



LUNAWOOD

Sustainable and technically pre-eminent
option for Russian Siberian Larch

Main arguments for Siberian Larch

- Natural weathering
- Natural durability – no modification
- Low maintenance



Like siblings

- Like all timber over time, Siberian Larch weathers to a silvery-grey, but this can be stopped and the original colour retained with a good UV treatment.
- **Natural greying applies to Lunawood Thermowood as well**
- High resin content makes Siberian Larch durable, having durability class 3 (EN350-2)
- **Lunawood Thermowood is resin-free yet durable thanks to thermal modification, having durability class 2 (EN350-2). Thermal modification enhances biological durability of wood.**

IN ADDITION:

- **Thermal modification only with heat and steam without any chemicals improves technical properties of Lunawood Thermowood, making Lunawood Thermowood extremely dimensional stable for decades**



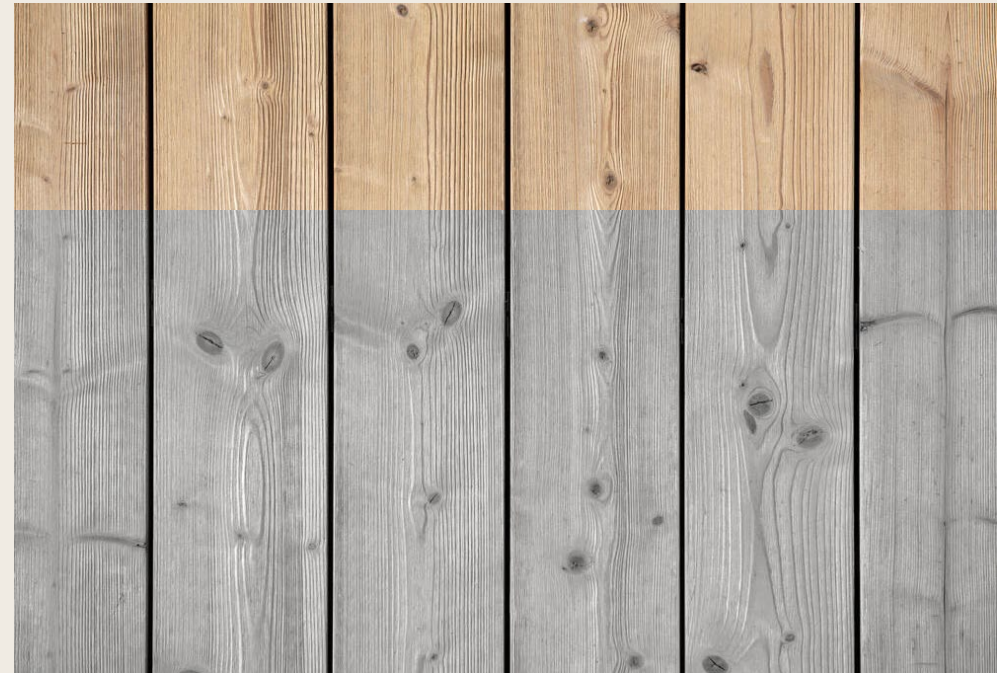
Natural Greying

Siberian Larch



www.russwood.co.uk/cladding/products/sila-select-siberian-larch/

Lunawood Spruce



Lunawood spruce: SHP Profix 3 32x166 brushed SAP



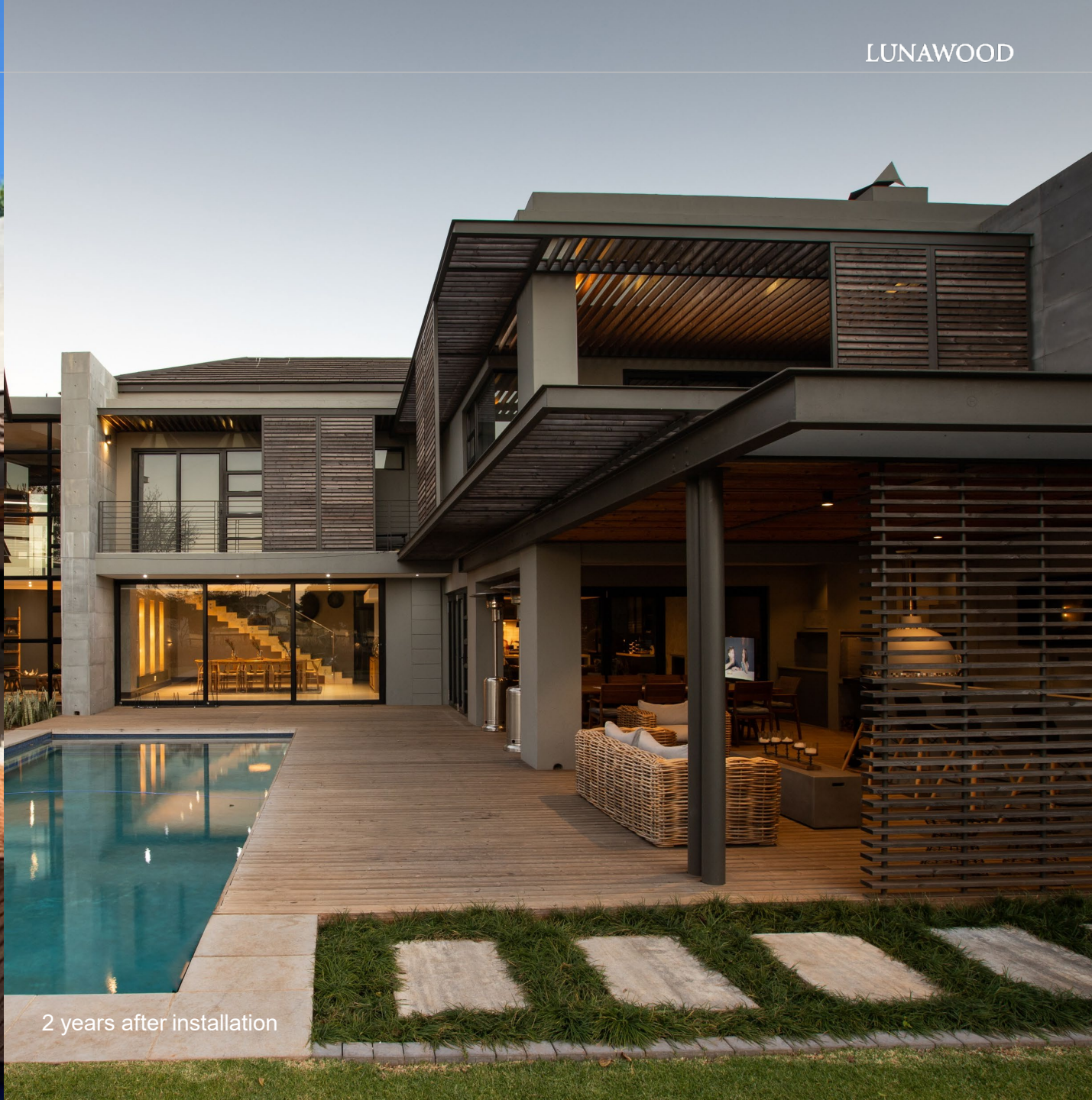
Munkevilla, Norway
Architect: Janine Müller
Product: Lunawood cladding



2 years after installation



Private House, Pretoria
Architect: Anthrop Architects
Product: Lunawood solar shades and decking



2 years after installation



Private Villa, Finland
Architect: Plusarchitects Ltd
Product: Lunawood decking



LUNAWOOD

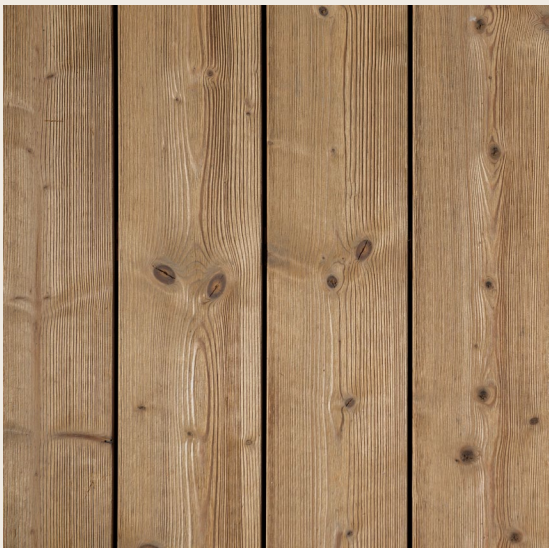
4 years after installation

Visual comparison



Siberian Larch (*Larix sibirica*)

- The color varies with sharp contrast to the narrow, lighter-coloured sapwood
- Visibly marked annual rings
- Special grain and texture due to its density
- Heartwood can sometimes be seen because of the way the logs are sawn
- Depending on the grade chosen, this species generally has small tight round knots.
- If left for around two years without any treatment, the wood will develop a natural grey color



Lunawood Spruce (*Picea Abies* LunaThermo-D)

- Unified golden brown color
- Colour and durability throughout the product
- Round knots
- Turns silver grey if left untreated

Tangent-sawing

- Siberian Larch is tangent sawed. The appearance and properties of the Larch varies depending on which part of the log the board comes from.



Siberian Larch



www.archdaily.com/492661/summerhouse-in-denmark-jva?ad_source=search&ad_medium=projects_tab

Lunawood Spruce



Galicia, Spain
Architect: Seara Peleteiro Arquitectos, Luna Triple panel

Siberian Larch



Sussex, UK, Architect: Alter & Company,
archello.com/project/bawa-house

Lunawood Spruce



Lohjan Saarenta, Luna Triple spruce panel

Siberian Larch



Queenstown, NZ, Architect: Daniel Friedrich,
(archello.com/project/twin-peak-house)

Lunawood Spruce



Service Center Kaskinen, Finland

Siberian Larch



www.siparila.fi/tuote/lehtikuusi-ulkoverhouspaneeli-utv/

Lunawood Spruce



Lohjan Saarenta, Luna Triple spruce panel

Siberian Larch



www.timberfocus.com/siberian-larch/

Lunawood Spruce



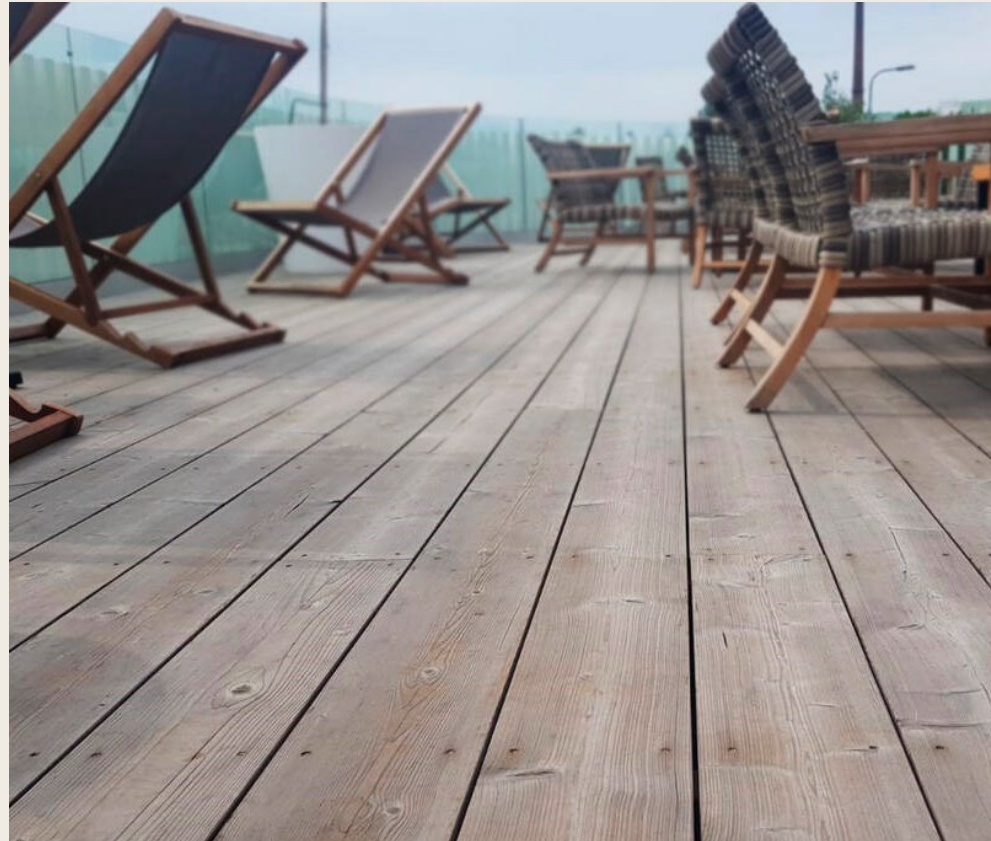
Golf Village, Brazil, Luna Triple spruce panel

Siberian Larch



www.siparila.fi/tuote/lehtikuusi-terassilauta/

Lunawood Spruce



Saunaravintola Kuuma, Lunawood Spruce

Technical Properties

Siberian Larch (*Larix sibirica*)

- Density — 590 – 650 kg/m³
- Very resinous wood
- Equilibrium Moisture Content 12 %
- Durability class 3 (EN 350-2)
- One of the weaknesses of larch is its tendency to warp and twist during drying
- The movement class of [Siberian larch](#) wood is high (145 mm wide cladding can vary 5 mm through the seasons).
- With a conductivity rating of (y10) of approximately 0.13 W/(mk) it is an excellent species to keep heat in.
- Known to have end split, face checks, occasional resin bleed and some distortion as natural characteristics
- Usually left without surface treatment, difficult to treat
- Fire rating D-s1,d0 *)

Lunawood Spruce (*Picea Abies* LunaThermo-D)

- Density — 420 kg/m³
- Resin free
- Equilibrium Moisture Content 7,3 %
- Durability class 2 (EN 350-2), use class 3 (BS EN 335)
- Does not absorb moisture
- Dimensional stable
- Share of heartwood is high
- Thermal Conductivity Thermowood has a thermal conductivity of around 20% less than standard softwoods. The thermal conductivity is y10 to 0.09 W/(m K)
- Can be surface treated or left untreated without any impact on durability
- Fire rating D-s2,d0 (EN 13501-1:2018)

Thermowood has better durability class than Siberian larch.

*The movement class of Siberian larch wood is high (145 mm wide cladding can vary 5 mm through the seasons).

Cladding	Northern spruce	Siberian larch	Thermo pine	Thermo radiata pine
Timber	Northern spruce	Siberian larch	Scots pine	Radiata pine
Latin name	Picea abies	Larix sibirica	Pinus sylvestris	Pinus radiata
Growth area	Russia (Karelia)	Northern Russia	Northern/ Eastern Europe	Finland
Durability (EN350-2)	Class 3	Class 3	Class 2	Class 2
Avg. density (kg/m ³)	Medium, ~450	High, ~610	Medium, ~420	Medium, ~480
Movement class	Medium	High*	Very low	Very low
Environmental certified	Yes	Yes	Yes	Yes
Process	None	None	Heat treatment, Thermo-D	Heat treatment, Thermo-D
Covering required	Yes	No	No	No
Appearance**	Light color, many knots	Golden orange color, tight grain, many knots	Light brown color, many knots	Brown color, very few knots
Length (m)	3.0-6.0 m	3.0-6.0 m	2.1-5.4 m	2.1-5.4 m

www.windhout.nl

Wood Type:

Softwood

Durability:

Slightly durable, Moderately durable

Treatability:

Extremely difficult

Moisture Movement:

Reported to be small

Density (mean, Kg/m³):

590 (Ranging from 570 to 650)

Texture:

Fine

Availability:

Available at specialist timber merchant

Use(s):

Cladding, Joinery - Exterior, Flooring, Decking

Colour(s):

Yellow brown (Golden brown), Light brown, Reddish brown (Pale)

www.trada.co.uk

Siberian larch is difficult to surface treat due to the tight structure and the high resin content.

The colour of Siberian larch varies a lot.

The durability class of Siberian larch is contradictory

The following scale of durability was outlined by TRADA, the Timber Research And Development Association.

Durability	Class Designation	Average timber service life	Example Timber
5	Not durable	Less than 5 years	American Ash
4	Slightly durable	5-10 years	Siberian Larch
3	Moderately durable	10-15 years	Douglas Fir
2	Durable	15-25 years	European Oak
1	Very durable	More than 25 years	Teak

www.iwood.co.uk

*Durability – Both types of larch are classed as **moderately durable**, which means you should get a service life of at least 15 years and, if well installed and looked after, they could last more than double that.* www.ecochoice.co.uk

The literature on durability of larch is often difficult to compare because:

- Different larch species have been studied
- The trees were grown and tested under different conditions - or different test procedures were applied.

In laboratory conditions a moderate durability is generally found for mature heartwood of both *L. sibirica* and *L. decidua* (Lyck and Bergstedt 2003).

Consequently the high durability claims currently being made for Siberian larch by some UK timber suppliers appear to be unsubstantiated.

Movement of the wood

- Wood movement is the dimensional change in timber caused by changes in the surrounding environment's relative humidity and temperature.
- **When humidity is high, wood absorbs moisture and swells. When humidity drops, wood shrinks.**

This “movement” is gradual, so you probably won't notice weekly changes. But seasonal changes cause problems you can't miss, like sticking doors, ugly gaps in woodwork or a crack in a tabletop.



Installation

Siberian Larch (*Larix sibirica*)

1. Due to Siberian larch's natural properties, it can be split during nailing so drilling holes is recommended before you fix the timber to the wall.
2. Stainless steel screws and nails, visible fixing
3. Siberian larch has a high resin content so it takes time to dry out. This means it needs to be dried slowly and given time to reach the desired properties before building. This is important to ensure your cladding has reached equilibrium before you start installing it.
4. Siberian larch can be sawn and machined well, making it a practical and efficient choice of timber for building projects.

Lunawood Spruce (*Picea Abies* LunaThermo-D)

1. Pre-drill the screw holes when the mounting is less than 70 mm from the end of the profile. This avoids the risk of cracks during installation
2. Stainless steel screws and nails, hidden fixing/nailing
3. Ready to install. Lunawood products are light weight
4. Sawing Lunawood is just as easy as sawing ordinary wood

Siberian larch decking after 10 years (in Finland)

Siberian larch decking after 10 years (in Finland)

European Larch

(Larix decidua or Larix europaea)

Durability – Both types of larch are classed as **moderately durable**, which means you should get a service life of at least 15 years and, if well installed and looked after, they could last more than double that.

However, the growing conditions of Siberian larch make it more durable than its British or European variant, meaning it's ideally used for external cladding or decking.

Availability – Siberian larch comes into the country pre-dried and cut and tend to be fairly standard in terms of sizing. With British larch, however, it's cut locally, which means it can be cut theoretically to any dimension possible when wet. For dried larch, however, the dimensions are still very much the same standard sizes: 1 to 2 inch thick (25-50mm) commanding the vast majority of volume.

Stability – **Both types are relatively unstable**, given that they are softwood. This means that they will move **throughout their use life, expanding, shrinking, and splitting slightly**, therefore good fixing is necessary.

Grading – Larch tends to be graded as either “fourths/sawn fallen,” which is a knottier grade or “unsorted,” which is a cleaner grade with fewer knots. Many suppliers will simplify matters by grading the Larch as A or B.

Density – Due to its slower growth, Siberian Larch is denser than European Larch: 590kg/m³ as opposed to **550kg/m³**. This usually means it is stronger – but if you're planning to build anything with either of these types of Larch, please ensure to ask advice on structural grading.

<https://ecochoice.co.uk/>

European



Siberian



Wood Type:

Softwood

Durability:

Slightly durable, Moderately durable

Treatability:

Extremely difficult, Moderately easy
(Sapwood - Larch sapwood
treatability may vary)

Moisture Movement:

Small

Density (mean, Kg/m³):

550

Texture:

Fine

Availability:

Readily available at timber merchant

Price:

Low

Use(s):

Cladding, Flooring, Joinery - Exterior,
Structural use

Colour(s):

Reddish brown (Pale)

Origin of the wood

Lunawood Spruce

(Picea Abies LunaThermo-D)

Sustainable managed
Finnish forests + thermal
modification in Finland

The tree grows 60 - 80 years



Siberian Larch

(Larix sibirica)

In **northwestern Russia** and
western Siberia. The westernmost
deposits can be found near Lake
Äänisjärvi.

Also known as Russian Larch, this
slow-growing tree is native to a very
cold climate with slow growth rate
-grows 70-80 years to mature.

In Finland, an average of 150 million tree seedlings
are planted every year

150 000 000

Lunawood Thermowood is **equivalent**
to Siberian Larch in appearance
and **more advanced** in technical properties.

Arguments for Lunawood

1. Low maintenance with natural greying. Same phases in natural greying and the end-result is the same.
2. **Lunawood is very organic and authentic – Thermowood's non-toxic and chemical free modification process gives the same product properties, but better durability class 2 PLUS – dimensional stability.**
3. Lunawood Thermowood origins from similar climate and vegetation zone
4. Origin of Lunawood Thermowood is Finland. The raw material comes from sustainable managed, certified Finnish forests
5. Quality controlled, unified properties, applies to colour as well
6. Lightweighted and easy to install also with hidden nailing
7. Wide selection of profiles with digital design support




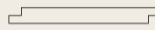
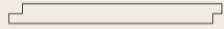




Technical comparison

	Siberian Larch	Lunawood
Dimensional Stability	-	✓
Durability (EN 350)	Class 3	Class 2
Delamination	✓	-
Cracking	✓	-
Low maintenance	✓	✓
Natural greying	✓	✓
Knots	✓	✓
Life cycle	20-30 y	20-30 y
Availability	-	✓
Origin	Russia	Finland









Highlights of Lunawood Collection

Cladding and panelling

	Product name	Species	Length (m)	m / m²	Digital design tools
	Luna TGV 19x140	Nordic Spruce	3,6–5,1	7,69 m	•
	Luna Layer 19x142 Brushed	Nordic Spruce	3,6–5,1	7,46 m	
	Luna Layer 19x188 Brushed	Nordic Spruce	3,6–5,4	5,55 m	
	Luna Vivo 19x188	Nordic Spruce	3,6–5,4	5,62 m	
Hidden Nailing products					
	Luna Pure Hidden Nailing 20x142	Nordic Spruce	3,6–5,1	8,26 m	
	Luna Bevel Hidden Nailing 26x142	Nordic Spruce	3,9–5,4	8,26 m	
	Luna Trim Hidden Nailing 20x142	Nordic Spruce	3,6–5,1	8,10 m	



Lunawood 3D-look products

	Product name	Species	Length (m)	m / m²	Digital design tools
	Luna Triple 32x140	Nordic Spruce	3,6–5,4	7,57 m	•
	Luna Duple 32x140	Nordic Spruce	3,6–5,4	7,57 m	
	Luna Duo 32x140	Nordic Spruce	3,6–5,4	7,57 m	
	Luna Trio 26x92	Nordic Pine	3,0–4,5	11,90 m	
	Luna Femma 26x142	Nordic Spruce	3,9–5,4	7,46 m	
	Luna Dual 26x142	Nordic Spruce	3,9–5,4	7,57 m	
	Luna Aalto 32x142	Nordic Pine	3,6–5,1	7,46 m	

Spruce decking

	Product name	Species	Length (m)	m / m²	Decking joist spacing	Digital design tools
	Luna SHP Profix 2 26x140 Brushed	Nordic Spruce	3,9–5,4	6,85 m (6mm GAP)	450 mm	
	Luna SHP Profix 3 32x166 Brushed	Nordic Spruce	3,9–5,4	5,81 m (6mm GAP)	600 mm	



Lunawood Collection



See the whole
Lunawood Collection
at lunawood.com

Follow us on social media

