

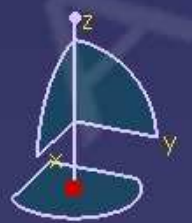
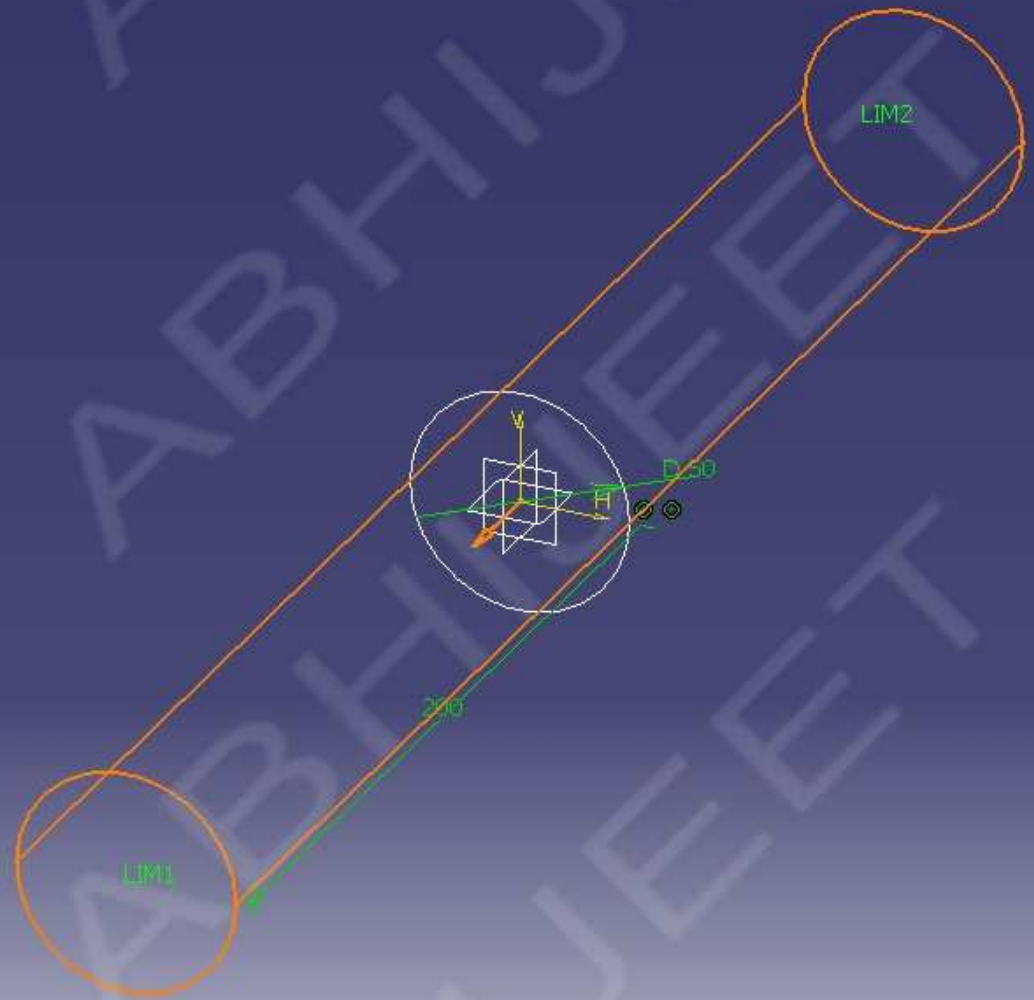


Part1

- xy plane
- yz plane
- zx plane
- PartBody

D 50

- Part1
 - xy plane
 - yz plane
 - zx plane
 - PartBody



Pad Definition

First Limit

Type: **Dimension**

Length: **200mm**

Limit: No selection

Profile/Surface

Selection: Sketch.1

Thick

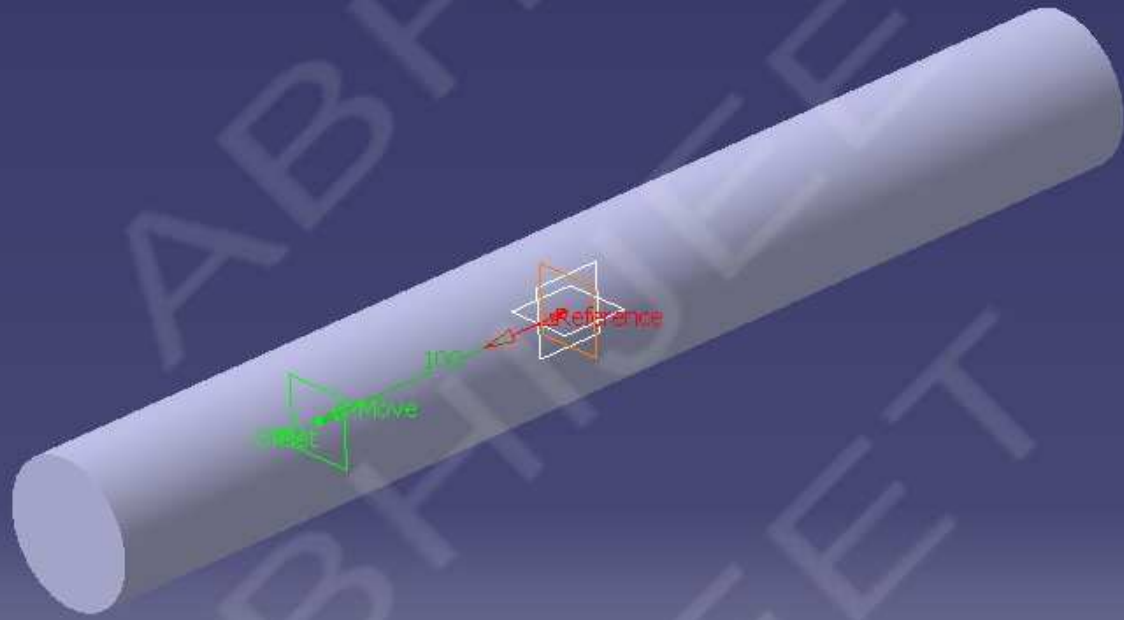
Mirrored extent

Reverse Direction

More >>

OK Cancel Preview

- Part1
 - xy plane
 - yz plane
 - zx plane
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Plane Definition

Plane type: Offset from plane

Reference: yz plane

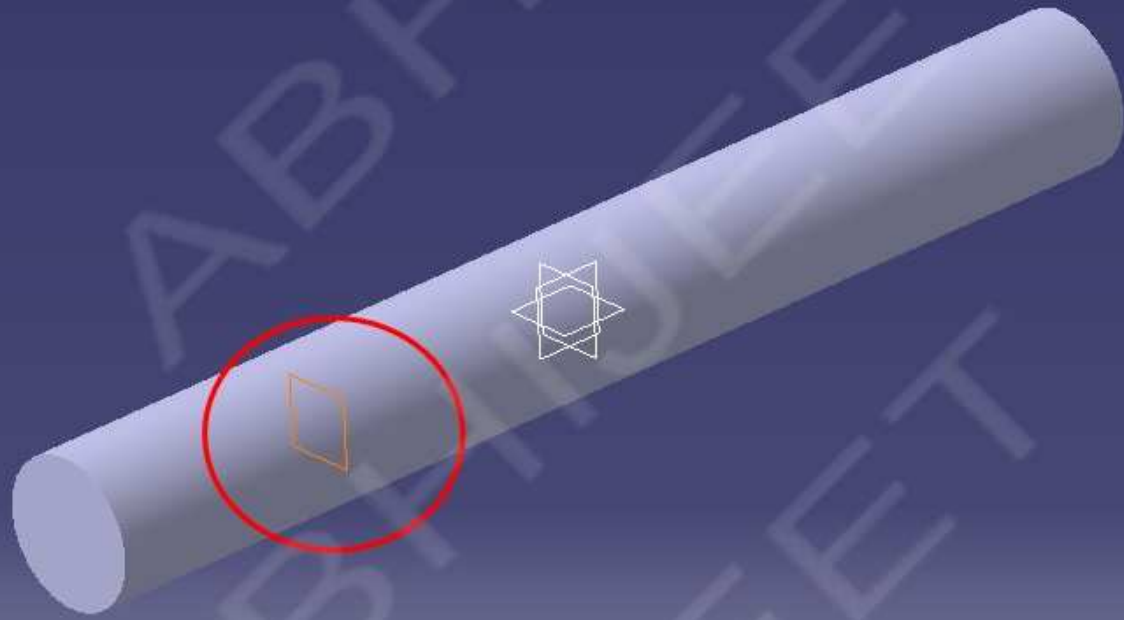
Offset: 100mm

Reverse Direction

Repeat object after OK

OK Cancel Preview

- Part1
 - xy plane
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 - PartBody



Creates a sketch from a reference (plane or planar surface) or edits the selected sketch

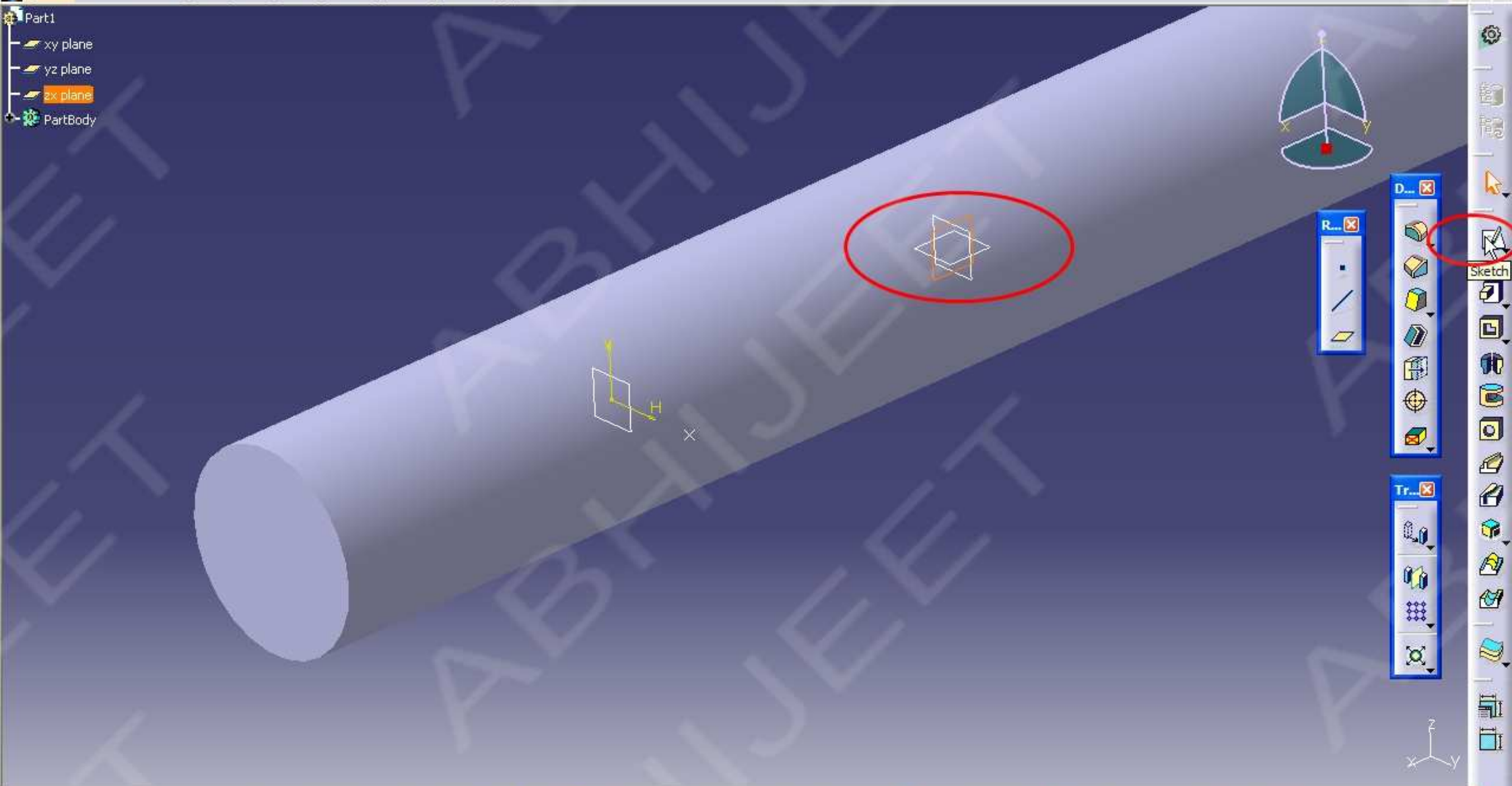
c:Sketch



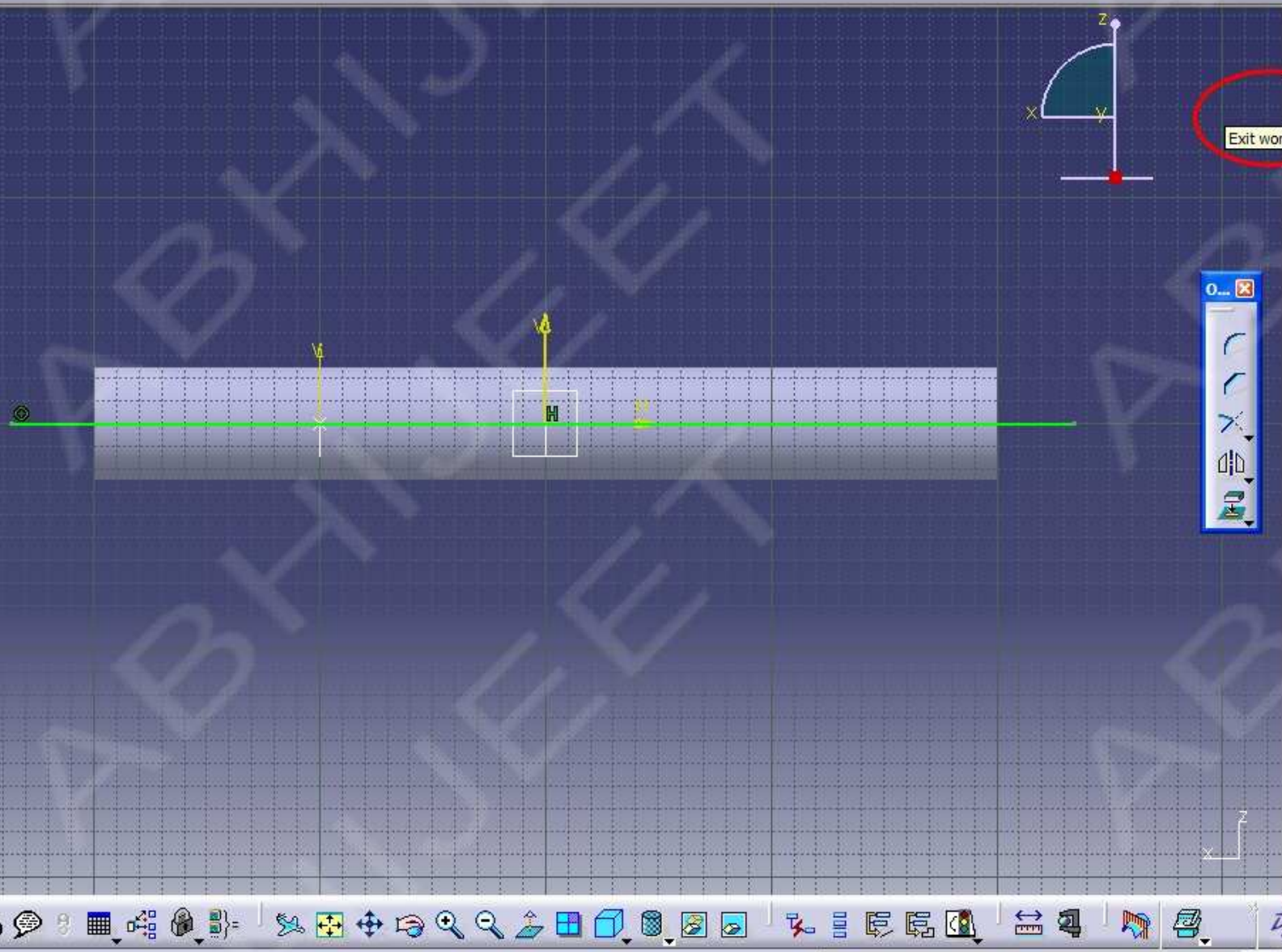
Part1

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- PartBody

The main workspace displays a 3D model of a circular part in a light blue color. A coordinate system is centered on the part, with the X-axis pointing to the right, the Y-axis pointing upwards, and the Z-axis pointing out of the page. A dimension line is drawn from the center of the part to a point on its right edge, with the value '25' displayed in green. The value '25' is circled in red. A small white square is visible on the part's surface. On the right side, there is a 'Z' axis indicator and a 'Y' axis indicator. A red circle highlights an icon in the top right corner, with a tooltip that says 'Exit workbench'. A vertical toolbar on the right side contains various icons for navigation and editing.



- Part1
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- zx plane
- PartBody

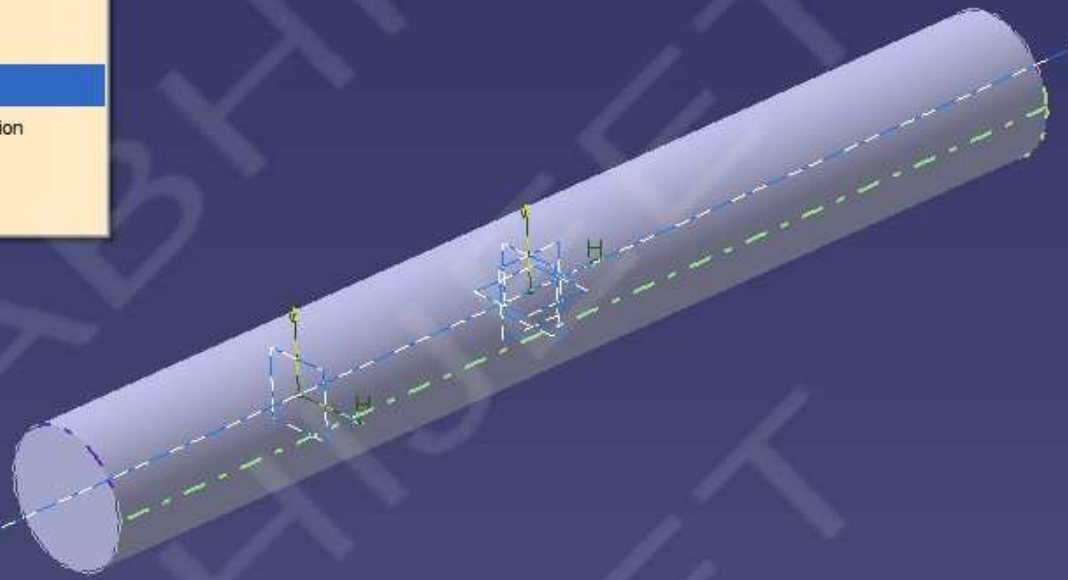


Exit workbench

Exit this workbench back to the command

- Infrastructure
- Mechanical Design
- Shape
- Analysis & Simulation
- AEC Plant
- Machining
- Digital Mockup
- Equipment & Systems
- Digital Process for Manufacturing
- Machining Simulation
- Ergonomics Design & Analysis
- Knowledgeware
- ENOVIA V5 VPM
- 1 Part1.CATPart
- 1 Part1.CATPart
- 2 Audi A5 coupe body.CATPart
- 3 Audi Q7.CATPart
- Exit

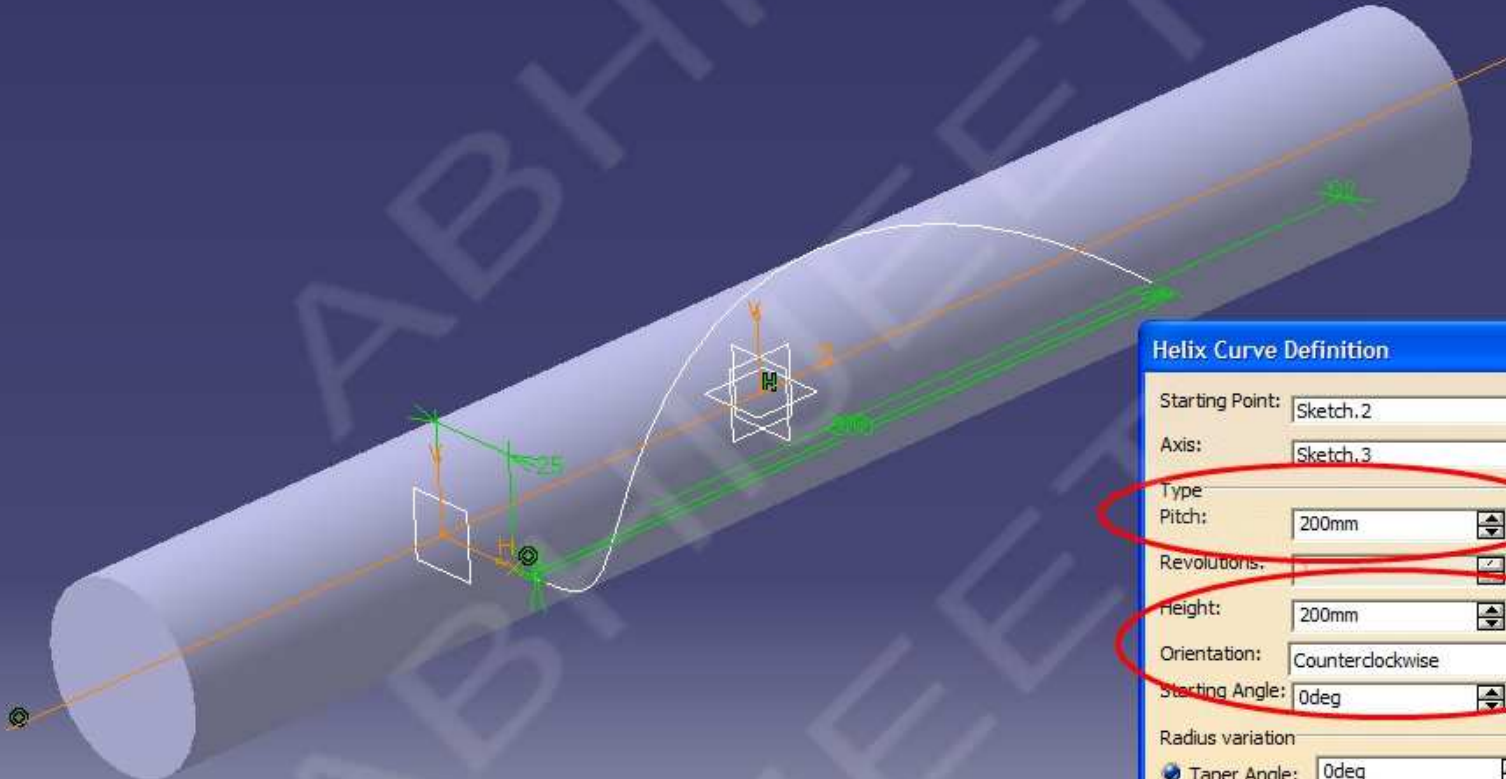
- FreeStyle
- Sketch Tracer
- Imagine & Shape
- Digitized Shape Editor
- Generative Shape Design**
- Quick Surface Reconstruction
- Automotive Class A
- Shape Sculptor



Toolbars and panels on the right side of the interface:

- D... (Design)**: A toolbar containing various icons for design operations, including a cube, a cylinder, and a sphere.
- R... (Reference)**: A panel with a few icons, possibly for reference or alignment.
- Tr... (Translation)**: A panel with icons for translation and other movement operations.

- Part1
 - xy plane
 - yz plane
 - zx plane
 - PartBody



Helix Curve Definition

Starting Point: Sketch.2

Axis: Sketch.3

Type: Law...

Pitch: 200mm

Revolutions:

Height: 200mm

Orientation: Counterclockwise

Starting Angle: 0deg

Radius variation

Taper Angle: 0deg Way: Inward

Profile: No selection

Reverse Direction

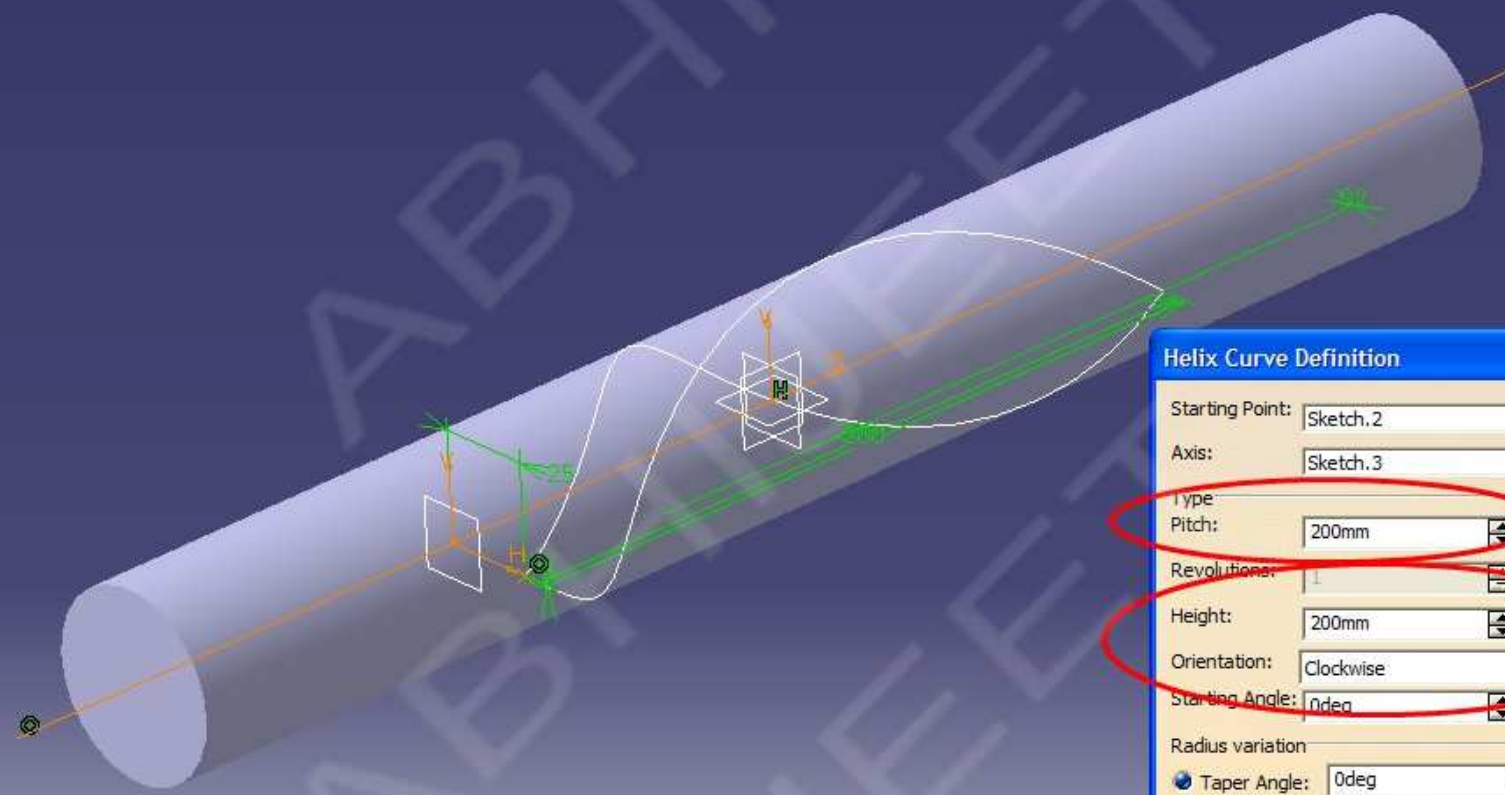
OK Cancel Preview



Select a planar curve as helix radius variation

Pitch,Height,Starting Angle,Taper Angle | 200mm,200mm,0deg,0deg

- Part1
 - xy plane
 - yz plane
 - zx plane
 - PartBody



Helix Curve Definition

Starting Point: Sketch.2
Axis: Sketch.3

Type:
Pitch: 200mm [Law...]
Revolutions: 1
Height: 200mm
Orientation: Clockwise
Starting Angle: 0deg

Radius variation:
 Taper Angle: 0deg Way: Inward
 Profile: No selection

Reverse Direction

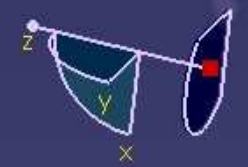
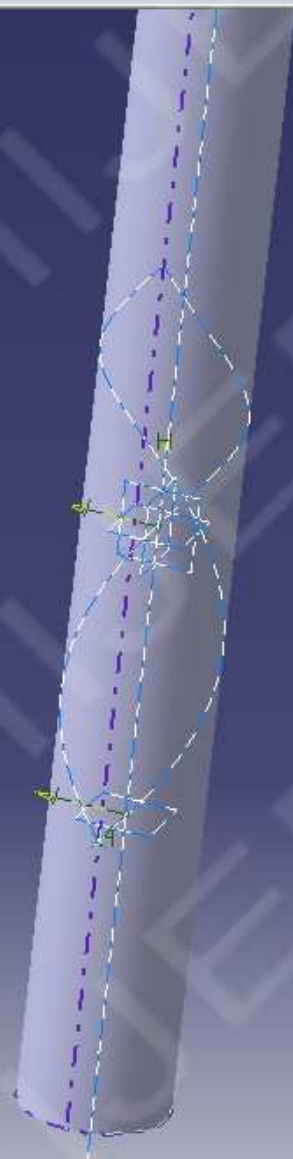
OK Cancel Preview



Select a planar curve as helix radius variation

Pitch,Height,Starting Angle,Taper Angle | 200mm,200mm,0deg,0deg

- Infrastructure
- Mechanical Design
 - Part Design
 - Assembly Design
- Shape
- Analysis & Simulation
- AEC Plant
- Machining
- Digital Mockup
- Equipment & Systems
- Digital Process for Manufacturing
- Machining Simulation
- Ergonomics Design & Analysis
- Knowledgeware
- ENOVIA V5 VPM
- 1 Part1.CATPart
 - 1 Part1.CATPart
 - 2 Audi A5 coupe body.CATPart
 - 3 Audi Q7.CATPart
- Exit



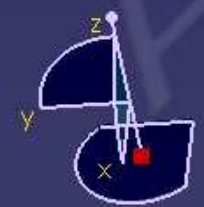
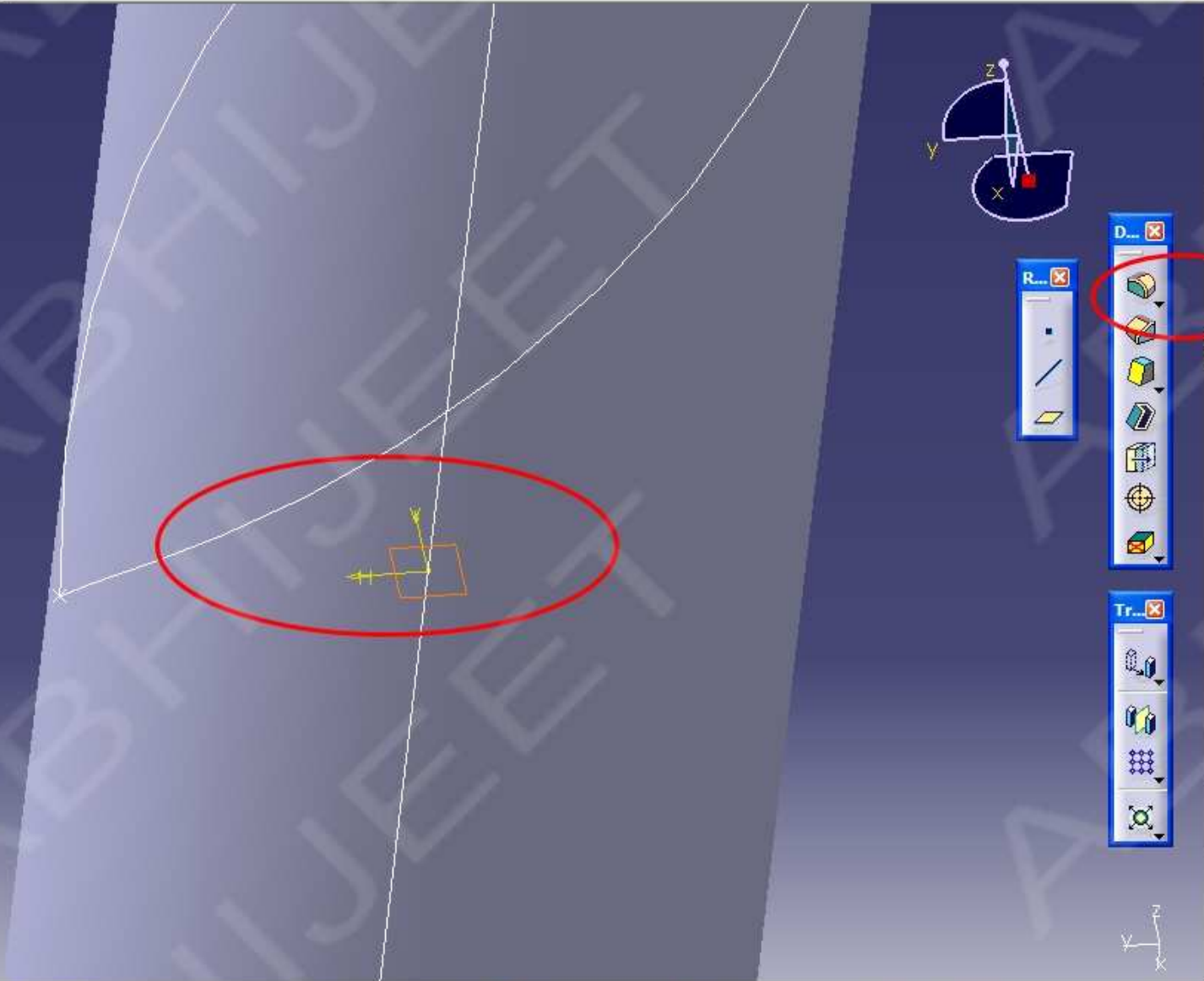
S... x

O... x

R... x

A vertical toolbar containing various icons for sketching and modeling. The icons include tools for creating lines, circles, arcs, and other geometric shapes, as well as tools for extruding, revolving, and other 3D modeling operations. The toolbar is organized into sections, with the top section labeled 'S...' (Sketching), the middle section labeled 'O...' (Operations), and the bottom section labeled 'R...' (Revisions).

- Part1
 - xy plane
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 - zx plane
 - PartBody
 - Pad.1
 - Sketch.1
 - Plane.1
 - Sketch.2
 - Sketch.3
 - Helix.1
 - Helix.2
 - Sketch.4



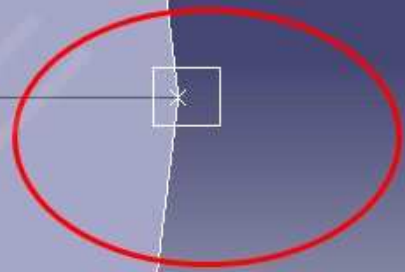
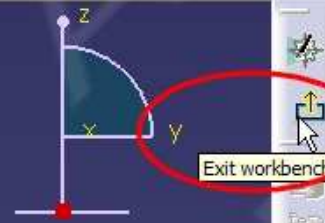
Creates a sketch from a reference (plane or planar surface) or edits the selected sketch

c:Sketch



Part1

- xy plane
- yz plane
- zx plane
- PartBody
 - Pad.1
 - Sketch.1
 - Plane.1
 - Sketch.2
 - Sketch.3
 - Helix.1
 - Helix.2
 - Sketch.4
 - Sketch.6



- Part1
 - xy plane
 - yz plane
 - zx plane
 - PartBody
 - Pad.1
 - Sketch.1
 - Plane.1
 - Sketch.2
 - Sketch.3
 - Helix.1
 - Helix.2
 - Slot.1
 - Sketch.4



Slot Definition

Profile: Sketch.4

Center curve: Helix.1

Profile control

Keep angle: [dropdown]

Selection: No selection

Move profile to path

Merge slot's ends Thick Profile

Thin Slot

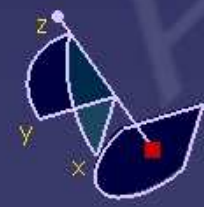
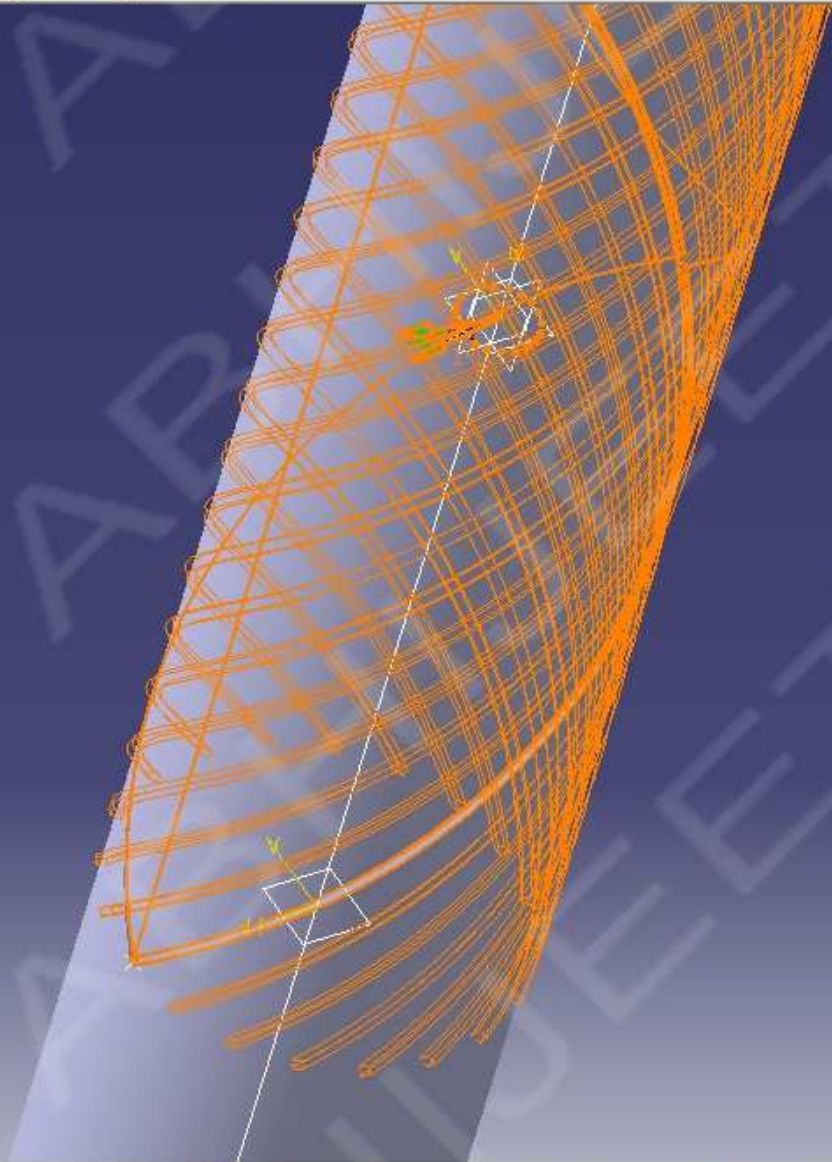
Thickness1: 1mm

Thickness2: 0mm

Neutral Fiber Merge Ends

OK Cancel Preview

- Part1
 - xy plane
 - yz plane
 - zx plane
 - PartBody
 - Pad.1
 - Sketch.1
 - Plane.1
 - Sketch.2
 - Sketch.3
 - Helix.1
 - Helix.2
 - Slot.1
 - Sketch.4
 - Slot.2
 - CircPattern.1



Circular Pattern Definition

Axial Reference | Crown Definition

Parameters: Complete crown

Instance(s): 20

Angular spacing: 18deg

Total angle: 360deg

Reference Direction

Reference element: Pad.1\Face.1

Reverse

Object to Pattern

Object: Slot.1

Keep specifications

More >>

OK Cancel Preview



- Part1
 - xy plane
 - yz plane
 - zx plane
 - PartBody

Repeat the slotting action for both the helix using the same "rectangle" sketched earlier to get the final knurling.
You may increase the size of the rectangle for different looks.

