk For a Rockpanel distributor in your area.

Assortment

For the current selection of Rockpanel Lines and other Rockpanel products, see www.rockpanel.co.uk.

Sustainability

Rockpanel is a sustainable building material throughout the material's useful life.



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