

# Instructions for Model TB80 - TB100 - TB130 Top Bender®

## Automatic Mode - multiple bend program

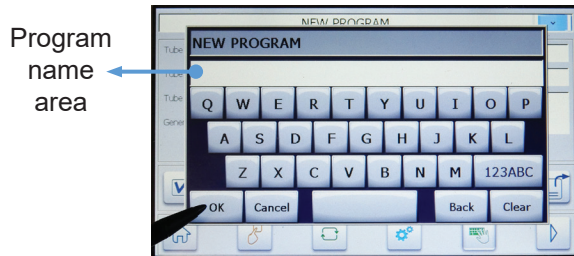
**WARNING!** Thoroughly read operators manual before attempting to operate machine  
 (Machine must be connected to correct power source before switching power on! **DO NOT USE** extension cord.)

Create a new program with multiple bends programmed.

1. Press programming icon from Home Screen

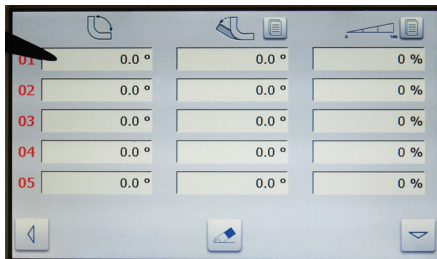


2. Enter program name from alpha keyboard, press OK.

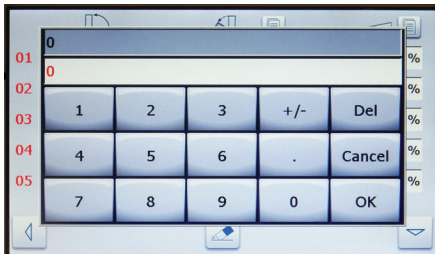


3. Press right arrow to access Data Input Area.

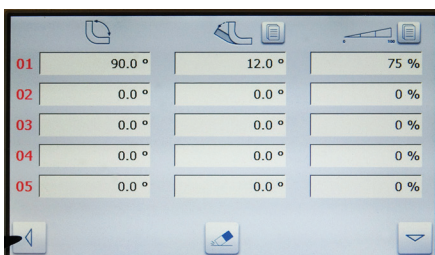
Select desired bending steps 1-30:



4. Enter desired bend angle, springback and speed setting to complete each line and select OK to enter.

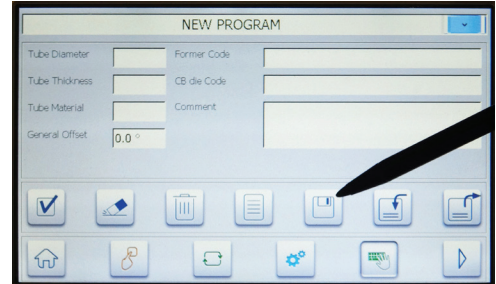


5. Bending info entered for one bend:

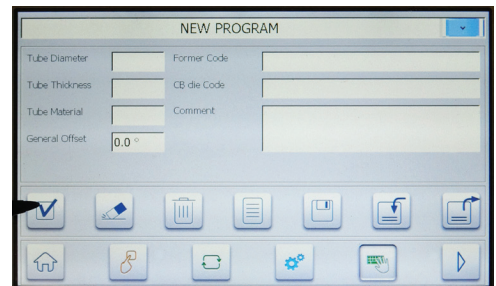


6. Press left arrow to return to programming page.

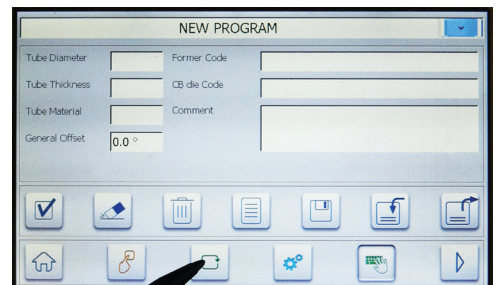
Press File Save icon to save changes.



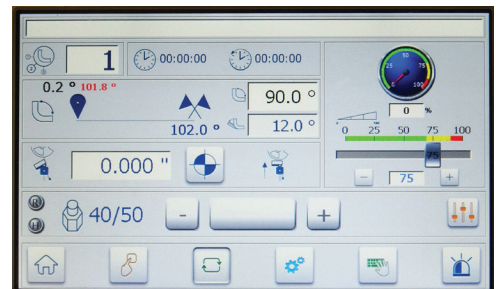
7. Press check mark to activate selected program:



8. Press Automatic icon:



9. Operation screen will appear:



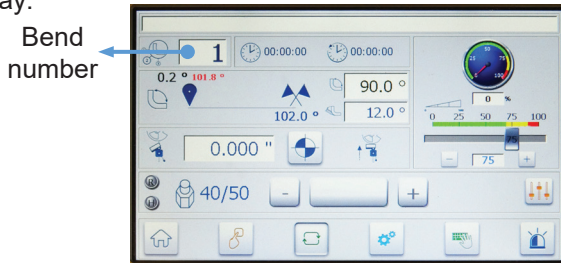
(Continued on back.)



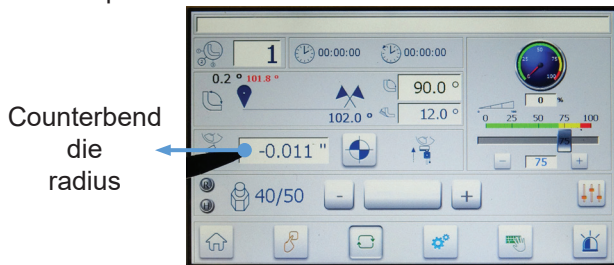
Setting Springback Value

(Continued from front)

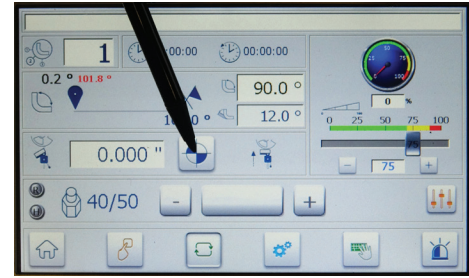
10. Bend number one (1) should appear in upper left of display:







11. If counterbend die radius is not set to zero, machine will not operate.



12. Press CB Reset icon to reset:



13. Press and hold Bend pedal  or  icon to initiate the bend.

When bend is complete press and hold Return pedal  or  icon to return former to zero and start the next bend.

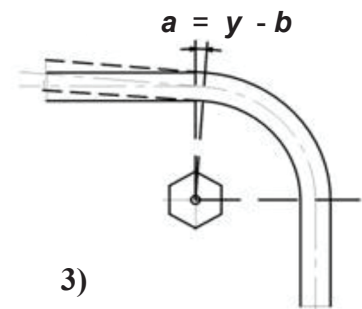
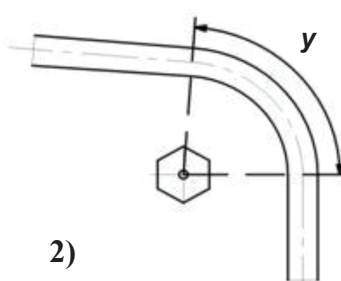
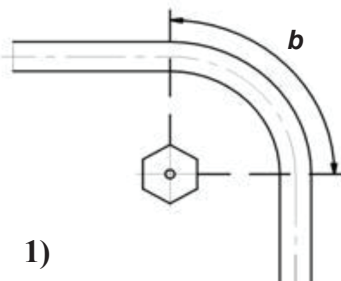
## Setting Springback Value

### Understanding springback

- Desired angle **b** represents value in degrees to be obtained after bending.
- Springback angle **a** represents angle in opposite direction of bend in which material returns after being released from the tools.
- The **y** angle that represents movement of "C"-axis

Springback angle is difference in degrees between desired bending angle **b** and bending angle **y** obtained without considering the elasticity of processed material  $a = y - b$

To obtain desired angle total bend rotation of "C"-axis equals  $y = a + b$ .



Use goniometer and measure angle obtained after test bend to determine value of springback return. The difference must be entered in springback return field.

Note: Angle measured with goniometer will be different from rotation value of the "C"-axis because of material elasticity. Make multiple bends and measure angle of each to determine actual springback return angle required.

Note: Rotation angle of "C"-axis cannot exceed 210°. If value entered in springback return field exceeds 210° the angle field will be automatically reduced to maintain limit.

By setting **b** = 200, if you enter **a** = 20 and therefore  $a + b = 220$ , the system automatically reduces the value of **b** and sets it equal to 190°

Note: entering a value between 0% and 10% in the Speed field, the machine will always move at a minimum speed of 10% while displaying the entered value.



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Programming a Bend Angle