

GRADING RULES

# **Aspen & thermally modified aspen**

**Wood for you**

MADE IN LEMPÄÄLÄ, FINLAND

# This is how we sort

Wood is a natural material, and no two boards are exactly alike. That's where its charm lies – but it also means that every board needs a pair of eyes to decide which quality class it belongs to. We'll go over the following principles, so you know exactly what you're ordering.

1. We sort aspen into two quality classes: **A** and **B**.
2. Sorting is always done according to **the better side** – that is, the surface that remains visible.
3. In sauna benches, the “better side” consists of **three visible sides**: the top and both edges.
4. In paneling, the “better side” is the **visible surface remaining in the room**.
5. The final quality is determined by the criteria presented on the following pages.

## A quality

Our most demanding quality class. Knot holes, surface cracks, wane and mechanical damage are not allowed on the visible face. Suitable for sites where a calm, even surface is important.

## B quality

A livelier option. Sound knots and small knot holes are allowed on the visible face – they are exactly what gives the wood its character. A great choice when you want wood to look like real wood.

### DID YOU KNOW?

Aspen withstands the varying conditions of the sauna exceptionally well: it does not get scorching hot, it repels water and it keeps its shape. Thermal modification darkens the wood to a deep brown tone and further improves its dimensional stability.

## Types of defects and their permissibility

On the next page, we go through all the types of defects examined in grading. The table shows separately what is allowed on the visible face of the board and what is allowed on the back face. The back face always remains inside the structure, so that's where we allow more defects. The details and natural properties of the surface are assessed from a viewing distance of about 1.5 meters. At least 95% of the production batch meets the quality requirements specified in the table. The appearance of wood may change after installation. Wood responds to its surrounding environment, so changes not covered by the grading rules may occur in its surface and appearance over time. The grading rules apply to the quality assessment carried out during production.



The red lines in the image indicate the area considered the visible face. In a piece planed all round (PAR), the working surface is the better side of the piece.



# Aspen

| Feature or defect     | Quality class: A                             |                                              |
|-----------------------|----------------------------------------------|----------------------------------------------|
|                       | Visible face                                 | Back face                                    |
| Knots                 | Sound knots up to 10 mm allowed              | Allowed                                      |
| Spike knots           | Not allowed                                  | Allowed                                      |
| Split knots           | Not allowed                                  | Allowed                                      |
| Knot holes            | Not allowed                                  | Allowed, not through                         |
| Bark knots            | Not allowed                                  | Allowed                                      |
| Black knots           | Not allowed                                  | Allowed                                      |
| Dead knots            | Not allowed                                  | Allowed                                      |
| Tearout around knots  | Not allowed                                  | Allowed                                      |
| Pin knots             | Allowed                                      | Allowed                                      |
| Arris knots           | Not allowed                                  | Allowed                                      |
| Broken edge knots     | Not allowed                                  | Allowed                                      |
| Canker and rind gall  | Not allowed                                  | Allowed                                      |
| Cracks                | Not allowed                                  | Allowed                                      |
| End cracks            | A through crack up to 30 mm long is allowed. | Allowed                                      |
| Ring shake            | Not allowed                                  | Allowed if it does not affect installability |
| Wane                  | Not allowed                                  | Allowed if it does not affect installability |
| Hit & miss            | Not allowed                                  | Allowed                                      |
| Trace of feed rollers | Not allowed                                  | Allowed                                      |
| Pith                  | Not allowed                                  | Allowed                                      |
| Slope of grain        | Allowed                                      | Allowed                                      |
| Bluestain             | Not allowed                                  | Up to 5% of the surface area                 |
| Color defect          | Natural color variation allowed              | Allowed                                      |
| Rot                   | Not allowed                                  | Up to 5% of the surface area                 |
| Insect damage         | Not allowed                                  | Not allowed                                  |
| Wood patch            | Not allowed                                  | Not allowed                                  |

\* The table shows the permissible size and number of knots on the most knotty 1 m long section of the piece of timber. Knots with a diameter of less than 6 mm are pin knots and do not count towards the knot total.



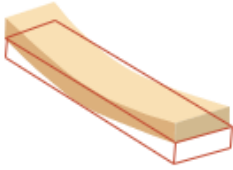
# Aspen

| Feature or defect     | Quality class: B                             |                                              |
|-----------------------|----------------------------------------------|----------------------------------------------|
|                       | Visible face                                 | Back face                                    |
| <b>Knots</b>          | Sound knots allowed                          | Allowed                                      |
| Spike knots           | Allowed                                      | Allowed                                      |
| Split knots           | Allowed                                      | Allowed                                      |
| Knot holes            | Through holes up to 5 mm in diameter allowed | Through holes up to 5 mm in diameter allowed |
| Bark knots            | Allowed                                      | Allowed                                      |
| Black knots           | Allowed                                      | Allowed                                      |
| Dead knots            | Solid knots are allowed                      | Allowed                                      |
| Tearout around knots  | Allowed                                      | Allowed                                      |
| Pin knots             | Allowed                                      | Allowed                                      |
| Arris knots           | Allowed                                      | Allowed                                      |
| Broken edge knots     | Allowed                                      | Allowed                                      |
| Canker and rind gall  | Not allowed                                  | Allowed                                      |
| Cracks                | Not allowed                                  | Allowed                                      |
| End cracks            | A through crack up to 10 mm long is allowed. | Allowed                                      |
| Ring shake            | Not allowed                                  | Allowed if it does not affect installability |
| Wane                  | Not allowed                                  | Allowed if it does not affect installability |
| Hit & miss            | Not allowed                                  | Allowed                                      |
| Trace of feed rollers | Not allowed                                  | Allowed                                      |
| Pith                  | Allowed                                      | Allowed                                      |
| Slope of grain        | Allowed                                      | Allowed                                      |
| Bluestain             | Not allowed                                  | Up to 5% of the surface area                 |
| Color defect          | Allowed                                      | Allowed                                      |
| Rot                   | Not allowed                                  | Up to 5% of the surface area                 |
| Insect damage         | Not allowed                                  | Not allowed                                  |
| Wood patch            | Allowed                                      | Allowed                                      |
| Finger joints         | Allowed                                      | Allowed                                      |

\* The table shows the permissible size and number of knots on the most knotty 1 m long section of the piece of timber. Knots with a diameter of less than 6 mm are pin knots and do not count towards the knot total.

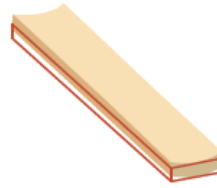


## Shape and dimensional tolerances



### BOW

Maximum 25 mm over a distance of 1000 mm allowed



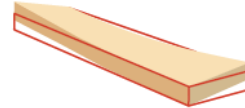
### CUP

Maximum 3% of the board width allowed



### SPRING, CROOK

Maximum 10 mm over a distance of 1000 mm allowed



### TWIST

Maximum 10 mm over a distance of 1000 mm allowed

| Dimension                        | Dimensional deviation when the moisture content of planed timber is 20% |
|----------------------------------|-------------------------------------------------------------------------|
| Thickness and width $\leq 20$ mm | $\pm 0.5$ mm                                                            |
| Thickness and width $> 20$ mm    | $\pm 1.0$ mm                                                            |
| Width                            | $\pm 2.5\%$                                                             |
| Length when sorted by length     | $-5...+100$ mm                                                          |
| Length when cut to size          | $\pm 2.0$ mm                                                            |

## RESPONSIBILITY

### Responsible production shows in the quality

The aspen we use is a natural material that is excellently suited to saunas. We make our products in Lempäälä, Finland, where careful planing and finishing ensure consistent quality. For us, responsibility means high-quality production, respect for the material and long-lasting products that stand the test of time.

