


## FreeForm – Add Points to Flaps

### Add Points Before, Add Points After

A **new point** is added before or after the selected point and then tracks the cursor, and can be fixed in a new location by right clicking. The new location must be along the **hinge**, which is between the point and arrow head on the **Active Section**.

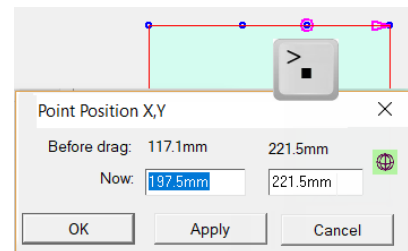
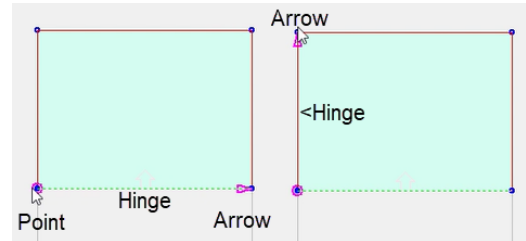
After right clicking an additional new point is created, and can likewise be dragged.

The dragged point is subject to the current **snapping** modes. If you move the cursor near a snapping target, then the dragged point will jump there (note *the cursor itself* does not snap).

While dragging the point, you can press 'period / full stop'  key to open a numeric entry dialog for setting the location exactly. Cancelling out of the numeric dialog terminates the command, otherwise a further new point is created and can be dragged.

Point Position: See Notes on Coordinates next page.

**Terminate** the command with **escape**. Note that a newly added, but unpositioned point, will be deleted.



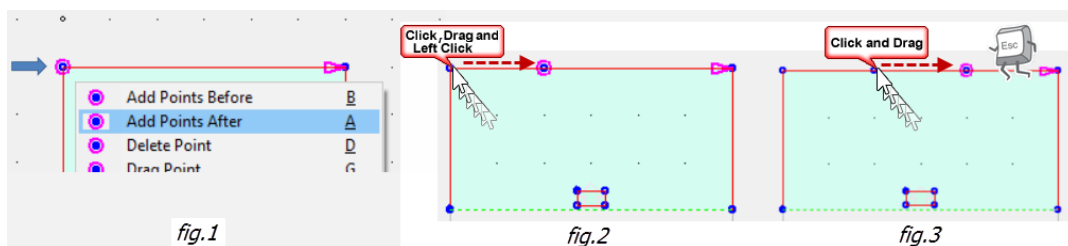
### How to Add Points After

First, add a flap to base line and then another flap. Then 'Add Point' to hinge as per video, which discusses **Add Point Before** but same principles apply to **Add Points After**.

Note: Shortcut Keys can be used and are displayed on the context menu.

- Shortcut Key for **Add Point Before**: Right Click **B**
- Shortcut Key for **Add Point After**: Right Click **A**

1. Left click on Point as shown and from context menu select **Add Points After A** (*fig.1*)
2. Drag to right (*fig.2*) and left click to apply. [**Tip**: Hold down 'shift' while dragging, to stabilize]
3. Left click again and drag to right (*fig.3*) and left click to apply. Then hit '**esc**' to complete.



### Construction Preview

- **Zoom**: Use mouse wheel to zoom (◆)  
◆ if necessary, left click on the pane first to get mouse and keyboard focus
- **Pan**: Hold middle button (or Left and Right buttons) and drag.
- **Select Sections**: Double left click selects sections
- **Select Points**: Left click and drag a rectangle selects points for setting stretch modes. (Hold 'Ctrl' to toggle and 'Shift' to extend)
- **Select Lines or Points**: Left click selects lines or points as active.
- **Context Menu**: Right click on Preview Pane or line/point of Active Section.

## Construction View Navigation:

- **Zoom:** Use mouse wheel to zoom (◆)
- **Pan:** Hold middle button (or Left and Right buttons) and drag to pan.
- **Select Sections:** Double left click selects sections (flaps)
- **Select Lines or Points:** Left click selects lines or points
- **Context Menu:** Right click on line or point gives a context menu.
- **ctrl-C** and **ctrl-V** are copy and paste (◆)
- **ctrl-Z** and **ctrl-Y** are undo and redo (◆)
- **ctrl-R** is repeat last command (◆)
- **'.'** (**full stop**) is invoke numeric entry dialog (◆)
- **<Delete>** is delete active point (◆)

## Coordinates X,Y

The points are **Cartesian** i.e. consisting of a set of two lines intersecting each other at right angles, but are rotated so that the Base Line is the X-axis and the intersecting line is the Y-axis, and the point of their intersection is called the origin with the coordinates (0, 0).



Note that the **Global** [0.0, 0.0] origin will always be determined by the **Original Base Line**.

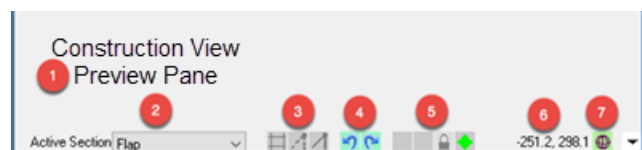
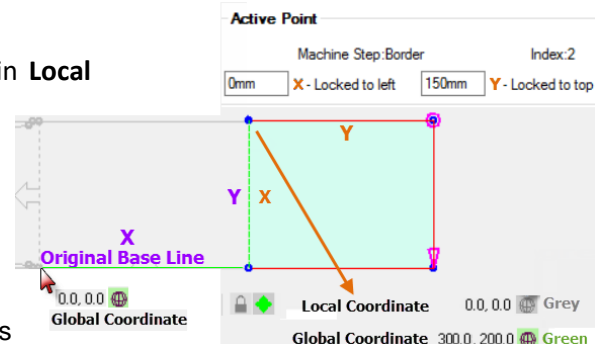
However, as in the case of the image below, the Active Section's Fold Line becomes the Base Line. This determines the **X** coordinate.

On the diagram, right, when a section is Active, **Pt1** in **Local mode** is the **origin** and its Local coordinates become [0.0, 0.0]. The coordinates of Pt2 are X = 0mm and Y = 150mm (Active Point Index:2 relates to Pt2)

On the status bar of the Preview Pane (1) the X,Y coordinates (6) and the coordinate mode (7) is shown.

**Coordinate Selector:** Left click to toggle between modes

-  Local Coordinate if greyed out.
-  Global Coordinate if green.



## REFER TO TUTORIAL 106 MAKING CUSTOM FLAPS

FOR MORE ON FREEFORM CAPABILITIES  
REFER TO CHAPTER 8

FOR MORE ON DESIGN CANVAS AND STATUS BAR  
REFER TO CHAPTER 2

SAI BOX & DISPLAY USER GUIDE



# Box&Display