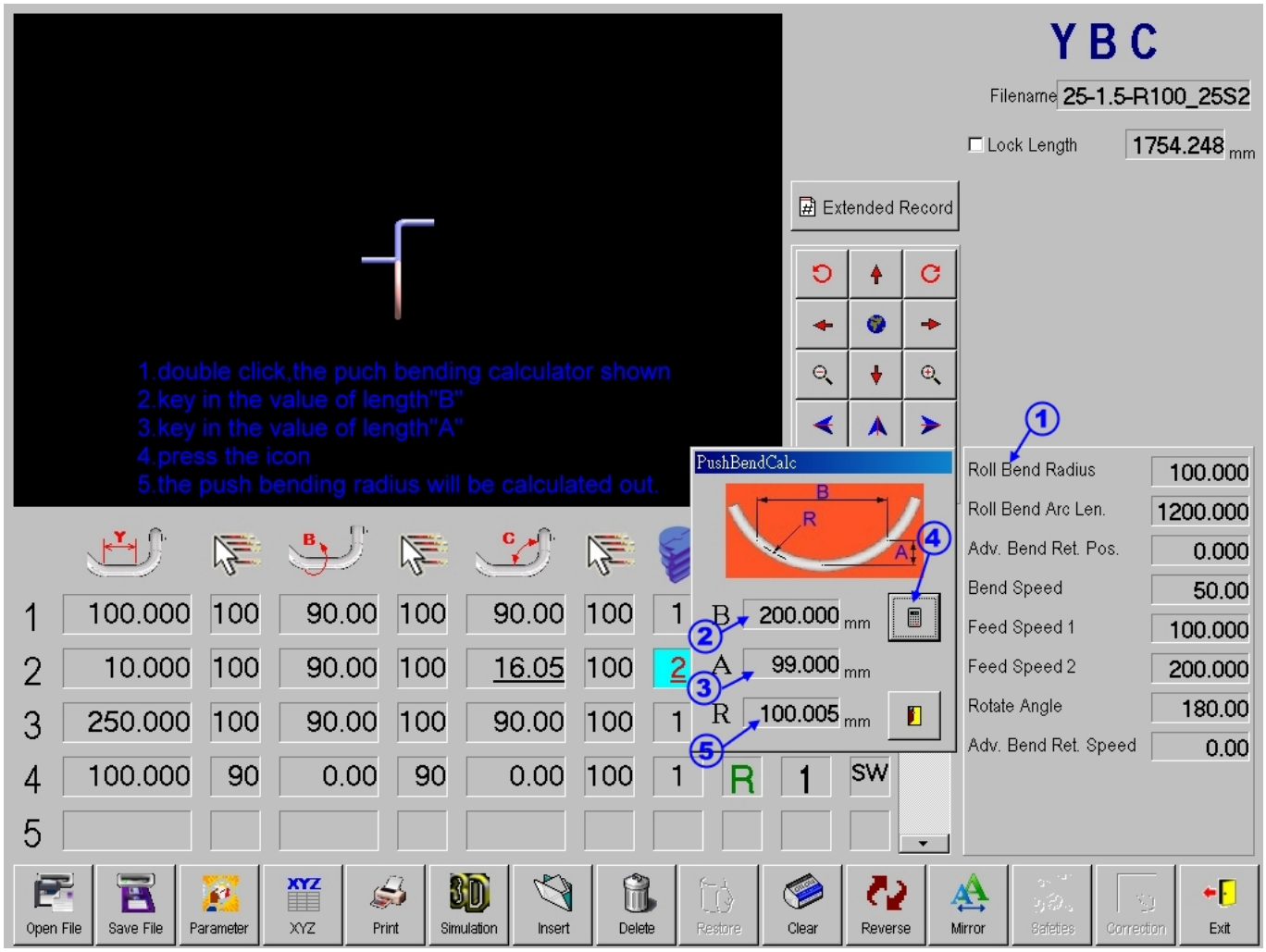
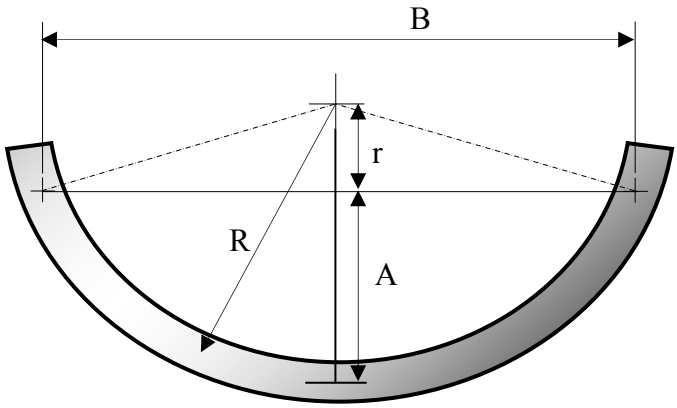


Theoretical push bending radius formula



$R = r + A$

$R^2 = r^2 + (B/2)^2$

$R^2 = (R - A)^2 + (B/2)^2$

$R^2 = R^2 - 2RA + A^2 + (B/2)^2$

$R = [\, A^2 + (B/2)^2 \,] / 2A$

Example:

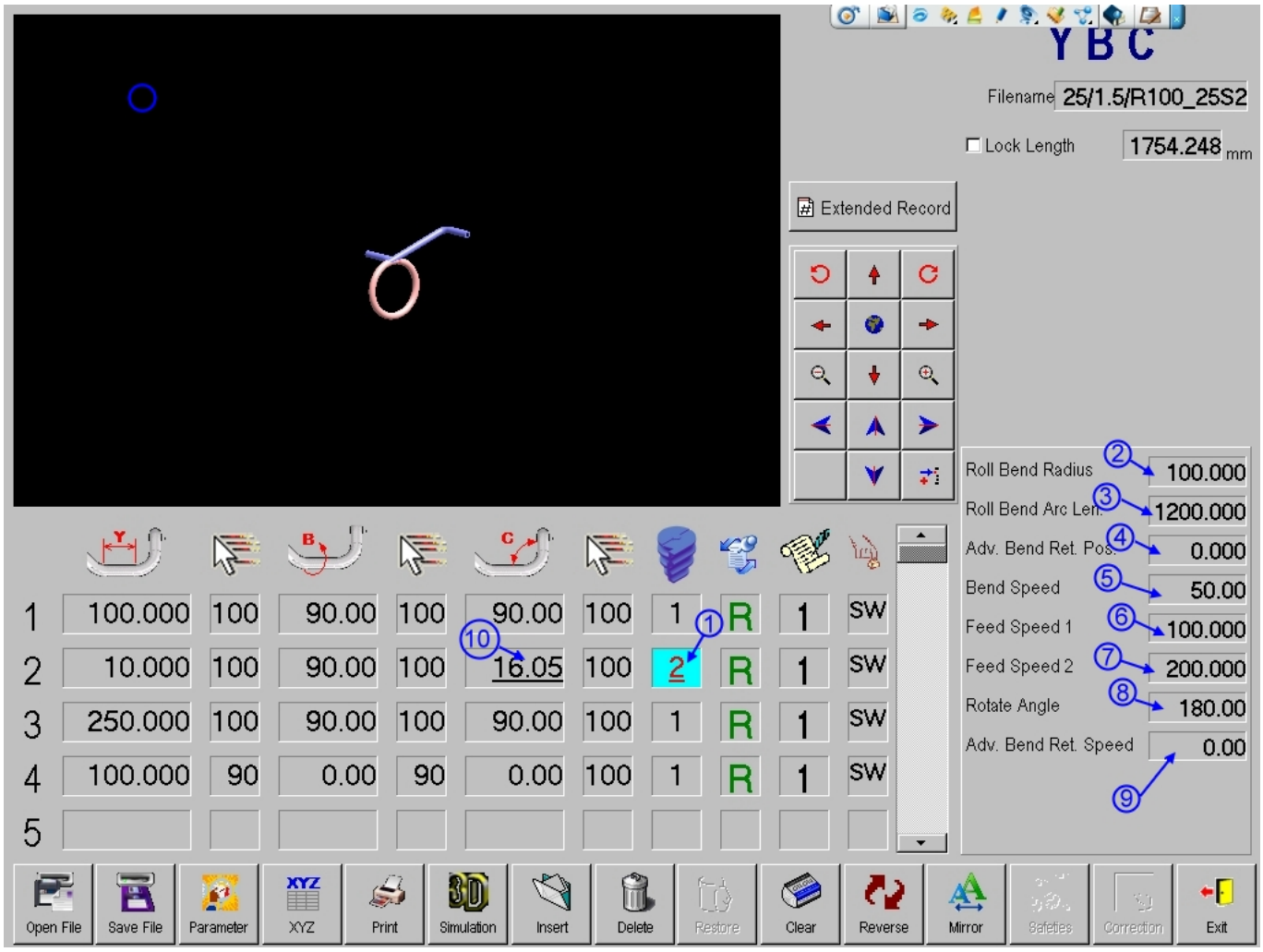
B = 200mm

A = 99mm

$R = [\, 99^2 + (200/2)^2 \,] / 2 \times 99$

= 100.005 mm

This calculating function is for no radius on drawing or unknown, we can trial to find the radius value through the measurement on the tube sample.

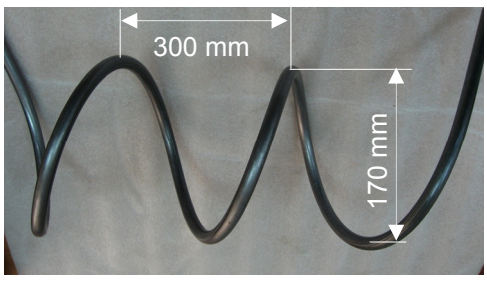


1. Double click the icon, the sub-window will be shown at the right side.
2. Roll Bend Radius (**R_P**) : push bending radius according to the dimension on the drawing or calculating value from the push bend calculator. .
3. Roll Bend Arc Len. (**S_P**) : push bending arc length, if the application is to push bend a circle or spiral. The length is a circumference or total circumference of the spiral.
4. Adv. Bend Ret. Pos. :
5. Bend Speed (**S_B**) : bending arm turning speed.
6. Feed Speed 1 (**S_{F1}**) : first stage push bending speed
7. Feed Speed 2 (**S_{F2}**) : second stage push bending speed
8. Rotate Angle (**A_R**) : the tube rotate from 0° to the setting angle in the push bending process.

Spiral Rate (S_R) = A_R / S_P

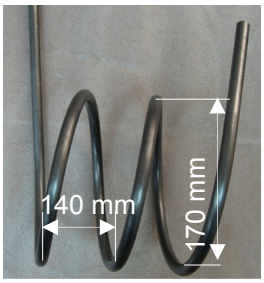
Example: A_R = 300°, S_P = 1500mm

Spiral Rate (S_R) = 0.2°/mm



A_R = 150°, S_P = 1500mm

Spiral Rate (S_R) = 0.1°/mm



That means push the tube forward 1 mm, the tube will be turn 0.1°

9. Adv. Bend Ret. Speed :
10. Bend Angle (**A_B**) : it will be automatically calculated and shown on the column field as the above picture when key in the push bending radius. The bend arm will turn to the value when start the push bending function.