Lesson 8
The Precise Input Toolbar

Typically, sketch geometry is dimensioned only after it is created. Precise input allows you to key-in sketch dimension values as you create the geometry. The precise input fields are modified versions of the same edit boxes used in the Equations and Parameters tools. This means that you can enter expressions as well as other algebraic values, with or without units. Note: Relative Orientation is only available for sketches in the Drawing environment.

For those users who like to use coordinate entry, the Precise Input toolbar allows them to continue that method.

Relative Origin

Relative Origin allows you to select a point on your model to define a temporary origin. Your subsequent coordinate inputs are measured from this new origin until you change it. The orientation of the new coordinate system is unchanged, only the origin changes.

Relative Origin will stay active after being used to set a new origin. You can pick an out-of-plane point to define the origin. The point is projected into the plane, and is used to define the origin. This projection is not persistent. The relative origin is reset when you leave sketch mode, or when you click the Relative Origin button again.

To set a relative origin:

1. Click the relative origin button.
2. Select a valid sketch point in the part modeling or drawing environments.

TIP: The coordinate icon displays the current orientation.

The Relative Origin tool is similar to setting the Origin in AutoCAD.

Relative Orientation

Relative Orientation rotates the axes of the current input coordinate system.

To rotate the current input coordinate system:

1. Select an axis, line, or linear edge to define the X axis.

2. The sense of the X axis will be inferred so as to maintain the sense of the current Z axis.
   You can choose out-of-plane lines to set the orientation.
   The line will be projected onto the plane, and the projected line will be used to set the orientation.

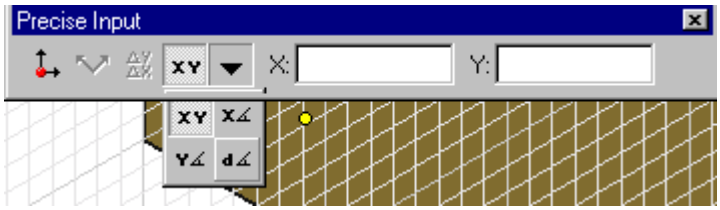
TIP: This command will be disabled in part modeling sketching.
This is similar to the SNAP ROTATE option in AutoCAD.

Delta Input

Delta Input allows you to enter sketch dimensions relative to the last point picked or entered in the current coordinate system. The first point of any command is always relative to the origin. Subsequent points are relative to the last selected point when this button is active.

TIP: The setting of this button persists throughout an Inventor session.

This is similar to using a relative coordinate in AutoCAD.



Precise input accepts data in the four formats listed below.

xy Specifies a coordinate by (x,y) point relative to current origin.

x° Specifies a coordinate by x-coordinate and an angle from positive x-axis.

y° Specifies a coordinate by x-coordinate and an angle from positive x-axis.

d° Traditional polar coordinates. Specifies a coordinate by a distance and an angle from positive x-axis.

To change the input type:

1. Click the down arrow to the right of the input type button.
2. Select a format from the fly-out icon menu.

TIP: The (x,y) coordinates reported on the status line reflect the current coordinate system and input method.

The Collaboration Toolbar

Autodesk Inventor provides tools to enable collaboration, cooperative work on a project by more than one person. The tools establish a framework for effective communication so that you and others can work simultaneously in related files.

- A system for defining projects and file locations. A project consists of the local and network folders containing the Autodesk Inventor files, and a project file that identifies these file locations.
- A file reservation system that warns other designers when someone is editing a file.
- The Engineer's Notebook to capture design information and other notes.
- The Design Assistant to track and manage file properties, links between files, and other important information about Autodesk Inventor files.
- Access to Windows® NetMeeting® to exchange ideas in a chat setting and on an electronic whiteboard.

The Collaboration Toolbar interfaces with NetMeeting to allow the user to Add Participants, Delete Participants, Add Directories, Chat, White Board, and Hang Up.

Usually, participants collaborate in a session similar to this:

- The host is working in an assembly and notifies participants that a meeting is needed.
- The host starts a Windows® NetMeeting® session and sets up the host security options.
- Participants start Windows® NetMeeting® on their own computers.
- The host selects Tools>Online Collaboration>Meet Now, then enters information about the participant's computer.
- On the participant's computer, a message signals the start of the meeting.
- A window opens on each participant's computer, showing a working session of Autodesk Inventor.

At the start of the meeting, the host has control of the Autodesk Inventor session. To operate Autodesk Inventor, double-click in the graphics window. On the host's machine, a window displays the request. When the host accepts, you gain control of the session and can operate Autodesk Inventor normally. Other meeting participants follow the same sequence when they want to operate Autodesk Inventor.

Any participant can start a chat or whiteboard session, but only the host can change control of Autodesk Inventor.