Deselect the **Use default template** option and select ***OK***. Pick the assembly template ***mmns_asm_design***. Enter data for the parameters and then ***OK***.

Bring in the first component, the base plate, using the ***Assemble*** button in the ribbon toolbar and selecting the part ***bplate.prt***. We need to constrain this component to the assembly datums. We will experiment with that a bit, showing three ways of doing it. For this assembly, each will result in the same position/orientation of the part in the assembly. For other assemblies, two of these variations will allow more freedom in determining how the component is placed.

The first (and easiest) constraint, as we did for the bracket in the subassembly, can be obtained by changing the constraint type to ***Default***. Do not do this now so that we can check out some other methods for constraining the first component. If you have created the default constraint, open the **Placement** panel, select the constraint, and delete it using the RMB pop-up menu.

Use the 3D Dragger to move the part away from the assembly datum planes.

To see a second method of constraining the plate, select ***New Constraint*** and pick on the coordinate systems in the component and the assembly. You may have to use a selection filter, or select in the model tree. This creates a ***Coincident*** constraint between the two coordinate systems. Pretty easy! The coordinate systems in either the component or assembly do not have to be at the origin of the default datum planes and can be oriented in any way in the model. Delete this constraint so that we can see a third option - hold the cursor over the **Coincident** flag in the graphics window, and select ***Delete*** in the RMB pop-up menu. Once again, move the part away from the assembly datums using the dragger (or CTRL-ALT-right mouse drag).

Confirm that the constraint type has automatically reset to **Automatic**. Pick any one of the datums in the component then pick on the corresponding datum in the assembly (component **RIGHT** and assembly **ASM_RIGHT**, for example). Creo automatically sets up a ***Distance*** constraint. Do this for each pair of datums (**FRONT** and **ASM_FRONT**, **TOP** and **ASM_TOP**) creating a ***Distance*** constraint for each pair. No other mouse clicks are required. After selecting the three pairs of datums, the component should be fully constrained. We could, of course, have created any correspondence with the three datums, as long as they were consistent, to reorient the base plate however we like.

You can accept the component placement by clicking the middle mouse button. The three offset distances can be changed by selecting the component in the model tree and then selecting ***Edit*** in the RMB pop-up. Set all three to **0** for now, then ***Regenerate*** the assembly. We don't need the datum planes or coordinate systems any more, so you can turn off their display. Leave the axes turned on.

Adding a Subassembly

Now bring in the bracket subassembly. We add this just as if it was a single component.