



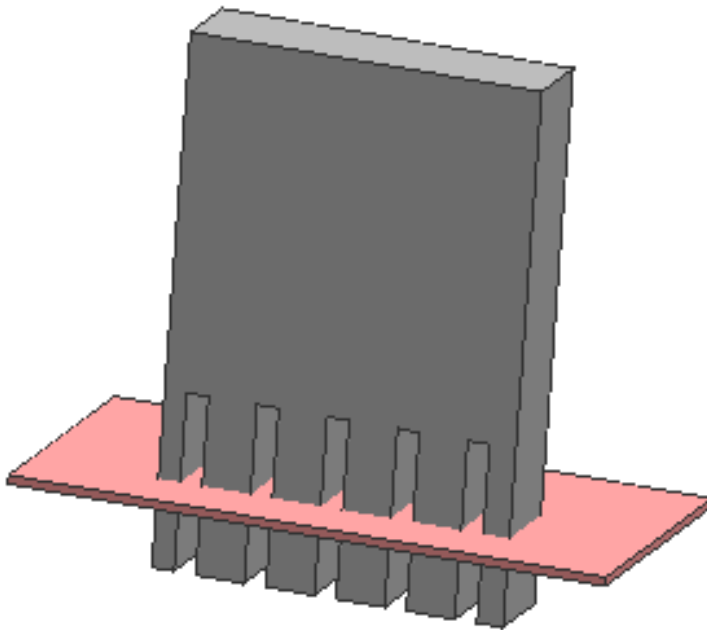
Solid Punch overview

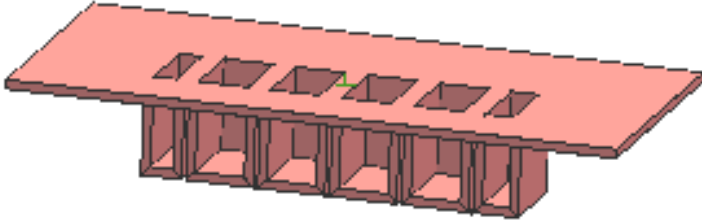
Overview

[How To](#)

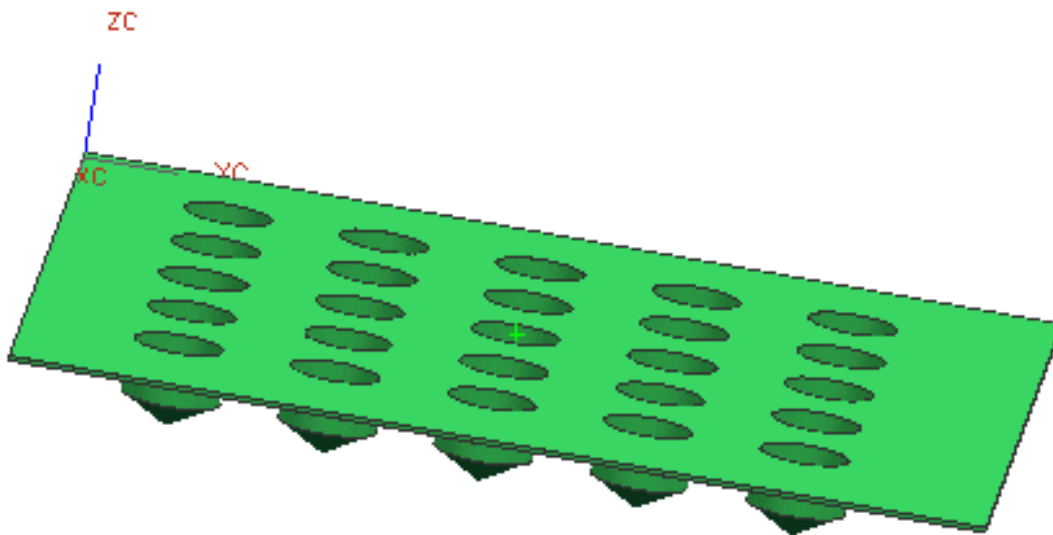
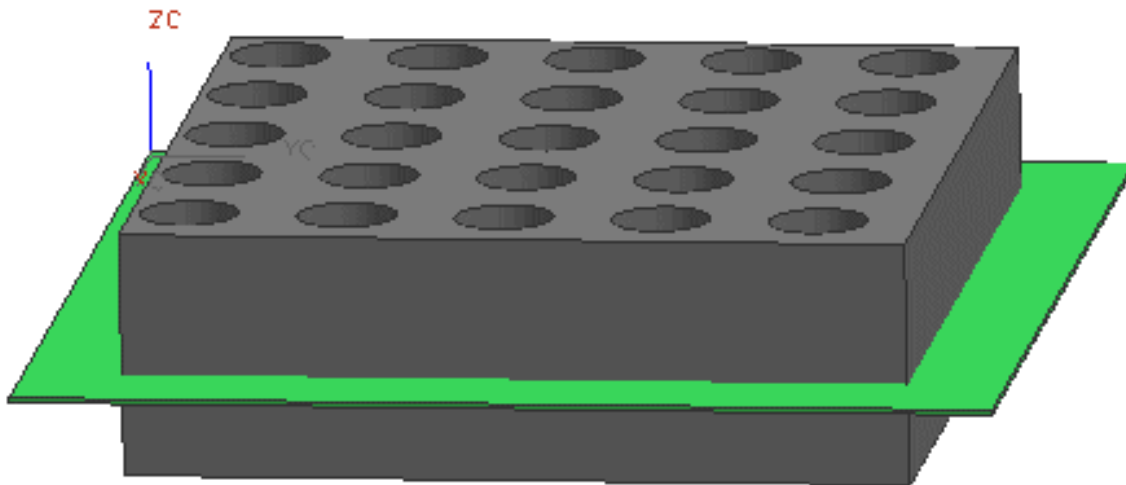
[Options](#)

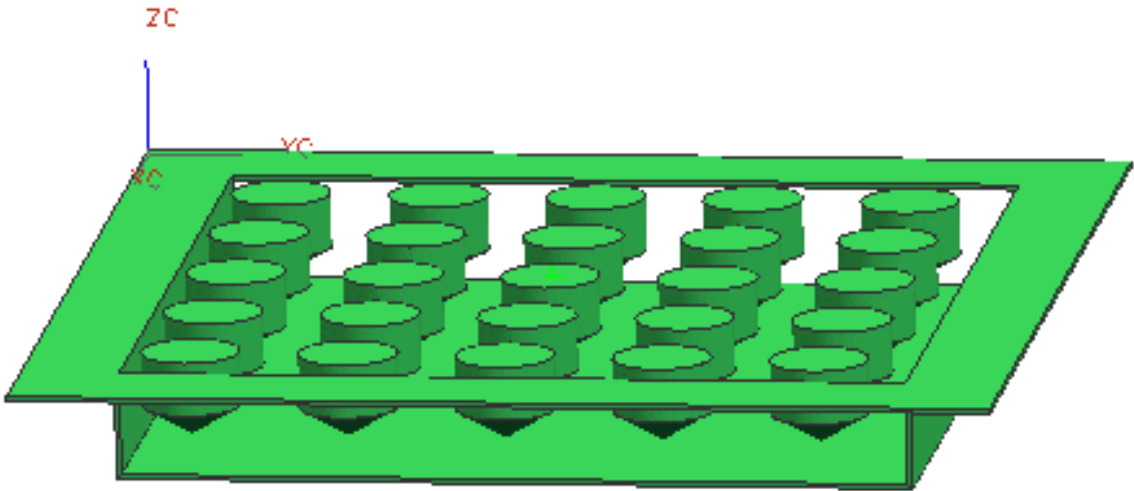
Use **Solid Punch** when you want to create a sheet metal feature that inherits the shape from the punch type tool body.





The **Solid Punch** is created with a die-type or punch-type tool body. A die-type tool body models the negative (void) shape, and a punch-type models the positive shape. The following figures show the tool body and the target (the green sheet), the tool body used as a die, and finally the tool body used as a punch.





Where do I find it?

Application	NX Sheet Metal
Toolbar	NX Sheet Metal→Punch list  →Solid Punch
Menu	Insert→Punch→Solid Punch



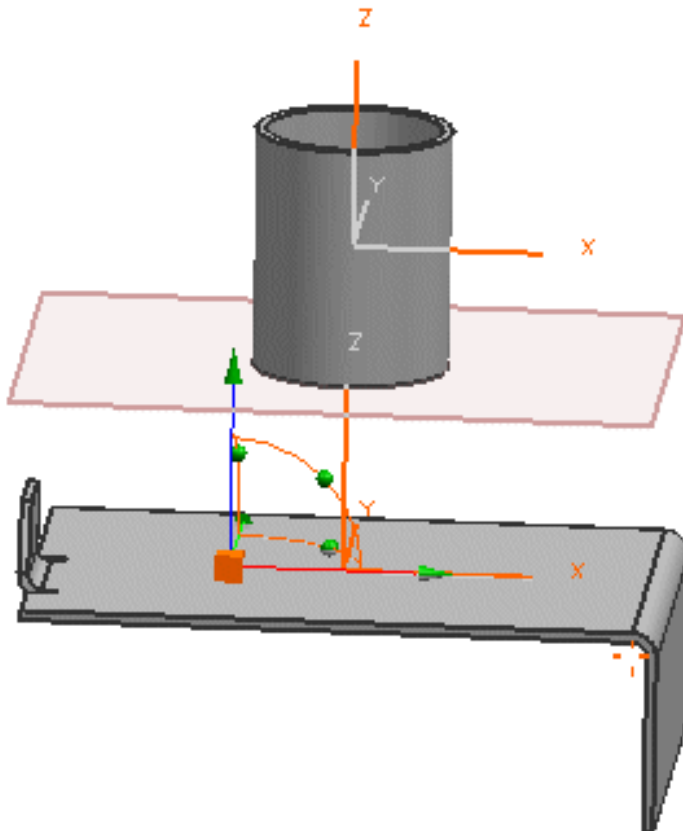
Create a solid punch

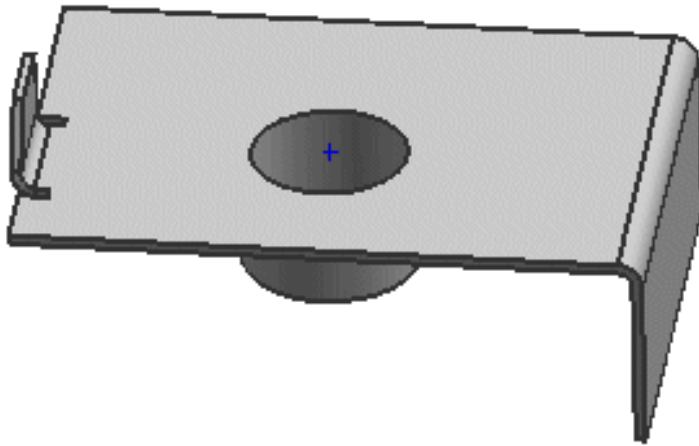
[Overview](#)[How To](#)[Options](#)

Both **Solid Punch** types follow the same basic procedure.



1. Click **Solid Punch**.
2. Select a **Type: Punch** to model a positive shape or **Die** to model a void.
3. Select a target face (the face first touched by the tool body).
4. Select a tool body.
5. If the tool does not intersect the tool body, select a *Csys* or point to define the *from* location on the tool and a *Csys* or point to define a *to* location on the target. The following figures show the locations of the **From Csys** on the tool body and the **To Csys** on the target, then the result (in this case, a **Die** type punch).



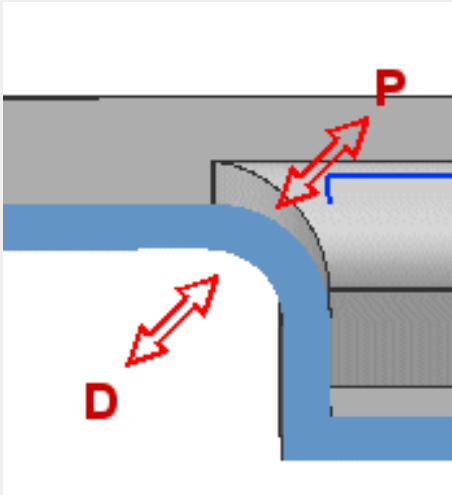


6. (Optional) Select **Pierce Faces** from the tool body. These faces will be removed from the target.
7. Enter a thickness value if the **Infer Thickness** option is not selected.
8. (Optional) If you do not want the tool to be visible once you create the punch feature, select **Hide the tool body**.
9. Select other [options](#).
10. Click **OK** to complete the feature.



Solid Punch options

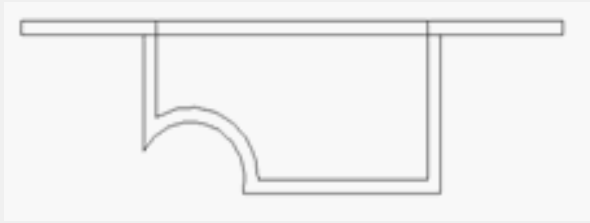
Overview	How To	Options
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Solid Punch Properties	
Thickness	Specifies the thickness of the solid punch.
Infer Thickness	Specifies that the solid punch thickness should be inferred from the target solid.
Auto Centroid	Creates a point at the centroid of the solid punch intersection curves. You can use this point for manufacturing purposes.
Hide the tool body	Hides the tool body once the punch has been created.
Rounding	
Round Solid Punch Edges	Applies die blends to the non-g1 edges between the solid punch and the target body. If this option is on, you must supply radius values.
Die Radius	The radius of the “inside” rounded edge where the punch meets the target (D in the figure below).
Punch Radius	The radius of the “outside” rounded edge where the punch meets the target (P in the figure below.). In general, Punch Radius is the Die Radius plus the thickness. 

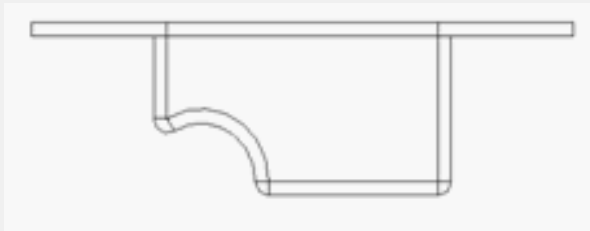
**Constant
Thickness**

Blends sharp edges with constant thickness on the tool body.

The following figures illustrate the difference.



Constant Thickness off



Constant Thickness on