

User Manual

for Synchronized Press Brakes



CybTouch 12

Sept14
V3.1

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SAFETY

GENERAL SAFETY



The users must have **READ** and **UNDERSTOOD**, but most of all must **RESPECT** the directives described in this manual.

All people coming into contact with the machine on which the numerical control is installed, whatever their function or whatever state the machine is in (assembly, disassembly, start-up, production, maintenance, repairs) must have read and understood the requirements concerning the security and the entirety of the directives of operation described in the manuals delivered with the machine.



The operator must be properly trained to work with the machine on which the numerical control is installed. Improper use of the numerical control can cause heavy damage on equipment and/or injuries to people.

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Modification of machine parameters can cause important material damage or lead to irregular product quality.

Do not expose the numerical control to excessive humidity so as to avoid any risk of electrocution and any deterioration of the equipment.

Make sure the numerical control is disconnected from the mains power before carrying out any cleaning. Do not use liquids based on alcohol or ammoniac.

In case of malfunction of the numerical control, call a technician.

Do not expose the numerical control to direct sun rays or any other heat source.

Do not place the numerical control in the neighborhood of magnetic equipment such as transformers, motors or devices which generate interference (welding machines, etc.)

SIGNS AND ICONS APPEARING IN THIS MANUAL

While using this manual, you will come across the signs and icons represented here below: they are directly related to the safety and security of persons. Carefully follow this advice and inform others about it.

General warning



This warning sign appears in the manual whenever it is necessary to pay attention to rules, instructions or advice. The correct sequence of operations is to be followed in order to avoid damage to the machine.

Symbolizes a serious personnel danger

Information



This warning sign appears in this manual whenever an important information needs to be taken into consideration. Pay attention to this sign and follow the instructions given.

Settings



This sign appears in this manual whenever setting instructions are given. Pay attention to this sign and follow the sequence of instructions given.

Navigation



This icon appears in this manual to give navigation information, to give the path to the subject treated in the chapter.

GETTING STARTED WITH CybTOUCH 12

Depending on software evolutions and the press brake controlled by the CybTouch (configuration/capabilities), the present manual may not fully correspond to the CybTouch that you currently have. However, differences are only minor.



Touchscreens are pressure sensitive.

Do not press down hard on the screen.

Pressing hard on the screen will damage the display. Such damage is not covered by manufacturer warranty!



Do not use sharp and/or pointed objects (sheet metal, screwdriver, metal pen ball, etc.) to touch the screen; only use your fingers (with or without gloves on) or a plastic pen. Make sure that your gloves do not have metal particles encrusted in the finger tips as they may also damage the screen.


Take a few minutes to practice pressing gently on the screen, you will find that the screen is very reactive and it is pleasant to use.



GENERAL NAVIGATION



Menu Button


The Menu button  allows you to directly select (jump to) the desired screen. The content of the menu changes contextually.



Status Pages Zone

The Status pages zone gives access to the [Status page](#) (see page 5). This is really a zone that is active at any moment from any page (except the wizard's).

Screen Cleaning

To clean the screen while the CybTouch is on, touch the  button. Use only a damp and smooth cloth with soap or a neutral detergent.



NEVER use solvent, petrol, benzene, alcohols, etc.

STATUS PAGE

The Status page shows the status of all inputs and outputs and axes positions of the NC. This feature is very useful during setup or during phone service with a machine installed in the field.

This page is accessed from anywhere by pressing the [Status Pages Zone](#) (see page 4).

To exit the Status page, press on the arrow on the left.

Press arrow to exit Status Page

On the upper line, a cycle message may appear indicating the cycle phase the machine is executing

Machine status			
Y1 axis	0.00 mm	2:11 Y1 axis	0.00 V
Y2 axis	0.00 mm	2:13 Y2 axis	0.00 V
X axis	98.91 mm	3:11 X axis	0.00 V
R axis	198.84 mm	3:13 R axis	0.00 V
Digital inputs		6:13 Pressure	0.00 V
2:16	Permanent regulation	6:27	-10.00 V
2:17	Downward command	Digital outputs	
2:18	Upward command	2:2	---
2:19	Comm. HS-LS beam	2:3	Mach Ready
2:21	---	2:5	SP Beam
2:22	Stop	2:6	SN Beam
2:23	X index zone	2:8	LS Beam
2:24	---	2:9	Top dead center seq.
3:16	---	3:2	Safety point
3:17	---	3:3	End of bend
3:18	---	3:5	End of product
3:19	---	3:6	---
3:21	---	3:8	Enable X axis
3:22	---	3:9	Enable R axis
3:23	---	4:3	Crowning SP
3:24	---	4:4	Crowning SN
Analog inputs (V)		4:6	---
2:26	Crowning 5.00 V 1.12 mm	4:7	---
3:26	---	4:17	---
4:12	---	4:18	---
4:26	---	4:20	---
		4:21	---

07:44:25

STOP

USER PREFERENCES



(Menu Button) → Other menus → User preference

User preference 1

Language: EN English

Length units: mm

Show Y1-Y2 position values: no

Show page L-alpha num: yes

Show bent part: yes

Materials

BDC correction: 0.00 mm

12:57:56



User preference 2

Clear indexation

USB explorer: no

Default retraction: 30 mm

Set clock

Touchscreen calibration

Brightness: 100% Eco 20%

12:58:30



To exit the User Preference page, touch the button.

Language

To browse through the available languages, simply touch **Language** on the screen.

Available languages are:

- **EN** English.
- **BR** Brazil.
- **CN** 中文.
- **CZ** Český.
- **DE** Deutsch.
- **ES** Español.
- **FR** Français.
- **IT** Italiano.
- **NL** Nederlands.
- **TR** Türkçe.
- **TW** 台灣.



The list of available languages is subject to change and may increase over time.

Length Units

This parameter allows choosing between **mm**, **inch** and **none** for the length unit to be used in the CybTouch.



When **none** is selected, the units are millimeters.

Show Y1-Y2 position values

This function will display the Y1 and Y2 axes positions on the [Bend Numerical Page](#) (see [page 14](#)).

- When set to **no**, the position of axis Y1 is displayed during the beam's movements.
- When set to **yes1**, the positions of the beam's axes are displayed during the beam's movements.
- When set to **yes2**, the positions of the beam's axes are constantly displayed under the angle/beam's position line.

Show page L-alpha num

When set to **yes**, this parameter gives access to the [L-Alpha Mode](#) (see [page 27](#)). This button  is then displayed on the [TouchProfile Mode](#) page.

Show bent part

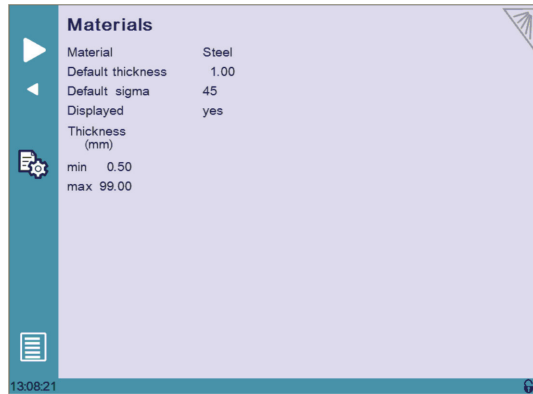
This parameter, when activated, lets the operator see the state of the part before and after the bend in the [Automatic Bend Sequencing \(optional\)](#) page.

Materials

Touching **Materials** opens the Materials page, where the default characteristics for each material can be changed, or a new material can be configured.



This page may not be available, depending on the machine parameters' configuration. To be allowed to access the Materials page, a level 2 password is required.



The Materials page displays:

- **Material:** Selected material (here **Steel**).
- **Default thickness** for the material.
- **Default sigma:** Default sigma for the material (here **45**).
- **Displayed:** If the material will be available to be selected for use (here **yes**).
- **Thickness min/max:** determines the maximum and minimum accepted thickness for the selected material.

Three predefined default materials are available (steel, stainless steel, aluminum), but others can be added.



To add a material:

1. Touch **Material** and select a non-configured material (Mater X) from the list.
2. Enter the new material's characteristics.
3. Touch the name (Mater X) to display the keyboard and enter the name of the new material.

BDC correction

This parameter allows the operator to apply a permanent correction to the Bottom Dead Center position.



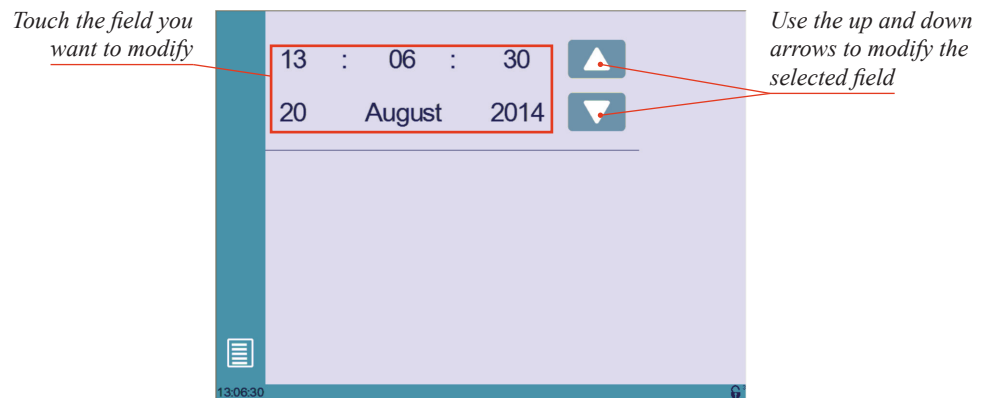
Please note that this correction is always applied and is NOT shown in the correction page. If you experience big differences from what you expect to get, maybe check the value of this parameter.

Clear indexation When activated, this function clears the index and the machine will search for them, as it does when turning the power on, allowing the operator to re-index its machine without turning it off.

USB Explorer When this parameter is set to **yes**, it is possible to browse the USB key from the USB transfer screen.

Default retraction This parameter allows defining the default value displayed in the [More Page](#) (see [page 14](#)) when activating the back gauge retraction function.

Set Clock Allows the user to set the time and date on the CybTouch.



Touchscreen Calibration As a tall operator will tend to touch higher than a smaller one on the screen, this function allows the calibration of the touch screen, and also makes sure that it is operating correctly.



SETTING INSTRUCTIONS:

Simply follow the instructions on the page to calibrate the touchscreen.



Use your finger or the plastic tip of a pen to calibrate the Touchscreen. Never use sharp objects as this will damage the screen.

Brightness xx%
Eco xx%

Here the brightness of the screen for normal mode and Eco mode can be defined:

1. Touch the mode for which you want to modify the brightness.
2. Use the buttons to set the brightness.

MANUAL AXES MOVEMENT

In the course of setting up a machine, it is sometimes necessary to be able to move the axes manually, for example when changing the tooling. This can be done on this page.



(Menu Button) → Other menus → Manual movement



SETTING INSTRUCTIONS:

1. Select the axis that you want to move:
 - for the back gauge X axis.
 - for the back gauge R axis.
 - for the crowning axis.
2. Touch the buttons to move the selected axis.
3. Use the foot switch (Low Speed Down movement) and this button (High Speed Up) to move the beam.

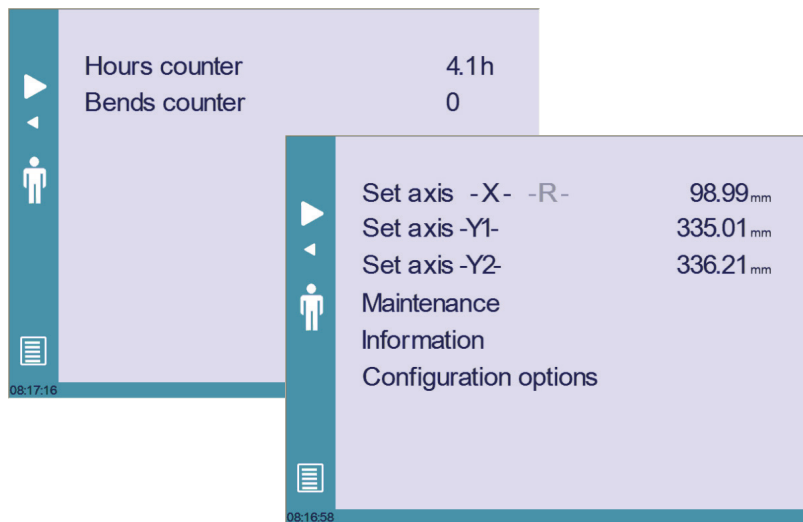
Desynchronized Beam

When the padlock is open , it is possible to select and move (Low Speed Down movement) Y1 or Y2 only. This is an easy way to return an unsynchronized beam back to parallel to the table.

SERVICE PAGE



(Menu Button) → Other menus → Service → Service



Set Axis

Allows the operator to manually adjust the position of the back gauge (axes X and R) and the beam (axes Y1 and Y2).



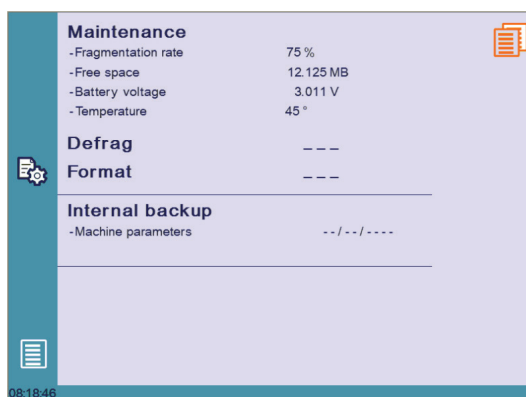
This function must be used with utter care and only by experienced personnel. Wrong settings may mechanically damage the machine. Settings are lost after indexing the machine.

Maintenance

The Maintenance page displays the hardware status of the CybTouch and lets the operator perform different maintenance actions.



(Menu Button) → Other menus → Service → Service → Maintenance



All the following actions require codes and should only be performed by technicians or upon request of a technician.

Defrag

This function will rearrange the memory space of the CybTouch. Simply touch it and follow the instructions given in the yellow pop-up window.

Format

This function will erase all data in the CybTouch. Only use this with the help of a technician.

Internal backup

This function is specially designed for OEM and support.

Usually a machine parameters' backup is made by the machine manufacturer or the company who services the machine. This backup allows a maintenance technician to restore original working parameters if necessary.

Should there be a need to restore parameters, call on a maintenance technician and follow his instructions.

Do not try to use this function unless you are in dire need.



Before using this last function, make sure that all your files have been transferred outside the CybTouch (see USB Transfer, page 13).

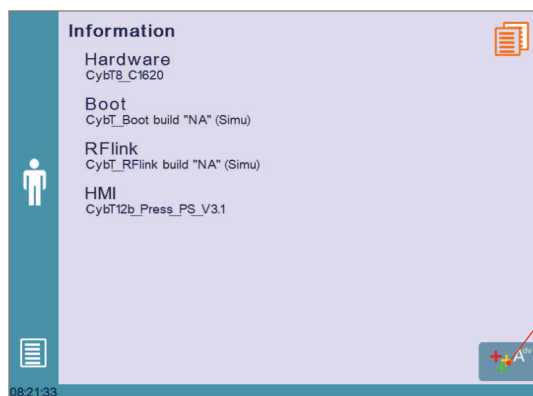
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Information

The Information page displays the names and versions of the softwares installed on the CybTouch. Pressing the Advanced button shows more detailed information.



(Menu Button) → Other menu → Service → Service → Information



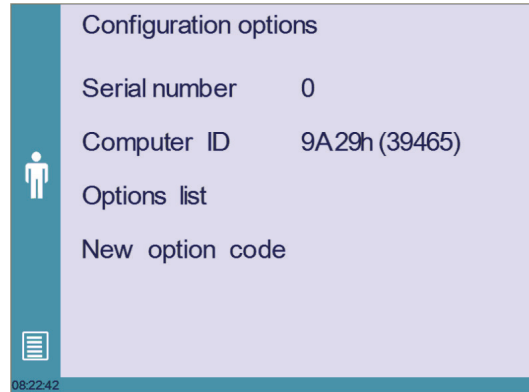
To Advanced information

Configuration options

Touching this menu opens the following page, where one can find the computer's identification and manage the machine's options.



(Menu Button) → Other menus → Service → Service → Configuration options



Serial number

This is the serial number of the CybTouch. It is entered at the factory at the end of the machine's initial setup and is related to the machine's option list.



Changing the serial number means that all the options installed on the machine can be lost.

Computer ID

This line displays an identification code that is unique to each CybTouch and guarantees, together with the serial number, a correct identification of the machine.

Option list

This function opens a yellow pop-up window where all the options installed on the CybTouch are displayed.

New option code

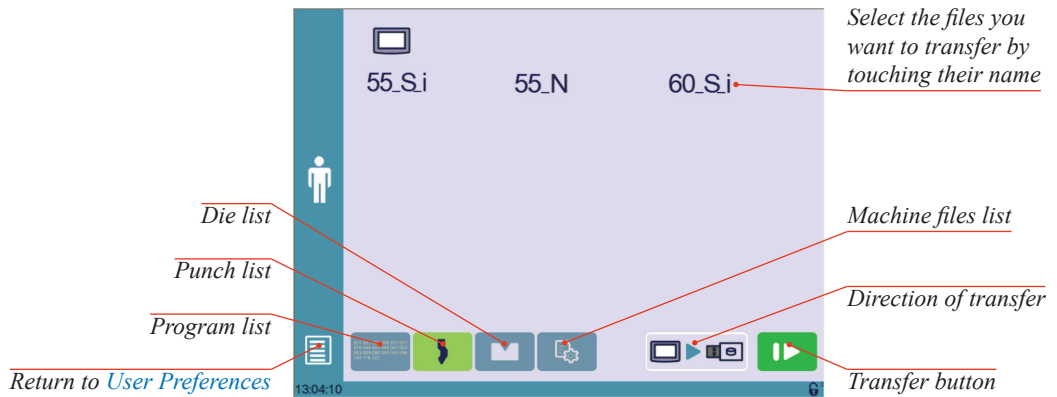
The function opens an alphanumerical pad where the code of the new option must be entered. The format of an option code is: ABC-DEF-GHI-JKLM

USB TRANSFER



(Menu Button) → Other menus → USB transfer

This function opens the USB transfer screen, which allows the operator to transfer data between the CybTouch and a USB key.



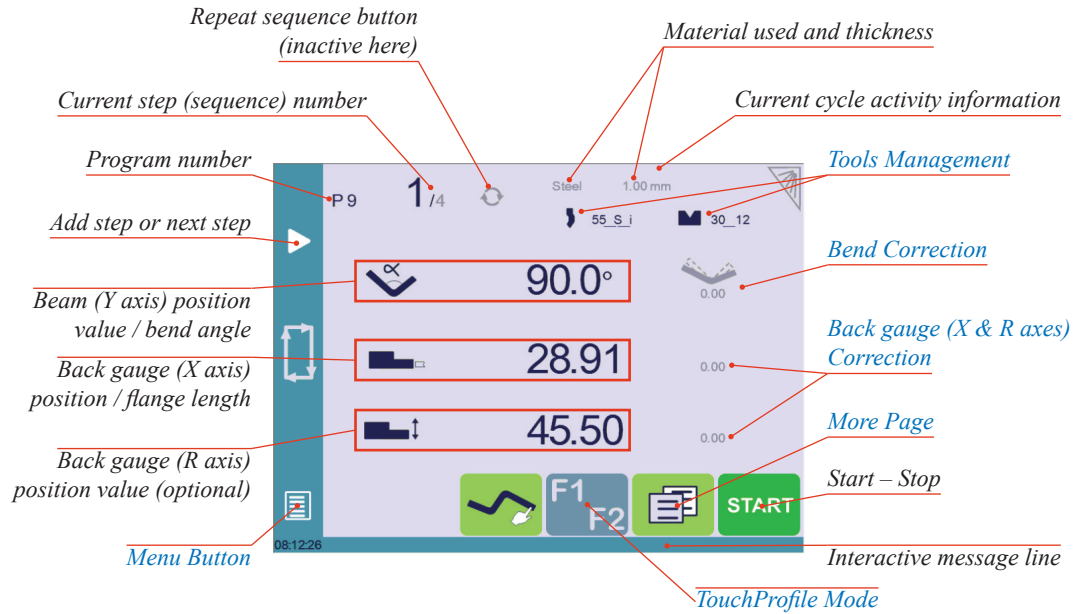
Importing parts from other Cybelec NCs

CybTouch 12 is delivered with Cybelec's off-line software PC1200, which controls most of the other numerical controls produced by Cybelec.

From version S1, PC1200 includes CybTouchConverter, which allows you to convert parts to the CybTouch format, and import them into your machine with the above mentioned function.

BASIC PAGE DESCRIPTION

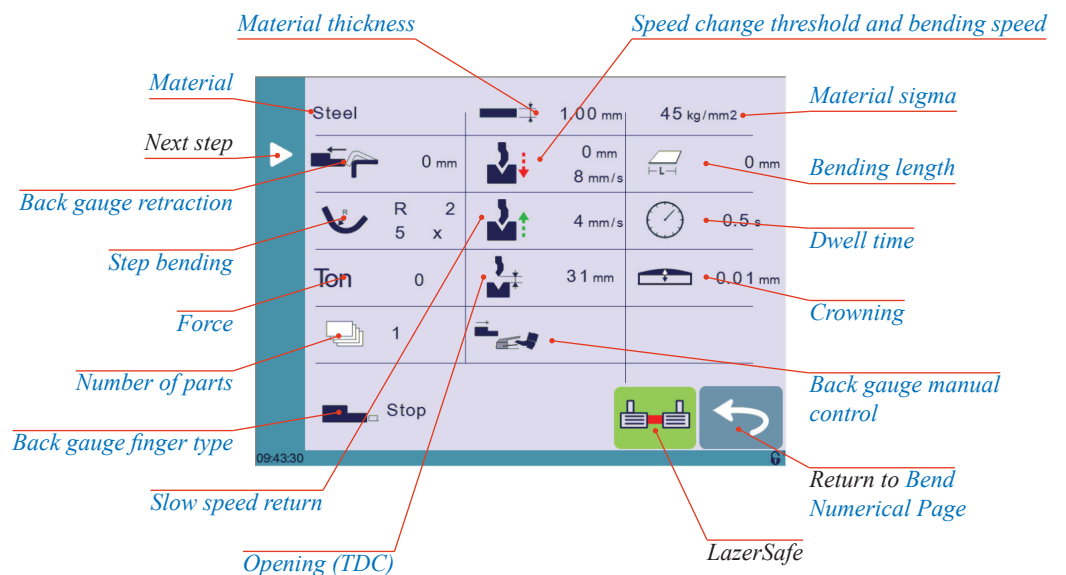
BEND NUMERICAL PAGE



MORE PAGE



Bend Numerical Page



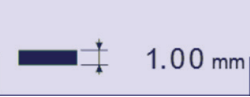
Available functions on the More page

The More page displays parameters related to the part, and depending on the CybTouch configuration and the type of action performed, it also displays various settings for the current bend.



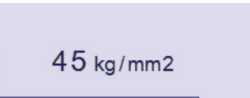
Material

This is not a sequence parameter, but of course a part parameter. Each touch on the material's name selects the next available from the list of [Materials \(see page 7\)](#).



Material thickness

The default thickness, defined in [Materials \(see page 7\)](#), is automatically displayed when changing material. It is however possible to change it simply by touching this icon. This is also of course a part parameter.



Material sigma

The default sigma, defined in [Materials \(see page 7\)](#), is automatically displayed when changing material. It is however possible to change it simply by touching this icon. This is also of course a part parameter.



Back gauge retraction

The back gauge retraction can be activated/deactivated at its [Default retraction \(see page 8\)](#) value using this icon. It is possible to modify the value by touching it. This is a sequence parameter, meaning it can be modified with each step of the program.



Speed change threshold and bending speed

The distance parameter allows the operator to increase the height of the speed change point. The speed parameter allows decreasing the bending speed from its maximum value defined in the machine parameters.



Bending length

This parameter defines the width of the sheet metal part that will be pinched between the tools. It is used to calculate the bending pressure.



If this parameter is not activated (gray), the CybTouch will not calculate the bending [Force](#) and the [Crowning](#).



Step bending

When a large radius bend has been programmed (see [L-Alpha Mode, page 27](#)), its parameters are displayed here. It is possible to modify them directly here.

Programming 99 x will automatically calculate the maximum possible step bends. The resulting value may be reduced. However, if it is increased over the maximum calculated value, the resulting radius and angle will be drastically affected.



The large radius bending function is deactivated when this field is grayed.



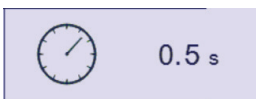
Slow speed return

This parameter allows slowing down the speed of the beam after the bend, and is generally used when the part has a long flange and the operator tries not to let it “fall down too fast”.

The beam will return at low speed up while the operator holds the foot pedal. It switches to high speed up when either the pedal is released or Pinch Point is reached, whichever comes first.



When this field is deactivated (grayed), the beam moves back up directly at HSU (High Speed Up).



Dwell time

Allows defining the duration of the dwell time, meaning the time during which the punch remains at BDC before coming back up.



When this field is deactivated (grayed), the default Dwell Time value defined in the machine parameters is applied.



Force

The force is automatically calculated by the CybTouch, according to the [Material](#), the [Material thickness](#), the [Material sigma](#) and the [Bending length](#). The value can also be manually modified here.



Opening (TDC)

For parts created with a profile (see [TouchProfile Mode](#) or [L-Alpha Mode](#)), this value is automatically calculated to allow the operator enough room to extract its bent part from between the tools. It is however possible to change it manually.

For part created manually (see [Numerical Mode](#)), this parameter uses the default minimum value defined in the machine parameters. It can however be programmed here. Creating a “New part” reinitializes it to its default value.



When this field is deactivated (grayed), the beam moves back all the way up to its maximum limit switch.



Crowning

The crowning function is activated here. It is automatically calculated, according to the [Material](#), the [Material thickness](#), the [Material sigma](#) and the [Bending length](#). If the crowning needs correction, use the [Crowning](#) (see page 29) function in the correction page.

The value can be manually changed by operator. It will however be automatically recalculated if any of the values used for its calculation is changed.



When the crowning function is deactivated (gray icon), the crowning system physically remains to its last position and does not automatically return to 0.0 mm. Keep that in mind when using this function – or not – between one sequence and the following.

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Back gauge finger type

The back gauge dimensions are defined in the machine parameters. This function allows browsing through the available support and stop positions of the back gauge. This function may be available, or not, according to the machine configuration.



Number of parts

The operator can enter here the total amount of parts to be produced. Every time all the sequences of the program are executed, hence a part is completed, this counter is decreased of one unit. When the amount of parts is reached, a yellow pop-up window signals it to the operator.



Back gauge manual control

Activating this parameter gives manual control over the back gauge movement. This means the operator must personally give the start to the back gauge movement, using for example the foot switch or the start button.

TOOLS MANAGEMENT

Tools management allows the creation and configuration on the CybTouch of the tools to be used on the machine. These tools are then taken into account in bend calculations.

Once a punch and die are created and selected, you can select the bend angle you require as well as the flange length (L). The CybTouch then calculates the positions for axes X and Y for the bend.

PUNCHES



Bend Numerical Page →

Punch mounting direction

Punch name 60_S_i

Browsing through existing punches

Basic punch data

α	60.0°
Height	175.00 mm
Radius	1.00 mm
Ton/m	100

Bottoming

Return to Bend Numerical Page

Basic shapes of the punch

Punch more specific data

Safety XS	12.00 mm		
X correction	0.00 mm		
L1	14.00	L8	15.00
L2	10.00		
L3	89.00		
L4	10.00		
L5	20.00		
L6	20.00		
L7	5.70		

Touch the punch to display its default shape, allowing an easier identification of the various dimensions



SETTING INSTRUCTIONS:

To select a punch, simply browse through the existing punches in your library using the arrows buttons, and then return to [Bend Numerical Page](#).

How to create or modify a punch?

If no punch is yet created, the punch will have no name (???) is displayed). If a punch already exists, then the last punch used will be selected, here **60_N** (modifications will not alter the existing punch as they will be saved under another name).



1. Touch the punch icon to access the punch details.
2. Enter the basic characteristics (α (punch angle), **Height**, **Radius** and **Ton/m**) for the new punch to be created.
3. Touch the button to invert the punch if necessary.
4. Select the or icon to define the tool as resistant for bottoming.
5. Touch the button to display the More page.
6. Select the punch type (straight, normal or gooseneck) with this icon .
7. Enter the more specific dimensions L1 to Lx by referring to the graphic representation on the right of the screen. Touching this image will display the default representation of the tool, making it easier to identify the various dimensions.



The dimensions L1 to Lx are the same as the ones used in PC 1200, DNC 880S, ModEva's. If you use the same tools, print them from PC1200 to easily program them in the CybTouch. Of course consider giving the same tools the same name.

8. Enter the following values:
 - **Safety XS:** Security distance between the tool and the back gauge for X axis.
 - **X correction:** If the punch is not perfectly aligned.
9. Return to previous page .



To be allowed to save a tool, a level 2 password is required.

10. Touch the punch name (here 60_S_i).
11. Touch **Save punch** to overwrite the existing tool or **Save punch as** if you want to save your tool under another name.
12. Enter the name of the new punch using the alphanumerical keypad.



We recommend that you follow the naming conventions explained in [Naming Tools \(see page 22\)](#).

13. Touching the button brings you back to the program page, with the punch you just saved being selected and ready to be used.

DIES



Bend Numerical Page →

Die mounting direction

Die name → 30_12

Browsing through existing dies →

Basic die data

Ve	12.00	(12.87)
α	86.0°	
Height	55.00 mm	
Radius	1.00 mm	
Ton/m	50	

Bottoming → 08:14:03

Return to Bend Numerical Page →

Die more specific data

Safety XS	7.00 mm		
Safety RS	4.00 mm		
Retr zone	0.00 mm		
L1	12.00	L6	15.00
L2	12.00	L7	10.00
L3	20.00	L8	30.00
L4	20.00	L9	30.00
L5	15.00		

Touch the die to display its default shape, allowing an easier identification of the various dimensions

10:20:10



SETTING INSTRUCTIONS:

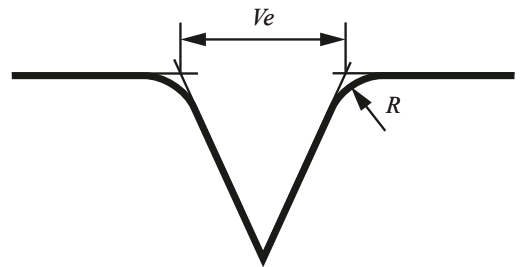
Selecting a die is the same as selecting a punch; simply browse through the existing dies in your library using the arrows buttons, and then return to [Bend Numerical Page](#).

How to create or modify a die?

If no die is yet created, the die will have no name (???) is displayed). If a die already exists, then the last one used will be selected, here 30_12 (modifications will not alter the existing die as they will be saved under another name).



1. Touch the die icon to access the die details.
2. Enter the basic characteristics (**Ve**, **α** (die angle), **Height**, **Radius** and **Ton/m**) for the new die to be created.
3. Touch the button to invert the die if necessary.
4. Select the or icon to define the tool as resistant for bottoming.
5. Touch the button to display the More page.
6. Enter the more specific dimensions L1 to Lx by referring to the graphic representation on the right of the screen. Touching this image will display the default representation of the tool, making it easier to identify the various dimensions.



The dimensions L1 to Lx are the same as the ones used in PC 1200, DNC 880S, ModEva's. If you use the same tools, print them from PC1200 to easily program them in the CybTouch. Of course consider giving the same tools the same name.

7. Enter the following values:
 - **Safety XS:** Security distance between the tool and the back gauge for X axis.
 - **Safety RS:** Security distance between the tool and the back gauge for R axis.
 - **Retr. zone:** Retraction zone.
8. Return to previous page .



To be allowed to save a tool, a level 2 password is required.

9. Touch the die name (here 30_12).
10. Touch **Save die** to overwrite the existing tool or **Save die as** if you want to save your tool under another name.
11. Enter the name of the new die using the alphanumerical keypad.



We recommend that you follow the naming conventions explained in [Naming Tools \(see page 22\)](#).

12. Touching the button brings you back to the program page, with the die you just saved being selected and ready to be used.

NAMING TOOLS

It is recommended that you use naming conventions for your tools.

Below you will find a simple convention allowing you to precisely identify a punch or die through its name.

Of course, depending on your needs you may need to create more rules for punch and die naming.

Punches

The name of the punch should be built in the following manner: first its angle, followed by its type, and then whether it is inverted or not.

PUNCH ANGLE (°)		PUNCH TYPE		INVERTED OR NOT
30		N = Normal		i = If inverted
60	-	S = Straight	-	
90		G = Gooseneck		

Following these rules, here are some examples of punch names: **90_N_i**, **60_G**, **30_S**, and so on, and so forth.

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Dies

The name of the die should be built in pretty much the same manner: first its width (Ve dimension), followed by its angle, and then whether it is inverted or not.

Ve (mm)		DIE ANGLE (°)		INVERTED OR NOT
12		30		i = If inverted
16	-	86	-	
20				

Following these rules, here are some examples of die names: **12_86_i**, **16_86**, **20_30**, and so on, and so forth.

CREATING A PART PROGRAM

There are three ways to create a program part: with the [TouchProfile Mode](#), with the [Numerical Mode](#) (see page 26), and with the [L-Alpha Mode](#) (see page 27).

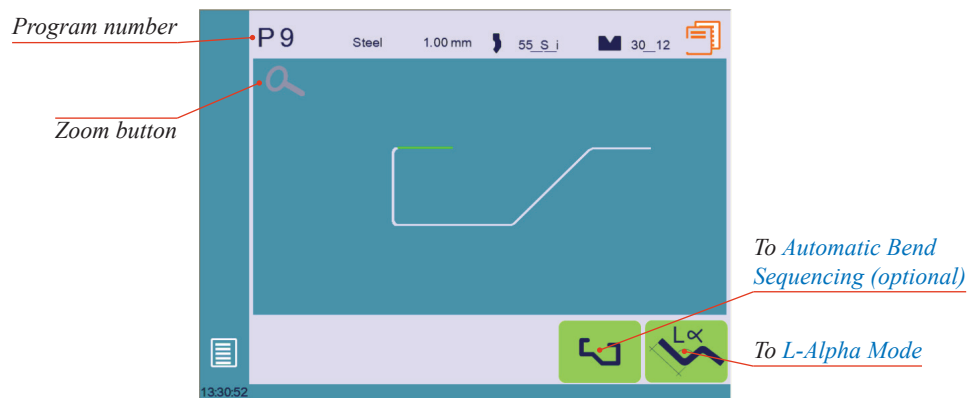


In this chapter the machine is considered operational: machine parameters, tools (see [Tools Management, page 18](#)), materials (see [Materials, page 7](#)), etc. are already configured and programmed.

TOUCHPROFILE MODE



Bend Numerical Page

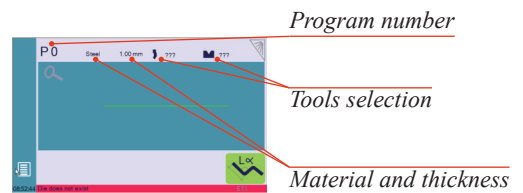


In this mode, the operator can very intuitively draw a profile directly on the screen.



SETTING INSTRUCTIONS:

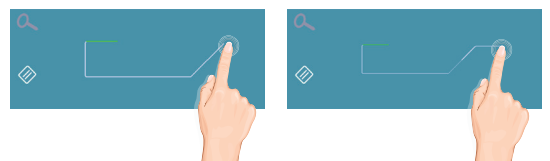
1. Touch the program number and select **New program** in the list.
2. First select the material, its thickness and the tools to be used for the part by touching their respective icons.



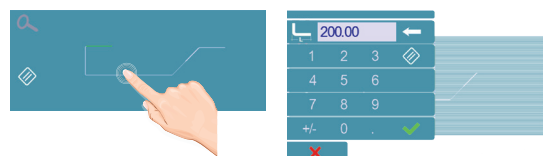
3. Draw the profile by touching the screen where you want to add a segment.





Touching this icon allows erasing the last segment added.



4. Touch on the middle of a segment to modify its value.



5. Touch on an angle to modify its value. Touching the  icon will open a yellow pop-up, in which it possible to:

- Activate (and deactivate) a special tool by touching its icon, and select it from a list by pressing .
- Change the value of the radius (see also [Step bending, page 16](#)) and define how many steps the NC will make to execute it.




Special tools

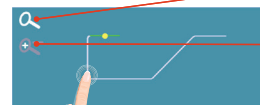
Maximum distance to ideal curve

Number of steps to execute the step bending

Large radius value




6. Should it prove difficult to select a particular segment or angle, it is possible to zoom on an area by touching this button  and then on the desired zone.




Activate/deactivate zoom

Toggle zoom in/zoom out



One can also choose to enter the length and angle values in the **L-Alpha Mode** page by pressing this  button.

7. Once all the segments and angles are adjusted, press this button  to access the [Automatic Bend Sequencing \(optional\)](#) (see page 24).

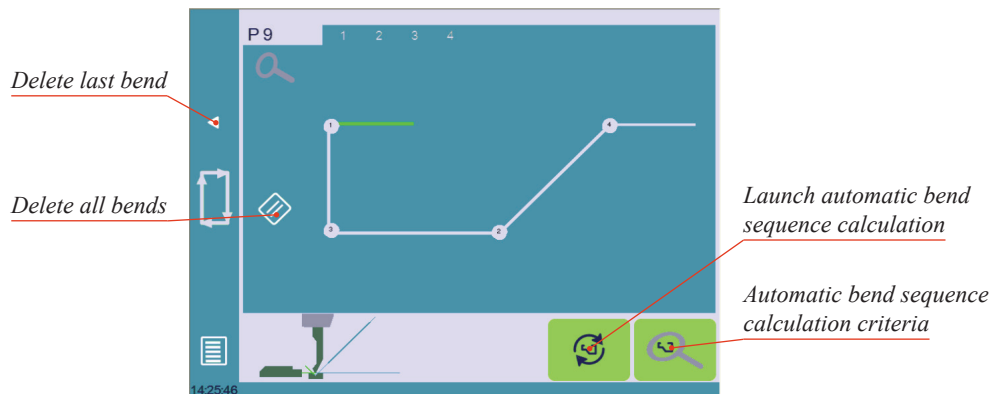
AUTOMATIC BEND SEQUENCING (OPTIONAL)




Bend Numerical Page



Once the shape of the part has been defined, the bending sequence for the part can be automatically determined by the CybTouch.



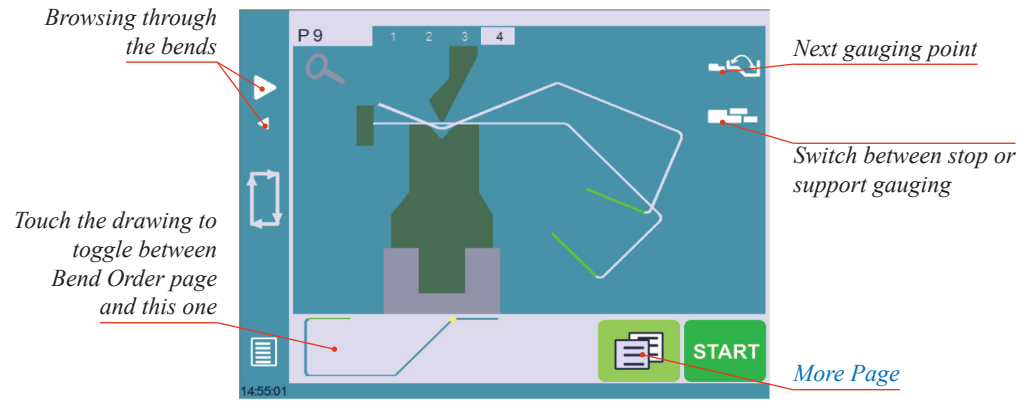
SETTING INSTRUCTIONS:

1. Simply touch the bend sequence calculation button . Once the sequence is calculated, the Bend 2D screen is displayed.
2. If the option is not installed, simply touch the bend in the order that you want them performed. A small number is displayed on the bend, indicating its position in the sequence.



Pressing the back button will erase the last bend in the sequence. If you wish to delete all bends, simply touch the button.

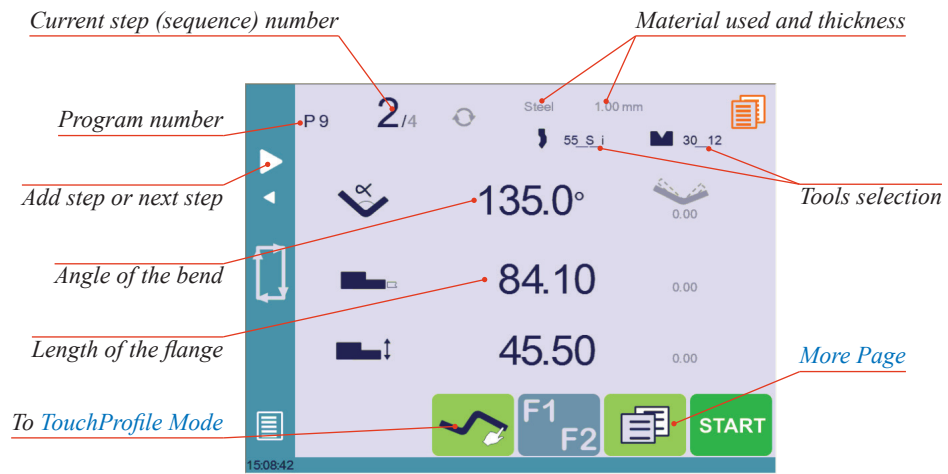
3. Immediately after determining the last bend to be selected, the Bend 2D screen here below is displayed.











4. In the Bend 2D page, the operator must determine the back gauge and part position for each bend, and if necessary the special parameters on the [More Page](#) (see [page 14](#)).
5. Press and select **Bend num page** to return to the [Bend Numerical Page](#).
6. Start the hydraulic pump motor (by pressing this button if available. It turns red when the motor is running the button becomes red).
7. Press the button to position the machine according to the data that were just entered.
8. When the machine is ready to bend, a button is displayed.
9. Press the foot switch to execute the bend.

NUMERICAL MODE

It is also possible to simply create a part program directly on the [Bend Numerical Page](#).



SETTING INSTRUCTIONS:

1. Touch the program number and select **New program** in the list.
2. First select the tools to be used for the part by touching their respective icons (see [Tools Management, page 18](#)).
3. Touch the material's name (here **Steel**). The [More Page](#) (see [page 14](#)) is displayed.
4. In the [More Page](#), select the [Material](#) used, enter the [Material thickness](#), the [Bending length](#), and other sequence parameters ([Opening \(TDC\)](#), [Slow speed return](#), etc.).
5. Touch the  button to return to the Bend Numerical page.
6. Touch the numerical value next to the angle icon , and enter the value for the first bend you wish to create (here **90°**).
7. Touch the numerical value next to the segment length icon , and enter the value for the first segment you wish to create (here **30.00 mm**).
8. Add the next bend to the program by touching .
9. Proceed in the same manner to create the other segments of the part.
10. Touch  to return to the first bend.
11. Start the hydraulic pump motor (by pressing this button  if available. It turns red when the motor is running the button becomes red).
12. Press the  button to position the machine according to the data that were just entered.
13. When the machine is ready to bend, a  button is displayed.
14. Press the foot switch to execute the bend.

L-ALPHA MODE



Bend Numerical Page →

	30.00	40.00	60.00	55.00	30.00
	90.0	90.0	135.0	-135.0	
N	1	2	3	4	5



This page is only available if user preference **Show page L-alpha num** (see page 6) is set to **yes**.

In this mode, the operator can define each step (length or angle) of a profile on a table.



SETTING INSTRUCTIONS:

1. Touch the program number, select **New program** in the list and press this button to access the L-alpha mode.
2. First select the material, its thickness and the tools to be used for the part by touching their respective icons.
3. Touch the first value in the table (here **200.00**). The window to the right is displayed.
4. Enter the value for the first segment's length and touch the button to add another step.




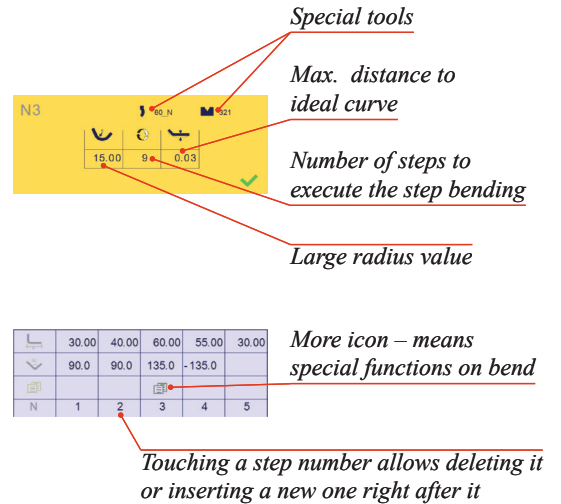
Click on OK when prompted to create new step.

5. Proceed in the same manner for all steps and angles of the profile.
6. If a bend needs special parameters (large radius, special tool), press in the more field of the corresponding sequence.



A special punch or /and die means there must be an additional working station.

7. A yellow pop-up is displayed, in which it is possible to:
 - Activate (and deactivate) a special tool by touching its icon, and select it from a list by pressing ???.
 - Change the value of the radius.
 - Define how many steps the NC will make to execute the step bending.
8. A small More icon shows that something special is programmed on the bend.
9. To remove the icon (and special parameters), return to the yellow pop-up, touch all the activated functions to make them turn gray, and select OK.
10. Once all the segments and angles are adjusted, press this button  to access the [Automatic Bend Sequencing \(optional\)](#) (see page 24).



BEND CORRECTION

All program corrections are made in the [Bend Numerical Page](#) (see page 14). Corrections can be made to:

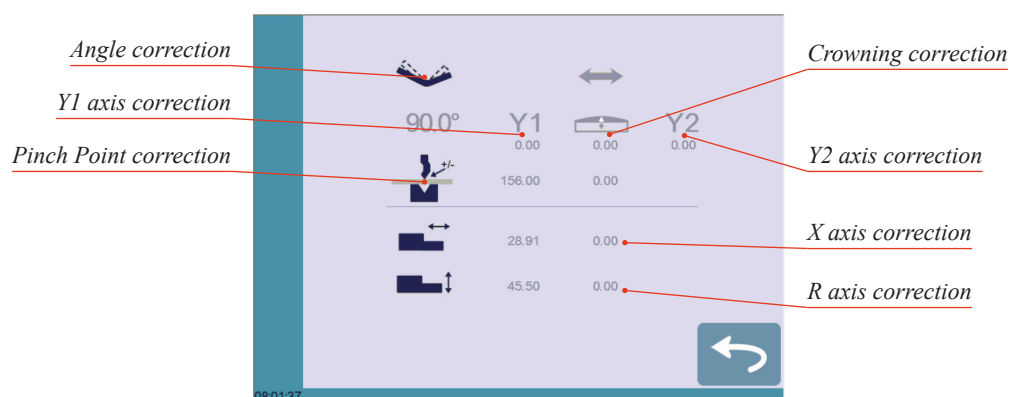
- The angle (Y1 + Y2, see [Angle Correction \(Y axis\)](#) and/or crowning if available, see [Crowning, page 29](#)),
- The back gauge position (X and R, if available), see [Back gauge \(X & R axes\) Correction, page 29](#).

Angle Correction (Y axis)

After physically measuring the angle, if corrections are to be made, they must be done on this page, and not directly in the program step.




[Bend Numerical Page](#) → 






SETTING INSTRUCTIONS:



1. Touch the angle correction  icon, and enter the physically measured value of the angle. The numerical control will automatically calculate the Y1 and Y2 axes corrections.



Reset corrections button





Pressing this  button will reset all angle corrections.

2. Depending on the position of the sheet metal in the press, it may be necessary to fine-tune the beam's corrections. It is possible by simply touching this  or this  icons, and entering the desired values.

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Crowning

3. Corrections to the crowning value can be made by touching this icon .
4. The numerical control automatically calculates the Pinch Point height. If it needs correction, it can be done by touching this icon .



The grayed value next to the Pinch Point correction icon is the value calculated by the numerical control, and thus the value onto which the correction will be applied.

Back gauge (X & R axes) Correction

5. Touching this icon  allows applying a correction to the back gauge X axis position.
6. Touching this icon  allows applying a correction to the back gauge R axis position.



The grayed values next to the back gauge correction icons are the value calculated by the numerical control, and thus the values onto which the corrections will be applied.

The back gauge positions corrections can also directly be made on the [Bend Numerical Page](#) (see page 14).




Back gauge (X axis) position correction value

Back gauge (Y axis) height correction value

SAVING AND LOADING A PROGRAM

SAVING A PROGRAM

After creating a program, an operator can save the program in order to use it again:

1. In the [Bend Numerical Page](#), touch the [Program number](#) (e.g. **P0**).
2. Touch **Save program**.
3. Enter the number you wish to give to the program (e.g. **1** for **P1**), followed by .
4. The program is now called P1 and is saved in the CybTouch.


LOADING A PROGRAM

To call (load) a program:

1. In the [Bend Numerical Page](#), touch the [Program number](#) (ex: **P1**).
2. Touch **Call program**.
3. Select the program to be loaded from the list (e.g. **002** for **P2**).
4. The selected program (**P2**) is then loaded into the work memory and is ready to be used.

DELETING A PROGRAM

To delete a program:

1. In the [Bend Numerical Page](#), touch the [Program number](#) (ex: **P1**).
2. Touch **Delete program**.
3. Select from the list the program to be deleted.
4. Touch  to confirm.

EASYBEND PAGE



(Menu Button) → EasyBend



The EasyBend page is used for individual bends, for example when an external worker needs to interrupt production just to make a single bend (usually with the same tools).



The program currently being used for production is only temporarily interrupted (no need to save it) when switching to the EasyBend page, and then resumed again when returning to the program page (Menu Button → Current program).

MAKING A BEND ON THE EASYBEND PAGE



See [Basic Page Description, page 14](#) for more information on the different controls on the EasyBend page.



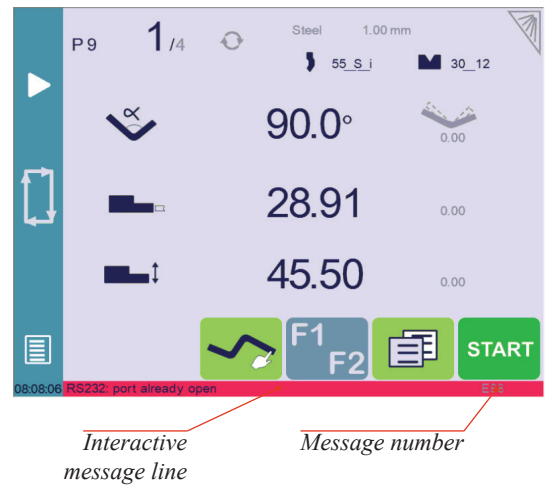
SETTING INSTRUCTIONS:

1. Touch the material's name (here **Steel**). The [More Page \(see page 14\)](#) is displayed. Select the [Material \(see page 15\)](#) used, enter the [Material thickness](#) and the [Bending length](#).
2. Touch one of the tool's icon (or) to select a punch or die. To learn how to configure tools, please refer to section [Tools Management, page 18](#).
3. Enter the angle for the first bend you wish to create (here **90°**).
4. Enter the flange's length (here **100.00 mm**).
5. Enter the back gauge height value (here **34.00 mm**)
6. Press this button to go to the [More Page \(see page 14\)](#) and enter the eventually required extra data for the bend.
7. Start the hydraulic pump motor (by pressing this button if available. It turns red when the motor is running the button becomes red).
8. Press the button to position the machine according to the data that were just entered.
9. When the machine is ready to bend, a button is displayed.
10. Press the foot switch to execute the bend.

ERROR AND WARNING MESSAGES


Following is a list of warning and error messages which may be displayed on the interactive message line of the CybTouch. There are two types of messages:


- **Warning Messages**, which are displayed on a green background. They are information or instructions that will disappear automatically.
- **Error Messages** (machine or NC errors), which are displayed on a red background. They inform the user of an error occurring on the machine or NC, and sometimes require intervention by the end user or a technician.




When reporting error messages, please **ALWAYS** indicate the error number at the end of the line. This number also refers to the first column in the section below.

WARNING MESSAGES

MSG NR.	MESSAGE	DESCRIPTION
W01	Not implemented	This message is displayed when a function is in development but not yet fully implemented.
W02	Ignore	This message appears when the desired action makes no sense, like for example clearing the indexation when the indexation was not made.
W03	Code accepted	This message is displayed when the correct password has been entered.
W04	Please press 2 seconds	This message reminds the operator to keep the start pump button  pressed for 2 seconds.
W05	The pump is on	This message appears after the pump starting cycle has been correctly executed.
W06	The pump is off	This message indicates that the pump has been stopped.
W07	Select at least one bend	This message is displayed when the operator tries to go to the Bend 2D screen from the Bend Order screen before defining the first bend of the sequence (see Automatic Bend Sequencing (optional) , page 24).
W08	Touch OK to continue	Indicates that a validation is required to continue.
W09	Step n°	This message appears in the More Page (see page 14), it indicates the step sequence number when browsing through the program's steps.
W10	Cycle in progress	While this message is displayed, the machine cycle is in progress and the screen is locked, except for the Stop button.
W11	Machine is indexed	Indicates the indexation cycle was successful.
W12	Identification OK	In the Axis Wizard, indicates the identification cycle was successful.

MSG NR.	MESSAGE	DESCRIPTION
W13	Touch the zoom center	When the zoom function  is activated, indicates that the HMI will zoom around the next touch on the screen.
W14	Touch to create a new segment	When creating a new part in the TouchProfile Mode (see page 23), this message reminds the operator to touch the screen to create a part's segment.
W15	Touch one length or angle to start the profile	When creating a new part in the L-Alpha Mode (see page 27), reminds the operator to touch the table to begin creating a part.
W16	Eco mode	This message appears when the Eco mode starts, after the timer defined in the machine parameters is over.
W17	Enter the measured angle	This message is displayed when the operator must enter the physically measured angle value in the Bend Correction page.
W18	Empty field	Operator did not enter a value.
W19	24V I/O power on	24V to the inputs/outputs is now available.
W20	Please select a field	This message is displayed when trying to set the time (see Set Clock, page 8) and no field (minute, seconds, etc.) has been selected.
W21	Set seconds	In the Set Clock (see page 8) page, when the corresponding field is selected, indicates that it can be set using the up and down arrows.
W22	Set minutes	
W23	Set hour	
W24	Set day	
W25	Set month	
W26	Set year	
W27	Touch the small graphic to toggle screen	This message appears once at the beginning of the bend manual sequencing, telling the operator that he can toggle from the Bend Order page to the Bend 2D page simply by touching the graphic at the bottom of the screen (see Automatic Bend Sequencing (optional), page 24).
W29	End of list	This message is displayed when reaching the end of the list in one of the different menus  .
W30	Serial number from 100'000 thru 231'071	This message appears only when entering the serial number. It indicates the range of the number to be entered. Attention, this operation is normally done at the factory, with a serial number is related to the options installed on the machine. Do not change it!
W31	New option code	When installing a new option in the Service Page (see page 10).
W32	Data entry in progress	Operation impossible: data entry in progress. Wait until the data is entered to try again.
W33	Indexation in progress	Operation impossible: indexation in progress. Wait until the indexation is finished to try again.
W34	RFLink disconnected	When the RFLink connection to a laptop has been shut down from the latter.
W35	Access not allowed	Operator needs another level password.
W36	Beam not at TDC, move beam up	
W37	Moving direction has been inverted	Wizard message: Rotary direction of the motor has been changed.
W38	Counting direction has been inverted	Wizard message: Counting direction of the axis has been changed.

MSG NR.	MESSAGE	DESCRIPTION
W39	Moving and counting directions have inverted	Wizard message: Both the rotary direction of the motor and the counting have been changed.
W40	OK	Indicates a cycle or operation has properly ended.
W41	No movement executed	Axis Wizard message: Operator pressed  but no movement was made.
W42	Enter next measured angle	When using double or triple angle measurement, tells the operator to enter the next measured value.
W43	OK, correction done	Appears when an angle correction has been entered and applied.
W45	Enter unlock interface password	This message is displayed when parameter P02.04 Level 0 Lock HMI is set to yes and the screen is touched.
W46	Enter password level 1 or greater	This message is displayed when a password of level 1 or higher is needed to execute a specific operation.
W47	Enter password level 3	This message is displayed when a password of level 3 or higher is needed to execute a specific operation.
W48	Enter new password	These messages are displayed when changing passwords.
W49	Confirm new password	
W50	Enter password for backup	This message is displayed when trying to create a backup.
W51	Enter password for restore	This message is displayed when trying to restore a backup.
W52	Enter password for init	This message appears on the page displayed after the system crashed (soft or hardware problem), when the operator tries to format the machine.
W53	Enter password for delete all backups	This message is displayed when trying to delete all backups.

ERROR MESSAGES

MSG NR.	MESSAGE	DESCRIPTION
E02	Pump motor off	The pump motor needs to be on for the sequence to start.
E03	Buffer Full	The part-program memory is full, you cannot add another sequence.
E04	Code refused	The level code to access the selected page is not correct. Try again or ask for it if you do not have it.
E05	File not compatible	The loaded part-program is incompatible with the NC. This part should be deleted.
E06	Machine parameter file problem	This file is corrupt and cannot be saved. Try to restart the NC. If the problem persists, format the memory.
E07	Machine parameters not compatible, please format data	This message appears when a software update has been made over a much older version and the parameters are no longer compatible. It can also appear if the uploaded parameters (with RFlink) are much older or newer than the current software version and they are not be compatible. A new start up of the machine must be made. Contact your dealer.
E08	Lismisc File not compatible	Information message, which will disappear when restarting the NC.
E09	Save program problem	This file is corrupt and cannot be saved. Try to restart the NC. If the problem persists, format the memory.
E10	File not found []	A file is missing and the code indicates which one. Call Cybelec with this code to know which file is missing.
E11	Write to file problem	This file is corrupt and cannot be saved. Try to restart the NC. If the problem persists, format the memory.
E12	X under minimum limit	Operator entered a value under the limit, or a memorized value in the program is under the limit. The wrong value flashes and must be corrected.
E13	X over maximum limit	Operator entered a value over the limit, or a memorized value in the program is over the limit. The wrong value flashes and must be corrected.
E14	Fw SetVar Error []	May occur when a feature is configured, but the dedicated input/output is not configured. Usually this is solved by loading the default input/output configuration (see the machine parameters).
E15	Bottoming not allowed	This message is displayed when a bottoming sequence is programmed and bottoming is not allowed with either one of the tools.
E16	Fw Axes Error [] ...	Axis manager error. The number gives more information. Most common errors are described in messages E55 to E68 . If other error numbers are listed, please send conditions of problem, traces and parameters to the Cybelec Technical support for assistance.
E17	Programming error	Machine parameters incorrectly configured, the error page is displayed.
E18	No Backgauge defined	All the back gauges programmed in Machine Parameters have none selected for mode. Select at least one mode other than none.
E19	Quantity = 0	When pressing start, the programmed amount of parts to be made is '0'. See Number of parts, page 17 for more information.
E20	Cycle repeat = 0	Cannot start cycle because repeat cycle function is set to "0".

MSG NR.	MESSAGE	DESCRIPTION
E21	No material defined (define one or more in MP)	No materials programmed in the Material pages (in User preferences). A material must be selected to perform calculations.
E24	Identification Error []	During the Axis Wizard, there was an error identifying one of the axes. The error number (typically E55, E56 or E57) gives more information. See also message E16.
E25	No FAST task running []	Switch OFF the machine for 1 min and restart it again.
E26	NULL pointer to axis struct.	This message indicates a software bug. Write it all down and contact Cybelec.
E27	MUTEX Error []	This message indicates a software bug. Write it all down and contact Cybelec.
E28	I/O no 24V or overload (output in safety off)	The 24V power supply for the inputs/outputs is no longer present or an output is overloaded. Reset any safety device on the machine, check protection grids and rear guards are closed, etc. If the problem persists, switch machine OFF for 3 min and restart it again. If the problem still persists, check the machine manual and/or ask a service technician to check your machine.
E29	Radio link error, code []	The RLink chip has detected an error. Check the environment for disturbances (cell phone, wi-fi) and that the material works properly. If the problem persists, write the error number down and send it Cybelec.
E30	Touchscreen error, code []	Please contact your machine dealer with this specific code and details.
E31	"Crowning" analog input not configured	While configuring (setting up) the NC, the Crowning dedicated input was not configured but is requested to run properly.
E32	"Crowning" analog output not configured	While configuring (setting up) the NC, the Crowning dedicated outputs were not configured but are requested to run properly.
E33	Syntax error in XML file	This file is corrupt and cannot be used. Try to restart the NC. If the file is a part-program, try to delete it.
E34	Memory allocation problem (xml)	There was a problem while trying to read a file in the memory. The file is probably corrupted. The number gives more information, write it down.
E35	Endless loop on process task	Process error. Please restart the NC and inform your dealer.
E37	WARNING: Overloop intern	This error should normally never happen on the machine. It means there are too many elements in a coded list.
E38	Unknown key	There is a list of known screen zones, and the pressed zone is not in it. This error can normally not happen in the field.
E39	"Start" input refused	The start command is not accepted in this page/situation.
E40	R under minimum limit	The programmed position value for axis R is below the value of the minimum limit switch position.
E41	Thickness smaller than min	The thickness entered for the material is below the minimum value defined in the User Preferences (see Materials, page 7).
E42	Thickness greater than max	The thickness entered for the material is above the maximum value defined in the User Preferences (see Materials, page 7).
E43	Configuration error	Input/output incorrectly configured in machine parameters, the error input/output page is displayed. Check for unauthorized doubled output or inputs. This message can also be displayed if the chosen configuration requires more icons on the first page than there room available.
E44	"External stop" input is active	External stop may be caused by safety devices, emergency buttons, rear protection guards, etc. See machine instructions.

MSG NR.	MESSAGE	DESCRIPTION
E45	Error: backgauge "rest" mode and retract	It is not allowed to program a Back gauge retraction (see page 15) with a support type of back gauge finger.
E46	"Pressure" analog output not configured	While configuring (setting up) the NC, dedicated input or output are not configured but are requested to run properly.
E47	R over maximum limit	The programed position value for axis R is above the value of the maximum limit switch position.
E48	Stop doesn't exist	This error means the operator is trying to make a bend without a back gauge or with a back gauge whose mode is none. Select a valid back gauge.
E50	Value out of limit	This message is displayed when the value the operator is trying to be program is bigger than the maximum authorized value.
E51	Error[][][]...	Internal management error. Write the error's codes down and the software's number (see Information, page 11) and call Cybelec.
E52	Punch does not exist	This message is displayed when trying to create a new part before having selected a punch in the list (see Punches, page 18).
E53	Die does not exist	This message is displayed when trying to create a new part before having selected a die in the list (see Dies, page 20).
E55	Identification Error 1 (No motion detected)	No motion detected. Should not happen if you started the Wizard from the beginning. If the error remains, check limit switches, drive, wiring, etc.
E56	Identification Error 2 (Not enough oscillations)	Not enough oscillations Increase the identification time. See machine parameters manual.
E57	Identification Error 3 (Amplitude of the oscillation)	Oscillation amplitude. Increase the identification voltage. See machine parameters manual.
E58	Fw Axes Error 32 [Trajectory tracking error]	This is a regulator error. The axis could not follow its trajectory. This may be due to high friction, resistance or an obstacle on the axis movement. This may also be a drive problem. Call a technician.
E59	Fw Axes Error 311 [MaxSpeed too high !]	Max speed or encoder resolution too high.
E60	Fw Axes Error 312 [MaxSpeed too small !]	Max speed or encoder resolution too low.
E61	Fw Axes Error 313 [Acceleration too small or MaxSpeed too high !]	Acceleration too low (mm/s ²) or max speed too high. This needs to be corrected. Please note that acceleration is not a ramp distance.
E62	Fw Axes Error 314 [Acceleration too high or MaxSpeed too small !]	Acceleration too high (mm/s ²) or max speed too low. This needs to be corrected.
E66	Fw Axes Error 33 [Maximum voltage time exceeded (10V)]	This is a regulator error. The axis could not follow its trajectory. This may be due to higher friction, resistance or an obstacle on the axis movement. It may also be a drive problem. Call a technician.
E67	Fw Axes Error 39 [Speed tracking error]	This is a regulator error. The axis could not follow its trajectory. It may be due to higher friction, resistance or an obstacle on the axis movement. It may also be a drive problem. Call a technician.
E68	Fw Axes Error 316 [MinPosition or MaxPosition outside limit !]	Axis position counter is out of max or min limit. Verify physical axis position and set the axis counter accordingly.

MSG NR.	MESSAGE	DESCRIPTION
E69	The machine is not indexed ! No limit	Before the machine is indexed, the NC doesn't know where the axes are. In manual page, movements are authorized but the electronic stroke limits are not activated. Operator is responsible for stopping axis movement before mechanical limit is reached.
E70	Progr. angle is smaller than the die angle	The programmed angle is smaller than the die angle. Change die.
E71	Progr. angle is smaller than the punch angle	The programmed angle is smaller than the punch angle. Change punch.
E72	Depth safety	The calculated angle causes the punch, material, and die to collide and approach coining mode. Operator must confirm to proceed.
E73	Collision backgauge-tool	This message appears to warn that, with the parameters cannot be entered as such, for they would cause a collision between the back gauge and the tools. Check your parameters' values.
E74	Beam error No [][]	
E75	Beam: static gains not found	
E76	Error in the parameter beam (you must correct it before continuing)	
E77	Error in the sequence parameter (you must correct it before continuing)	
E78	RS232: parity error	
E79	RS232: overrun	
E80	RS232: framing	
E81	RS232: noise	
E82	PCSS event No xx	
E83	PCSS error time out	
E84	PCSS error checksum	
E85	PCSS error buffer rec to small	
E86	File access error	There was an error when trying to access a file while programming an option. Make sure that the code was entered properly. If it is not working try and restart the NC. If the problem persists, contact Cybelec.
E87	Unknown error	An unknown error occurred while trying to program an option. Contact Cybelec.
E88	RS232: port already open	
E89	Solution not found	This message indicates that the bending sequence automatic search did not find any solution. Try to create the bending sequence manually. If not possible, it means that this part is not feasible on this machine.