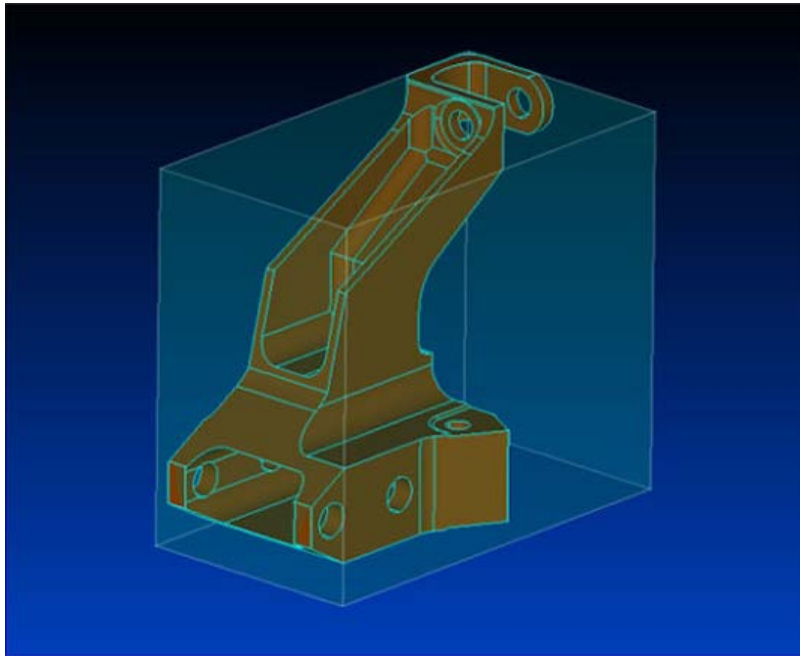


## Femap Tips and Tricks: Model Box

What is the Femap Model Bounding Box, and why is it important?

The Femap Model Bounding Box is a hexahedral cuboid constructed from planes that bound the model in the x, y, and z axes. The longest diagonal of the model bounding box is used to determine certain default values in Femap.



For example, the default tolerance used when merging entities is calculated to be bounding box diagonal divided by 10,000.

$$\text{Merge tolerance} = \text{Diagonal} / 10,000$$

Also the default maximum deformation is calculated to be the bounding box diagonal multiplied by the applied scale factor and root 3, to average the edge length of the model bounding box.

$$\text{Maximum deformation} = \text{Scale factor} * \text{Diagonal} * \sqrt{3}$$

Watch the video of this Femap tip on [YouTube](#).