

VisiTouch

Series



© 2020 Cybelec S.A. All

Rights Reserved

Copying, reproduction, modification, distribution, display or transmission of any of the contents of this manual for any purpose without the prior consent of Cybelec S.A. is strictly prohibited.

Table of Contents

Safety	6
General Safety	6
Signs and Icons appearing in this Manual	7
General warning	7
Information	7
Settings	7
Navigation	7
Getting started with VisiTouch	8
Screen Map	9
Screen Map (continued)	10
General navigation	11
Menu Button	11
Status Page Zone	11
Screen Cleaning	11
Status page	12
User Preferences	12
Language	13
Length Units	13
Force Units	13
Force / Length Units	13
Sigma Units	13
Show axes position values	14
Show bent part	14
Materials	14
BDC Correction	15
Menu horizontal alignment	15
Menu vertical alignment	15
Clear indexation	16
USB Explorer	16
Beam trace	16
Auto open beam trace	16
Default retraction	16
Set Clock	16
Touchscreen Calibration	17

Offset Pinch Point function.....	17
Show button up	17
Show L first	17
Beam stop during retraction	17
Manual Axes Movement	18
Desynchronized Beam	18
Linked axis	18
Information Page	19
USB Transfer	20
Precautions.....	20
Importing parts from PC program	20
Basic Page Description.....	21
Bend Numerical Page	21
Available functions on the Bend Num page	21
Quick access tab	23
User button tab	23
Extra Bending Parameters	24
Copy to All Function	28
Tools Management.....	29
Punches	29
How to create or modify a punch?	30
Dies	31
How to create or modify a die?	32
Naming Tools	33
Punches	33
Dies	33
Creating a Part Program	34
TouchProfile Mode	34
Bend Sequencing	35
Numerical Mode.....	37
L-Alpha Mode	38
Bending and Corrections	39
Semi-Automatic mode.....	39
Angle Correction (Y axis).....	40
Crowning.....	40
Back gauge Correction	41
Managing Programs.....	42

Saving a Program	42
Creating a Program.....	42
Loading a Program.....	43
Deleting a Program.....	43
Beam Error Messages.....	44
Resources	45
Tutorials - Videos.....	45

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.



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

Do not expose the numerical control to excessive humidity 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 neighbourhood 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 VISITOUCH

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



This manual describes all features of

- VisiTouch19_Press_PS_PC_V1.11.7 and above.



Touchscreens are pressure sensitive.

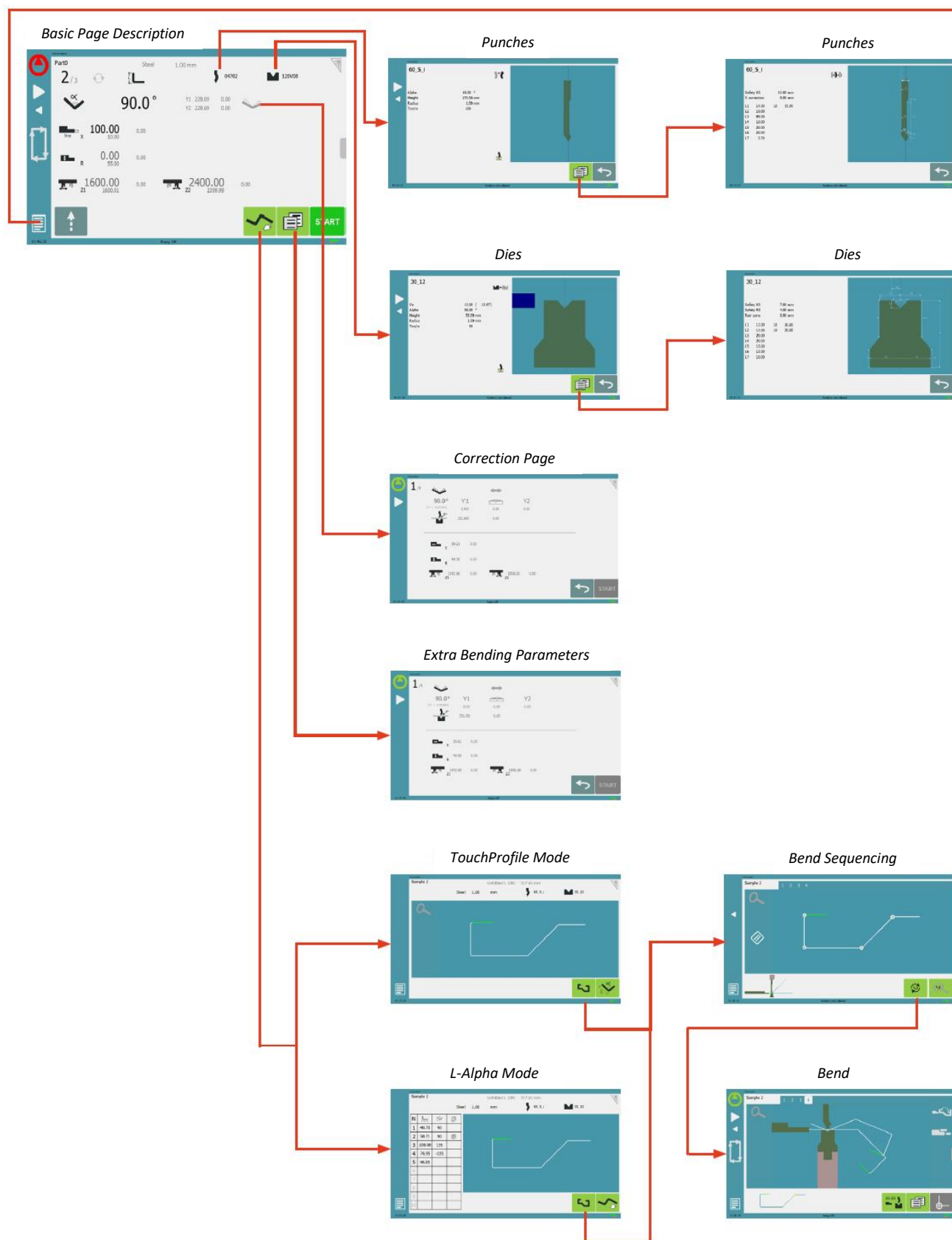
Do not press down hard on the screen.

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

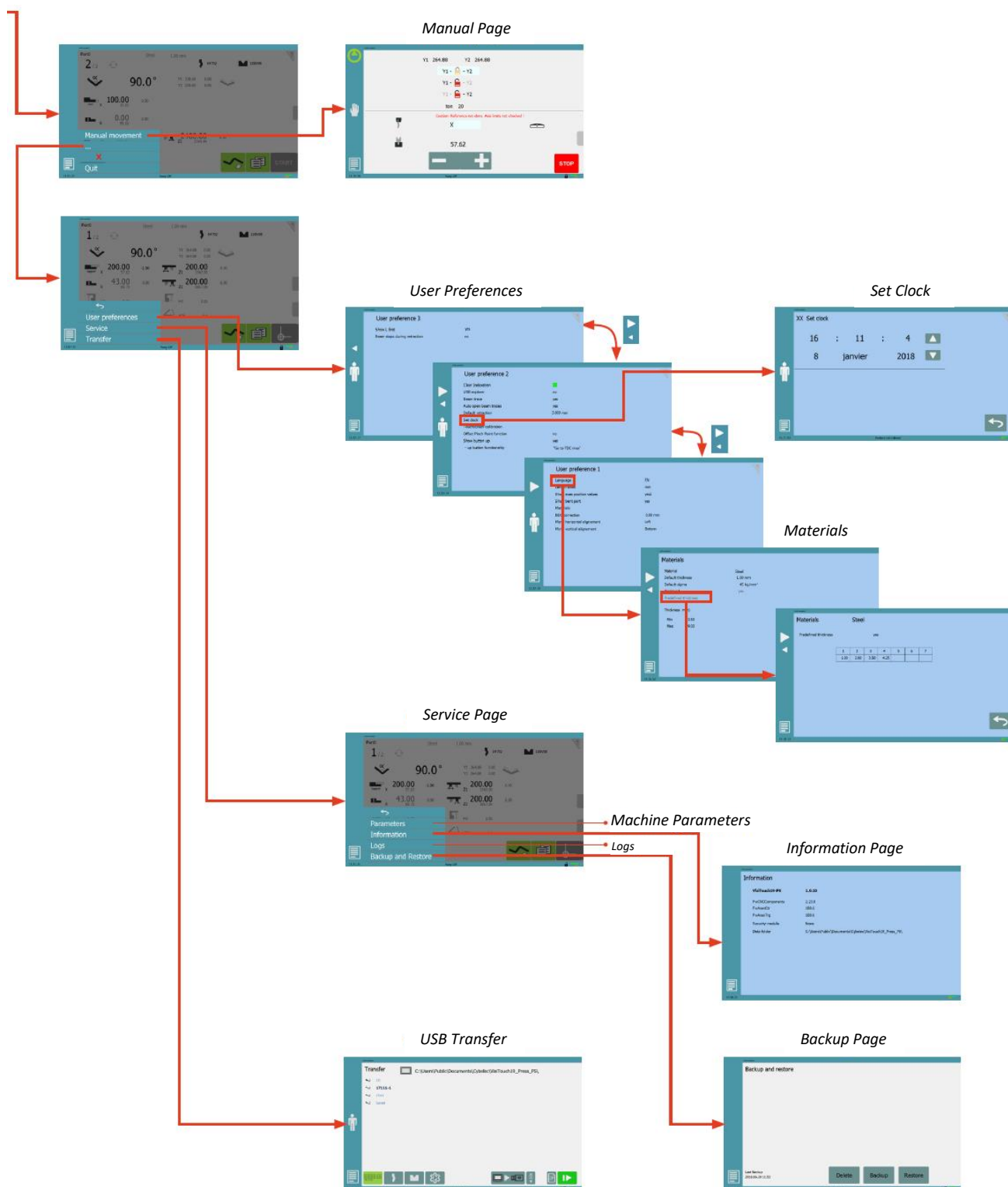
Do not use sharp and/or pointed objects (sheet metal, screwdriver, metal pen ball, etc.) to touch the screen; only use your fingers (with or without gloves on) or a plastic pen. Make sure that your gloves do not have metal particles encrusted in the fingertips as they may also damage the screen.

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.

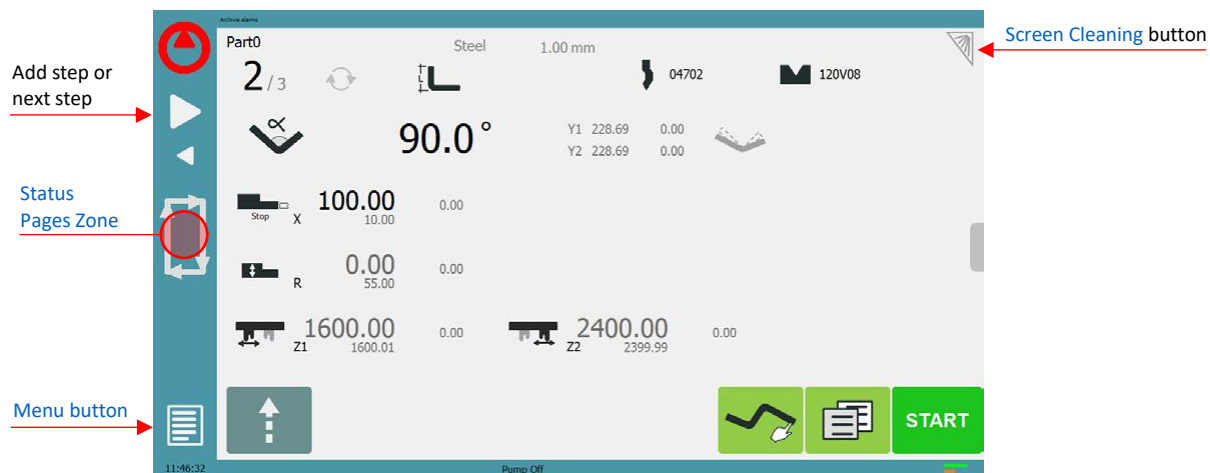
SCREEN MAP




SCREEN MAP (CONTINUED)

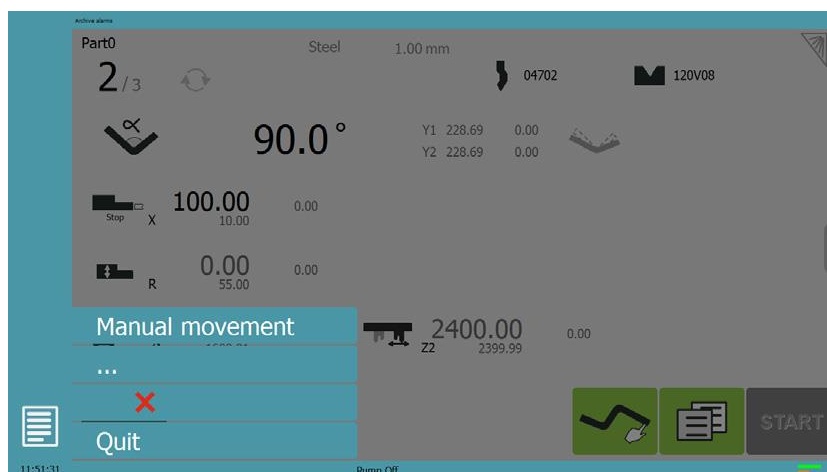


GENERAL NAVIGATION



Menu Button

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




Status Page Zone

Briefly touching the Status pages zone gives access to the [Status page](#). This is really a zone that is active at any moment from any page.



Touching this zone for more than 2 seconds will activate the [Semi-Automatic mode](#).

Screen Cleaning

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



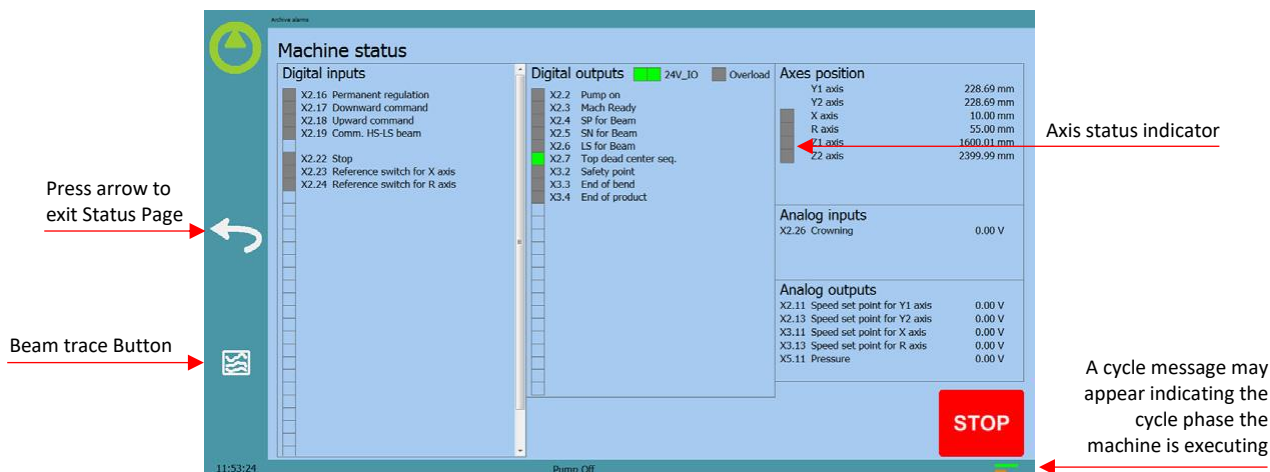
NEVER use solvent, petrol, benzene, alcohols, etc.

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](#).

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



Axes have specific indicators. Their colour indicates the position of the axis relative to the tolerance.

Possible states are:


-  : Device not active and in the tolerance.
-  : Device moving.
-  : Device not active and outside of the tolerance.

USER PREFERENCES



(Menu Button) → ... → User preference



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.
- **FI** Suomi.
- **FR** Français.
- **IT** Italiano.
- **NL** Nederlands.
- **PL** Polski.
- **PT** Português.
- **RU** Русский.
- **SL** Slovensko.
- **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 VisiTouch.

When **none** is selected, the units used are millimetres.

Force Units

This parameter allows choosing between **ton**, **kN** and **tons** for the force unit to be used in the VisiTouch.

Force / Length Units

This parameter allows choosing between **ton/m**, **kN/m** and **tons/ft** for the force/length unit to be used in the VisiTouch.

Sigma Units

This parameter allows choosing between **kg/mm²**, **N/mm²** and **psi (*1000)** for the sigma unit to be used in the VisiTouch.

Show axes position values

This function will display the axes positions on the [Bend Numerical Page](#).

- When set to **no**, the position of axes Y1, X and R is displayed during the beam's movements.
- When set to **yes1**, the positions of the axes (Y1, Y2, X and R) are displayed during their respective movements.
- When set to **yes2**, the positions of the axes (Y1, Y2, X and R) are constantly displayed under their respective set-point values.

Show bent part

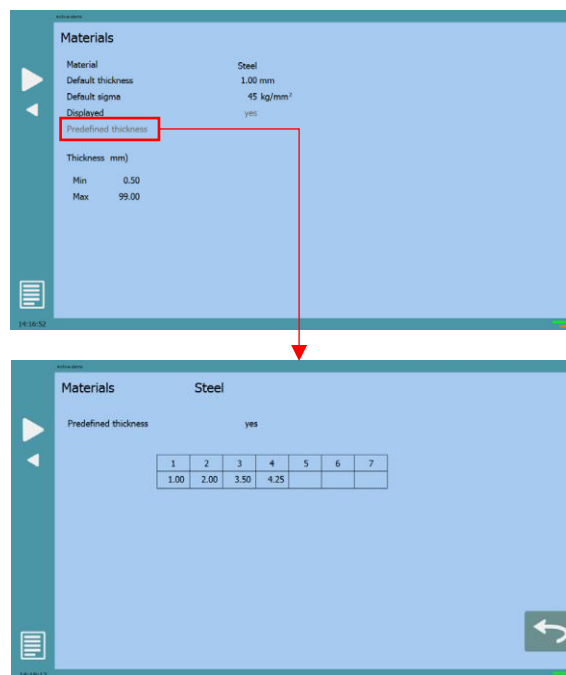
This parameter, when activated, lets the operator see the state of the part before and after the bend in the [Bend Sequencing](#) page.

Materials

Touching [Materials](#) opens the Materials page, where the default characteristics for each material can be changed, or a new material can be configured.



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**).

- **Predefined thickn.:** Allows defining up to 7 different predefined thicknesses for the selected material.
- **Thickness min/max:** Determines the maximum and minimum accepted thickness for the selected material.

Three predefined default materials are available (steel, stainless steel, aluminium), 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 Centre 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.

Menu horizontal alignment

This parameter allows the operator to choose on which side – **Left** of **Right** – he prefers to have the side bar containing the **Menu Button** .

Menu vertical alignment

This parameter allows the operator to choose if he prefers to have the menu displayed at the **Bottom** or at the **Top** of the screen when he presses the **Menu Button** .

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 (see [USB Transfer](#)).

A USB key must be inserted.



Preferably use a specific USB key for transferring parts and VisiTouch Data instead to use a generic memory stick full of data programs that are not relevant for the numerical control.

Beam trace

When this parameter is set to **yes**, this small button  is displayed on the [Status page](#). By activating/deactivating it, one can start and stop the recording of beam traces.

Auto open beam trace

When activated, this function will open the beam trace screen automatically at the end of the recording.

Default retraction

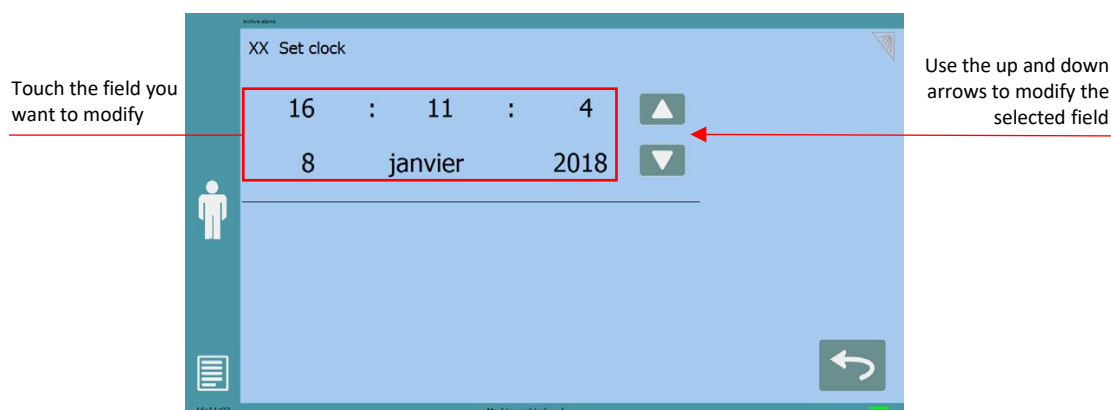
This parameter allows defining the default value displayed in the [Extra Bending Parameters](#) when activating the back-gauge retraction function.



In [TouchProfile Mode](#), when a retraction is necessary, the numerical control will automatically calculate and activate the function. The calculated value can naturally be manually modified.

Set Clock

Allows the user to set the time and date on the VisiTouch.



Touchscreen Calibration

This function allows the calibration of the touch screen.



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.

Offset Pinch Point function

When this parameter is set to **yes**, the **Offset Pinch Point** function is available in the **Extra Bending Parameters**.



Show button up

When this parameter is set to **yes**, the button up  is available when the beam is not at TDC.

Upward command
Go to TDC max
Go to next TDC

The beam goes up as long as the button is pressed.
The beam goes to TDC max
The beam goes to the next TDC. (first to programmed TDC, then to the TDC max)


Show L first

This function allows choosing the data entry mode for the back gauge on the **Bend Numerical Page** or **EasyBend Page**. When set to **yes**, the length of the flange icon  is displayed by default. When set to no, the icon for the position in mm of the back gauge  is displayed.

When set to **never**, the position of the back gauge is no longer linked to the bending angle, i.e. the position is never recalculated when the bending angle is modified.



The default value for this preference is **never**. Note that completely formatting the machine will reset this preference to its default value.

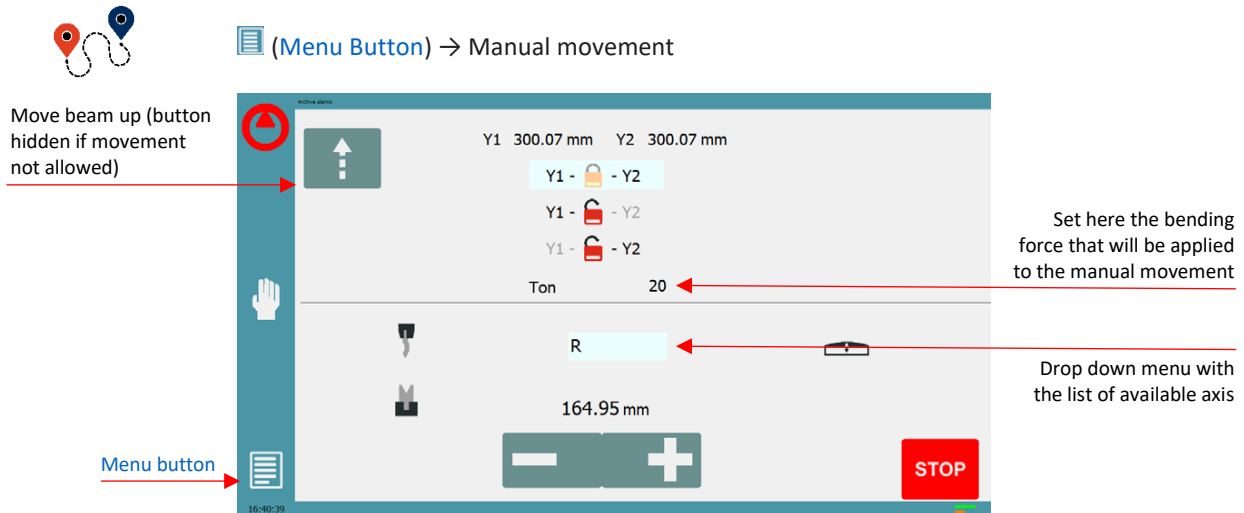
The  mode is not available for graphical parts (see also **Set point back gauge (X axis) / flange length**).

Beam stop during retraction







When this parameter is set to **yes**, the down movement of the beam is stopped and the beam is maintained in closed loop at pinch point during the retraction. The beam cycle will resume as soon as the back gauge has finished its retraction.

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.




SETTING INSTRUCTIONS:

- Select the axis that you want to move:
 - by selecting the desired axis from the drop down menu.
 - by selecting this icon  for the crowning axis.
 -  or  for the tool clamping devices (if available).
- Touch the   buttons to move the selected axis.
- Use the foot switch (Low Speed Down movement) and this button  (High Speed Up) to move the beam.

Desynchronized Beam

By selecting a line where 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.


Linked axis

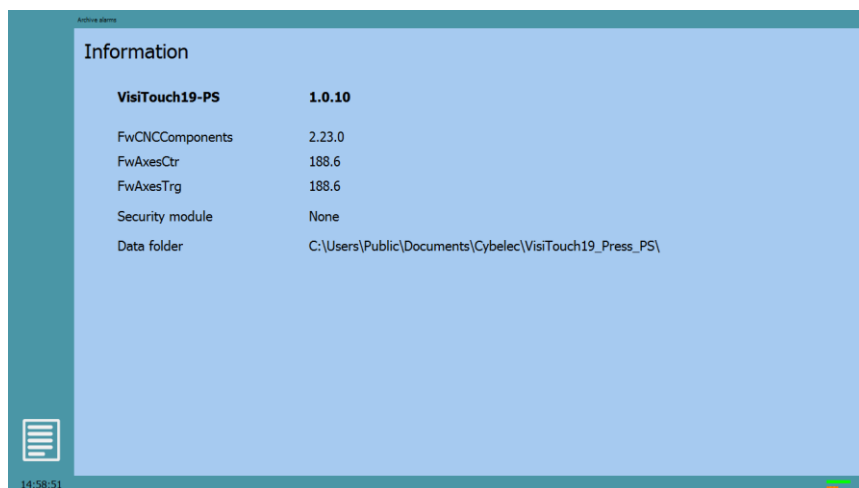
Depending on the configuration of the machine, a padlock can be displayed next to the axes selected. This means that the movements of these axes are interlocked. In a similar fashion as here above, when the padlock is open , it is possible to select and move a single axis.

INFORMATION PAGE

The Information page displays the names and versions of the software installed on the VisiTouch.



 (Menu Button) → ... → Service → Information

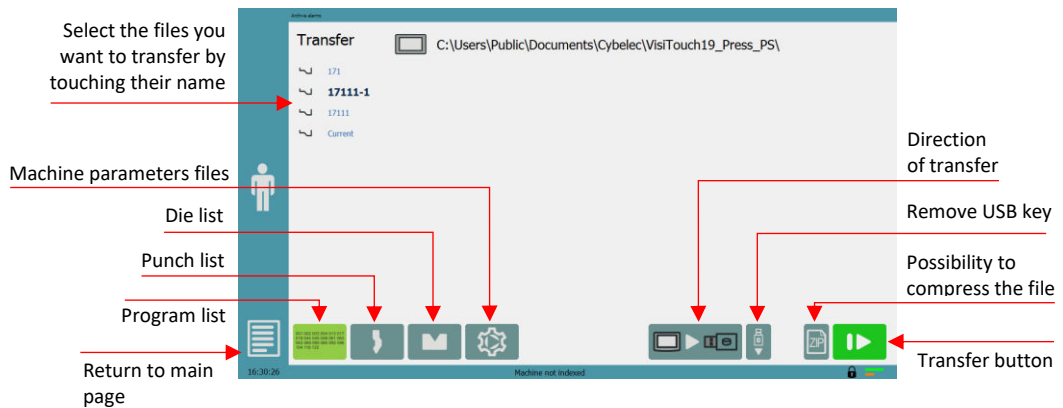


USB TRANSFER



 (Menu Button) → Other menus → USB transfer

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



Copying parameters from USB to NC requests a level 3 password or, for end- users, the restore password.

Precautions

For a smooth transfer, please take the following precautions into consideration:

- The USB port of the VisiTouch is meant to be used only with a storage media of the "Memory stick" type.
- The port is a standard USB 2.0 port, USB 1.1 compatible.
- USB 3.0 key that are USB 2.0 compatible, should normally work. There's however no guarantee, as it depends of the firmware of these new keys.
- CD and external HDD are not accepted.
- Although unlikely, it is possible to find a USB key that is not compatible with the VisiTouch. If so, try with another one.

3 rules for a fast and easy transfer:



- Use a USB key dedicated to files transfer with the VisiTouch.
- Less files means a faster transfer.
- The file's path on the key is limited to 255 characters.

Importing parts from PC program

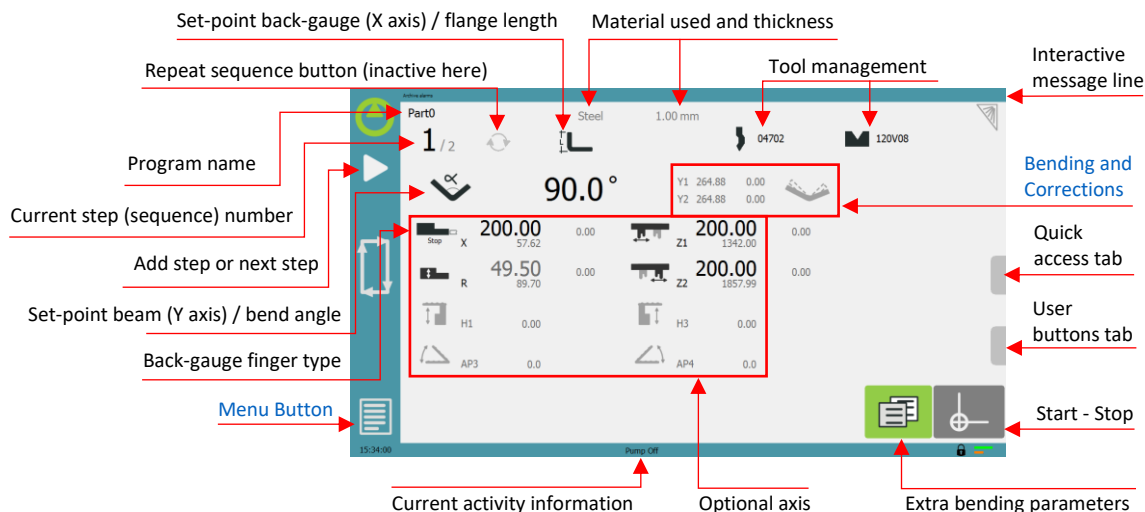
PC VisiTouch is the offline software which has the same features as the controller. It is possible to transfer parts or tools from one to another.



PC VisiTouch is available as an option, please contact the machine manufacturer if you would like to purchase it.

BASIC PAGE DESCRIPTION

BEND NUMERICAL PAGE



Available functions on the Bend Num page

The Bend Numerical Page is normally the working page, from which the bends are executed, and most of the navigation originates from and leads to.

Program name

Part0

Touching the program name allows creating a new one, saving it and more. See [Managing Programs](#) for more information.

Current step (sequence) number

2 / 3

Touching the step number will open a yellow pop-up window as shown here, with 3 different actions to choose from:

- **Insert step:** this function will insert a step after the current one.
- **Delete step:** this function will erase the current step.
- **Go to step:** this function allows jumping directly to the desired step.



The **Insert step** and **Delete step** functions cannot be used on parts created with the **TouchProfile Mode**.



Set-point beam (Y axis) / bend angle

The VisiTouch has three different modes to manage the Y axis. Touching one of the icons on the left allows going from one mode to another. The three modes are:



In this mode, the operator simply enters the desired angle and the VisiTouch will calculate the position at which the beam will stop (BDC).



In this mode, the operator can see the calculated target of the angle. It is possible to change the value.



This is the bottoming mode. When the beam stops, or when the target value is reached, the bending cycle continues (dwell time, return). When activated, the calculated bottoming value is displayed in grey. It is however possible to modify this value, which will then be displayed in black. It can only be used if both the tools accept bottoming (see [Punches](#) and [Dies](#)).



Set-point back gauge (X axis) / flange length

The VisiTouch has two different modes to manage the back-gauge X axis. Touching one of the icons on the left allows going from one mode to another. The two modes are:



When activated, the operator simply enters the desired length for the flange and the VisiTouch will calculate the position for the back gauge X axis. This mode is only available when programming a part with the [Numerical Mode](#).



When deactivated, the operator enters the targeted position for the back gauge X axis.



This is the relative mode. The back gauge makes a relative movement of the value entered. When the value entered is negative, the back gauge moves in the operator's direction.

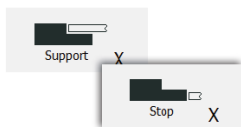


The relative mode is activated/deactivated by pressing the back-gauge icon for 2 seconds.

Relative movement is not possible on the first sequence (neither on Easy Bend) or on graphical parts.



User Preference [Show L first](#) allows choosing which mode is displayed by default first.




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.

Optional axes

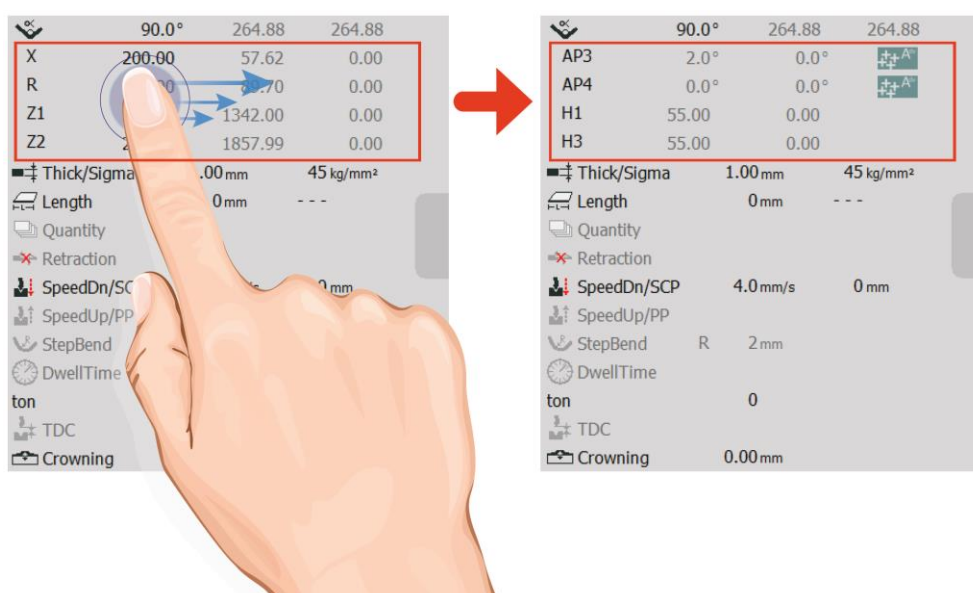
All the various optional axes of the machine are displayed in this zone. Their respective values are calculated by the VisiTouch and are displayed in gray. They can however be manually modified but are then displayed in black.



To restore the calculated value, simply press reset .

Quick access tab

Contains various settings for the current bend such as axes positions and bending parameters. If the machine has multiple axes, it's possible to slide on the display in order to show the other axes.

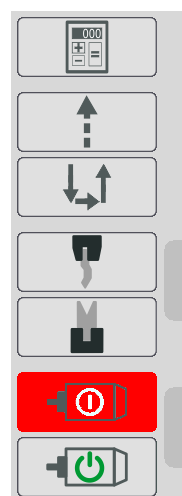


User button tab

Contains various buttons depending on the configuration for machine functions such as tool clamping, pump activation or upward command.



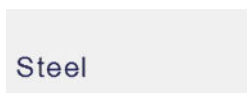
The user buttons tab will only appear if configured by the machine manufacturer.



Extra Bending Parameters

Extra bending parameters can be found on this page, which displays parameters related to the part, and depending on the VisiTouch configuration and the type of action performed, also displays various settings for the current bend. Most of these parameters can also be found in the [Quick access tab](#).

Material



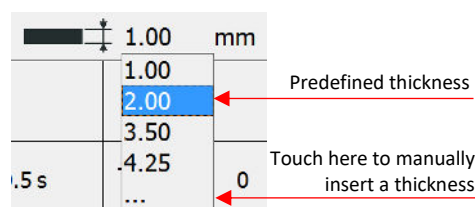
This is not a sequence parameter, but of course a part parameter. Each touch on the material's name selects the next available from the list of [Materials](#).

Material thickness



The default thickness, defined in [Materials](#), is automatically displayed when changing material. It is however possible to change it simply by touching this icon.

If on the other hand, the parameter [Predefined thickn.](#) is set to [yes](#), a touch on this icon will open a numerical pad as show to the right, where the operator will be able to select directly one of the predefined thicknesses.



This is a part parameter.

Material sigma



The default sigma, defined in [Materials](#), 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](#) 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 / Position offset



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

If this parameter is not activated (grey), the VisiTouch will not calculate the bending Force and the Crowning.

The second value defines the position of the sheet metal in the machine.

Step bending



When a large radius bend has been programmed (see [L-Alpha Mode](#)), 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 greyed.

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.

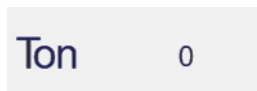
When this field is deactivated (grayed), the beam moves back up directly at HSU (High Speed Up).

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 the icon is crossed  , it means that there is no automatic return of the beam after TDC. This is a sequence parameter, meaning it can be modified with each step of the program.

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

Force

The force is automatically calculated by the VisiTouch, according to the [Material](#), the Material thickness, the Material sigma and the Bending length / Position offset. 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 / Position offset. If the crowning needs correction, use the Crowning (see page 39) 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 (grey 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.

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 updated of one unit (increased or decreased, see [Program counter mode](#)). When the amount of parts is reached, a yellow pop-up window signals it to the operator.

Back gauge manual control

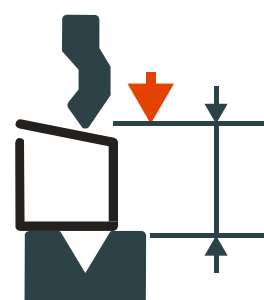


Activating this parameter gives manual control over the back-gauge movement. This means the operator must personally give the start to the back-gauge movement, using for example the foot switch or the start button.

Offset Pinch Point



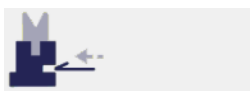
This function allows making a bending cycle further away from the matrix, for example to close the opened side of a box, as shown on the right.



Once activated, this function forces the VisiTouch into bottoming mode (see Set-point beam (Y axis) / bend angle, page 21).

With this function, the Speed Change Point occurs higher, and the operator can inch the beam down with short impulses on the pedal, until the proper height is reached. The parameters Speed change threshold and bending speed can also be useful in this situation.

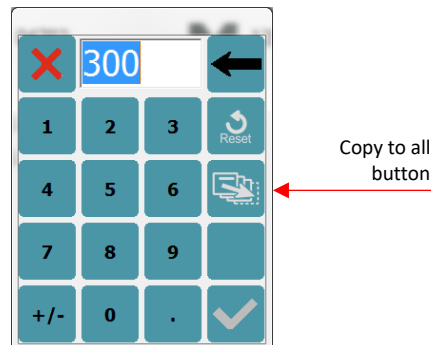
Proceeding this way is normally used for unit or small series. If, however the number of parts is large, the operator can enter a target value in the bottoming field, which will then turn black. This way, the VisiTouch will execute a normal bending cycle, stopping the beam at the programmed value, i.e. saving a lot of production time.

Hemming

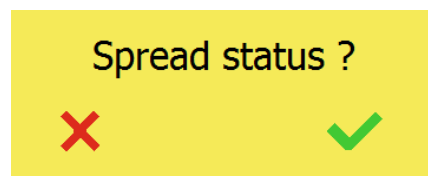
Allows making conventional die hemming bends (optional).

COPY TO ALL FUNCTION

This function allows copying a defined value to all the steps of the current program. It appears in the numerical pad of relevant fields, such as Bending length / Position offset, Force, Bending and Corrections, etc.



It is also possible to use the Copy to All function with fields that do not require a numerical pad by simply holding the button for 2 seconds. The pop-up **Spread status ?** will then appear.





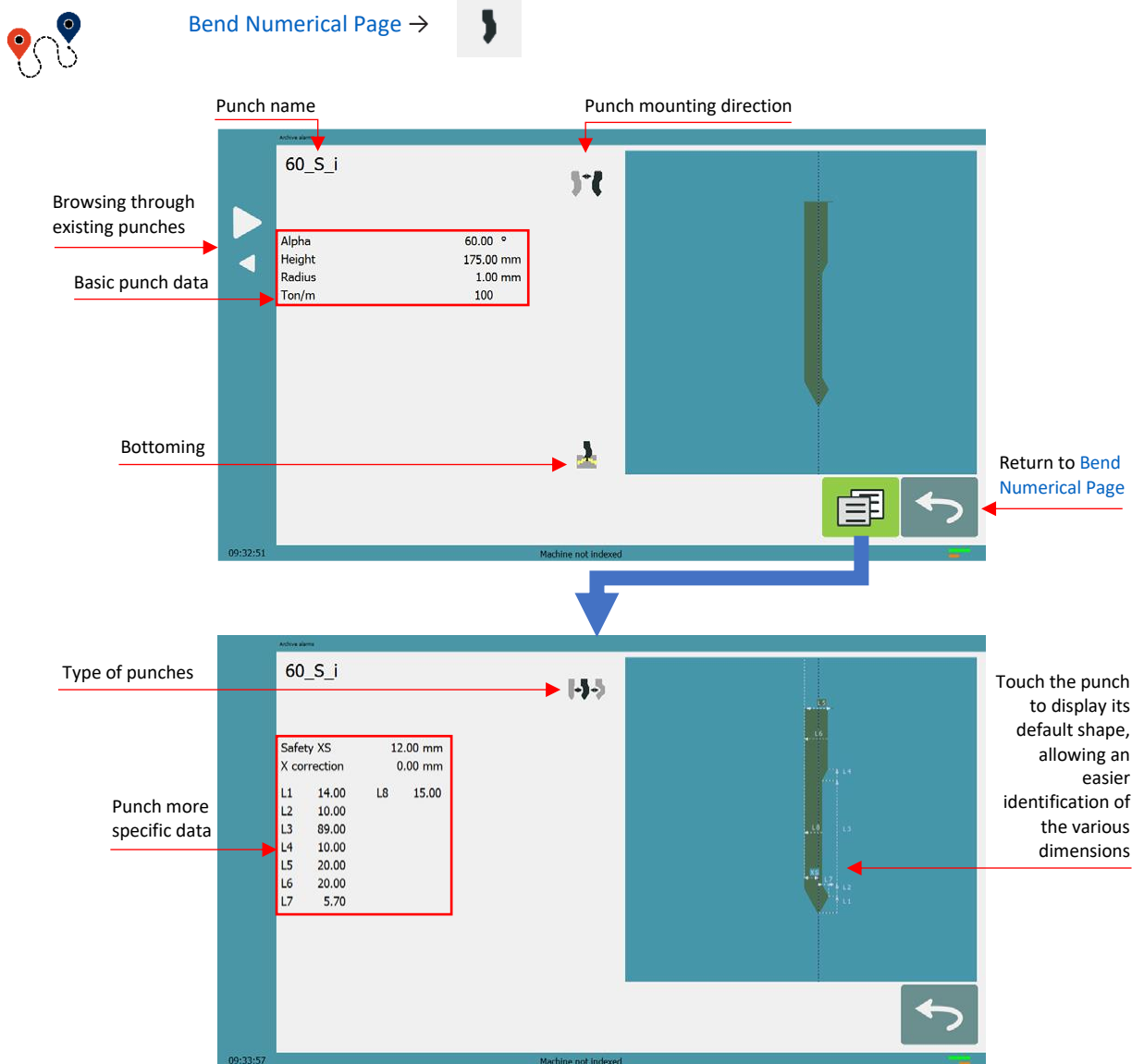
TOOLS MANAGEMENT

Tools management allows the creation and configuration on the VisiTouch of the tools to be used on the machine. These tools are then considered 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 VisiTouch then calculates the positions for axes X and Y for the bend.

PUNCHES

 [Bend Numerical Page](#) → 



Punch name
60_S_i

Punch mounting direction

Browsing through existing punches

Basic punch data

Alpha	60.00 °
Height	175.00 mm
Radius	1.00 mm
Ton/m	100

Bottoming

Return to Bend Numerical Page

Type of punches

Punch more specific data

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

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_S_i** (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 VisiTouch. 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](#).

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 name: 30_12

Die mounting direction: [Icon]

Browsing through existing dies: [Left Arrow]

Basic die data:

Ve	12.00 (12.87)
Alpha	86.00 °
Height	55.00 mm
Radius	1.00 mm
Ton/m	50

Bottoming: [Icon]

Return to Bend Numerical Page: [Right Arrow]

09:47:44 Machine not indexed

Die more specific data:

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

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

09:47:51 Machine not indexed








SETTING INSTRUCTIONS:

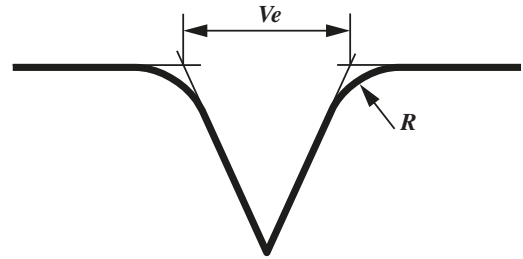
Selecting a die is the same as selecting a punch; simply browse through the existing dies in your library using the arrows buttons, and then return to [Bend Numerical Page](#).

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 (V_e (die width), α , 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 VisiTouch. 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 alphanumeric keypad.



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

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		
60	–	S = Straight	–	i = If inverted
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.

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		
16	–	86	–	i = If inverted
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](#), and with the [L-Alpha Mode](#).



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

TOUCHPROFILE MODE



Bend Numerical Page →

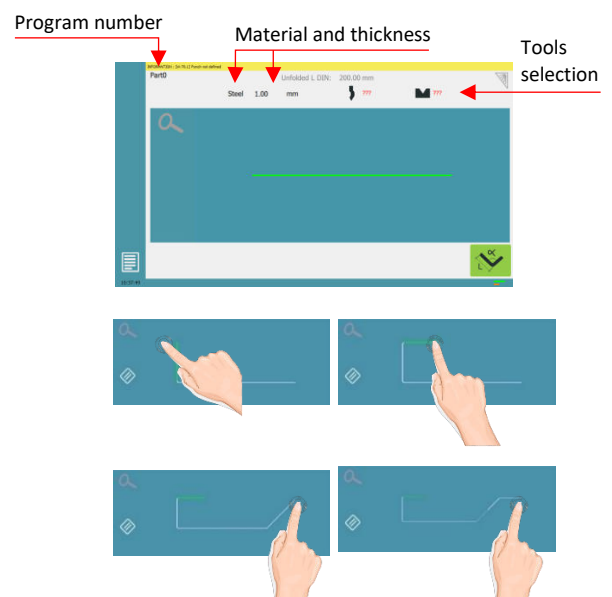


In this mode, the operator can very intuitively draw a profile directly on the screen.



SETTING INSTRUCTIONS:

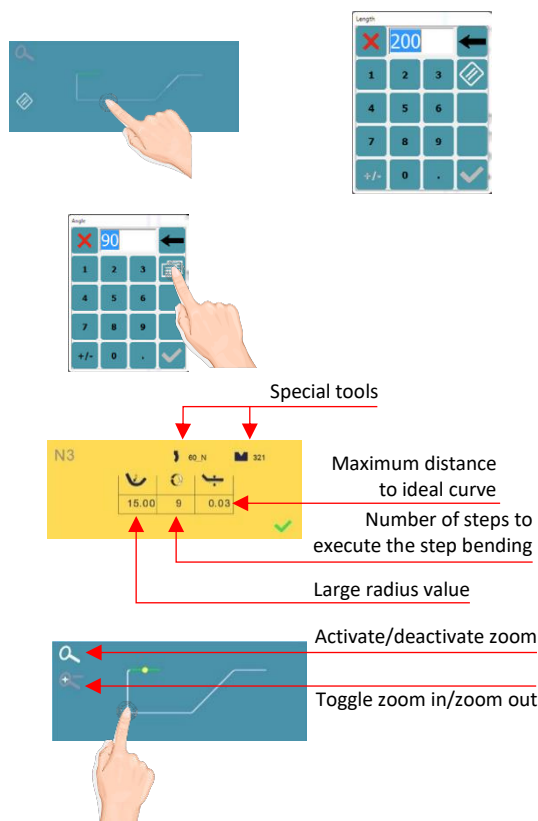
1. Touch the program number, select **New program** in the list, and touch **Graphical 2D**.
2. First select the material, the Material thickness (see page 22) and the tools to be used for the part by touching their respective icons.
3. Draw the profile by touching the screen where you want to add a 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 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 (see also Step bending) and define how many steps the NC will make to execute it.
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.



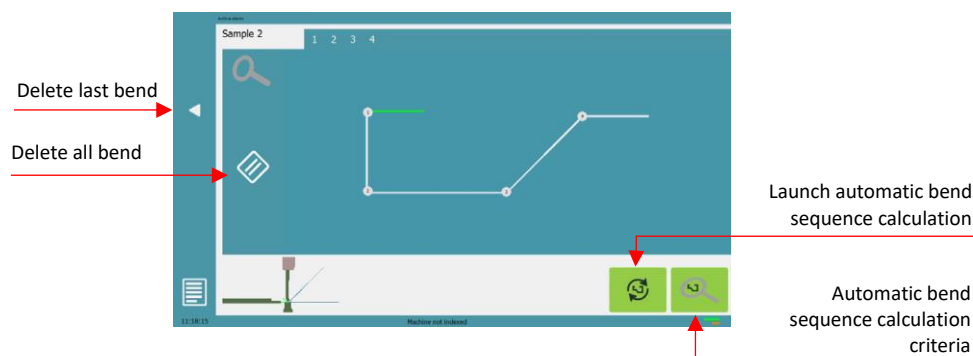
One can also choose to enter the length and angle values in the L-Alpha Mode page by pressing this button.

7. Once all the segments and angles are adjusted, press this button to access [Bend Sequencing](#).

BEND SEQUENCING




Bend Numerical Page → →





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



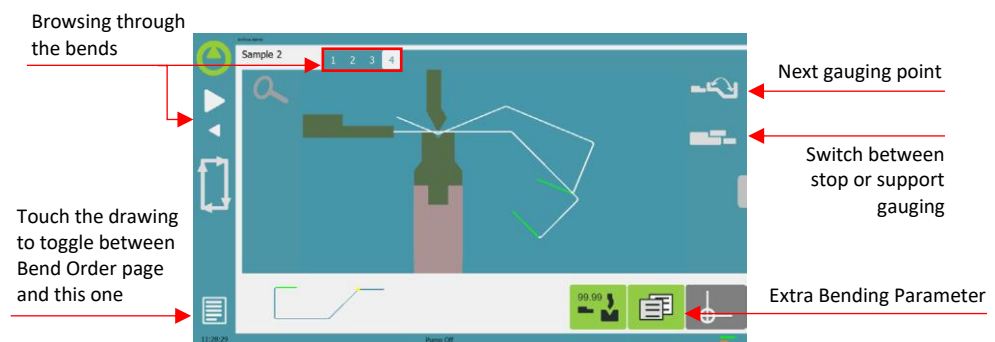
SETTING INSTRUCTIONS:



1. Touch the bend sequence calculation button . Once the sequence is calculated, the Bend 2D screen is displayed.



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

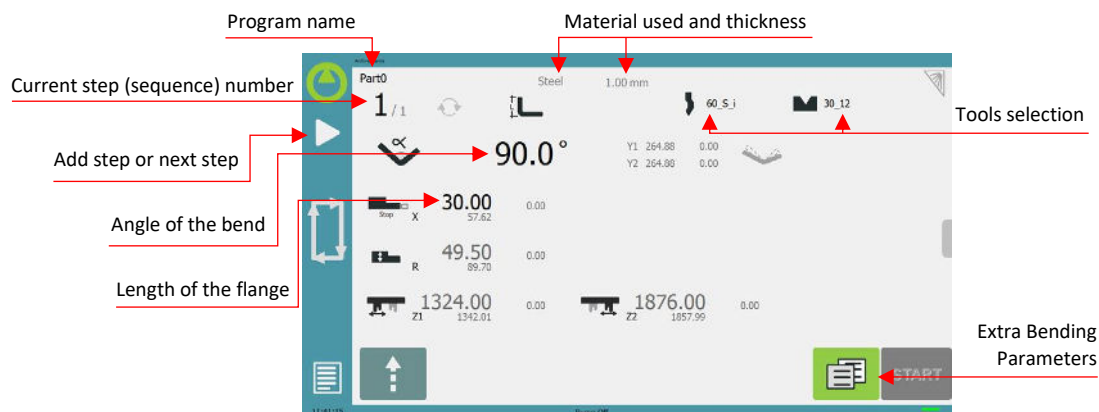
2. Immediately after determining the last bend to be selected, the Bend 2D screen here below is displayed.
3. In the Bend 2D page, the operator must determine the back gauge and part position for each bend, and if necessary Extra Bending Parameters.








4. Press  and select **Bend num page** to return to the **Bend Numerical Page**.
5. Start the hydraulic pump motor (by pressing this button  if available. It turns red when the motor is running).
6. Press the **START** button to position the machine according to the data that were just entered.
7. When the machine is ready to bend, a **OK** button is displayed.
8. If you want to repeat the same step in order to apply all the necessary corrections to it, switch to the **Semi-Automatic mode**.
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, select **New program** in the list, and touch **Numerical**.
2. First select the tools to be used for the part by touching their respective icons (see [Tools Management](#)).
3. Touch the **Material's** name (here **Steel**) until the one used is displayed.
4. Touch the Material thickness and select or enter the proper one.
5. In the **Extra Bending Parameters'** section, enter the Bending length, and other sequence parameters (Opening (TDC), Slow speed return, etc.).
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).
12. Press the **START** button to position the machine according to the data that were just entered.
13. When the machine is ready to bend, a **OK** button is displayed.
14. If you want to repeat the same step in order to apply all the necessary corrections to it, switch to the [Semi-Automatic mode](#).
15. Press the foot switch to execute the bend.

L-ALPHA MODE



Bend Numerical Page →




Program name

Angle value

More parameter for step

Segment length

To Bend Sequencing



To TouchProfile Mode

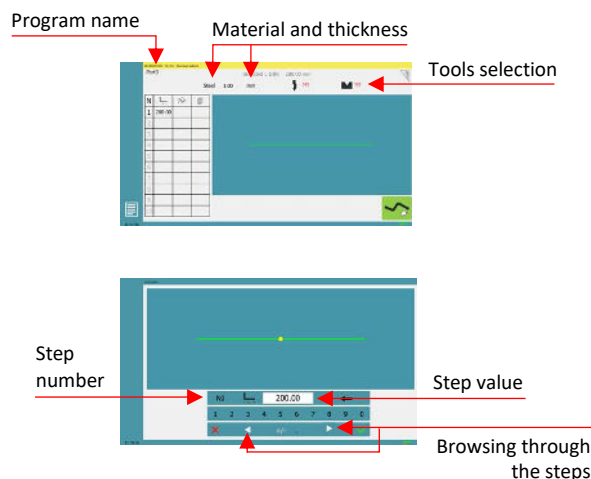
N	L	A
1	40.75	90
2	58.71	90
3	100.00	135
4	76.95	-135
5	46.85	
6		
7		
8		
9		
10		

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



Program name

Material and thickness

Tools selection

Step number

Step value

Browsing through the steps



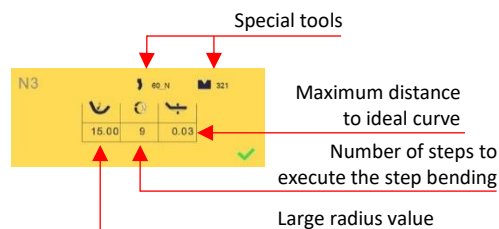
Click on OK when prompted to create new step.

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

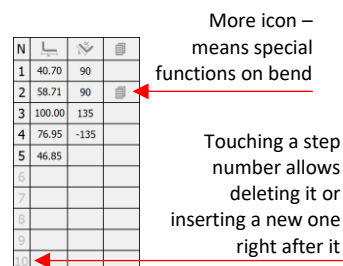



A special punch or /and die means there must be an additional working station.

8. A yellow pop-up is displayed, 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) and define how many steps the NC will make to execute it.



9. A small More icon shows that something special is programmed on the bend.
10. To remove the icon (and special parameters), return to the yellow popup, touch all the activated functions to make them turn gray, and select OK.



11. Once all the segments and angles are adjusted, press this button  to access [Bend Sequencing](#).

BENDING AND CORRECTIONS


All program corrections are made in the [Bend Numerical Page](#). According to his preferences, the operator can choose to execute all the steps of the program one after the other, making corrections along the way. Or he can choose to apply all the corrections necessary to the same step before moving to the next one using the [Semi-Automatic mode](#).


Corrections can be made to:

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

Semi-Automatic mode



The semi-automatic mode allows repeating the same sequence indefinitely. It is used when the operator wants to apply corrections to his part one bend after another. He can thus execute the same step until he gets the desired result, before moving to the next one by means of the  button.

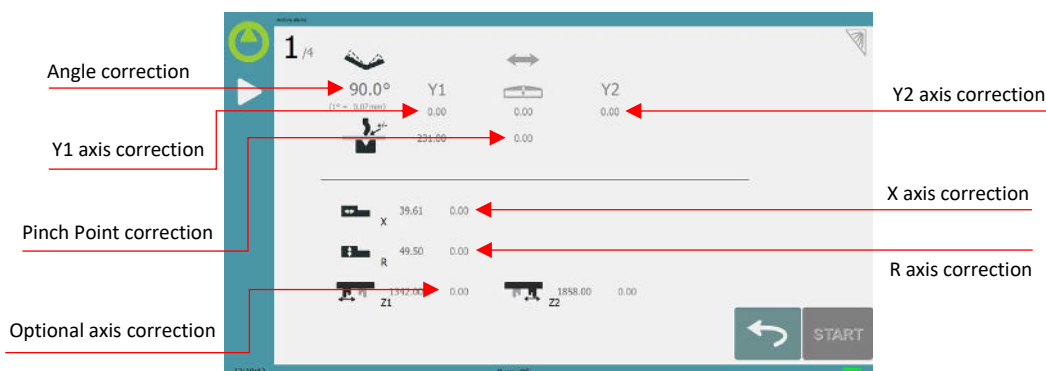
The semi-automatic mode is activated (and deactivated) by touching for more than one second on the  button.

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 icon  or this  one and entering the desired values.

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 greyed 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.

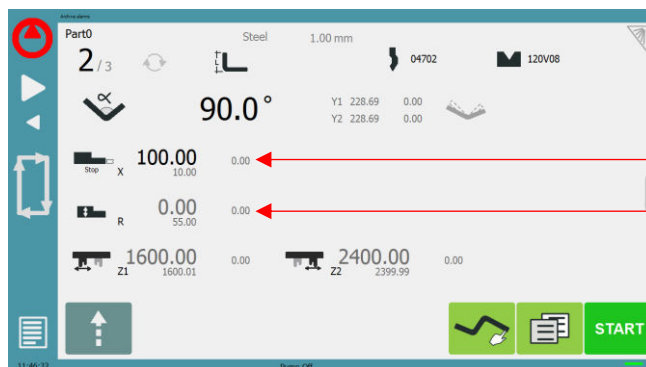
Back gauge Correction

- Touching the values next to any axes **0.00** allows entering a correction.



The axes corrections **0.00** can be positive or negative and will be added to the axes positions.

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



Back gauge (X axis) position
correction value

Back gauge (R axis) height
correction value

MANAGING PROGRAMS


Because the production of parts follows cycles, the programs related to those parts need to be managed. They need to be stored, called into function, and so on.

On the VisiTouch, the Program name is displayed on the top left corner of different pages. Touching it will open the following menu:



SAVING A PROGRAM

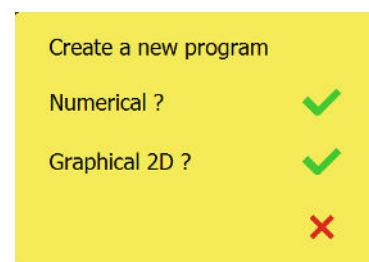
After creating a program, an operator can save the program in order to use it again:

1. Touch the Program name.
2. Touch **Save part as...** to save a new part. Give it a distinctive name using the alphanumerical keyboard and validate with .
3. Or touch **Save part** to save the modifications made to an existing part.
4. The program is now saved in the VisiTouch.

CREATING A PROGRAM


To create a new program:

1. Touch the Program number (e.g. **P1**).
2. Touch **New program**.
3. A yellow pop-up windows asks what kind of program:
 - » Selecting **Graphical** will open a new program in the **TouchProfile Mode**.
 - » Selecting **Numerical** will open a new program in the **Numerical Mode**.

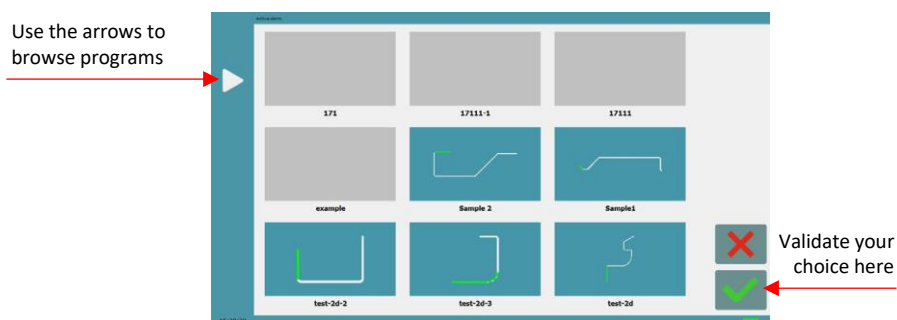


LOADING A PROGRAM

To call (load) a program:

1. Touch the Program name.
2. Touch **Load part**.
3. Browse through the programs using the arrows and select the program to be loaded.
4. Validate your choice by touching .
5. The selected program is then loaded into the work memory and is ready to be used.


Use the arrows to
browse programs



Programs created with the TouchProfile Mode have a small miniature to help easily to identify them from those created in Numerical Mode.

DELETING A PROGRAM

To delete a program:

1. Touch the Program name.
2. Touch **Delete program**.
3. Browse through the programs using the arrows and select the program to be deleted.
4. Validate your choice by touching .
5. Confirm in the pop-up window.

BEAM ERROR MESSAGES

MSG NR.	DESCRIPTION	COMMENT
13	Command refused because pinch point is below Y1 and Y2 bottom dead centre	Check the value of the PP correction, and the value of the BDC correction in the User Preference page.
14	Command refused because the speed commutation point is below the pinch point	
15	Command refused because low speed up speed out of limits	
16	Command refused because speed out of limits	
17	Command refused because Bottom Dead Centre Y1 and Y2 are too different	Difference between target values of Y1 and Y2 bigger than the limit value defined in the machine parameter. Call you dealer.
18	Command refused because pinch point is outside stroke limits	
19	Command refused because beam is moving	
20	Command refused because Bottom Dead Centre is outside the beam limits	
26	Command refused because beam is in emergency	For example, beam out synchronism tolerance.
27	Command refused because Synchronism controller parameters not in range	Problems with limit parameters (max and min) of the beam. Contact your dealer.
28	Command refused because stop is active	
37	Command refused because zero has not been found yet	Beam is not indexed.
40	Command refused because bend data have never been loaded	
44	Command refused because beam is in emergency. Only a manual down of the upper axis is allowed	Only the axis with the highest position is allowed to be moved manually down.
49	Command refused because beam is not at high end of stroke position	
52	Command refused because the beam is requested to go to TDC	
53	Command refused because a beam cycle is not running	
248	Synchronism limit reached, Y1: {0} Y2: {1}	Height difference between Y1 and Y2 bigger than the limit value defined in the machine parameter. Call you dealer.
265	Error with Oil Leakage Control. Cancelling operation	
267	Beam not indexed, no move	
606	High speed down stopped by safety speed switch	
607	Command refused because other command still active	Order of priority is as follows : 1. Stop Command 2. Go to TDC MAX 3. Go to next TDC 4. Up command 5. Down command



This table does not contain an exhaustive list of all the errors related to beam. If the message number is not explained here, please write it down and contact your dealer.

RESOURCES

TUTORIALS - VIDEOS

Please subscribe to our YouTube channel to have our latest videos and tutorials.



https://www.youtube.com/channel/UCLBu-RxCGGf_epuHtMwoAcQ



Don't forget to click on the ring bell button to stay in touch!

Please, let us know if you have any suggestion at support@cybelec.ch