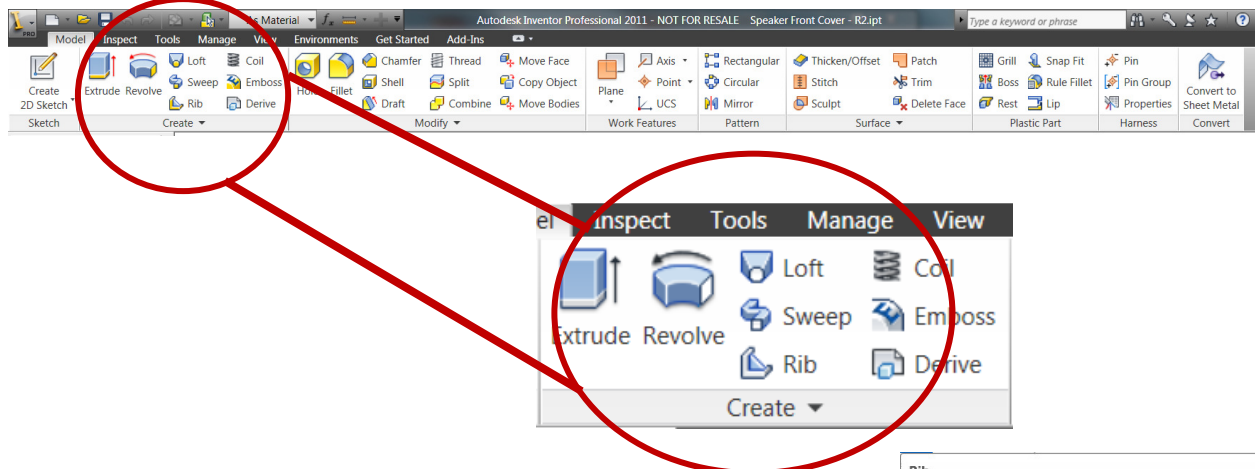




Creating Plastic Features in Inventor - Ribs

Darin Green

Inventor's plastic part design tools simplify the creation of many types of features common to plastic parts. This paper will look at the Rib tool.



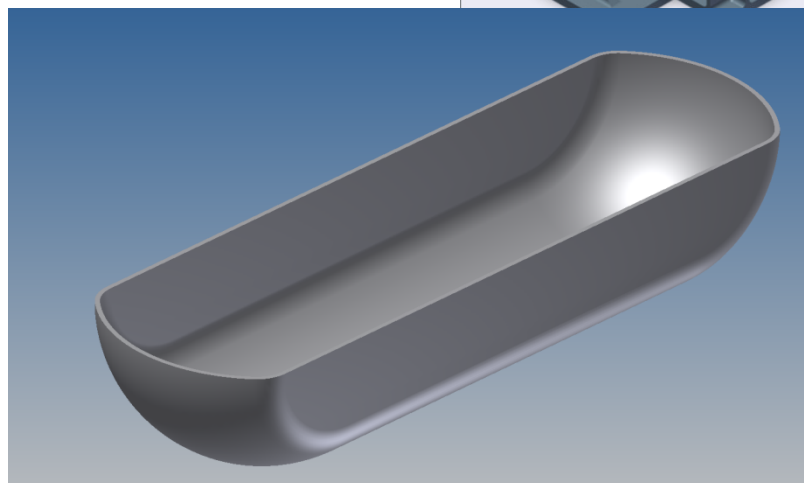
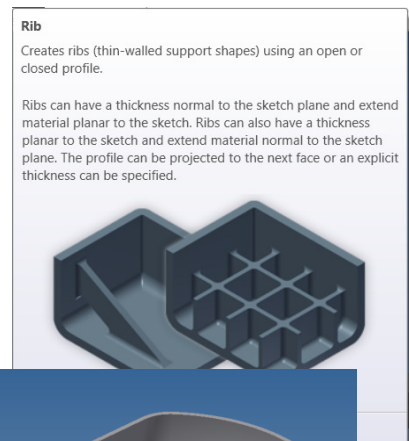
The Rib tool allows the easy creation of free standing or connected thin walls. It uses a single sketch to define the various segments of the rib. If center points are included in the sketch it can also create holes or pegs.*

* - New for R2012

For this first example a simple curved cover needs to have some stiffening ribs added.

A sketch is placed on a work plane slightly recessed into the part.

This sketch includes points added to the six intersections. These were added, then constrained to be coincident to the sketch lines. This allows them to be used for bosses. These bosses are different from the dedicated Boss feature in that there aren't any center holes in these bosses.

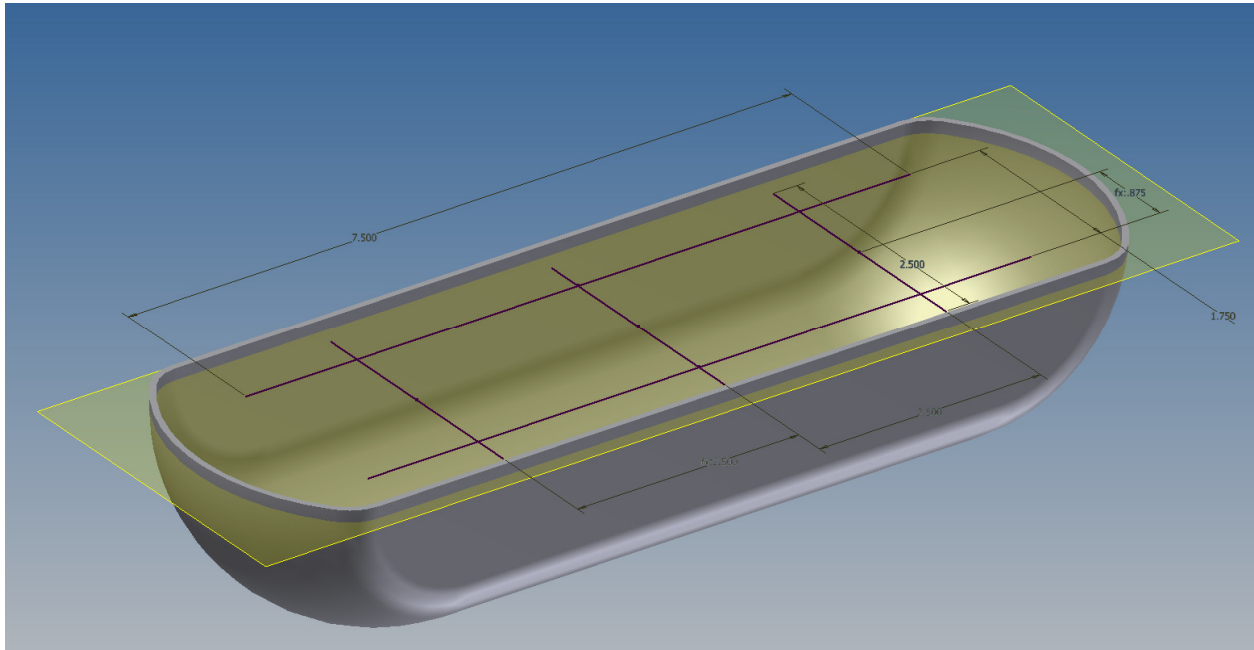


SYNERGIS

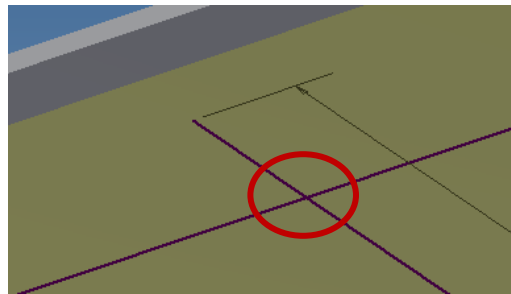
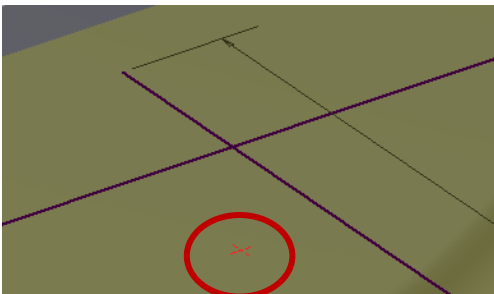
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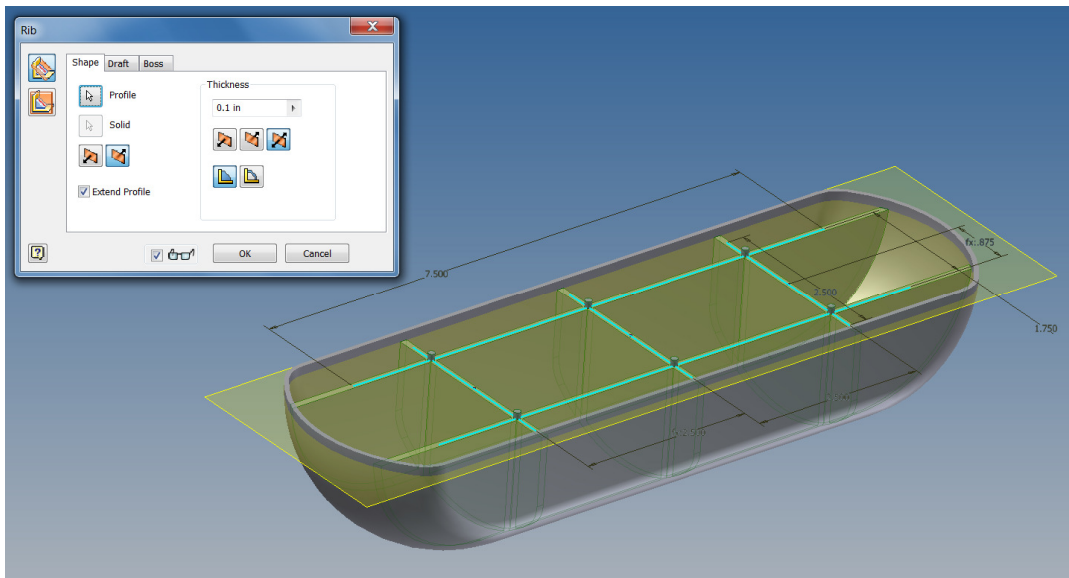
Creating Plastic Features in Inventor - Ribs



Once these points are constrained they are very difficult to see in the sketch.



Finish the sketch, start the Rib command, and select all the sketch objects:



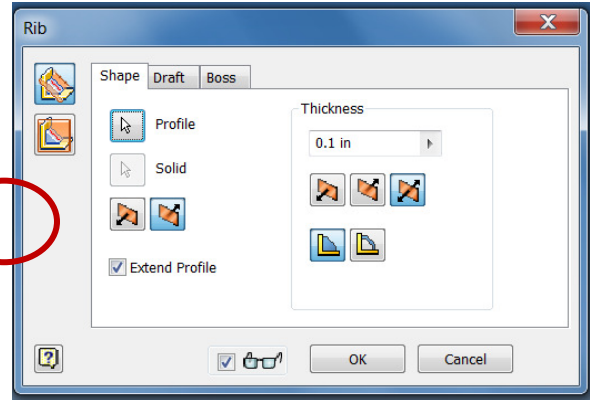


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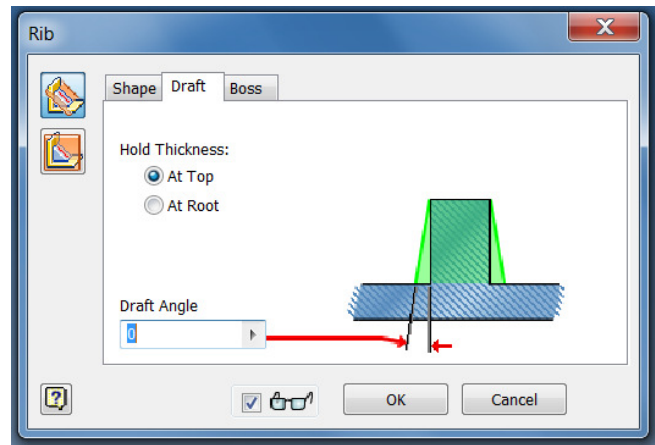
The choice for Normal to Sketch Plane is the only choice that gives a solution preview. If the sketch lines were parallel the Parallel to Sketch Plane option would have give shelves in the work plane.

The Extend Profile option is also turned on, which extends the sketch lines to existing part faces.

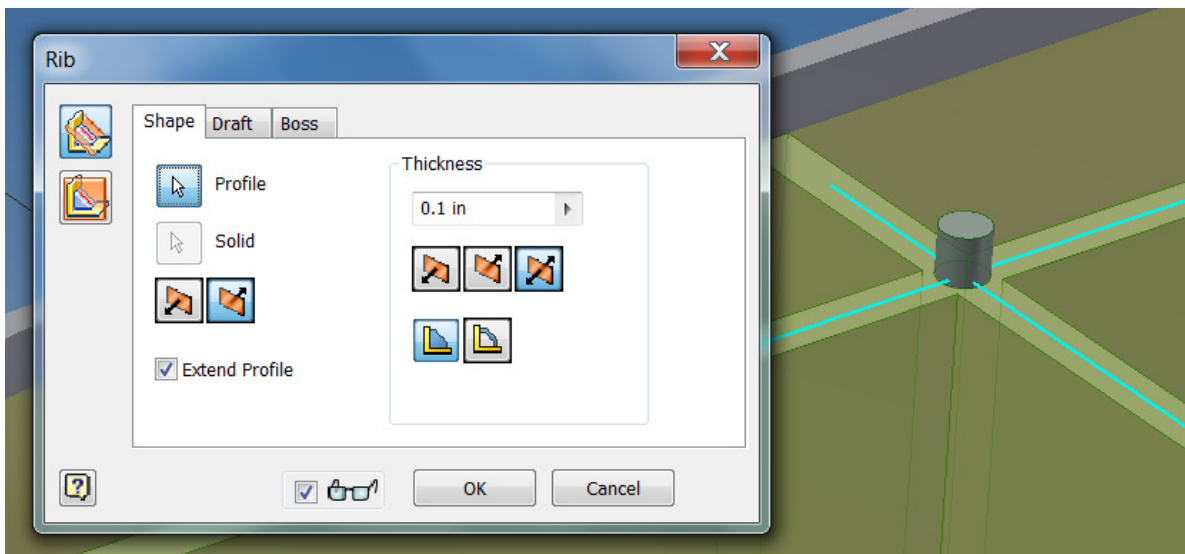
Other settings on the Shape tab control: how thick the rib will be, in which direction(s) the wall will be offset and if the wall extends all the way to the bottom of the part or is only a thin beam.



The Draft tab controls where the wall thickness is held to the specified value and how much draft is applied.



The Boss tab allows points to be picked for centers of bosses. The Offset value is the height that the boss extends above the rib.





Creating Plastic Features in Inventor - Ribs

Note - If the points aren't constrained to be coincident to the rib's sketch lines they aren't available for creating rib bosses.

