HI·MACS

The shape of your ideas

15. BASIN INSTALLATION

FABRICATION GUIDELINES

Solid Surface Material

LX Hausys

Installation of HIMACS Cast and Thermoformed Sinks and basins

HIMACS cast sinks and basins, as well as thermoformed sinks and basins, may be installed using the under-mount technique, either with or without a rebate. The following section outlines the minimum standard procedure required to ensure a consistently high-quality and stable installation.

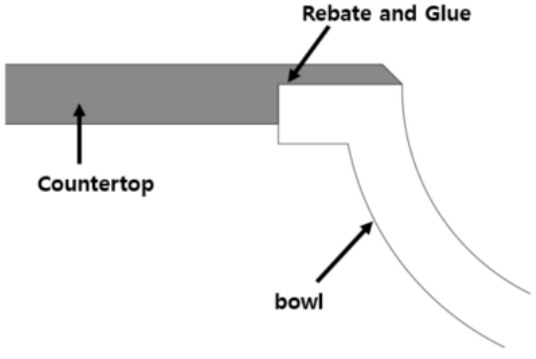
1. Installation Types

When the HIMACS sheet and basin are of the same colour, it is strongly recommended to use the rebate method during installation. This approach ensures a more seamless and visually appealing finish, enhancing the overall quality of the installation.

Benefits of the Rebate Method

- **Seamless Appearance:**
  The rebate method allows the sink or basin to sit slightly recessed into the worktop, creating a flush, visually continuous transition between the basin and the surrounding surface—especially effective when both are the same colour.
- **Enhanced Hygiene:**
  By eliminating exposed edges and lips, the rebate method reduces areas where dirt and moisture can accumulate, making cleaning easier and improving overall hygiene.
- **Improved Strength and Stability:**
  The rebated edge provides additional support for the sink or basin, resulting in a more secure and durable installation.
- **Superior Aesthetics:**
  This technique conceals the joint line, minimising visible seams and enhancing the overall finish, which is particularly important for high-end or colour-matched installations.
- **Professional Standard:**
  The rebate method is widely regarded as best practice in solid surface fabrication, reflecting a higher standard of workmanship.

Under mount with rebating



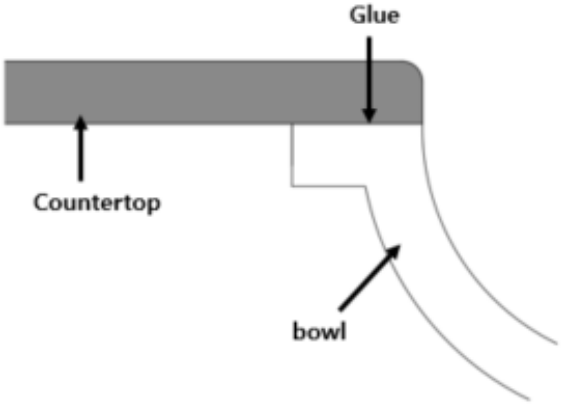
Butt Seam Under-Mount Installation for Contrasting Colours

When the HIMACS sheet and basin are of different colours, a straightforward butt seam under-mount installation may be used. It is essential to ensure that all bonding surfaces are properly smoothed prior to assembly to achieve a secure and visually acceptable finish.

Advantages of the Butt Seam Method

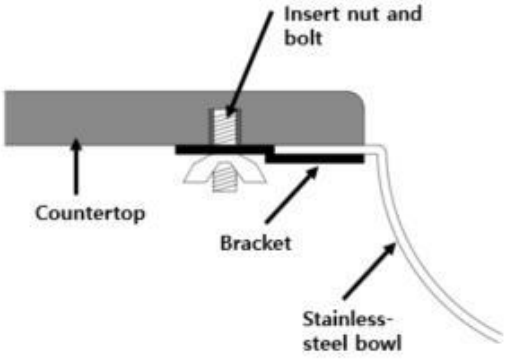
- **Simplicity and Speed:**
  The butt seam technique is straightforward and quick to execute, making it ideal for installations where efficiency is a priority.
- **Suitable for Contrasting Colours:**
  This method is particularly appropriate when the sheet and basin are of different colours, as it creates a clear, intentional transition between the two components.
- **Minimal Material Preparation:**
  The process requires only that the bonding surfaces are properly smoothed, with no need for complex edge profiling or additional fabrication steps.
- **Cost-Effective:**
  With fewer fabrication requirements, the butt seam method can reduce both labour time and material wastage.
- **Reliable Bonding:**
  When executed correctly, the butt seam provides a secure and durable join suitable for everyday use.

Under mount without rebating

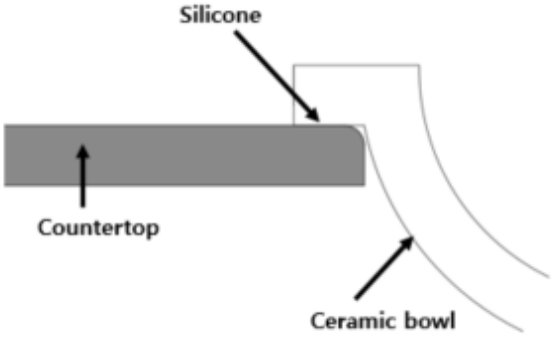


Alternative basin types, such as stainless steel or ceramic, may be installed as illustrated in the figures showing an under-mounted stainless-steel basin and a top-mounted ceramic basin

Under mount stainless – steel basin



Top mount ceramic basin



General Considerations for Solid Surface Countertops

- **Material Compatibility**: HIMACS is non-porous and can be machined precisely, making them suitable for both under-mount and top-mount installations.
- **Thermal Expansion**: Allow for slight movement due to temperature changes, especially around adhesives and sealants.
- **Surface Integrity**: Avoid excessive force or heat during installation to prevent cracking or warping.

When installing **stainless steel** and **ceramic basins** on **solid surface countertops**, it's important to respect the following key aspects to ensure durability, hygiene, and aesthetic quality:

Stainless Steel basin (Under-Mount Installation)

1.Cut-Out Accuracy:
1. CNC or template-guided cutting is recommended for a precise fit.
2. Edges should be smooth and sealed to prevent water ingress.

2.Support & Fixing:
1. Use corrosion-resistant clips or brackets.
2. Reinforce the basin with adhesive suitable for solid surfaces (e.g. two-part epoxy or polyurethane).

3.Sealant Application:
1. Apply a continuous bead of waterproof silicone between the basin and countertop underside.
2. Avoid excess sealant that could interfere with the flush finish.

4.Finish Protection:
1. Use protective film or padding during installation to avoid scratches.

Ceramic basin (Top-Mount Installation)

1.Cut-Out Dimensions:
1. Ensure the cut-out allows the basin rim to sit evenly on the surface.
2. The rim should cover the cut edge completely.

2.Weight Distribution:
1. Ceramic is heavier; ensure the countertop is adequately supported underneath.

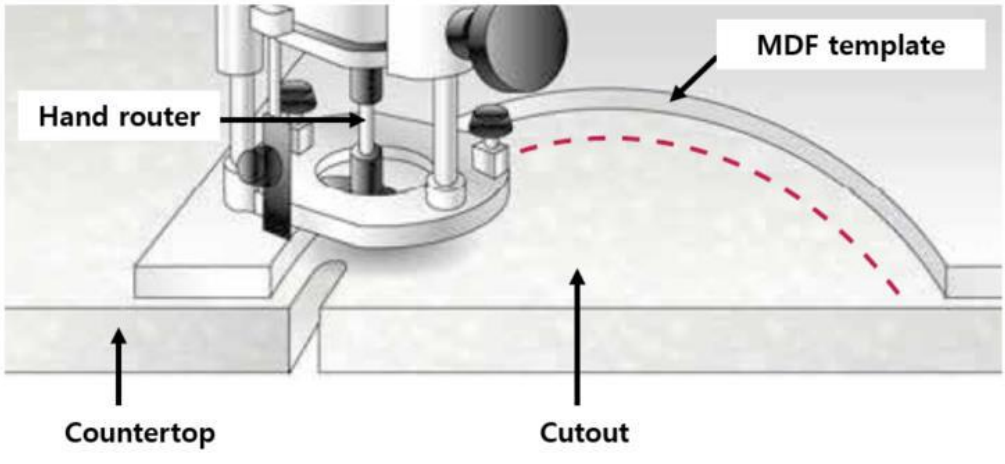
3.Sealant & Adhesion:
1. Apply a sanitary-grade silicone around the rim to prevent water seepage.
2. Avoid adhesives that may stain or react with the ceramic glaze.

4.Handling & Alignment:
1. Handle with care to prevent chipping.
2. Align the basin before sealing to avoid repositioning once the adhesive sets.

2. Installation Details

basin Installation with Rebate

1. **Template Preparation**
   Utilise a pre-fabricated cut-out template made from MDF or any other suitable timber material.
2. **Cut-Out Calculation**
   Ensure that the final cut-out in the solid surface sheet is smaller than the internal diameter of the basin.
   An overhang of approximately 2 to 3 mm is acceptable.
3. **Template Positioning**
   Position the cut-out template accurately and secure it firmly using clamps.
4. **Workpiece Alignment**
   Confirm that the workpiece is aligned correctly and adequately supported to prevent movement during routing.
5. **Routing Procedure**
   Perform the cut-out using a hand router with a minimum power rating of 1.8 kW.
   The router must be compatible with a 12 mm shank and equipped with a 10 mm and a 30 mm sleeve guide.
   Route in a clockwise direction for optimal control and finish.



Rebate Preparation and Cleaning Procedure

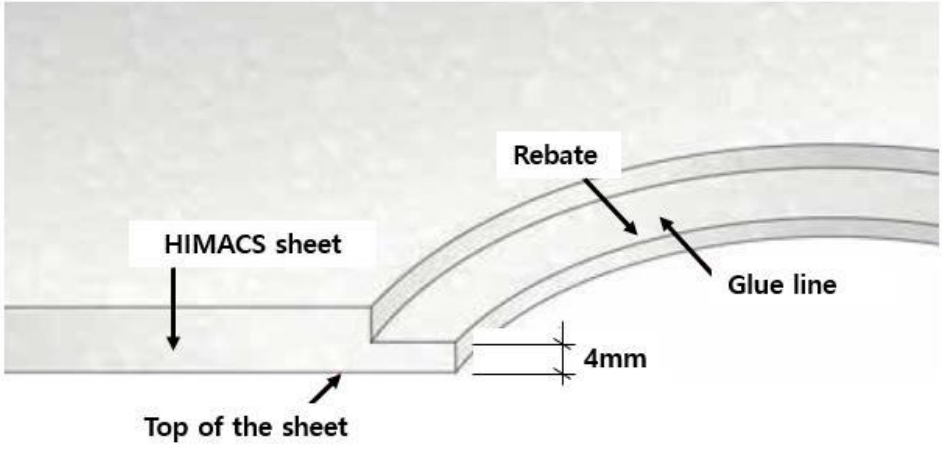
1. **Template Replacement**
   Remove the cut-out template and position the rebate template accurately.

2. **Routing the Rebate**
   Utilise a sharp 20 double-flute carbide router (side and bottom cutting) fitted with a 30 mm sleeve guide.
   Adjust the router depth to ensure a minimum of 4 mm material thickness remains in the HIMACS sheet.

3. **Template Removal and Cleaning**
   Once routing is complete, remove the rebate template.
   Clean the area thoroughly using denatured alcohol and a clean white cloth or white industrial-grade paper.

4. **Surface Preparation for Bonding**
   Clean both the rebate and the edge of the basin to be bonded, ensuring all dust, grease, and pen marks are removed.
   Denatured alcohol and a white cloth are recommended for best results.

5. **Handling Precautions**
   Avoid touching the cleaned surfaces with bare hands.
   If contact occurs, clean the area again to prevent contamination, which may become visible in the adhesive line.



Adhesive Preparation and Application

6. **Adhesive Preparation**
   Prepare the HIMACS adhesive in accordance with the manufacturer's instructions.

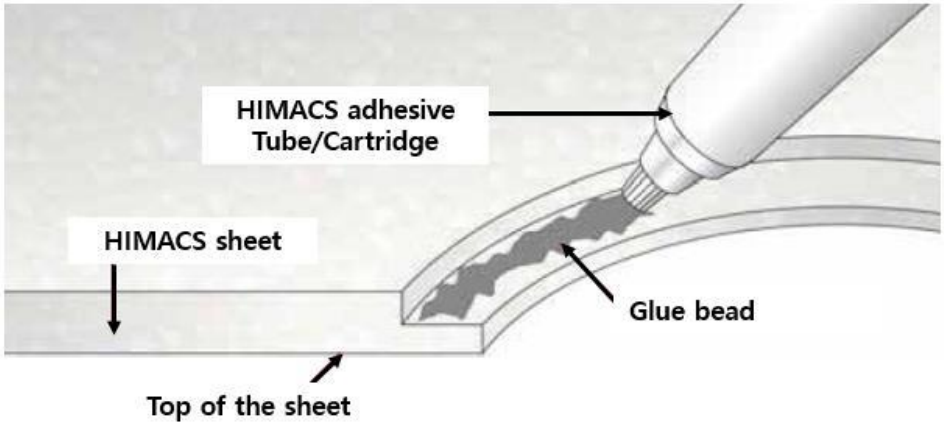
7. **Component Mixing**
   If using a tube-type adhesive, fill the tube with the filler component followed by the hardener.

8. **Air Removal and Sealing**
   Expel any trapped air from the tube and seal the top securely using the designated plug.

9. **Mixing Procedure**
   Place the tube in an orbital sander and mix thoroughly for a minimum of 1.5 minutes, moving the tube alternately to the left and right.

10. **Mixing Verification**
    Ensure the adhesive is fully and evenly mixed before application.

11. **Application**
    Apply the adhesive in a continuous bead along the rebate or around the edge of the basin to ensure a uniform bond.



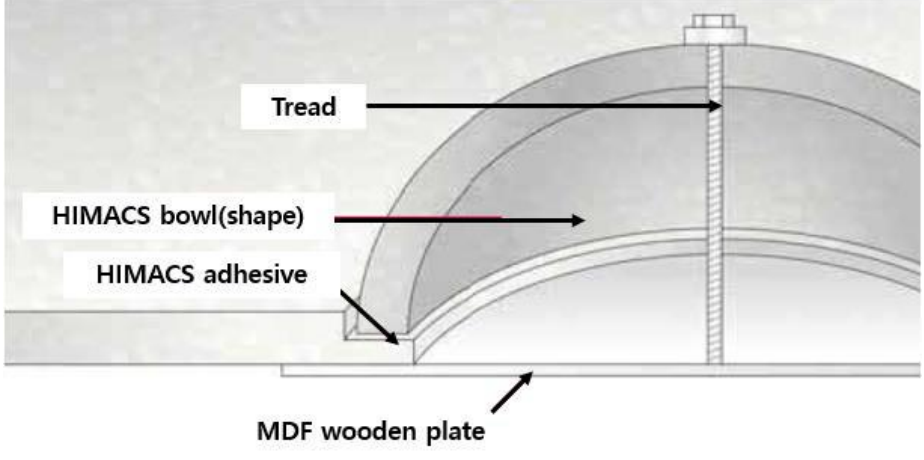
Basin Positioning, Clamping, and Bonding Procedure

12. **basin Placement**
    Invert the basin and carefully position it into the rebate.

13. **Alignment Check**
    Ensure the drain hole is correctly aligned for the final orientation of the sheet.
    Confirm that the basin is squarely positioned within the rebate.

14. **Securing the basin – Clamping Tips**
    - Use clamps or a threaded rod inserted through the drain hole to hold the basin in place.
    - Protect the basin and sheet by placing a thick wooden plate between the clamp and the surface.
    - Apply additional clamps at the front if necessary to maintain even pressure.
    - **Do not overtighten**: excessive force may deform the basin or damage the solid surface.
    - Check that the basin remains level and centered throughout the clamping process.

15. **Adhesive Curing**
    Allow the HIMACS adhesive to cure undisturbed for a minimum of 35 minutes at a room temperature of at least +17°C.



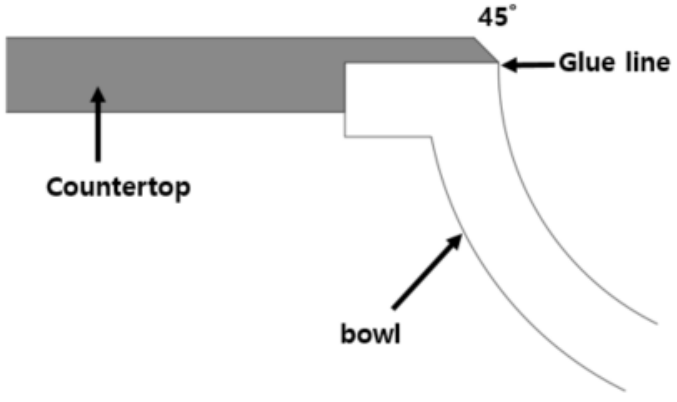
Finishing the basin Installation

16. **Clamp Removal and Sheet Reorientation**
    Remove all clamping systems and carefully turn the sheet over.

17. **Trimming the Cut-Out**
    Use a tungsten carbide profile router bit with a nylon bearing and a 12 mm shank to trim the cut-out.
    Always use a 45° profile and begin precisely at the adhesive joint between the basin and the sheet.

18. **Profile Selection**
    Avoid using a radius profile, as it may accentuate any slight colour variation between the basin and the sheet, even when both are of the same colour.

19. **Sanding and Finishing**
    Sand the trimmed area and complete the finishing process according to standard surface preparation procedures.



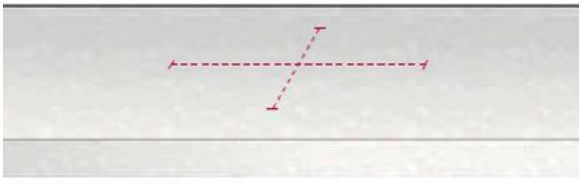
Basin installation without rebate

This method is used when a rebate is not required, offering a simplified installation process while maintaining a secure and hygienic bond between the basin and the solid surface sheet.

Installation Procedure

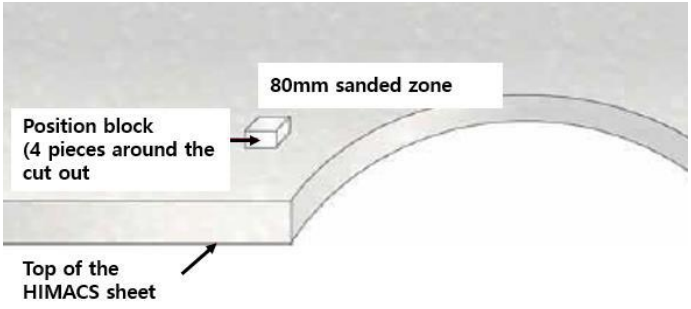
1.Marking the basin Position

- From the rear side of the solid surface sheet, accurately mark the intended position of the basin.
- Ensure the alignment is correct, particularly with respect to the drain hole, as this will be critical when the sheet is turned over.



Cutout and basin Positioning Procedure

1. **Template Placement**
   Position the cutout template accurately and secure it firmly using clamps.
   Tip: Double-check alignment before proceeding to avoid errors during routing.
2. **Workpiece Support**
   Ensure the HIMACS sheet is properly aligned and supported to prevent movement or vibration during cutting.
3. **Routing the Cutout**
   Use a hand router with a minimum power rating of 1.8 kW, compatible with a 12 mm shank. Fit a 10 mm single-flute carbide router bit with a 12 mm shank and a 30 mm sleeve guide.
   Tip: Confirm the router bit's working length is suitable for the sheet thickness.
4. **Sanding the Back Surface**
   Sand an approximately 80 mm wide strip adjacent to the cutout on the reverse side of the HIMACS sheet. Use a random orbital sander with 100- and 60-micron sandpaper (equivalent to 150/180 grit).
   Tip: Sand evenly to ensure a smooth bonding surface.
5. **Surface Preparation**
   Remove all visible marks and scratches from the pre-sanded area to ensure optimal adhesion.
6. **basin Repositioning and Fixing**
   Reposition the basin accurately. Attach 3–4 positioning blocks (approx. 2cm x 2cm), made from HIMACS or wood, using hot-melt adhesive.
   Tip: These blocks are temporary and should be removed after bonding is complete.



Preparation and Bonding Instructions

1. **Surface Cleaning**
   Clean the sheet and the edge of the basin to be bonded, removing all dust, grease, and pen marks. Use denatured alcohol or acetone with a clean white cloth.
   Tip: Avoid coloured cloths, as dyes may transfer and contaminate the surface.
2. **Handling After Cleaning**
   Do not touch cleaned surfaces with bare hands. If touched, clean again to prevent visible contamination in the glue line.
   Tip: Use gloves to minimise accidental contact.
3. **Adhesive Preparation**
   Select a HIMACS adhesive cartridge (45ml or 250ml) in the correct colour (refer to the sheet/adhesive colour chart).
   Dispense a small amount without the mixer tip to ensure both components (hardener and base) are flowing.
   Attach the mixer tip and discard the first 2cm of mixed adhesive before use.
   Tip: If only one component is dispensing, check for blockages or cartridge damage.
4. **Adhesive Application**
   Apply adhesive in a continuous bead, ideally along the edge of the basin.
   Tip: Avoid breaks in the bead to prevent weak spots in the bond.
5. **Positioning the basin**
   Invert and position the basin carefully. Ensure the drain hole is correctly aligned and the basin is square.
   Tip: Dry-fit the basin before applying adhesive to confirm alignment.
6. **Securing the basin**
   Clamp the basin using either clamps or thread through the drain hole, protected by a thick wooden sheet. Use additional clamps at the front if needed.
   Do not overtighten.
   Tip: Over-tightening may distort the basin or squeeze out too much adhesive, weakening the bond

7. **Curing Time**
   Allow the adhesive to cure for at least 35 minutes at a minimum room temperature of +17°C.
   Tip: In colder environments, extend curing time or use a heat source to maintain temperature.
8. **Cleaning Excess Adhesive**
   Do not clean uncured adhesive with acetone or denatured alcohol, as this may weaken the bond.
   Tip: Wait until fully cured, then remove excess with a plastic scraper or sanding tool.
9. **Mechanical Fixings**
   Install additional mechanical fixings in a four-corner cross-level configuration for added stability.
   Tip: Ensure fixings do not interfere with the adhesive bond line.



Post-Bonding Finishing Procedure

1. **Remove Clamping System**
   Carefully take off all clamping devices and turn the HIMACS sheet over to expose the front surface.

2. **Trim the Cutout**
   Use a tungsten carbide profile router bit fitted with a nylon bearing and a 12 mm shank (e.g. Titman XC201-12,7-12-25*12) to trim the cutout precisely.
   Tip: Ensure the router is stable and the bearing runs smoothly along the edge to avoid chipping.

3. **Sanding and Finishing**
   Sand the trimmed area to a smooth finish, using appropriate grit levels for the desired surface quality.
   Tip: Begin with a coarser grit and progress to finer grades for a polished result.

Installation Guidelines for Alternative basin Types

1. Cut-Out Preparation

Utilise a dedicated template to create a reduced-size cut-out in the worktop. This ensures the basin fits appropriately and allows the flange to be securely affixed to the surface.

2. Edge Finishing

Apply a radius to both the upper and lower edges of the sheet thickness. Finish the edges by sanding with 150/180 grit sandpaper, or alternatively, 100/60-micron sandpaper, to achieve a smooth surface.

3. Mounting Methods

- **Top-Mounted Installation**: Position the sink from above into the prepared cut-out and secure it using an elastic adhesive, such as silicone.
- **Undermounted Installation**: Install the basin from beneath the worktop using elastic adhesive (e.g., silicone) in conjunction with supplementary mechanical fixings.

Important Considerations

All kitchen sinks must be provided with additional structural support during the installation of the countertop. Although HIMACS kitchen sinks are lighter than cast iron models, their overall dimensions mean that, when filled with water, dishes, and cookware, the total weight is considerable.

Due to the wide range of sink and cabinet configurations available, LX Hausys does not recommend a specific support product. However, installation guidelines for cast iron sinks may serve as a useful reference for determining the appropriate type of support required.

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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