

# HIMACS Drop Edges & Downturns

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**HM2120**

**Version : 21V3**

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## Introduction

This section guides the fabrication of HIMACS sheet drop edges and downturns.

## Overview

HIMACS has its unique ability of providing the machining ability for fabricators to exercise their design creativity when creating edges. With the multitude of bits available to the fabricators and terrific adhesives, there are almost endless lists of edge considerations. The fabricator skill level will come into play when considering the level of sophisticated or complicated edge ideas. The fabricator's skill level also comes into play in making inconspicuous joints also paramount to the high quality of an edge simple or complicated. The minimum general method to get the edge fabrication with stable quality will be addressed in this section.

## Note !

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Contact LX Hausys HIMACS territory manager or distributor of your market for specific questions and information.

## 1. Consideration Between Design and Fabrication

Drop edge and downturns have a variety of design options. And, some drop edge and downturns design will be more suitable for specific colors having vein, pearl/glitter, large chip and translucent effect. The fabrication methods in this section are generally suitable for Solid color and Granite color having small to medium chips.

Refer to 'HM2140 HIMACS Fabrication for specific colors' for HIMACS sheets having vein, pearl/glitter, large chip and translucent effect.

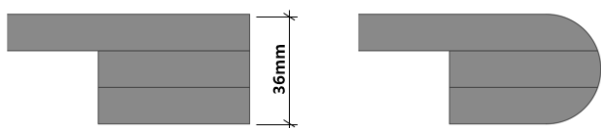
Drop edge and downturns that have been fabricated with wrong or improper method will lead to failure like cracks because of stress. Sometimes, wrong and improper method may make concentration and/or rise of stress. But, the properly fabricated drop edge and downturns will help to strengthen the assembly of HIMACS sheet. Therefore, the design and fabrication should be well matched for the durability.

## 2. Fabricating Straight Part

### 2-1. Stacking for thin drop edge

One of the easiest ways to produce a drop edge is to simply stack layers of HIMACS on the underside of the sheet. And, this method is suitable for Solid and Granite color family. 2 layers (24mm) or 3 layers (36mm) stacking are general.

Fig. 2-1. Stacking/buildup example



#### Process

- Start by cutting strips which are slightly oversized and sand the underside with 120 grit paper. Clean with denatured alcohol and white cloth.
- Apply a sufficient amount of HIMACS joint adhesive to each of the strips and smooth out using a wooden or plastic spatula.
- Attach "A" style spring clamps every 70 mm to 80 mm and allow to cure (approx. 45 min/+20°C). Ensure that, once the clamps have been applied, a reasonable amount of adhesive is forced out from the joint.
- When the adhesive is completely dry, smooth down the surface using a circular table saw, then machine the required profile using a portable hand-held router or a table planer.
- Finish the surface through sanding and polishing.

### 2-2. Rebating for long skirt and apron

Drop edges can sometimes be applied on edge, primarily for deeper downturns. The best way to achieve this detail is to first rebate the underside of the sheet to a depth of approx. 1~2 mm.

Rebating method has more strong points compare to boot seam with poor boot seam fabrication. The rebating serves several good functions.

- Increasing the bond strength,
- Minimizing the effect of uneven particle distribution.
- Taking away the rough sanding finish on underside of sheet.

- Stopping the edge on a fine line to avoid using gluing blocks or any kind of ruler or gluing templates.

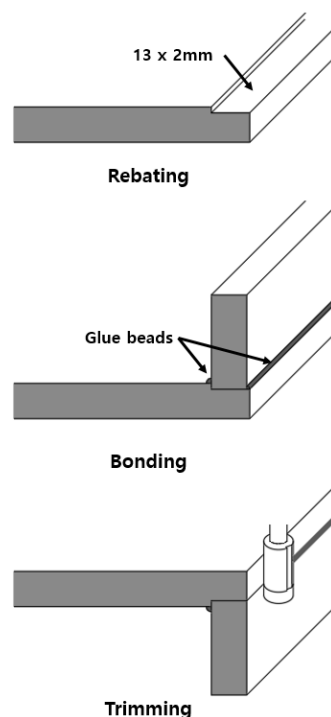
Fig. 2-2. Long skirt and apron example



#### Process

- Create the rebate that approximately 13 x 2mm of the sheet.
- Check all edges carefully before bonding. Ensure that no chips are broken out and no heavy marks of the saw blade or any whitening of the edge is visible.
- Sand both the internal edges of the rebate and the corresponding edges of the downturn with 150/180 grit paper, cleaned with denatured alcohol and with a white cloth
- Apply a sufficient amount of adhesive and clamp the edge in position with screw clamps to set every 70/80mm.
- Ensure that beads of adhesive are continuously formed at both the internal and external edge of the joint. Once fully cured turn over sheet, and trim off the adhesive overhang by using a portable hand router with a straight cutter with Nylon bearing attached.
- Finish the surface through sanding and polishing.

Fig. 2-3. Rebating process



#### Note !

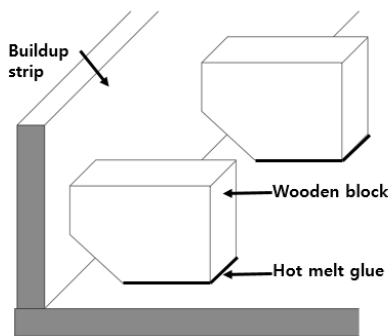
- For large chip color family sheets like Volcanics and Lucia, the rebating depth(2mm) should be increased to 5mm. This will improve the uniformity of the size of the chips.

- Vein color family like Marmo, and glittering color family like Perna/Sparkling need 9mm rebating depth. This will hide the absence of vein and glitter on edge of sheets. For more information refer to 'HM2140 HIMACS Fabrication for specific colors'.

### 2-3. Boot seam(Non-rebated) and V-Grooving(45° cut) edge

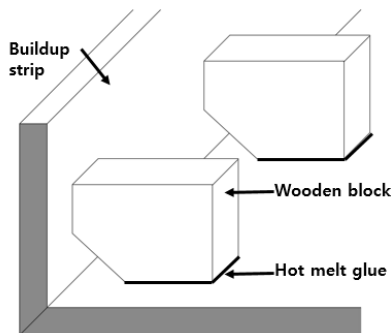
The fabrication for boot seam drop edge needs checking the defects on the underside of HIMACS sheets, and needs sanding with 120 grit sand paper the underside of HIMACS sheets and strips before bonding. Wooden stop blocks with hot melt glue are useful to align the buildup strips. Rebating method is more recommend than this method.

Fig. 2-4. Boot seam fabrication



V-Grooving fabrication method is useful to cover the color difference of specific colors that have vein and or glitter. Refer to 'HM2140 HIMACS Fabrication for specific colors' for HIMACS sheets having vein, pearl/glitter, large chip and translucent effect.

Fig. 2-5. V-Grooving fabrication



### 2-4. No drip edge

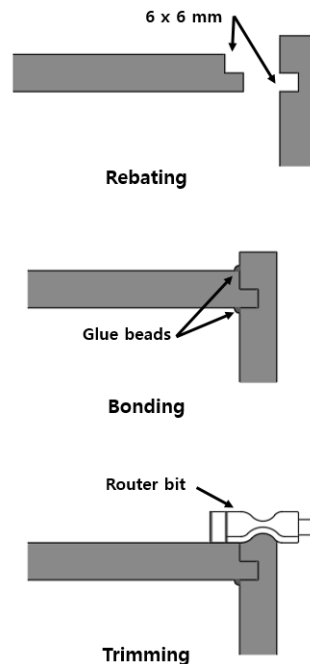
A no-drip front edge can be a feature of any horizontal surface fabricated using 12mm material.

#### Process

- Start by cutting a rebate 6mm in depth and height at the top of the front edge of the countertop surface.
- Cut a similar groove in the apron material at a level that, when the apron and countertop surface are joined, the apron material stands proud of the horizontal countertop by about 12mm. Use joint adhesive to join the apron to the countertop.

- After the joint adhesive has hardened, use a router to round over the top of the edge and sand the surface as required.

Fig. 2-3. Rebating process



## 3. Fabricating Inside Corner

There are important recommendations for inside corner of top.

- HIMACS sheet needs a minimum radius of 5mm for any inside corner. And, the large radius is the better.
- The vertical joint line of edge and top seam line should have minimum 25mm of distance.
- The all jointed part of edge should be back blocked by HIMACS as reinforcement.
- Make top 1.5mm bigger for correct edge trimming.

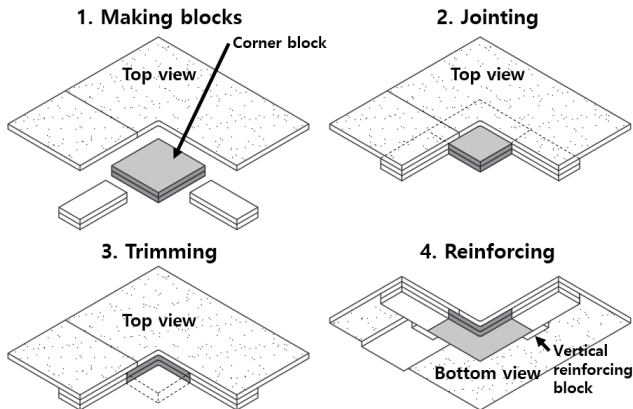
### 3-1. Stacking

#### Inside corner of cut out top

- Start by making blocks with HIMACS sheet. You will need minimum 130 x 130mm blocks if you have following condition.
  - Edge depth = 50mm
  - Inside corner radius = 5mm
  - The distance from corner to seam line = 50mm
  - The distance from seam line to block edge = 25mm
  - Sum = 50 + 5 + 50 + 25 = 130mm
- Sand the underside of blocks with 120 grit paper. Clean with denatured alcohol and white cloth.
- Stack and join the blocks and strips for edge material underside of inside corner with sufficient amount of HIMACS joint adhesive.
- Attach "A" style spring clamps and allow to cure (approx. 45 min/+20°C). Ensure that, once the clamps have been applied, a reasonable amount of adhesive is forced out from the joint.
- The vertical joint line occurred by corner blocks and strips should be back blocked with 50mm width and 12mm thickness of HIMACS sheet if you can't make sure the strong enough structure for corner.

- When the adhesive is completely dry, cut out the blocks along the shape of the inside corner and remove the over flowed adhesive with a router.
- Finish the surface through sanding and polishing.

Fig. 3-1. Inside corner of cut out top



### Inside corner of jointed top

- Start by making blocks with HIMACS sheet. You will need minimum 125 x 125mm blocks if you have following condition.

Inside corner radius = 50mm

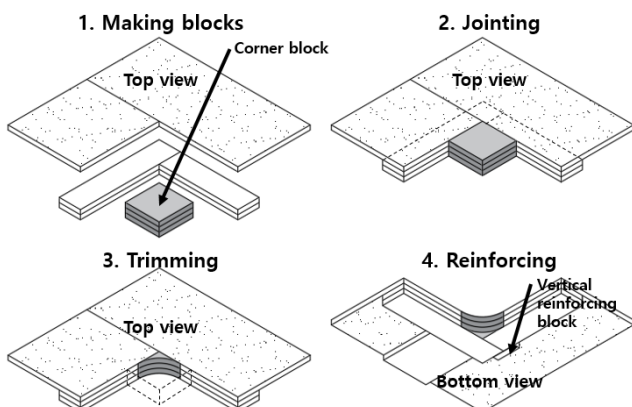
The distance from corner to seam line = 50mm

The distance from seam line to block edge = 25mm

Sum = 5 + 50 + 25 = 80mm

- Sand the underside of blocks with 120 grit paper. Clean with denatured alcohol and white cloth.
- Stack and join the blocks on the edge strips for edge material underside of inside corner with sufficient amount of HIMACS joint adhesive.
- Attach “A” style spring clamps and allow to cure (approx. 45 min/+20°C). Ensure that, once the clamps have been applied, a reasonable amount of adhesive is forced out from the joint.
- The vertical joint line occurred by corner blocks and strips should be back blocked with 50mm width and 12mm thickness of HIMACS sheet if you can’t make sure the strong enough structure for corner.
- When the adhesive is completely dry, cut out the blocks along the shape of the inside corner and remove the over flowed adhesive with a router.
- Finish the surface through sanding and polishing.

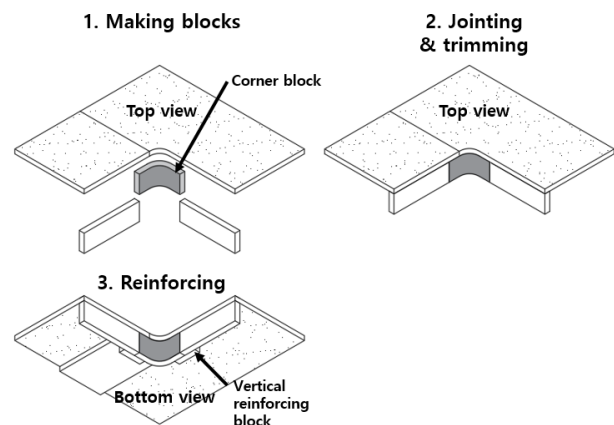
Fig. 3-2. Inside corner of jointed top



### Inside corner with long skirt

- Start by making thermoformed corner block. Refer to ‘MH2110 HIMACS Thermoforming’ to make the thermoformed block.
- Sand the underside of blocks with 120 grit paper. Clean with denatured alcohol and white cloth.
- Join the thermoformed block and strips for edge material underside of inside corner with sufficient amount of HIMACS joint adhesive.
- Attach “A” style spring clamps and allow to cure (approx. 45 min/+20°C). Ensure that, once the clamps have been applied, a reasonable amount of adhesive is forced out from the joint.
- The vertical joint line occurred by corner blocks and strips should be back blocked with 50mm width and 12mm thickness of HIMACS sheet if you can’t make sure the strong enough structure for corner.
- When the adhesive is completely dry, cut out the blocks along the shape of the inside corner and remove the over flowed adhesive with a router.
- Finish the surface through sanding and polishing.

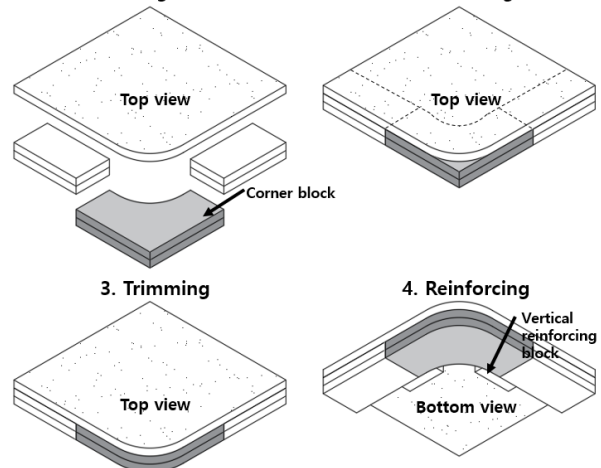
Fig. 3-3. Inside corner with long skirt of jointed top



## 4. Fabricating Outside Corner

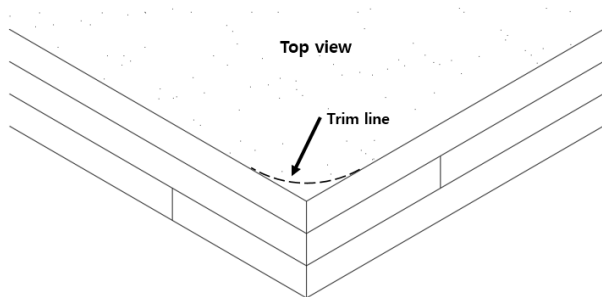
Outside corner can be fabricated by stacking method and/or thermoforming method. The fabrication method and important recommendation for long service life is same with the inside corner fabrication.

Fig. 4-1. Outside corner by stacking method



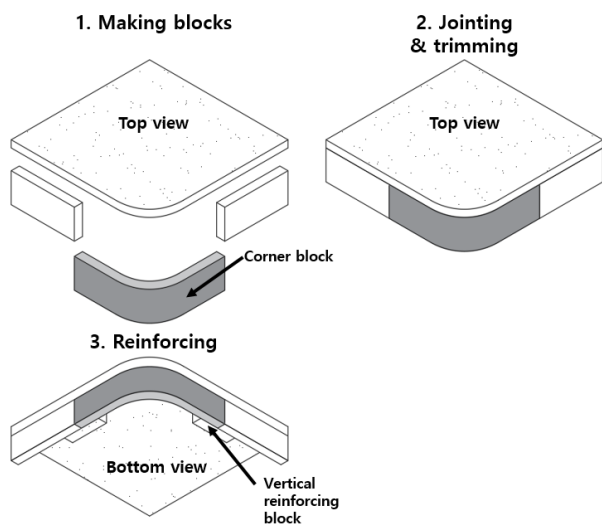
If you want to make small radius outside corner, the corner can be strengthened by cross stacking the edge strips.

**Fig. 4-2. Outside corner by cross stacking method**



Refer to 'MH2110 HIMACS Thermoforming' to make the thermoformed block.

**Fig. 4-3. Outside corner by thermoforming method**



**Note!**

Always remember following minimum recommendation for long service life of your products when you fabricate corner with HIMACS sheets.

- Make a corner radius as large as possible, and never make square corner.
- Make sure enough distance between the corner and seam line on top, and minimize jointing parts on the corner.
- Use enough reinforcing methods at the joint parts if possible.
- Corner needs more stable supporting by structure.

**Referenced documents**

'HM2110 HIMACS Thermoforming'

'HM2140 HIMACS Fabrication for specific colors'

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