

EN1740 Computer Aided Visualization and Design

Spring 2012

2/14/2012

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Last time:

• Parent – Child

Tonight:

- Measuring within Pro/E
- 2D representation
 - Orthographic projection
 - 3rd Angle vs. 1st Angle

• Creating engineering drawings READING ASSIGNMENT:

Please read Chapt. 3 in Wilson

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Measure

• Analysis >

Measure

 There are a number of measure options available



Measure - Length

- Analysis > Measure > Length
- Select a line entity



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Measure – Distance

This options gives the most options

Analysis > Measure >

Distance

- Any entity can be selected
- => Curve, Plane, Axis,

Edge, Surface

• NOTE: UNLESS GOING PLANE TO PLANE, SHORTEST DISTANCE IS REPORTED



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Measure – Distance

This options gives the most options

• At times, a projection

reference is required



Measuring from top to edge of through hole without projection reference

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Measure – Distance

This options gives the most options

• Adding the center axis as a projection reference gives the vertical distance



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Measure – Angle



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Measure – Diameter

Very useful



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Projection Planes and Quadrants



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Flipping of planes into Front View (Vertical) Plane for drawing onto a sheet of paper



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Third Angle Views of an Object



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Engineering Drawing in third angle projection



Engineering Drawing in first angle projection



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Open piston.prt



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Create a new drawing:

- File > New
- Select the Drawing radio button
- Type the name of the part (piston) so the files can be easily associated



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Create a General View:

• RMB

- Insert General View...
- LMB where the center of

the first view should appear

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Our component appears with the Drawing View dialog box



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In Drawing View dialog:

- Select View Type
- In the View Orientation section select the FRONT model view
- Select Apply

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	Hidden line removal for xhatches Yes No	HLR edge display quality Follow Environment OK Cancel Apply					

- Click on View Display
- 2 Select No Hidden from Display

style

- **3** Select Dimmed from the Tangent
 - edges display style

Click Ok

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Create a Projected View:

- RMB and Hold on original view
- Scroll down and LMB on Insert Projection View...
- LMB on location where center of Project View should be







Set view properties:

- View display
- Set Display style to No

Hidden

• Set Tangent edges

display style to Dimmed

Click OK



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EXERCISE - Create a drawing

Create ANOTHER Projected View:

- RMB and Hold on second view
- Scroll down and LMB on Insert
- Projection View...
- LMB on location where center of
- Project View should be







Set view properties again:

- RMB, Properties
- View display
- Set Display style to No
 Hidden
- Set Tangent edges

display style to Dimmed

Click OK





- Turn off the display of:
 - Datum Planes
 - Datum Axes
 - Datum Points
 - Coordinate Systems
- Repaint
- YOUR SCREEN SHOULD
- LOOK LIKE THIS.

🖳 PISTON (Active) - Pro/ENGINEER Edu	cation Edition						
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EXERCISE – Create a drawing

- Click Accept All
- Click Close
- Click anywhere in the graphics
 window to deselect dimensions and
 axes



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- Move dimension, clip witness lines
- and erase unnecessary dimensions



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