

7. SITE INSPECTION & JOB PLAN

FABRICATION GUIDELINES

Solid Surface Material

Good preparation through site inspection, accurate measurement, and the use of templates will help create a successful job plan. Careful planning can reduce material waste and save time. The characteristics of HIMACS sheets should be taken into account and incorporated into the job plan to prevent failure and to avoid shortening the lifetime of the finished products after installation.

■ 1. Site Inspection

Installation site accessibility is one of the key factors in determining the size of semi-finished products produced in the workshop. Before starting any fabrication, LX Hausys recommends checking and analysing the following information about the installation site:

- Parking and unloading areas.
- All entrances along the delivery route: doors, windows.
- Hallways, lifts/elevator cars, stairs, and ceiling heights.
- Hallway corner angles.
- Any other site conditions that could create difficulties during delivery or installation.

Installation requirements

The following information must be identified in advance to prevent structural issues and installation defects:

- **Wall condition:** flatness, cleanliness, slope, and any obstacles.
- **Furniture condition:** correct levelling and stability of the frame structure.
- **Electrical, plumbing, and heating element positioning.**
- **Sufficient space** for the installation at the site.
- Any other site conditions that could cause difficulties during installation.

Detailed furniture evaluation (cabinets)

Verify that all furniture is installed in compliance with industry best practice.

- **Flatness:** Check and control the flatness of base furniture. Any deviation must be corrected before installation.
- **Structural integrity:** Ensure the furniture can support the weight of HIMACS, as well as accessories such as sinks, cookware, and kitchen fittings, without compromising safety for the end user.
- **Ventilation:** Dust covers, solid cabinet tops, corner cabinets, and “Lazy Susan” cabinets must be ventilated to prevent trapped air. In each case, the tops of these cabinets should be removed as much as possible without compromising the structural integrity of the cabinet.

Templates

Templates with strips are not essential for most general work with HIMACS sheets. Digital templates can also be used. For simple flat walls or straightforward countertop shapes, an accurate sketch with precise measurements is often more useful.

However, if accurate measurements and sketches cannot be guaranteed, for example due to irregular walls or complex furniture shapes, templates with strips are often the simplest, most accurate, and most efficient method for planning the job.

Points to Check for Templates and Sketches

The first step in templating is usually to sketch a plan view of the job, including:

- Sink identification and location(s)
- Cooktop identification and location(s)
- Appliance identification (e.g. slide-in range, refrigerator, dishwasher) and location(s)
- Finished edge(s)
- Overhang(s) less than 150 mm (six inches) at base cabinets
- Overhang(s) more than 150 mm (six inches) at base cabinets requiring support
- Overhang(s) more than 150 mm (six inches) including peninsulas that require support
- Inside and outside corner(s) including radius measurements
- Pass-through location(s) and edge treatment(s)
- Backsplash and side splash type (loose or coved) and dimensions
- Special cut-outs and any unusual conditions
- Allowances for thermal expansion

Template materials

Choose rigid, lightweight materials that are easy to handle, do not shrink, warp, or deflect, and offer a long service life. They should also be thicker than the template guide. Suitable materials include:

- Plywood strips
- Hardboard
- Heavy cardboard sheets
- MDF strips
- Digital templates (where possible)

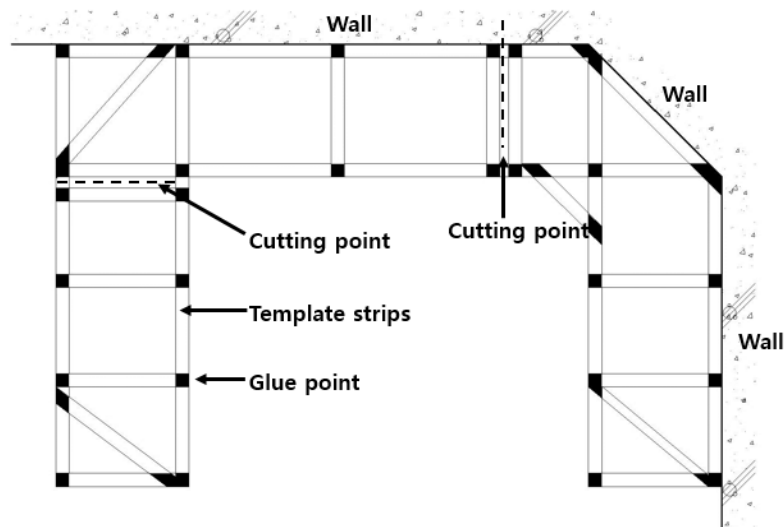
Templates must be strong enough to maintain their accurate shape during transport from the site to the workshop without distortion.

Example of Kitchen Countertop Templating

1. Cut the template material to length and place it close to the wall.
2. Note the largest gap between the template strip and the wall on the template, and inform your customer of any wall warping.
3. If the customer wants the countertop to fit directly against the wall, trim the template strip to fit. Check and trim again if necessary.
4. If the customer prefers to finish with filler such as silicone sealant, do not trim the strip; keep the template strip straight.
5. Repeat the process for all wall sides.
6. Lay out the remaining strips on the cabinet to match the exact size and shape of the countertop.
7. Once laid out, secure the strips together with hot-melt glue to form a single piece.
8. Ensure the size, shape, and angles are correct before gluing.
9. Add diagonal strips to strengthen the shape.

Notes:

- Record all important information on the template.
- Refer to the section *Check Points for Templates and Sketches* in this document and add any relevant notes.
- Mark seam locations. When deciding seam placement, refer to the section *Job Planning*.
- Simulate the moving path using the assembled template to determine the correct semi-finished product size with sufficient clearance.
- Refer to the section *Site Inspection*.



■ 2. Job Planning

Good job planning is essential for a successful installation. Careful planning is required to calculate the correct quantity of HIMACS products, and it is strongly recommended to minimise the risk of installation failure.

Site inspection results, templates, and accurate measurements are key factors in effective job planning. In addition, material characteristics and seam locations must also be considered. All this information should be thoroughly reviewed and incorporated before starting your order, fabrication, or installation.

Thermal expansion and contraction

One of the main characteristics of HIMACS sheets, and solid surface materials in general, is their tendency to expand and contract with temperature changes. HIMACS sheets expand as the temperature rises and contract as the temperature falls. This property is expressed as the *thermal expansion coefficient value*.

• Thermal expansion coefficient value for HIMACS sheets is: [value to be inserted]

$$4,5 \times 10^{-5} \text{ or } 45 \times 10^{-6}$$

This is the average value for HIMACS sheets; please refer to the material test report for each colour for more detailed information.

If thermal expansion is not considered, HIMACS sheets may crack, break, or distort after installation. Always ensure that the material can expand and contract freely without any barriers during installation.

Providing the correct gap between the structure and the HIMACS sheets is the solution.

Before fabrication or installation, calculate the expected expansion and contraction of the HIMACS sheets and determine the appropriate gap. When performing this calculation, take into account:

- The thermal expansion coefficient value of HIMACS sheets.
- The temperature variation within the building.
- The overall size of the finished product.
- Refer to the following example for the calculation.

Example Calculation

Conditions:

1. Thermal expansion coefficient value (α) = 4.5×10^{-5}
2. Temperature difference (ΔT) = 60 °C (range from -15 °C to +45 °C)
3. Product length (L) = 1,000 mm

Formula:

$$\Delta L = \alpha \times \Delta T \times L$$

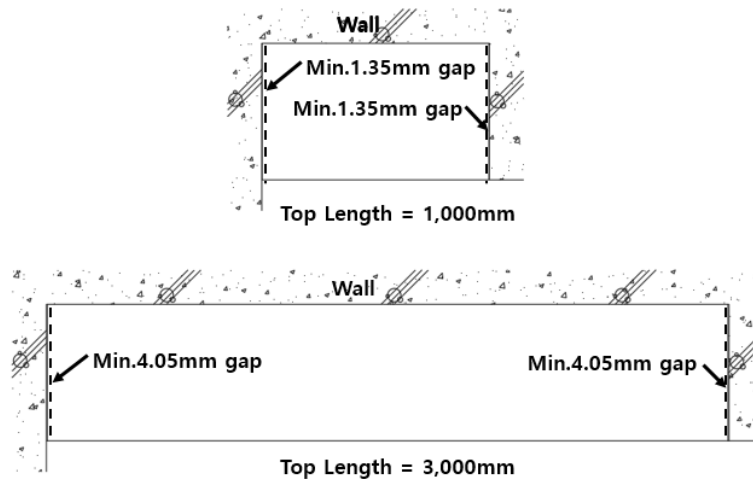
Calculation:

$$\Delta L = 4.5 \times 10^{-5} \times 60 \times 1,000$$

$$\Delta L = 2.7 \text{ mm per } 1,000 \text{ mm length}$$

This means a minimum gap of **1.35 mm per edge** is required.

Expansion gaps on a Kitchen countertop



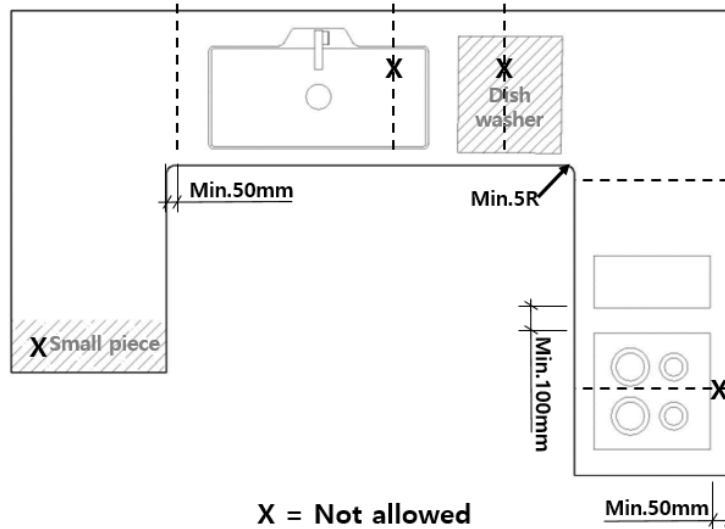
Seam and Cut-out Positioning

Proper seam and cut-out positions are essential for optimising material yield and ensuring the durability of the installation.

Avoid placing seams in risky areas that may cause problems with performance or design. Position seams where they will minimise HIMACS sheet usage, following the recommendations below. Refer to *Fig. Seam and Cut-out Position* for guidance.

Recommendations:

- Never place a seam over a cut-out or in a heat or wet zone such as above a heating device, dishwasher, or washing machine.
- Keep seams at least 100 mm away from any sink or other cut-out.
- Keep seams at least 300 mm away from a hob cut-out.
- The distance from a hob cut-out to a backsplash or upstand should be at least 50 mm.
- The distance from a hob cut-out to the wall should be at least 60 mm.
- When laying out and fabricating a countertop, maintain a minimum seam distance of 50 mm from any inside corner.
- Radius all inside corners of "L" and "U" tops to a minimum of 5 mm.
- Never join small pieces to extend the length of a countertop if the total length does not exceed the standard HIMACS sheet length of 3,680 mm.



Spare Material Consideration

Always allow for some spare HIMACS sheet quantity when planning fabrication and preparing materials.

If you face a shortage of HIMACS sheets during fabrication or installation and need to order additional products, it is not guaranteed that the distributor will have sheets from the same lot number. Using sheets from the same lot number ensures the best possible colour match at the joints.

This guideline has been created to provide technical information for successful fabrication and installation of HIMACS, and it is intended to be used in a safe environment considering their own discretion and risk by who has technical skill for fabrication and installation of HIMACS.

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