

Basic Features

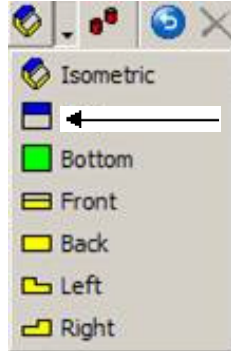
A) Preparation

I) If you imported from SolidWorks or Pro-E

a) After importing your file click the arrow next to this button



b) Select front view from the dropdown menu



(1)

c) This is the top view of your model as it will be made in the mill

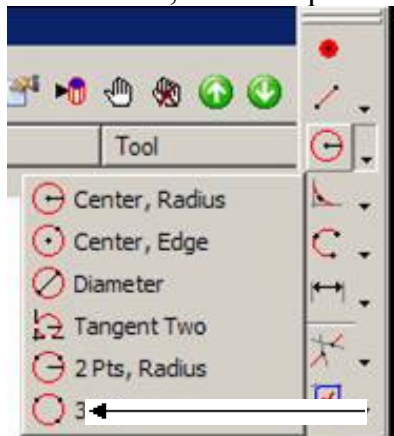
d) Using the edges of the imported solid, create geometry using the geometry tools

(i) Ensure that the snaps toolbar looks like this:



(2) Explanation: All solid modeling software import as solids. FeatureCAM only can use geometry (line and arcs) to create features

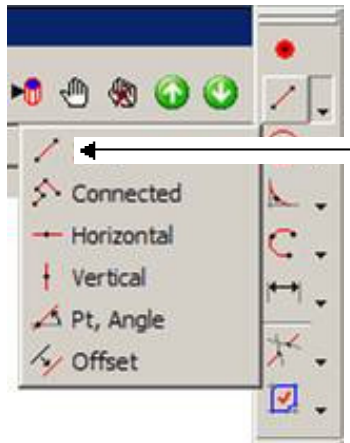
(3) To create circles, use the 3 pts circle tool



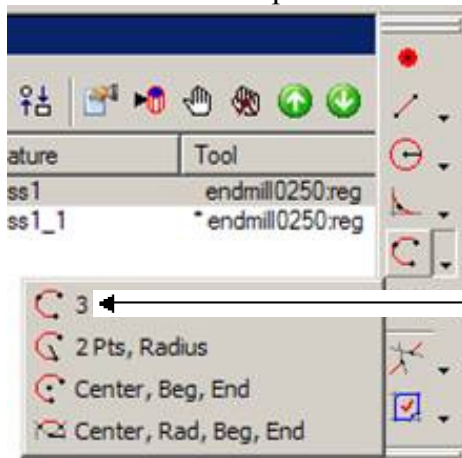
(i)

(ii) Select three points of each circle you wish to create

(4) To create lines, use the 2 pts line tool



- (i)
 - (ii) Select the endpoints of each line you wish to create
- (5) To create arcs use the 3 pts arc tool



- (i)
- (ii) Select an endpoint of an arc, then a random point on the arc, and finally the other endpoint

II) If you imported from AutoCAD, continue to B

B) Curve Creation

- I) Before a feature can be created from geometry, the geometry must be grouped into a curve. Most Features require curves and each feature requires slightly different curves.

C) Features

I) Hole

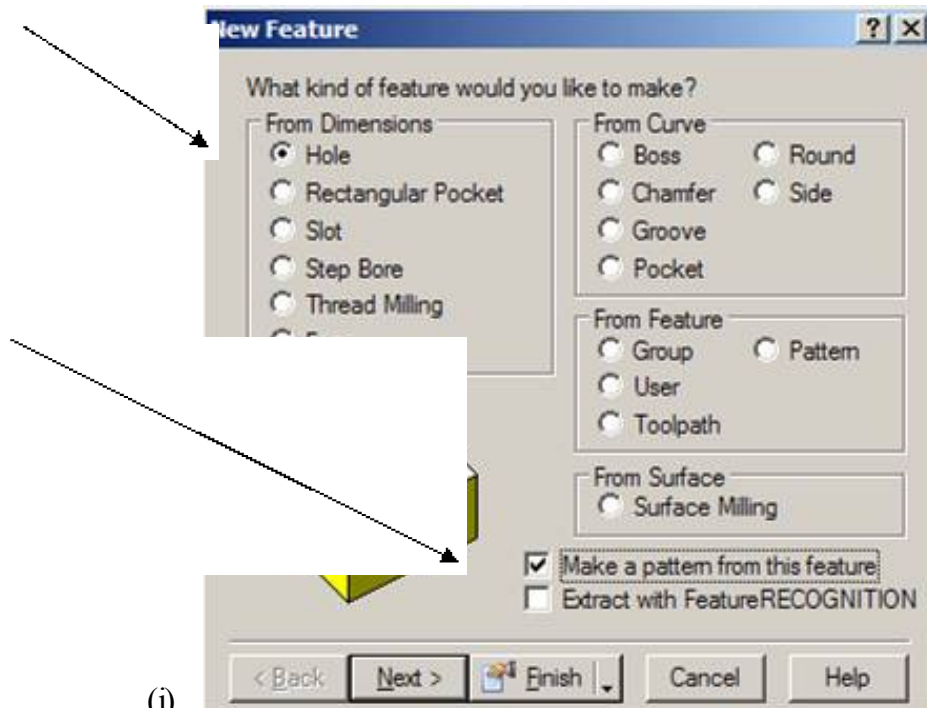
a) Curves

- (1) Not needed

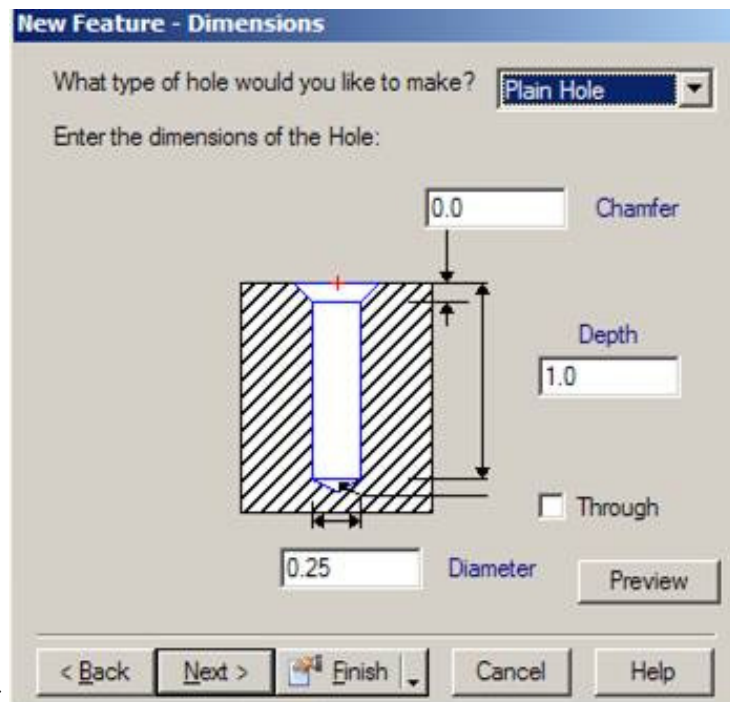
b) Procedure

- (1) Click  on the toolbar

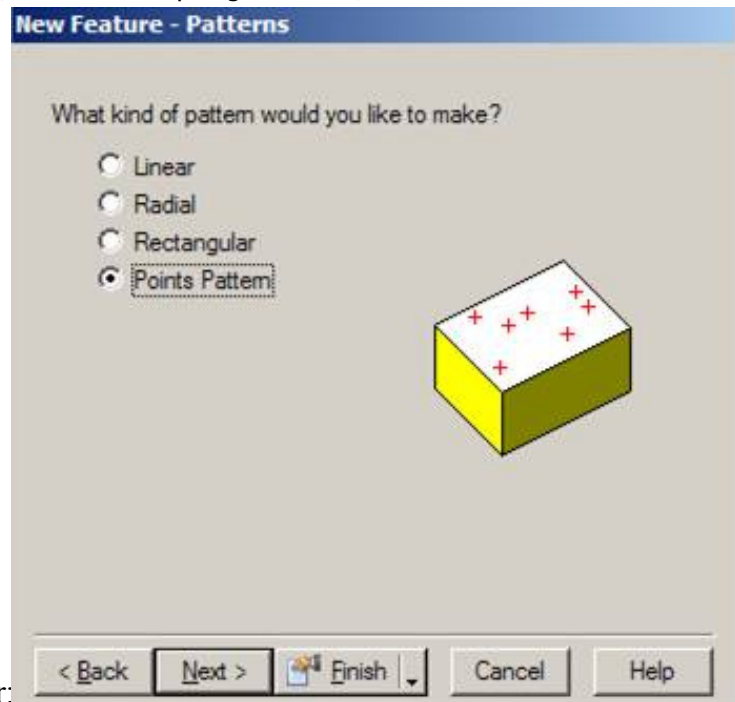
- (2) This dialog box will appear:



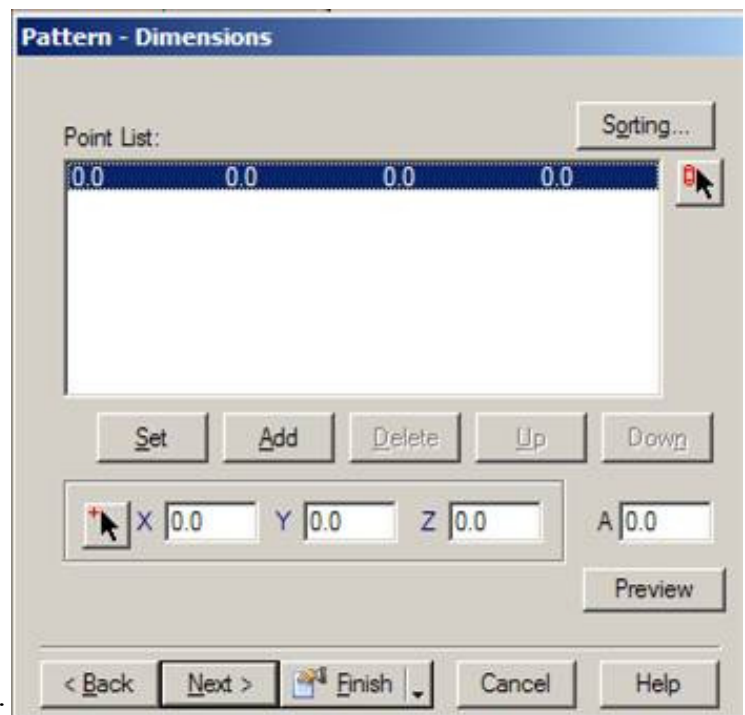
- (i)
- (3) Select the correct options (the arrows)
 - (4) Click next





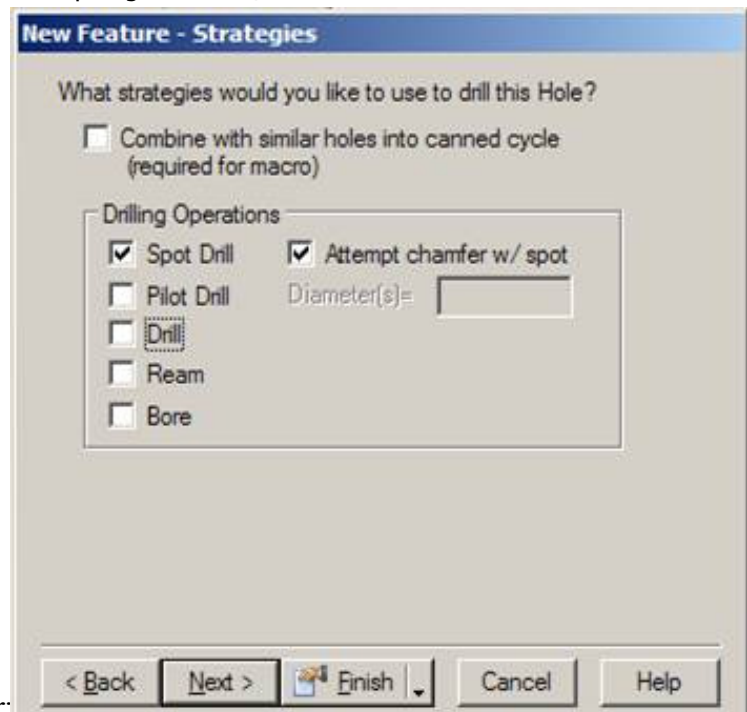
- (5) This dialog box will appear:
- (6) Enter the diameter of hole
- (7) Click next



- (8) This dialog box will appear:
 (9) Select points pattern
 (10) Click next



- (11) This dialog box will appear:
 (12) Click  and select the center of a circle of previously specified diameter
 (13) Click set
 (i) If there are more circles of the same diameter click 
 (ii) Select another circle's center
 (iii) Click add
 (iv) Repeat
 (14) Click next

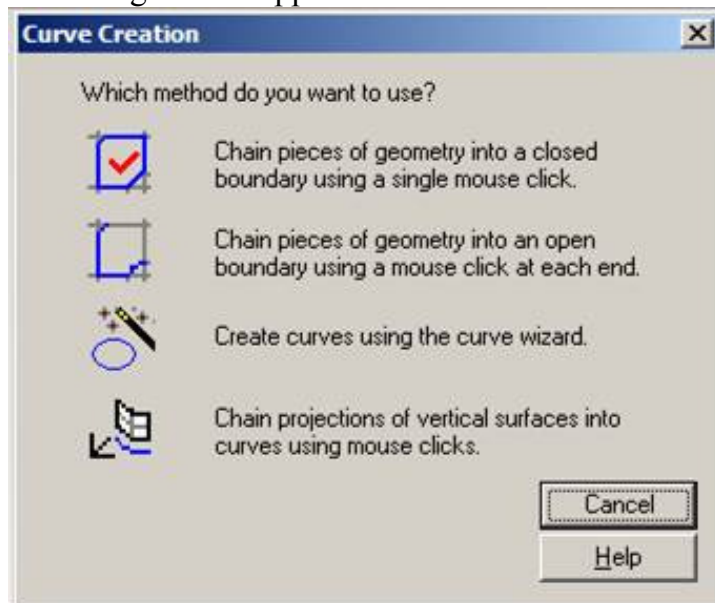



- (15) This dialog box will appear:
- (i) Ensure that only spot drill is selected
- (16) Click next four (4) times
- (17) Click finish

II) Boss

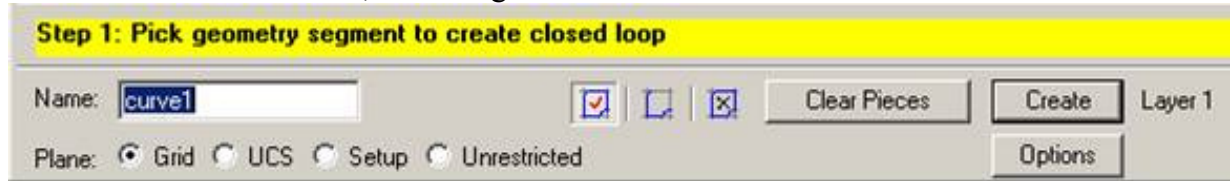
a) Curves


- (1) Click 
- (2) This dialog box will appear:



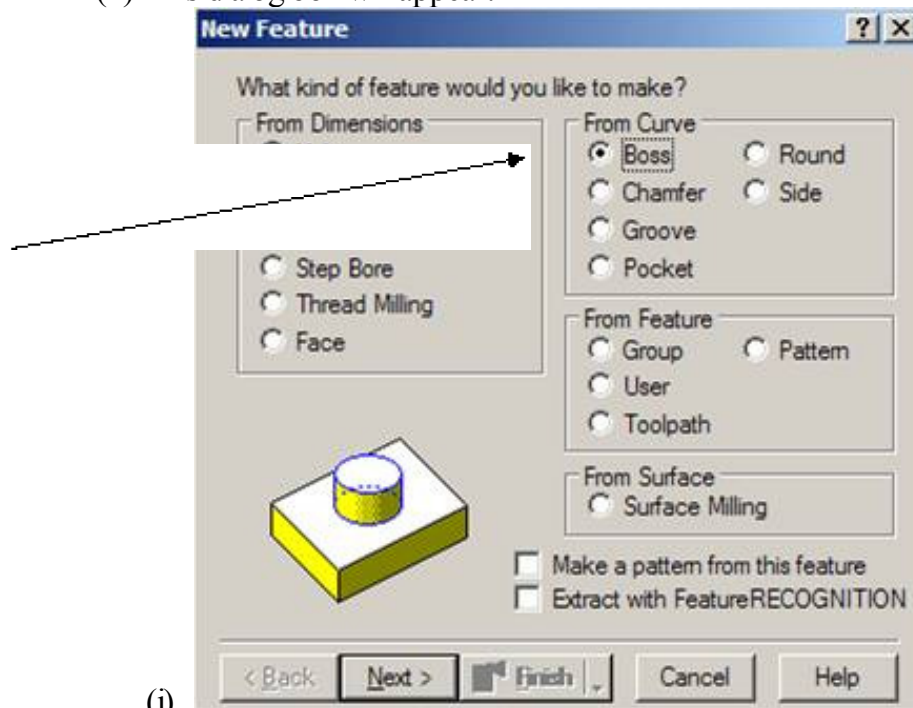
- (3) Click  and select part of the shape you want to cut around

- (4) The entire shape will highlight blue.
- (5) On the bottom of the screen, this dialog box is shown:

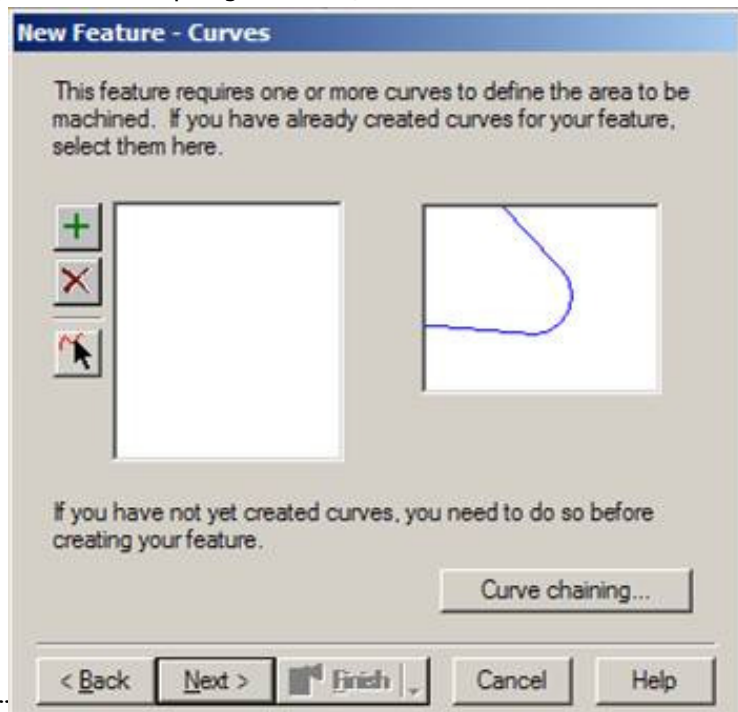


- (6) Click create
- (7) The curve is created
- b) Procedure
 - (1) Click  on the toolbar


- (2) This dialog box will appear:

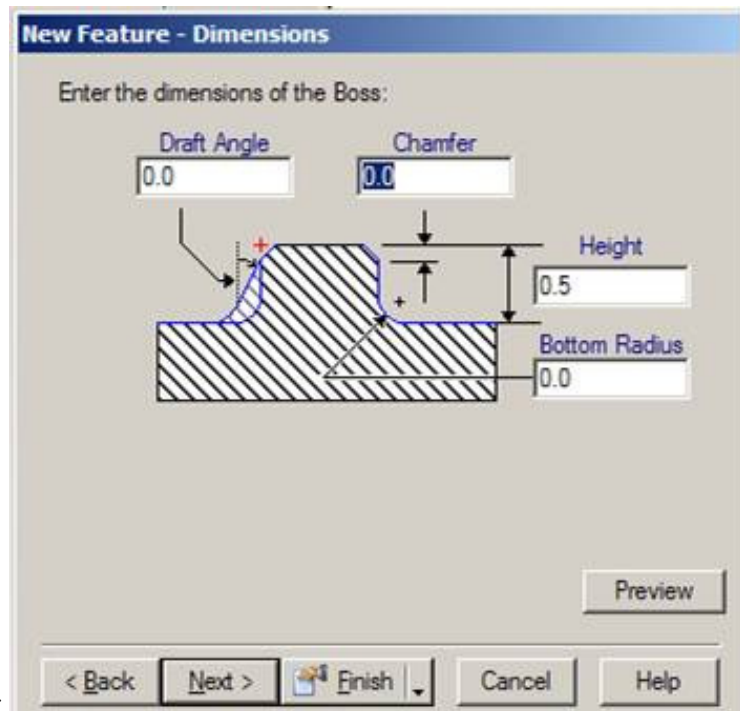


- (i)
- (3) Select the correct options (the arrows)
- (4) Click next



(5) This dialog box will appear:

- (6) Click  and select the previously created curve
- (7) Click next twice (2)



(8) This dialog box will appear:

- (9) Set height to .05 in
- (10) Click next

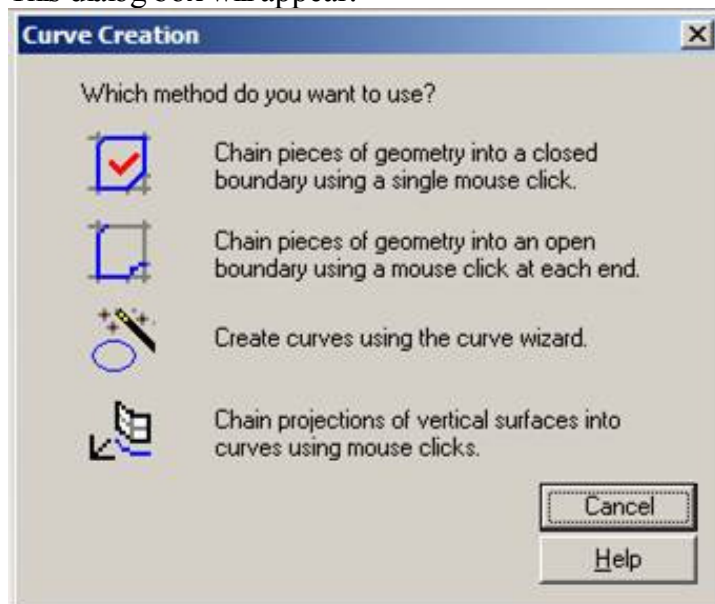



- (11) This dialog box will appear:
- (12) Deselect finish pass
- (13) Click finish
- (14) Repeat, but this time deselect rough and select finish pass

III) Pocket

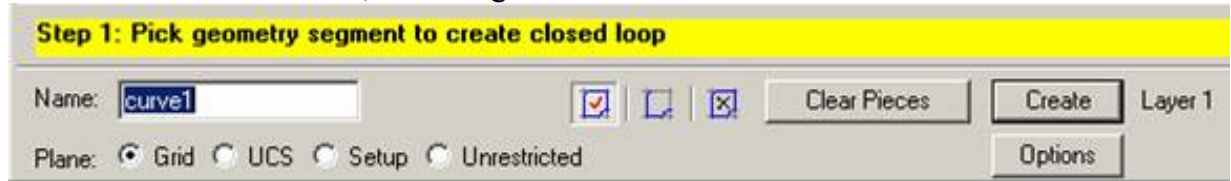
a) Curves


- (1) Click 
- (2) This dialog box will appear:



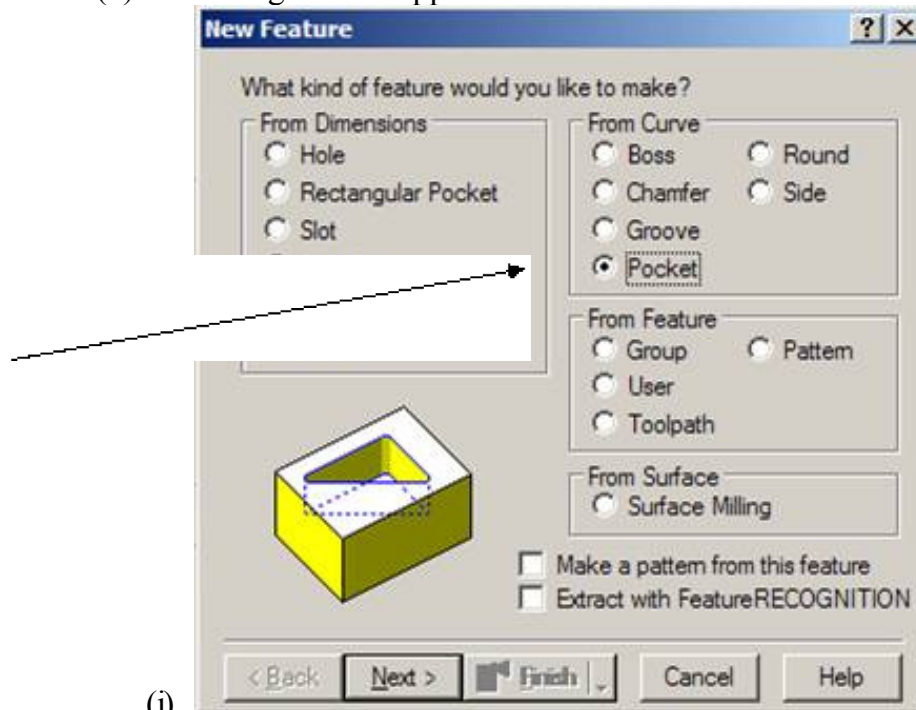
- (3) Click  and select part of the shape you want to cut inside

- (4) The entire shape will highlight blue.
- (5) On the bottom of the screen, this dialog box is shown:

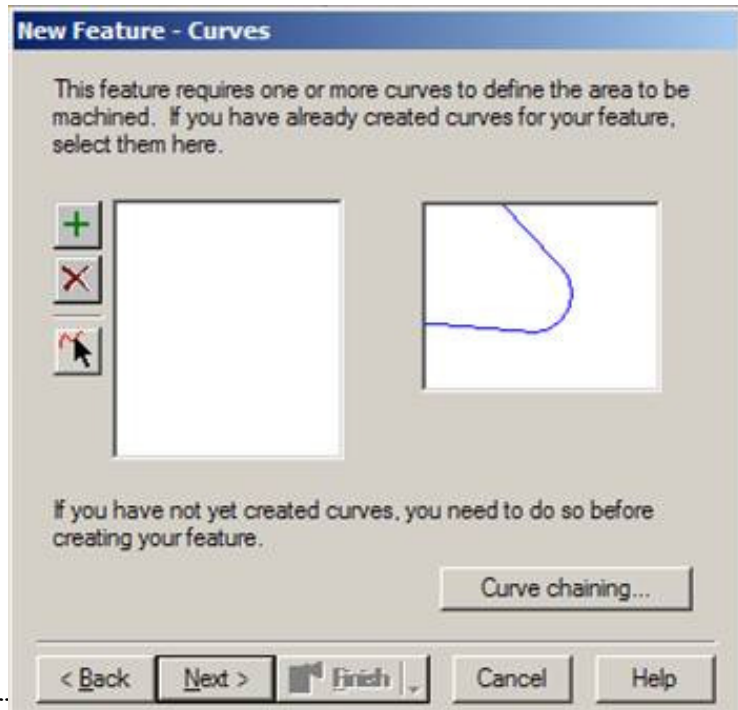


- (6) Click create
- (7) The curve is created
- b) Procedure
 - (1) Click  on the toolbar


- (2) This dialog box will appear:



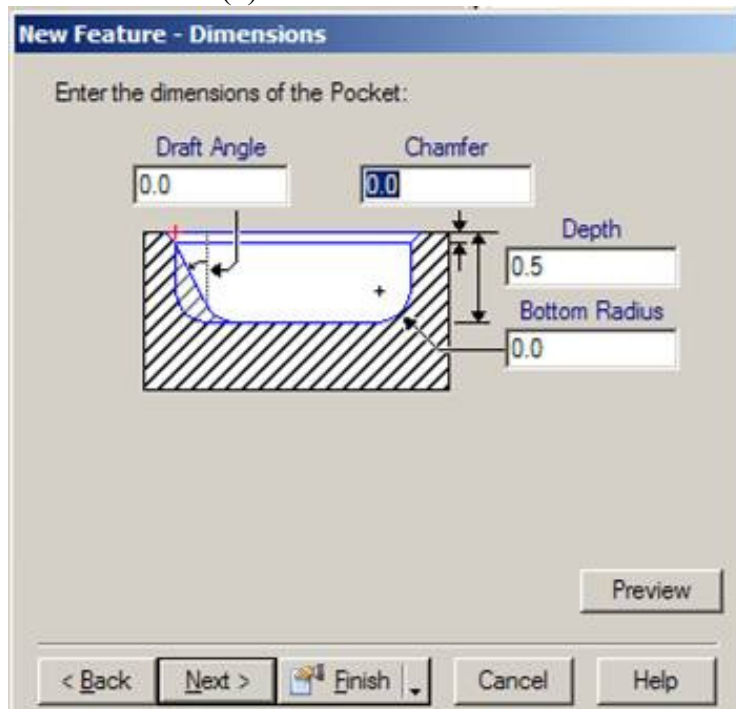
- (i)
- (3) Select the correct options (the arrows)
- (4) Click next



(5) This dialog box will appear:

(6) Click  and select the previously created curve

(7) Click next twice (2)



(8)

(9) Set depth to .05 in

(10) Click next

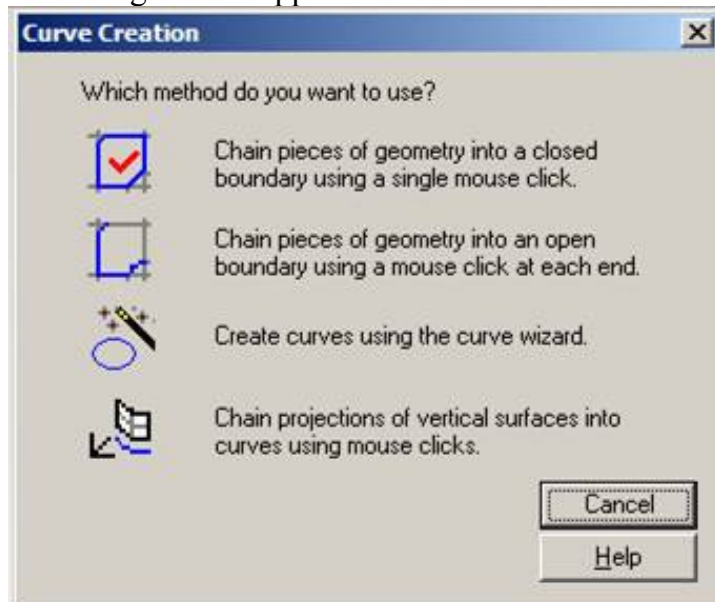



- (11) This dialog box will appear:
- (12) Deselect finish pass
- (13) Click finish
- (14) Repeat, but this time deselect rough and select finish pass

IV) Contour

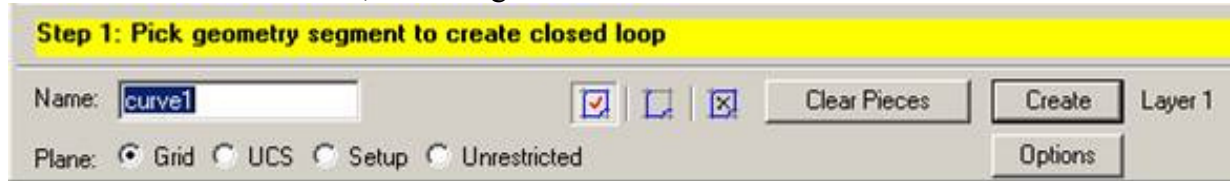
a) Curves


- (1) Click 
- (2) This dialog box will appear:



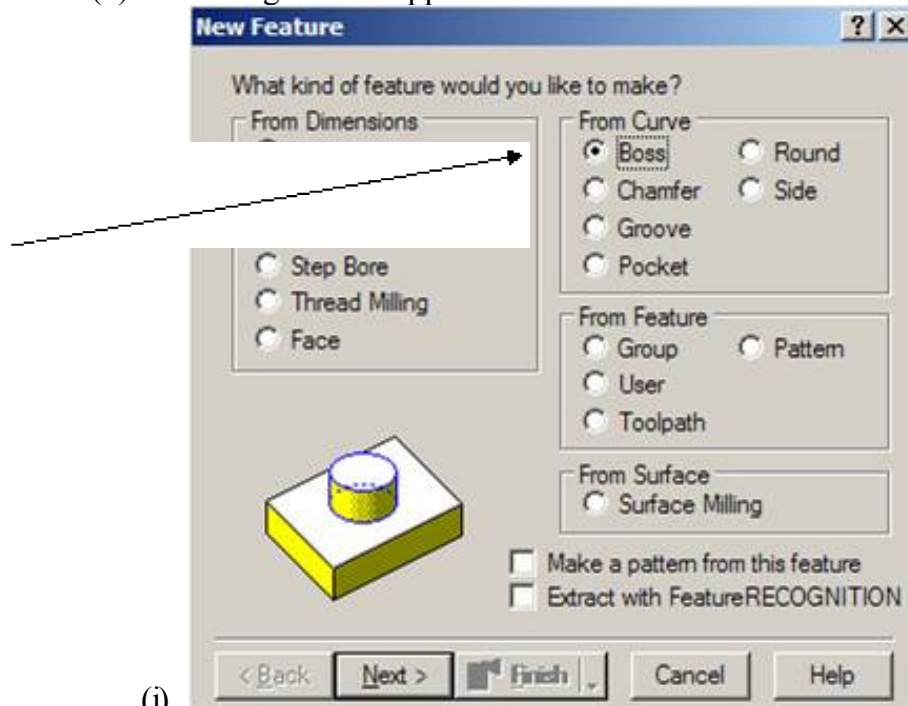
- (3) Click  and select part of the shape you want to cut around

- (4) The entire shape will highlight blue.
- (5) On the bottom of the screen, this dialog box is shown:

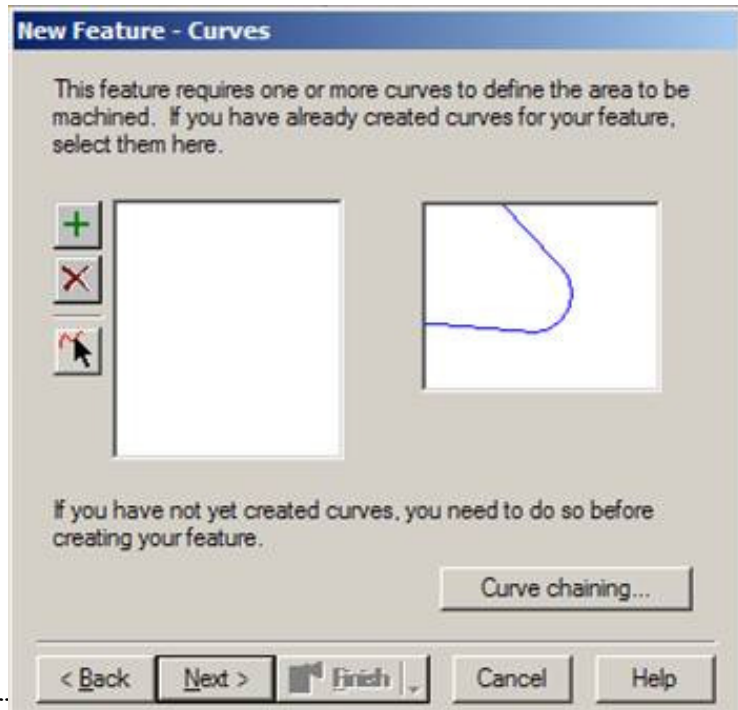


- (6) Click create
- (7) The curve is created
- b) Procedure
 - (1) Click  on the toolbar


- (2) This dialog box will appear:

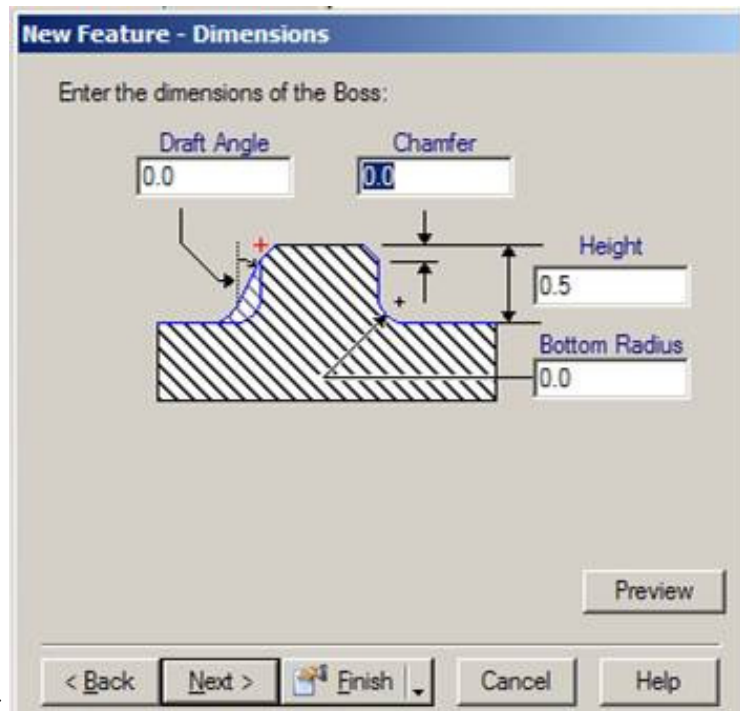


- (i)
- (3) Select the correct options (the arrows)
- (4) Click next



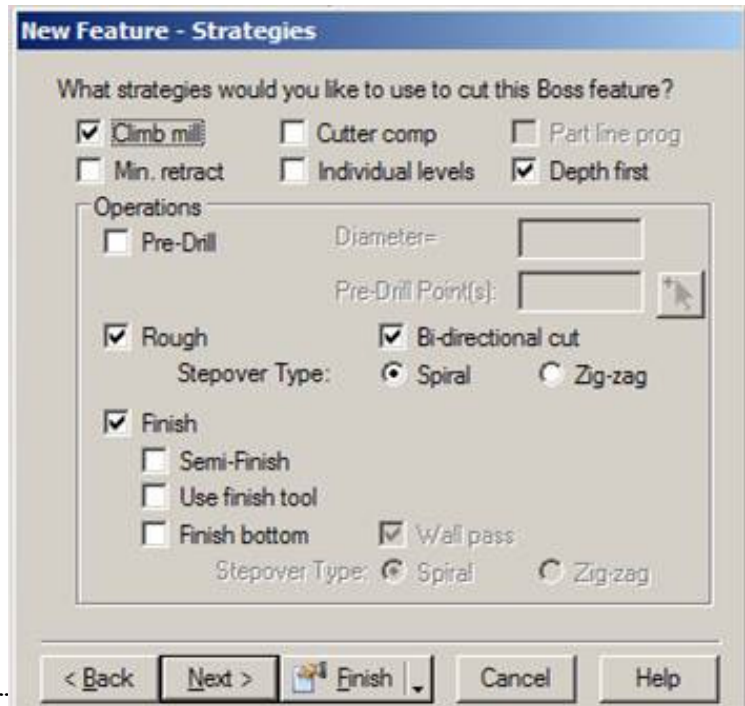
(5) This dialog box will appear:

- (6) Click  and select the previously created curve
- (7) Click next twice (2)

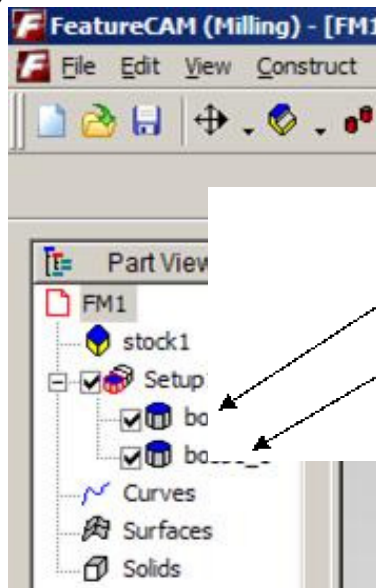


(8) This dialog box will appear:

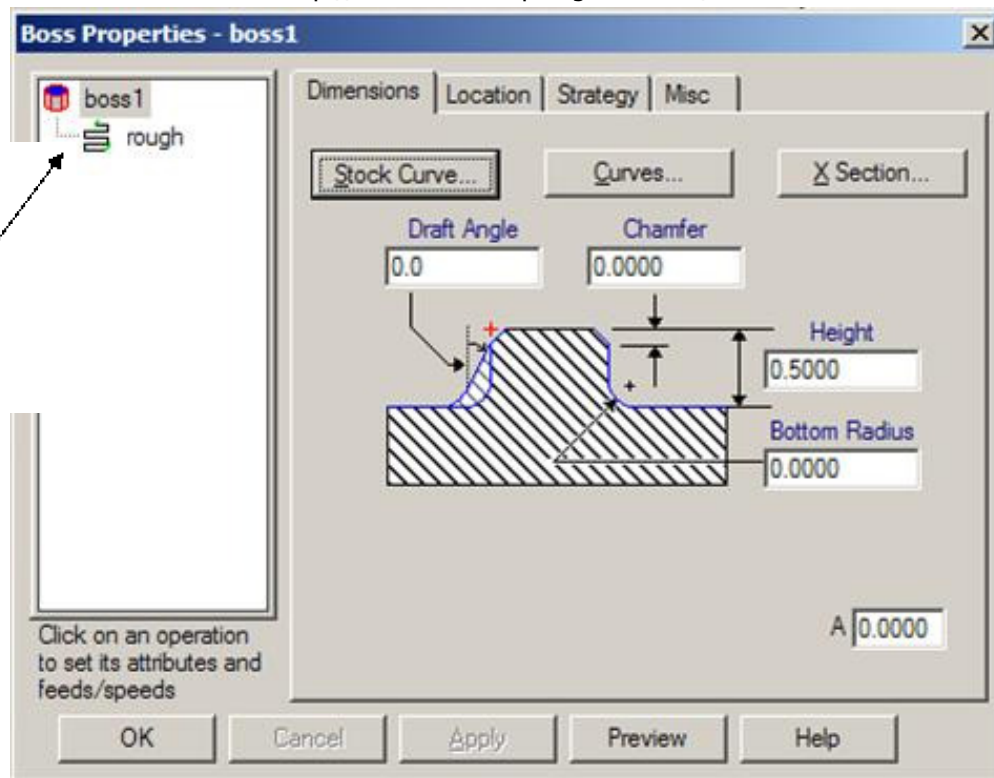
- (9) Set height to .05 in
- (10) Click next



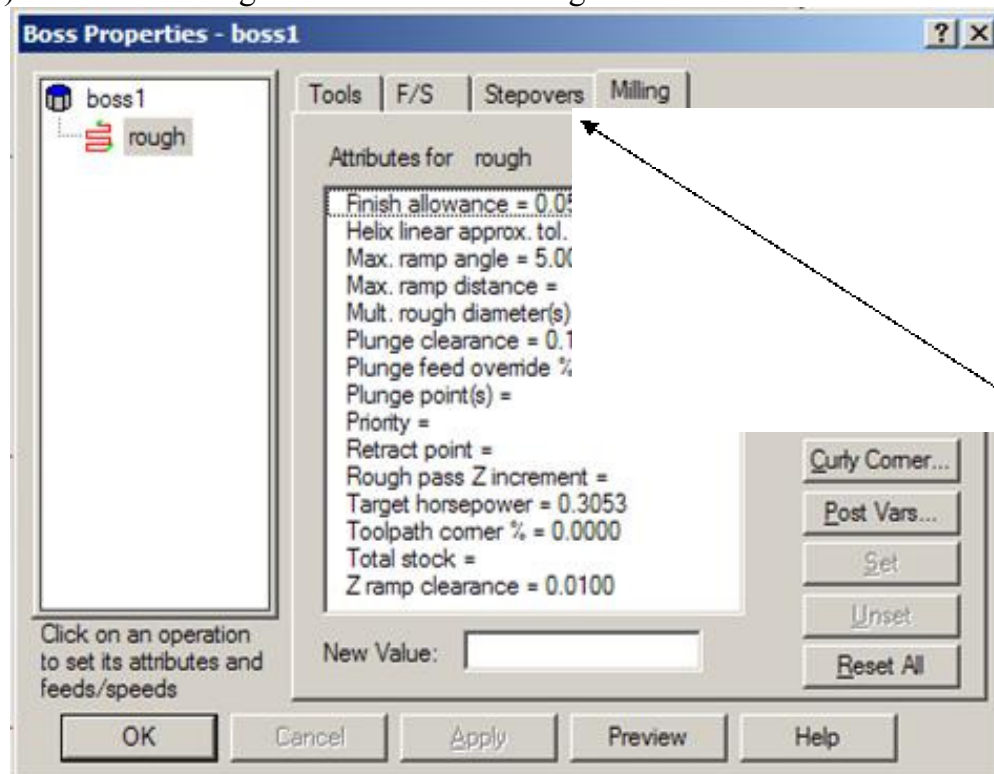
- (11) This dialog box will appear:
- (12) Deselect finish pass
- (13) Click finish
- (14) Repeat, but this time deselect rough and select finish pass
- (15) On the left side of the screen, double click the roughing boss that was just created:



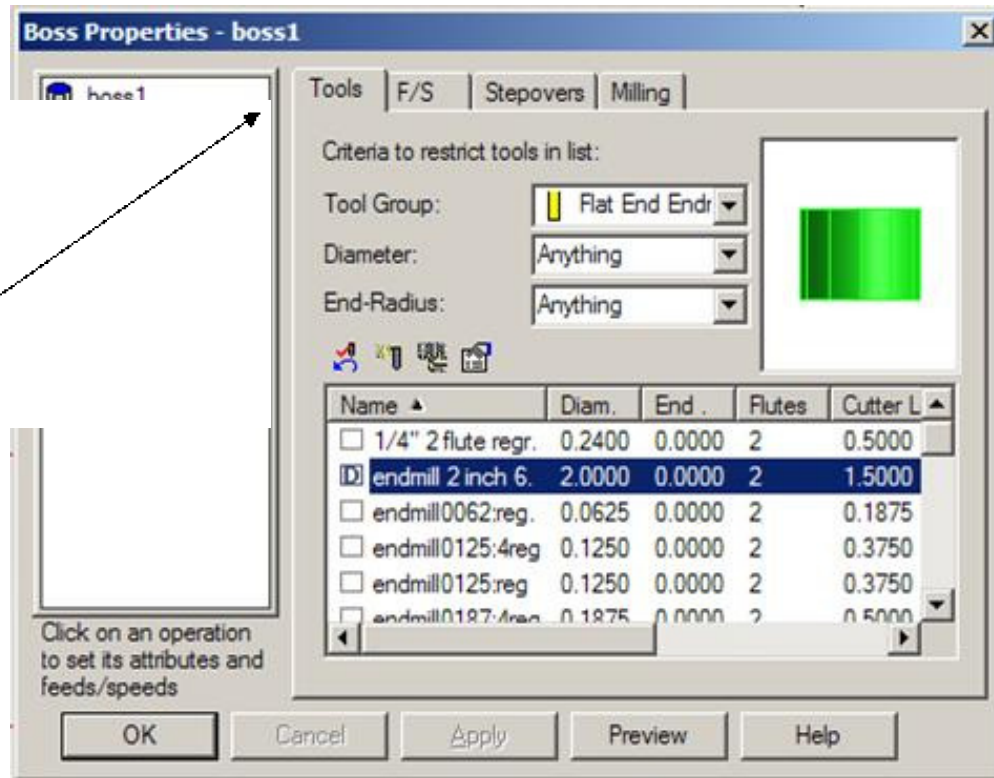
- (16) This dialog box will appear:



- (17) Select rough and then click the milling tab:



- (18) Find the option for "Total Stock =" and select it
 (19) In the new value box, enter .s
 (20) Click set
 (21) Select the tools tab:



- (22) Check the box next an appropriately sized tool
- (23) Click OK

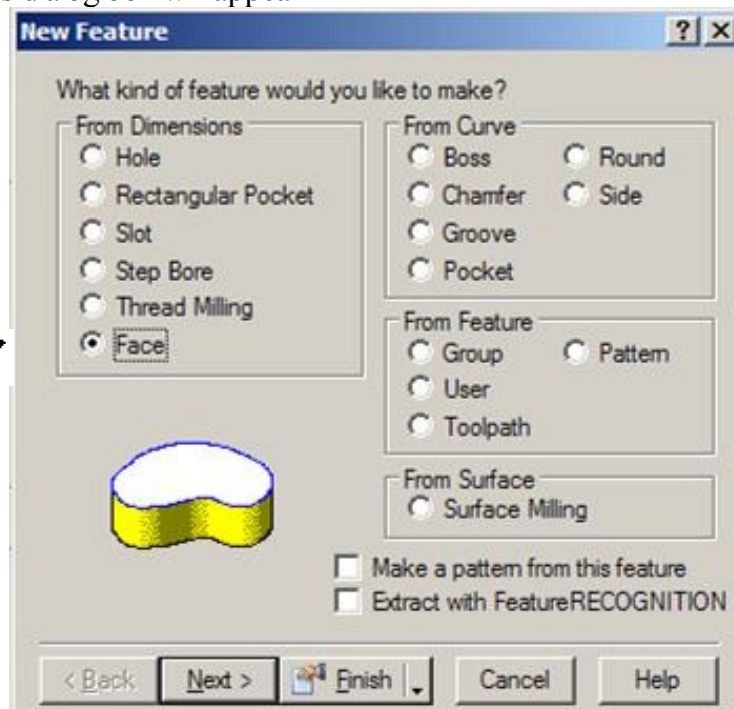
V) Face

a) Curves

- (1) No curves required

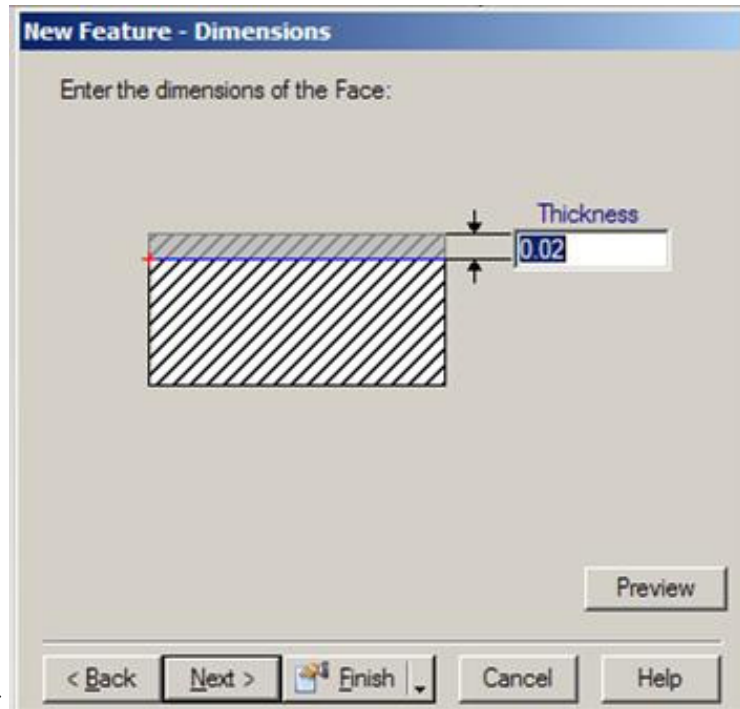
b) Procedure

- (1) Click  on the toolbar
- (2) This dialog box will appear



(i)

- (3) Select the correct options (the arrows)
- (4) Click next twice (2)



- (5) This dialog box will appear:
- (6) Enter how deep you want the face to be
- (7) Click finish