

Magnetic Brake

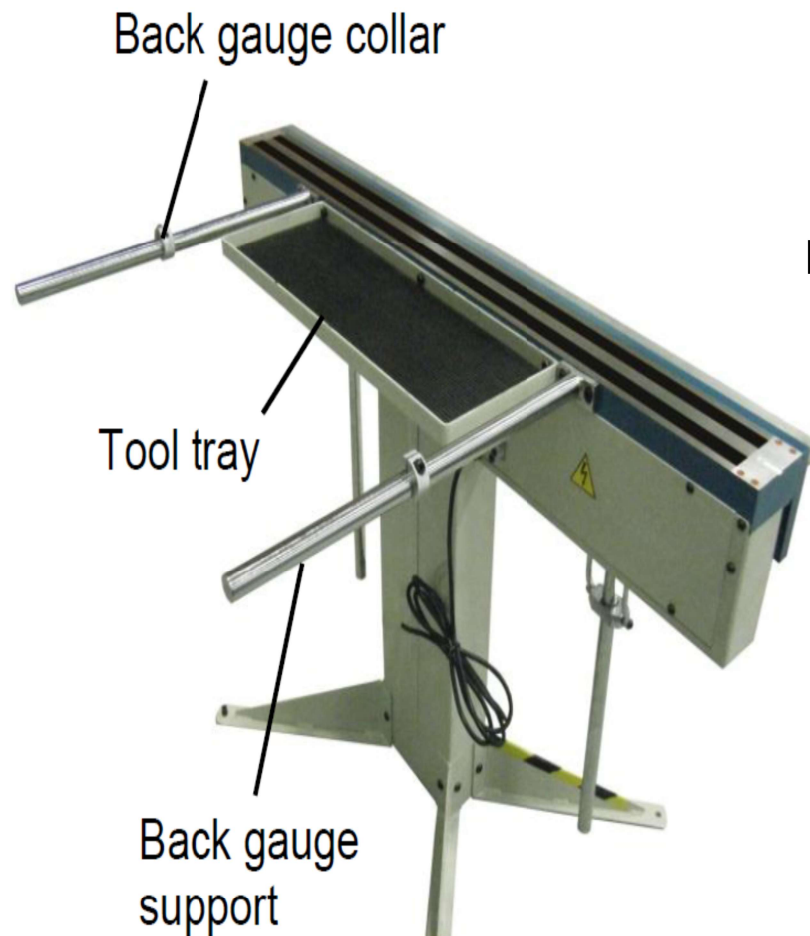
- There are some items that you need to know about the brake.

The brake has a clamping force of 6 tons. There are a couple stages of the clamping, when you first press on the clamp, it applies a smaller clamping pressure. Once you pick up on the handles to bend the material, the full force of the clamp is applied.

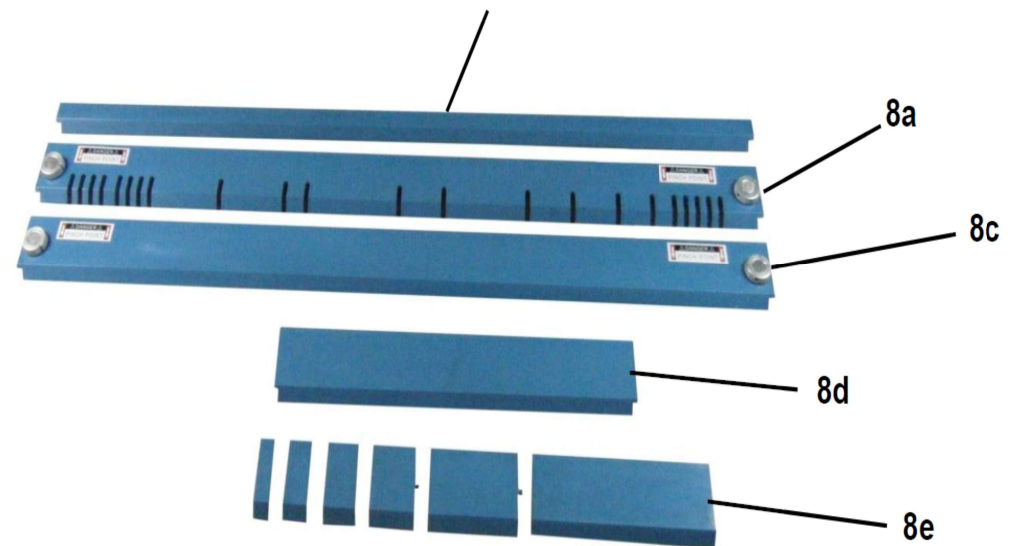
You need to watch your fingers.

With the machine on, to start the clamping pressure you will need to use the foot switch or press either of the start buttons. When you are finished with that break then you will press the stop button for several seconds. This will put a back emf through the magnets to release. Do not exceed the duty cycle on the brake, which is 30%.





Below you have you various factory clamp bars



► Below is the close up of the control panel & what the various buttons do.

4. Press the RED power rocker switch to turn on the machine.
5. Position the piece part under the clamp bar. Use the backstop if needed.
6. To apply the pre-clamping force, step down on the footswitch or press either of the GREEN start switches. (See fig. 8 below) Now that the piece part is held in place, pull up on the bending leaf handles. This will activate the micro-switch which tells the electro-magnet to apply full clamping force. Continue pulling up on the handles until the desired bend angle is made.

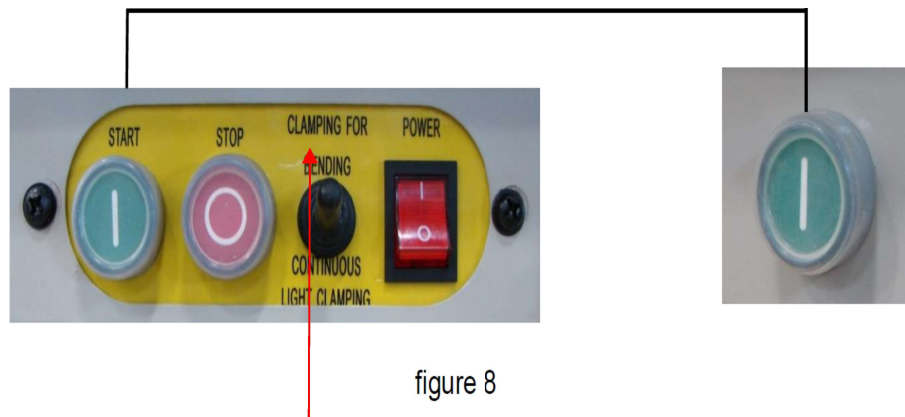


figure 8

Press red stop button for several seconds to DE-magnetize, To remove the clamp bar & material.

This is your angle locking collar, you set your angle to the top of the collar.

7. The left handle has a leaf angle indicator that is shown in (fig. 9). To allow for springback of the material, bend a few degrees more than the required angle. Read the section Understanding springback. There is also a locking collar on the indicating shaft which can be set and locked to duplicate multiple bends.
8. After the bend is made, lower the bending leaf.
9. Press and HOLD IN the RED stop button (fig. 10) until the clamping bar releases. Release the red button.



Important: Each time the machine switches OFF, a short pulse of reverse current is sent through the electromagnet to demagnetize it as well as the piece part. Holding the red stop button for 2-3 full seconds help collapse the magnetic field.



figure 9

10. Reposition the piece part for the next bend and repeat steps 4 thru 7.
11. For thicker gauge materials set the toggle switch in (fig. 10) to the CLAMPING FOR BENDING position. When bending very thin materials set the toggle switch to CONTINUOUS LIGHT CLAMPING.



Set your materials into the brake, you will need to put your setback as needed for the material thickness or how crisp you would like your bend. On two of the factory clamp bars, there are ball springs to adjust the setback. If you are bending a short piece then you will need to place a similar thickness behind to make an even bend.



IMPORTANT: DO NOT run the magnetic brake without material between the clamping bar and the electromagnetic work bench. After releasing the electromagnet, residual magnetism could still hold down the clamp bar.

Sheet Metal Bending

1. If you are using the clamp bars with the lifting balls, make sure they are both properly seated in the pockets of the workbench. (fig. 6)
2. Remove or install the bending leaf extension as needed for the material to be formed. See specification page.



Note: Typically for mild steel, 16ga., extension OFF. 18ga. extension On or Off, 20ga. and thinner, extension On. When forming around round stock as in Rolling and Edge, the extension bar is typically installed. The bending leaf extension is shown installed.

3. Set the machine for the material thickness you will be bending. Raise the bending leaf 90° as shown in (fig. 7). Rotate the knobs on each end of the clamping bar which adjusts the setback distance gap. Set this gap at slightly more than the material thickness to achieve an accurate bend. There are three positions on the knobs (0 – 1 – 2) which are useful when doing repeat bending.

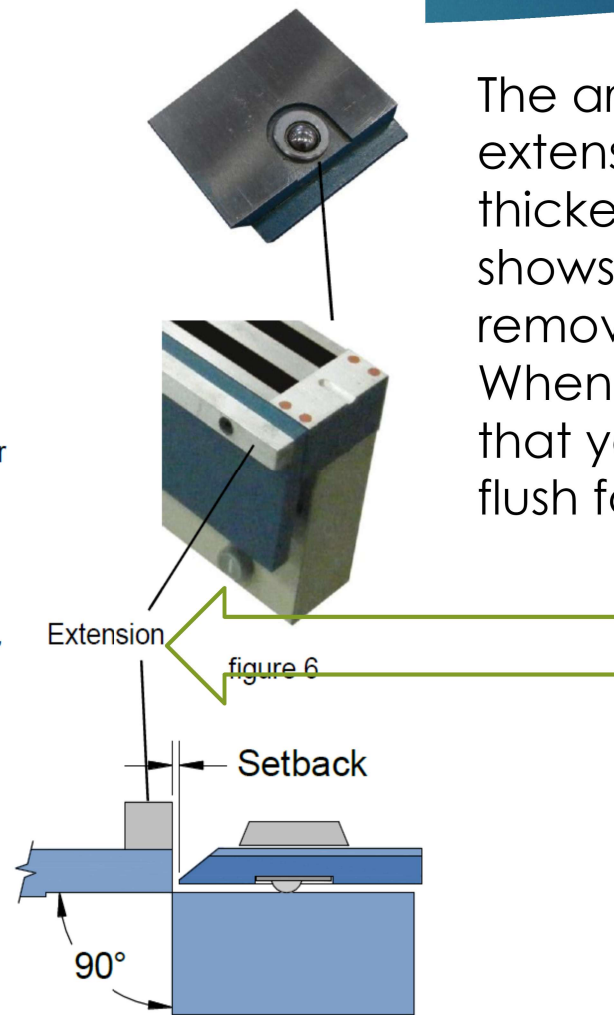


figure 7

The arrow below points to the extension. If you are bending thicker materials than what it shows you will need to remove the extension bar. When putting back, be sure that you get is completely flush for the next user.