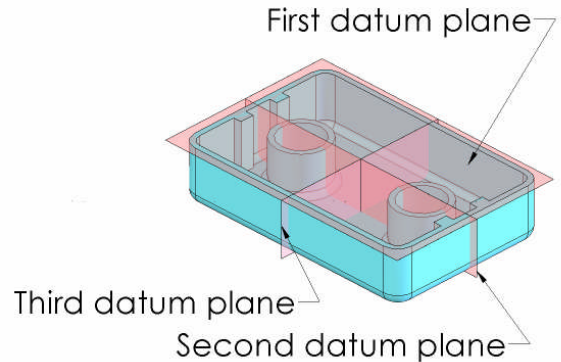
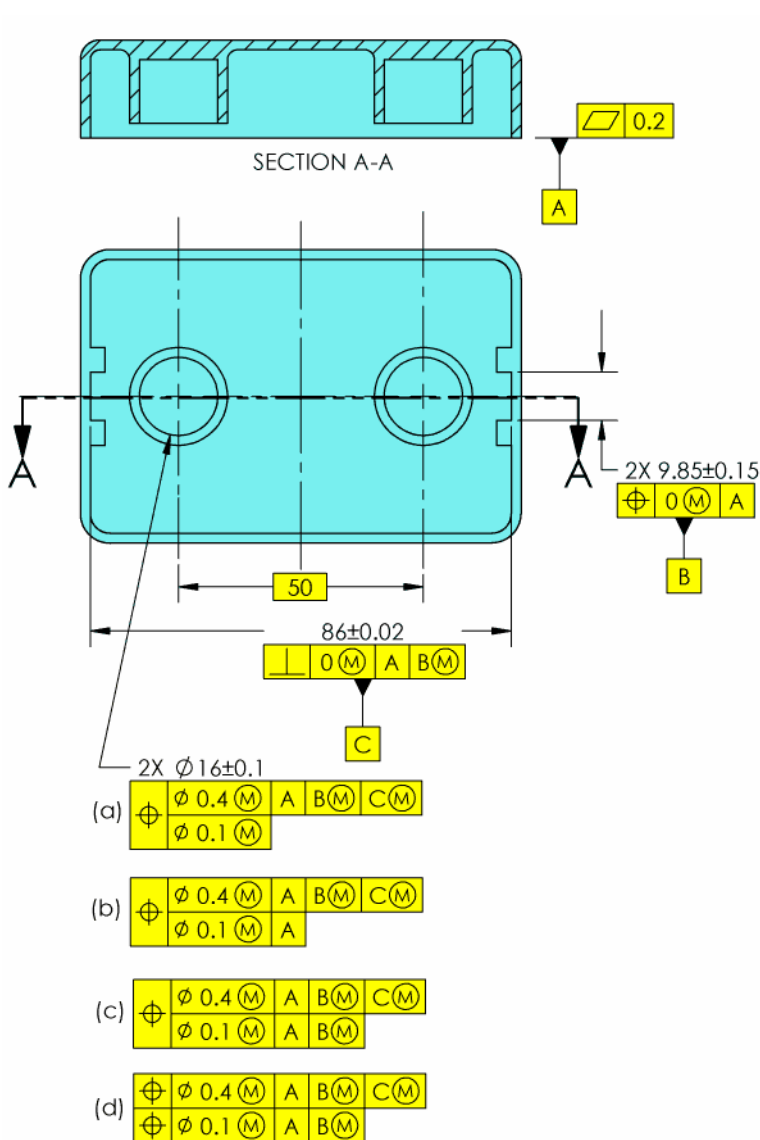


# December 2008 Tip-of-the-Month

## Composite versus Two Single Segments [5.4]

It is often necessary to control a pattern of features tighter within the pattern and looser to the datum reference frame. This can be done using composite or single-segment position tolerances. In composite tolerancing there will be only one position symbol but multiple tolerances. Any datum references repeated in the lower segment of a composite tolerance are there to tighten the orientation of the pattern to the datum reference framework.



	Controls Provided by the Lower Segment
(a)	Location of the holes to each other
(b)	Location of the holes to each other Perpendicularity to the first datum plane
(c)	Location of the holes to each other Perpendicularity to the first datum plane Orientation to the second datum plane
(d)	Location of the holes to each other Perpendicularity to the first datum plane Orientation to the second datum plane Location to the second datum plane

This drawing shows 4 possible position controls for the pattern of 2X Ø16 holes. In every case the upper segment locates the two holes relative to the datum reference frame. The lower segment is different in each callout. The table shows the controls provided by each of the lower segments. The fourth example, (d), is referred to as two single segments, not composite. Notice that in (d) there are two position symbols.

Go to <http://www.tec-ease.com/tips/Dec-08.htm> to view a video clip of Don Day explaining this Tip. Please email us any suggestions or topics that you would like to see covered in our Tip-of-the-Month series. [www.tec-ease.com](http://www.tec-ease.com)