

MODULE 4: TECHNICAL CAD PATRONAJE AND APPLICATION TO THE CUT MATERIAL

SCANNING TOOLS 4.1: 3D 2D 3D. ALTERNATIVES

The vast majority of footwear companies worldwide are currently using software design and manufacturing of footwear (Software design lasts, heels, soles, plus software patronaje shoe ...) and although the expansion of the use of design tools (CAD) and manufacturing (CAM) applied to the footwear industry and its support industries is relatively recent, they have caused a great advance in the industry.

New technologies are essential in an industry such as footwear, being very important for quality footwear and competitive in the market.

In order to provide assistance to businesses design, pattern and scale various computer programs were created, so that once you have defined models and through this specific software type of footwear the cutting was done and scaled according to sizes the requesting client.

As the shoe design process transcends digital, shoe collections are made with greater pressure on the pattern makers to produce faster and more accurate patterns.

Here are the most commonly used programs patronaje shown:

AUTODESK - CRISPIN ENGINEER

Use Crispin Engineer means you can import a digital design in a variety of file formats for automatic leveling. Then patterns can change quickly adding pieces, margins, create boundaries and markers notches and with a few clicks of the mouse. You can also easily scan patterns so you can edit them faster and more accurately.

If you have the digital Trepá, no need to start from scratch. Therefore the production time is much reduced. It also means you can do more variants within minutes, helping to reduce certain costs and time required for products to reach the market. Cut patterns will also be simple with the integration of most cutting machines.

SHOEMASTER

This software has three shoe patronaje CAD CAM solutions available for patronista:

- 2D Esprite Shoemaster
- Classic 2D Shoemaster
- Shoemaster Power 2D / 3D

Each of the three systems provides all the traditional tools and functions that a patronista expect.

SHOEMASTER ESPRITE

It is the perfect solution for the development of existing patterns performed manually. The software provides a quick and easy input patterns using a digitizer tablet, scanner, or using data from another CAD system. The system is also fully compatible with all automatic cutting machines.

Significantly reduces the time required for entry Tropa of the model and its development, resulting in faster performance and increase production capacity.

SHOEMASTER CLASSIC

Offers the most traditional form of CAD / CAM for pattern-makers. It is the perfect solution for pattern-makers who wish to develop and carry out the different models. All constructions are possible patterns and characteristics of size and shape.

The advantage to the use this type of software is that employers share common lines being linked, so that automatically if the line is changed, then all associated parts are updated automatically. Shoemaster Classic accurately mimics the most complex manual processes.

SHOEMASTER POWER

It is an innovative sponsorship system that includes all the 2D functionality and Classic Esprite to develop their 2D patterns, but also has the power of additional 3D features.

Developed to meet the needs of the modern shoe, allowing 3D / 2D design and simultaneous patronaje. 3D functionality lets you mimic manual processes in a CAD environment, reducing costs associated with developing and optimizing productivity of design, pattern and scale.

Shoemaster Power is compatible with a 3D scanner. Leveling system provides all the tools to create any kind of flattened to produce the best Trepas adjustment and minimize material waste.

ROMANS-CAD

RCS allows you to import 2D flattened made from RCS 3D, edit patterns and scale flat patterns in different sizes. With this software patronaje shoe has the possibility of making patterns as accurately, whatever the type of shoe model (female or male, sports or urban, boots, etc.), is one of the challenges RCS 2D which has wanted to solve, and has masterfully done. More than 250 functions tested by its industrial partners make this software a real productivity tool for a shoe company.

Interfacing with various automatic cutting machines market is essential, since production plants can use any type of machine. Prepare racks for seams and allow communication with sewing machines are other tasks that you can perform.

Will allow you to transform your development departments into real profit centers

because it integrates all the knowledge and experience of a shoe manufacturer, coupled with a unique technology.

ICADPAT - INESCOP

This software patronaje footwear also known as SIPECO, is a 2D software that allows the user to perform the basic design, modification, scaling, calculation of consumption and cutting patterns and parts for industry footwear, based on scanning or scanning the Tropa of the model.

The program has the necessary tools for the technical development of the shoe sponsorship. It allows cutting, pattern making and scaling model shoe from scanning Tropa the basis of the model. It also allows the creation of technical specifications, calculate material consumption and generate the necessary files to send to different patterns automatic cutting systems. One of its advantages is that it is compatible with any Windows environment, with other CAD / CAM programs developed by INESCOP and with most machines used in the sector.

Offers great versatility in creating pieces, making changes on the base model, scaling and import / export of models to standard formats. It enables the creation of several models of the same mold on the same file and using the same baseline, reducing time and costs, standardizing information and shorter response time before the changes.

NAXOS - TESEO

This Software of Italian origin, and its strength passion for innovation has been at the forefront of development. In 1987 he created his first CAD projection footwear PC. Since then its software has evolved and improved constantly adapting to the leading companies in the sector of footwear.

The development team is composed of young analysts, engineers and mathematicians, who joined Italian creativity with direct knowledge of professionals in the sector, allowing for original software, simple and efficient.

With a support 24 hours a day support its customers in more than 67 countries and in 10 languages, with support department with operators able to solve any technical issue

Naxos creates style, makes the model prepares production, industrialize the project, manages costs and help in selling. A unique software fully integrated real-time freeing creativity and lets take care of business itself.

Models can be inserted manually according to the usual customs, acquire it automatically from the scanner or piece by piece. All technical operations are manually complex, with Naxos become simple and quick. Scaling functions sizes satisfy the need for inserting a corrective or special variations. You determine the correct consumption of material becomes easy thing to do. The presence of a visual editor allows each user to create and modify the most appropriate depending on personal taste and needs technical specifications. CAM functions simulate and generate the optimal route for the CNC cutting peripherals. Naxos can work in parallel while still operating with the same model.

4.2 WITH CALIGOLA PATTERN CUTTING TOOL

Main functions and features of the application:

Buttons

In the bottom of the program tells us that each button of the mouse.



€ Equals Left button of the mouse (SX).



€ Equals F2 Button



€ Equals Right mouse button (DX).

The wheel of the mouse to zoom serves. If the press allows us to move the lines.

Enter € to introducing a measure on the bar and give us intro creates a line of that measure.

CREATES



Linea + _ Used to make a single line, with 2 or more points, the color bar is selected entity type.

Sx € button positioned one point.

Sx sx + € button positions a square dot. F2 € delete button above.



Linea o It serves to make a line with the guide compensation mouse digitizing tablet, of the color to be selected in the entity type bar.

Sx € button positioned one point.

Sx sx + € button positions a square dot. F2 € delete button above.



Linea == It serves to create a slotline (for figurative or grooving, as export configuration).

Sx € button positioned one point.

Sx sx + € button positions a square dot f2 € delete button above.



Linea Serves to create a line with square main points of the color bar is selected entity type.

- Sx € button positions a square dot.
- Sx sx + € button positioned one point.
- F2 € delete button above.



Punto It serves to position a point, of the type that is selected in the toolbar entity type.

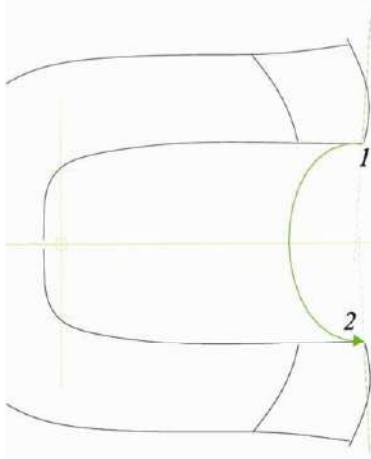
- Sx € button puts a point.



Eje simetria Used to position an axle, primarily for symmetry.

- sx € button puts the first point of the axis.
- F2 € button switches between different types of axis (perpendicular axis, axes connected

Shafts connected (used to make the heels of open rooms).



1. You have to put points 1 and 2.
2. The axes must be put to consider the rotation of the green line) .Approximately the rotation of the workpiece (must
3. The piece is created by selecting all the lines of a do, punctured shaft and the other side lines.

To put an axis centered on the heel of a plant, prick the line and keep the heel pricked right, we see a menu and choose REAR AXLE background and automatically have the shaft.



Circulo It serves to make a circle or an ellipse.

- Sx € button starts a circle
- Button sx + sx € Create a circle equal to the previous measure

designed button f2 € changes circle by 3 points, a circle of diameter (from the side), ellipse (from the center), ellipse (from the side), circle (from center).



Rectangulo

It used to make boxes.

Sx € button starts to make a rectangle.

F2 € Change button rectangle from one edge design from the center.



Paralela

Create parallel lines.

Sx € Select button a stretch.

Sx sx + button € Select total line.

In the writing shaft if we put a number, makes us the chosen distance, if we put a number space and another number, makes us the selected distance and number of repetitions indicated (Example 13 4 for 4 parallel 13 mm each) .



Simetria base

Symmetry makes what we indicate about an axis, symmetry no it is "linked", it ie it can be modified at will after a single part.

Sx € button selects a stretch.

Sx sx + button € Select entire line.



Texto

We can write a text in the piece.

Scripture will catch related data project information, so if we change our model, we use the model or part of the model to another, will not have to modify all texts.

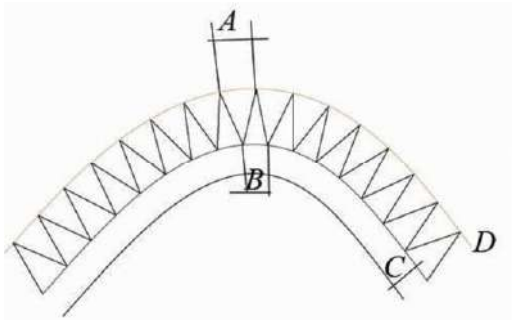
Writing fast can choose the scriptures most used (folded, to singing,)

Sx € button sets the text in the position. Once set

moves the text. € sx sx + button once fixed, double click wide or shrink the text. Button f2 € one fixed time, rotate the text.



Create a line of festoon.



A = distance chosen in the festoon.

B = A is not equal because the modified curve width to make the curve.

C = distance from the baseline.

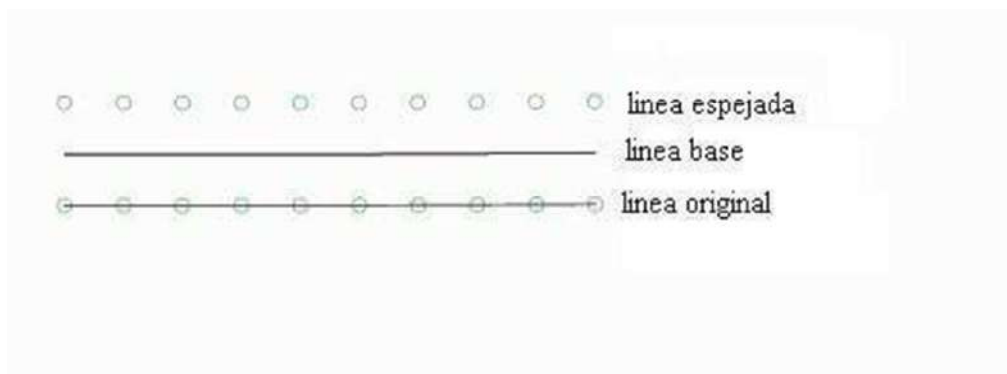
D = line distance calculation, if we vary the distance D vary the distance there in the curve of A and B.



Create a line of punctures.

Like the festoon line.

Puncture on the line there is a possibility of symmetry with respect to the line carrying the puncture is on their properties. A symmetrical turn in the mirrored properties line appears





Linea de motivos

Create a line of internal motives on the part.

It works like a custom scalloping, but the difference is that the festoon is part of the contour of the part and the line of reason, no.



Vectorializa

Looking for an image to acquire the lines and to work with them.

In choosing the image:

Sx € button choose the color of the background and part

Button f2 € We enter the parameters of image acquisition

Dx € button Acquires the outline once we chose the color of the background and part



Eje de escalado principal

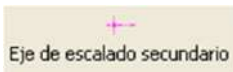
main axis scaling.

It tells us which way to scale the shoe.

Double clicking on the axis gives the properties of scaling (size climbing, scaling type, ...).

Sx € button fixed starting position.

Button Switches to set f2 € starting position pointed or heel.



Eje de escalado secundario

A secondary shaft for corrective.

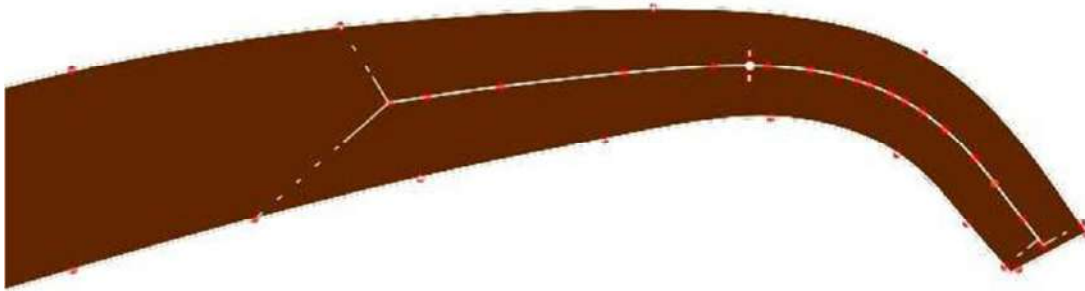
Pricking double click in the center of the shaft, the properties appear. Sx € button fixed position.

€ f2 button changes axis parallel to the main Bareshaft.



Graduador listas

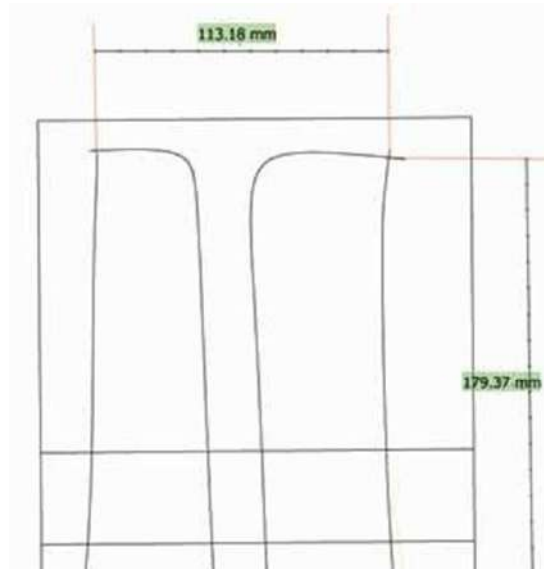
It is used to make corrective to the strips.



1. Choose the lines we want block and a center line appears, with predefined association and link.
2. Double click the center point of the support line that has appeared and enter the menu, blocking what we need or by adding the corresponding groups.



It is used to make corrective cane Boots.



1. measure the part we want to correct. (In this case 113.18mm 179.37mm long and wide)

2. Click on graduation area and make a picture that involves all part we want to correct.

3. Select the square and double-click mouse, making another graduation line by dialing 100% (all that is between 100% new rules apply. You can also put more lines giving the percentage we want in each place).

4. Edit the axis has come out and put measures the width and length. We must also tell you to grow in each case.

5. The shaft must be put where you want to start measuring (usually up to the ankle)

6. When everything is set, select the square and hold down the button and choose dx "Attaches Graduaciones Area". Everything that is within the square is linked to the shaft. (If you do not want any line is linked, we must hide before).



Asociar Ejes a regla To associate a measurement to a shaft.

For example, a strip with two sizes, want to grow and 10 mm between them. A putting a ruler and link shaft, as it gives us the rule it is displayed in the properties of the shaft and which has no default of the last.



Asociación

Tool to attach a line, point, etc. another line or axis for corrective.

Click in association chose the center line and then we want to block.

Sx sx + button € normal association. Sx + f2 € button link association. F2 + f2 button € anulo association.

€ f2 button switches between association and fix the shaft with an intersection.



Pieza

Tool to create the piece.

Sx € Select button line is part of the piece.

€ f2 mode button exchanges between different rounding options for the part.

MODIFIES



Atras Adelante

Tool to take a few steps backward or forward if we did back.



Borra

Eraser tool.

If one or more items are selected and we click cancel, delete everything selected.

Sx € button selects a stretch to clear. Sx sx + € button selects whole line.



Alargar

Lengthen tool serves to lengthen the lines.

Sx button € lengthens the line a stretch or until it touches another line. Button f2 € Go to the trim tool.



Recortar tool trims

€ sx button Deletes a leg, if there is an intersection of lines, clears up the intersection.

Button f2 € Go to lengthen tool.



Curvar angulo

Curve an angle with a square dot (if no point square behaves as smoothing).

Sx € Select button you want to bend the line. After you choose the stretch. € sx sx + button After selecting the line, smoothes the entire line.



Crea angulo

In a line with a curve, it eliminates the curve and make an angle.

Sx € button select the line you want to delete the curve. After you choose the stretch.



Suavizar

Softens drawing a line.

Button sx € Select the line we want to smooth out. Then select the segment.

€ sx sx + button After selecting the line, smoothes the entire line.



Doblar

Select a section of line and bends, stretches and shrinks said section.

Button sx € Select the line we want to bend. Then select the section, and then we take the points that interest and move us position ourselves in the position that suits us. (A caught once can give a measure with keyboard in the direction you move the mouse).

Sx sx + button € Select the entire line.

F2 € Delete button setting distance of a point.



Cambra It is used to fold part of a piece.

You have to select the lines that we bend before clicking the function.

Sx € button sets the bending point and moving the mouse leaves a blue line. (This line gives us the axis of rotation). We look back to prick the blue line. Now moving the mouse turn lines.

Button f2 € Once we have the blue line F2 Cut prodding of the lines and we can stretch them and shrink them.

Dx button € get a menu to reselect lines and to finish.



Corta Cut a continuous line.

Button sx € Select the line that we want to cut. Another short line click on the mouse position.

€ sx sx + button cuts the line in the position of the mouse. € f2 button cuts the line in the position of the mouse.



Unir Connecting two lines having the proximal edges, creating a single line.

Select the lines to be connected and click on the Join feature.



Copia Creates a copy of the selected lines.

Select the lines to copy and click on the Copy function. Operation will automatically enter the Move function.



Mueve Moves, inverts, increases and decreases the size of the selected row.

Sx € button Moves the selected lines.

€ sx sx + button Increases and decreases the size of the selected lines. F2 button € Turn lines having as axis the yellow circle.

F2 + f2 button € Reverses selected lines with respect to the yellow circle.



Scale selected lines.

an x-axis appears, y, z. Stretching points in x or y axis increases or decreases the lines in the x axis. Stretching the point farthest from the axis z you increase or you decrease the x and y axes uniformly. Puncturing the central point of the z-axis turn axes. Button f2 € Above the yellow circle, move the axes.



Aligns all lines to your drawing, which will have been previously set benchmarks.

Click on the two lines that have references in the program.
Then click the same two references in the drawing.



Baseline becomes a margin or symmetrized line.

Select the lines you want to convert and click on BECOMES basis function.



Replaces a line on the other, with all its margins and lines linked.

Click the REPLACE LINE, click the old line function do not want and click the new line, we want (all lines and margins linked pass from one to another).



Changes the properties of the line, the margin and the puncture we select the entity that selected entity type.

Select the type of entity you want to have, or puncture select the line you want to change and click on the function ENTITY



Replacing a line of a shaft or a shaft by a line.

Select a line or an axis and prodding the-line AXIS function online change of axis or axis line.



Export part selection or other model lines.

Select the parts or lines that want to export and click in the EXPORTA function.



Export everything in the model (parts and lines).



Import from another model.

in the current model, exported in another model.

DERIVATIVE



When we activate the mirror axis, everything we believe in one side of the shaft, symmetrized automatically.

To enable or disable this feature, you must select the axis with which we symmetrise and click the mirror axis active role.

While this asset, all believed to be simetrizara respect to the axis.



Create a margin (line linked to another) according to the specifications mentioned in the entity type.

Button sx € Select the line you want to apply a margin, then select stretch, then choose the side to where the margin is.

€ sx sx + button After selecting the line, select the entire line to the margin.



Symmetry makes what we indicate about an axis, symmetry

It is "linked", ie can not be changed at will after a single part.

Sx € button selects a stretch.

Sx sx + button € Select entire line.



Draw a line down the center of the two chosen lines.

Sx € Select button a stretch.

Sx sx + button € Select the entire line.



Creates a line joining various line plots.

Button sx € Choose the lines you want to create a united

line DX € the manu button to complete the sequence appears



Inserts a notch in the line we decide.

Sx button € Choose a line, then select the position.

Button f2 € After choosing the line varies between different types of existing notches: linked notch, peak, cutting whatever is in point, coding and what we have saved in groups).

Placed in a groove and if we click with dx notches list appears.



Inserting a notch at the intersection of two lines.

Sx button € Choose a line, then select a position, then choose the line that crosses it.

Button f2 € After choosing the line varies between different types of notches



Inserts a slot in a line.

Button sx € Select the line, then select the stretch.

Sx sx + button € Select the entire line.

€ f2 button Inserts a point in the slot.



Enlace curvo Joins two lines by a curved link adaptable.

Sx € button Select one of the lines and where you want to start with the link, then select the other line and where you want the link is made. You can move the link points to adapt to the need.
Button f2 € curved link goes to other types of link



Enlace Circular Joins two lines by a round link.

Sx € button Select one of the lines and where you want to start with the link, then select the other line and where you want the link is made. You can move the center point to adapt the link to the need.
Button f2 € curved link goes to other types of link



Enlace arco Joins two lines by a link arcuate.

Sx € button Select one of the lines and where you want to start with the link, then select the other line and where you want the link is made. You can move the link points to adapt to the need.
Button f2 € curved link goes to other types of link



Enlace recto Joins two straight lines through a suitable link.

Sx € button Select one of the lines and where you want to start with the link, then select the other line and where you want the link is made. You can move the link points to adapt to the need.
€ f2 button link goes straight to curved link

You repeat notches (used mainly for bags)

(Line 1 and 3 is the margin for bending).

1. Select the tool "repeat notches" and choose the line 1 whole.

2. Put the margin goes on line 2, which is the line that will measure the marks of rotation.
3. Choose the line 3 and give you the distance you want (always from the axis).
4. Set the margin goes on line 4, which is the line where the marks are measured rotation.
5. The mark out point 5 is the distance that needs the part (the same as the line 2).



Linea asociada

Create a line associated with an existing line.

Button sx € Choose the line you want to make a linked line.

Then associates the section and select the distance you want to be linked online. Sx sx + button € After choosing the associates entire line.



Insertar pieza transparente

Inserts a transparent piece, for the composition of the model. (It is the same function as the button click dx above a piece already created and click on transparent).

€ sx Move button transparent.

€ sx sx + button enlarges or reduces transparent.

Button f2 € Giro transparent.

F2 + f2 button invest € transparent.



Borde guiado

Create a rectangle of the same extent as a curved line. (Example a living).

Select edge guide.

Sx button € Create an axis of symmetry, putting two points (or choose a secondary axis).

Button sx € Choose the curved line from which we choose the

measure and choose the section or the entire line.

Sx € button choose the width of the rectangle we want.

Writing in the bar if we put a number, makes us the chosen distance.

TOOLS



Regla recta

Measuring a straight line distance.

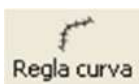
Sx € Select button points to measure the distance. € sx sx + button inserts a point.
Button f2 € Pasa rule to rule (measure)



Regla recta (compartida)

Measuring a straight line distance and maintains a visor with that distance. (Clicking double click on the viewer can select the size of the numbers and put the initial, modified distance and difference).

Sx € Select button points to measure the distance. € sx sx + button screen control the display appears. Button f2 € Pasa rule (measure) to rule.



Regla curva

Measures a distance on a line (straight or curved).

Button sx € Select the line, then select the stretch.
Sx sx + button € Select the entire line. In a line where we started measuring, it puts a point.
Button f2 € Spend a roller (measure)



Regla curva (compartida)

Measures a distance on a line (straight or curved) and maintains a display that distance.

Button sx € Select the line, then select the section to be measured. Sx sx + button € Select the entire line. In a line where we started measuring, control screen viewfinder appears.
Button f2 € Raisin roller (measure) to roller.



Calcula dimensiones

measured across all selected lines button

sx € select lines to measure

Dx € button once selected measuring lines gives us the measure.



Pieza anterior

It shows the previous piece created



Pieza siguiente

It shows the

following created piece



Oculta

Select one or more items to the hidden punch they will be hidden.



Oculta el resto

Select one or more items to the hidden punch the rest is all but Selected hide.



Ver todo

A puncturing everything is hidden, appears.



Agrupar/dividir

Groups or divides a

set of elements



Cortar pieza

It serves to cut a piece already created and divided into two
We must visualize the workpiece with a single line that divide,
we choose the line that divides the piece and apply the function
and the piece is automatically cut.



Escala 1:1

In working with a digital tablet, an outline in red, which indicates
that we are working with a pen tablet and does not let us work
outside this area appears.

ARCHIVE



Nuevo Create a new model.



Abrir Opens an existing model.



Guardar Saves changes made to the model.



Scanner a scan done with the default scanner and displays the image to vectorize.



Imprimir fichas Card printing technique we have created from the model.

ESCALATING



Parametros Scaling parameters (height base, minimum and maximum size, step,)



Escala (personalizada) Choose sizes are scaled to visualize puncturing one or more pieces.

LACES



definir entidades Select the entities to which they will affect lace, and the rest will not affect you.

Button sx € Select or deselect entities that want to use with lace.

Button f2 € Uncheck all member institutions reserve requirements.



A puncturing pause, stop working all assets lace.



RED activating only let us draw elements (lines, punctures, etc.) point-to-point network.



END Turning to draw near to the end of a line to put a point on a line, pricking, etc. Mouse brings us directly to the end of the line.



Activating the midpoint closer to the middle of a line to put a point on a line, puncture, etc., the mouse directly on the center line.



KEY POINT enabling approach to the line, the mouse brings us directly to the points that are marked and form a line or puncture.



Activating point near the approach line to put a point on a line or a puncture, the mouse directly on the line, so it gives us more accuracy when drawing a line over another.



Activating indicates the point perpendicular point where we're drawing the line would be perpendicular.



Ortogonal a los ejes

ORTONGONAL activating the axes to the design a line only lets us put points at right angles or 45 degree angle.



Polar

POLAR activating the line indicates that we set for ourselves at 0, 30, 60 or 90 degrees it to the main shaft.



Intersecciones

Activating intersections, to approach any intersection, brings us the pointer to the same intersection, to help us be more precise.

ENTITY



Línea: Blanca

Select line type defined there. To define new lines we click on line and the next box appears.



We can define the name of the line, the thickness we will see, the color and the line (continuous, long dash, dash fine point and line). And if we want the kind of line is only as an internal, automatic selects and that is unique to the part or not.

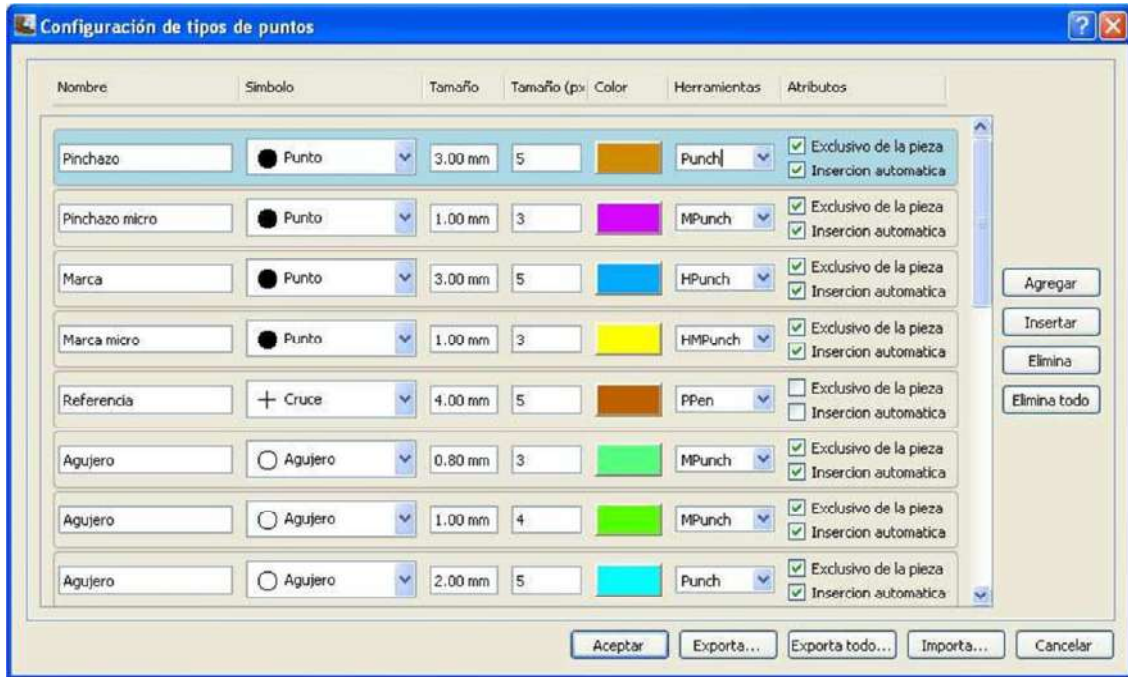
A tools we are deploying:

	<u>Cutting machine</u>	
Cut	_____	punzonado
HCut	<u>ra</u> cut	awl
LPen	cut incision	micro punch
Grooving	Pen	pen
Projection	Pen	awl
Reinf	projected line	line ignored (no projection)
Sewing	Line heel reinforcement.	Line heel reinforcement.
	Intermittent line written *	Skipline written *

* You have to configure output parameters Sewing mode output with the layout we want.



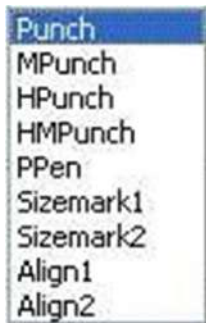
Select the type of point to be defined. To define new types of point and we punctured POINT appears:



The name that we give, the symbol will have, the nozzle size that will cut the size we see in the design, color, what kind of tool created it and whether it is unique to the piece and if it is inserted automatically on the workpiece.

The types of tools are:

Cutting machine



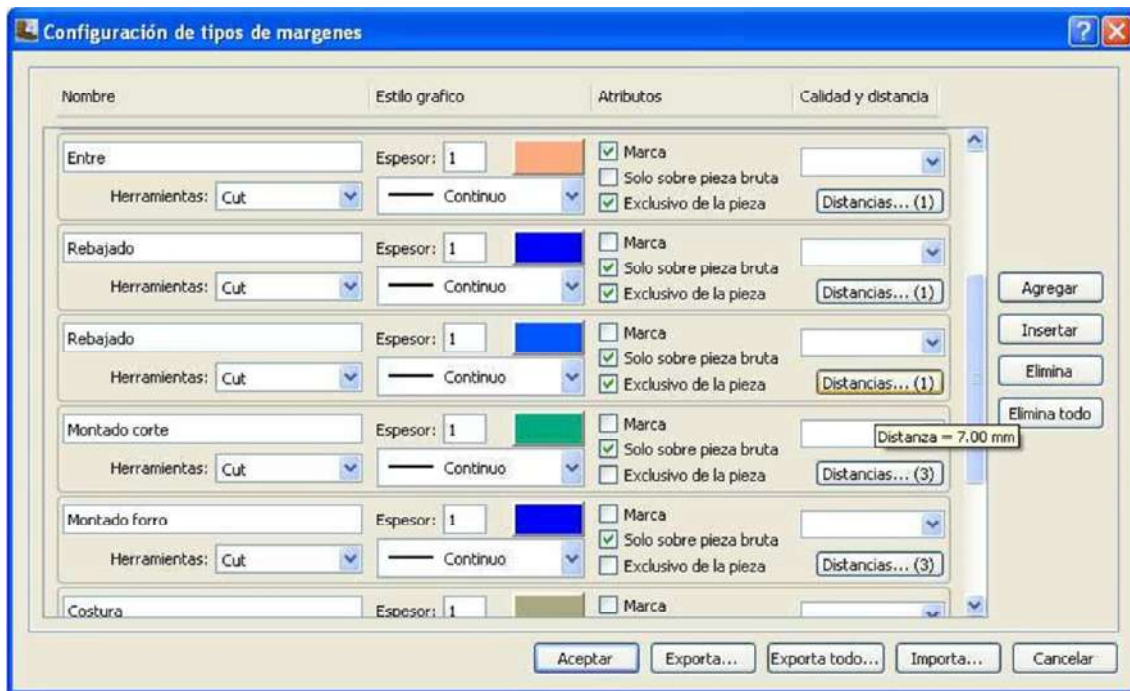
	<u>punzonadora</u>
Punches (?)	awl
Punches (?)	micro punch
Brand punch (?)	brand awl
Ignored	brand micro punch
Point pen	point pen
symbolic 1	ignored
Symbolics 2	ignored
Alignment	
Alignment 1 *	
2 *	

* Alignment points 1 and 2 are made in the sheet model then align the sheet with the lines and are drawn.

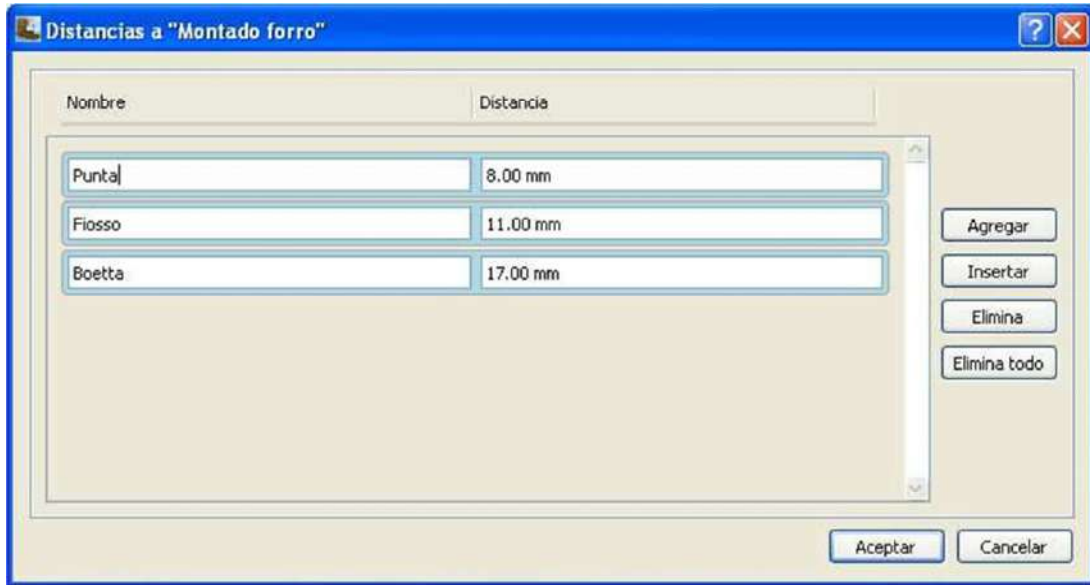


Choose a type of margin (linked line to another) of which there are defined. To define more types of margin you have to click on

And the next thing we MARGIN appears.



We can choose the name, the thickness of the line we will see, the color, the stroke (continuous, thick script, fine script and point and line), if it contains brand or not (figurative for between) only on blank and if it is unique to the part or not. We can also predefine the distance that will be the margin (with one or more distances), clicking distances displayed:



We indicate where one or more distances and names. (In the example image we have the distances to the margin "mounted lining").

SIZE



Here we indicate that we are working height. Shading number is the base size and number lines is the size we are currently seeing, (when we are watching a size that is not the base carving background is red).

If we click on the hammer next to size with any active part, the image displayed on the screen scale appears.

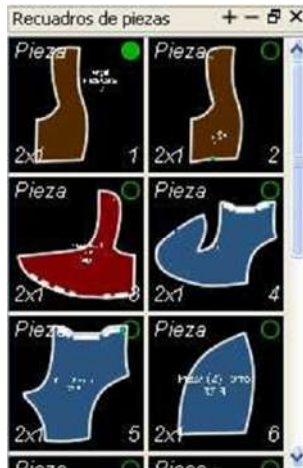


Here we indicate that we are working width. Shading number is the base width and number lines is the width we are seeing

Currently, (when we are seeing a width that is not the base width bottom is red).

If we click on the hammer next to Calce with some active part, the image displayed on the screen scale appears.

SIDE WINDOWS



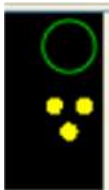
Box parts

It shows the parts that are already created.

At the top of each piece shows the name we have designated this piece. In the bottom of each piece shows the number of parts in a pair.

The circle in the upper right of each piece, when we click and stuffed, shows the piece in design.

When clicking any piece 2 times the background green, we will modify the part, adding or removing internal elements modifying the contour.



If we find this symbol in the window of a piece, indicates that this scale pieces in one group.



If we encounter these symbols within the window of a piece, it indicates that some piece of this custom scale (it has been digitized separately and does not follow scale)



Ratings

They show the different layers of the model.

Arrow we see is the layer where you are writing at this time.

The green dot means that we are seeing the layer if the point is white, the layer is hidden.

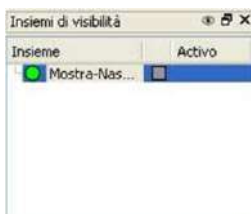
A passing the mouse over window scores, model lines take on the color of the layer in which they are to better differentiate.



Alternatively we choose different types of created view.

In view we have the image of the design that we made (we can upload a photo or drawing model)

We can have various designs of color combinations, you'll worksheet.



Window visibility.

This window is a module layers, which are used to put tools, such as the rules. In this way we can remove and put the tools margin leaving the layers of the model.

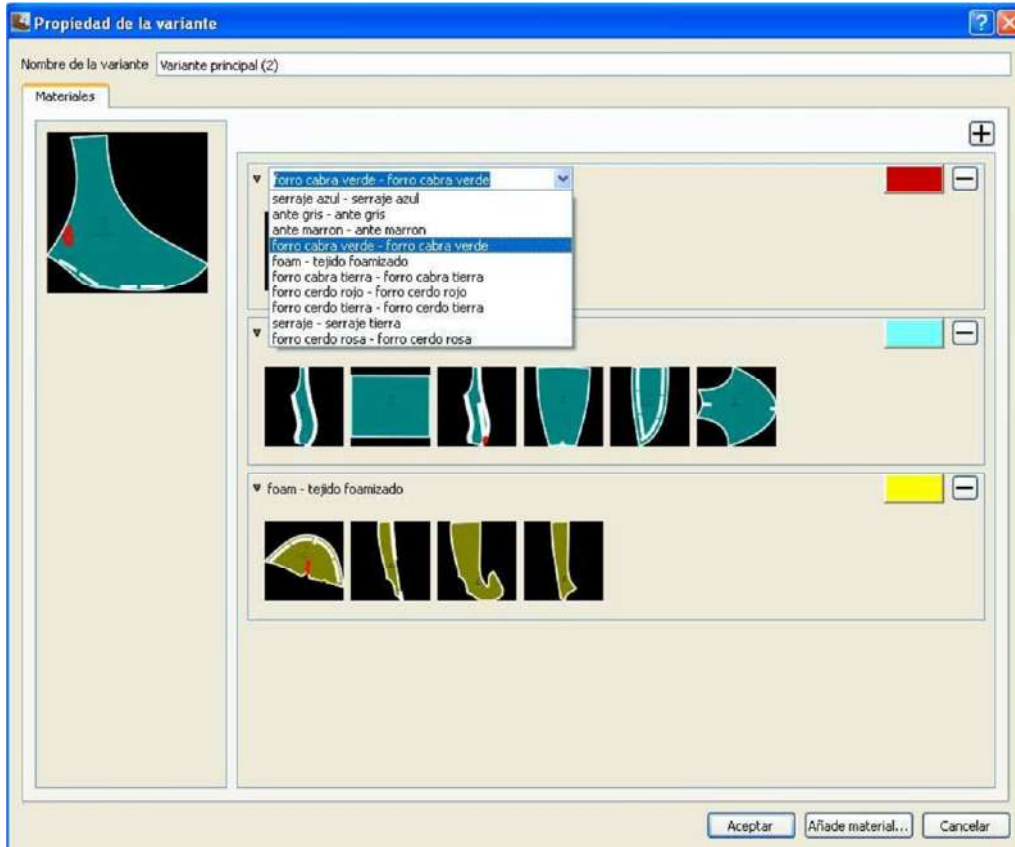
DATA SHEET

To create a sheet model, we will continue the following steps.

Go to Sheets € € variant cover creates

Here we draw the model (we can import lines) or put a background image.

In data sheets € € Property variant of the variant choose the materials that will comprise the model



To make the database of materials, go to Sheets € databases of materials.

Here we find the following image

Codigo	Año	Proveedor	Descripción	Precio	um	sesperdicio %
ante gris	2013	pieles del sureste	ante gris	6	ft2 •	15
ante marron	2013	pieles del sureste	ante marron	6,25	ft2 •	15
foam	2013	foamizados andres	tejido foamizado	0,6	ft2 •	14
forro cabra tierra	2013	anticpiel	forro cabra tierra	1,8	ft2 •	18
forro cabra verde	2013	anticpiel	forro cabra verde	1,8	ft2 •	18
forro cerdo rojo	2013	pieles del sureste	forro cerdo rojo	1,2	ft2 •	27
forro cerdo rosa	2013	pieles del sureste	forro cerdo rosa	1,2	ft2 •	27
forro cerdo tierra	2013	pieles del sureste	forro cerdo tierra	1,2	ft2 •	27
serraje	2013	anticpiel	serraje tierra	2,8	ft2 •	22
serraje azul	2013	anticpiel	serraje azul	2,8	ft2 •	22

A Giving to add the data we getting the items, vendor, price, unit of measure and percentage of waste added for each type of material.

If we are to € variant data sheets doubles € variant, we make a copy of the variant to other color combinations and are reflected in consumption after the change in ownership of the current variant.

If we are to € variant data sheets € opens different base, add supplements to the model, such as zippers, ornaments, brooches ...

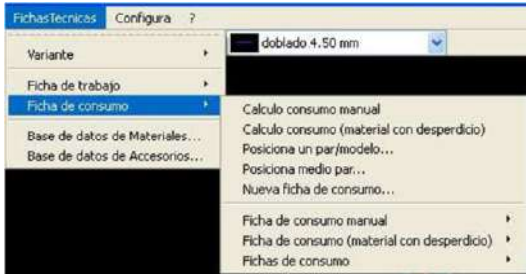
To make the database accessories, go to Technical Data Sheets € databases of accessories (like database of materials).

If we are to Technical Data Sheets € worksheet € new worksheet we used to import the lines of the pieces we should clear up with some explanation, and write it with text, such as bending, between, to the song ...

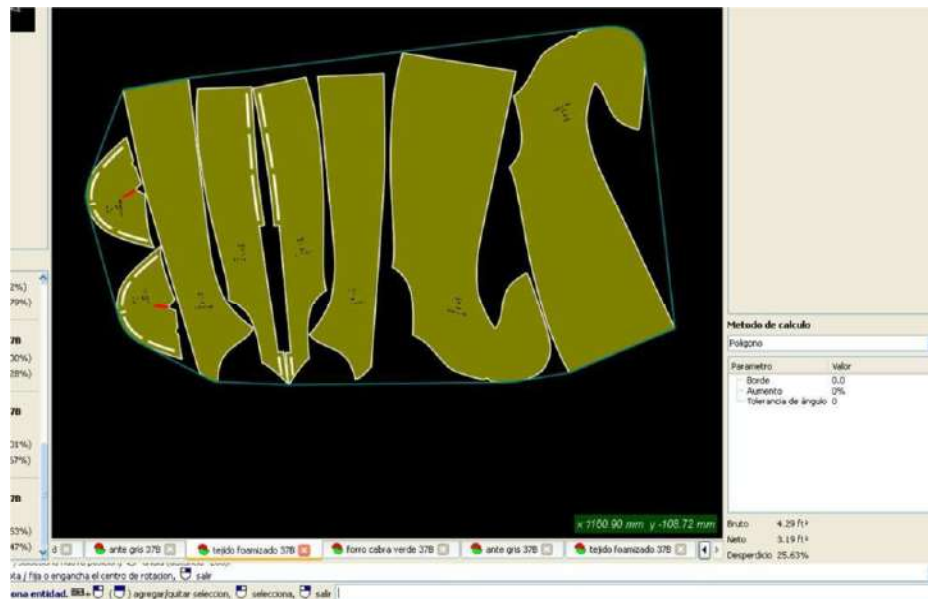


To calculate the consumer has the model, we chose the variant we want

Then we'll technical data sheets € consumption. We have the following options.



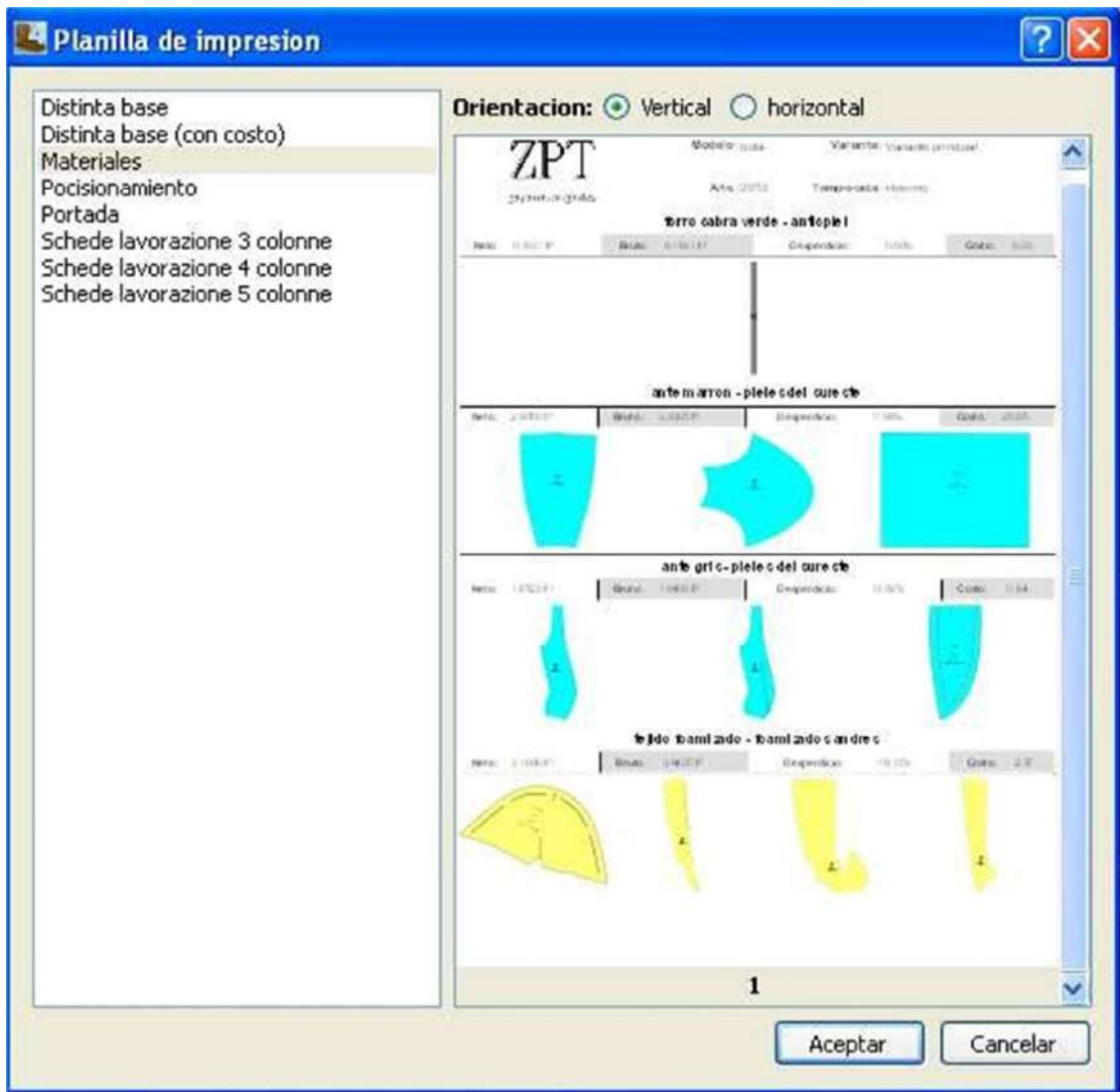
- Manual calculation consumption. manually measure the consumer has the model and introduce by material
- Consumption calculation (waste material), it gives us what we consume the model without considering placing waste.
- Positioning a pair / pattern positions us a pair, so settled as it would in the placement of the skin and gives the consumer, as shown in the following image. On the right calculation method appears, which it indicates that method will measure consumption (the most correct is the polygon).
- Positioned middle pair, middle pair positions us and gives us the average torque consumption.
The operation is the same as that of positioning a pair.



To print the data sheet, we will file € print technical specifications, and we can see the following window:



Where we put "LOGO" We can put the image of the logo of our company.
Where we put "CHOOSING VARIANT" choose the variant you want to work (or more)
We click on the "+" and select the chips you want to print.



Once you have selected the cards, we appear on the screen surrounded by a green outline. If you do not want a punctured foil on the foil and crumbs will not be printed.

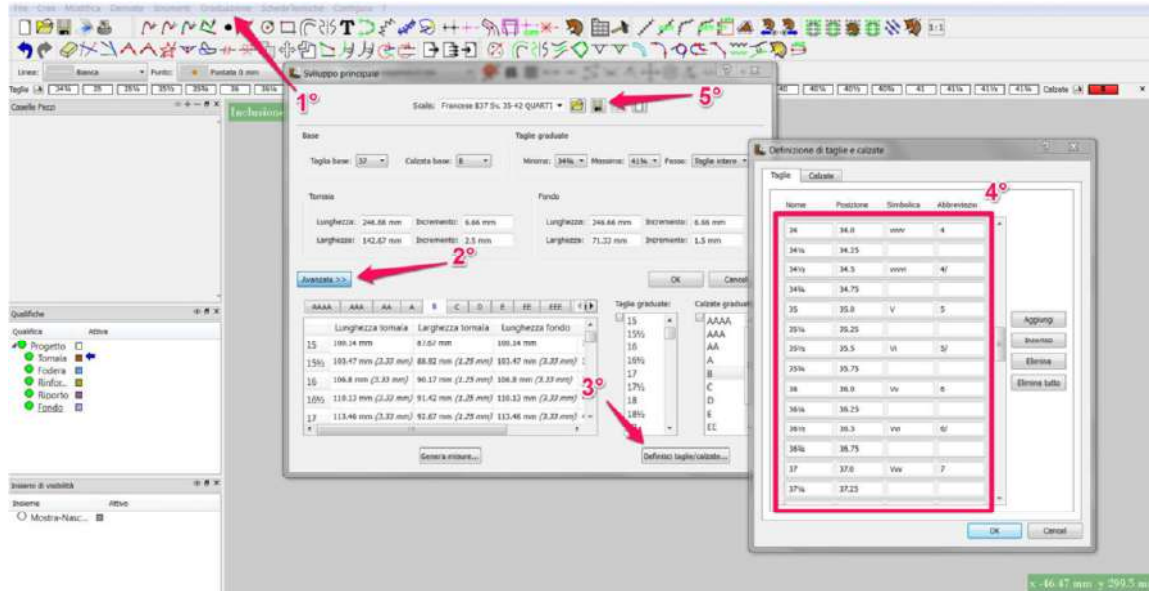
Click in print and choose a printer (if multiple) .If we give Exports we export a Zip file within multiple PDF files have all the information.

- If we want to leave some information in the data sheet of any part must make this information as "Note" in the properties of the part.

SETTING

- In network configured € We can choose to view the network or not also see the dimensions.

- To configure ¼ size should go to advanced upscaling € € € size parameters-wide defincion and you have to add the missing sizes. After reminds you to save the scale.



It would like the picture.

- To set type there go to Scaled encoding parameters € € € Advanced height-wide definition must be put on number 40 and change what we consider as it comes preset number 40 without symbolic
V = v = big bite
bite small

i =

average number, I make

a small cut e = bite outer

If we want to leave a space in the media we

underscore. Example: VV_e

- Settings € piece: We can set the semiautomatic or manual outer contour, the inner contour and the connection between predetermined lines, automatic text insertion new piece, showing the description of the parts. We can also find the automatic insertion of internal and lines on active parts.
- Settings € encoding: We can choose the size of the muescas of symbolic and enable or disable activating expand size.
- € Settings menu: We set the size of icons and if we want the text or icons, we can also choose the disappearance of the right or left bar.
- Table Settings € graphic digitizer: configure the model of the tablet.
- € Settings Output parameters: we must incorporate sewing in the case of interrupted lines and want to be drawn with the machine.

PERSONALIZATION

- It is recommended to customize the program to open a new model and have the measures and tools that we usually want more frequently, such as:
 - o different layers
 - o Margins with more measures used by the company
 - o It may be interesting to include the main axis scaling
 - o A personalized time, we must save as a template, giving it a name. In the create a new model, we choose the template you have saved and have our customization. We can create as many templates as you need, for example, a customized boot, another salon, another for sandals, ...

We can customize the letters choose each function by clicking with the mouse wheel up function to customize.

SCALING NOTES

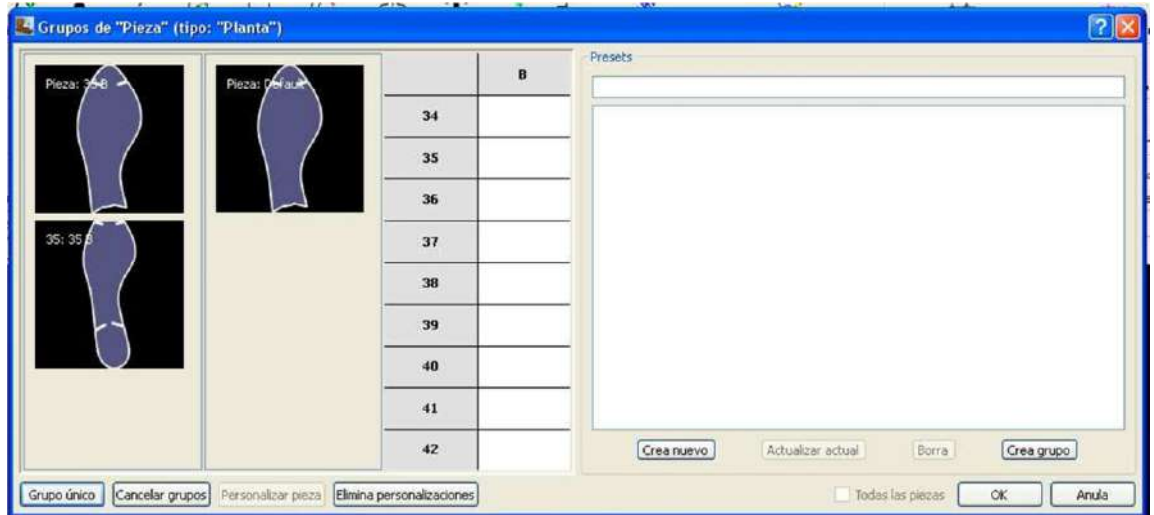
- Put the main shaft (or make the impost on the template to come out at startup)
- € In scaling parameters / data parameters have horma.
 - € Also we access the parameters by double clicking on the main shaft.
 - € In plants, we can put measures plant automatically selecting the line of the plant and keeping the right we see a menu. If we click on set measures the background, automatically measures the plant and put measures.
- For scaling, we click on the hammer there on the side of size.
- Attention to putting transparent to see how it looks. Ensure the transparent is the same size with which we will work.
- Scaling groups € dcho button. above the workpiece and punctured to scaling group. We chose the bases and drag from the grassroots want the numbers belonging to that group.
 - o To block the growth of a part of a piece, put a double countershaft and we click. Upstairs we measure and group.
 - As in block the axis X or Y
 - In groups we can create different groups or single group.
- Add to scale a piece that is unrelated to the scale or modify the shape of the piece in a particular size. € Choose the size you want to modify, for example 35



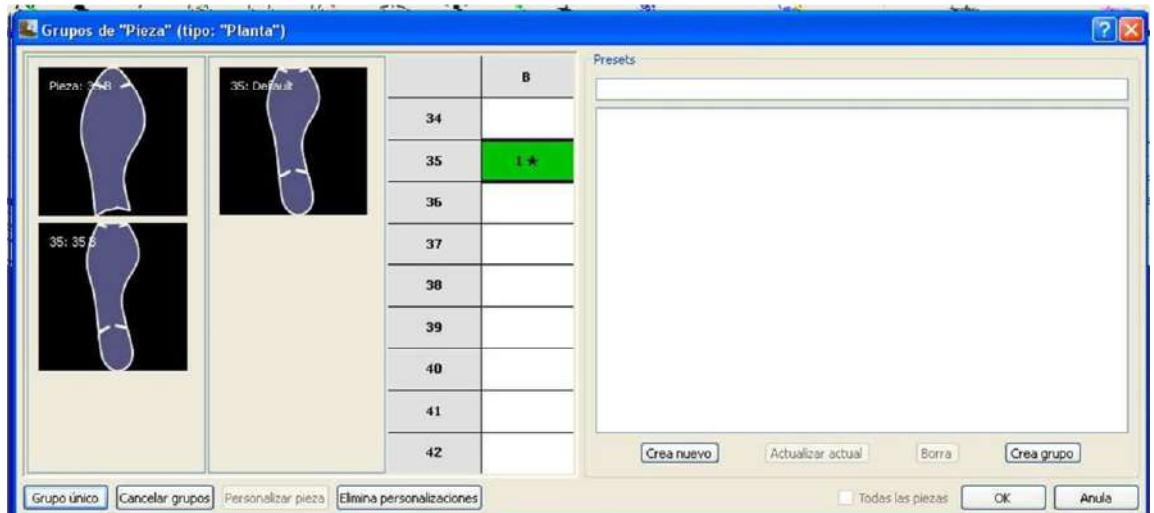
We the bottom is red and striped size selected. Copy the lines of the piece, or return to digitize modifying as appropriate (always with the corresponding size selected)

Create the piece

Right click on the piece with the original scale and choose scaling groups € within the window, click customize piece and the following menu appears



Click and drag the modified part corresponding to the size and appears to us the following



We click OK and the part we disappear from the side window, the following symbol appears on the piece of original scale.



This indicates that in this scale there is a custom piece.

It is important to return the correct size to continue scanning parts in the model.

PROBLEMS

A modifying a line appears in red one piece, we get up and go "exploited piece" It has changed a line and tell us that the modification does not work well because it has changed one piece and is not viable.

A modifying some line or creating a piece, the outline of the piece appears in orange. It warns that there is a problem in any size. (If we give dcho. Button on the piece, and click in escalations pieces, shows that size is the problem.

A cutting a closed line, not cut and generates a square dot
You should go to Configure / parameters, search Spezza LINE and change the value to 0.01

4.3 PREPARATION AND UPDATING OF TECHNICAL SPECIFICATIONS

Following is the basic content of a technical sheet shown footwear.

Logo	Empresa:		Modelo:		Fecha:	
	Colección:		Referencia:		Diseñador/Modelista:	
Producto - Foto.		Dibujo técnico - Foto.			Patrones- Foto	
COMPONENTE	REFERENCIA	PROVEEDOR	MATERIAL	CARACTERISTICA		CANTIDAD
1. HORMA	#					
	Altura:					
2. PLANTILLA MONT.	#					
	Altura:					
3. CAPELLADA	#			Color:	Calibre:	
4. FORRO	#			Color:	Calibre:	
5. PLANTILLA INT.						
6. HILO	#			Color:	Calibre:	
7. REFUERZO	#					
8. PUNTERA	#					
9. CONTRAFUERTE	#					
10. CREAMLLERA	#			Color:	Numero:	
11. HEBILLA	#			Color:	tipo:	
12. ACCESORIO	#			Color:		
13. TACON	#			Color:	Acabado	
	Altura					
14. SUELA	#			Color:	Acabado	
15. MARQUILLA	#					

Logo	Empresa:	Modelo:	Fecha:				
	Colección:	Referencia:	Modelista:				
PATRON DEL MODELO	PIEZA	MATERIAL	COLOR	DESCRIPCION			
				DOBLADO	CORTADO	COSIDO	COSIDO VUELTI
	Capellada 1			COSTURA			
	Capellada 2						
	Capellada 3						
	Capellada 4						
	Forro 1						
	Forro 2						
	Hilo						
	Hobilla						
	Cremallera						
	Accesorio						
	Puntera						
	Contrafuerte						
	GRAFICO PLANTILLA INTERNA	PIEZA	MATERIAL	COLOR	DESCRIPCION		
Pieza 1							
Pieza 2							
Pieza 3							
Marca/ Marquilla							