



storaenso



# Stora Enso Industrial Components

The best choice for the joinery industry

[www.storaenso.com](http://www.storaenso.com)

# Stora Enso

Do good for the people and the planet.

Stora Enso is a leading provider of renewable solutions in packaging, biomaterials, wood and paper on global markets. Our aim is to replace non-renewable materials by innovating and developing new products and services based on wood and other renewable materials.

The Group has some 27 000 employees in more than 35 countries worldwide. Stora Enso's Wood Products division is largest producer of wood products in Europe. Approximately 4 000 people are employed in over 20 production units and within a worldwide distribution network.

Rethink is our change engine, serving as a promise that we shall always rethink the old and expand to the new in all that we do.

Our Values – Lead and Do what's right – are the lights for our journey, anywhere we operate. Our values must always be aligned with the local laws and rules, but also take us beyond local practices to bring the people and communities forward.

Our Purpose – Do good for the people and the planet – is why we do all this. Why we set a strategy and then execute it, including but not limited to the financial, market and other metrics. How we want to change the world, the communities and lives of all people who come in contact with us, be it through our products, our operations or our value chain. Change for better.



## Integrated value chain

All Stora Enso component manufacturing units are integrated with a sawmill. We have full control over the whole process from raw material to tailor-made component.

### Honkalahti unit

in Finland is producing wooden components for window, door, joinery and log house industry. Main products are window components, claddings, floorings and classic pine sawn goods. Effex raw material and glued blanks for designers and industrial users complete the selection. Annual sawing capacity is 310 000 m<sup>3</sup> and further processing capacity 90 000 m<sup>3</sup>.

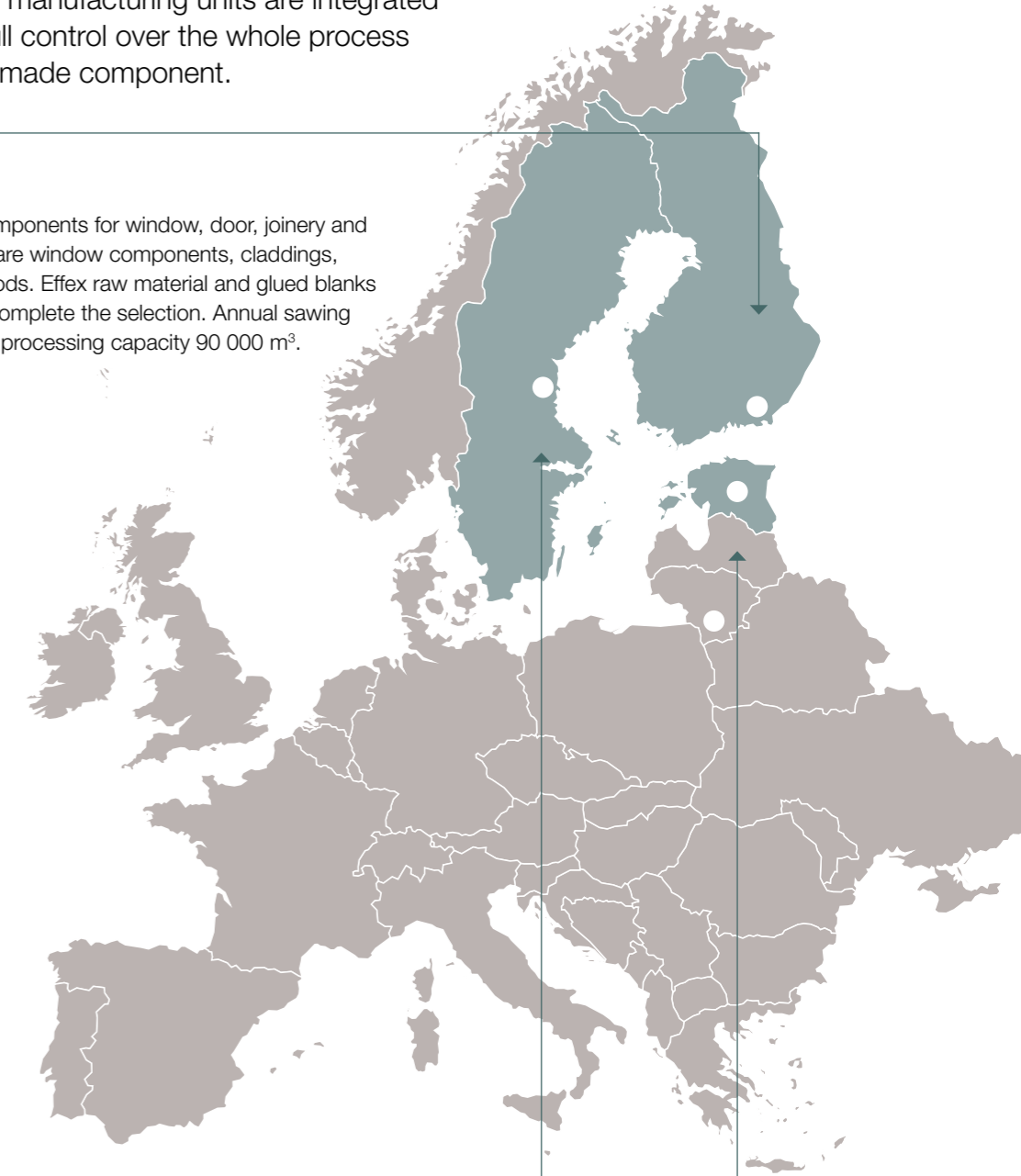


### Ala unit

in Sweden is serving industrial customers and importers. Main products are wood components for window industry and classic pine or spruce sawn goods. Annual sawing capacity is 380 000 m<sup>3</sup> and further processing capacity 40 000 m<sup>3</sup>.

### Imavere and Alytus units

Imavere unit in Estonia manufactures finger-jointed wood components primarily for door industry and planing mills. Product range includes also wood components for window industry, beams, classic sawn products and pellets. Annual sawing capacity is 350 000 m<sup>3</sup> and further processing capacity 190 000 m<sup>3</sup>. A component line in Alytus unit, Lithuania, will be opened in 2015.



# Natural and sustainable

Recognition of the environmental and structural benefits that wood brings to construction is constantly increasing. Growing social awareness of resource conservation and new technical developments are bringing mankind's oldest building material back into the spotlight.

## Certification for quality and environment.

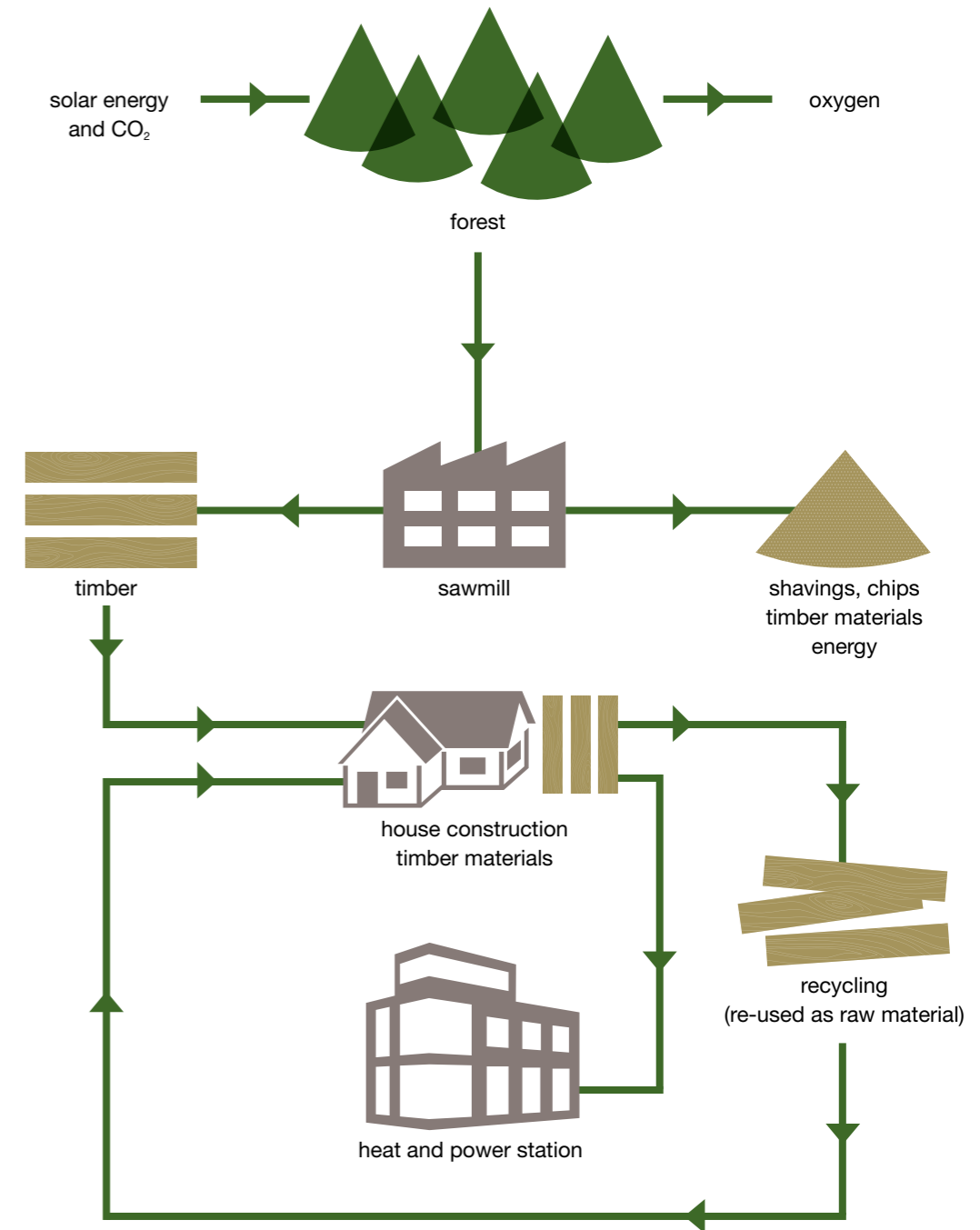
We believe in a sustainable and energy-efficient construction method for the public and private sectors. Wood, our most important raw material, has many advantages over the materials made from non-renewable resources. Wood is renewable, recyclable and it can be used as a bioenergy at the end of its life cycle. With carbon captured in the wood, the products offer a truly sustainable means of combating climate change.

Stora Enso products are manufactured from responsibly sourced wood. The wood supply chains to Stora Enso Wood Products units are covered by a wood traceability system, which is third-party certified according to PEFC™ or FSC® Chain of Custody system, or according to both systems.

In the manufacturing process, we set constantly higher targets to minimize negative environmental and social impacts and to maximize the efficiency of all raw material use. To achieve operational excellence, we apply integrated management systems. Stora Enso Wood Products units have a good coverage of third-party certified management systems for Quality (ISO 9001) Environment (ISO 14001) and Occupational Health and Safety (OHSAS 18001).



## Natural cycle: wood can be recycled or used as energy.



Wood is an excellent reusable material. At the end of their lifecycle wood products can be used to generate bioenergy, without releasing fossil CO<sub>2</sub>.

# High quality products for various end use possibilities

- Windows and window frames
- Doors and door frames
- Mouldings
- Paneling
- Flooring
- Furniture and fitting
- Staircases
- Other applications



Wood is a versatile raw material that can easily be combined with other building materials. Wood has a fascinating and harmonious surface and for thousands of years it has been the natural choice for interior design. Wood has a low thermal conductivity, which makes it a good insulator and helps to achieve better energy efficiency ratings. Wood is also light but has good structural and load-bearing properties.

Stora Enso offers finger-jointed and customized wood components for window, door and joinery industry. Thanks to the uniform quality and dimensional stability Stora Enso

Industrial components are well-suited for various end use possibilities.

We have a high know how of customer needs and we understand the importance of defining and finding the right raw material for each purpose of use. Our customers can improve the performance of their end products by using components where the optimal heartwood content is reached by a careful selection of raw material. Thanks to the natural durability of heartwood and the smaller moisture movement the components ensure far greater consistency in stability and durability without the need for modification.

# Door and door frame components

Where durability and dimensional stability are required



Stora Enso offers finger-jointed wood components and blanks for door and door frame manufacturers. Door rims, stiles and rails, are ready for assembly products, while door frame components are meant for door frame manufacturers.

- **Dimensional stability via finger jointing**
- **Consistent and uniform high quality**
- **Highly accurate size tolerances**

## Technical details

Thickness / Widths / Lengths:	Customer selectable
Wood species:	Pine and spruce
Moisture content:	8, 10, 12% ± 2%
Processing:	Planed, finger-jointed, laminated, module length cut
Surface:	Planed, rough
Glued products:	Edge or face glued products into L or block profiles
Strength class:	N/A
Grades:	Pine: 1–4 side clears, sound knot quality. Spruce: customized knot requirements



# Window Components

High quality windows through carefully selected raw materials

Stora Enso offers a wide range of mass-customised window components with quality being the key factor. By providing tailored solutions we can help our customers' window manufacturing processes to be more efficient and productive.

Glued L-profiled components are designed to match the final window profiles. Significant savings can be achieved by the window producer through the reduction in fibre loss.

Stora Enso Wood Products is an integrated part of window making in the Nordic countries due to its strong position in market, high know how, integrated supply chain and mass-customised high quality products.

Did you know that 4 out of 10 windows produced in Nordic countries are having window components from Stora Enso?

- **Continuous fibre structure**
- **Consistent and uniform quality**
- **Efficient manufacturing through mass-customization**



## Effex Industrial

Modern and sustainable design at its best

Stora Enso Effex® Industrial offers various blanks intended for designers and industrial users. Effex Industrial is a finger-jointed and knot-free raw material for further-processors.

Effex is an example of a Finnish design innovation. It offers endless possibilities to realise new and sustainable fittings, windows, doors, furniture and even lighting. Thanks to its lamella structure, Effex Industrial maintains its dimensions and shape, and has a beautiful linear appearance. Made by genuine Nordic pine, Effex is an entirely different and a unique choice.

- **Timeless and unique look**
- **Consistent and uniform quality**
- **Knot-free**
- **Great dimensional stability**
- **Standing growth rings**



### Technical details

Thickness / Widths / Lengths:	Customer selectable
Wood species:	Pine
Moisture content:	12% ± 2%
Surface:	Planed
Strength class:	N/A
Processing:	Planed, finger-jointed, glue laminated, module length cut
Glued products:	Edge- or face-glued products into L or Block profiles
Grades:	1-4 side clears & sound knot quality



### Technical details

Thickness:	5,5-93 mm
Widths:	63-306 mm
Lengths:	6,080 m
Wood species:	Pine
Processing:	Planed, finger-jointed, laminated
Surface:	Planed, finesawn
Moisture content:	Max. 10% ± 2%
Strength class:	N/A
Grades:	A, B, AB



# ThermoWood window for passive houses

Thermally modified wood repels humidity and has lower dry density than untreated wood. This improves the thermal insulation ability while the wood becomes dimensionally stable and has a better resistance to rot.

Stora Enso has developed a process in which thermally modified pine heartwood is optimised for use in energy windows. Passive windows can now be efficiently manufactured from solid wood without the need for synthetic insulation. Modified wood provides a lower lambda value than untreated wood, making the U-value of the window even to a level of untreated wood combined with additional insulation.

Using thermally modified wood extends also maintenance periods of surface coatings due to higher dimensional stability and reduced swelling and shrinking.

The environmental impacts of the window are minimised while the structure becomes both simpler and stronger.



## Climate-smart building for World Ski Championships 2015



Stora Enso ensured the realisation of the building for the World Ski Championships 2015 in Falun, Sweden. The two-storey building served as an administrative building with space for office premises, and will benefit the inhabitants of Falun after the games are over.

The building is an excellent example of the versatile use of Stora Enso's wood products. In addition to the CLT (cross laminated timber) frame and glulam beams Stora Enso has provided the finger-jointed components for windows and doors, ThermoWood for exterior cladding and Effex for flooring.

"Wood products store carbon dioxide throughout their lifetimes and we believe that wood construction is the way of the future. With this new building, we will be able to clearly show these advantages to our stakeholders."

- Karl-Henrik Sundström, CEO, Stora Enso -



## Seinäjäoki city Library

The city of Seinäjoki, Finland, is known for the most extensive cluster of buildings designed by Alvar Aalto, including the old library. To meet modern demands, the old library needed an extension that would fit to the valuable cultural environment.

New library was opened in 2012. Wooden furniture softens the building dominated by copper and concrete. All the bookshelves and tables at the cafeteria are made of Effex Industrial enabling the elegant yet vivid look and feel. In addition, children have their own special Effex furniture that can be used as reading and playing areas.



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