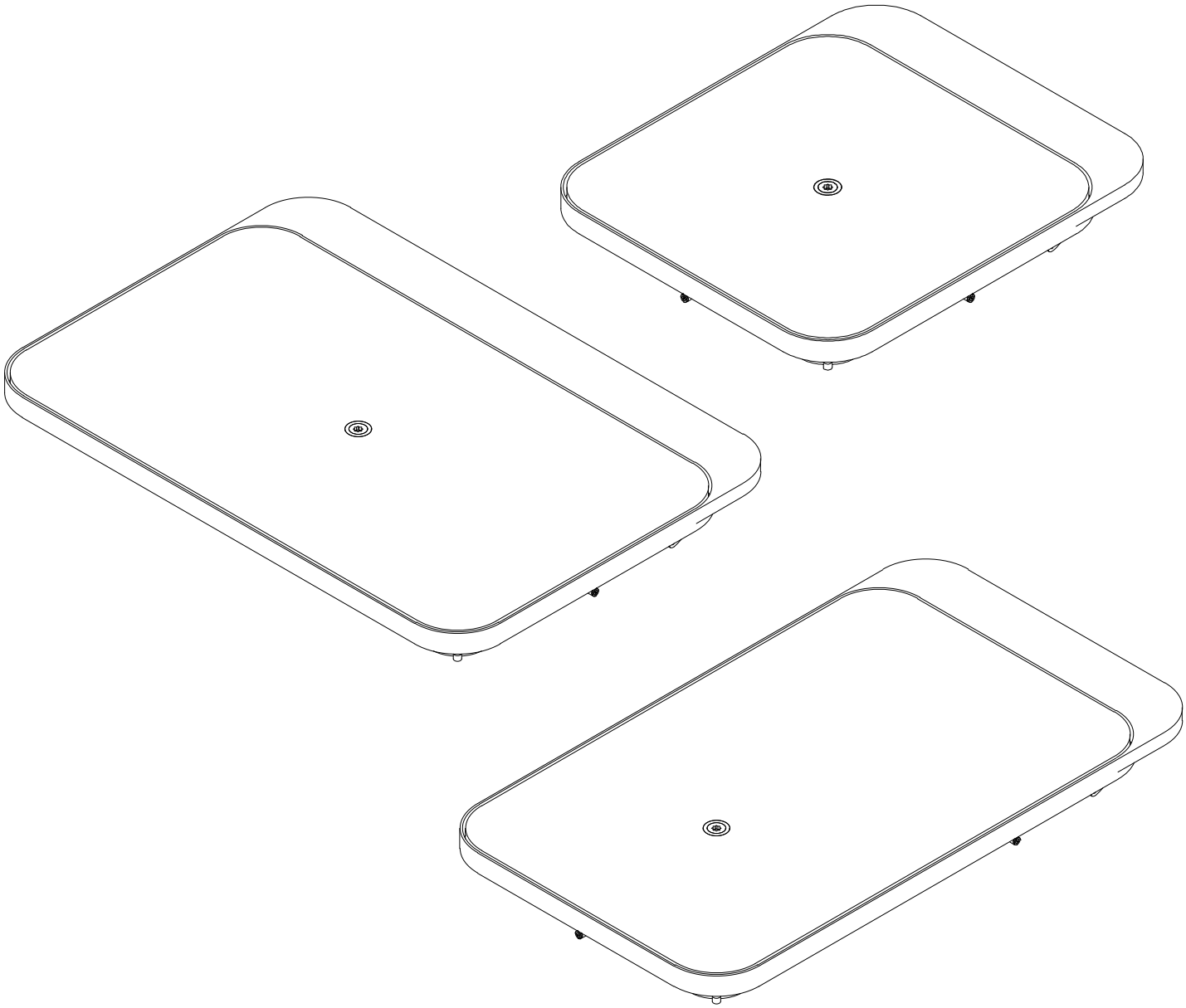
Flush hatch, welding insertion procedure

De Vor Metaalbewerking B.V.



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Watertight Hatch

Welding Insertion Procedure

Introduction

This user manual has been prepared with the purpose to have the various hatches inserted into the ship's structure in the correct way.

In this manual we describe the various steps of the procedure, the sequence of these steps to be taken and what tolerances are acceptable.

This manual is intended for technical operational or preparatory staff. It is expected that these employees have a basic knowledge of how to read technical drawings.

In order to reach a good end result, the area (plate field) in which the hatch will be placed needs to be free of tension. This implicates that no horizontal or vertical strips are welded along the plate cut in order to stretch the area.

Various types of watertight hatches

This manual can be used for all kinds of hatches of De Vor Metaalbewerking. The hatches can be opened in a horizontal way and can be made of aluminium, steel or stainless steel. Please check the front page for the different types.

Disclaimer

In the case of any conflict between the content of this manual and the regulations of the classification provider, the latter shall prevail.

Excluded from the scope of this manual:

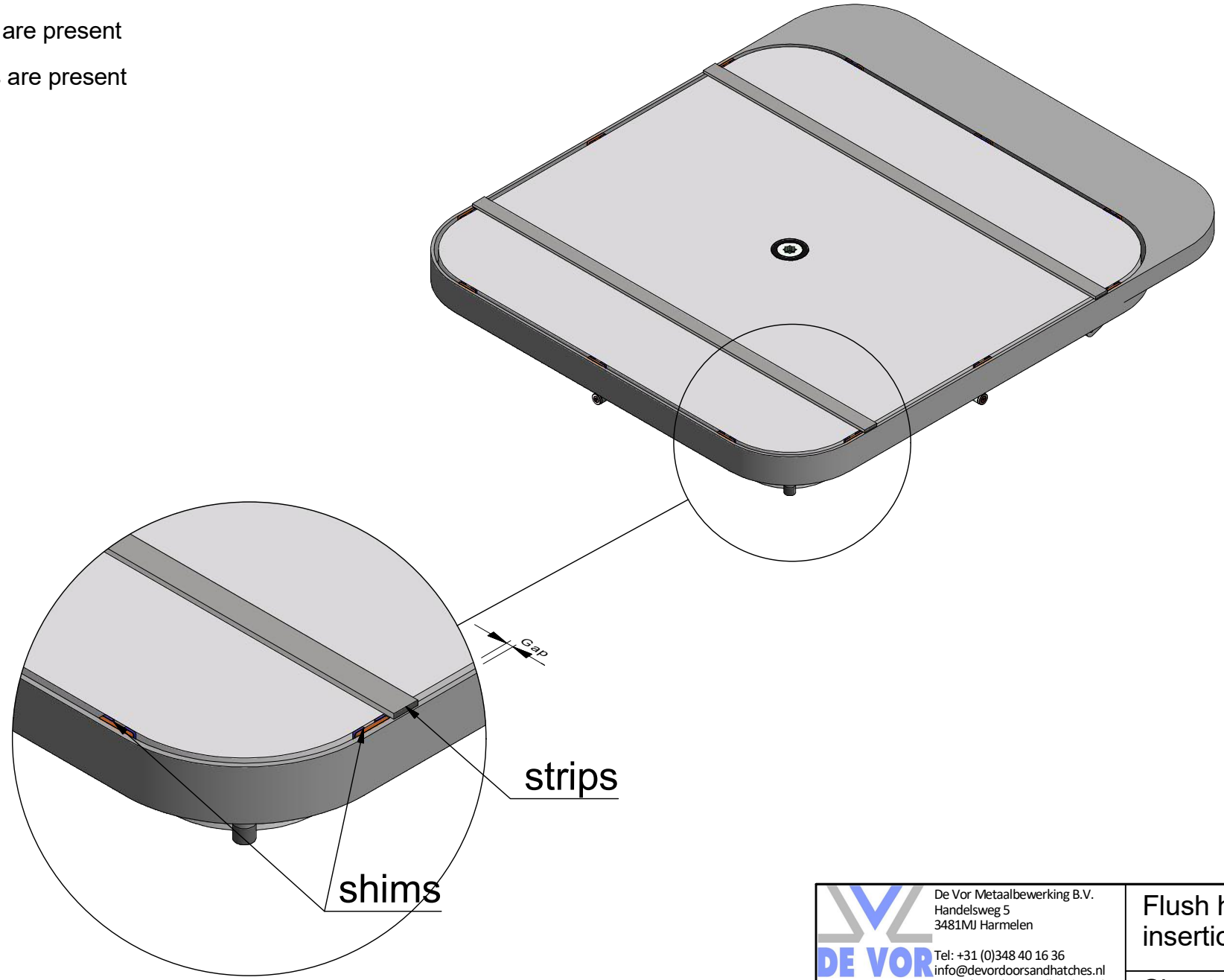
- The extent to which the area in which the hatch is placed is straight /aligned
- The welding procedure specifications, the quality and the finishing of the welds.
- Safety instructions
- Required (measuring) tools

CHECKLIST

☐ Undamaged package (Frame and hatch assembly)

☐ Strips are present

☐ Shims are present



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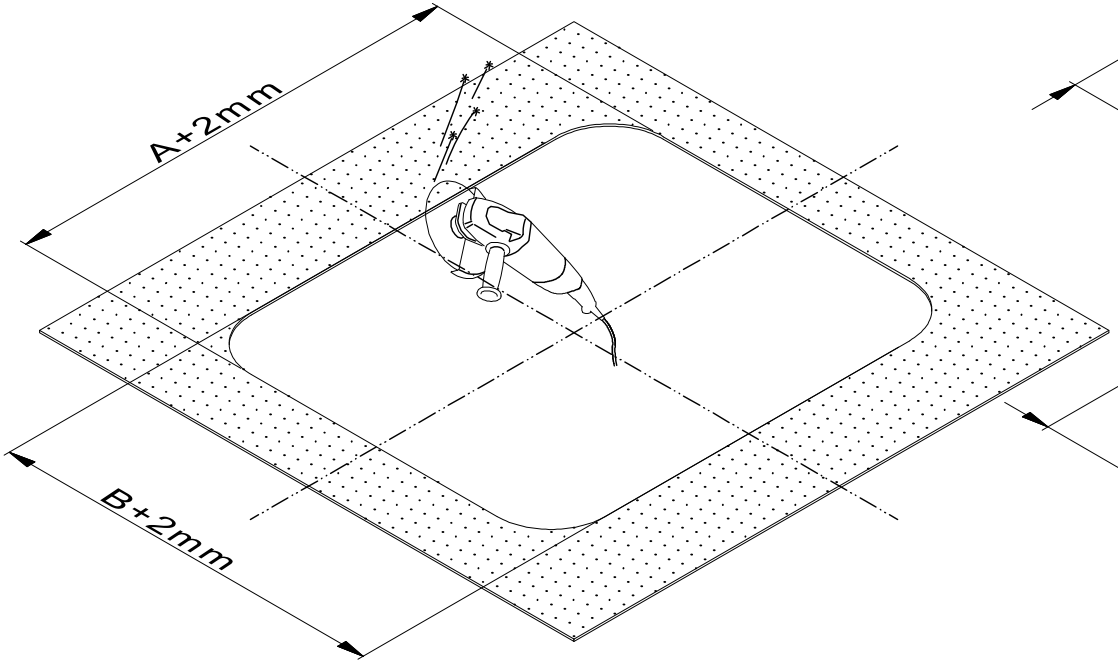
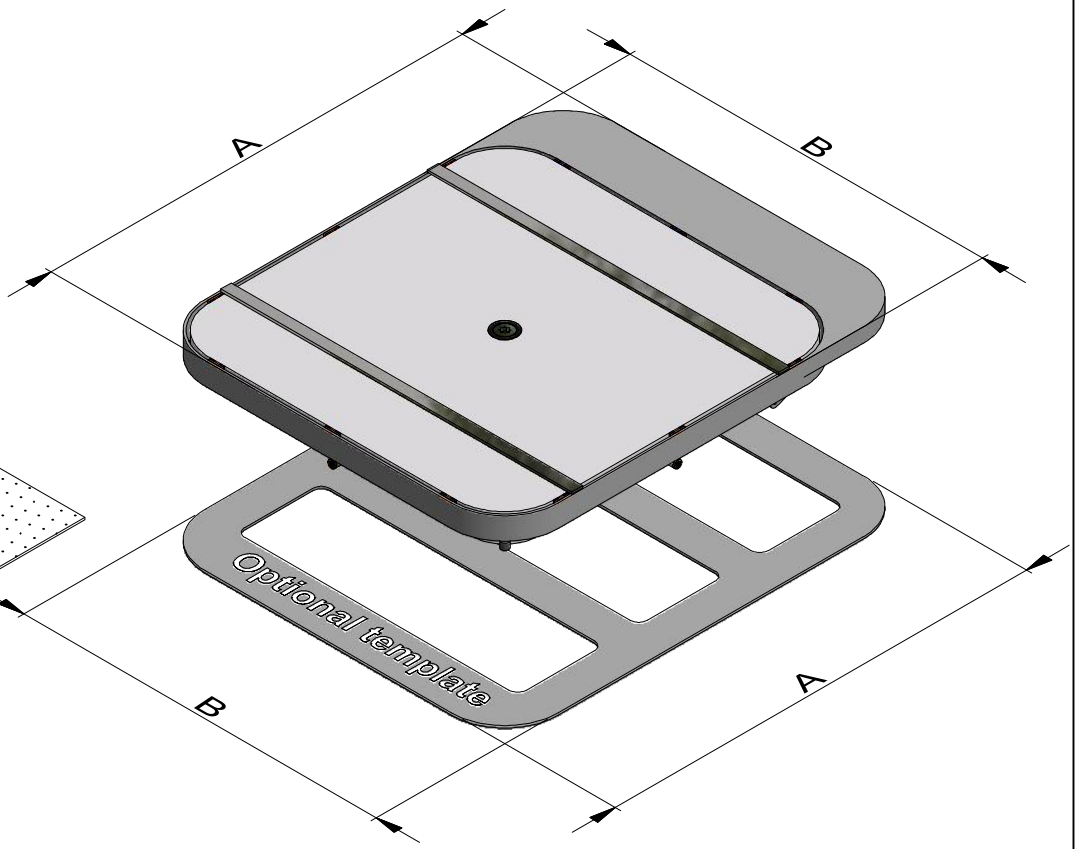
CHECKLIST

- ☐ Determine plate cut position
- ☐ Mark contour (using optional template)
- ☐ Make plate cut





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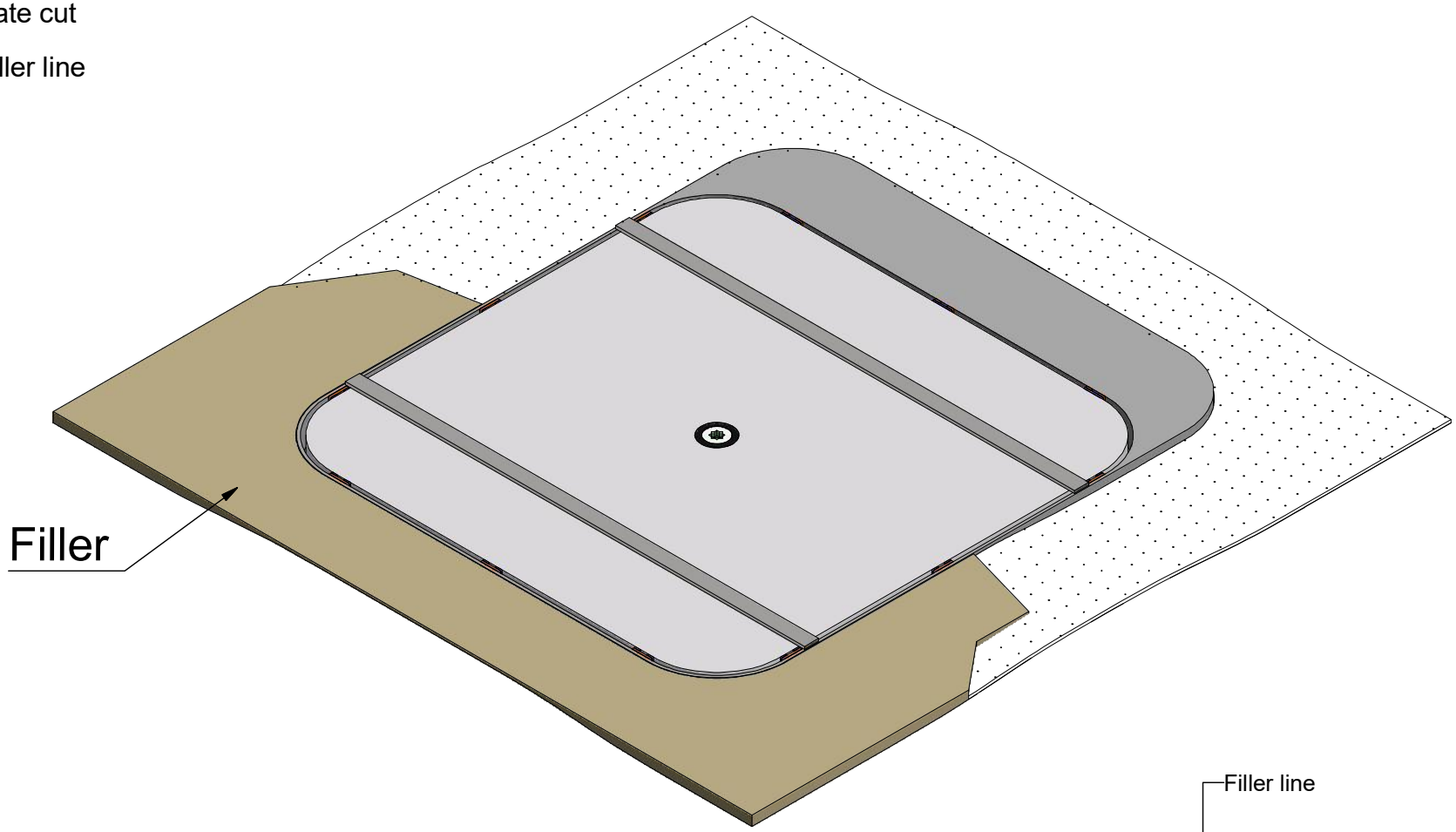
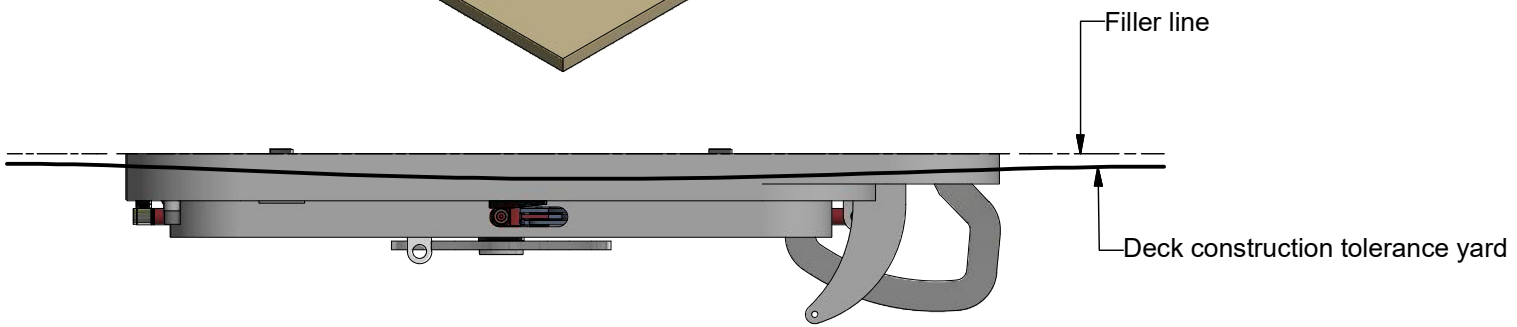
Flush hatch, welding insertion procedure

CHECKLIST

☐ Place package in plate cut

☐ Hatch is flush with filler line





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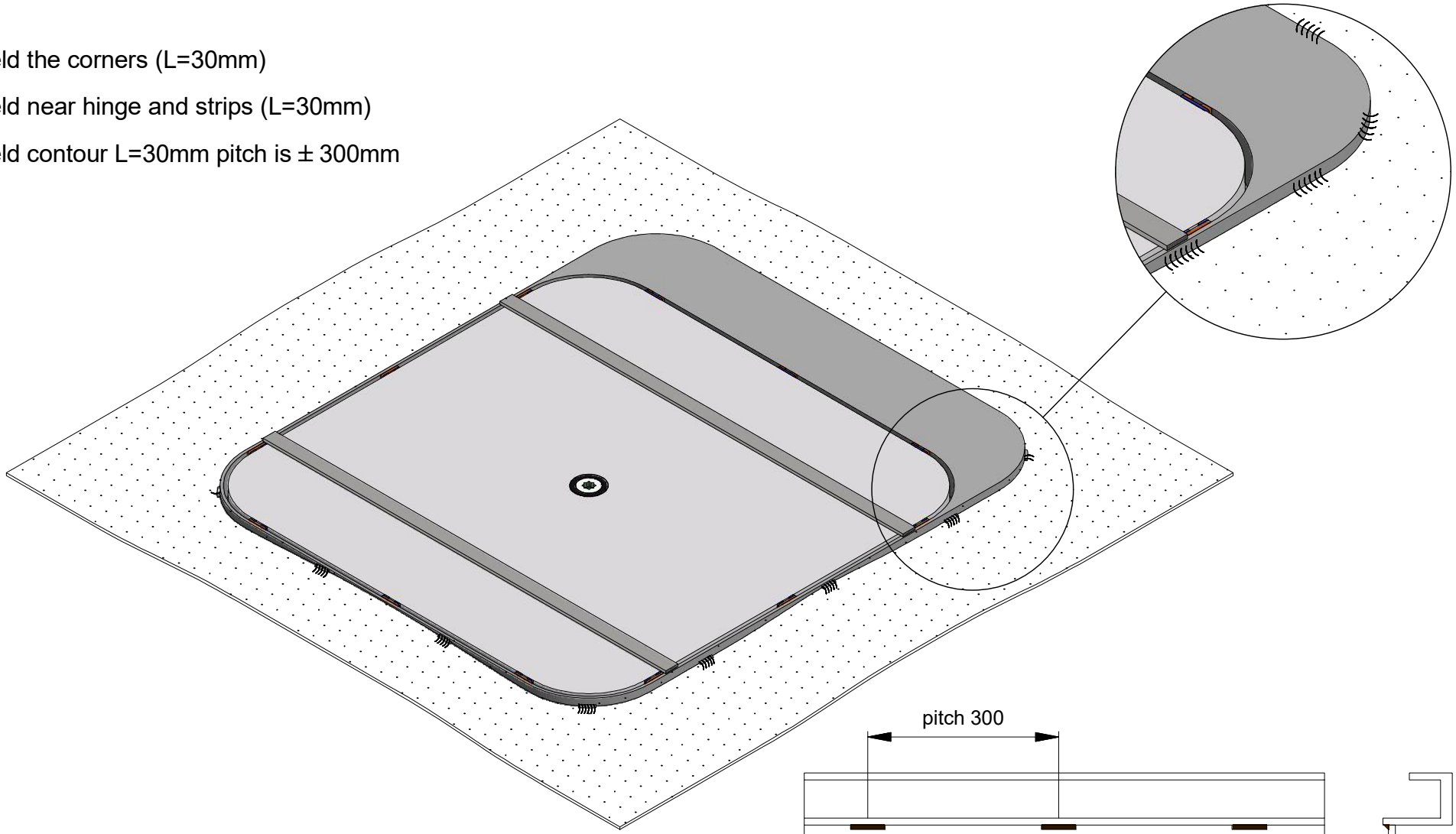
Flush hatch, welding insertion procedure

CHECKLIST

☐ 1. Tack weld the corners (L=30mm)

☐ 2. Tack weld near hinge and strips (L=30mm)

☐ 3. Tack weld contour L=30mm pitch is ± 300mm



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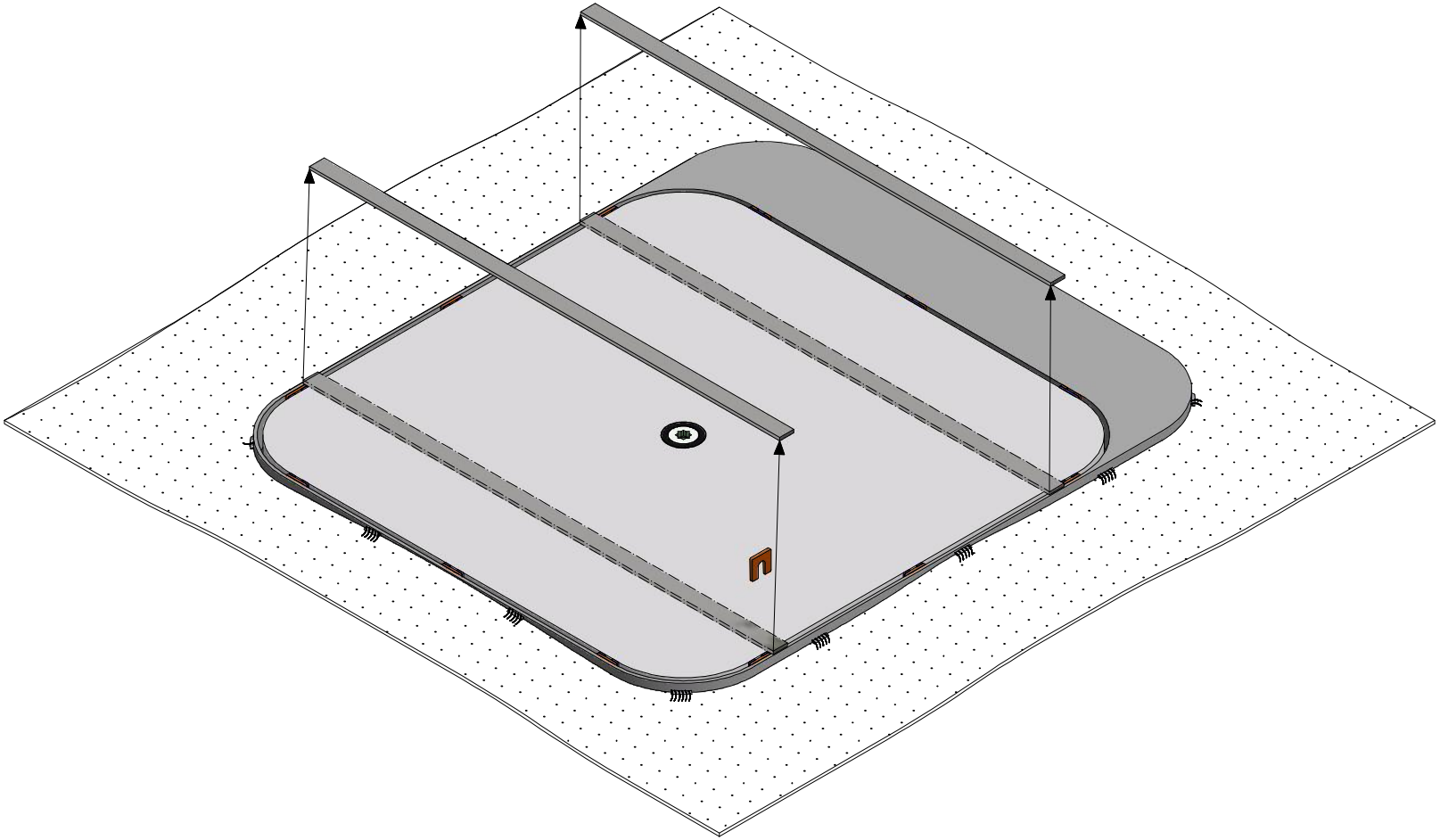
CHECKLIST

☐ Remove all welded strips

☐ Remove shims



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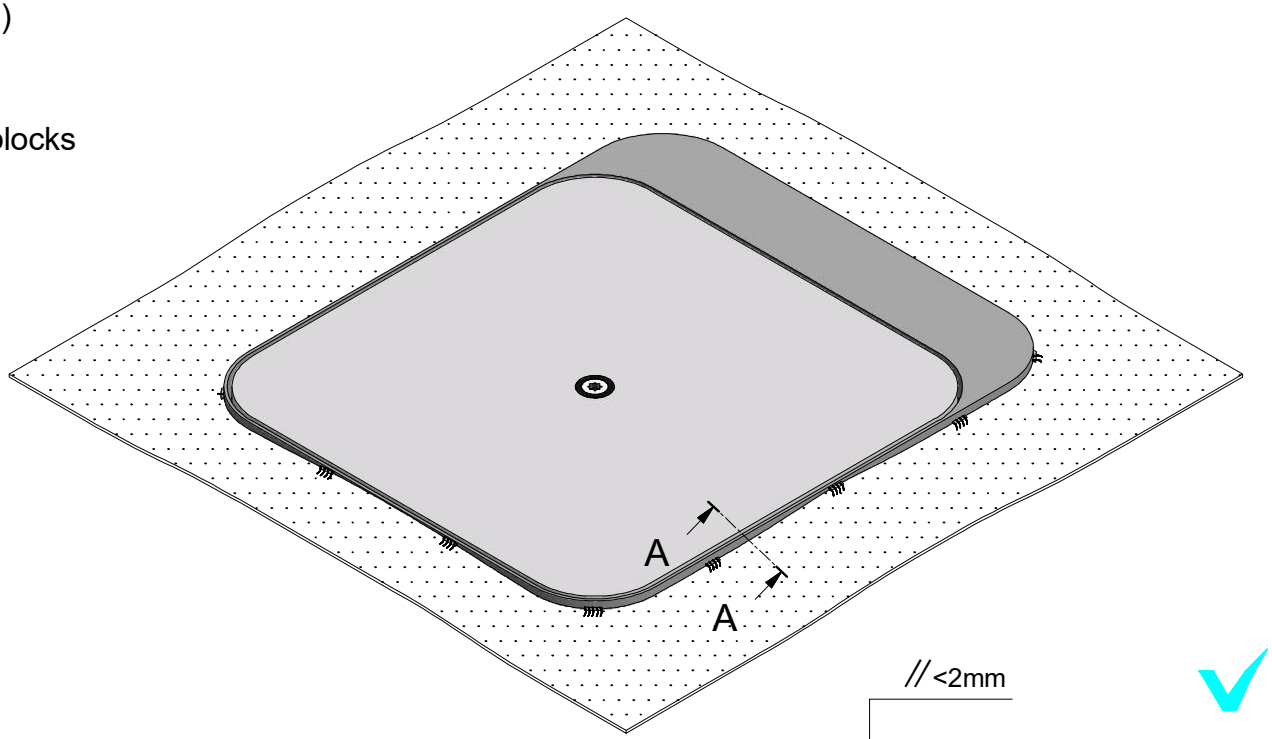
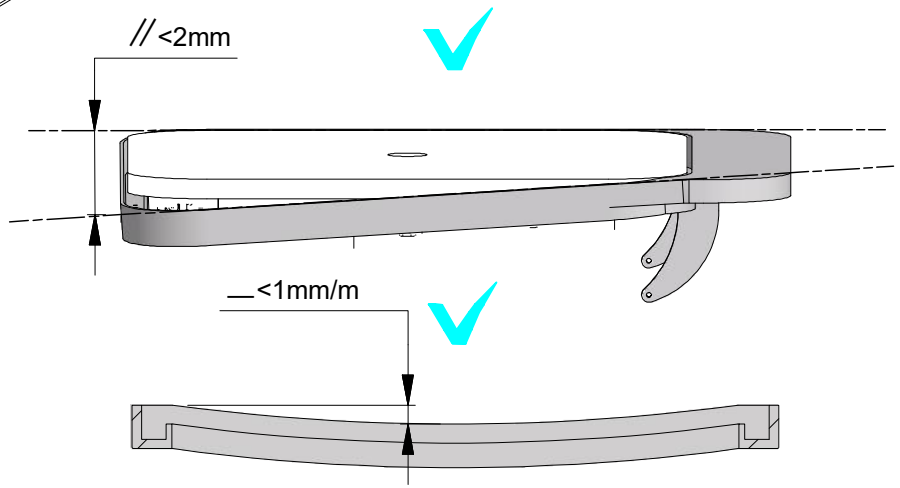
CHECKLIST

- ☐ Frame is placed parallel (// <2mm)
- ☐ Frame is straight (⎯ <1mm/m)
- ☐ Hatch is flush with filler line
- ☐ Hatch makes contact with all blocks





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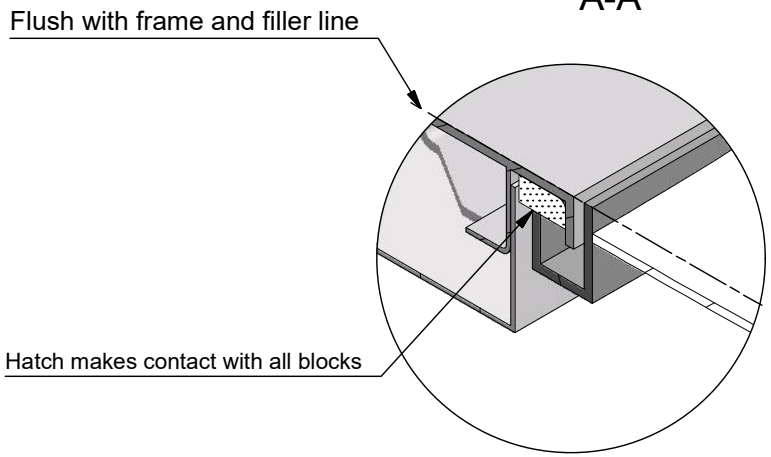

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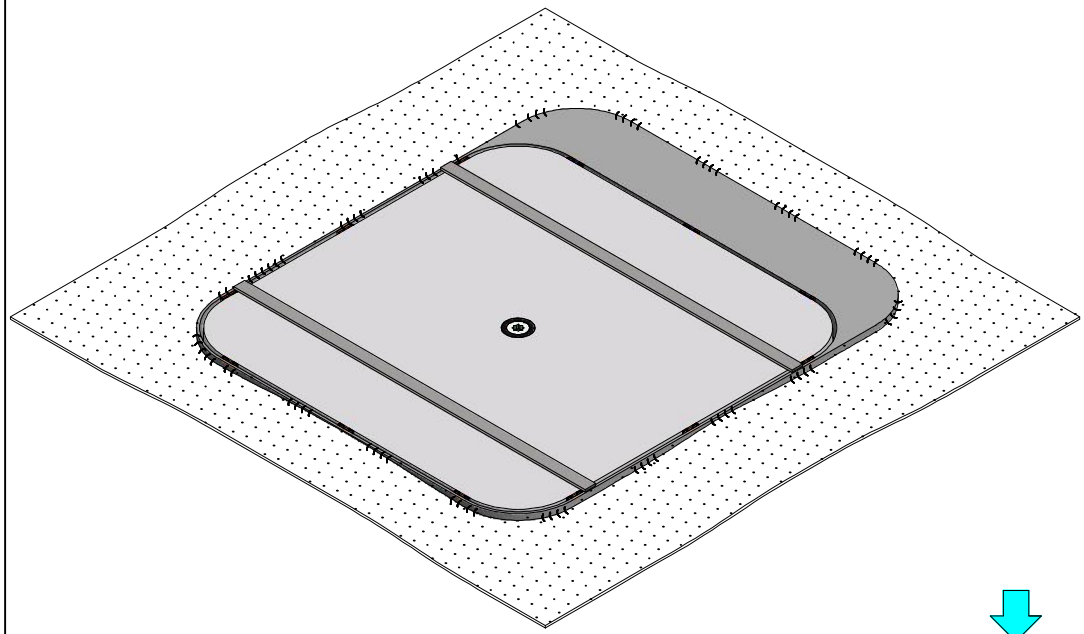
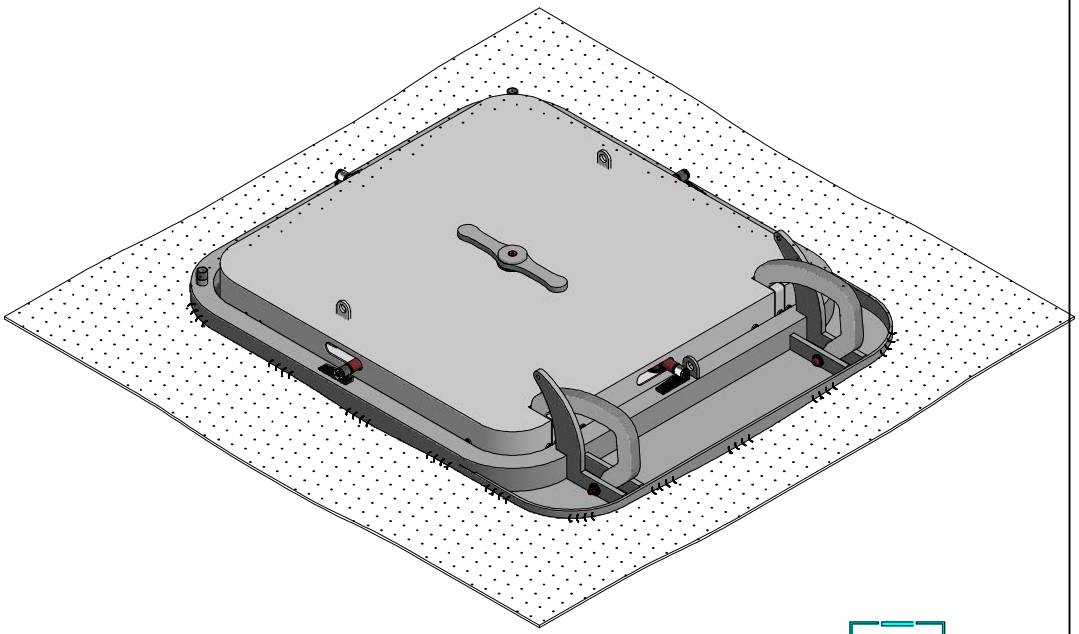
CHECKLIST

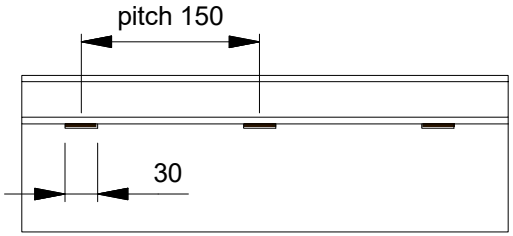
- ☐ Tack weld exterior contour L=30mm pitch is ± 150mm
- ☐ Tack weld interior contour L=30mm pitch is ± 150mm

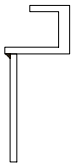




Exterior

Interior





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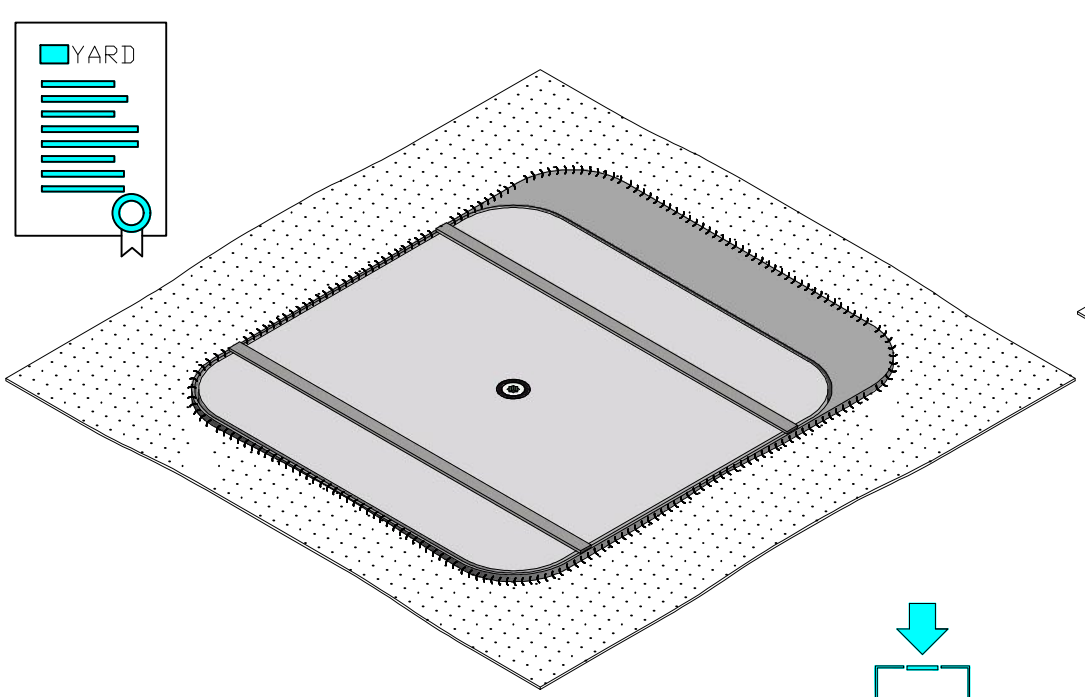
CHECKLIST

☐ 1. Weld parameters are according to yard specification

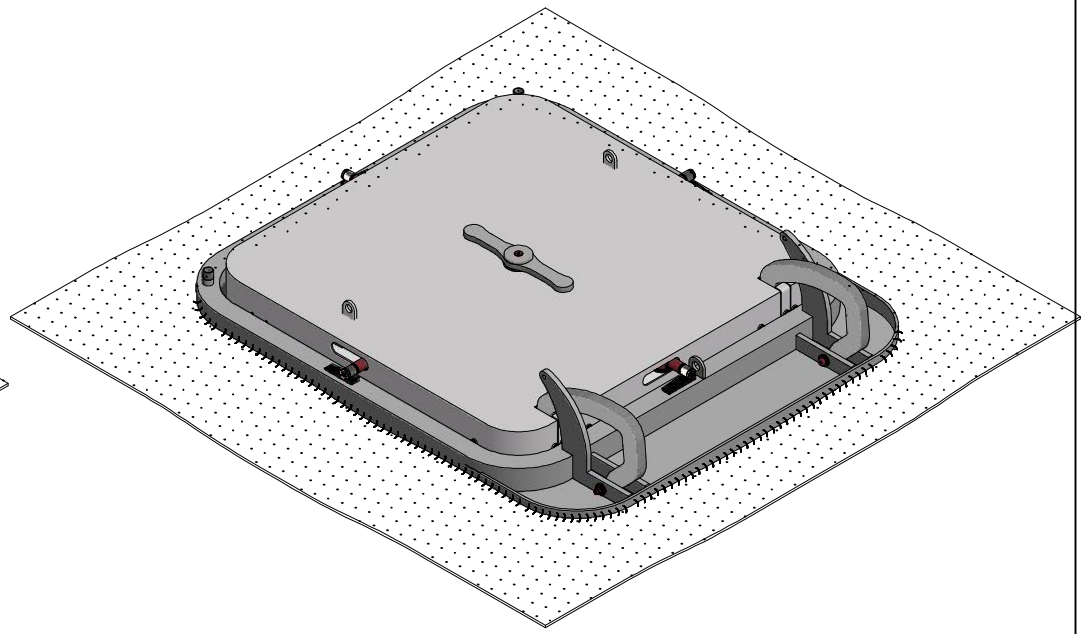
☐ 2. Fully weld corners

☐ 3. Weld crosswise between tack welds to minimize deformation

☐ 4. Interior side according to yard specification, completely welded or tack welded.



Exterior



Interior

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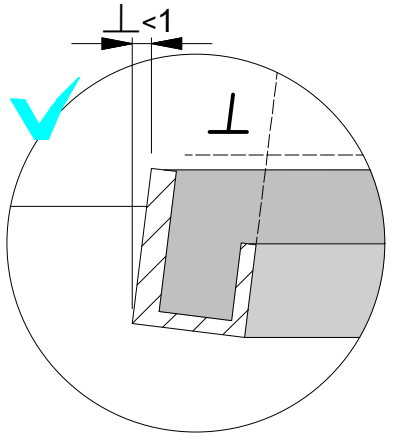
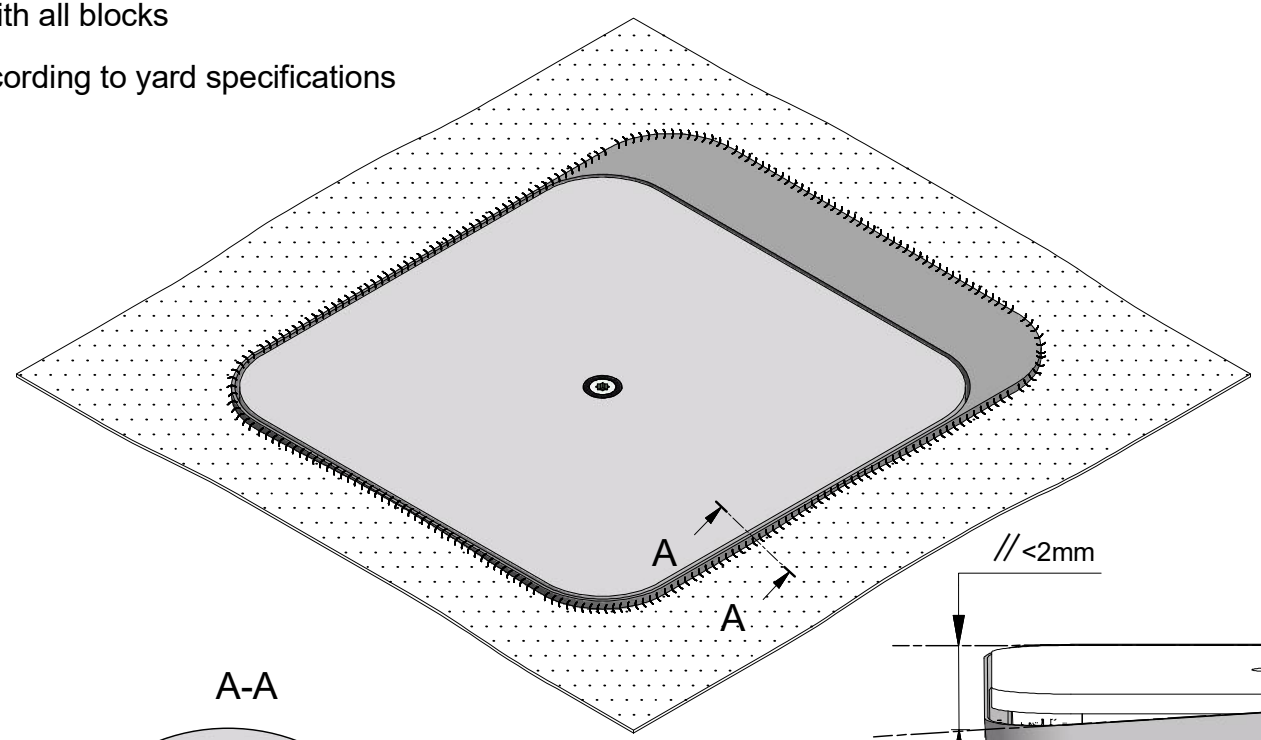
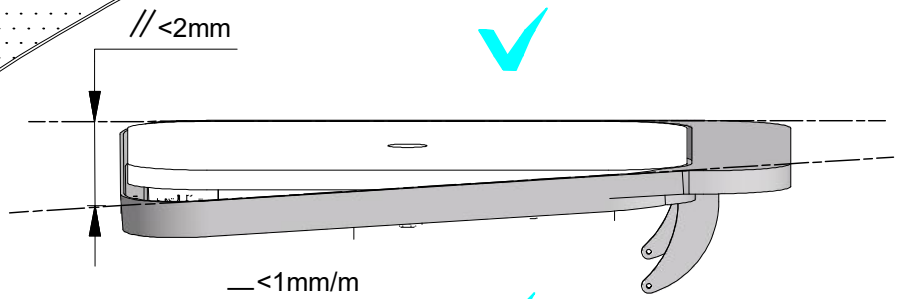
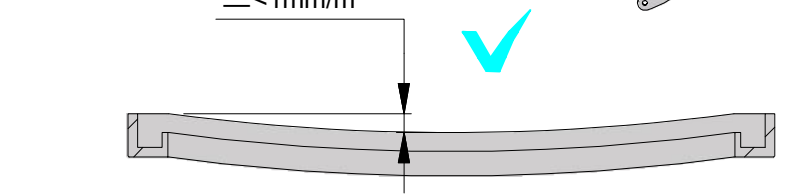
- ☐ Frame is parallel (// <2mm)
- ☐ Frame profile is perpendicular to hatch face (⊥ <1mm)
- ☐ Frame is straight (⏤ <1mm/m)
- ☐ Hatch makes contact with all blocks
- ☐ (Weld) finish quality according to yard specifications









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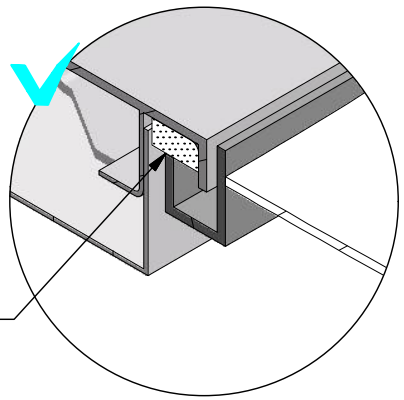

Hatch should 'rest' on all blocks

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