

**WOODEN BOXES**

Date of issue: 01 Sept 2006

Modification: 01

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1. PURPOSE OF USE

It is used for external and internal transport and storage of castings.

2. GENERAL QUALITY REQUIREMENTS

Conformity with the quality specification.

3. PROPERTIES OF MATERIAL

Basically, wooden boxes must be in accordance with Figure 1 below: Livar d.d. transport crate

THE MAXIMUM ALLOWED CLEAR OPENING BETWEEN BOARDS IS 100 MM AND THE WIDTH OF INDIVIDUAL BOARD IS MIN. 60 MM.

Battens must be dried and may not appear wet.

The internal reinforcement corner batten must be free of gnarls and defects from wood processing.

Dimensions of the internal corner batten must be 2.5 x 10 cm or 4 x 7 cm for ½ m³ crates, or 4 x 7 cm or 5 x 8 cm at 1 m³ crates, due to the stability.

The nails may not bulge out of the pallet. Due to the higher strength, the spiral nails are required.

a) Large-size transport box

- 3 nails per each side of the crate are used. Usually, they are nailed 3-5 cm apart, according to Figure 1: Livar d.d. transport crate, i.e. $3 \times 4 \times 2 \times 4 = 96$ nails,
- boards on the bottom side of the crate: it is enough to use 2 nails per stud $\times 5 \times 2 = 20$ nails, if there are 5 bottom boards
- the crate bottom is nailed to the sides from the lower side using 28 nails
- therefore, min. 144 nails per large-size crate

b) Small-size transport box

- 3 nails per each side of the crate are used. Usually, they are nailed 3-5 cm apart, according to Figure 1: Livar d.d. transport crate, i.e. $3 \times 3 \times 2 \times 4 = 72$ nails,
- boards on the bottom side of the crate: it is enough to use 2 nails per stud $\times 5 \times 2 = 20$ nails, if there are 5 bottom boards
- the crate bottom is nailed to the sides from the lower side using 28 nails
- therefore, min. 120 nails per small-size crate

Treated battens may be wane, but the bark must be removed.

Wane battens must be oriented into the interior of the pallet, while the lower ones must be oriented into the bottom of the pallet.

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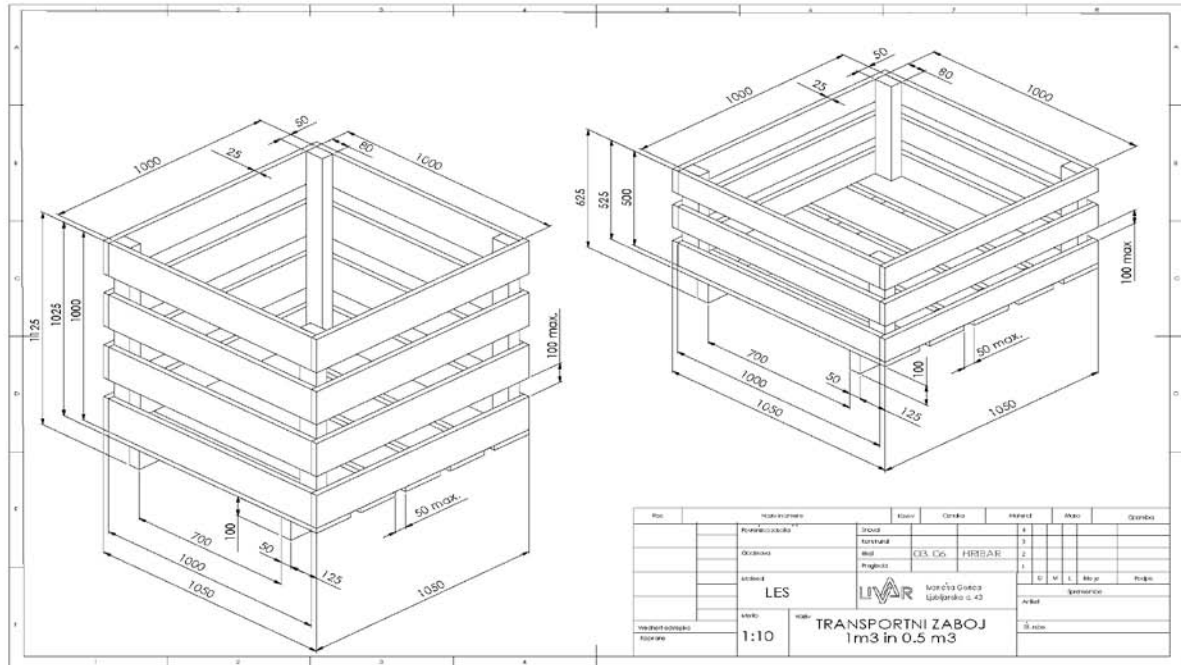


Figure 1: Livar d.d. transport crate (Note: The drawing and number of battens are for informational purposes only.)

4. PACKAGING, PACKING AND TRANSPORT

Wooden boxes must be delivered undamaged. They must be assembled or disassembled by pieces.

Battens in an assembled pallet may not be fractured or damaged.

Battens must be free of gnarls falling out, since there is a great possibility of breaking the batten.

The assembled pallet must not be tilted vertically in one direction for more than 2 cm.

The internal dimension by diagonal may deviate max. by 5 cm.

Pallets may not be wet or covered by snow in winter.

Each crate must be marked by colour in the lower left corner of the crate with regard to the supplier (blue, colour, green colour, etc.)

5. WARRANTY OF QUALITY

Upon every delivery, an appropriately completed delivery note is required (with clearly indicated order number of Livar d.d.). In the opposite case, we will be forced to reject the crates!

6. MANNER OF ACCEPTANCE

Wooden crates will be accepted by the acceptance control of LIVAR.



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7. CONTROL PROCEDURE

Wooden boxes will be sampled (2 crates from every shipment) according to Figure 1: Livar d.d. transport box

8. MANNER OF MEASUREMENT

All dimensions are indicated in Figure 1: Livar d.d. transport box.

9. ANNEXES