6.5.3.2 Operating modes of the machine

Set bending angle and bending width using digital controller. How to make these settings are explained below.
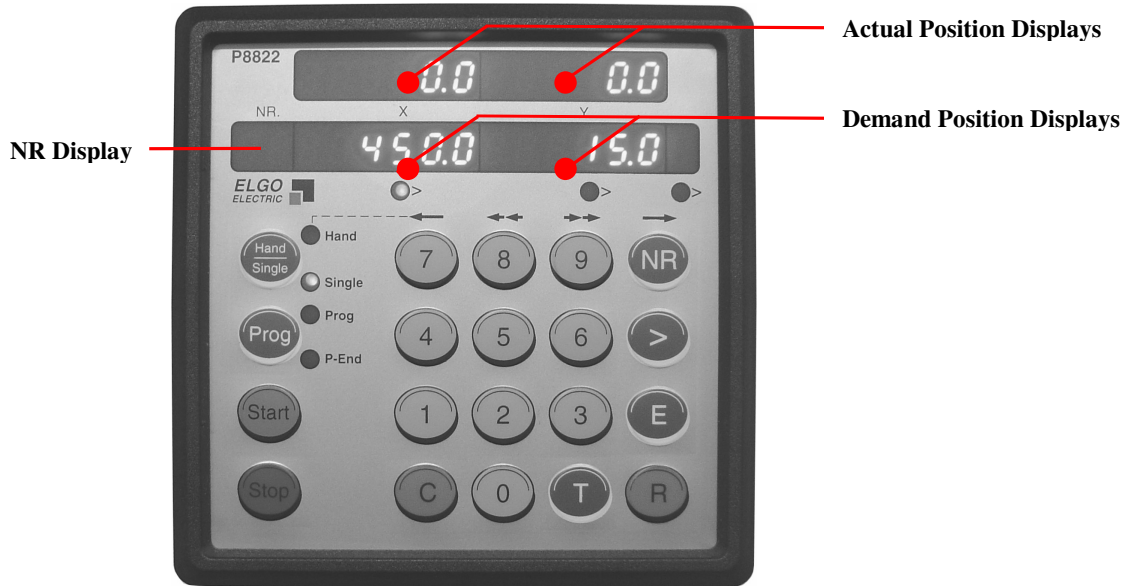
Figure 6.5.3.6

| Key	Function
Actual Position Displays	Shows current X and Y axes value.
Demand Position Displays	X and Y axes entries
NR Display	Shows NR value
Hand-Single	Hand or Single mode selection key
Prog	Program mode selection key
Start	It executes X and Y axes according to values entered
Stop	Stops execution
NR	Steps the program through, line by line
>	Steps through field by field (rolls over from line to line as well) Single Selects single run mode
E	Ends programming (cursor light must be in "last" window)
C	Cancels existing value
T	Resets the program to beginning
R	Selects Registers

P8822 digital controller has 3 working modes.
1- Manual mode
2- Single mode
3- Program mode

These modes are explained in details below.

1. Manual Mode

This mode is used for adjustment process. You can determine angle values according to the tool you are using and also move the backgauge for adjustment applications. To work with manual mode;

1. Press Hand/Single key two times **(See Figure 6.5.3.7)** on the P8822. The small led on the controller (Hand led) will light up. Thus you will switch to manual mode.

Figure 6.5.3.7	**Figure 6.5.3.8**

2. Press cursor key **(See Figure 6.5.3.8)** to select the axis in which you make adjustments.

3. Use the numeric keys 7, 8, 9 and NR **(See Figure 6.5.3.9)** to move the axis.

Note: When making the X axis move manually, you must start the main pump.
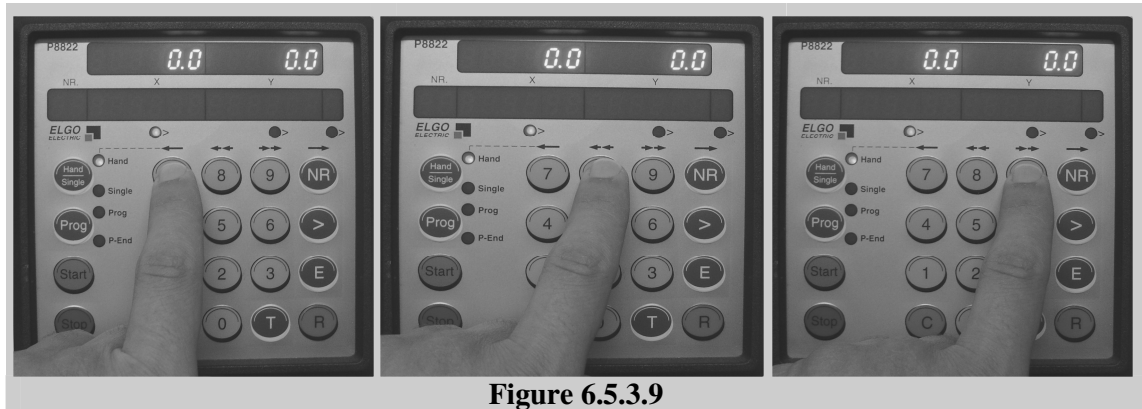
Figure 6.5.3.9

2. Single Mode

When controller is in single mode, you can bend sheet metals by entering bending width value (X value) and bending angle value (Y value). If you want o make another bent, you should enter new X and Y values. To select single mode;

1. Press Hand/Single key once **(See Figure 6.5.3.10)** on the controller. The related led (Single led) will light up.

Figure 6.5.3.10   Figure 6.5.3.11

2. Enter the bending width **(See Figure 6.5.3.11)** in X axis window (X value) using numerical keys.

3. Press cursor key **(See Figure 6.5.3.12)** to select Y axis window (Y value).

4. Enter the bending angle **(See Figure 6.5.3.13)** in Y axis window (Y value) using numerical keys.

Figure 6.5.3.12

Figure 6.5.3.13

5. Press start key on the controller. **(See Figure 6.5.3.14)** Thus the back gauge will move to its final position and the motor with reducer behind the top beam will adjust the angle value.

Figure 6.5.3.14

Note: **Y value is in millimeters. Because of using different types of tools and limitations in Elgo controller, it is impossible to design angle scale in degree. Therefore the user should design a millimeter scale for angle according to different types of tools.**

3. Program mode

When you select the program mode in the controller, you can bend sheet metals according to the program you write before. To work with program, first you should select program mode;

1. Press Prog key on the controller **(See Figure 6.5.3.15)**. The small led (Prog. Led) will light up.A new program can be selected by means of Register R40. The values of digits in register R40 are 0 to 99 i.e. value "0" is the number 1 program.

| Figure 6.5.3.15 | Figure 6.5.3.16 |

2. In this step, you should select program number. To select program number, press R key **(See Figure 6.5.3.16)** on the controller. (If you are editing a program, press T key to resets windows to zero.) NR window begins flashing.

3. Enter 40 **(See Figure 6.5.3.17)** using numerical keys and press Cursor key **(See Figure 6.5.3.18)**.
You will see existing program number in X widow.
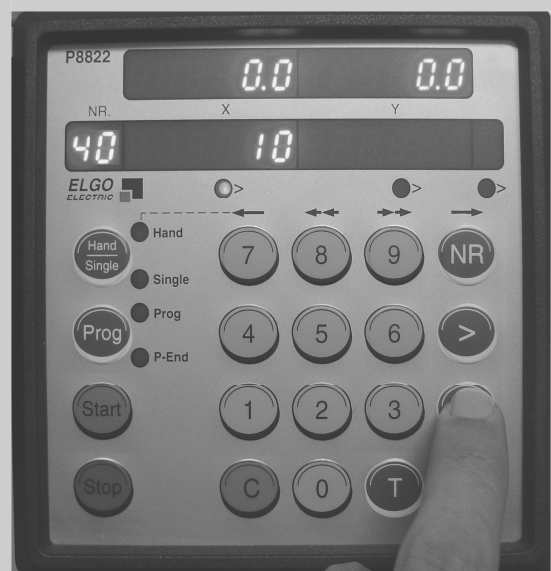
Figure 6.5.3.17   **Figure 6.5.3.18**

4. Enter any program number (up to 99) **(See Figure 6.5.3.19)** for example 1 using numerical keys and press E key **(See Figure 6.5.3.20)**.
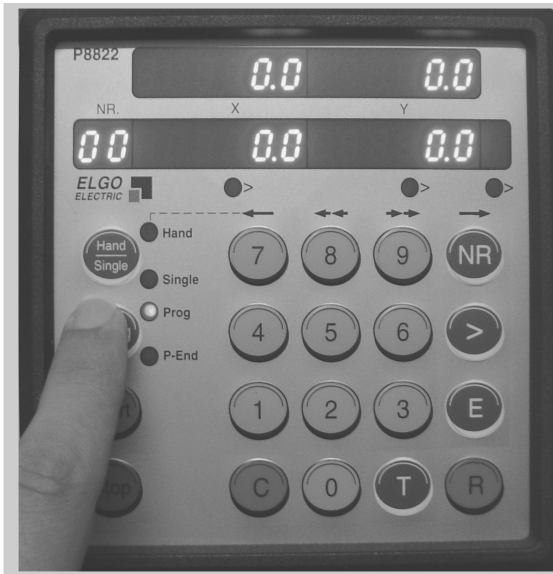

Figure 6.5.3.19   **Figure 6.5.3.20**

5. You will see zero on NR window (now program line number) and X,Y demand value windows **(See Figure 6.5.3.21)**. Now you are ready to write a program. Do not forget that you are writing 10th program in this example.

| **Figure 6.5.3.21** | **Figure 6.5.3.22** |

6. Press NR key on the controller **(See Figure 6.5.3.22)** to select program line. After pressing NR key, NR window will show 01. Now you can edit your program.

7. Enter the bending width **(See Figure 6.5.3.23)** in X axis window (X value) using numerical keys.

8. Press cursor key **(See Figure 6.5.3.24)** to select Y axis window (Y value).

Note: In order to **delete** existing x or y value, pres C key on the controller.

Figure 6.5.3.23

Figure 6.5.3.24

9. Enter the bending angle **(See Figure 6.5.3.25)** in Y axis window (Y value) using numerical keys.

10. Press Cursor key again **(See Figure 6.5.3.26)** to go to the second line in the program. NR window will show 02. Now you are in the second line in your program.

Figure 6.5.3.25

Figure 6.5.3.26

11. Repeat the procedure above to program successive lines. You can program 20 lines in a program as a default.

12. At the end of your program, press E key **(See Figure 6.5.3.27).** You will see zero on NR window (now program line number) and X,Y demand value windows **(See Figure 6.5.3.28)**.

| Figure 6.5.3.27 | Figure 6.5.3.28 |

4. Editing a program

1. In order to make any changes in a existing program, press Prog key on the controller (If you are already in program mode, press T key to set all windows to zero). All windows will show zero **(See Figure 6.5.3.29)**.
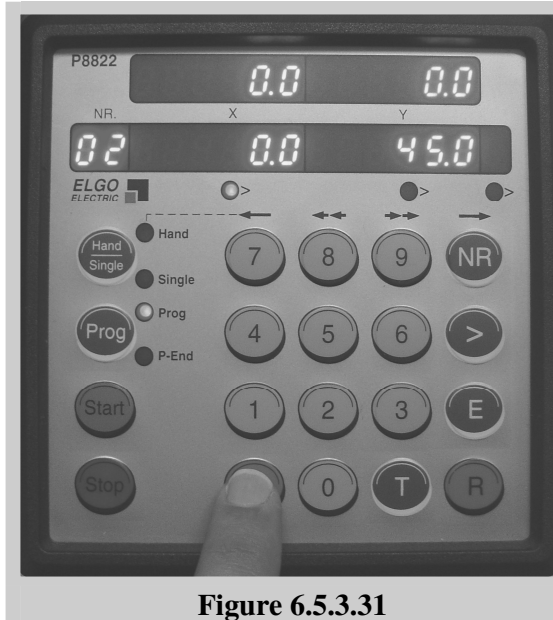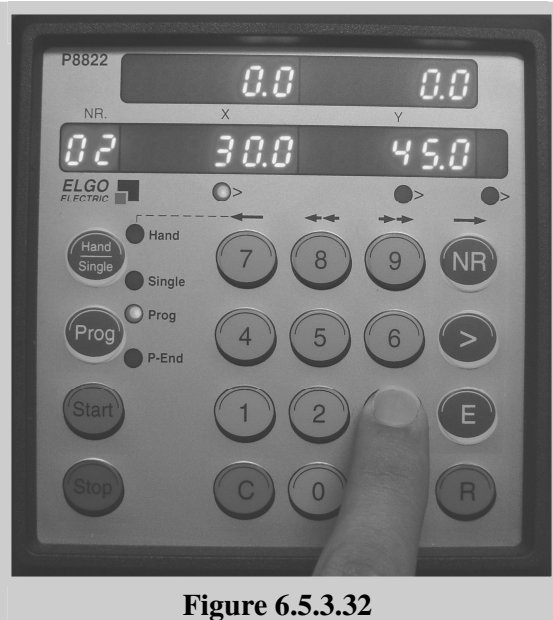

| Figure 6.5.3.29 | Figure 6.5.3.30 |

2. By pressing NR key sequentially, select the program line you want to change **(See Figure 6.5.3.30)**.

| Figure 6.5.3.31 | Figure 6.5.3.32 |

3. Press cursor key to select axis value you want to change**.** If you want to change X axis value do not need to press cursor key.
4. Press **C** key to delete existing value **(See Figure 6.5.3.31)**. Write new value and press cursor key. The changes you have made will be saved to memory after pressing Cursor key. Press T key to the beginning of the program **(See Figure 6.5.3.32)**
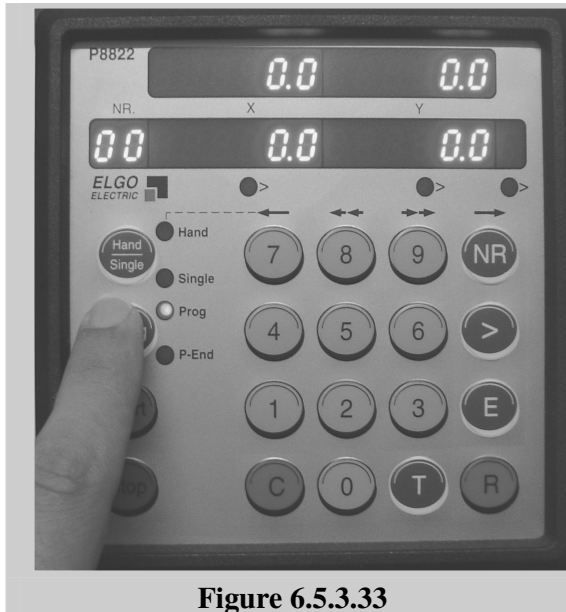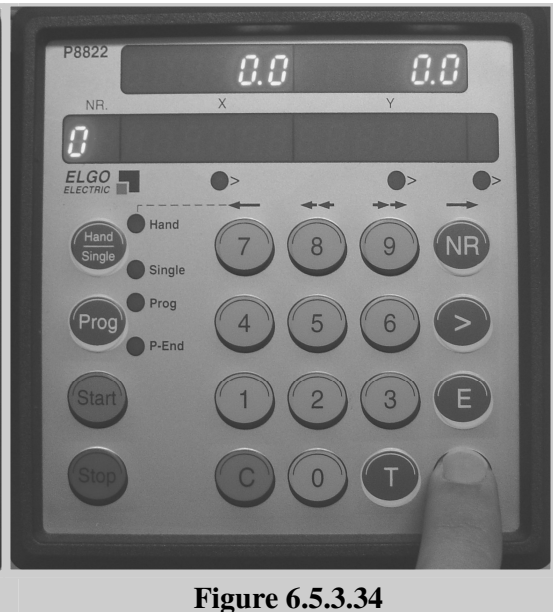

| Figure 6.5.3.31 | Figure 6.5.3.32 |

5. Working with programs

1. If you write programs before (up to 99), first you select the program you want to run (execute). Press Prog. Key **(See Figure 6.5.3.33)** and then press R key **(See Figure 6.5.3.34)**

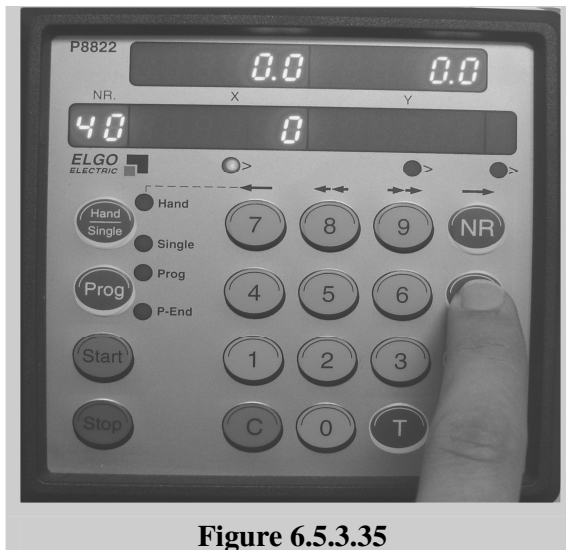**2.** Write 40 by using numerical keys in NR window.
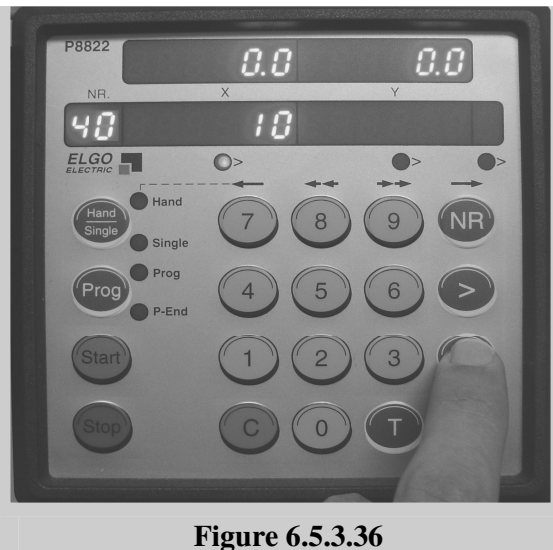

| Figure 6.5.3.33 | Figure 6.5.3.34 |

3. Press Cursor key **(See Figure 6.5.3.35)**. Now you are ready to select the program. 0 shows program 1. Write the program number you have created before.

4. Press E key **(See Figure 6.5.3.36)**. Now you should see the beginning of your program. NR will show the line number of your program.
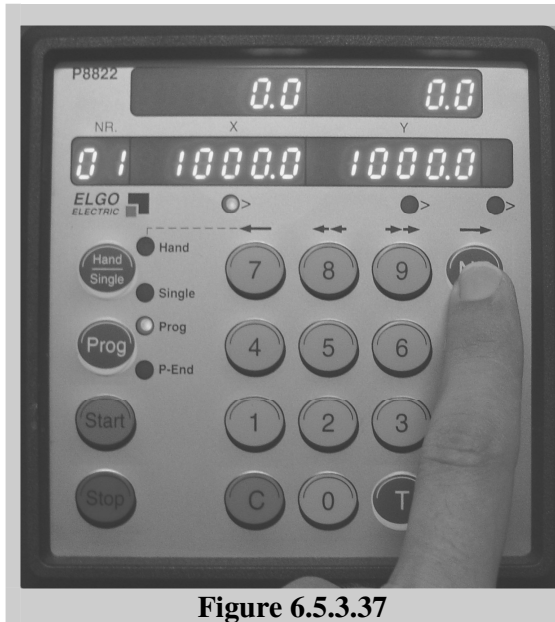

| Figure 6.5.3.35 | Figure 6.5.3.36 |

5. Press **NR** key to select the beginning line you start to execute **(See Figure 6.5.3.37)**.

6. Press **Start** key on the controller **(See Figure 6.5.3.38)**. The controller will sets the backgauge and angle.
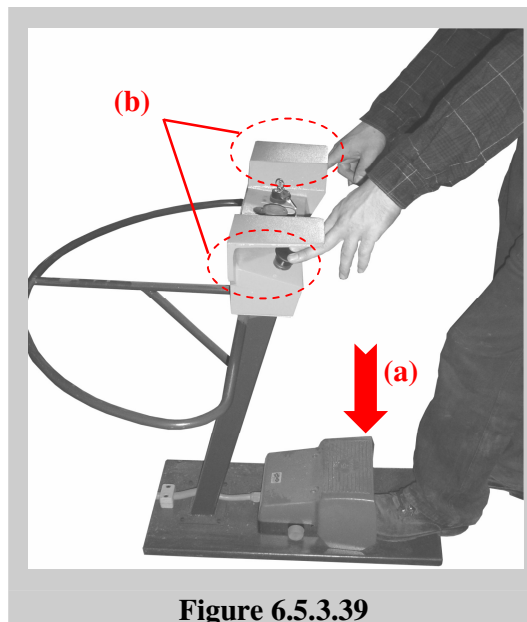

| Figure 6.5.3.37 | Figure 6.5.3.38 |

7. Keep the left foot switch pressed on the pedal control **(See Figure 6.5.3.39.a)**. (If you use two hand mode, keep the two-hand buttons pressed. **(See Figure 6.5.3.39.b)**.) The top beam will travel down and **stop at mute point.**

Figure 6.5.3.39