



# Deep Drawn Stamping: How To Select An Edge Type

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**MANOR**

TOOL & MANUFACTURING COMPANY

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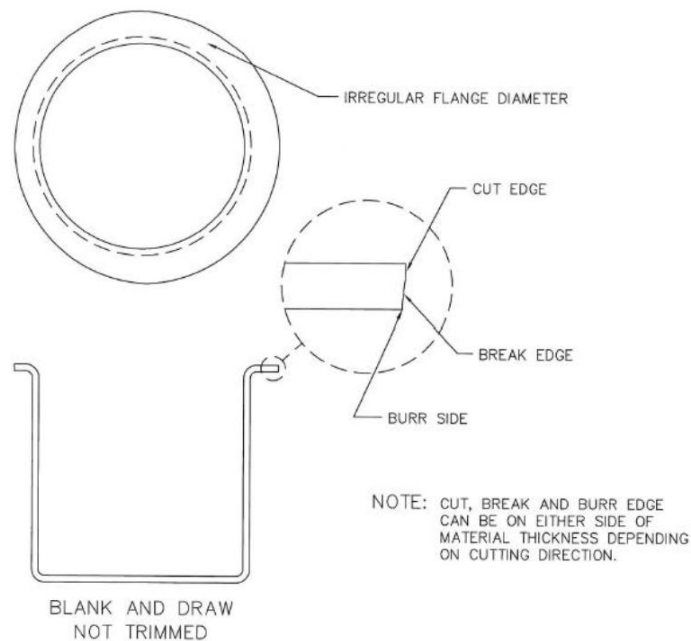
## *Which Edge Type is Right for Your Deep Drawn Stamping?*



On many projects our customers have a hard time determining the proper edge type for their deep drawn stamping design. The edge type can be the difference in a cost effective and ready to assemble part. This guide will help you determine the best edge type for part performance and cost savings.

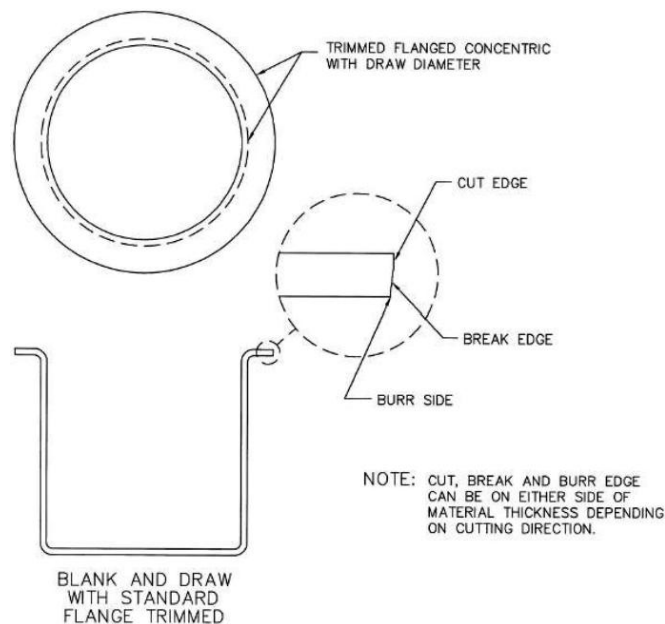


## *Blank and Draw With Un-Trimmed Flange*



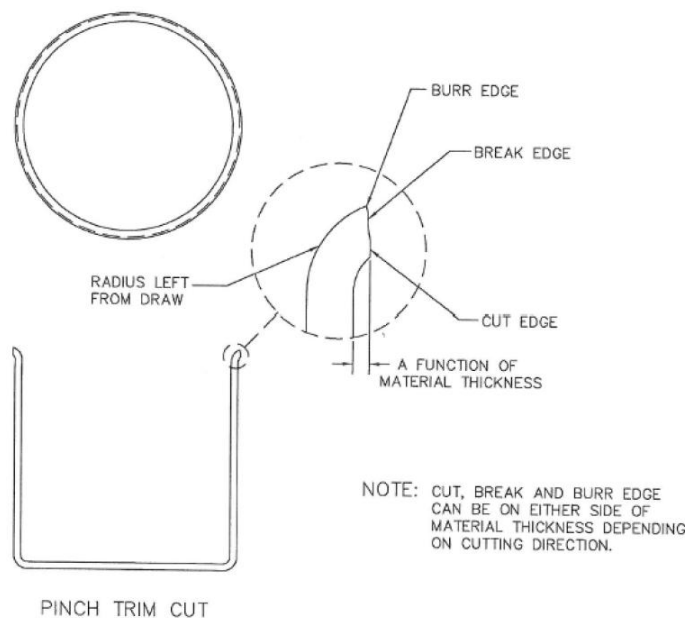
If your design requires a flanged edge but it is not a critical dimension, you can use the “Blank and Draw with Un-Trimmed Flange” edge type to save on your cost per part. This option uses no additional tooling and results in an irregular flange diameter. It will not be concentric to the overall drawn part. Please specify the burr side in your design.

## *Blank and Draw With Trimmed Flange Diameter*



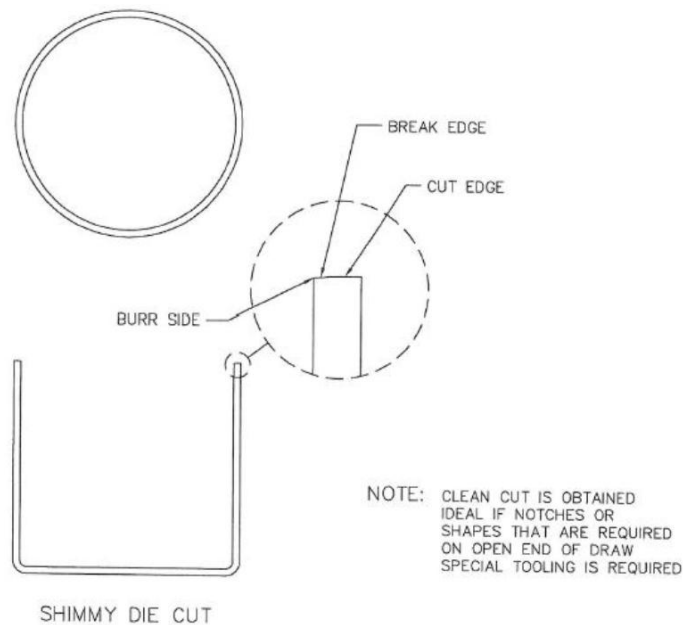
When the flanged edge of your deep drawn part is a critical dimension for assembly, specify the “Blank and Draw with Trimmed Flange Diameter”. The process produces precision flange diameters through additional tooling or stations. The extra stations or tools will increase the cost per part and be more expensive than other edge type options, but it will produce assembly ready pieces. Please specify flange and burr direction when designing your part with this edge type.

## *Pinch Trim Cut*



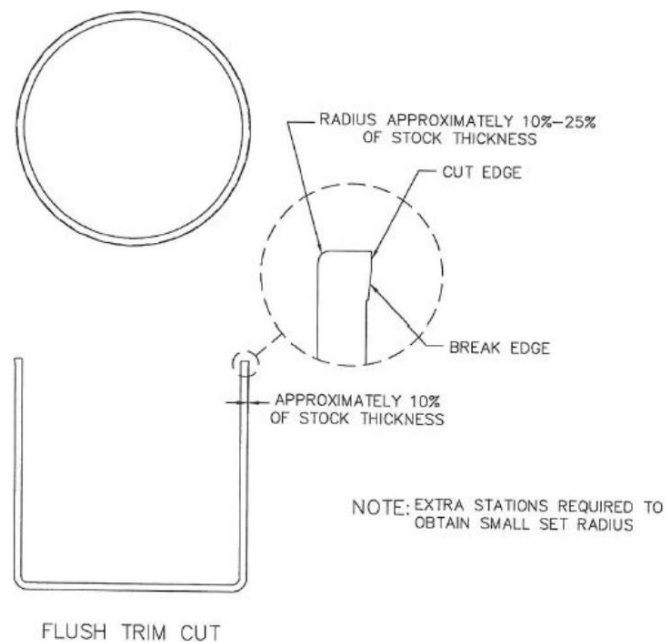
If your design does not require a flange, and a slight flare at the edge of your deep drawn part is acceptable, the “Pinch Trim Cut” is an option. The size of the flare at the open end of the draw will depend on the material thickness. With the “Pinch Trim Cut” edge you can specify your cut, break, and burr side preference when designing your deep drawn part. It is possible that additional tooling may be required for certain combinations of material thickness, depth, and burr direction. However, the goal is to do all of this in the same process to keep costs down.

## *Shimmy Die Cut*



If your design requires a completely clean cut edge or the sidewalls of your deep drawn part will have notches or shapes, the “Shimmy Die Cut” is an alternative. Additional tooling is required to achieve this precision and with that comes increased cost per part. Select this edge type when your design mandates a clean edge or additional cut features in the open end of the draw. Keep in mind that the burr will be on the inside of the draw.

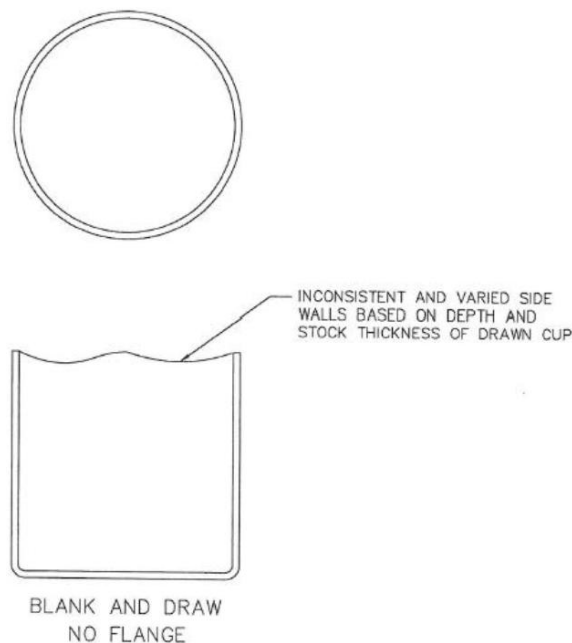
## *Flush Trim Cut*



The “Flush Trim Cut” is a cost effective alternative to the “Shimmy Die Cut”. As the cut can be performed during the draw process, no additional tooling is required for a 10-25% of stock thickness radius on the inside of the draw. If the radius is acceptable for your design, the cup side burr is not going to cause assembly issues, and a completely clean cut is not required, this is an option to explore to save manufacturing costs.



## *Blank and Draw No Flange*



When side wall edges are not important for your final part, the “Blank and Drawn No Flange” provides the most cost effective solution. There is no additional design or tooling cost as the edge is allowed to shape in an irregular fashion. The resulting edge will be inconsistent and varied based on the depth of the draw and the stock material thickness. The burr will be on the inside of the draw. If the final assembly of your product does not require a precise edge on the deep drawn parts, this is an area where you can save on production costs at the design stage.

## *Edge Type Description and Use Case*

Edge Type	Description	Use Case
<b>Blank and Draw with Un-Trimmed Flange</b>	<ul style="list-style-type: none"> <li>• Edge condition will be approximately 30% cut and 60% break.</li> <li>• Burr side can be on either side of material thickness.</li> <li>• Flange diameter will be irregular.</li> <li>• No secondary tooling station required to trim piece part.</li> </ul>	Used when flange diameter is not important.
<b>Blank and Draw with Trimmed Flange Diameter</b>	<ul style="list-style-type: none"> <li>• Edge condition will be approximately 30% cut and 60% break.</li> <li>• Burr side can be on either side of material thickness.</li> <li>• Flange diameter will be concentric with the draw diameter.</li> <li>• Secondary tooling station is required for trimming.</li> </ul>	Used when flange and burr direction is important.
<b>Pinch Trim Cut</b>	<ul style="list-style-type: none"> <li>• Edge condition will be approximately 30% cut and 60% break.</li> <li>• Burr side can be on either side of material thickness.</li> <li>• A slight flare of material around the draw diameter is present, this is a function of the material thickness.</li> <li>• Secondary tooling station may be required depending on the diameter, depth, and burr direction.</li> </ul>	Used when no flange is needed and the slight flare is not important.
<b>Shimmy Die Cut</b>	<ul style="list-style-type: none"> <li>• Edge condition will be approximately 30% cut and 60% break.</li> <li>• Burr side is to the inside of the draw.</li> <li>• Secondary special tooling required.</li> </ul>	<ul style="list-style-type: none"> <li>• Used for clean bottom cut.</li> <li>• Ideal if notches or shapes are required on the open end of the draw.</li> </ul>
<b>Flush Trim Cut</b>	<ul style="list-style-type: none"> <li>• Edge condition will be approximately 30% cut and 60% break.</li> <li>• Burr side is to the cup side of the draw.</li> <li>• Secondary tooling stations required to obtain a small set radius.</li> <li>• Cut edge diameter is approximately "stock thickness +10%" larger than draw diameter.</li> <li>• Draw will have a radius of 10-25% stock thickness on the I.D. of open end of shell.</li> </ul>	Use as a cost effective alternative to a Shimmy Die Cut.
<b>Blank and Draw No Flange</b>	<ul style="list-style-type: none"> <li>• Edge condition will be approximately 30% cut and 60% break.</li> <li>• Burr side is to the inside of the draw.</li> <li>• No secondary tooling required.</li> <li>• Inconsistent and varied side walls based on depth and stock thickness of drawn cup.</li> </ul>	Used when side wall edges are not important.