

HPK NC Controller User Manual



HPK - NC - 3X – CMT 3072 XH SERİSİ

2 – TECHNICAL FEATURES : CMT 3072 XH

Specifications

Construction: plastic molding housing
Display: 7" 65,536 color TFT LCD
CPU and core logic: 32Bit RISC 400MHz processor
DRAM: 64 MB DDR2 on board
Storage: 128 MB flash memory on board,
I/O: 3 serial ports:Com1: RS-232/RS-485 2w/4w,
Com2: RS-232,
Com3: RS-232/RS-485 2w
1 USB 1.1 host
1 USB 2.0 high speed device
RTC: Built-in
Power input: 24±20%VDC,250mA@24VDC
Dimension (W x H x D): 200 x 146 x 42.5mm
Weight: 0.85kg
Software: EB8000 V2.0.0 or later

LCD Display

Display type TFT LCD
Display size (diagonal) 7"
Max colors 65536
Resolution 800 x 480
Pixel pitch (HxV, mm) 0.1905 x 0.0635
Viewing angle (°) 70/50/70/70(T/B/R/L)
Luminance (cd/m2) 300
Backlight LED
Backlight Life time 30,000 hrs.
Contrast ratio 500:1

Touchscreen

Type: 4-wire, analog resistive
Resolution: continuous
Light transmission: above 80%
Life: 1 million activation minimum

Environmental Specifications

Operating temperature: 0° ~ 45°C (32° ~ 113°F)
Storage temperature: -20° ~ 60°C (-4° ~ 140°F)
Relative humidity: 10% ~ 90% @ 40°C, non-condensing
Shock (operation): 10 to 25Hz(X,Y,Z direction 2G 30minutes)
CE/FCC <input type="checkbox"/> Complies with EN 55022:2006,Class A
EN 61000-3-2:2006
EN 61000-3-3:1995+A1:2001+A2:2005
Front panel meets NEMA4 / IP65

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4 – MAIN PAGE :



NC Unit provides you to control an axis on manuel,automatic and semi automatic mode Axis can be moved by control buttons .NC Unit has 500 program storage capacity and 200 line can be saved on each program and program storage may improved up to 10.000 program with USB flas memory disc .If you press the company logo at the middle of main page screen settings and company contact informations comes up and if you press onto screen then you transferred to main page again

*** AXIS :

Axis defined with the view from drop end side

X AXIS : Left and right rotation of the top roll

Y AXIS : Up and Down movement of the left roll

Z AXIS : Up and Down movement of the right roll

Nc Unit has 7 different working mode and you will find the definitions of these modes below ..

*** 05) USER

*** 06) MANUEL

*** 07) SEMI AUTOMATIC

*** 08) PARAMETER

*** 09) PROGRAM

*** 10) TEACHING

*** 11) AUTOMATIC

5 - USER :

There are occasions that you dont need to use passwords whilst using the machines but sometimes password and user informations are obliged to enter so its been explained below how to choose user ,how to enter password and other notices and advices.

It has to be said that in order to operate the machine off any problems and allow it to perform with convenient parameters any staff must use the machine other than the authorized operator using the correct passwords and use codes



Below screen appears once you press USER button on the main page ..On this screen PASSWORD and USER options can be seen separately



5 – 1 – Operations without password :

Below operations can be done without a password and user code :

- *All movement on **MANUEL** Mode.
- * All movement on **SEMI AUTOMATIC** Mode.
- ***Reset X** (Reseting Rotation Axis)
- *Getting to **AUTOMATIC** page ,calling a program and running this called program
- *Getting to **PROGRAM** page and viewing program list.
- * **Getting to PROGRAM** page and to view programs with **ADJUST**

*All other operations apart from aboves requires to choose **USER** and to enter correct pasword. **USER** and **PASSWORD** which has 3 level has been defined below*

5 – 2 - 1. Level:

USER : OPERATOR (PROGRAMMING)

PASSWORD : 1111

This password allows on level 1 operator mode ;

- *All operations which can be executed without any*
- *REFERENCING all axis .*
- *Limit ON / OFF settings.*
- *All operations on TEACHING page. (Program recording etc.)*
- * All operations on PROGRAM page. (List, adjust, delete, write a new program, copy)*
- *Getting to the ALARM page throught PARAMETER page and only viewing the contents*

As described above if USER button is touched on MAIN PAGE below screen where user is chosen and password is entered will appear



Selecting the User :



;Touch to red button underneath the half human figure or to black arrow



***OPERATOR (PROGRAMING)**
***ADMIN (PARAMETRE)**
***ADMIN (EXPERT)**

Options will come up. Once you press OPERATOR (Programing) line means you select OPERATOR (Programing)



Operator (programming will appear inside the red window)

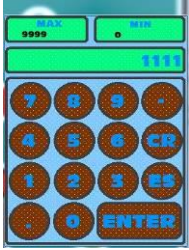
Entering Password :

After OPERATOR (PROGRAMING) is selected and to enter its password “ 1111 “;





Once you touch to star inside red button below numeric buttons will show up



Enter the password “1111” on the keyboard and then touch ENTER



Now there will be 4 star inside the red box.



If correct password is entered then touch that button



If correct password is entered OPERATOR(PROGRAMING) message comes up and password setting is completed

Screen will appear as below when password setting is completed



If false password entered WRONG PASSWORD message will appear



If you press next button you will be transfered from USER page to MAIN PAGE.

5 – 2 - 2. LEVEL :

USER : ADMIN (PARAMETRE)

PASSWORD : 1953

This password allows you to ;

**Use all the options that can be done on OPERATOR (PROGRAMING)*

**Altering AXIS SETTINGS on PARAMETER adjustment*

**All options on OTHER SETTINGS except CALIBRATION*

5 – 2 - 3.Level :

USER: ADMIN (EXPERT)

PASSWORD : 2013

This password is allows you ;

**All operation on ADMIN (PARAMETER)*

**CALIBRATION settings on OTHER ADJUSMENT.*

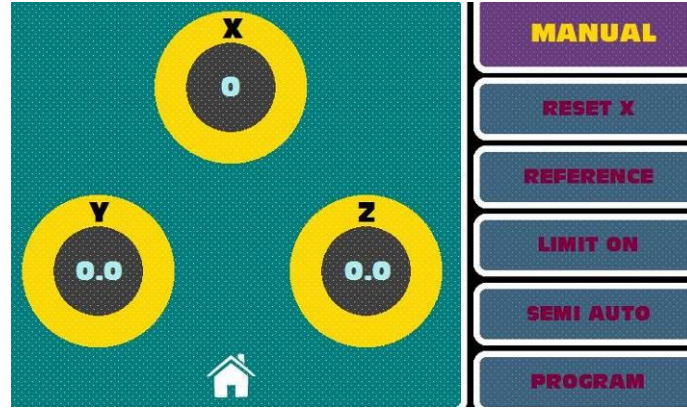
**Returning to FACTORY SETTINGS*

MACHINERYHOUSE

6 – MANUAL OPERATION:



Once you touch **MANUAL** button on the **MAIN PAGE** below screen will appear



On Manual mode axis can be moved manually with the buttons and animation of the movements can be seen on the screen ,roll directions , encoder reading directions can be checked

Manual sheet rolling operation is able to be executed easily on the machine with the up and down buttons on the control panel Y left roll –Z right roll and X top roll
Here below a sample control panel can be seen

Also on this manual model :

- 6 – 1 *** RESET X**
- 6 – 2 *** REFERENCE**
- 6 – 3 *** LIMIT ON / OFF**

Operations can be done. And also provides you to pass on to the other pages seen below.

SEMI AUTOMATIC : You can bypass the system to automatic mode with this button.
 You can find elaborate description on Automatic Mode

PROGRAM : You can bypass the system to program mode with this button
 You can find elaborate description on Program Mode



MAIN PAGE : You can bypass the system to main page with this button

6 – 1 * RESET X :**

This buttons resets X(Rotation) axis to 0..Button has to be touched for 1 second to set X to 0
 If we assume **X (Rotation)** axis value is **500** so as to set it to 0 Reset X button has to be touched around 1 second then axis value will be 0 .



6 – 2 * REFERENCE :**

User code and password required for REFERENCE mode and how to get to it was explained previously .



When REFERENCE button is touched on Manual Page then reference screen will show up. There are 2 ways to reference from this page. **First One;** is to set all the references together so as to do that REFERENCE ALL Button which is on the right side of the screen has to be touched but before you touch this button



REFERENCE ALL

Lower down Left (Y) , right (Z) pistons. (Y axis as sample : Y axis (left roll) lowered all the way down to the bottom with manuel up & down buttons . Motor side and drop end side of the roll has to be lowered all the way down too so in order to do that conic +/- button should be used as well. Motor side of the roll should be rised up a little bit with conic + button then with manuel down button it has to be lowered down and again conic – button all the way down. Main purpose is to do that is to make sure two side of the roll are positioned at the bottom point.. Limit has to be off during this time nevertless when referencing operation is bending done limit turns to off position automatically

Following these steps all axis lowered down to bottom position and once it is sure that all axis are referenced;

RESET ALL button is touched for 1 sec so REFERENCE values are assigned for all the axis. In order to delete red **RESET** warnings it s necessary to go to MANUAL page by touching MANUAL button . Axis reference values comes up to the screen as axis reference values

These reference values are the ones that was measured previously and entered to the parameters and will be explained on machine parameters AXIS VALUES section.

Here below its been explained as sample for Y axis



Shows the Reference value of Y axis. Its been seen that active reference value is 234.4 when REFERENCE is done .Reference value which will be active when Y axis is lowered down can be seen on this parameter .

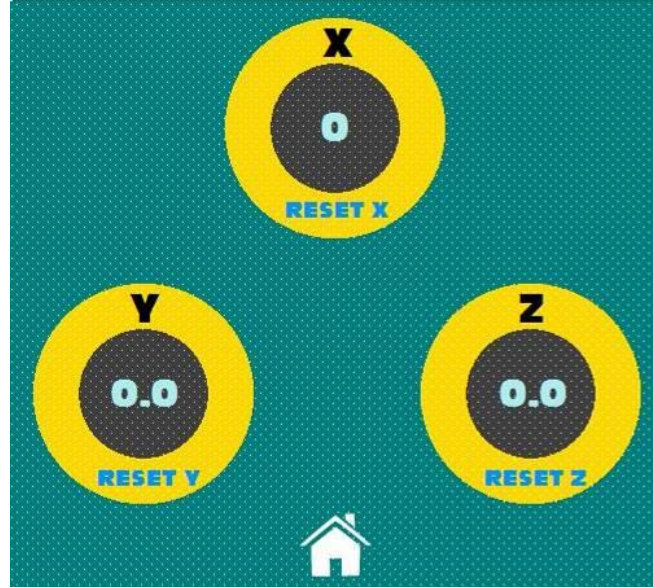


This reference value is entered to the parameter page after distance is measured while Y axis is at top position and touches to the top roll. Each time REFERENCE is done Y axis value is assigned like this automatically..

RESET ALL button is touched for all the axis (Y – Z – X). There is no need to press this button unless all axis references will be set.. Referencing of axis should be done when it is necessary

After REFERENCE operation RESET lettering will be delete if MANUAL button is touched

Second is to **REFERENCE** all the axis individually . RESET button should be touched for 1 sec for the axis that is desired to be reset so only this axis reference value will be active



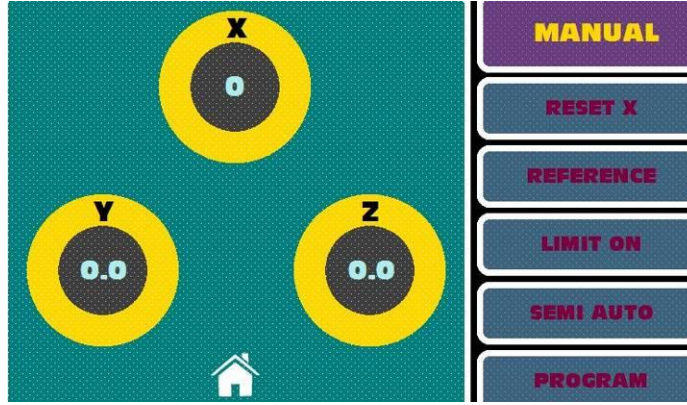
**TOUCH TO AXIS
DURING 1 SEC. FOR REFERENCING**

(**Y – Z**) Related axis must be brought up to required position.if it will be referenced at different position which is a special situation ,it should be brought up to desired position and RESET Y button is to be touched 1 sec..As mentioned above REFERENCE must be done correctly and when its necessary

Once **REFERENCE** button is touched **LIMIT** will be **OFF** automatically

6 – 3 ***LIMIT ON /OFF:

‘’ Required user code and password and how to set limit explained previously. If LIMIT ON button is touched 1 sec then limit will be OFF..But this has to be done when its necessary.Reason is to set limit on or off can be explained as below



LIMIT ON

ON :After machine setting is done limit must be set to ON position that allows you to work between min and max values. Axis can be moved up and down between these values .Let say machine limits min 0 and max 240 mm so whilst machine working on manual or semi automatic mode axis travels between these values when it reaches up to 240 mm axis movement stops so machine is not under pressure this is same for min 0 as well...Thats why machine limit has to be set to ON position

LIMIT OFF

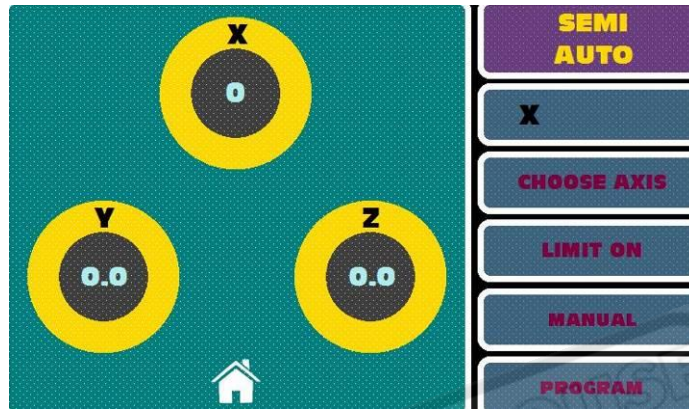
PASİF : Machine is under pressure .NC is not set to LIMIT OFF position unless its necessary because on min and max values machine doesnt stop so over these limits machine will be under pressure that will cause several problems.It should be turned OFF when axis will be set to 0 . Axis will move out of min and max values . For example max value is 240 mm but when axis reaches up to 240 mm it will not stop and when you press down button it will keep moving down as a result machine doesnt stops on min and max position so if there is not any other situtation machine limit turns ON position

7 – SEMI AUTOMATIC MODE :



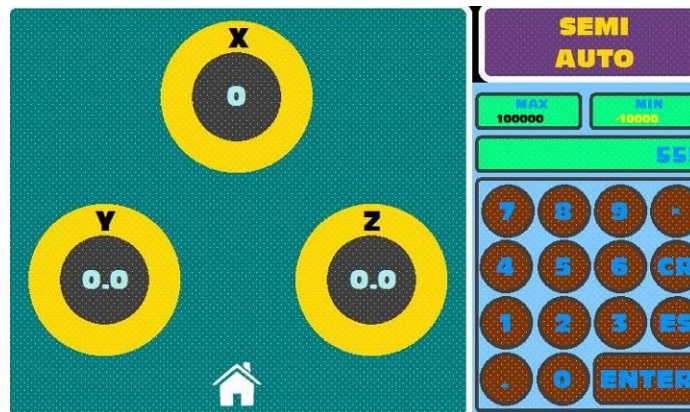
Once SEMI AUTO button is touched from MANUEL page then below screen will appear.

On SEMI AUTOMATIC mode axis check is being done. Axis can be sent to different position easily ..



CHOOSE AXIS

which axis desired to be moved will then numerical keyboard appears of the related axis . Desired value can be entered for the axis wanted to be moved from this keyboard .On the other hand if CHOOSE AXIS button is touched then all axis light will flash red and yellow. Numerical Keyboard appears when axis button which wanted to be moved is touched then desired value can be entered and touched enter ..After that green START button is touched on the front panel and axis starts moving. During these movement axis light will flash red& yellow.Once axis reach its target then movement stops and light stop flashing too



Axis can be moved with related buttons on **SEMI AUTOMATIC** mode but other axis cant be moved whilst one of them is running .

On SEMI AUTOMATIC mode if any axis is on movement you can not bypass to MANUAL mode or MAIN PAGE

AXIS TEST

Once you decide which axis will be tested then related axis button is touched on the screen and then keyboard appears to enter value that axis wanted to be sent to ..However if CHOOSE AXIS button is pressed than all axis light will start flashing red and yellow so again which axis wanted to be moved then related button is pressed and keyboard appears to write value.Desired value is entered on the keyboard and press ENTER after green START button is pressed on the control panel and axis start moving while red&yellow axis light was flashing. When it reaches to target value or close value axis movement and flashing of the light stops .This operation has to be replicated up and down untill axis reaches its target value..

CHOOSE AXIS

(For example : ‘ Y ‘ axis wanted to be traveled between 125 mm and 10 mm so after you enter 125 mm to keyboard then ENTER and START afterwards , axis will move to reach 125 mm and then 10 mm...In case axis doesnt reach its target lets say it stopped at 125.4 mm and then to 10.2 mm you have to replicate sending axis up & down operation untill it finds its target value(125-10mm)..This is same for all axis (X-Y-Z)



MANUAL	: Bypass to Manual Mode
PROGRAM	: Bypass to Program Mode

8 – PARAMETER MODE :

PARAMETER

PARAMETER screen page appears if PARAMETER button is pressed from the MAIN PAGE

In case no password is entered initially so as to get to this page required password has to be entered however if this password is not entered then below screen will appear



Next warning will appear on all the screen if password is a must



You can get back to MAIN PAGE if you press next button.

In order to use PARAMETER page required password and user code has to be entered from below page as explained previously .



8 - 1 - *** AXIS SETTINGS :



If you push down on **AXIS SETTINGS** button on **PARAMETERS** page, you will see "X" axis parameters page.

In this page, there are parameters of "X" rotation axis.

*It is very important that if there is not any compulsory situation, you should not enter in **PARAMETERS** page and you should not change anything.*



In this page there are position sensitivity settings of axes. **NC** unit calculates the parameters automatically and these parameters become active. Also **NC** unit updates these parameters automatically.



It shows the maximum value of rotation axis.



It shows the minimum value of rotation axis.



It shows **REFERENCE** value of rotation axis. You can see here that in **REFERENCE** process, active value is **0.0** (zero).



For the other axis, "Y" axis, when you push down on **Y AXIS** button, you will see parameters page of this axis. You can see the "Y" axis parameters on this page.

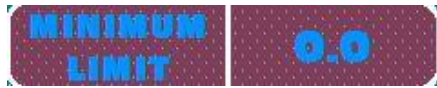
*It is very important that if there is not any compulsory situation, you should not enter in **PARAMETERS** page and you should not change anything.*



The parameters below will be explained briefly on parameters page:



It shows the maximum value for **Y** axis. It is entered by measuring maximum opening length of **Y** axis. On **LIMIT ACTIVE**, when this axis reaches its maximum value, it stops. Because it reaches maximum level.



It shows the minimum value for **Y** axis. You reach this value when you take left piston "Y" completely up and it touches top roll.



It shows the **REFERENCE** value of **Y** axis. It is seen that on **REFERENCE** process, active value will be **234.4**. When you take **Y** axis completely down, **REFERENCE** value which will be active for this axis is seen in this parameter.



*For Y axis, when left cylinder is put completely up and touches top cylinder; calculating opening length with measuring tool, you can find **REFERENCE** value and write on parameters page. Whenever you do **REFERENCE**, this **REFERENCE** value will be assigned automatically for Y axis. This value is also written for Max. limit parameter.*

8 - 2 - *** OTHER SETTINGS



On **PARAMETERS** page, when you push **OTHER SETTINGS** button you will reach **OTHER SETTINGS** parameters. Also you can make **CALIBRATION** and **LANGUAGE** settings from this page.

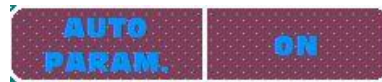


8 - 2 - 1 *** LIMIT ON/OFF :



In this page, when you push **LIMIT ON** button it will be **LIMIT OFF**. You should do this if it is necessary. It is explained in **LIMIT** section on **MANUAL** page that what **LIMIT ON** or **LIMIT OFF** means, why it is necessary to change it and in which situation it is necessary to change.

8 - 2 - 2 *** AUTOMATIC PARAMETER ON/OFF :



In this page, when you push **ON** button next to **AUTO PARAM.** button it becomes **OFF**. When you push again, it becomes **ON**. When it is **OFF**, manually entered parameters will become active in axis parameters. When it is **ON**, **NC** unit calculates the parameters automatically and these parameters will become active. Also when it is **ON**, **NC** unit updates these parameters automatically in a regular way.

8 – 2 – 3 *** MOUSE CURSOR :

When you push this button it is **ON** and when you push again it is **OFF**. If you push once more, it is **ON** again. If you want to remove the mouse cursor from screen, you should make it **ON**. If it is **OFF**, mouse cursor will become active on screen.

8 – 2 – 4 *** BUZZER :

If you do not want to hear any sound while working on **NC** screen, you should push this button to make sound off. If you push this button again, the sound is on. To make sound on you should make it **OFF**.

8 – 2 – 5 *** SYSTEM BAR :

Bottom of **NC** screen there is a settings menu. If want to remove this menu, you should push this button. If you push it once more, you will see the menu again. If you want to remove it, you should make it **OFF**.

8 – 2 – 6 *** USB POPUP :

You can insert **USB** to **NC** unit. But when installing a programme to **NC**, **USB POPUP** should be **ON**. If **USB** is used only for writing and saving a programme, **USB POPUP** should be **OFF**. When it is **OFF** you can not install a programme to **NC**.

8 – 2 – 7 *** LANGUAGE :

LANGUAGE

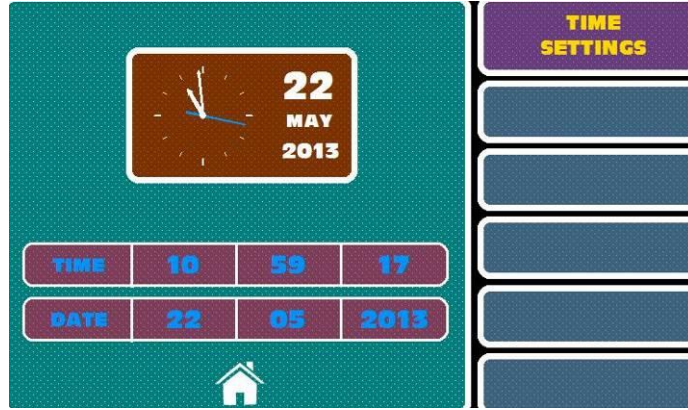
When you push **LANGUAGE** button on this page, you will see the languages section. You can see the country flags on the screen. When you push down on the related flag, you will have that country's language automatically. You can push down on the logo in the middle to return to previous menu. With this way, you can control if language is selected.



8 – 2 – 8 - *** TIME SETTINGS



If you push down on **TIME SETTINGS** button, you will see the page as you see below. When you push down on the numbers that you want to change, you will see a numeric keyboard. When you enter the numbers and push **ENTER**, you set the time or date. You can set time and date from this page easily.



To set time (hour-minute-second) you should push the numbers next to time. You will see a keyboard with which you can write numbers and then push **ENT**. You can do it for minute and second respectively.



To set the date (day-month-year) you should push the numbers next to date. You will see a keyboard with which you can write numbers and then push **ENT**. You can do it for month and year respectively.

8 – 2 – 9 *** CALIBRATION :

CALIBRATION

When you push **CALIBRATION** button you will see **CALIBRATION** page as you see below. You can calibrate all axes especially rotation axis on this page.

If the password has not been entered before, it must be entered to reach **CALIBRATION** page. You need to enter the password as explained in **USER** section.

When you push **ADMIN (EXPERT)** button, which is necessary for 3. level password, you choose **ADMIN (EXPERT)** as the **USER**. After choosing **ADMIN (EXPERT)** as the user, you should enter the 3.level password necessary for this section as: "2013".

USER: ADMIN (EXPERT)

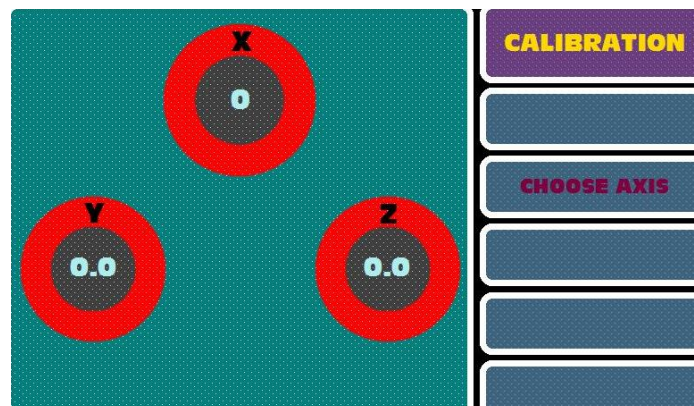
PASSWORD: 2013



8 – 2 – 9 – 1 – Calibration of X (Rotation) Axis:

CHOOSE AXIS

First of all you need to define which axis will be calibrated. For this push **CHOOSE AXIS** button. On the screen you will see axes as you see on the page below. All axes are flashing in red and yellow. When you choose the axis you want to calibrate, they stop flashing and axis which will be calibrated is chosen.

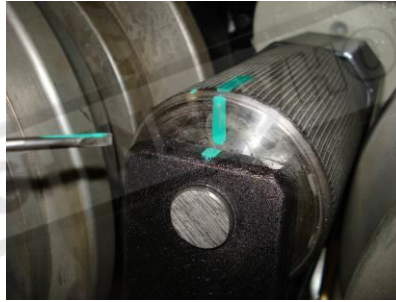


First, let's explain "X" rotation axis and accordingly let's choose "X" axis. When X axis is chosen you will see the page you see below. You can now calibrate X rotation axis.



Min. Calibration:

Put a mark somewhere on the top roll. Then put a mark on a fixed part on which you can see the rotation movement. These two marks should be exactly next to each other. You can see this in the picture below.



To calibrate "X" rotation axis, firstly you need to calculate the circle area of top roll (cylinder). It is calculated by multiplying **Pi number (3.14)** by diameter of top roll (cylinder).

$$\text{Circle area} = 3.14 \times (\text{Diameter of Top Roll})$$

$$\text{Circle area} = 3.14 \times (170 \text{ mm})$$

$$\text{Circle area} = 533.8 \text{ mm}$$

When you push down on **0.0** number next to minimum calibration, you will see a numeric keyboard. When you enter **0.0** for minimum calibration value with this keyboard and push **MINIMUM OK** button, you will see a page as you see below:



Max. Calibration:

When you push down on the number next to maximum calibration, you will see a numeric keyboard. With this keyboard, you can write the calculated maximum calibration value. Then, push down on the rotate right button on the front panel and make the roll take a **complete** stroll. Stop it when two marks are next to each other. Push **MAXIMUM OK** button. When you push **SAVE** button, you will see the page below:



If you push on green OK button, CALIBRATION process will be completed and you go back to the CALIBRATION page. You can control whether calibration is done or not on manual work.



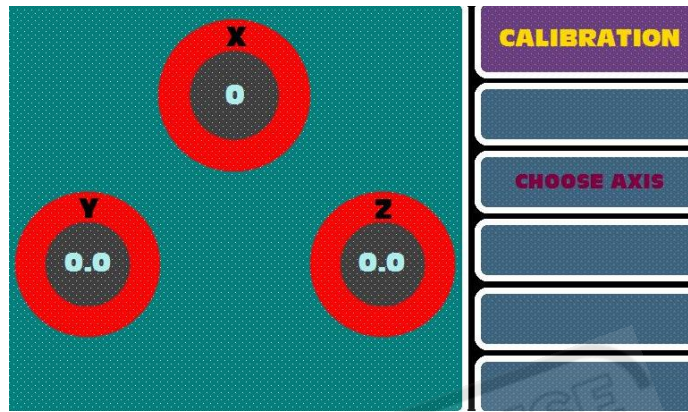
On the other hand if you push red cross button, calibration process will not be completed and you will go back to CALIBRATION page.

All axes should be calibrated very carefully. If it is not necessary, you should not calibrate these axes. If it is really necessary, it should be done as explained in the **CALIBRATION** section .

8 – 2 – 9 – 2 – Calibration of Y (Left Cylinder) Axis:

CHOOSE AXIS

First of all you need to define which axis will be calibrated. For this, push **CHOOSE AXIS** button. On the screen, you will see axes. All axes are flashing in red and yellow. When you choose the axis you want to calibrate, they stop flashing and axis which will be calibrated is chosen.



First, let's explain "Y" rotation axis and accordingly choose "Y" axis. When Y axis is chosen, you will see the page you see below. You can now calibrate Y rotation axis.



*Whether an axis is on the right or left is defined by looking the machine from bracket side. Before calibrating Y axis you should set **LIMIT OFF**.*

Min. Calibration :

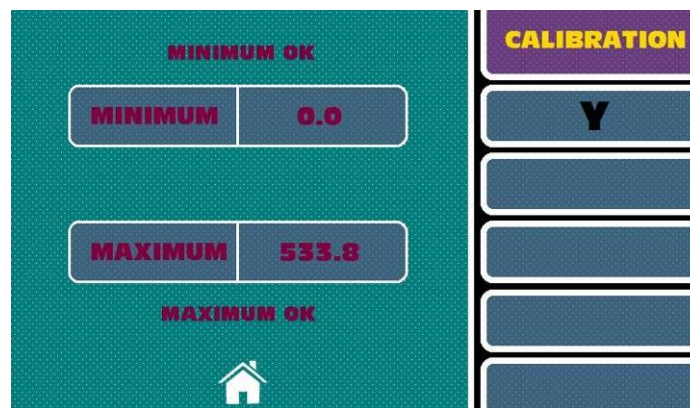
Y axis (left cylinder) should be taken completely down by using manual up/down buttons on the front panel. Both motor and bracket sides of the cylinder must be taken down. For this, use conic +/- buttons and push +. Take the bracket side a little bit up. Then push manual down button and after push conic – button and take bracket side completely down. The purpose is to take both sides completely down. By taking the limit **ON OFF** you can take both sides down. **Y** axis (left cylinder) is taken down by pushing manual up/down buttons on front panel.

Take **Y** axis to minimum calibration point. (Put **Y** axis cylinder completely up) **Y** axis is taken up by pushing manual up button. While it is going up, axis encoder value seen on the screen will decrease. It is taken up until it touches top cylinder.

(When the axis is in this position, distance of left cylinder is measured. Let's say it is 234.0 mm in this example. It is measured as you see in the picture below. This value will be used up next in the process of max. calibration.) You can see this measuring process in the picture below.



When you push down on number **0.0** next to minimum calibration, you will see a numeric keyboard. With this keyboard, when you enter **0.0** for minimum calibration value and push **MINIMUM OK** button, you will see a page as you see below:

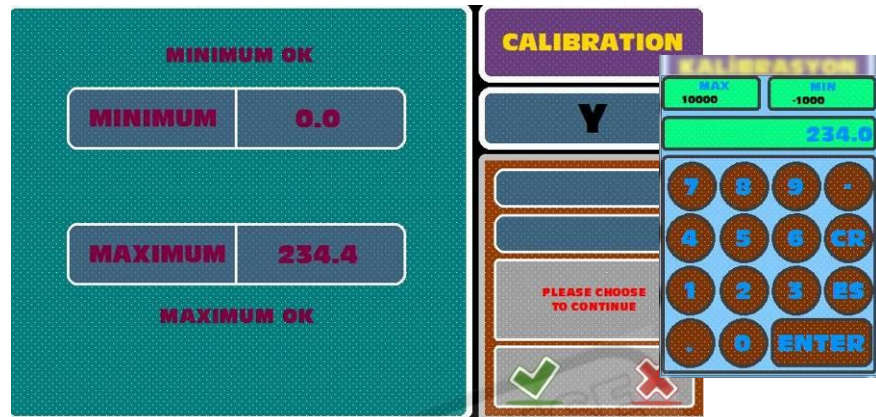


Min. Calibration is completed now. You can continue with Max. calibration.

Max. Calibration :

When you push the number next to maximum calibration, you will see a numeric keyboard. You can write the measured value (234.0 mm) with this keyboard.

Push **ENTER** button. Then push manual down button on the front panel and take **Y** axis cylinder completely down. You should check once more whether it is completely down *by pushing conic + and then pushing manual down conic – button*. Push **MAXIMUM OK** button and then **SAVE** button. You will see a page as you see below:



If you push on green OK button CALIBRATION process is completed and you go back to the CALIBRATION page. You can control calibration is done or not on manual work.



If you push red cross button, calibration process will not be completed and you go back to CALIBRATION page.

All axes should be calibrated very carefully. If it is not necessary you should not calibrate these axes. If it is really necessary, it should be done as explained in the **CALIBRATION** section .

8 – 2 – 10 *** STARTUP MODE (AUTO) :



Starting position on automatic mode is defined with this parameter . 0” or “1” is to be chosen as starting position ...

“1” Position :In order to run the program automatically START button has to be pressed .Program runs automatically and workpiece starts moving forward but the piston that counts the distance of the X axis stays down so that it doesnt read the distance untill workpiece reaches the start switch and activates the piston to move up .. Program runs and advances gradually step by step when START button is pressed

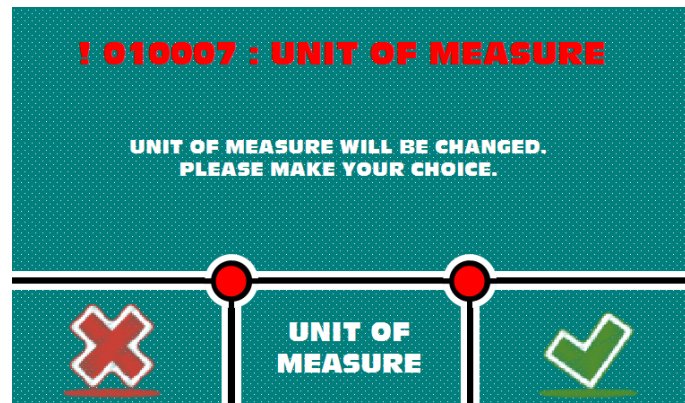
“0” Pozisyonu : In order to run the program automatically START button has to be pressed but program doenst start untill workpiece is detected by starting switch or START button is pressed while workpiece is detected by the starting switch...In order to run the program workpiece has to be detected by the switch and simultaneously START button has to be pressed

8 – 2 – 11 *** UNIT OF MEASURE : (mm / Inch)

OTHER SETTINGS sayfasında **UNIT OF MEASURE** butonuna basılırsa **mm / Inch** deęiřtirme sayfasına ulařılır.



Makine **mm** ve **Inch** olarak ayarlanmıřtır. řayet deęiřiklik yapılacak ise yandaki butona basılırsa ařaęıdaki ekran aılır. Onaylama butonuna basılırsa **mm** ise **Inch** ayarlarına dnmüř olur. řayet **Inch** ise onaylama butonuna basılırsa **mm**'ye dñölmüř olur.



İřte bu řekilde **mm** ve **Inch** deęiřiklięi kolaylıkla yapılmaktadır ve makine hem **mm** hemde **Inch** olarak alıřmaktadır.

8 - 3 - *** FACTORY SETTINGS :

FACTORY SETTINGS

If you push **FACTORY SETTINGS** button in **OTHER SETTINGS** section, you will see the page for factory settings as you see below.

If the password was not entered before, for reaching the **FACTORY SETTINGS** page, you need to enter the required password. It is entered as explained in **USER** section. In this section when you push **ADMIN (EXPERT)** button which is necessary for 3.level password, you choose **ADMIN (EXPERT)** as **USER**. After choosing **USER** as **ADMIN (EXPERT)** you need to enter required 3.level password as ‘2013’.

USER:ADMIN (EXPERT)

PASSWORD:2013



! 010000 : FACTORY SETTINGS

As restoring factory settings is very important, you will see a warning code. If you are sure to restore factory settings you should push green **OK** button. Now factory settings are restored in settings parameters. If you do not want to restore factory settings, you should push red cross button and close this page.



*If you push green OK button restoring **FACTORY SETTINGS** is completed. Settings parameters of the machine is restored in factory settings.*

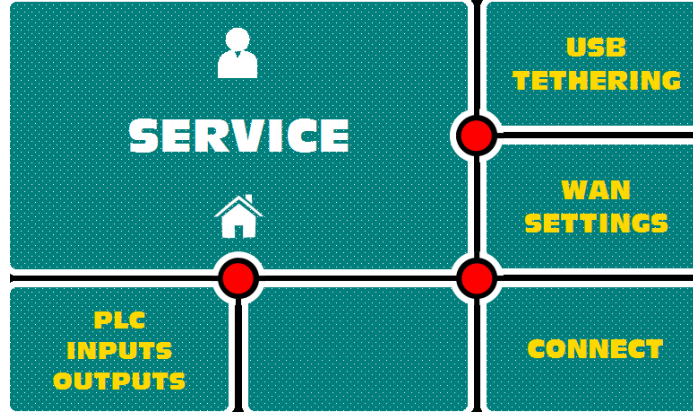


*If you push red cross button you close the page without restoring **FACTORY SETTINGS**.*

Note : *When you restore factory settings, programmes that are written or saved are not deleted. Only settings parameters are restored in factory settings. If it is not necessary, you do not need to do it.*

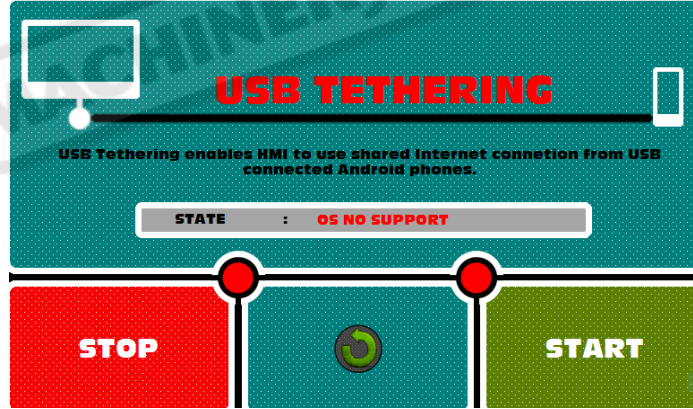
8 - 4 - * SERVICE :** SERVICE menü is used to see PLC inputs/outputs or connect NC screen to Internet and to start Remote Access.

To start remote Access, NC screen must be connected to Internet with smartphones by using USB TETHERING or with Ethernet by using WAN SETTINGS. After connected NC screen to Internet, Remote Access must be activated by pushing CONNECT button.



Here you will see descriptions step by step of 2 different connecting methods below:

8 - 4 - 1 * USB TETHERING :** After you pushed USB TETHERING button the page below will open.



ATTENTION: You can use USB TETHERING only with Android smart phones. It is not available with IOS smart phones.

To start Internet Sharing :

Connect smart phone with USB data cable to screen from plug on it.

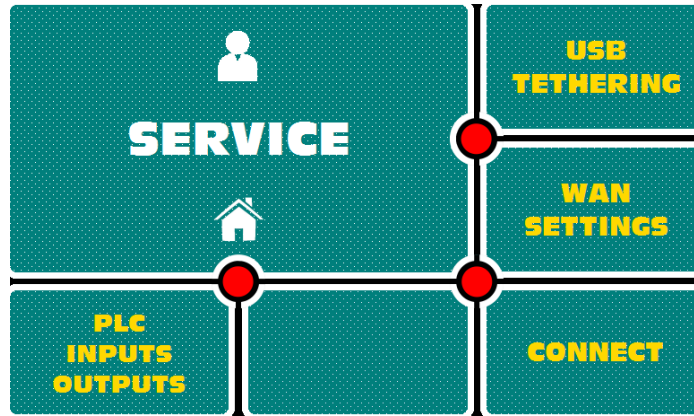
Then activate internet sharing on your smart phone.

Then push START button on this page.

Internet shearing will be made succesfully when you saw STATE : CONNECTED on this page.

After you shared your Internet with our machine by your smart phone, you need to start **REMOTE ACCESS**.

Push **CONNECT** button on page below:



After you pushed “**CONNECT**” button you will see page below:



This **CONNECT** page is used for starting **REMOTE ACCESS**. If you already connected NC screen to Internet, **REMOTE ACCESS** can be activated by pushing **START** button. If connection is made successfully; you need to see this page like below:

COMMAND : Start
STATE : Connected
ERROR CODE : Success

To stop Remote Access you can use **STOP** button.

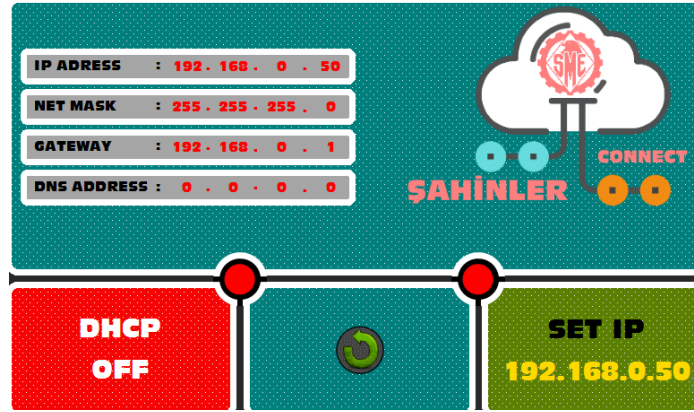
8 - 4 - 2 * WAN SETTINGS** : When you pushed **WAN SETTINGS** button you will see page below.

Here to connect NC screen to Internet you need to do IP adjustments.

To use Automatic IP, **DHCP** must be **ON**.

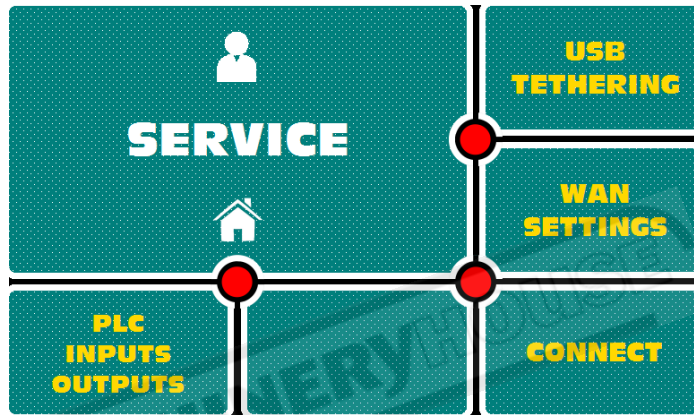
To use Manuel IP, **DHCP** must be **OFF** and intened IP is written manually.

SET IP : If you pushed **SET IP 192.168.0.50** button, all informations on this page will come to screen automaticly like below:

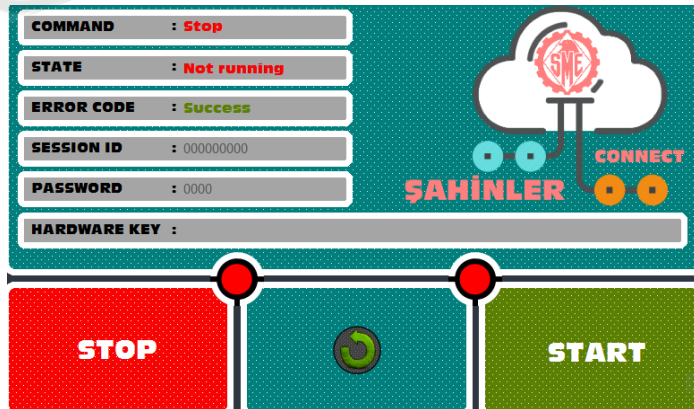


After you shared your Internet with our machine by ETHERNET, you need to start REMOTE ACCESS.

Push CONNECT button on page below:



After you pushed “CONNECT” button you will see page below:



This CONNECT page is used for starting REMOTE ACCESS. If you already connected NC screen to Internet, REMOTE ACCESS can be activated by pushing START button. If connection is made successfully; you need to see this page like below:

COMMAND : Start

STATE : Connected

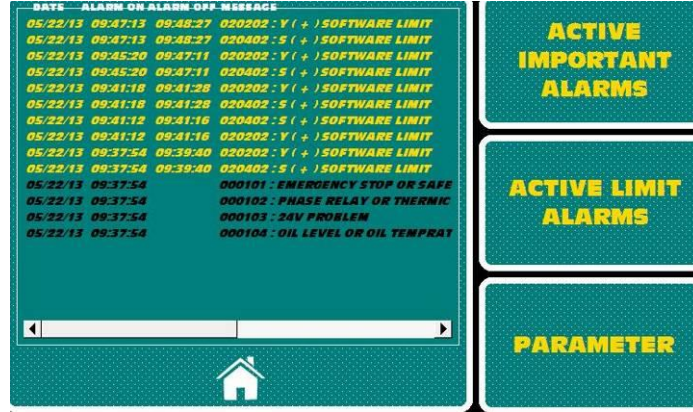
ERROR CODE : Success

To stop Remote Access you can use STOP button.

9 - 5 - *** ALARM HISTORY



To see alarm history you should push **ALARM HISTORY** button and then you will see a page as you see below.



You can see all the alarms on this page. You can view previous alarms. By pushing **ACTIVE IMPORTANT ALARMS** and **ACTIVE LIMIT ALARMS** you can see all alarms in details.

If you need to see active important alarms and solve any problems about them, you should push **ACTIVE IMPORTANT ALARMS** button and you will see the times and codes of the alarms.

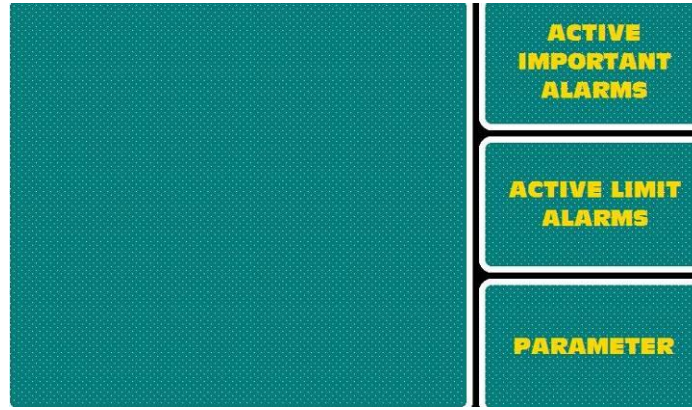


If you see this sign on the page, it means that there is an active important alarm or alarms. If you push on this sign, active important alarms page will open and you will see all the alarms. If you push on the page again, you will go back to previous page.

If you only see the **EMERGENCY STOP** alarm, when you remove emergency stop button and solve the problems, this sign will disappear.



If you need to see active limit alarms and solve any problems about them, you should push **ACTIVE LIMIT ALARMS** button and you will see the alarms with their times and codes.



If you see this sign it means there are active limit alarm or alarms. When you push this sign, you will see the page of active limit alarms with details. If you push down on the screen again, you will go back to previous page.

If there is **Z (+) SOFTWARE LIMIT** alarm, it means that the right roll (**Z axis**) is completely down and on max. point. Please check whether it is completely down, if it is down then the limit alarm is right. So it gives you a warning. When you push **LIMIT OFF**, this warning disappears. When you push **LIMIT ON**, axes that are on the down or up limit and their min. and max. limits will be seen on this page. **ACTIVE LIMIT ALARMS** are all right if the axes are on the stated positions. The alarms give information about the positions of the axes.

020202 : Y (+) SOFTWARE LIMIT : It shows that Y axis is in max. (completely down) point.
020201 : Y (-) SOFTWARE LIMIT : It shows that Y axis is in min. (completely up) point.
020302 : Z (+) SOFTWARE LIMIT : It shows that Z axis is in max. (completely down) point.
020201 : Z (-) SOFTWARE LIMIT : It shows that Z axis is in min. (completely up) point.

If it was **LIMIT OFF**, you could not see the information messages as you see now.

During the working of the machine any kind of error or warning messages can be seen with the signs below.



If you see this sign on the page, it means that there is an active important alarm or alarms. If you push on this sign, active important alarms page will open and you will see all the alarms. If you push on the screen again, you will go back to previous page.



If you see this sign, it means there are active limit alarm or alarms. When you push on this sign, you will see the page of active limit alarms with details. If you push on the screen again, you will go back to previous page.

When you push this **ALARM** buttons, it comes on the screen automatically. You will see the page with error and warning messages. In the list, you will see all error and warning messages. When you solve the problem, the error or warning message on the screen will disappear. When you touch on the screen, you go back to working page again.

You should pay attention to these error and warning alarms. You can find information about these alarms below. What these error or warning alarms mean, why they appear, time processes and how they are removed are all explained below.

8 – 5 – 1 – ACTIVE IMPORTANT ALARMS :

000104 –LOW OIL LEVEL OR OIL OVERHEATED :

If you see ‘*Low Oil Level*’ on the screen, you must check the hydraulic oil level in oil tank. Before turning the machine on, you should put oil in the machine in the first place. When you put enough oil, the message will disappear.



If you see ‘*Oil Overheated*’ message on the screen you should check these:



*** Thermostat which shows the temperature of hydraulic oil is located on oil tank. First you need to check if the temperature control setting is right.
 *** If the temperature of hydraulic oil is above the given value, the temperature must get to normal level. When you check them, message will disappear.

000102 – PHASE SEQUENCE RELAY AND THERMIC RELAY ERROR:

If you see ‘*Phase Sequence Relay Error*’ on the screen you should check these:



*** If you see ‘Phase Sequence Relay Error’ you should check ‘FSR’ relay. If there is no light or red light on this relay, it means phase sequence is wrong. In this case you should change any two of 3 phases from the energy input. In this way, the sequence will be right and the message will disappear.

*** You must check the direction of motor rotation. They must be rotating clockwise.
*** If you still see the ‘Phase Sequence Relay Error’ message despite the fact that the light of FSR works properly, you should check whether 3 phase is on FSR input. Also you should check FSR switch (11-14). This switch should be off when everything works properly.

If you see ‘Thermic Relay Error’ on the screen, you should check these in thermic in beam box:



*** Thermic may be blown. If it is blown, you should turn it in its normal position.
*** Check thermic settings area. It should be set according to motor current.
*** Check thermic subsidiary switch (13-14) whether it is working or its connections are right.
*** Check whether 24 V (DC) touches to thermic subsidiary switch input with gauger. Take it in DC position. One side should be on no.3 point which in the input of subsidiary switch. and the other side should be on no.2 point. Then you should measure 24V (DC).
*** Check whether thermic subsidiary switch transmits 24V (DC).
*** Check why motor draws overcurrent. Because when it draws **overcurrent**, thermic blows.

000101 – EMERGENCY STOP BUTTON PUSHED OR ROPE SWITCH NOT SET:

If you see ‘Emergency Stop Button Pushed’ message on the screen the emergency stop button is pushed. Pull it up manually.

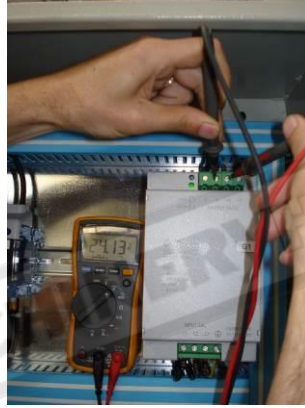


If you see “**Rope Switch Not Set**” message on the screen you need to check whether rope switch is set. For safety you need to set it up. Machine will work after you set rope switch. When the rope switch is set the open contact will close and message will disappear.



000103 – NO 24 V (DC) INPUT:

If you see “**No 24V (DC) Input**” message on the screen it means **24Volt** does not work. You need to check these in this situation:



*** You need to check “**G1**” DC power supply in beam box for its input and output voltages. You should check if there is **24V DC** in output of power supply. When the gauger is on **DC**, one side of it should be on no.2 point of **G1** and the other side should be on no.11 cable. If you gauge **24V DC** check the things below.

*** Check **24V – DC** circuit breaker for whether **F3** circuit breaker is on position **1** (close). If it is on **0** you should pull it up to **1**. If you still have the problem check if the circuit breaker is working properly. Gauge **24V DC** in the input of circuit breaker. Gauge in the same way from output. From the output of **F4**, when the gauge’s one side is on **no.11** cable and the other side is on **no.2** cable there should be **24V DC**. If there is **24V** in the input but there is non in output, you should change circuit breaker. If there is **24V** in the output keep on checking.

*** Afterwards, check **S1 key (0-1 power switch)** on the panel. Gauge **24V DC** in the input and output of this key. From the output if you gauge **24V DC** when one side is on no.3 and other side is on no.2 cable. If there is **24V** check by gauging **24V** from beam box (no.3 and no.2 cables).

*** When you check all of these, the problem will be identified and after solving the problem, “**No 24V input**” error message will disappear.

8 – 5 – 2 – ACTIVE IMPORTANT LIMIT ALARMS:

If you see “*Y (+), Y (-), Z (+), Z (-) Limit*” messages on the screen, here are the causes:

020202 : Y (+) SOFTWARE LIMIT : It shows that Y axis is in max. (completely down) point.
020201 : Y (-) SOFTWARE LIMIT: It shows that Y axis is in min. (completely up) point.
020302 : Z (+) SOFTWARE LIMIT : It shows that Z axis is in max. (completely down) point.
020201 : Z (-) SOFTWARE LIMIT: It shows that Z axis is in min. (completely up) point.

If it was **LIMIT OFF** you would not see these messages.

*** If “**Y**” axis is completely down (max.) you will see “*Y (+) Limit*” message on the screen. It is normal. If **Y** axis (when you look the machine from bracket side, it is left roll) is taken up with the up/down buttons, because it is moved from bottom (max.) point, the message will disappear.

***If “**Y**” axis is completely up (min.), you will see “*Y (-) Limit*” message on the screen. It is normal. It means axis is on the top. If **Y** axis is taken down with the up/down buttons, because it is moved from top (min.) point, the message will disappear.

This working process is the same for the other axes. But although they are not on the top or bottom, if you still see these messages, you should do these:

*** **REFERANCE** process may be done when **Y** axis is on a different point, not completely down. You should do **REFERERANCE** when **Y** axis is in the right position.

*** **REFERANCE** process may be done wrong. It may be done when axes are in a different position or they are on the top. To solve this problem you should do **REFERANCE** in the right way and right position.

*** *You can see that **REFERANCE** must be done as it is explained. Limit values in parameters must be written right and they must be saved. You must be careful about **LIMIT ON-OFF** positions. When it is not necessary otherwise, **LIMIT** must be **ON** all the time.*

9 – PROGRAM MODE :



PROGRAM button is pressed from the MAIN PAGE to get into PROGRAM mode. On this mode new program can be entered, adjusted, copied, deleted and all programs in the memory can be listed

USER : OPERATOR (PROGRAMMING)

PASSWORD : 1111



9 - 1 – NEW PROGRAM

9 - 2 – PROGRAM EDIT

9 - 3 – PROGRAM COPY

9 - 4 – PROGRAM DELETE

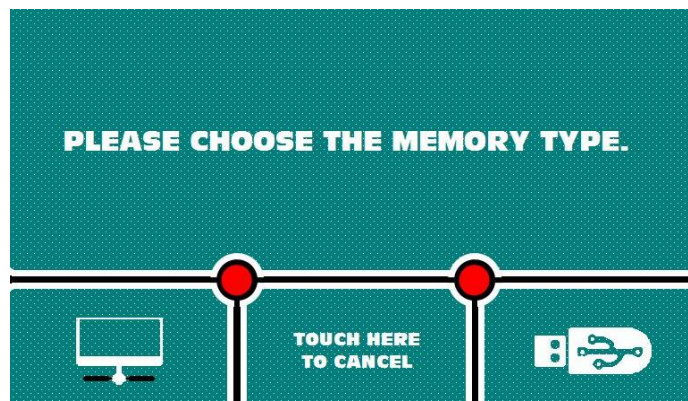
9 - 5 – PROGRAM LIST

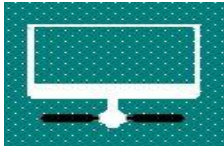
9 - 1 – NEW PROGRAM :



Press NEW button on PROGRAM page then determine where to record this program. If it will be recorded to NC then NC is selected if it will be recorded to USB then USB is selected

PLEASE CHOOSE THE MEMORY TYPE message appears on the screen. It's been asked where to store this program





If you select next button then NC is selected for program storage



If you select next button then USB is selected for program storage



Program recording can be canceled from next button



If next button is selected that means storage will be NC unit then below screen will appear .



Program number and program name has to be entered for future easy use so as to do that choose PRG :NC 0 box and press on 0 to enter program number (keyboard will appear once you press 0) .Example program number 1 and enter

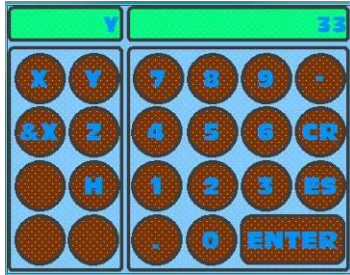


After program number you can name the program so as to do that you have to press just under PRG :NC and then keyboard appears to enter program name .Example program name is AC

1 . Entering First Program Line :



When you press NEW LINE button keyboard screen appears with axis on the left and right side numbers for entering values.



You can select axis from the left and numbers from the right and once you enter the axis and values press ENTER.

Example Y axis (left roll) with 33.0 value then ENTER

For the first line

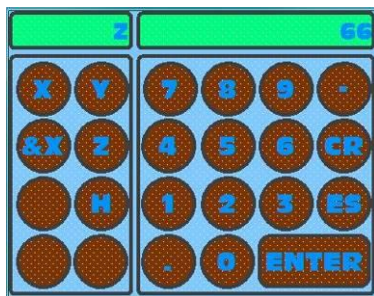
Below screen will appear after you press enter and that shows your first line



2 . Entering Second Program Line :



NEW LINE button should be pressed to enter second line



For the second line Z axis selected with 66.0 value then press ENTER..Second line is recorded

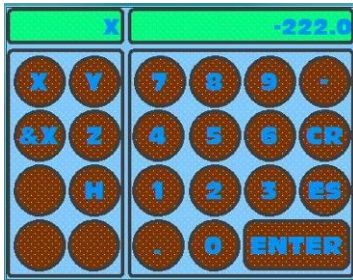
Below screen appears after entering second line :



3 . Entering Third Line :



NEW LINE button should be pressed to enter third line



For the third line X (rotation) axis selected with 222 value then press ENTER

Below screen appears after entering third line

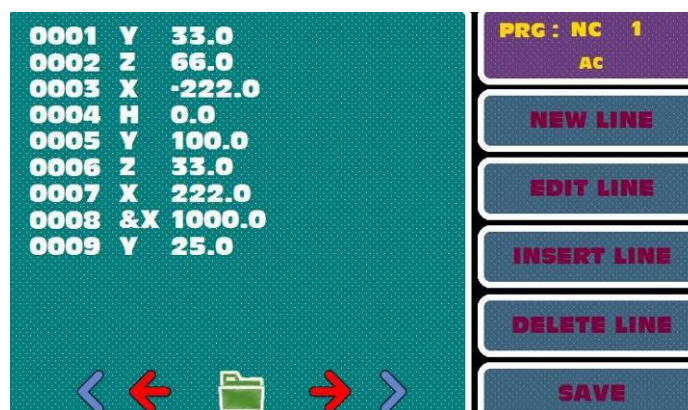


Position values which is more than min & max values of the axis shouldnt be written during recording a program because that will makes axis to go beyond its max value so it will stop the program



Once all the program is written and presses SAVE button then recording stage begins and below screen appears.

On this screen final program can be seen which has 9 lines



If program is completed then press green OK button to complete the program recording. This program can be called afterwards with AC name form program list



If you press this button then program is not saved and takes you back to program page

HLD : This command is to use to stop the machine.so when HLD turns come on the program NC Unit stops and waits for further command ..Pause button which is at the left side of the screen starts flashing so in order to start NC unit again .PAUSE button has to be pressed and followed by RESET Button

Program above has HLD command on 4 . line that is the command to stop the NC unit so as to start NC program from 5.line. PAUSE and RESET has to be pressed

&X : Two axis works at the same time. X axis and second axis (Y or Z axis) moves at the same time. In the programme After &X line must written Y or Z axis. For example

```
2 ....
3 & 200
4 Y 50
5 ....
```

Programme writing : press **“WRITE.”** Button, enter the axis and position values on the upcoming screen and press **“Enter”** button. To go to the next line press **“New Line”** button.

Saving a Programme: After writing the last line press **“New Line”** button and then press **“SAVE”**.button

Editing Line: Pres the “edit Line buton to change a stored programme line, Enter the line number, Choose the Axis and position on the screen and press **“OK”** button.

Example Program :

```
1 X 500
2 Y 80
3 Z 80
4 HLD
5 X 250
6 Y 50
7 Z 50
8 & 400
9 Y 20
```

Explanation:

1. X roll rotates to 500 mm.
2. Y roll moves to 80.0 mm.
3. Z roll moves to 80.0 mm.
4. Program execution pause. Start button should be pressed to resume the program.
5. X roll rotates to 250 mm.
6. Y roll moves to 50.0 mm.
7. Z roll moves to 50.0 mm.

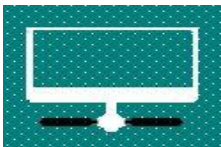
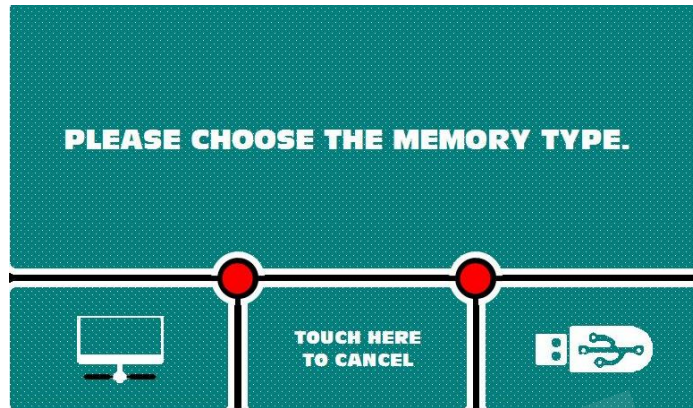
8&9. X roll rotates to 400 mm. and Y roll moves 20 mm. at the same time

9 - 2 – PROGRAM EDIT



If you press EDIT button on program page below screen will appear then first thing is to do to find the program you want to edit..It could be either in USB or NC

Here below screen it is been asked to choose the memory type.



If you press this button NC memory will be selected



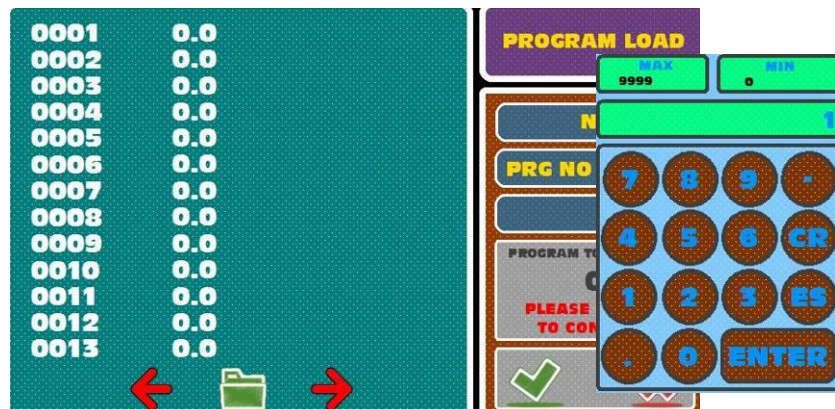
If you push this button USB memory will be selected



This button cancels the operation of editing program.

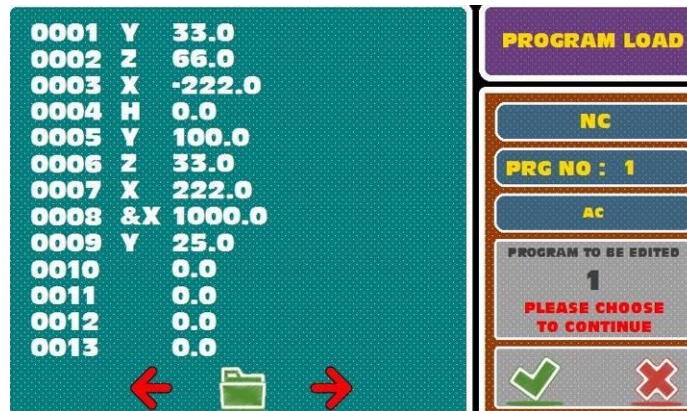


If you press this button that means NC memory is selected so below screen will appear



PRG NO : 0

If you press PRG NO : 0 button then keyboard appears then you can choose the program number ,program name that edit will be done. Here below screen NC memory ,program 1 ,program name NC is selected

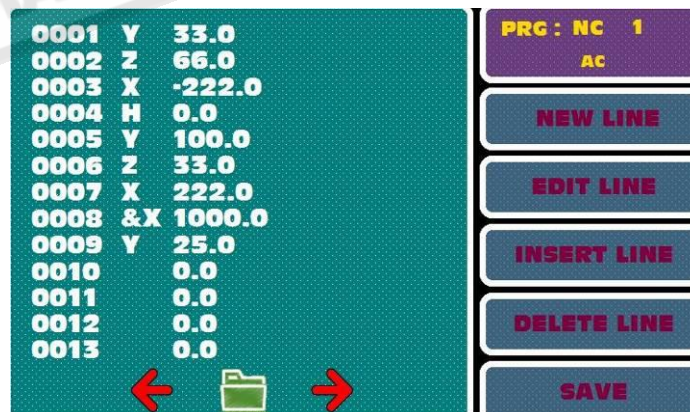


If this button is pressed no.1 AC programme will open in NC memory and you can edit it.

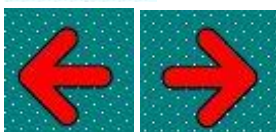


If this button is pressed then it takes you to the PROGRAM PAGE

Here on the below screen program will be used as sample for all program mode actions



If you press this button it takes you to PROGRAM page



There could be 200 line on the program and you can only see 9 line on one single page so these buttons takes you to the other pages of the program

- 9-2-1 : NEW LINE
- 9-2-2 : EDIT LINE
- 9-2-3 : ADD LINE
- 9-2-4 : INSERT LINE

9-2-1 : NEW LINE :

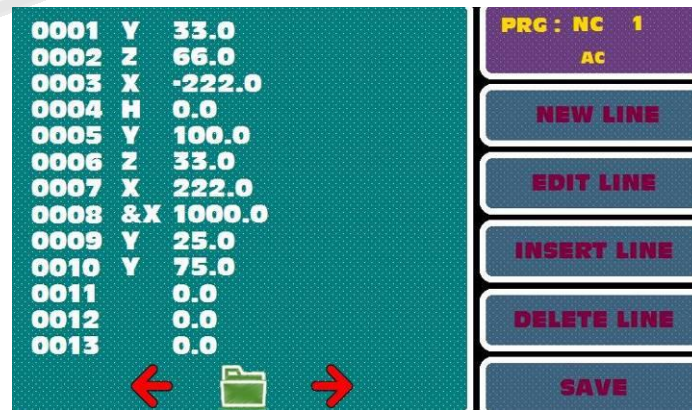
NEW LINE

New lines can be added in the existing programme in this page. If **NEW LINE** button is pressed than keyboard will be displayed. For this line to be added, axis (**Y**) is written on the left and the movement position value of this axis (**75**) is written on the right by means of the keyboard and **ENT** is pressed.



SAVE

If **SAVE** button is pressed after entering new line below screen will appear for final confirmation



If you press next button
New line will be saved as line 13



If you press next button then it takes you to the previous page

9 – 2 – 2 : EDIT LINE :

EDIT LINE

If you want to change any of the program steps values what you have to do is to press EDIT button and bwlo screen will appear



0001	Y	33.0
0002	Z	66.0
0003	X	-222.0
0004	H	0.0
0005	Y	100.0
0006	Z	33.0
0007	X	222.0
0008	&X	1000.0
0009	Y	25.0
0010	Y	75.0
0011		0.0
0012		0.0
0013		0.0

LINE NO : 0

Press LINE NO: 0 button and select program line you want to change then press ENTER.



Y 0.0

Press ENTER after Y axis and its value 33.0 is entered from keyboard





If you press next button then it means you have changed on AC named program number 1 line 2 has been changed(First it was 66.0 and now its Z 33)



If you press next button then it takes you to previous page.

Here below program that was edited can be seen

0001	Y	33.0	PRG : NC 1 AC NEW LINE EDIT LINE INSERT LINE DELETE LINE SAVE
0002	Y	33.0	
0003	X	-222.0	
0004	H	0.0	
0005	Y	100.0	
0006	Z	33.0	
0007	X	222.0	
0008	&X	1000.0	
0009	Y	25.0	
0010	Y	75.0	
0011		0.0	
0012		0.0	
0013		0.0	

9 - 2 - 3 : INSERT LINE :



If new line needs to be added to existing program then you have to select INSERT LINE button

0001	Y	33.0	PRG : NC 1 AC INSERT LINE LINE NO : 2 Y 33.0 EDIT LINE 2 PLEASE CHOOSE TO CONTINUE <input type="checkbox"/> <input type="checkbox"/>
0002	Z	66.0	
0003	X	-222.0	
0004	H	0.0	
0005	Y	100.0	
0006	Z	33.0	
0007	X	222.0	
0008	&X	1000.0	
0009	Y	25.0	
0010	Y	75.0	
0011		0.0	
0012		0.0	
0013		0.0	



Select the line number you want to add then press ENTER (Lets say program line 5)

0001	Y	33.0	PRG : NC 1 AC INSERT LINE LINE NO : 5 Y 33.0 EDIT LINE 5 PLEASE CHOOSE TO CONTINUE <input type="checkbox"/> <input type="checkbox"/>
0002	Z	66.0	
0003	X	-222.0	
0004	H	0.0	
0005	Y	100.0	
0006	Z	33.0	
0007	X	222.0	
0008	&X	1000.0	
0009	Y	25.0	
0010	Y	75.0	
0011		0.0	
0012		0.0	
0013		0.0	

Y 0.0

If you choose the line then value to be entered from the next button then below screen will be displayed Line to be add will Line 5 Y and value will be 75.0 and then press ENTER

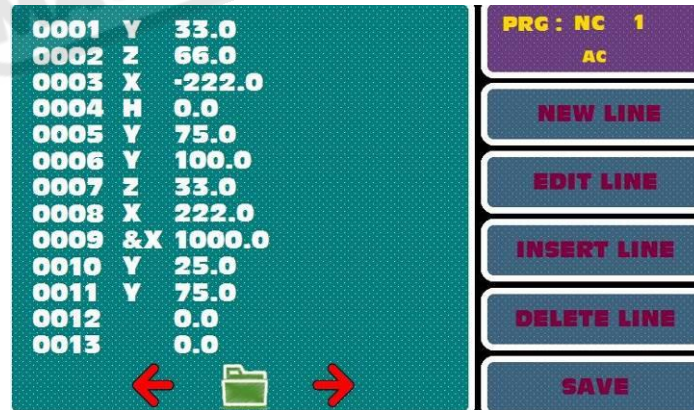


If you press confirmation button new line will be inserted to the program (Y 75.0)



Cancellation button takes you to the previous page.

Now here below new program can be seen



Line 5 th was Y 100 but now its Y 75 ...

9 – 2 – 4 : DELETE LINE

DELETE LINE

If any line will be deleted on a existing program DELETE LINE button has to be used and below screen will be displayed

0001 Y 33.0	PRG : NC 1
0002 Z 66.0	AC
0003 X -222.0	DELETE LINE
0004 H 0.0	LINE NO : 5
0005 Y 75.0	LINE TO BE DELETED 5
0006 Y 100.0	PLEASE CHOOSE TO CONTINUE
0007 Z 33.0	<input type="checkbox"/> <input type="checkbox"/>
0008 X 222.0	
0009 &X 1000.0	
0010 Y 25.0	
0011 Y 75.0	
0012 0.0	
0013 0.0	

LINE NO : 0

Select the Line number you want to delete then press ENTER (Line will be deleted is assumen 5)

0001 Y 33.0	PRG : NC 1
0002 Z 66.0	AC
0003 X -222.0	DELETE LINE
0004 H 0.0	LINE NO : 5
0005 Y 75.0	LINE TO BE DELETED 5
0006 Y 100.0	PLEASE CHOOSE TO CONTINUE
0007 Z 33.0	<input type="checkbox"/> <input type="checkbox"/>
0008 X 222.0	
0009 &X 1000.0	
0010 Y 25.0	
0011 Y 75.0	
0012 0.0	
0013 0.0	



If you press confirmation button then line number 5 will be deleted.



If you press cancellation page then it will take you to previous page

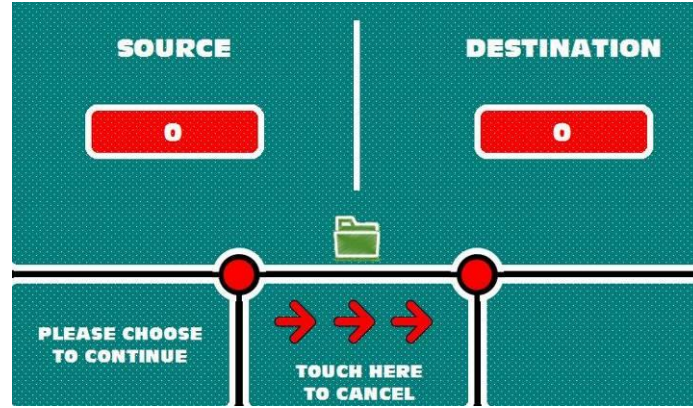
Here below new program can be seen

0001 Y 33.0	PRG : NC 1
0002 Z 66.0	AC
0003 X -222.0	NEW LINE
0004 H 0.0	EDIT LINE
0005 Y 100.0	INSERT LINE
0006 Z 33.0	DELETE LINE
0007 X 222.0	SAVE
0008 &X 1000.0	
0009 Y 25.0	
0010 Y 75.0	
0011 0.0	
0012 0.0	
0013 0.0	

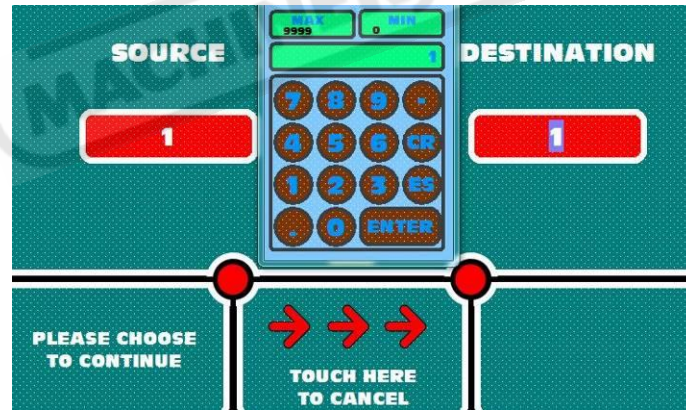
9 - 3 – COPY PROGRAM



COPY is used to transfer one program to another destination so once is pressed then below screen will be displayed



On this screen selection is to choose which program will be copied from SOURCE to which destination so red buttons underneath the options has to be pressed and with displayed keyboard preferation can be entered then ENTER..Here below on our example program 1 from NC memory will be copied to USB memory with the same number



Program numbers were choosed so now source and destination has to be selected

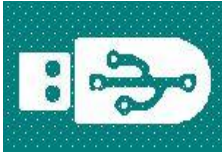
Source Selection :



In order to continue PLEASE CHOOSE TO CONTINUE button has to be selected



By using this button NC is selected as SOURCE

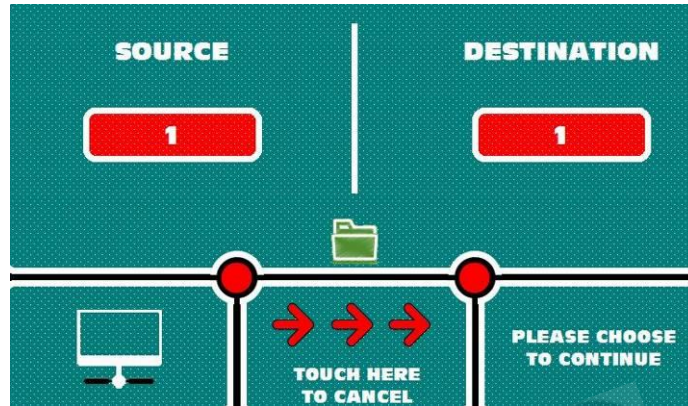


By using this button USB is selected as SOURCE



Cancellation Button to return previous page.

Source is chosen now next thing is to choose destination



Destination Selection :



In order to continue PLEASE CHOOSE TO CONTINUE button has to be selected



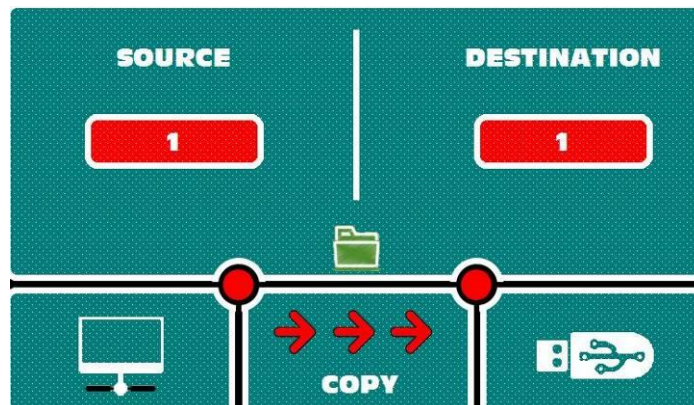
By using this button NC is selected as DESTINATION

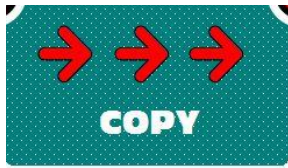


By using this button USB is selected as DESTINATION



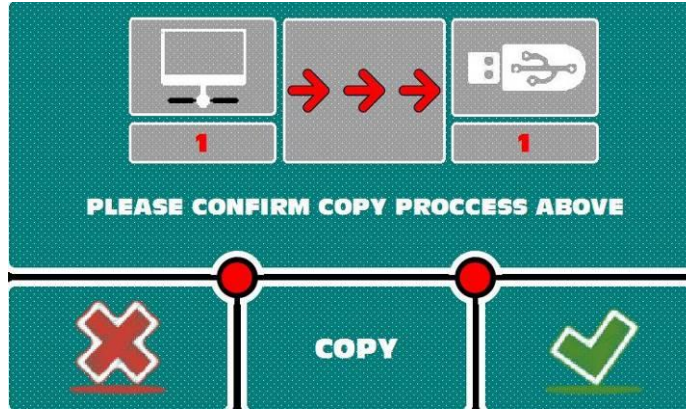
Cancellation Button to return previous page.





As seen above Source is selected as NC and Destination is selected as USB ..Pressing next COPY button will copy the program

However final confirmation will be asked as seen on below screen

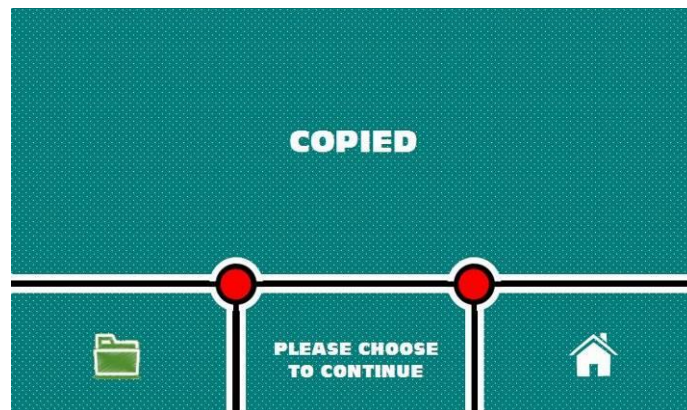


Confirmation button completes copying process

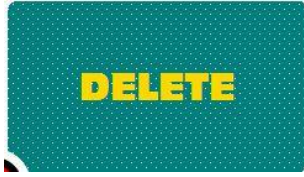


Cancellation button will return to previous page.

Below message shows that program is copied successfully.



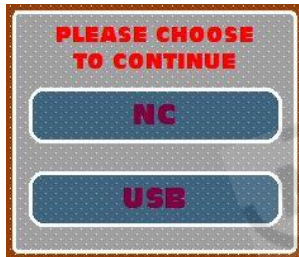
9 – 4 – DELETE PROGRAM



Recorded programs which are inside NC or USB memory could be deleted ..**DELETE** button on the program page has to be pressed for this process and below screen will appear



First of all it has to be determined which program and from which memory will be deleted so by selecting either USB or NC button just underneath PLEASE CHOOSE TO CONTINUE phase



Below screen will appear when you select NC



In order to write the number of the program to be deleted PRG NO: button has to be selected from the keyboard and enter 1 and then ENTER



Confirmation and Cancellation buttons will be displayed so if confirmation button is pressed then program will be deleted. If cancellation button is used then it will take you to previous page

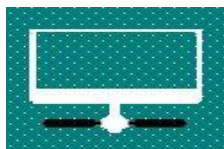
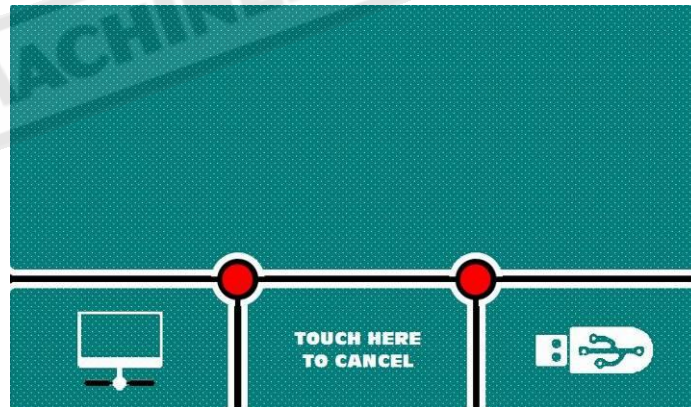
Below screen will appear once you delete the program



9 – 5 – PROGRAM LIST



In order to list the programs either NC or USB has , LIST button has to be selected and then below screen will be displayed for the user to choose their selection



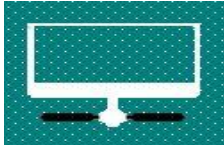
Next button is used to choose NC memory so programs inside NC memory will be listed



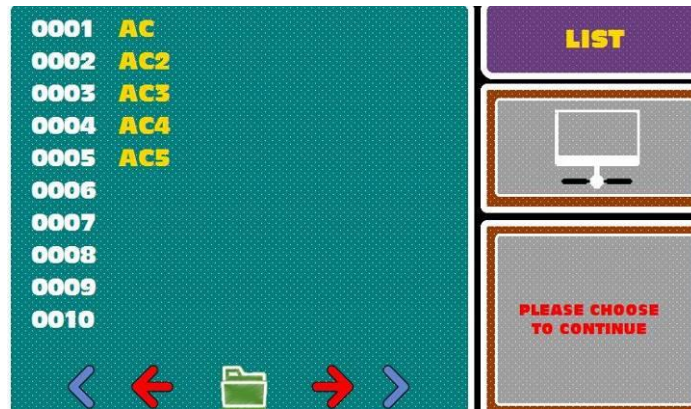
Next button is used to choose USB memory so programs inside USB memory will be listed



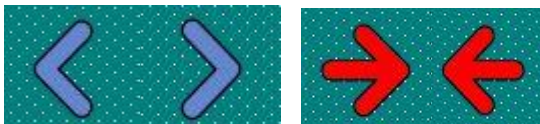
Next button is to cancel Listing and to get back to the previous page



In case next button is selected for NC memory then below screen will be displayed.



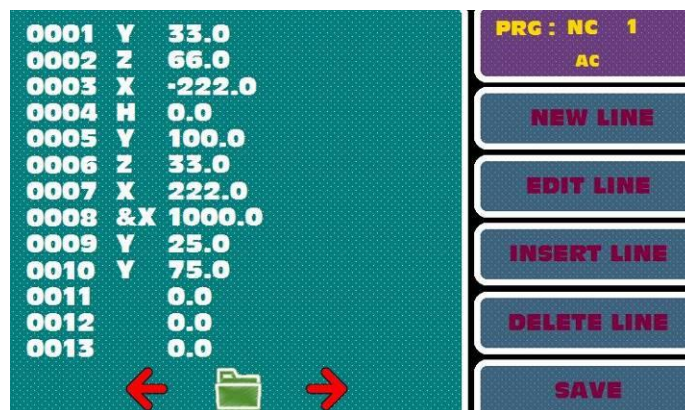
As it can be seen from the above screen programs that are inside the NC memory are being listed. These programs are AC , AC2 , AC3, AC4, AC5 ...NC has 500 program memory so there could be several more programs and by using the buttons below next or previous pages could be displayed



Next button is used to return to previous page.

Selection can be made by pressing on the program name from the list then program steps can be seen as below screen

NC	: Program in in NC memory
1	: Program Number is 1
AC	: Program name is AC



Once desired program is found then editing operation can be done from this screen as well as explained before.



This button is to return to previous page

10 – TEACHING MODE



By Pressing the “TEACH” button the following page will open.

If the password is not entered before it has to be entered to Access the **PROGRAM** page. **Password** must be entered as explained in the “USER” section.

In this screen for 1st Level password is necessary is you only press the **OPERATOR (PROGRAMMING)** button. And as user **OPERATOR (PROGRAMMING)** will be selected.

After selecting **OPERATOR (PROGRAMMING)** as the user the first level Password must be entered as “1111” .

USER : OPERATOR (PROGRAMMING)

ŞİFRE : 1111

To reach the **TEACH** mode TEACH button must be selected on main screen. In this part every operation on the Machine is made manually and will be recorded in the **NC Programm**. Briefly any operation made step-by-step will be recorded in **TEACH** mode and will be turned in to a **READY** program to use anytime in the future.



Firstly the NAME and Program Number will be given. (User Input required)

PRG : NC 0

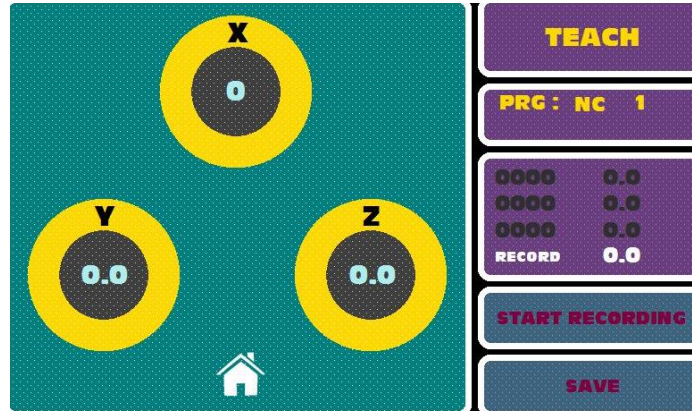
On this Button : when the “0” is pressed you will see a NUMBER PAD where you can select a certain number. For example we call it Nr.1 so “1” + **ENTER**.



After selecting the number , the Name of the program will be Entered by pressing the “NC”. The QWERTY keypad will appear and press enter. In this Exmple let’s call the name “AC”.

START RECORDING

By pressing “**START**” the Main Motor starts and the Machine is ready to receive Commands. After pressing the “**START RECORDING**” button for 1 second continuously you will activate the Following screen.



We want to explain the two Buttons here on this Screen.



HOLD : This command can be used only once during the Program Teaching mode. If there is need to pause the program during the “AUTOMATIC” operation this “HOLD” command will be activated where it is used give necessary time to change anything in the operation. This will add a certain Pause time.

0004 H 0.0

Below is an Example for STEP.4 with “HOLD” . SO in Teaching mode by pressing the “HOLD” there will be a Step added for a Pause.

*On **AUTOMATIC** operation if there is a step with “HOLD” the following will occur : On the LEFT TOP section of the screen there will be **Pause** indicator flashing. To continue you can use the **Pause** button or **RESET** .*



By pressing this button you can see a larger list showing 12 steps to watch in the program list.



By pressing this Button you will get back to the **TEACH** page.

1 . STEP recording :

The Material will be feeded in to the Machine, here we make an example bending. **Left Roll (Y)** can be moved up-down by pressing the arrow buttons. The Y axis will change and also from the screen it can be checked. If you move UP position the Y axis will update the (-) minus value and will be a smaller value.

Y axis can go from 175 to 125, after this the **Right Roll (Z)** shall be moved up with the UP-DOWN buttons on the screen. So when we give another command (secondary) the First Step will be Recorded as – Y = 125 and our First Step will be done.

2. STEP recording :

We have moved the Z axis to a new position so the first Y axis movement was recorded. After reaching the necessary point release the button. Then go on by moving the Y axis from 125 to 75. Then by pressing the S axis buttons UP the 3rd step starts. So the 2nd step is recorded and the 3rd step has started.

3 . STEP recording :

We have started the 4th step by using the (X) axis to change and STEP 3 was recorded. We go on moving the (X) to left and release the button after the necessary point. For going left the value will be increase in Negative (-). Let's make it from 0 to (-)222. After Any movement of any other Axis Y,Z this STEP 3 will be recorded.

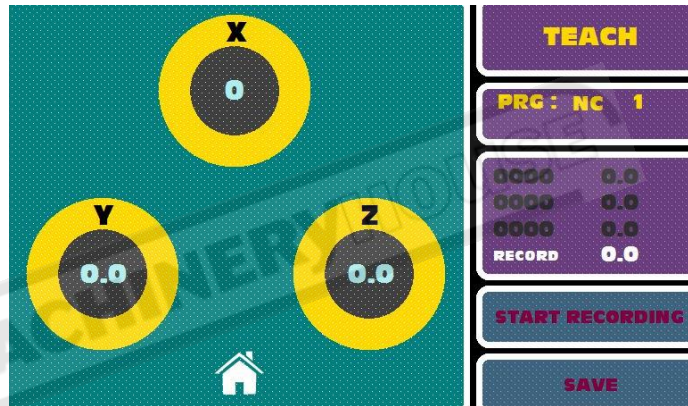
Note : *The AXIS movements will be seen only after moving a different axis and then the step will be recorded. If you move the same AXIS to left or right until you are sure for the position, it will not be recorded unless you use another Axis.*

Example Programme is recorded as follows :

```

01 Y 125.0
02 Z 75.0
03 X -222
04
    
```

After the Operator is satisfied with the FORM of the Material You can save the Program by pressing the “SAVE” button. And the Below Screen will appear.



Green **CHECK** symbol will finish the RECORD process and the program will be SAVED with NR. 1 and the NAME: AC



The red X mark will carry you to the previous screen so you can continue your program.

Program has been saved and ready to use anytime.

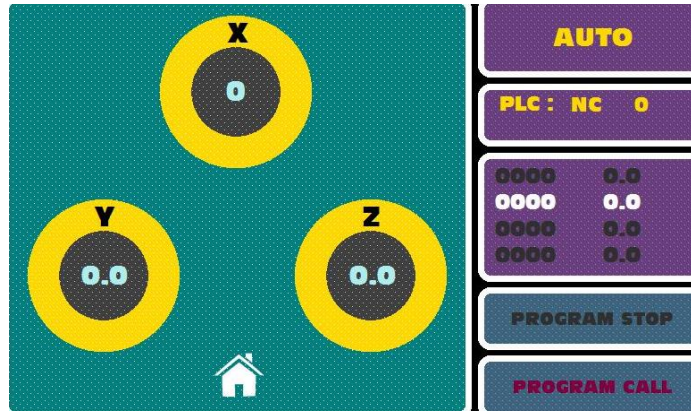
RECORD CANCEL

If the program shall be cancelled the “RECORD CANCEL” button can be pressed for 1 seconds. The program is not saved and the Program recording can go on. You can not reach the MAIN WINDOW without using this button if you want to cancel everything.

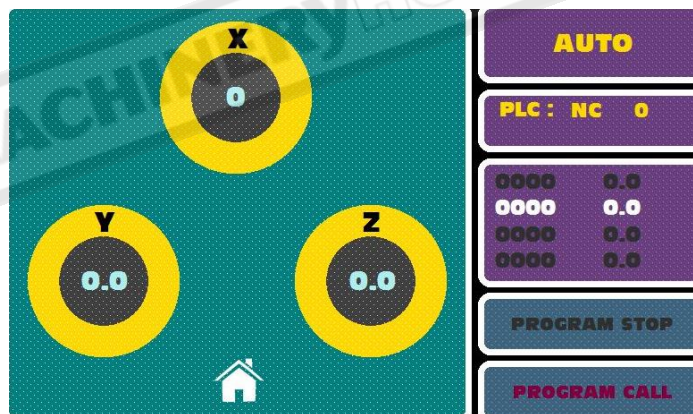
11 – AUTOMATIC MODE



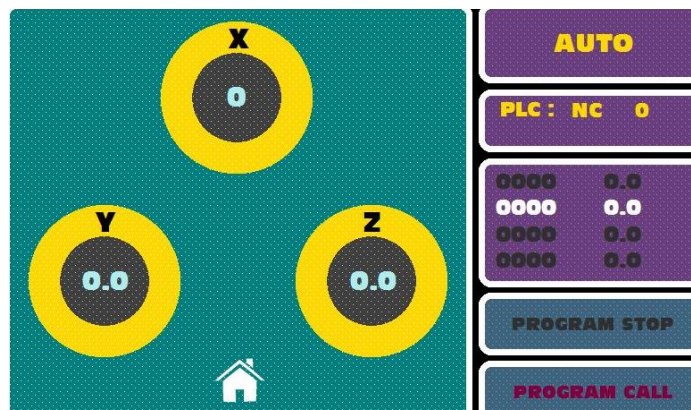
AUTO button will open the AUTOMATIC program screen when pressed on the Main Screen.



this **PROGRAM CALL** button must be pressed for 1 seconds long to access the Ready Saved Program list. After that the Following Screen gives you the access to find a program from the NC memory or from a USB flash disk.



You may select from the desired source “NC” or “USB” . On this case we will select the “NC” option and continue from the following page.



After the source is selected “LIST” option can be pressed to find the saved programm. In the “NC” list there will be for example 5 Programs which have been recorded before by the TEACH mode.



You may see the list and choose the desired program by pressing on the NAME on the screen. After selecting the program the STEP list will appear.



AC program will be seen more detailed. This Screen is asking for the last time to Enable this program or not.

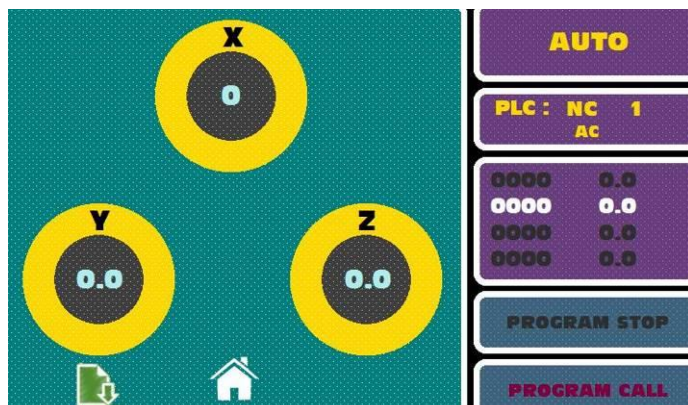


Green **CHECK** button will load the **NC** memory number **1** program



The Red X will cancel the loading and the Programs List will appear again.

After the green CHECK button the program the Programm will be loaded and the following screen will appear.



To be able to start the operation after the green CHEK on screen pressed, Use the **START** button on the Mobile console. And be sure it lights. After this the Programm will start to run starting from Step.1 in the programm.



To make the Program run after pressing the OK-check button, there will be an indicator flashing like this symbol. While this symbol is flashing the Programm will not Start even if you press the START button. After this symbol wanishes from the screen the START button on the mobile console will start the actual operation to run.

*To be able to start the automatic mode the **START** button has to be used to run the program properly. Although turning movements will begin turning axis (x) will not be seen on screen because 'tuning attachment' is stil at bottom position. Section to be bend will move forward till reach 'start sensor' then up movement for piston is starting. Here again use **START** buton to see the Program works step by step.*

In this section you can watch the operations step-by-step and the Active operation will in White color at the moment. The White color will move to the Next row after finishing the position of the roll which is moving at the moment.

In this section you can watch the operations step-by-step and the Active operation will in White color at the moment. The White color will move to the Next row after finishing the position of the roll which is moving at the moment.

PROGRAM STOP

This Button enables to Stop the program. (**PROGRAM STOP**) To be able to run from the point we stop, you can use the **START** button on the mobile control panel. After that The **PAUSE** indicator will flahs on the screen. Pushing this will actually put the Machine to its operation back again.



While running the “**RESET**” button on the mobile panel will also stop and pause the operation. The “**PAUSE**” indicator will flash on the screen. IF pressed on the **PAUSE** the Machine will continue its work.



***NC** will stop if there is a **HOLD** (**HLD**) command in the steps. And the **Pause** is on and off. In this case **Pause** button will again make it possible to go on with the programs future steps.*



This button enables you the 12 Step list to watch during the operation.



This button allows you to get back to the **PROGRAM** page. But First the **PROGRAM STOP** button shall be pressed. Other wise there is no possibility to get back to the previous screens.

! 010000 : AUTOMATIC PROGRAMME

**AUTOMATIC PROGRAM IS STILL ON.
DO YOU WANT TO CONTINUE ?**

If there is an electricity failure during an Automated process the Programme will stop. On that case when the machine is powered on this above message will appear. You can choose one of the following options.



*Green **CHECK** button will allow the program to continue from its last position.*



If you chose the red X the program will be disabled and you will not be able to continue the program.

MACHINERYHOUSE

12 – ABOUT :

If you push **ŞAHİNLER** logo you will see the page below. There are photographs of the machines in this page.



If you push once again on **ŞAHİNLER** logo you will see the page below. You can find system information, contact information for manufacturing company and machine information on this page.



If you push **ŞAHİNLER** logo on this page you will go back to main page.

13 – WARNING!!!

- 01 – *It is very important that you not change **PARAMETERS** if it is not obligatory.*
- 02 – *When you insert a **USB** to **NC** unit you may have some problems. If you turn the unit off and on again the problem will be solved.*
- 03 – *If the **NC** unit works slow turn it off and then on again.*
- 04 – *If you restore factory settings programmes that are written and saved will not be lost. Only parameters restored. Also if it is not obligatory you do not need to restore factory settings. If it is necessary you should do it as explained in **FACTORY SETTINGS** section.*
- 05 – *If you will not do **REFERENCE** for all the axes at the same time do not push **ALL REFERENCE** button. If it is necessary you should do it as explained in **REFERENCE** section.*
- 06 – *If it is not necessary you should not do **REFERENCE**. If it is necessary axes should be on the right position. It should be done as it is explained in **REFERENCE** section. Zorunlu bir durum olmadıkça **REFERANS** işlemi yapılmamalıdır.*
- 07 – *Calibration of **X** axis must be done very carefully. If it is not necessary you should not do it. If necessary do it as it is explained in **CALIBRATION** section.*
- 08 – *While the machine is working **LIMIT** should be **ON**. If it is taken to **OFF** position for an operation it should be taken to **ON** again after the operation. This process is explained in **LIMIT OFF/ON** section.*
- 09 – *You must pay attention to the **ALARM** and **LIMIT** error and warning messages. You can find the information about this in **ERROR** and **WARNING** section.*
- 10 – *You can find any other information in **USER'S MANUAL**.*

HAVE A NICE WORKING DAY