Durasein
Profile Bits for Undermount Bowls

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Durasein

Fabrication and Installation
Profile Bits for Durasein Undermount Bowls

BULLETIN NO.
Profile Bits_2026

TECH INFO
Profile Bots

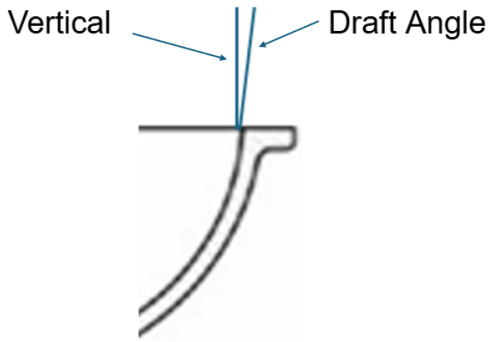
Introduction

In this bulletin, methods are provided for creating profiles for Durasein® Solid Surface seamed undermount sinks and lavatories.

Importance of the Draft Angle

A draft angle is a slight taper usually applied to the vertical walls of a mold. Instead of being perfectly straight, the walls are angled slightly outward from the base to the top. This slight taper ensures that the cast sink can be easily removed from the mold without damage. Without an adequate draft, the solidified part would bind or stick to the mold due to friction or shrinkage.

The draft angle creates a gentle slope on the sidewalls, front and rear of the sink. A small draft angle creates a slope which is almost perpendicular to the countertop. A larger draft angle can make the sink sides appear more sloped.



Based mostly on design considerations, the draft angles on bowls can vary, usually ranging from between 2° to 20°. Generally vanity bowls will tend to have a range of draft angles due to aesthetic and water flow considerations. Kitchen sinks tend to have smaller draft angles.

A kitchen sink might typically have a small draft angle.

A vanity sink may typically have a larger draft angle.

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The following is a chart showing the draft angles for Durasein sinks:

MODEL NUMBER			SINK DRAFT ANGLES SIDES	FRONT	REAR
DLB 401A	Ansel		12º	7.5º	7.5º
DLB 402	Ansel		12º	7.5º	7.5º
DLA359	Frida		17º	6.5º	4.5º
DLA 104A	Frida		18º	5º	10º
DLA 354	Euro		7º	6º	4º
DLA 360A	Euro		9º	8º	5º
DLD 125	Vincent		7º	7º	7º
DLD 202	Henri		5º	5º	5º
DLB 379A	Andy		4º	4º	4º
DLB 411	Andy		4º	4º	4º

Bowl profiling bits

Generally, two types of router bits are used after an undermount bowl is seamed to the sheet.

The first bit is used to cut the sheet away from the undermounted bowl.

The bit is typically a ⅜” or ½” straight cut bit with an oversized bearing.

The second is a bit that cuts a bevel and. roundover. The bevel angle can vary and is usually about 3° larger than the draft angle of the bowl.

To begin with the routing process, turn the top over and drill a pilot hole for the first bit. Cut the sheet material from the center of the bowl area with the flush-cut router bit with an oversized nylon bearing. Start from a pilot hole and rout clockwise around the bowl. Hold the cutout steady as it separates from the top to avoid damage to the edge. Then select the desired bowl profile bit and rout clockwise around the bowl.

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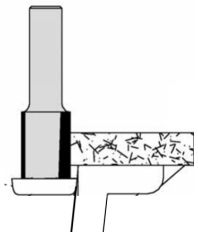
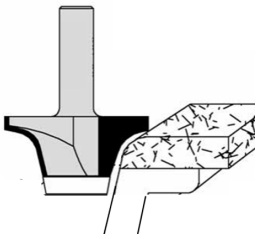
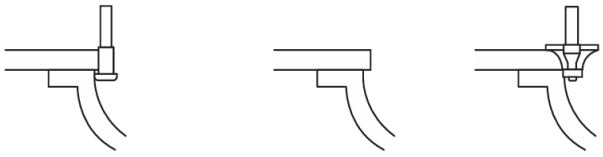
The first cut leaves a small amount of overhang that will be removed by the profile bit.



The second cut is using the profile bit which slightly trims the top of the bowl and cuts the seam area and edge of the top with both an angle and a roundover.





Flush Cut with Oversized Bearing | Flush Cut showing Overhang | Profile Bit Cut

The progression results in a smooth transition from the sink to the top. The most common bit profile is a roundover, usually with either a ⅜” or ½” radius curve. Some bit manufacturers provide OG profiles. Depending on the selected bit, the angle portion of the bit will usually be a few degrees more than the draft angle of the bowl.

Selecting the bits

The bits are basically selected keeping in mind the draft angles of the bowl. Manufacturers have a limited number of options.

Here is a sample chart showing one manufacturer’s suggested bits for a roundover profile on Durasein sinks:

	SINK DRAFT ANGLES			VELEPEC	
MODEL NUMBER	SIDES	FRONT	REAR	BIT #	BIT ANGLE
DLB 401A	12º	7.5º	7.5º	30-140	20º
DLB 402	12º	7.5º	7.5º	30-140	20º
DLA359	17º	6.5º	4.5º	30-140	20º
DLA 104A	18º	5º	10º	30-140	20º
DLA 354	7º	6º	4º	30-157	15º
DLA 360A	9º	8º	5º	30-157	15º
DLD 125	7º	7º	7º	30-155	10º
DLD 202	5º	5º	5º	30-155	10º
DLB 379A	4º	4º	4º	30-155	10º
DLB 411	4º	4º	4º	30-155	10º

Note that the angles on the suggested bits are slightly larger than the draft angles on the various bowls. As the angle on the bit gets larger the result is a wider flair of the upper finished edge of the bowl. When choosing a bit for this process, try to use a bit that is only slightly larger than the draft angle on the bowl. Particularly for vanity bowls, there is a wider variation in the draft angle at the bowl edge so a proper bit is generally selected based on the largest draft angle in the bowl.

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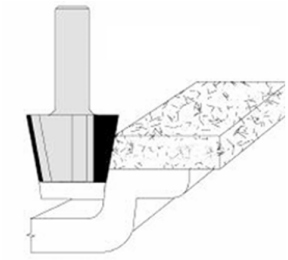
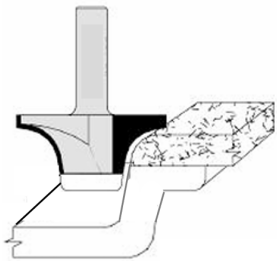
There may be some cases, particularly in bowls with small draft angles, that a slightly different approach might be selected. This process uses a straight bevel bit followed by a roundover bit.



BEVEL BIT



ROUNDOVER BIT

Regardless of the method used, the tooling should be field tested and approved by the fabricator prior to actual use. Regular metal bearings for router bits can create issues, so be sure to sleet bits that are designed for use on solid surfacing and are outfitted with bearing guides that will not scratch the material.

Referenced Documents: Approved Solvents for Surface Preparation of Durasein® Solid Surface During Fabrication