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EuroCAD Spread&Cut Planner

User manual

EuroCAD Spread&Cut Planner

is part of the EuroCAD CAD package,
that contains the following applications:

EuroCAD Pattern Designer
EuroCAD Photo Digitizer
EuroCAD Spread&Cut Planner
EuroCAD Automarker
EuroCAD PlotMaster

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Application use:

With EuroCAD Spread&Cut Planner (ESCP) you will be able to:

- Planning the size combinations on markers and planning the lays to obtain the required quantities
- Call EuroCAD Automarker application to optimize the markers
- Calculate the input and efficiency
- Set and print the cut plan technical sheet
- Print the markers on a plotter
- Export the markers for the automatic cutting machine
- Save and manage data in files on the computer hard disk or in databases for cutting plans.

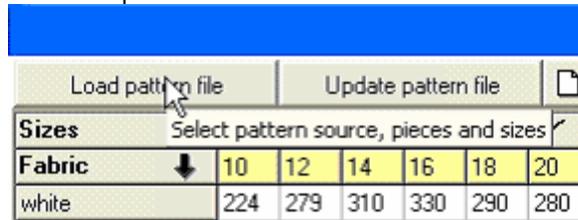
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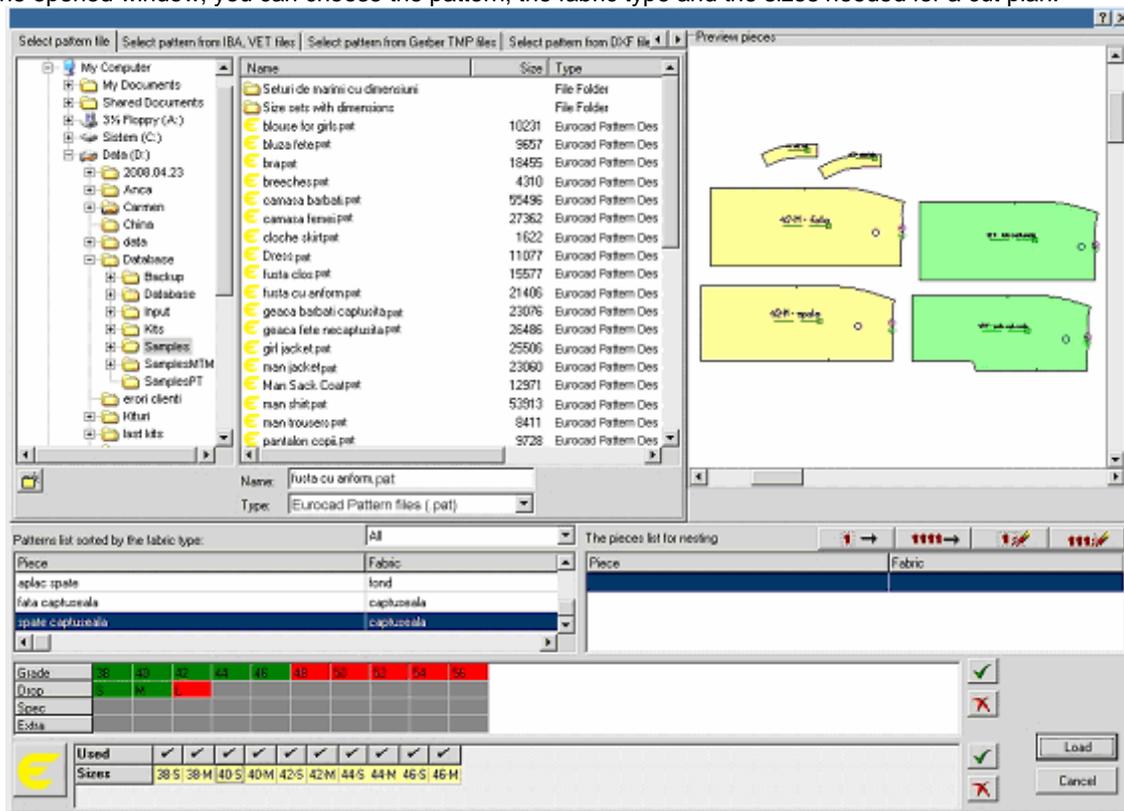
2.2 Choose a pattern source and select the sizes for a specific customer order

Choose pattern source -> Select current pieces -> Select current sizes -> Accept

Click on « Load pattern file » button to open the selection window



In the opened window, you can choose the pattern, the fabric type and the sizes needed for a cut plan.

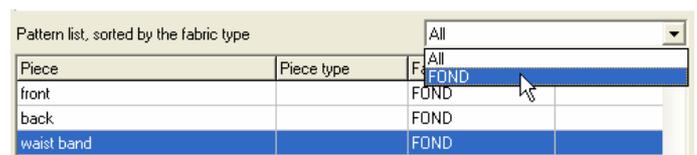


If you want to create a new folder, you must use the “Create a new folder” button in the “Pattern selection” window. In the opened window you must fill the new folder name in the selected folder tree and then you must click on “Accept” button.

After selecting a valid project that can be loaded by the program, in the right side of the opened window you will be able to visualize the project pieces, then the list with available sizes and the piece list in the model.



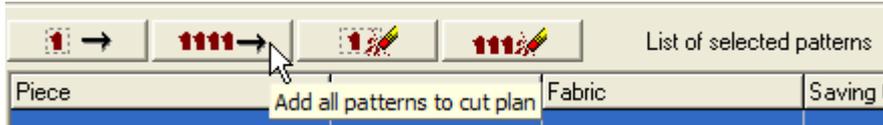
For the next step you must select the fabric type to be cut and transferred in the pattern list for specific fabric type. Thus, you must click on the small arrow near the field « Pattern list, sorted by the fabric type ». A list is opened; this list contains all fabric in the selected pattern. Select the fabric for the cut plan. After you have selected the material, only the selected pieces for cutting will be displayed.



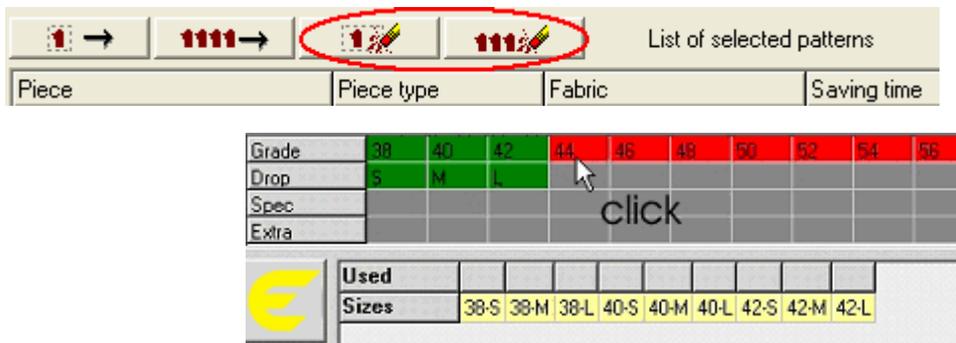
You have two ways to transfer the pieces in the working list. First you can transfer pieces one by one, by click to select the piece and then click on « Add pattern to cut plan » button.



The second way is to transfer all pieces of the same fabric in the working list by click on the « Add all patterns to cut plan »



To delete a piece or all pieces from the working list, you must use one of the buttons: « Remove pattern from cut plan » or « Remove all patterns from the cut plan ».

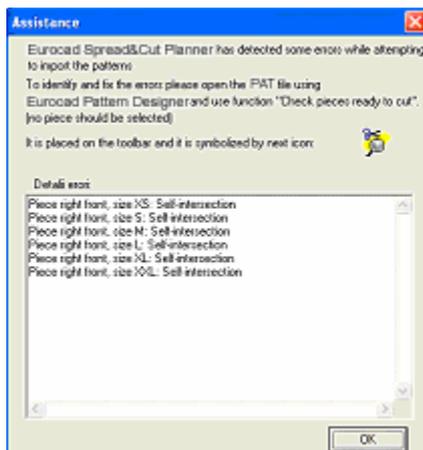


After piece selection, you must check to select the sizes that appear on the customer order. For the models that are graded on multiple set sizes (Grade, Drop, Spec and Extra) it is possible to use the size combination filter. On the top of the size table used in the current order, it can be found a table that contains all the sizes grouped on each defined set of size. In this table, the user has the possibility to check or uncheck by click the sizes used for combination size from the order. The sizes from green boxes are the used sizes and the sizes from red boxes are the sizes that will not be used. There are two buttons that permit the fast check or uncheck of all the sizes from the size filter table.



If the order contains a size that is not on the project size list, you must open again EuroCAD Pattern Designer program to re-enter this size too. After you have selected the pieces and checked the sizes, you must click on « Accept » button.

If you click on the « Open the selected pattern in EuroCAD Pattern Designer » button, the EuroCAD Pattern Designer application will be launched automatically and will load the selected pattern in EuroCAD Spread&Cut Planner. This operation is very useful for a last check or change before planning for cutting and nesting optimization.



If the model to be loaded includes pieces with errors, then a warning message will appear. When you load a pattern in EuroCAD Spread&Cut Planner application, all pieces are checked; if any error is detected, a new "Assistance" window is opening. Here there is a list of detected errors and the steps that you must perform in order to find and correct them. EuroCAD Spread&Cut Planner application will not load a model with errors.

2.3 Set parameters for markers and spreading

Click on « Cutting setting » button -> Enter settings -> Accept

For an accurate marker planning or spreading you must set some options in the setting window. These settings can be adjusted at any moment during working with this program and induces recalculations for any planning operation.

You must click on « Cutting setting » button to open the setting window.



The setting window shows three fields:

1. Spread/cut settings
2. User settings – general settings regarding the program
3. Plotter settings
4. Cutter settings
5. Optimization settings

Spread and Cut settings | User settings | Plotter settings | Cutter Settings | Optimization

Recommended number of sheets:

Fabric width: cm

Recommended spreading length: cm

Maximum no. of products on the marker: **Estimate**

Spreading gap: cm

Gap (double gap for each piece) cm

Fabric's specific weight: g/m²

Fabric spreading options

Simple sheet

Double sheet spreading (half of pattern for one symmetrical product)

Double sheet spreading (all patterns for two products)

For tubular or folded fabric:

Use the upper edge

Use the lower edge

Fabric types settings:

Similar fabric types that can be spread and cut together

Different fabric types that must be spread in different lays

Group the fabrics with similar properties

Fabric width, pieces gap and shrink will be declared for each fabric type

Fabric shrink

Take the fabric shrink from the pieces

Raw fabric width: cm

Processed fabric width: cm

Width shrink: %

Raw fabric length: cm

Processed fabric length: cm

Length stretch: %

Don't load the double pieces for double sheet

Tubular or folded fabrics

When a symmetrical piece is half-folded and placed on the edge of the fabric, make it double

Always place the symmetrical pieces half-folded on the edge of the fabric

OK Cancel

In the spread/cut settings field you can set:

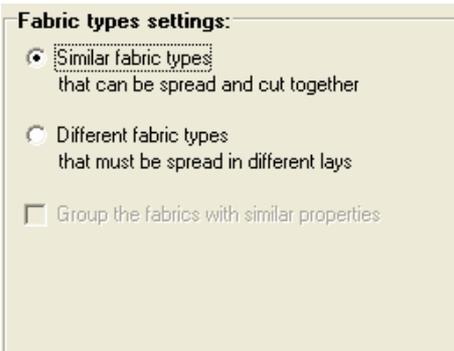
- general information for spreading
- fabric combination settings
- spreading options
- settings for folded or tubular fabric
- information about fabric contraction.

General information for spreading

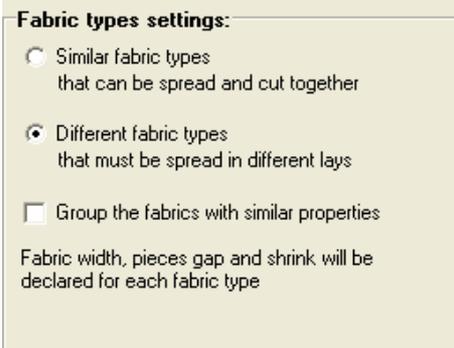
- Recommended number of sheets
 - This is the optimal number of sheets in the lay, according to the fabric thickness and properties;
- Fabric width
 - Represents the fabric width to be cut; it is used to create and optimize the markers. If the materials are contracting, the useful width will be set by click on the box with the fabric name, in the planning table.
- Recommended spreading length
 - Represents the optimal spreading length, according to the technical conditions and to the spreading material; this length can be exceeded to obtain effective optimization but you must not exceed the maximum spreading length. The maximum spreading length is the recommended spreading length plus 5% from its value.
- Maximum number of sizes on the marker
 - Represents the maximum number of products estimated to fit a marker, as close as possible to the recommended spreading length. This number is only an approximation while after combination between various sizes you can obtain longer or shorter markers. Maximum number of products can be set in two ways: automatically by the program using "Estimate" function or by typing manually directly the number. To calculate this automatically the program will follow next algorithm: 80 percentages from marker area (The marker area will be calculated using the values from "Cutting settings" "Spreading width" added by "Recommended spreading length") will be divided by the arithmetic average for all sizes in the marker (products). The number of products will remain the same with the number inserted by user if the program cannot calculate it automatically.
- Spreading reserve
 - Represents the technological reserve left for spreading at the two ends for each sheet in the lay; you must set only the reserve at a single end and the program will double it.
- Lateral reserve
 - Represents the technological reserve let at the two edges of each sheet in the lay; will be introduced only the reserve from one side, not the cumulate one. The program will consider it as double when will be calculated the total consume of fabric in g/m^2 .
- Technological distance. Pieces reserve.
 - Represents the technological reserve left around each piece for cut. If the fabrics behave differently, the technological cutting distance will be set by a click on the box with the fabric name, in the planning table.
 - If you realize a cut plan for an order from multiple fabrics, the piece reserve differs for each fabric; this will be mentioned by displaying the piece reserve on a colored background. Displaying the piece reserve on a colored background may also signal a change operated in EuroCAD Automarker application.
- Specific weight
 - You must fill in the specific weight for the used fabric in g/mp . If you are using fabric with different properties, the specific weight will be set by a click on a box with the fabric name in the table with the fabric amounts. If you realize a cut plan for an order that involves multiple fabric types with different specific weights, the background in the value boxes will be colored.

Fabric combination settings

In the Spread&Cut Planner settings window you may choose between combined or separate lays from different or similar fabric type.



If the fabrics have an identical behavior on spreading, if they have the same contraction, then you may choose combined lays; this operation may lead to supplementary optimization for planning.



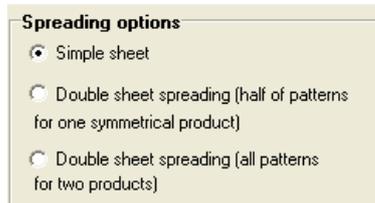
If the fabrics have a different behavior, if they cannot be put in contact or if they have different contractions, then you must cut them separately and you must select the option with different fabric types that will be spread in different lays. Thus, marker settings, especially those regarding fabric widths, technological distance for cutting and contractions, will be introduced separately for each fabric by a click on the fabric box in the planning table.

If only some of the order fabrics have different properties the user can choose the "Group the fabrics with similar properties" option to cut in the same lay fabrics with common properties (fabrics with the same width, piece gap, shrink and specific weight).

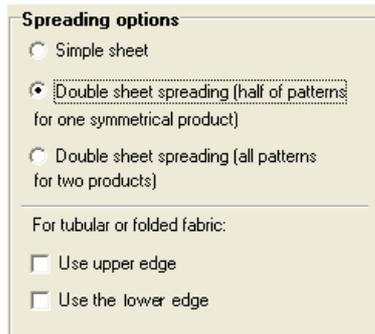
Attention! If the cut plan includes more than one fabric and if they are set with different common properties, the planning must be realized so as the markers in a color will be used for other colors too. Thus, it is possible that some planning will apparently not respect the user defined parameters in « Cut settings » window.

Information regarding sheets in the lay

In this section you may choose the spreading options for the current order. You can choose these options according to the model and material, or if you will spread simple sheets, double sheets (front/back) or if you will work on tubular or folded fabric.



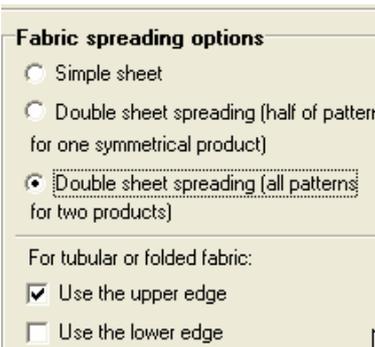
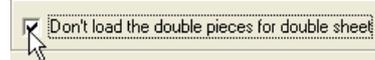
If you work on a project without matches or symmetries you must spread simple sheets. On the marker, you will see the full patterns. You must check "Simple sheet" option.



If you work with symmetrical products on which you want to obtain some symmetry, you must spread double sheets. On the marker, you will see half of the pattern, the other half being cut on the twin sheet of the double sheet. You must check the "Double sheet spreading (half of patterns for one symmetrical product)" option. You may choose not to load the double pieces for double sheet. For this, you must check the message „Don't load the double pieces for double sheet". If this message is unchecked on the marker there will be loaded all pieces without their symmetrical corresponding doubles.

If you realize markers on folded fabric, you must select the edge used for folding if you use tubular fabric you must select both edges. For folded or tubular fabrics you must place the symmetrical pieces along the folding edge in order to obtain the symmetrical piece by fabric unfolding.

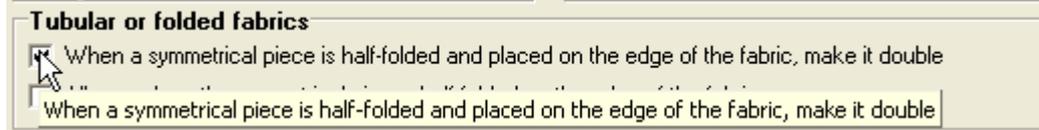
The program will automatically calculate the product amount and the sheet number according to the specific spreading algorithm.



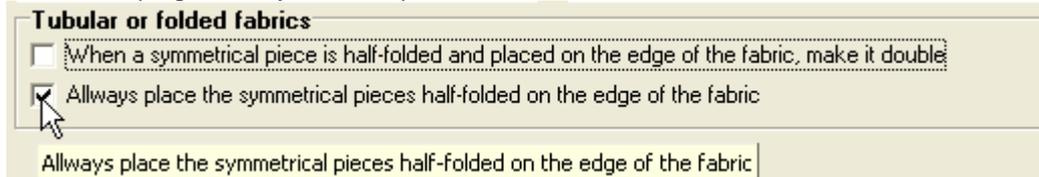
If all products are worked on tubular or folded fabric, with all patterns for two products on a marker, you must check the "Double sheet spreading (all patterns for two products)" option. The program will automatically calculate the product amount and the sheet number according to the specific spreading algorithm. On the marker, the symmetrical pieces will be half-placed along the folded fabric edge so as the symmetrical piece to be obtained by fabric unfolding.

If you work on a tubular material you must check both "Use upper edge" and "Use lower edge" options. If you work on a folded fabric, you must select only one of these options.

Setting for folded or tubular fabric



In the Spread and cut settings, there are 2 new settings for symmetrical pieces. For nesting on tubular or folded fabric for half of the pieces in a model obtained by symmetrization you may choose to double or not the symmetrical pieces on folding. By default, the "When a symmetrical piece is half-folded and placed on the edge of the fabric, make it double" option is checked, so that the pieces will be doubled when the EuroCAD Automarker optimizes the marker. If you don't uncheck this option, when nesting the marker using the EuroCAD Automarker program all symmetrical pieces from model will be half folded.



The second option regards the automatic nesting for tubular or folded fabric, with piece folding decided by the program; when checked, this option allows you to choose if all symmetrical pieces will be folded or not. The "Always place the symmetrical pieces half-folded on the fabric edge" option is unchecked by default; if you check this option all symmetrical pieces in the model will be folded during marker optimization in EuroCAD Automarker application.

Fabric shrink

You can prepare the markers on a fabric with shrink without changing piece size in EuroCAD Pattern Designer. The pieces can be designed and kept in a *.PAT file at the nominal size without calculating the shrink. Pattern lengthening or shrinking on the fabric length or width are automatically realized by EuroCAD Spread&Cut Planner program, by entering information about the fabric shrink: you measure a piece of fabric and enter its length and width, then you enter the length/width of the same piece of fabric after processing. The program calculates the shrink or lengthening factor and applies it reversely to the patterns marked on the fabric, independently from the pattern placement on the fabric.

If you check the message "Take the fabric shrink for pieces" you will not be able to edit the shrink setting fields in EuroCAD Spread&Cut Planner.

Fabric shrink	
<input type="checkbox"/>	Take the fabric shrink from the pieces
Raw fabric width:	<input type="text" value="100"/> cm
Processed fabric width:	<input type="text" value="97"/> cm
Width shrink:	<input type="text" value="3"/> %
Raw fabric length:	<input type="text" value="100"/> cm
Processed fabric length:	<input type="text" value="99"/> cm
Length shrink:	<input type="text" value="1"/> %

Shrink settings in EuroCAD Spread&Cut Planner

Measure the length and width for a piece of fabric and enter the value in the field near the message « Raw fabric width » or « Raw fabric length ». After processing the fabric piece, you must measure again the piece length and width and you will enter the resulted values in the field near the message « Processed fabric width » or « Processed fabric length ». EuroCAD Spread&Cut Planner will automatically calculate the fabric contraction according to the entered values.

If the fabric shows different behaviors, the contraction will be set separately for each fabric in a window that is opened when you click on the box with the fabric name, in the planning table.

In EuroCAD Automarker program you can set different values for the contraction or reserve on pieces or fabric lays; the values for piece reserve or fabric contraction can be displayed on a colored background.

If the order will be realized on multiple fabric types, in the "Spread&Cut Planner Settings" you must check "Different fabric types and must be spread on different lays", fabric settings will be different for each fabric; different values for fabric contraction and piece reserve in a lay or between different lays of the same fabric, will be marked by displaying these values on a colored background.

2.4 Enter ordered quantity for each fabric type

Enter fabric type -> Enter quantity -> Transfer into planning table

After selecting a project and the specific sizes, these sizes appear on the first row of the planning table.

Sizes	→	✓	✓	✓	✓	✓	✓	
Fabric	↓	2	3	4	6	8	10	12
Stofa1		0	0	0	0	0	0	0

To enter fabric type, you must click on the first gray column on the left side of the window; another window will open; here you will enter the fabric name.

If the pattern is worked from multiple fabrics with common properties, the information regarding the useful width, piece reserve and contraction can be changed from the setting button related to the current cut plan; in the „Fabric setting” window they are inactive. After you fill in the needed data, you must click on „Accept” button. If you want to cancel the entered information, click on „Cancel” button.

To enter different fabric types, you must click on the first gray column on the left side of the window; another window will open; here you will enter the fabric name; if the project is worked on multiple fabric types with different behavior, you must fill in information regarding:

- Fabric width
- Piece gap (distance between pieces)
- Raw fabric width
- Processed fabric width
- Raw fabric length
- Processed fabric length

The program will automatically calculate:

- Width shrink/lengthening
- Length shrink/lengthening

After you fill in the needed data, you must click on „Accept” button. If you want to cancel the entered information, click on „Cancel” button.

All info in this window (except the fabric name) will be completed as described in chapter 2.3

Information that appears on red background indicates different values from different fabric.

In the window that displays fabric properties, the values are imported from the first marker that includes that fabric in one of the lays.

If there is no such marker, fabric properties will be displayed.

Load pattern file		Update pattern file						
Sizes	→	✓	✓	✓	✓	✓	✓	Total
Fabric	↓	10	12	14	16	18	20	
white		224	279	310	330	290	280	1713
red		125	130	220	165	225	145	1010
Total		349	409	530	495	515	425	2723

Fabric amounts are entered near each size and near each fabric type. Accepted values are ranged from 0 to 9999 pieces for each size.

If the user has chosen to make a manual optimization without completing automatically the maximum number of sheets, at the end of the table becomes displayed a new column where you can see the total number of products per color.

Also, on bottom, on the last row, you can see the total number of products remained to be optimized on each size from the order.

Load pattern file		Update pattern file						
Sizes	→	✓	✓	✓	✓	✓	✓	Total
Fabric	↓	46	48	50	52	54		
blue		10				22	24	
green		2				2	1	
white		3	4	5	6	3		

A cut plan may include an unlimited fabric number.

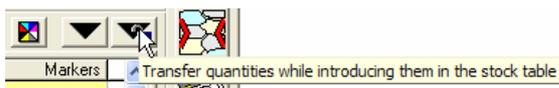
To delete a fabric from a list you must right click on the corresponding row and then select « Delete fabric ».

If there are markers with lays that includes the corresponding color, those lays will be deleted from the marker; if there are no more remaining lays, the marker itself will be deleted.

Manual transfer – Permanent transfer



After you have entered all quantities, you must click on « Transfer and compute now the quantities in the stock table » button or to press on ENTER key; thus, the entered quantities are transferred in the stock table. If you operate further changes on quantities, you must click again on « Transfer... » button or press ENTER key.



Near « Transfer... » button, you will find « Transfer quantities while introducing them in the stock table » button. If this button is hold down, the quantities will be automatically real-time transferred in the stock table as they are entered; thus, the results are obtained faster. This working mode can be used with a powerful computer while processing relatively few sizes and small quantities. Due to planning recalculation for each new entered/modified some unpleasant delays may appear during data display. In this situation we recommend the working mode with the « Transfer quantities while introducing them in the stock table » button inactive

The transfer functions: “Transfer” and “Permanent transfer” are disable if the User decides to make a manual optimization without completing automatically the maximum number of sheets from “Optimization settings” window.

Spreading order

Sizes	46	48	50	52	54
Fabric	46	48	50	52	54
Fabric1	12	16	20	16	12
Fabric2	2	5	7	5	2



When spreading many fabric types you can set the spreading order. For this press the "Spreading order" button. The "Fabric order" window will be displayed on the screen. Here you can move the fabrics up and down by dragging with your mouse the fabric name in order to be spread.

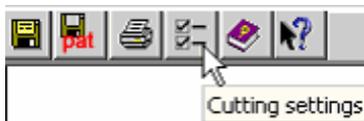
If you want to save last changes press "OK" button, if you don't want to save them press "Cancel" button.

2.5 Set planning strategy

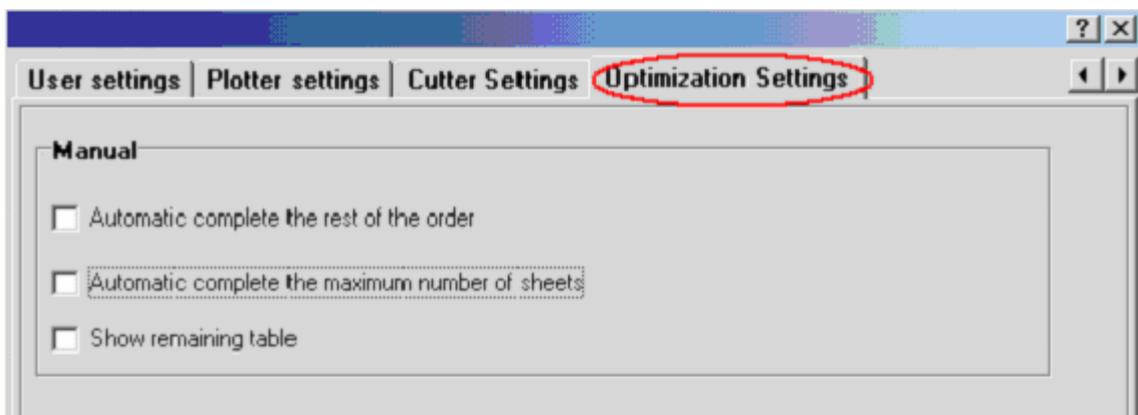
Settings -> Optimization settings -> Planning strategy -> End strategy -> Manual planning

In EuroCAD Spread&Cut Planner application the markers planning can be done in two ways: manually or automatically. The user must decide how to plan the markers by making some settings.

Press the "Cutting settings" button to open the settings window.

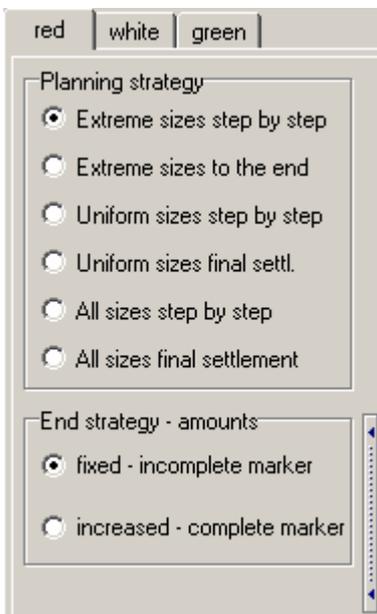
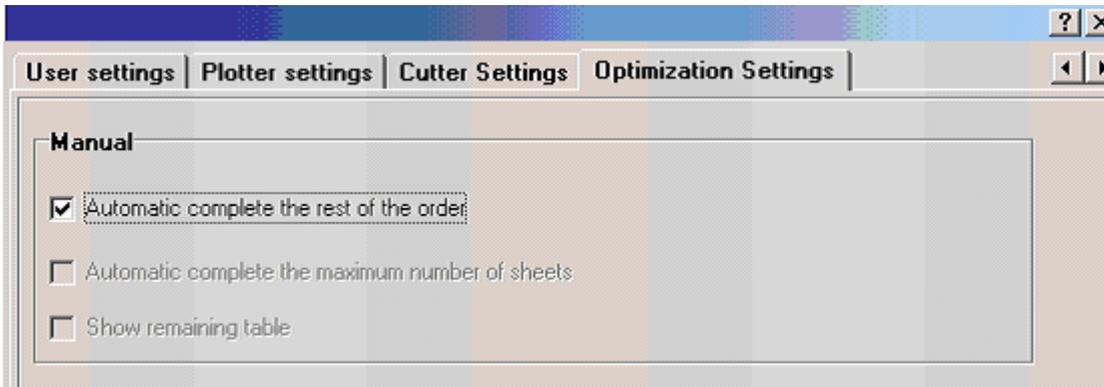


In the "Setting" window make a click on the "Optimization settings".



2.5.1. Automatic planning:

To realize the planning in automatic way you must check the option “Automatic complete the rest of the order” in the “Optimization Settings” tab from “Spread&Cut Planner Settings” window.



At automatic planning will be take into account the planning strategy existing from each color material.

Planning strategy means the way to group sizes in order to obtain a minimal number of lays as close as possible to the optimal length.

The planning strategy will be displayed and set independently form one color to another.

Attention: The strategy planning must be set and displayed for each color. The settings from the first color will not be taken in automatic way for the rest of the colors.

To enlarge the planning area, the planning strategy zone can be hiding with the hide button from the right side.

The strategy has two parts:

A. Planning strategy involves the main part of the order, until only small quantities remain; these small quantities lead fatefully to a reduced sheet usage. Planning strategies are:

- **Extreme sizes step by step** In this strategy you will look to place the extreme sizes on the same marker. The advantages for this method are:
 - Priority superseding of the extreme sizes (generally less required); thus, when you will deal with an insufficient fabric amount, you may cut lesser medium sizes that represent the main quantities.
 - Better fit on the marker, due to combinations between small and large sizes.
- **Extreme sizes to the end** The sizes to be placed on the marker are sorted with the same strategy from **Extremes sizes step by step**; the difference consist in the choice for the sheets in the lay. If in the previous strategy you have chosen the lesser number of sheets (the rests were treated on place), in the actual strategy you can choose the maximum number of sheets as long as possible. From the moment when it is impossible to complete a lay with a maximal number of sheets, you can process the rests with the same rules as used on **Extremes sizes step by step**.
- **Uniform sizes step by step** This strategy looks for a uniform depletion of all sizes. The advantages for this method are:
 - Uniform depletion of all sizes. If there if not enough material, less products will be cut from all sizes and the ratio between ordered quantities will be constant.
 - A good fit on the marker, due to combination between small and large sizes; it is useful for the orders with lesser number of sizes or with a sizes number that not

- exceed the product number on the lay. If the number of sizes is larger than the number of products on the lay, we recommend the **All sizes** strategy, that insures a better uniformity
- **Uniform sizes final settlement.** The sizes to be placed on the marker are sorted with the same strategy from **Extremes sizes step by step**; the difference consists in the choice for the sheets in the lay. If in the previous strategy you have chosen the lesser number of sheets (the rests were treated on place), in the actual strategy you can choose the maximum number of sheets as long as possible. From the moment when it is impossible to complete a lay with a maximal number of sheets, you can process the rests with the same rules as used on **Extremes sizes step by step**.
 - **All sizes, step by step.** This strategy is similar with **Uniform sizes step by step** strategy, but it is more useful for an order in which the sizes number exceeds the product number on the lay. You must try to build lays with a maximum number of sheets, but if the number of sizes to be cut is lower than the maximum sheet number, you must choose this amount as sheet number. The advantages for this method are:
 - Uniform depletion of all sizes. If there is not enough material, less products will be cut from all sizes and the ratio between ordered quantities will be constant.
 - A good fit on the marker, due to combination between small and large sizes; it is useful for the orders with lesser number of sizes or with a sizes number that not exceed the product number on the lay. If the number of sizes is larger than the number of products on the lay, we recommend the **All sizes** strategy, that insures a better uniformity
 - **All sizes, final settlement.** The sizes to be placed on the marker are sorted with the same strategy from **All sizes step by step** strategy; the difference consists in the choice for the sheets in the lay. If in the previous strategy you have chosen the lesser number of sheets (the rests were treated on place), in the actual strategy you can choose the maximum number of sheets as long as possible. From the moment when it is impossible to complete a lay with a maximal number of sheets, you can process the rests with the same rules as used on **All sizes step by step** strategy.

B. End strategy defines the way the small residual amounts are placed at the planning end, either by creating suboptimal length lays or by a small increase of some sizes; the two end strategies are:

- **Fixed – incomplete marker** This strategy looks to remove the residual amounts after applying a planning strategy, without exceeding the ordered quantities. Even if the program optimizes the lays length (to maximize it), it is possible that the product number in the lays to be under expectations, resulting in shorter lays.
- **Increased – complete marker** This strategy looks to remove the residual amounts after applying a planning strategy, without exceeding the defined quantities. The strategy insures optimal length lays but it is possible to exceed a little the ordered quantities.

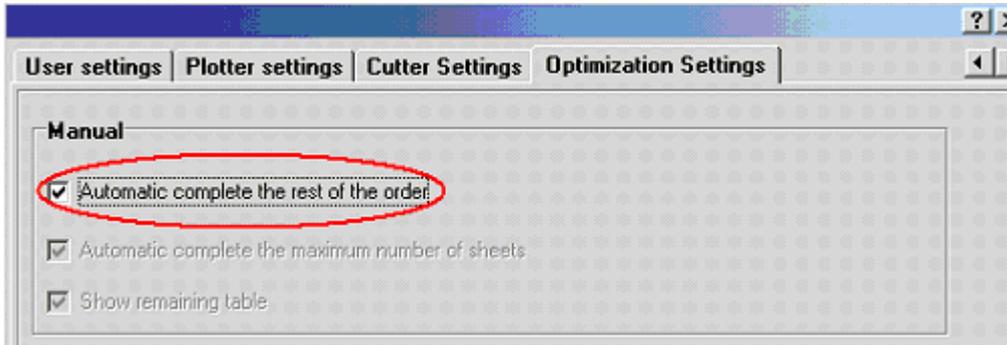
When you choose a strategy you must look to obtain lesser lay number and also to insure the order accomplishment, according to the customer will.

2.5.2. Manual planning:

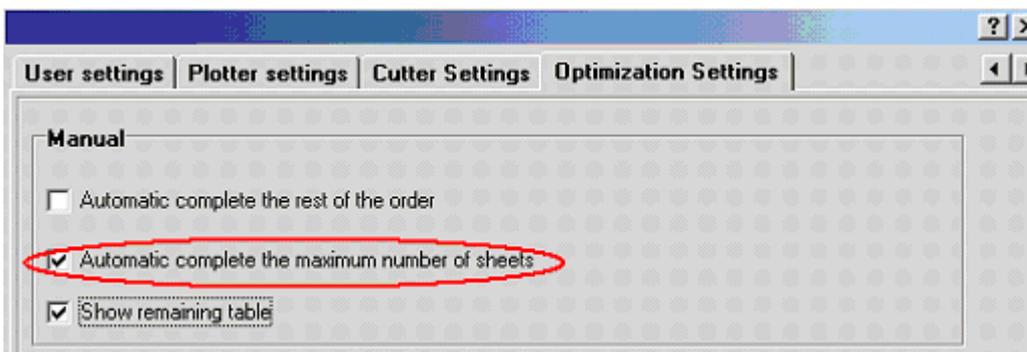
Manual planning presumes to complete manually the planning table.

Manual planning can be done in two ways:

1. Using automatic complete for the rest of the order– in this case you must ensure that the option “Automatic complete the rest of the order” from “Settings/ Optimization settings” window.



2. Without automatic complete – in this case the user must ensure that the message “Automatic complete the rest of the order” from “Settings/ Optimization settings” window is unchecked.



There are two types of manual planning without automatic complete:

- with automatic complete for the maximum number of sheets
- with manual complete for the number of sheets on each marker

In the first case you must check the message “Automatic complete the maximum number of sheets” from “Settings/ Optimization settings”. When the message is checked the user must complete manually the number of sheets for the current marker.

Warning ! On manual planning, if you make changes on one row, all rows below to this one will be erased from the current cut plan.

On manual planning the user can display on the screen the remaining products table from the order. For this you must check “Show remaining table” from “Settings/ Optimization settings” window.

Lay planning -> Manual achievement in the stock table

You can realize the planning operation manually, by entering the size number for each step and the sheet number directly in the stock table; the program is able to check the manual operations that have been performed if you check the option: “Automatic complete the rest of the order” from “Settings/ Optimization settings” window.

Each planning step is composed by two rows:

1. A yellow or green row, on which appear the product number that remain to be distributed before that step
2. A row with grey and white columns in which you may enter the sheet number to be calculated for that step and how many times a size must appear on that marker. When you click on the specific boxes to edit values, their color changes from gray to white.

In the yellow rows area, the planning proceeds manually while in the green rows area, the planning is automatically realized by the computer.

Automatic computing area, Manual computing area

In the same planning table can be displayed automatic planning area and manual planning area only if the user checks the message "Automatic complete the rest of the order" from "Settings/ Optimization settings".

To move the border between the manual and automatic computing area, you must click on the yellow or green row where you want to move the border. If you move this border upper (thus reducing the manual computing area) the program will automatically recover the automatic planning starting from the quantities that remain to be distributed from each size when entering the automatic computing area.

When you move this border down (by increasing the manual computing area) nothing changes in the automatic computing area until you introduce new values in the grey boxes.

If you enter a number in the grey box in the green area (automatic computing area), the yellow area (manual computing) will automatically extend there, including the modifying row.

If the message „Automatic complete the rest of the order" from „Settings/ Optimization settings" window, than you can complete only manually the table.

Main columns

The first (white) column displays the sheet number required for each marker. This column can be editable only if you make manual planning.

The second column (dark grey) displays online the product number in the marker planned at that step. This column cannot be edit by the user.

The columns corresponding to the ordered sizes indicate how many times one size in the marker appears. These columns can be editable only for manual planning.

The last column (dark grey) displays the marker content, i.e. the specific sizes in the marker. This column cannot be edit by user. If one size appears more than three times in a marker its name won't be duplicate in the marker name. It will be written between brackets how many times that size appears in the marker (Ex:"42(X8)").

Delete a lay

A lay can be deleted only for manual planning. To delete a lay you must right click on the gray row to be deleted and then select « Delete lay ».

white		red					
.layers	Pc.	10	12	14	16	18	20
		224	279	310	330	290	280
100	5	1	1			1	2
		124	179	310	330	190	80
40	4		1			1	2
		124	1		0	150	0
100	6	1	1		1	1	

If there are no more remaining lays, the marker itself will be deleted from the "Cutting settings" windows.

Planning table for simple sheets

white		red						
.layers	Pc.	10	12	14	16	18	20	Markers
		100	100	310	330	290	100	
100	5	1	1	1		2	1	10-12-14-18-18
		0	0	210	330	90	100	
90	6			2	2	1	1	14-14-16-16-18-20
		0	0	30	150	0	10	
10	6			3	2		1	14-14-14-16-16-20
		0	0	0	130	0	0	
26	5				5			16(x5)
		0	0	0	0	0	0	

If the pieces will be worked on simple sheets, the planning table structure remain as previously described. If you want to change the sheet number or the number of times a size appears on a marker you must click on the box to change value and then you enter manually the new sheet or product number. After entering the new values, you must press ENTER key for the program to remake the planning automatically.

The planning table for double sheets (half of the pieces for a single product resulted by symmetrization)

white		red						
Layers	Pc.	10	12	14	16	18	20	Markers
		200	200	200	330	290	100	
100 x 2	6	2	2			1	1	10-10-12-12-18-20
		0	0	200	330	190	0	
100 x 2	6			2	3	1		14-14-16-16-16-18
		0	0	0	30	90	0	
10 x 2	6				3	3		16-16-16-18-18-18
		0	0	0	0	60	0	
10 x 2	6					6		18(x6)
		0	0	0	0	0	0	

The program will calculate the product and sheet number on a specific algorithm for this kind of spreading. You will observe changes in the Layers column (sheet number in the planning for spreading on double sheets) from the similar column in the spreading on simple sheets.

In planning for spreading on double sheets (half-product) the sheet number will be multiplied by 2 (while a double sheet is composed by two sheets that are spreading face-on-face). If you want to change the sheet number you must click on the specific box and enter the desired value. After entering the new values, you must press ENTER key for the program to remake the planning automatically. If you click then on other box, the entered value appears as "valuex2"

You can also set manually the number of times a size appears on a marker. After entering the new values, you must press ENTER key for the program to remake the planning automatically.

Planning table (stock table) for tubular fabric (double sheet – all pieces for two products resulted by symmetrization)

white		red						
Layers	Pc.	10	12	14	16	18	20	Markers
		200	200	200	330	290	100	
50	5	2 x 2	2 x 2			1 x 2	0	10-10-12-12-18
		0	0	200	330	190	100	
50	6			2 x 2	2 x 2	1 x 2	1 x 2	14-14-16-16-18-20
		0	0	0	130	90	0	
13	6				5 x 2	1 x 2		16(x5)-18
		0	0	0	0	64	0	
8	4					4 x 2		18(x4)
		0	0	0	0	0	0	

For planning on tubular or folded fabric the program will calculate the product number and the sheet number on the specific algorithm for this kind of spreading. The differences consist in the display mode for the number of times a size appears on the marker.

Thus, for planning spreading on a tubular/folded fabric, the number of times a size appears on that marker will be multiplied by 2 (while a size on a marker will be cut once from the upper part of the sheet and once from the lower part of the folded sheet).

If you look to change the number of times a size appears on that marker, you must click the box to be changed and enter the desired value. If after you enter the new value, you click on another box, the entered value appears as "valuex2"

You can also set manually the number of times a size appears on a marker. After entering the new values, you must press ENTER key for the program to remake the planning automatically.

The only strategy that can be used for tubular fabric is "increased-complete marker".

Special functions to facilitate the manual planning:

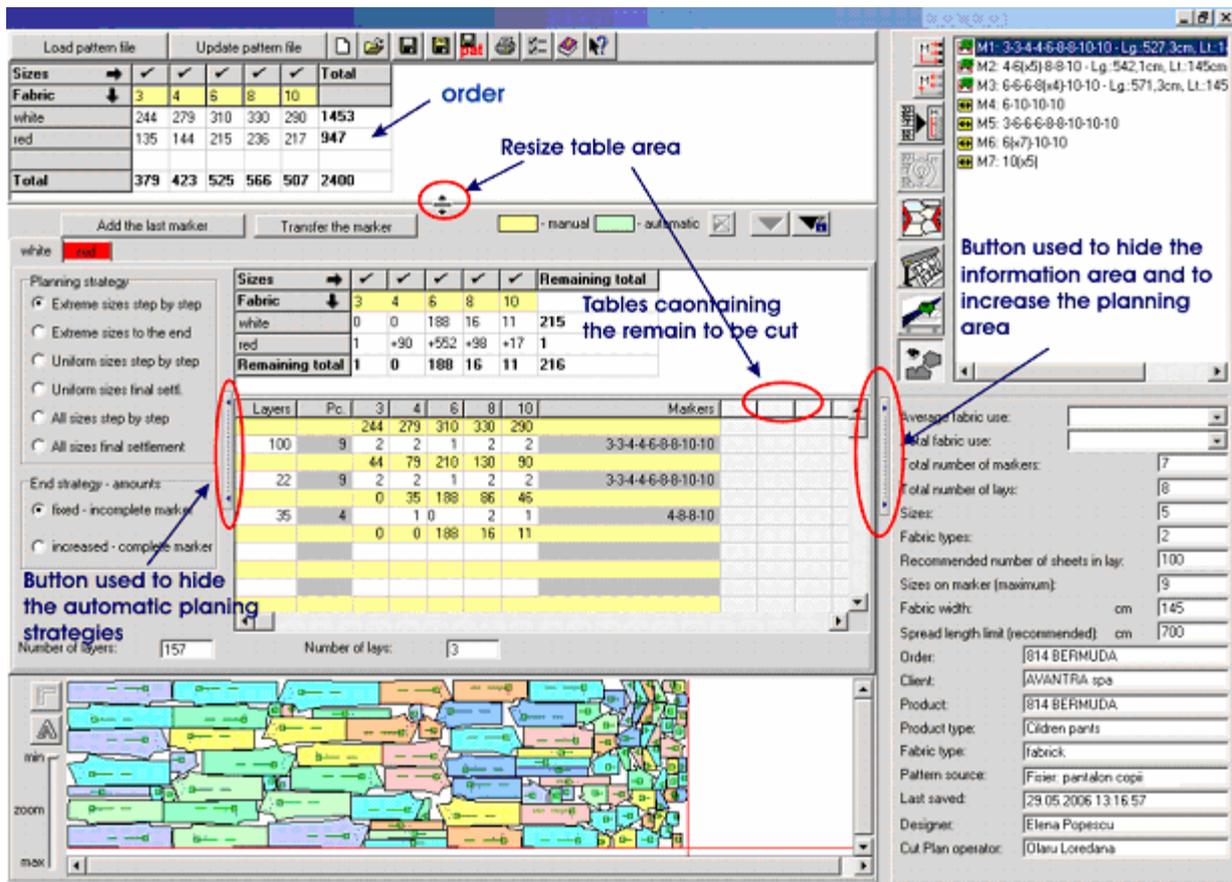
In the manual planning mode, the EuroCAD Spread&Cut Planner main window looks different than in the automatic planning mode.

In the manual mode the table where you insert the order and quantities for each size and fabric type contents one more row and column. On the last column the program displays automatically the total number of products for each color and on the last row also you can see displayed the total number of products for each size. Both the row and the column cannot be edit by user.

If the setting “Show remaining table” from « Setting/ Optimization settings » is checked, below the order table a new table will be displayed in the main window of the EuroCAD Spread&Cut Planner application. Here you can follow the remained quantities on each size and fabric. Also this table cannot be edit by the user. It is displayed automatically by the program, depending on the already planned markers.

Under these two tables you can see displayed the planning order table.

There is a button between the planning order area and the information area. After pressing this button the information area will be hidden and the planning area will be increased to be able to see many sizes.



To make a quick manual planning the user can use the next two functions: “Add the last marker” and “Transfer the marker”.

“**Add the last marker**“ : can be used if you want to repeat the last marker from the cut plan for the current fabric type.

“**Transfer the marker**“ button can be used when needing to transfer the last marker from the current fabric planning to the others fabrics from the order.

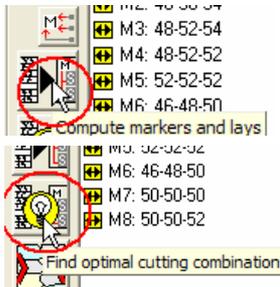
If when using the transfer function (or if you add manually many products than you had in the order) the fabric name will be displayed on a red background.

Also the fabric name can be displayed on a red background if the maximum number of layers in the lay is surpassed.

2.6 Compute markers and lays, manual or automatically

Manual computing -> Automatic computing

After the planning is done, the data in the planning (stock) table are transferred in a result table (area), being centralized in markers and lays.

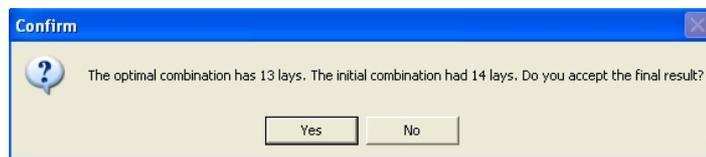


To calculate the marker and lay list, you must click the « Compute markers and lays » button. The program will combine the cut plans for all fabric type and will generate a complete common cut plan.

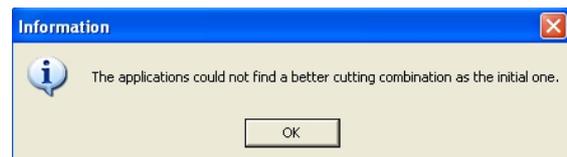
For an automatic computation of the optimal planning combination between different fabric types, you must click on the button « Find optimal cutting combination » button; the program will try all possible combinations and will select and display the best of them. The button “Find optimal cutting combination” cannot be used if the cut plan was created using the manual planning or if the cut plan contains more than 5 fabric types. The user will be

warned about this.

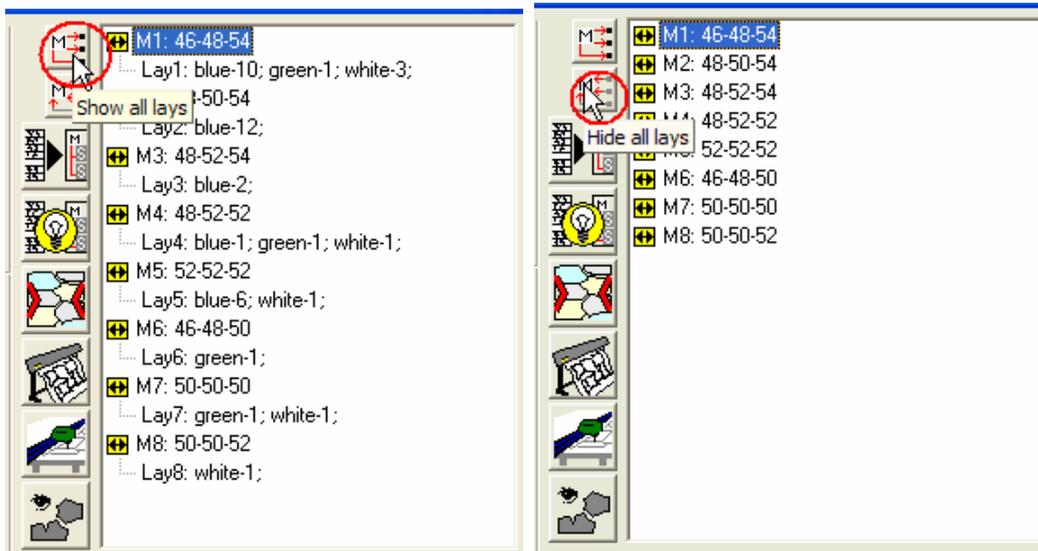
If a better combination is found, you are warned by a message in which the initial and the final number of lays are displayed. To accept the new combination, you must click on “Yes”; to cancel the new combination you must click “No”.



If there is no better combination, when the optimization ends, a information message is displayed. You are informed that there is no better combination for the current marker.



In the result table (area) you can see the markers and lays that will be cut accordingly. To see the lays associated to a marker you must click on the marker symbol. To hide the lays, you must click again o the same symbol. To expand the whole marker and lay tree you may click on « Show all lays » button; to shrink back the whole tree you must click on « Hide all lays » button.



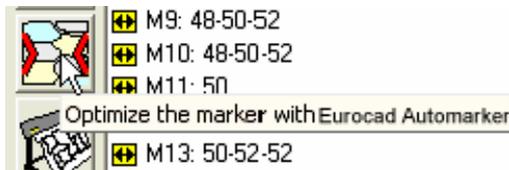
2.7 Optimize markers

Select marker -> Click on optimization button -> Optimize marker -> Accept

After you have selected markers and lays and you have found the optimal combination, each marker must be optimized apart. Optimization is realized by the EuroCAD Automarker application.

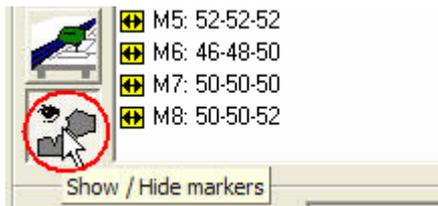
Markers in the result area can show different statuses, expressed by different symbols:

-  • unoptimized marker, is a marker that has not been optimized and cannot be used yet for cutting purposes
-  • OK optimized marker, is a marker that have been optimized by EuroCAD Automarker and as a result, the marker length fits the maximum spreading length; it is ready to be printed on plotter or to be exported to the cutter
-  • invalid optimized marker, is a marker that have been optimized by EuroCAD Automarker but the obtained marker length is larger than the maximal spreading length; this marker cannot be used for cutting. The maxim spreading length represents the recommended spreading length plus 5% from its own value.



To optimize a marker you must select it from the result area; then click on « Optimize the marker with EuroCAD Automarker » button. The EuroCAD Automarker application opens; here, the marker optimization is realized automatically or semi-automatically. The EuroCAD Automarker application work mode is detailed in a separate manual.

After the optimization process ends, if you accept the result, this will be returned automatically in EuroCAD Spread&Cut Planner application. The markers can be visualized by click on the « Show/hide markers » button.



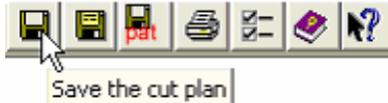
Together with the marker optimization, the specific information on it becomes available: marker length, efficiency, the markers that will be used to calculate statistics regarding average fabric use per product, per fabric type or total, fabric input, total average efficiency, etc. This information is displayed in the information area and on the printed version of the cut plan.

Warning! The marker length displayed in « Results area: lays and markers » does not include the spreading end reserve.

2.8 Save a cut plan as file or in a database, save cut plan with a different name

Click save/save as button -> Enter cut plan name -> Accept saving

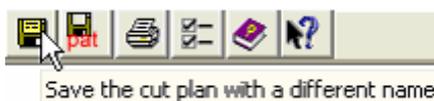
After you have finished a cut plan and the markers have been optimized, you must save your work for further usage. You may save the cut plan during working, before completion and necessarily when you finish the project.



To save the current cut plan you must click on « Save the cut plan » button. According the program working mode, the database or the save to disk windows are opening.

Enter the new file name and click on « Save » button.

When saving first time the cut plan, the program fills automatically in the "File name" field the order name and the fabric type from the information area. Also the user can change the name generated automatically by the program or can add some more information at the file name for the SCP file.



To save the cut plan with a different name you must click on « Save the cut plan with a different name » button. According the program working mode, the database or the save to disk windows are opening. Enter the new file name and click on « Save » button.

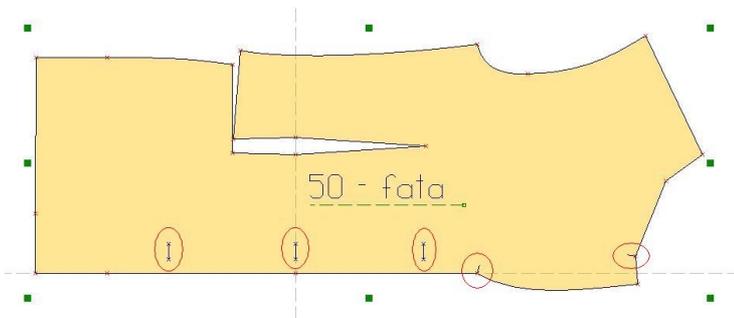
2.9. Update pattern file

Press the button « Update pattern file » -> Pattern selection -> Update

A function as **“Update pattern file”** can be useful when changing pieces in a project used in a cut plan with nested markers. When updating a pattern file in nested markers from a cut plan you can load the following changes: create/delete or modify notches, create/delete or modify internal points, increase or decrease the length of the pieces, change the piece shape (grading, seam allowance) etc.

Attention ! Some pieces might overlap to another in the marker after updating the pattern file because of changes.

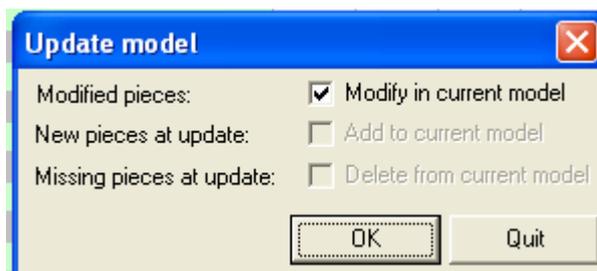
To update a pattern file after you have made the changes in EuroCAD Pattern Designer you must save the project with the same name and in the same place. After this click on the “Update pattern file” button in EuroCAD Spread&Cut Planner to display the “Pattern Selection” window. From this window select the changed project; choose the same fabric and the same pieces that you have used in the first place for the cut plan.



The changes are made in EuroCAD Pattern Designer: for example, on the piece from the image were added two distance notches and three internal points for the button hole (the changes are marked with red). You must save the pattern with the same name and in the same place.

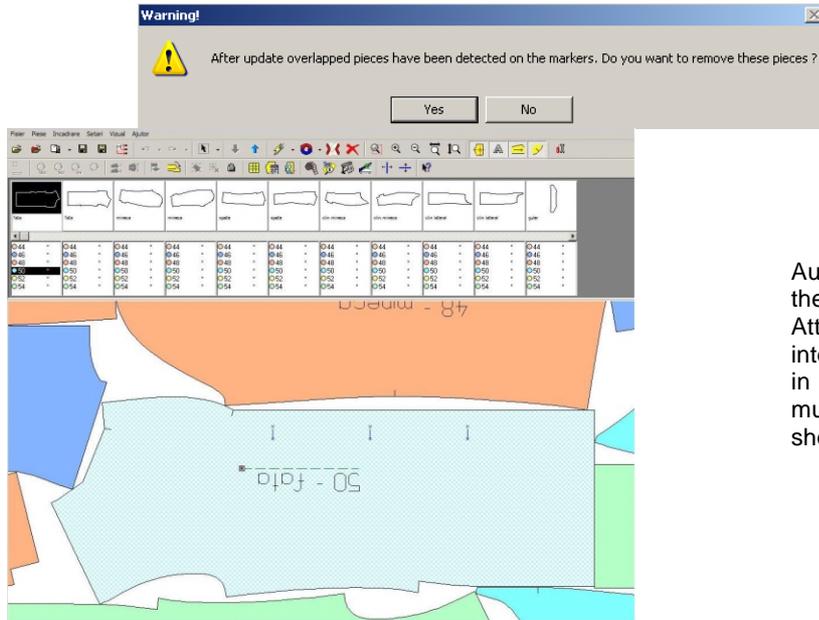
Sizes	46	48	50	52	54
Fabric	46	48	50	52	54
Fabric1	12	16	20	16	12
Fabric2	2	5	7	5	2
Fabric3	54	60	95	60	54
Fabric4	6	12	32	12	6
Fabric5	20	25	30	25	20

In EuroCAD Spread&Cut Planner press the « Update pattern file » button to display on the screen the « Pattern selection » window. Select in here the changed pattern. Choose the same fabric and the same pieces and then press the « Update pattern file » button.



An update message will be displayed on the screen after updating the project. Here you can see the type of changes made. If you are agree with the changes press «OK» button. If you don't press the « Quit » button.

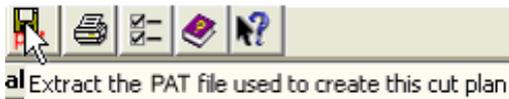
After you choose «OK» an warning window appears and you will choose if you keep the optimized markers or not, in the case when there are the overlaped patterns. If you choose «Yes» you accept that the overlaped patterns to be removed on the markers and the optimizations to be losted. If you choose «No» you keep the optimized markers even if can be the overlaped patterns on the markers.



Automatically you will find the changes in the marker. Attention: to visualize internal points and notches in EuroCAD Automarker must be pressed the show/hide buttons.

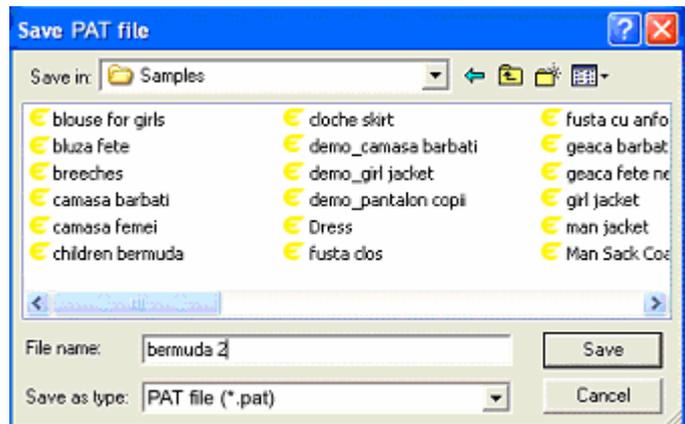
2.10 Extract a PAT file used to create a cut plan

Click on « Extract the PAT file used to create this cut plan » -> Save PAT file



If you want to obtain the PAT file used to create a cut plan you must click on « Extract the PAT file used to create this cut plan » button.

In the opened window you must choose the path on the hard disk where to extract the *.PAT file and then you must enter the file name if needed; then you must click on « Save » button.



When you open the save window, near the PAT file appears the cut plan name, already filled in.

2.11 Automatic fabric use calculation

After you have optimized all markers in a cut plan, the following fabric usage will be automatically calculated: theoretical average fabric use (in g), practical average fabric use (in g), total fabric use (in g), fabric use per product or total fabric use in linear meters. All fabric usage is calculated separately for each fabric type.

Average fabric use	TOTAL: 1.114m
Total fabric use	TOTAL: 181.590m
Total number of markers	8
Total number of lays	8
Sizes:	5
Fabric types:	3
Recommended number of sheets in lay	100
Maximum number of sheets in lay	110
Sizes on marker (maximum)	3
Fabric width:	m 1,36
Spread length limit (recommended)	m 27,30
Spread length limit (maximum)	m 28,67
Order:	MANSHIRT
Client:	AVARTA stl
Product:	MAN_SHIRT
Product type:	MAN SHIRT
Fabric type:	fond
Pattern source:	Fisier: Man Shirt.pat
Last saved:	24.03.2006 14:30:11
Designer:	Loredana Olaru
Cut Plan operator:	Loredana Olaru

The average fabric use in linear meters and the total fabric use will be displayed in the information area and also in the cut plan report.

Average fabric use (in linear meters) is calculated for each fabric, by calculating the Total Fabric Use from which you must subtract the lay edges. The result must be divided to the total number of products that must be cut from the fabric.

Total fabric use (in linear meters) for each fabric is calculated by adding all lay lengths and the edges the result must be multiplied with the total number of products from the selected fabric.

In the fabric use calculation, the lay's margins are not considered. They are considered only for the total fabric use calculation.

Fabric use (in g) for each fabric type and is calculated considering the «specific weight» value, defined by the user in «Cutting settings» if the fabric used show the same properties or in the «Fabric settings» for each fabric type with different properties; thus you to cut them in different lays.

Order information							
Recc. spreading length	27,3 m			Number of lays	10 lays		
Recc. no of sheets in lay	100 layers			Total fabric consume	-		
No of pieces on the product	12 pieces			Total number of products	130 products		
Max. products number on marker	3 products			Spreading option	Tubular or folded fabric		
Number of sheets	22 layers			Tubular/Folded fabric	Both sides		
Number of markers	10 markers			Average efficiency	-		

Material	Specific weight	Average fabric use* per product (theor)	Average fabric use* use per product (pract)	Average fabric use* per product	Total fabric use** (lm)	Total fabric use** (g)	Real production fabric use
arva11	30,00 g/ml	44,75 g	59,29 g	1,098 ml	5,49 ml	296,46 g	
arva12	30,00 g/ml	35,45 g	59,83 g	1,108 ml	22,16 ml	1196,64 g	
arva13	30,00 g/ml	41,18 g	59,53 g	1,102 ml	49,61 ml	2678,94 g	
arva14	30,00 g/ml	39,00 g	60,00 g	1,126 ml	82,17 ml	4380 g	
arva15	30,00 g/ml	35,45 g	59,83 g	1,108 ml	22,16 ml	1196,64 g	

The average theoretical fabric use per product (in g) calculation:

- you have to calculate the total theoretical weight for each fabric by adding all fabric weights; then you have to subtract the margins weight; the result is multiplied by the effective pieces surface
- the total theoretical weight is divided to the total product number that must be cut from the selected fabric

The average practical fabric use per product (in g) calculation:

- from the total fabric weight is subtracted the margin weight. The result is divided by the product number that has to be cut from the selected fabric.

Total fabric use (g) for a specific fabric is calculated by adding each lay weight and adding the lay edges weight; the result is multiplied by the lay number.

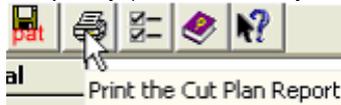
The practical fabric use per product (in g) or the average fabric use per product (in linear meters) does not include the lay extra margin.

The lay extra margin will be included only in the total fabric use (in g and linear meters).

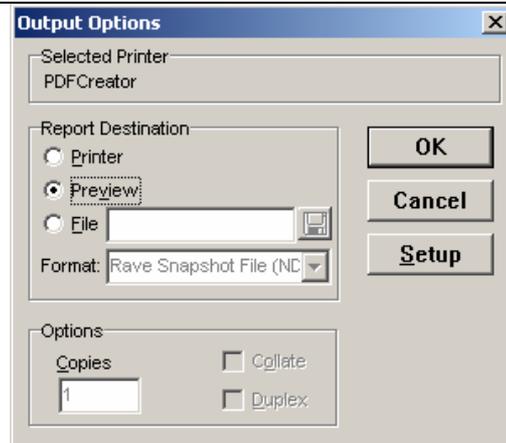
2.12 Print the cut plan report

Click on Print the Cut Plan Report -> Preview report -> Send to printer

After you finish a cut plan you can print a central report that contains all information required for archiving and also for the cutting room. This report can be comprised in single or multiple A4 sheet, according to the cut plan complexity (markers and lay number)



To print the cut plan you must click on « Print the Cut Plan Report » button. A preview window will open and the user can choose to preview, save or print the report before printing. In order to preview the report, the user must check the “Preview” box.



In this window you will be able to execute the following operations, by click on the specific buttons:

- change preview zoom level
- scroll the pages report, if multiple
- printer setup
- print the report on an active printer
- convert the report into a PDF file
- quit printing

CUT PLAN REPORT

Order no.:	Date: 16.09.2008	Product:
Client:	Time: 2:53:51 PM	Product type:
Fabric type: fond	Cut Plan user:	Designer:
Pattern source: file: geaca barbati captusita.pat		Last save: 16.09.2008
		Page: 1

Quantities

Size	Order quantity / Cut quantity / Difference				Total
	40	44	48	52	
Fabric1	5	7	8	6	26
Total	5	7	8	6	26

Order information

Recommended spreading length	8 m	Number of markers	3 markers
Recommended no. of sheets in lay	100 layers	Number of lays	3 lays
No. of pieces on the product	20 pieces	Number of sheets	5 layers
Max. products number on marker	60 products	Spreading option	Simple layer spreading
Spreading gap	0 cm	Tubular / Folded fabric	-
Total number of products		26 products	
Total fabric consume		-	
Average efficiency		-	
Cutting perimeter		51,7 m	

Fabric	Specific weight	Average product weight*	Average fabric weight consumption*	Average fabric linear consumption*	Total fabric consumption (ml)**	Total fabric weight consumption (kg)**	Real production notes
Fabric1	0,00 g/m2	0,00 g	0,00 g	0 lm	0 lm	0 kg	

Cut Plan

Lay	Sizes on marker	Sheets	Width (cm)	Length (cm)**	Total fabric (m)**	Total fabric consumption (kg)**	Cutting perimeter	Width shrink	Length shrink	Piece gap	Total products	Product numbering
M1:S1	40-44-48-52-52-52	2 Fabric1	147	-	-	0 kg	- m	0%	0%	0 mm	12	1 - 12
M2:S2	40-44-44-48-48-48	2 Fabric1	147	-	-	0 kg	- m	0%	0%	0 mm	12	13 - 24
M3:S3	40-44	1 Fabric1	147	255,91	2,56 m Fabric1 2,56 m Total	0 kg	51,7 m	0%	0%	0 mm	2	25 - 26

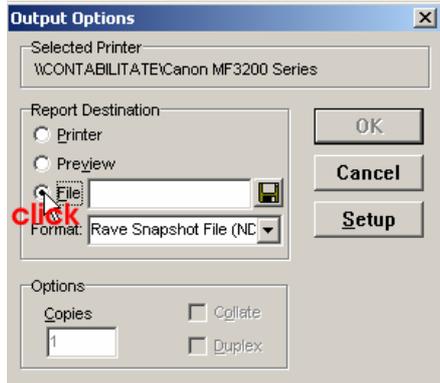
Supervisor area

Checked quantities	(date)	(signature)
Checked markers	(date)	(signature)

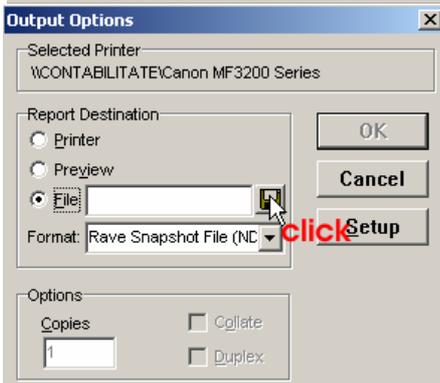
To send in electronic format the cut plan reports made by EuroCAD Spread&Cut Planner, these must be converted in PDF files. For this you must install one of the conversion programs (for e.g. PDF Creator). After installing the PDF conversion program, the user must follow the next steps



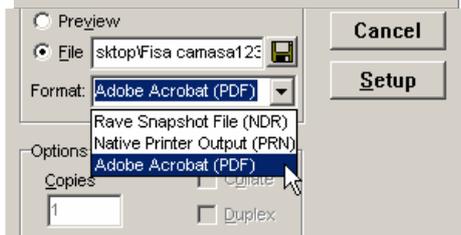
Press "Print the Cut Plan Report" button.



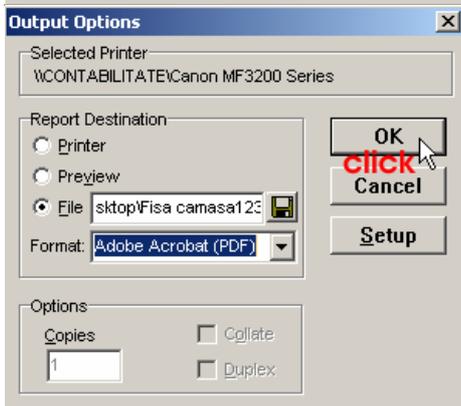
In the new opened window, "Output Options" must be checked the "File" box



Click the button than shows a disk. In the new window that appears will be saved the saving path for the PDF file. Its name will be edit in the "File name" field after that "Save" button will be pressed. In the "File" field will be shown the saving path and file name that will be saved.



Click the arrow from the "Format" field in order to choose the file that user wants to save. From the following list will be chosen "Adobe Acrobat (PDF)". Press ok button from "Output Options" window.



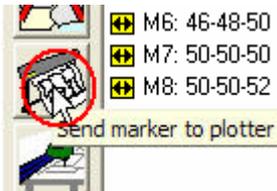
At the end, will be pressed ok button from "Output Options" window

2.13 Print markers on a plotter or a printer

Plotter printing

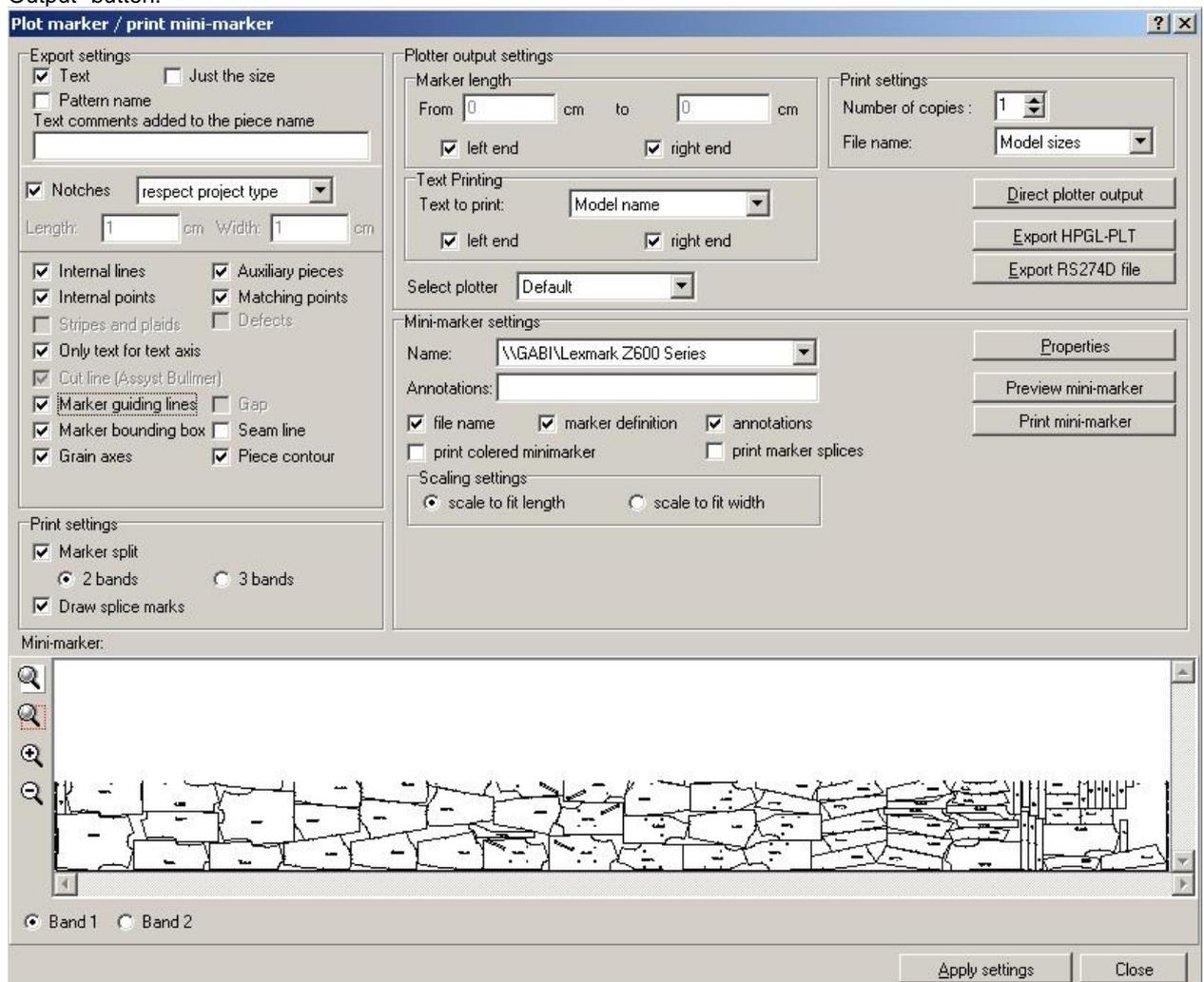
Select a marker -> Click on “Send marker to plotter” button

If the markers are optimized and OK, they can be used for manual or automatic cut by printing on plotter or export to automatic cutter.



In the result area you must select the marker and then click on « Send marker to plotter » button. The « Plotter print / Print mini-marker» window is opening.

In order to print a marker directly at plotter in the window “Plotter print/ Print mini – marker” click “Direct Plotter Output” button.



The marker will be added to the printing queue. Plotter printing is realized by EuroCAD Plotter Spooler program, described separately. If the maker to be printed is larger than the maximum spreading length (invalid marker) the program will notice you with a message on the screen.

In the left side of the « Plotter print / Print mini-marker» window you can set the elements to be printed on the marker. These elements to be printed can be: text, piece size only, notches, internal lines, technical points, stripes and plaids, the cut allowance between pieces, the contour that lines the thermal bonding group and the printing mode – o a single, double or triple sheet.

Text – if you check « Text », the name, comments and size will be printed on the pieces

Just the size – if you check this message, only the size will be printed on the pieces

Pattern name – you must check this option if you want to add the pattern name to the piece name for all pieces on the marker.

Text comments added to piece name – The text inserted in this field will be displayed and printed together with the piece name only if the option „Just piece size” is not checked.

Notches – If you check this option, the notches will be printed

If you want to print the notches, you can choose to print them as in the project or as V,I or U. If you choose printing the notches as V, I or U you will be able to define the depth and width for the notches, by filling the corresponding boxes with the preferred value.

Internal lines – if you check this option, all axes on the pieces will be printed. (grain axes, text axes)

Text axis – if you check this option, all text axis will be printed on the nested pieces

Only text for text axis – If you check the box near this message, during revisualization and for printing steps the text axes will not be visible while the corresponding text will be displayed/printed. If the box is not checked, both text axes and text will be printed if the message

Internal points – if you check this option, all internal points will be printed.

Stripes and plaids – This option is active for the markers on plaids and stripes fabric. If you check this option the plaids/stripes will be printed according to the settings in « Plotter/cutter » settings.

Cut line (Assyst Bullmer) – For the markers with pieces imported from Assyst Bullmer you may print the cut line on the pieces. If the marker to be printed does not include pieces imported from Assyst, this option is inactive.

Marker guiding lines: If you want to print on marker the marker guiding lines used for nesting the marker, check this box ,

Auxiliary pieces – if you want to print the auxiliary pieces you must check the box near the message..

Gap – if you check the “Gap” options confirmed by a click on the “Apply settings” button, you may plot on the external contour and also on the internal contour for the piece with allowance; this is available for the pieces on which you have selected the Gap plot option in “Piece properties” table. This option is activated if there is at least a piece which will have the Gap plot option checked in “Piece properties” table. Thus, it is possible that some pieces will be plotted on the gap contour and other pieces to be plotted on the gap contour, piece contour or both.

Matching points – To print matching points during plotting, you must check the specific message in “Export settings” field.

Defects – To print the defects declared in EuroCAD Automarker application you must check this message. In order to print the defects from EuroCAD Spread&Cut Planner, the cut plan must be saved.

Marker bounding box: It is possible to print the marker bounding box. If this box is unchecked, the HPGL – PLS file will not contain the marker bounding box. This option is very useful for clients that are using HPGL (for plotter/cutter) for cutting the marker.

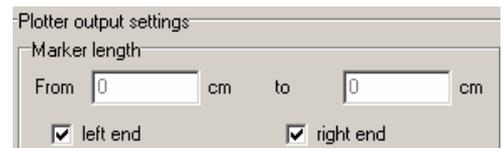
Seam line: For the markers where were nested pieces made on seam line, when this option is checked will be printed both seam line and cut line.

Piece contour: If this option will be unchecked, the exported PLT file will not contain the piece contour

Marker length

You can print a marker on all width or only a part of it. To print all marker width you must check both messages: « left end » and « right end ».

If you want to print only a part of the marker you must uncheck the « left end » and « right end » messages and you must insert the distances in mm for the printing limits.

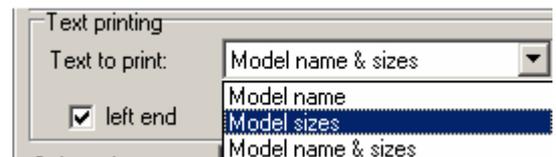


Text printing

On a marker beginning and end, a text will be printed. This text contains information regarding the marker width, height, efficiency, the gap, piece contraction, fabric type, date, etc

Together with all these data, you can print only the project name and sizes. You can choose what to print in the right side menu near the « Text to print: » box.

After defining the text to be printed, you must set if the text will appear at the beginning, at the end or on both marker edges. Thus, you must check « left end » and/or « right end » edges according to your needs.



Select plotter

For the users with more than one plotter, you can save a list in plotter settings. Before printing, you must choose from the list the plotter on which you will print the marker.

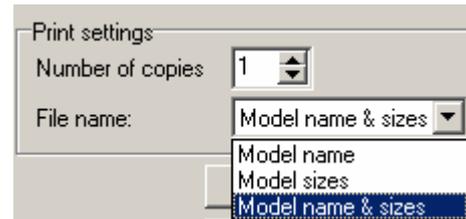
This option will be saved. When you will export again a PLT or RS274D file, in” Select plotter“edit will appear the last used plotter.



Print settings

Before printing the marker you must enter the number of copies to be printed in the « Number of copies » field.

Then you must choose what will be included in the PLT file. The PLT file name can be identical with the project name, may include the sizes name on the current marker, or may be composed by the project name and the sizes on the marker. To define the file name you must choose an option from the menu that opens when you click on the arrow near the « File name: » box.



Print on bands

If you have a reduced width plotter, you may choose to print the marker on bands. According to marker width it can be divided in two or three bands. To recompose accurately the marker, you must check the message "Draw splice marks" in order to print also the splice markers.



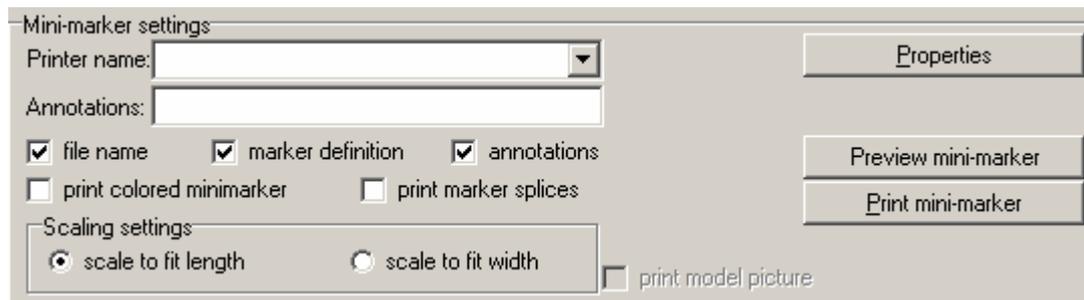
To preview the marker you must click on « Apply settings» button after you have performed any setting change.

In preview area you can zoom in or out the image, by using the ZOOM buttons on the left side bar.

Print mini-marker

Select a marker -> Click on Send to plotter button -> Click on Print mini-marker

To print a mini-marker, you must click on « Print mini-marker » in the Mini-marker settings area of the « Plotter print / Print mini-marker» window



Before printing a mini-marker you must adjust the mini-marker printing settings. Near « Printer name » you must choose the printer.

When you click on « Properties » button, you must set the printer properties.

You can also set the mini-marker to fit the length or width by checking the specific options.

On the mini-marker you can print also some annotations if you check the specific box and you fill the specific « Annotations » field.



At least but not the last you can check on "File name" or on "Marker definition" to print also these options on mini-marker.

After all settings are done and before printing, you can preview the mini-marker by click on « Preview mini-marker ».

After you have checked that the marker will be printed correctly, you must click on « Print mini-marker » button.

2.14. Export marker in HPGL – PLT file

Select a marker -> Click on Send marker to plotter button -> Click on Export HPGL-PLT

HPGL-PLT files can have *.plt, *.hpgl extension or they may have no extension. These file can be used only to print markers and pieces.

In such a file you cannot change the piece shape.

When you print a HPGL / PLT file, you must check the piece dimensions, length and width.

If you click on « Direct plotter output », you will obtain a PLT file that will be saved in the ACTIVE folder, from which it is automatically read by the EuroCAD PlotMaster printing application.

If you click on « Export in HPGL- PLT file » you can also obtain a PLT file that can be saved anywhere on a disk and that can be printed later on a printer or on a plotter.

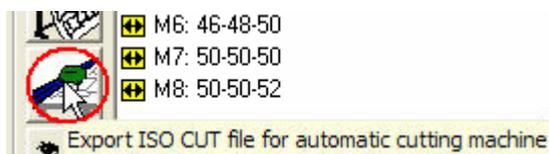
EuroCAD Spread&Cut Planner application can export markers from the cut plan in HPGL-PLT format.

Before export you can adjust some settings. You can set the marker length as values expressed in cm by checking "left end" and "right end" options. After settings adjustment, you must click on "Apply settings" button to apply changes.

To export a marker in HPGL- PLT format, you must click on "Export HPGL-PLT" button. A new window opens it is identical to the DXF export window; here you can choose the file saving path and name and then click on "Save" button to apply changes.

2.15. Export markers for the cutter

Select a marker -> Click on Export ISO-CUT



CUT files can have the *.cut or *.gbr extensions

These files can be used only for automatic cutting machines (cutter) or for printing.

CUT files for cutter will include only the cut lines and the notches.

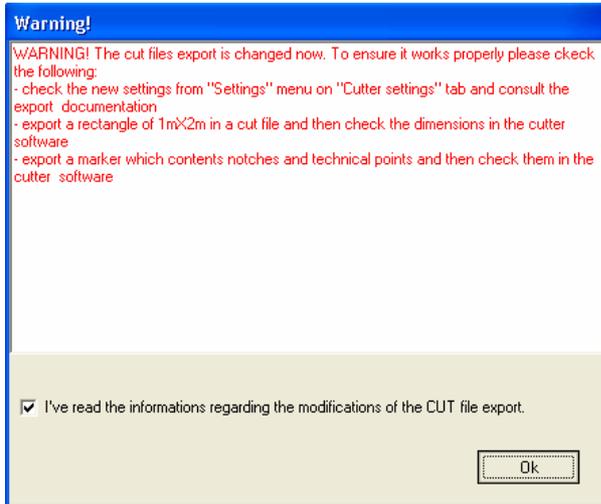
In such a file you cannot change a piece shape. If the file includes a marker, you will not be able to optimize it.

When you cut or print a CUT file, you must check the piece dimensions, width and height.

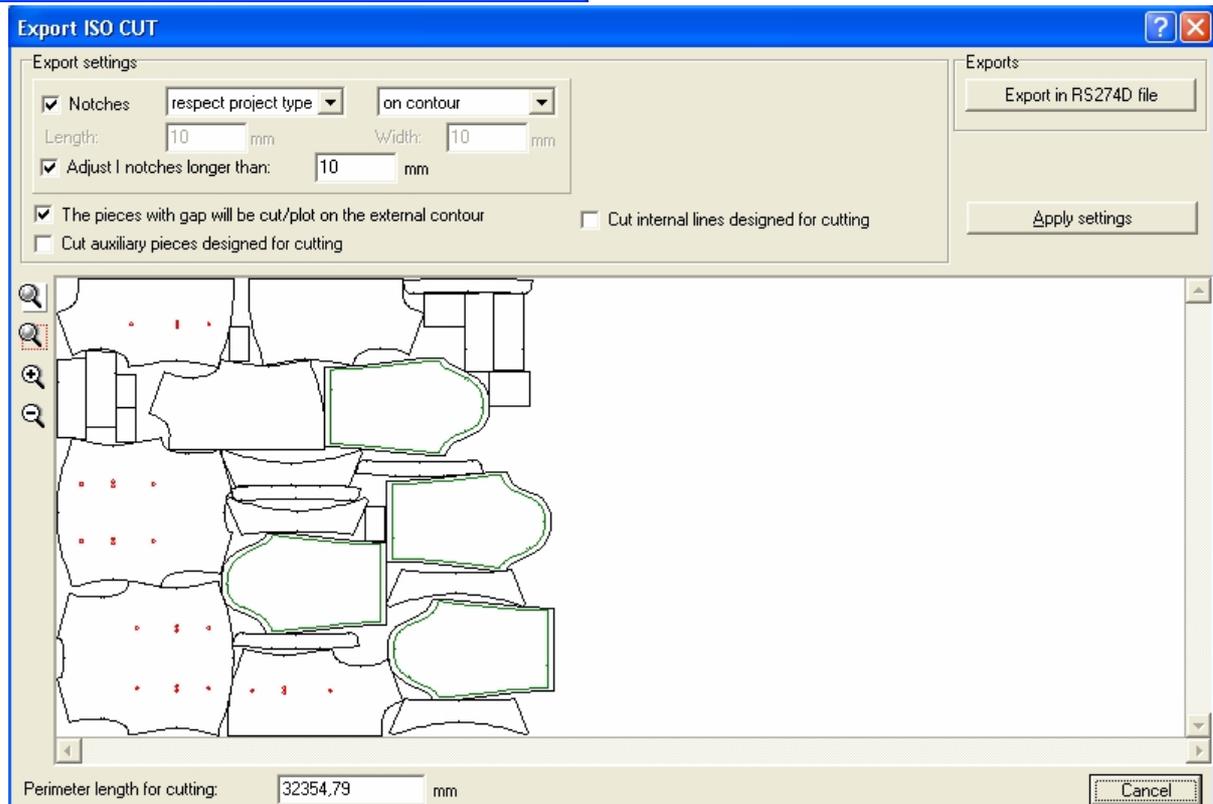
To export the marker for the cutter, you must click on the “Export ISO-CUT file for automatic cutting machine” button located in the “Results area: lays and markers” of the EuroCAD Spread&Cut Planner application, as shown.

When you press the “Export ISO-CUT file for automatic cutting machine” button it will be displayed on the screen a warning window. In this window you are informed that the CUT file export process has been changed and you are asked:

- to check the new settings from “Settings” menu from “Cutter settings” tab and to consult the export documentation;
- to export a rectangle of 1mX2m in a cut file and then to check the dimension in the cutter software;
- to export a marker containing notches and technical points and then check them in the cutter software.

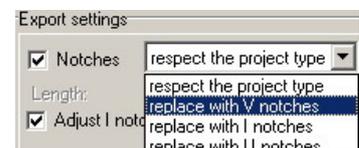


This warning message is displayed on the screen only once. To close this window check « I've read the informations regarding the modification of the CUT file export” and then press «OK» button.



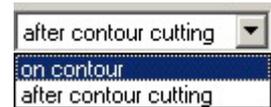
A dialog window opens; here you can see the displayed marker, you can define the export with notches included or not. If you want to include notches in the export, you must check the « Notches » option in « Export settings » area. If you don't want to include notches into the export file, don't check or uncheck this option.

Regarding the notches, you must choose the way they will be cut, if they will be similar as in the project or if they will be replaced by special shape notches (V, I or U). Click on the arrow in the right part of the specific field and choose the desired notch type from the menu. If you respect the initial project, you must choose if the notches will be cut on the contour of after the contour cutting.



You can also adjust notches larger than a defined value by checking the box near the message « Adjust notches longer than »

If you have chosen to replace normal notches with V, I or U shaped notches, then you must set their length and width by filling in the values in the corresponding fields. Beside settings regarding the notches you must decide if the reserve pieces will be cut on the external contour, if the pieces in the thermal bonding group will be cut on the group contour or if you will drill holes for internal points as: dart end, hook hole, fastener hole.



Besides the notch settings, the user can also must decide if the pieces with seam allowance will be cut on the exterior contour and if the notches will be cut from interior to exterior, or from exterior to interior. In order to be possible for the user to choose the notches to be cut from interior or from exterior, the command “on contour” it must not be available.



If you check the “Pieces with gap will be plotted/cut on the external contour” option then the pieces for which you have selected the cut on the reserve will be cut on the external contour of the reserve. According to the settings in this window the contours will be displayed as follows:

- in black for the cutting contour
- in green for the rest

Thus you may cut some pieces on the reserve contour, other pieces can be cut on the piece contour; the difference from plotting is that the two options are exclusive.

If you check “Rotate 180” option, the marker will be rotated by 180 degrees.

After any setting adjustment, you have to click on “Apply settings” button to apply changes. After you have applied settings adjustment you can click on « Export ISO CUT » button or «Export in RS274D file » button. A new window will open; here you can set the saving path for the file; then click on « Save » button.

The export for the cutter can be done also from the « Plotter print / Print mini-marker» window by a click on « Export in RS274D file » button. After you click on this button a new dialog window will open; here you can enter the CUT file name and the saving path on the computer.

In the status bar of the export for automatic cutter window the “Perimeter length for cutting”, is displayed; this length depends on the application settings.

The perimeter length for cutting is displayed in the “Cut Plan Report” for each marker apart. The total perimeter length for cutting for the whole cut plan is also displayed in the “Cut Plan Report”.

2.16 DXF file import

DXF files (Data Exchange files) are used for patterns only and contain pieces for each size.

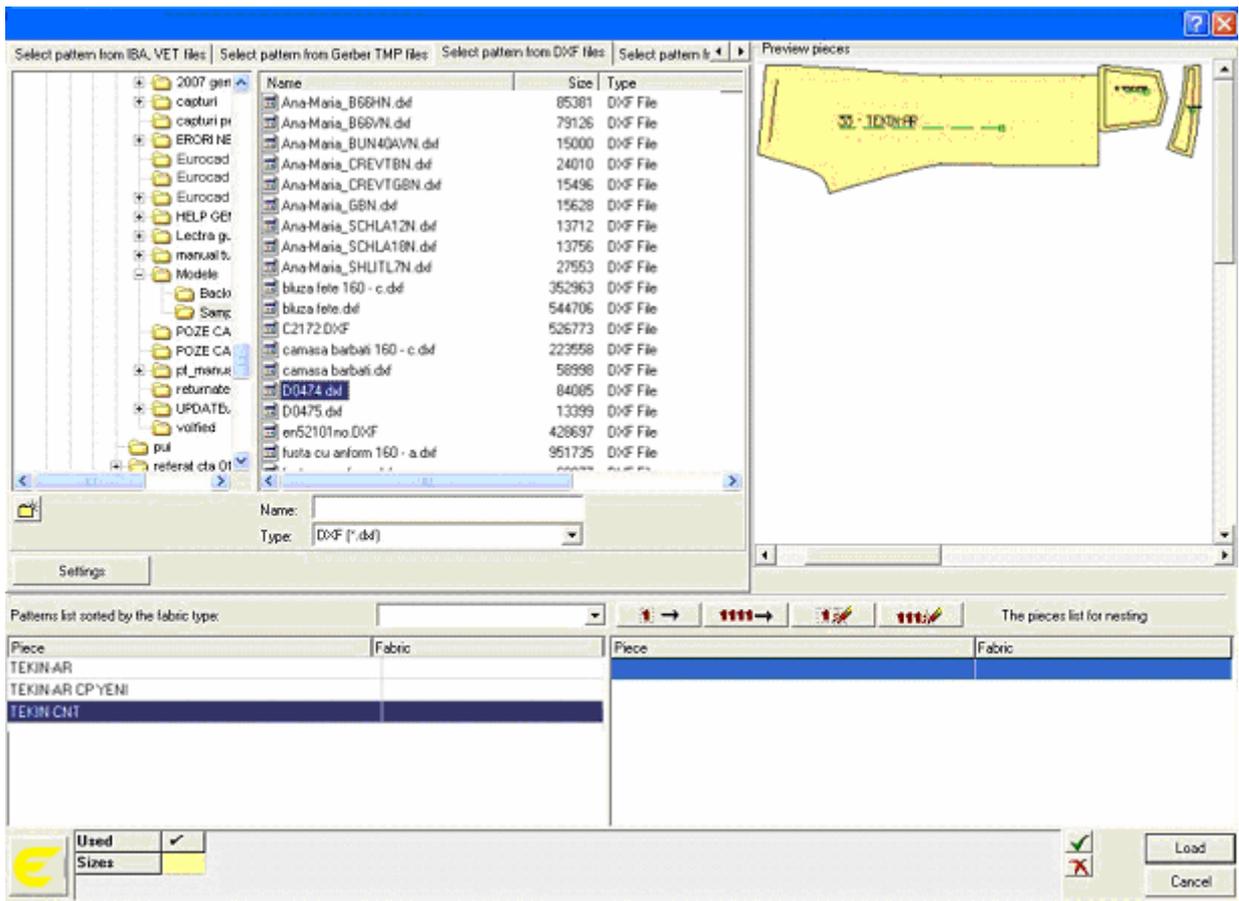
DXF-AAMA files are accompanied by a **RUL** or **TXT** file. These DXF-AAMA files are used also for patterns only and they include only the pieces on the base size. The grading rules for the pieces in a DXF–AAMA file can be found in the RUL or TXT file.

The pieces in a DXF or DXF-AAMA file can be imported on the seam line or on the cut line but never on both. Sometimes, the seam line can appear inside the piece but as auxiliary piece.

A DXF and DXF-AAMA file does not include information regarding the piece number and the fabric used. In some cases there is some information regarding the fabric type, but this information accuracy must be checked.

To import one of those file types, you must click on « Load pattern file » button. A submenu will open; it contains the file types that can be imported by EuroCAD Pattern Designer. In this list you must choose the file type to work with. If you don't know the DXF file that will be imported, you must choose the first option in the list « DXF/AAMA (*.dxf) files». After selecting the file type, it will open a small window, similar to those that opens for *.PAT files.

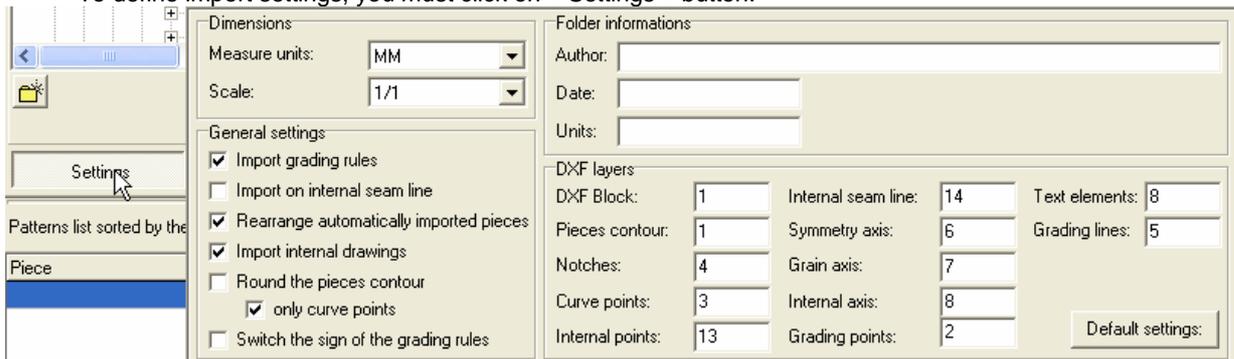
Explore the folder list up to you get the file to be opened. In the central window appears the file list in the selected folder. Click on the file to be opened. If you have selected the correct file, in the right side window will be displayed the project content. To open the selected project, click on « Accept » button. If the file content is not correct, on screen appears « Invalid file » message together with a list of the encountered problems in the selected file.



When you import any DXF file you have the multiple file selection option; you can also open them in a single PAT file. To select multiple files, hold down **SHIFT** key and left click on the first and last file to select all files between them. For a random selection you must use the **CTRL** key instead. If the imported DXF files have different size sets, only the pieces with different grading groups will be imported.

DXF file import settings

To define import settings, you must click on « Settings » button.



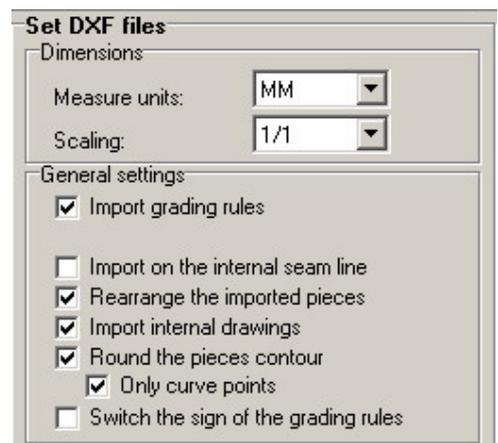
Dimensions

You must select a measurement unit for the saved DXF file, together with the scaling factor.

General settings

If the message **Import grading rules** is unchecked at the DXF file import then each size of a piece will be imported separately in EuroCAD.

If the message **Import grading rules** is checked, then EuroCAD Pattern Designer application will build the grading table. When you import DXF files in which for each size corresponds a piece in a file, EuroCAD Pattern Designer will automatically convert the piece sizes into grading table. Thus, after the import there will



be no more pieces for each size but only the base size and the corresponding grading.

For DXF-AAMA files, you must check the option « Import grading rules » in order to import the base size with all grading rules. If this option is unchecked, the result will be represented by the base size only.

If for the DXF files this option is unchecked or if the gradings cannot be converted, the pieces can be imported separately, one piece for each size with different grading groups.

The option **Import on the internal seam line** must be checked according to the DXF creation method. If the file includes the pieces on the seam line, you must check this option; if the pieces on the cut line, you must leave the message unchecked.

Important pieces rearrangement can be realized automatically if you check the message **Rearrange the imported pieces**.

In order to import the internal drawings for the pieces in a DXF file, you must check the **Import internal drawings** option.

If you check **Round the pieces contour** on DXF file import, part of the points on the piece contour will be smoothed. Only the points whose smoothing does not coarsely affect the piece shape will be smoothed.

If you check **Only curve points**, on DXF file import only the points on the curve of the piece contour will be smoothed.

If you check **Switch the sign of the grading rules** the sign for the grading steps will be changed and the smaller sizes in the set becomes larger sizes.

Information about DXF file

You can also preview some information regarding the DXF file to be imported. Thus, you can observe the author name, the CAD system for the imported file, the export date, and the used measurement unites.

Folder informations	
Author:	<input type="text"/>
Date:	<input type="text"/>
Units:	<input type="text"/>

DXF layers		
DXF Block:	<input type="text" value="1"/>	Internal seam line: <input type="text" value="14"/>
Pieces contour:	<input type="text" value="1"/>	Symmetry axis: <input type="text" value="6"/>
Notches:	<input type="text" value="4"/>	Grain axis: <input type="text" value="7"/>
Curve points:	<input type="text" value="3"/>	Internal axis: <input type="text" value="8"/>
Internal points:	<input type="text" value="13"/>	Grading points: <input type="text" value="2"/>
		Text elements: <input type="text" value="8"/>
		Grading lines: <input type="text" value="5"/>
		<input type="button" value="Default settings"/>

If you click on the « DXF layers table » button, a new window is opening; here you can modify (only if required) (the value for a layer from which an element is read. The layer number for any imported element must be introduced according to the DXF file structure.

To get back to the default settings, you must click on « Default settings » button.

It is possible that some DXF or DXF-AAMA imported files show some errors regarding the technical elements import: notches, axes, grading. Thus, these files must be checked carefully before further usage.

Possible problems on DXF file import.

- The number of the imported pieces can differ from the number of pieces in the project saved as DXF file. The piece number must be checked.
- DXF files or DXF-AAMA files does not include information regarding the fabric type. In some cases, there is some information regarding the fabric, but you must always check and fill in the fabric name for each piece.
- You must carefully check the construction line (internal seam line or cut line)

When you import a file from the list, the pieces will be displayed in the preview area

If you import DXF / DXF AAMA file we recommend to open them first into EuroCAD Pattern Designer for check and restriction and piece properties editing for further nesting. To open the pattern in EuroCAD Pattern Designer or the selected pieces in EuroCAD Spread&Cut Planner, you must click on « Open selected pattern in EuroCAD Pattern Designer ».



After you select the files, the pieces that must appear on the marker will be transferred in « Pieces list for nesting » and then you must check the sizes on the current pattern. Finally, you must click on « Load » button to import and nest the pieces.

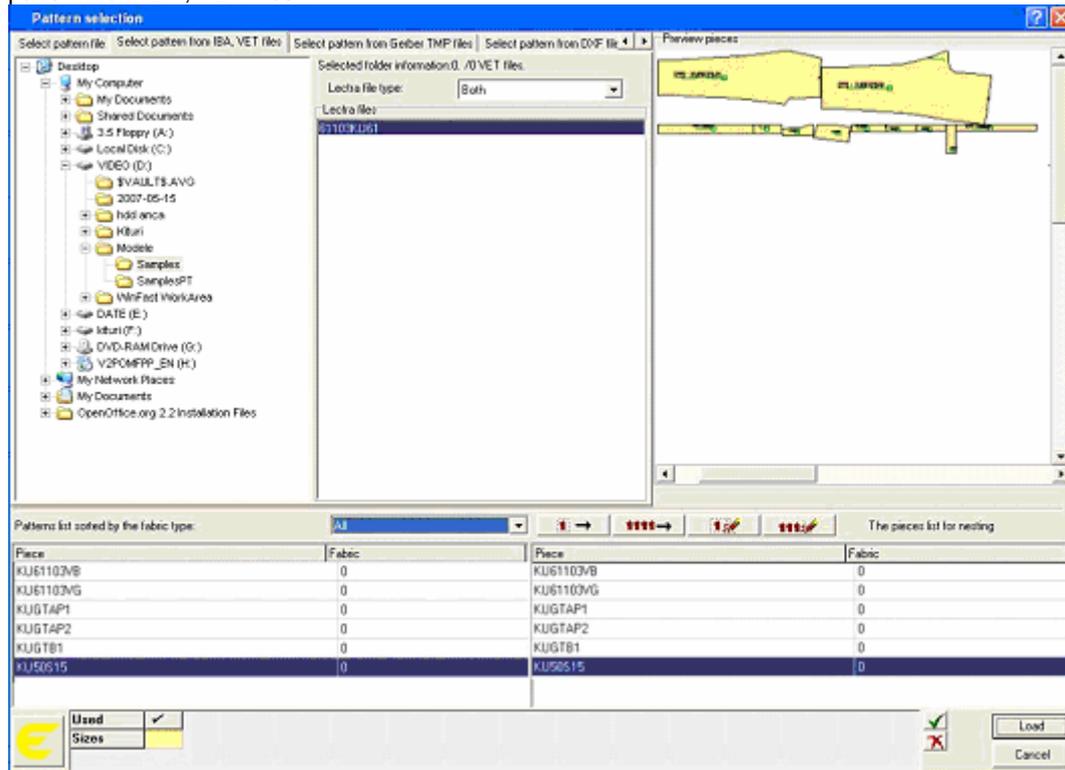
2.17 Native Lectra import (IBA and Vet extensions)

Native Lectra files have IBA, VET or MDL extension and include patterns and/or pieces. In EuroCAD Cut Editor you can import IBA and VET files. These files are used only for patterns and include all information from Lectra. IBA file includes a piece with size set, gradings, interior lines, auxiliary pieces. Such a file does not include information regarding fabric type and how many times it appears in a project.

Attention! For exported pieces to have auxiliary figures you must check “Internal lines generation” option from the export settings. You can visualize the export settings from Lectra if you make a click on the sign from the front of “Export garment” option from the “File” menu.

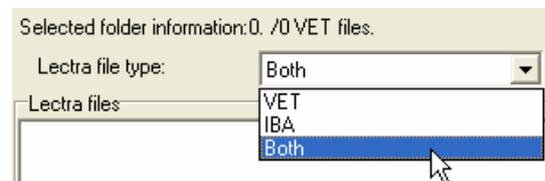
VET file includes all information regarding the designed pattern (piece number, piece type, fabric type). VET file can be imported in EuroCAD Pattern Designer only if it is accompanied by IBA files.

To import IBA or VET files, you must click on « Load pattern » button and then you must select the page « Select pattern from IBA, VET files ».



In the page for pattern selection from IBA and VET files you must choose the path on the hard disk for the file to be imported from the list. If the selected folder includes Lectra files with IBA or VET extension, they will be directly displayed in Lectra files window. On the top file list you will find the pattern number and the pieces in the selected project.

In the « Lectra files » list you can display only IBA files, only VET files or both file types. To do so you must use the filter near the message « File type ». When you click the arrow near the corresponding field, a menu opens; here you must choose the file type from the displayed list.



When you select a file from the list, the pieces will be displayed in “preview pieces” area.

Both on IBA or VET file import it is recommended to open them first in EuroCAD Pattern Designer for a check and edit the piece properties and restrictions. To open the pattern in EuroCAD Pattern Designer or the selected pieces in EuroCAD Spread&Cut Planner, you must click on « Open selected pattern in EuroCAD Pattern Designer ».



After you select the files, the pieces can be filtered according to the fabric type (if you have imported a VET file) and then they will be transferred in the « The pieces list for nesting »; then you must check the sizes on the current pattern. Finally, you must click on « Load » button to import and nest the pieces.

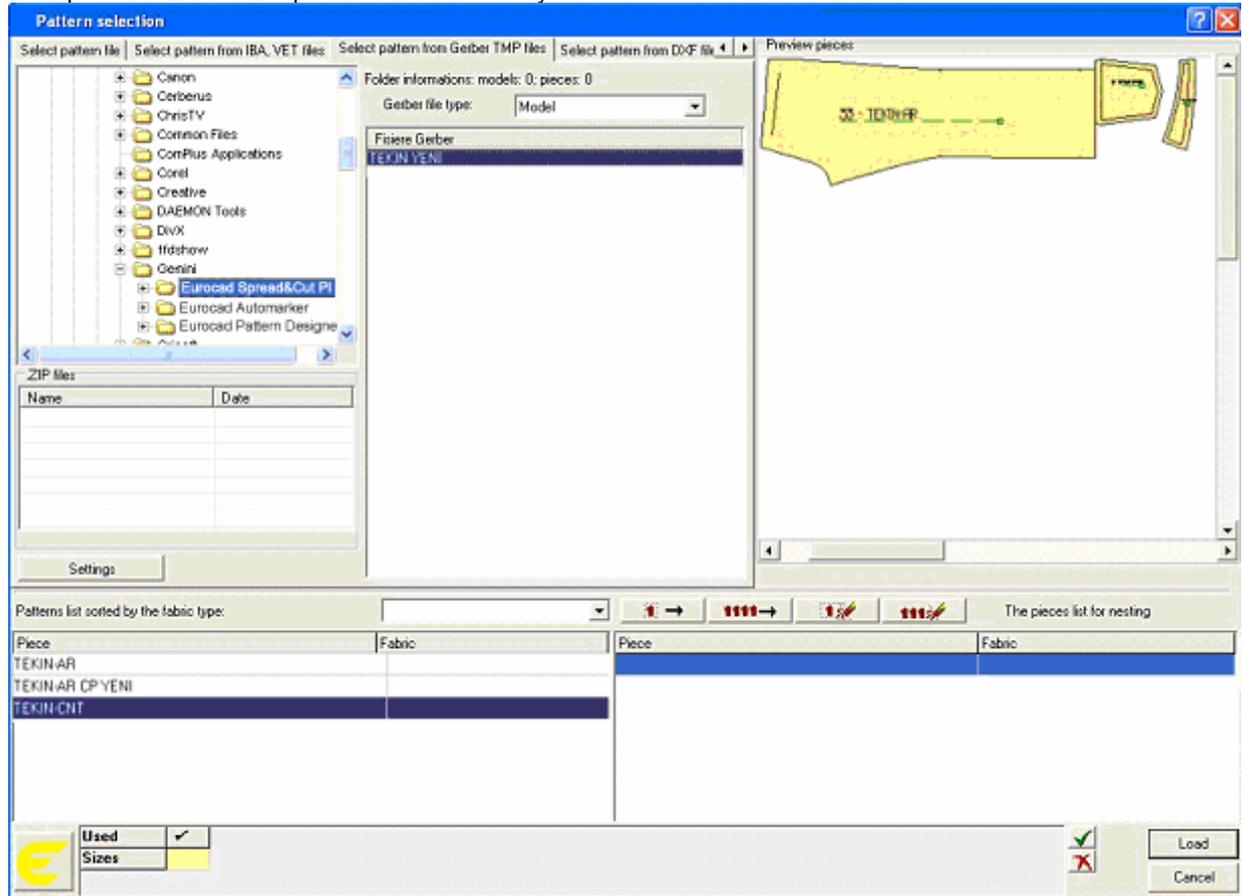
2.18 Native Gerber file import(*.TMP)

Native Gerber files has a *.TMP extension and can include projects and/or pieces. These files can also be found as ZIP archive files. Alike DXF files, the native Gerber files are used only for patterns. They include all information from Gerber application, except those regarding the notch dimension and definition; the notches dimensions can be set from the EuroCAD Spread&Cut Planner Import window.

There are two Gerber file types that can be imported in EuroCAD Spread&Cut Planner: **Piece** and **Model**.

The **Piece** file type includes a piece with a size set, grading, internal line, auxiliary pieces. Such a file does not include information regarding the fabric type and how many times it appears in the project.

The **Model** file includes all information about the project (piece number and type, fabric type). The Model file can be imported in EuroCAD Spread&Cut Planner only if it is associated with Piece files.



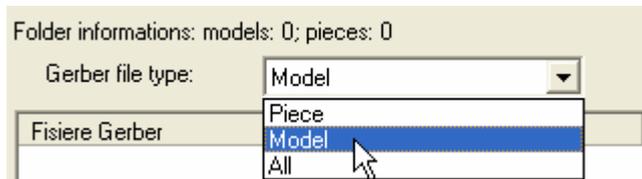
To import Gerber files, you must click on « Load pattern » button and then you must select the page « Select pattern from Gerber TMP files ».

In the page for pattern selection from Gerber TMP files you must choose the path on the hard disk for the file to be imported from the list

If the selected folder includes *.zip files, these will be displayed in ZIP files list; when you select a zip file, the archive content will be displayed in Gerber files list.

If you select a *.zip file and no Gerber file is displayed, then the archive is invalid.

When you select a *.zip file, the number of models and pieces in the archive will be displayed automatically. The import will interest the whole *Model* or each *Piece* separately, by selecting one of the corresponding options.

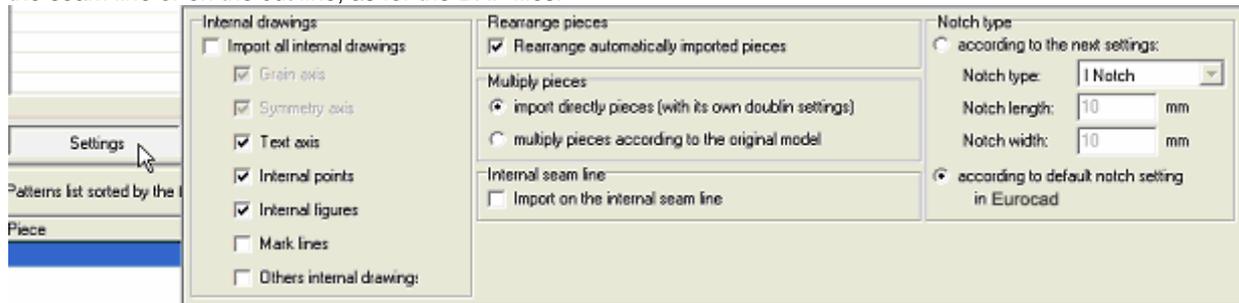


When you select a file from the list, the pieces will be displayed in “preview pieces” area.

To define the import settings you must click on « Settings » button. In the opened window you must define the internal drawings to be imported, piece position, piece multiplication and notches type.



When you import native Gerber files, you must set if you want to import all internal drawings this being the text axis, grain axis, symmetry axis, internal technical points, internal drawings, marker lines or other drawings. For the important pieces you may choose an automatic nesting for repositioning. You may also define the import on the seam line or on the cut line, as for the DXF files.



You must remember that in Gerber the pieces are designed only on the cut line. Thus, you must check the option « Import the internal seam line » only if in Gerber there were designed the projects and not the patterns.

In EuroCAD, the pieces can be simple, double or double mirror while in Gerber the pieces can be multiple, symmetrized horizontally, vertically or both. Thus, you may choose either a direct piece import (with the specific doubling options) or to multiply pieces according to the specifications in the original project.

If you choose « import directly pieces (with their own doubling settings) », at file import, you must define the piece type as simple, double, double mirrored, in order to keep their number and position.

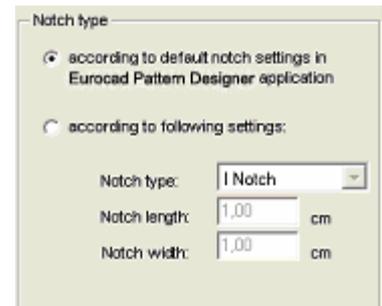
Example: if in Gerber, a piece was defined as triple with horizontal symmetry, in EuroCAD this piece will be imported twice; the first piece will have the double setting while the second piece will have the double mirrored setting.

If you choose « multiply pieces according to the original model », the pieces will be imported in the position specified in Gerber (horizontal or vertical flip, or both) as « simple » pieces.

When you import native Gerber files (*.tmp) you must specify the way you will import the notches, while those are not included in Gerber files and they cannot be found in the ZIP file.

You must choose the notch type and its dimensions after import.

Attention! For a higher accuracy of the imported information from a Gerber file it is recommended to check the **“include all components”** option, when you export a file from Gerber.



Both for *patterns and piece import* it is recommended to open them first in EuroCAD Pattern Designer a check and edit the piece properties and restrictions. To open the pattern in EuroCAD Pattern Designer or the selected pieces in EuroCAD Spread&Cut Planner, you must click on « Open selected pattern in EuroCAD Pattern Designer »



After file selection, the pieces can be filtered according to fabric type (if you have imported a pattern type file) and then they are transferred into « The pieces list for nesting »; then you must check the sizes on the current pattern. Finally, you must click on « Load » button to import and nest the pieces.

2.19. Plotter settings



To change plotter settings in EuroCAD Spread&Cut Planner you must click on « Cutting settings » button; a dialog window opens; here you must select « Plotter settings ».

Spread and Cut settings |
 User settings |
 Plotter settings |
 Cutter Settings |
 CMD Cutter S

Plot stripes and plaids

all stripes (plaids)

no more than one stripe (plaid) at distance cm

Printed stripes (plaids) will be represented as segments. The length of the segment will be cm

Distance between stripes (plaids) will be cm

Print settings

Bottom limit: cm

Side limit: cm

Text font max. size: cm

Split text on multiple rows

HPGL export with PEN specification

Text: Cut line:

Notches: Seam line:

Axis: Internal points:

Plotter scale factor

Width:

Length:

(1000 = 1:1)

Plotter resolution

Resolution:

Scale:

Export marker's dimensions

HPGL extra initialization string

Splicing settings

Minimum band width on splicing cm

Maximin band overlap cm

Add/ Delete plotter + -

Plotter	Save path
Default	D:\plt\active\

Plot stripes and plaids

*from EuroCAD Automarker you can print either all lines or no more than one line, defined by the user. If you check "no more than one line.." the printed segments will be represented by segments or a defined length and a settable distance.

Plotter scale factor

*scale factor settings are used especially for fine plotter/cutter calibration. These settings can be done on paper length and/or width. This calibration can be also realized directly on plotter.

Print margins

* You can set (in mm) the bottom and lateral printing margins.

Text font maximum size

* You can define the maximum size for the text on the pieces

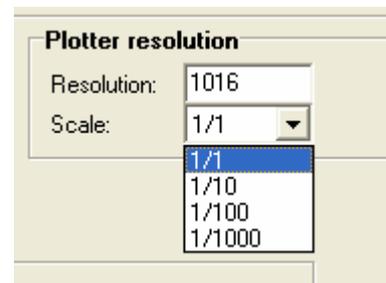
Split text on multiple rows

* For long text lines you may choose to split the text on multiple rows

Plotter resolution

*resolution – in this field you can enter the plotter/cutter required resolution.

*scale – if you click on the arrow near the scale field, a menu opens here you can choose the plotter printing scale. The presets values are 1/1, 1/10, 1/100, 1/1000, 1/5, 5/1, 10/1, 100/1

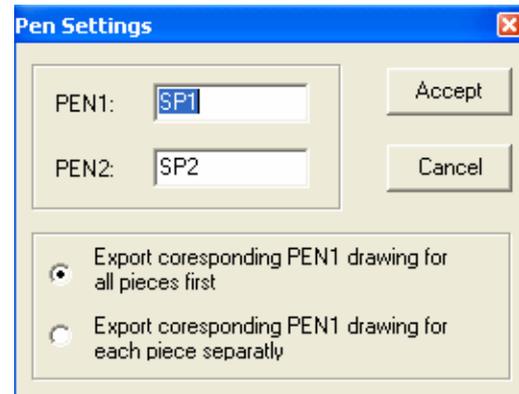
**Export HPGL with PEN specification according to drawing**

* If your system is connected to a plotter combo that can cut and plot in the same time, you can set the PEN type to be used for each line type. Such a plotter will be able to cut on the contour and in the same time will be able to draw the grain axis, notches, sewing line and internal technical points.

You can choose the way you will plot or cut. These options can be set by pressing the „PEN Option” button”; there are two sections:

- in the right side of the window with PEN settings is a „PEN Option” button; when you press this button in the displayed window can change the command that export the information from the file.

- to change the PEN between sessions you set SP1 or SP2. Check the setting „Export corresponding PEN1 drawing for all pieces first” when you want to draw all pieces first and then to cut all pieces at the same time; and check the setting „Export corresponding PEN1 drawing for each piece separately” when you want to draw and cut each piece separately.

**Plotter list**

* you can create a plotter list for those who has more than one plotter. In this list it will appear the available plotters and the path to save files for a direct print.

To add a plotter in the list you must click on “+” sign in Add/delete plotter field. To change a plotter save path you must right click in the opened menu and you must choose „Modify”. After you click „Modify” you must select a new path in the opened window.

To delete a plotter from the list you must select the plotter to be deleted and then click on “-”.

The user can change also the save path for Default plotter. But he can not delete this plotter from the list.

Splicing settings

Splicing settings	
Minimum band width on splicing	40 cm
Maximum band overlap	20 cm

* To find out where you can make section on the maker, choose to plot the splices on the mini-marker. For this check "print marker splices" from the window "Plot marker/ print mini-marker".
 The splicing signs of the marker will be set in accordance with the minimum band width on splicing and with the maximum band overlap set by the user in the "Settings plotter" window in the "Splicing settings" fields.
 You can use to splicing on the marker when you have a marker with a bigger length made on the fabric with aleatory defects.

2.20 Cut settings



To change plotter settings in EuroCAD Spread&Cut Planner you must click on « Cutting settings » button; a dialog window opens; here you must select « Cutter settings ».

? X

Spread and Cut settings | User settings | Plotter settings | Cutter Settings | CMD Cutter S

<p>CNC starting corner:</p> <p><input type="radio"/> Bottom Left</p> <p><input checked="" type="radio"/> Top Left</p>	<p>Cutter scale factor</p> <p>Width: <input type="text" value="1000"/></p> <p>Length: <input type="text" value="1000"/></p> <p style="text-align: center;">(1000 = 1:1)</p>
--	--

Measurement unit

0.01 inch

0.001 inch Command:

0.1 millimeters Command:

Export command for measurement unit in the file

Internal points

Add a hole for the next type of internal points:

Dart edge Command:

Hook hole Command:

Fastener hole Command:

Internal points Command:

Export internal points in ISO CUT format

Flip

Flip X Flip Y

Tubular cutting options

Do not cut straight lines near fabric folding edge

Tolerance: cm

Alternate patterns cutting direction

Foloseste textul de initializare ISO CUT

OK Cancel

CNC starting corner

* For those who have a cutting machine, you can set the cutter to start from « bottom left» or from « top left » corners.

Cutter scale factor

*scale factor settings are used especially for fine cutter calibration. These settings can be done on paper length and/or width. This calibration can be also realized directly on cutter.

Measurement unit

There are three types of measurement unit in which you can make the export to the automatic cutting machine. The three types of measurements units are:

- 0.01 inch
- 0.001 inch
- 0.1 millimeters

The message „Export command for measurement unit in the file” must be checked to show in the file, information about measurement unit used to the export.

G70 and G71 are the commands applied in the file for the afferent measurement unit.

Internal points

* Only three types of internal points can be cut on the automatic cutting machine. These points are: „Dart edge”, „Hook hole” and „Fastener hole”. In this file these points are read under the command M43.

* To see or cut these points at the cutting machine you must check the checkbox near the point type.

If the field is not checked, even if on the marker these technical points exist, they won't be cut on the cutting machine.

Export internal point in ISO CUT format

* This message must be checked to export the internal technical points in ISO CUT format.

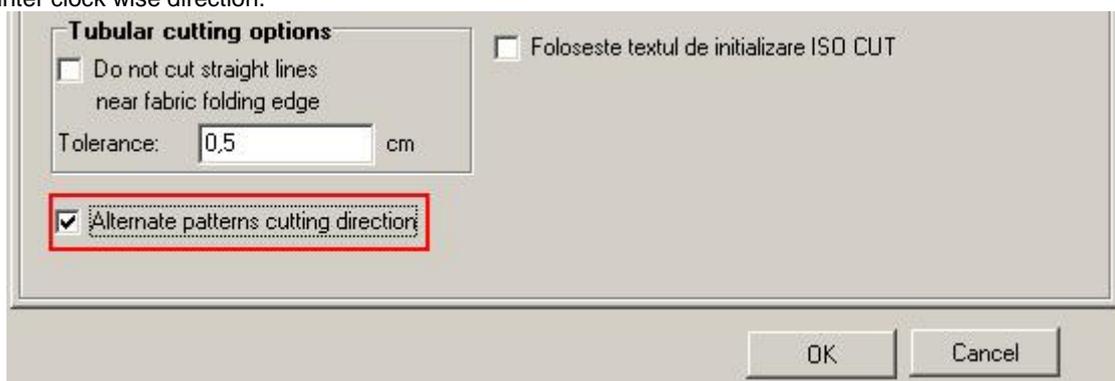
Flip

You can export the marker to the cutting machine as it is displayed on the screen, flipped on x, flipped on y or flipped on x and y.

Tubular cutting options

The user has the possibility to choose if the straight lines from the tubular edge will be cut or not and he can decide the tolerance as well. In order to do this, the box **“Do not cut straight lines near fabric folding edge”** will be checked or unchecked .

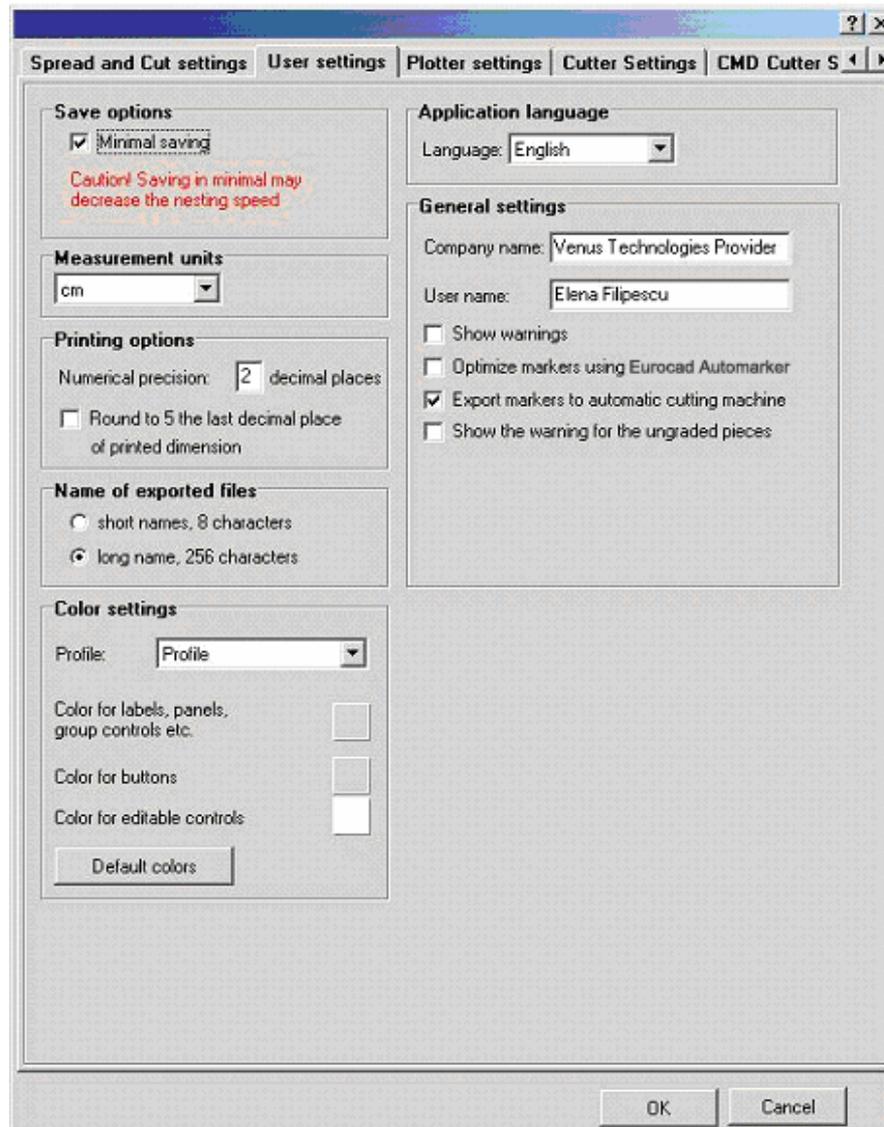
It is possible to choose a cutting direction of the marker's patterns. Checking the option “Alternate patterns cutting direction”, then a part of the patterns will be cut on clock wise direction and the other part will be cut in counter clock wise direction.



2.21 EuroCAD Spread&Cut Planner – general settings



To change general settings in EuroCAD Spread&Cut Planner you must click on « Cutting settings » button. In the opened dialog window you must click on « User settings » tab.



Save options

Here you can check/uncheck the « Minimal saving » message. Checking this message will increase the marker process duration.

Measure unit

After opening the EuroCAD Spread&Cut Planner application you can change the measure unit during working on it. All quotas will be converted in real time by the program into the current measure unit.

Numerical precision

The quotes printed on the cut plan can be rounded and may have different work precision. To round values you have to set the printed quote precision. Also here you can round to five the last quote (check/uncheck).

Exported file names

The program allows short names (max. 8 characters) or long names (max. 256 characters).

Application language

Here you can choose the application menu language. Click on the arrow near the “Language” box, and choose your language.

Color settings

The user can change the color for the buttons, for the editable fields, for panels and labels. Also he can define and save some color profiles for the Spread&Cut Planner Application.
To activate the initial colors use the button „Default colors”.

General settings (company, user name)

The company/operator name must be inserted in the cut plan to appear on the header of the printed cut plan. There is a length restriction for these names, due to the limited place on the report; it is recommended to preview the report before printing.

Here you can also choose to display a warning message for cut plan optimization.

You can choose EuroCAD Automarker as the optimization application for the markers.

If you check « Export markers to automatic cutting machine » button, the user can export EuroCAD Spread&Cut Planner files to the cutter.

If you check « show the warning for the ungraded pieces » button the user will be warn through a message that the pieces are not graded.

2.22. EuroCAD workstation - Hardware Specifications

To run EuroCAD programs your computer should have the minimum hardware configuration described below. The EuroCAD programs can run on computer with less performance hardware configuration than the minimum configurations, in this case the performance (speed) will be slower. For computers where the files made in EuroCAD programs are complex (models with many pieces, cutting plans with many and long markers), we recommend a computer with higher hardware configuration than the minimum.

Minimum hardware configuration.

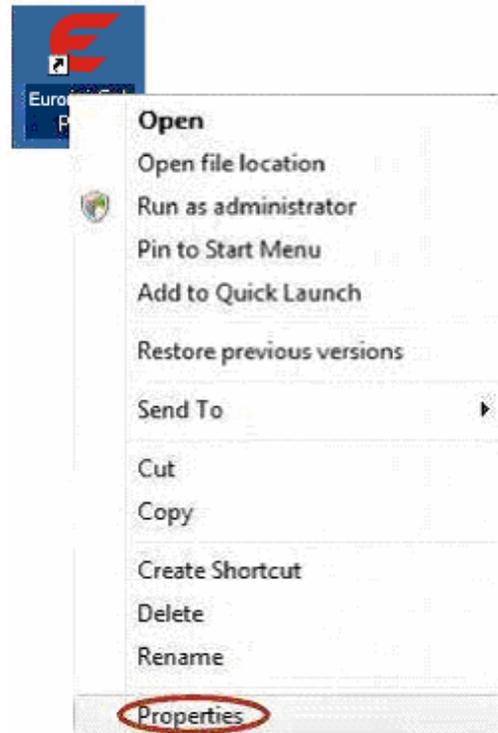
Application Hardware description	EuroCAD Pattern Designer	EuroCAD Spread&Cut Planner	EuroCAD Automarker	EuroCAD Photo Digitizer
Processor	P IV 1500 MHZ			
Free Disk Space	1 GB			
RAM memory	512 MB	512 MB	1 GB	1 GB
Sound Card	Recommended For digitizing	not required	not required	not required
Ports for dongle – hardware protection key	Onboard COM port or PCMCIA adaptor or USB to serial adaptor – USB to RS232 Converter			
Other ports	COM port (for digitizer)	not required	not required	not required
CD- ROM	For software installation			
Operating system	Windows XP Windows 2000 Windows Vista*	Windows XP Windows 2000 Windows Vista*	Windows XP Windows 2000 Windows Vista*	Windows XP Windows 2000

*** To run EuroCAD programs under Windows Vista you have to follow the steps below.**

1. Install all desired EuroCAD programs.

2. If you have icons on the desktop for the installed programs, make a right click on the corresponding icon, and then choose the “Properties” option from the opened menu.

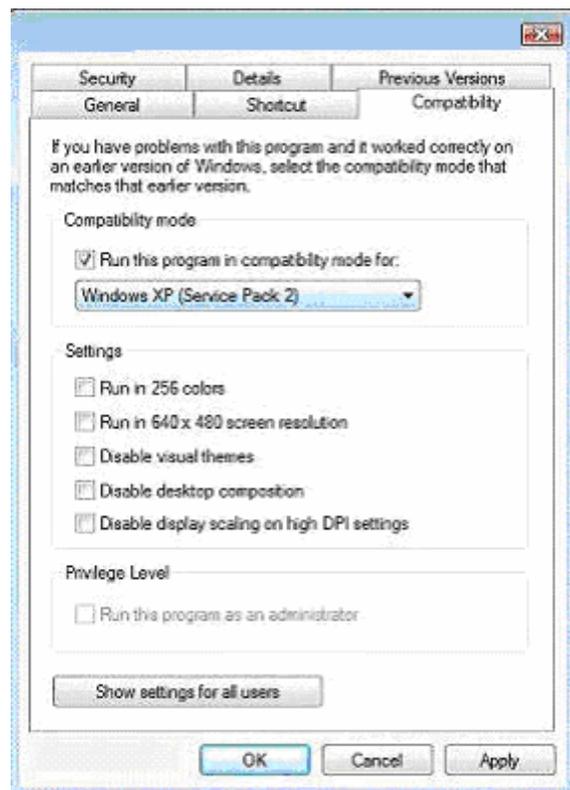
If you don't have an icon on the desktop, you must enter the installing folder (ex: C/Program files/EuroCAD/*Application name*), and make a right click on the exe file (ex. for „*Application name*”: EuroCADPatternDesigner.exe).



3. A new window will open on the screen, when the “Properties” options are active. This window contents many tabs. You must activate the “Compatibility” one, by making a click on it. Here you will have to select the compatibility mode that matches to our program.

For this, check the “Run this program in compatibility mode for:” option from “Compatibility mode” section. After this, select the Windows XP operating system from the list below.

4. Check the “Run as administrator” setting after settings the operating system where it is necessary.



3. A new window will open on the screen, when the “Properties” options are active. This window contents many tabs. You must activate the “Compatibility” one, by making a click on it. Here you will have to select the compatibility mode that matches to our program.

For this, check the “Run this program in compatibility mode for:” option from “Compatibility mode” section. After this, select the Windows XP operating system from the list below.

Warning! The compatibility between the operating system and program must be set for each program separately!