USER GUIDE

pad² SYSTEM™

V6

Patten Design

Version 6

PAD System International Limited

www.padsystem.com

PAD System™ is a trademark and a system developed by:

PAD System™ International Limited
Flat A, 2/F, Cheung Wing Industrial Building,
109-115 Wo Yi Hop Road, Kwai Chung,
New Territories, Hong Kong

Telephone: (852) 2370-9063
Fax: (852) 2370-9085
E-mail: padinfo@padsystem.com
Technical support: support@padsystem.com
Website: www.padsystem.com

PAD² Pattern Professional / Pattern Enterprises 6.0

Pattern Professional

This edition offers full features of previous Pattern Professional and also the Clone relationship that allows you to create more patterns pieces in different fabrics. Clone enables you to create the link between Plan piece and Production piece that any changes made on Plan View will automatically update on the Piece view, resulting in saving your valuable time in working with the pattern. In addition to all the advantages of PAD² Pattern Professional, you can use the Clone relationship with this software package. This revolutionary function allows you to create one or many pattern pieces in as many different fabrics as you wish. The respective Clone Pieces automatically modify themselves whenever the Master Pieces undergo a modification. The Clone gives you the possibility when you set your piece from the plan to keep a link between the Plan piece and the Production piece. So that if you make a modification on the Plan View it will automatically be made also on the Pieces View. This allows you to save a lot of valuable time when adjusting, modifying and/or correcting your pattern.

Pattern Enterprise

This edition offers the most complete features of PAD² Patter Design. Apart from the features found in Professional edition, this also includes the Frames that can create the base of measurement entries by allowing you to apply and retrieve all of your patterns. Other distinctive features include, Plan View, Piece View, Comprehensive Pattern Design Tools, Made-to-measure frame options, Clone (Plan-Piece View), Piece Production Treatment and also File Conversion, giving you the wonderful experience in working with patterns. The most complete and advanced PAD² PAD Enterprise includes all the functions previously described in Pattern Professional. PAD Enterprise includes the Frames to create a base of measurement entries that you can save, load and apply on all your patterns. PAD Enterprise gives you the Plan View, Pieces View and all the pattern design tools, the made-to-measure frame options and the clone Plan to Piece link feature. Also it includes the important features on Piece Production Treatment and File Conversion. It is the most complete version of PAD's pattern design application.
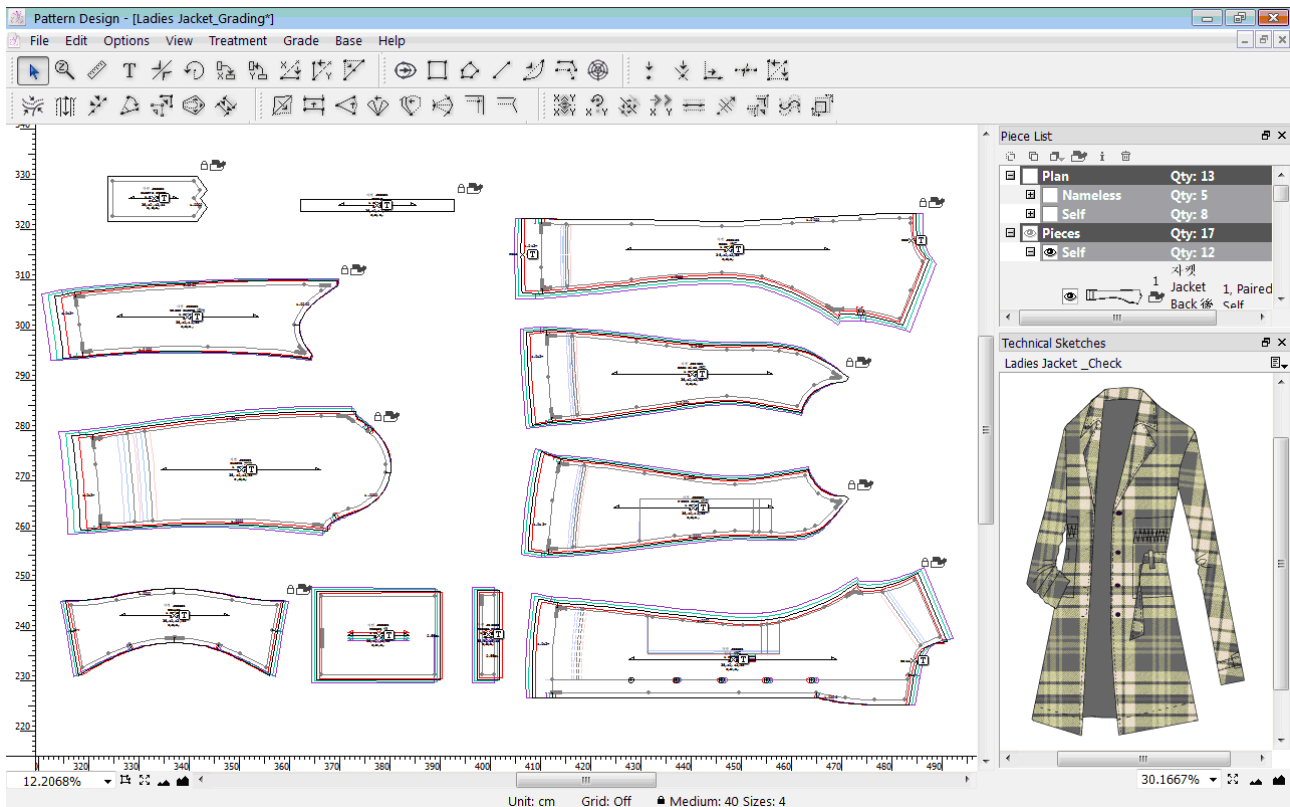
Chapter 1
The Pattern Basics

• • • • • • •

Working Area Interface

User can use the toolbox / toolbar to perform different functions on the working area.   The Piece List window shows the pieces you work on and the info box gives you useful hints of tools as well. Each element will be elaborated further in coming sections. The toolbox or toolbar represents a list of actions that you can perform on the working area. The Piece List window shows the pieces on the working area, visible or not. The Info box gives much useful information about the work that is being done. Those elements are detailed on the following pages.

Info bar is at the window's bottom part.

The Info bar shows:

● Default Unit

● Grid Status (On or Off)

● Medium Size (as default)

● Quantity of sizes in grading nest

● Cursor position on the working area

And it may display:

● Information of angle

● Length of segment

● Length and depth of a curve

● Info of the radius of a circle

● X and Y coordinates and distance of a rectangle, Ellipse

● Job Status

Floating Windows in Working Area

Floating windows perform different functions, such as Piece List, Grading Arrows, Grading Info, Grading Library, Frame and Technical Sketches. User can group those into a single window or ungroup to multi windows in the working area; and also drag those to the desired place inside the working area.
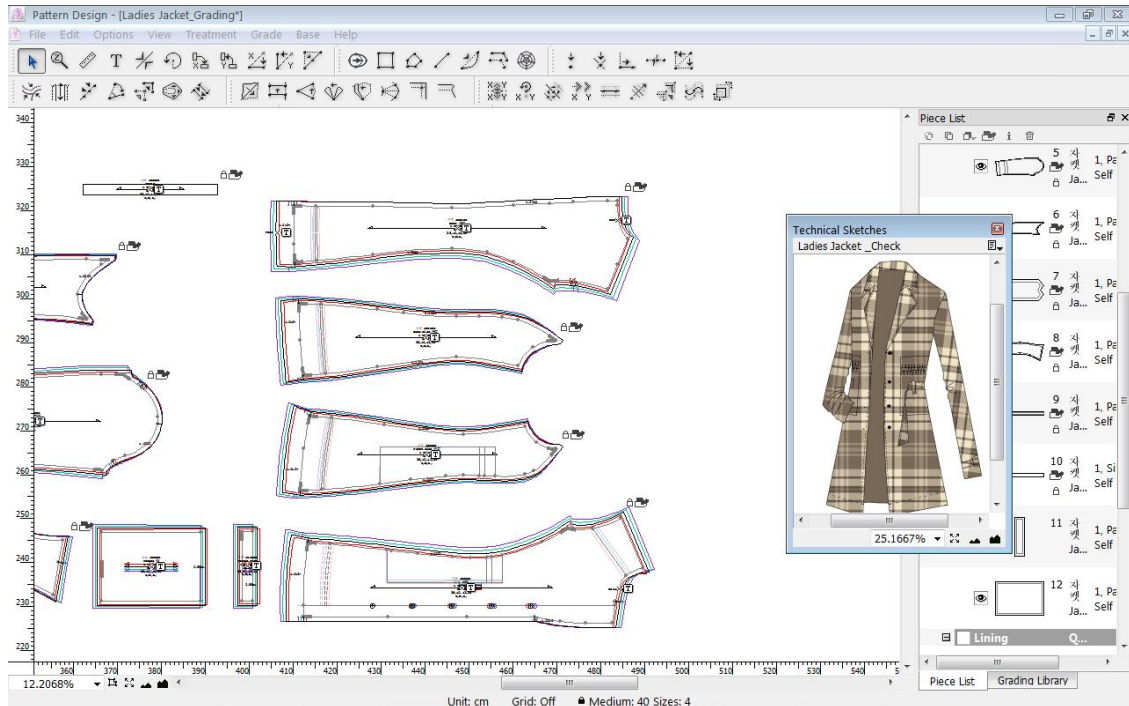
<u>Single Window</u>

You can group two or more into the window by simply dragging the title bar to one of the floating window.
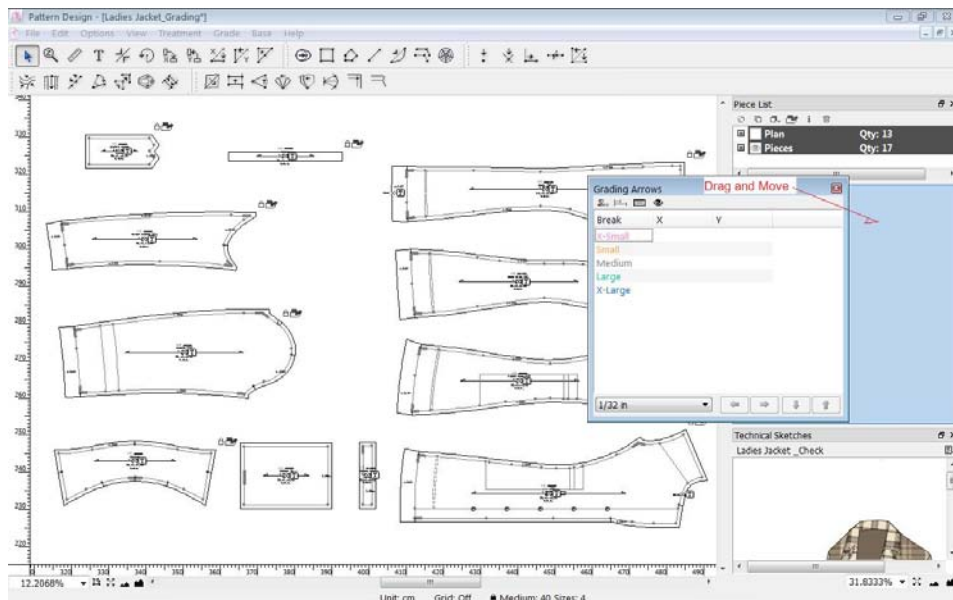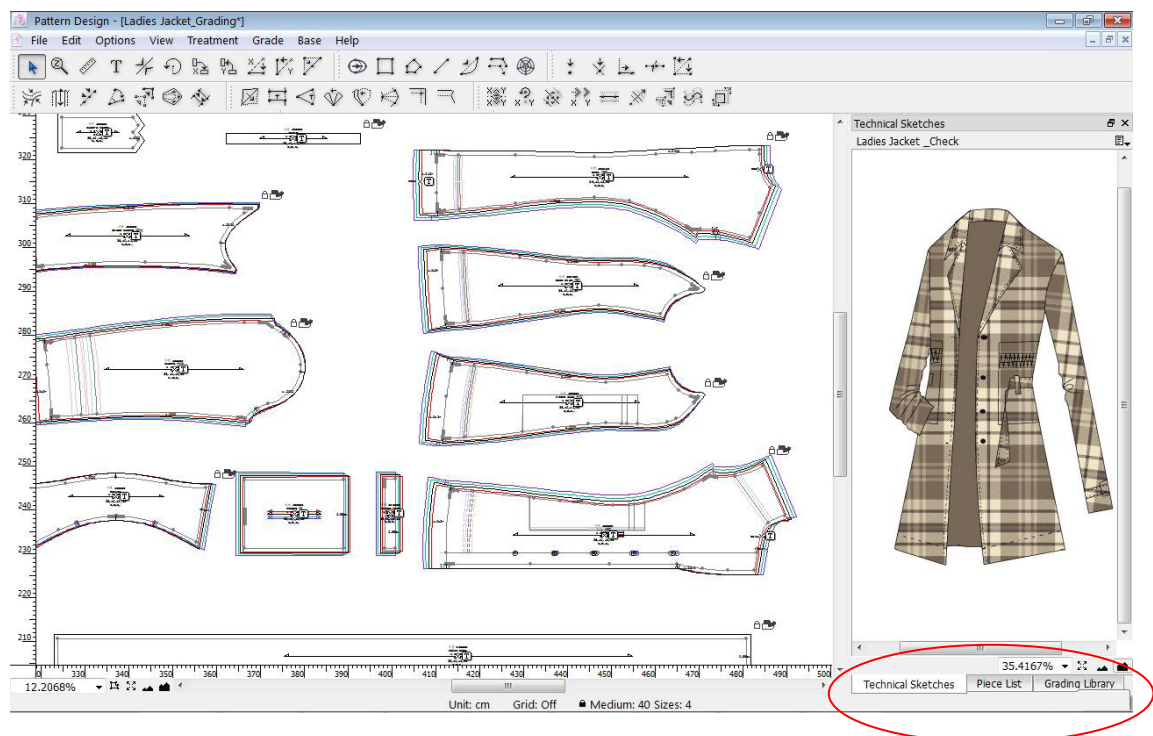

Grading Arrows dialogs put to the middle of the floating window.
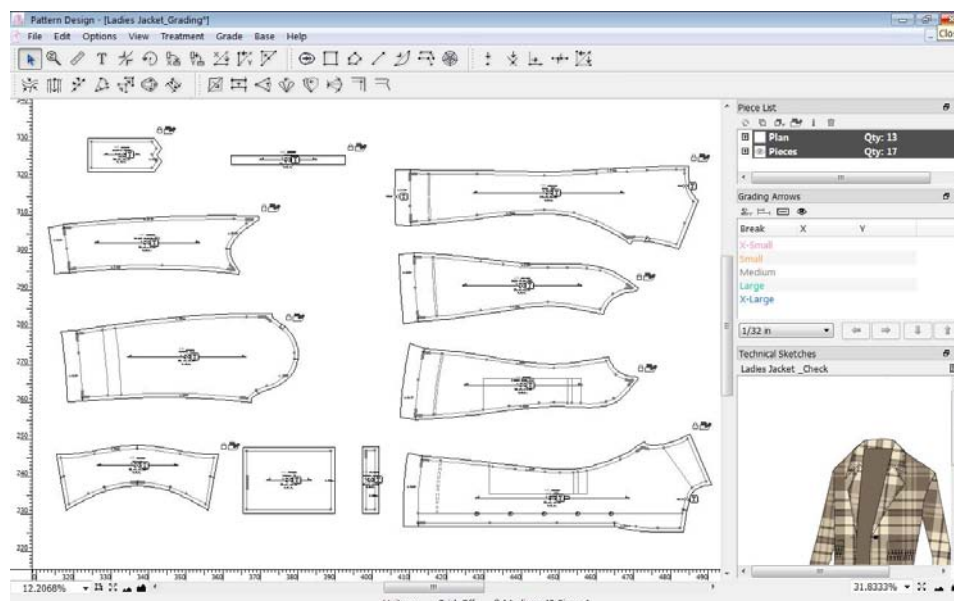
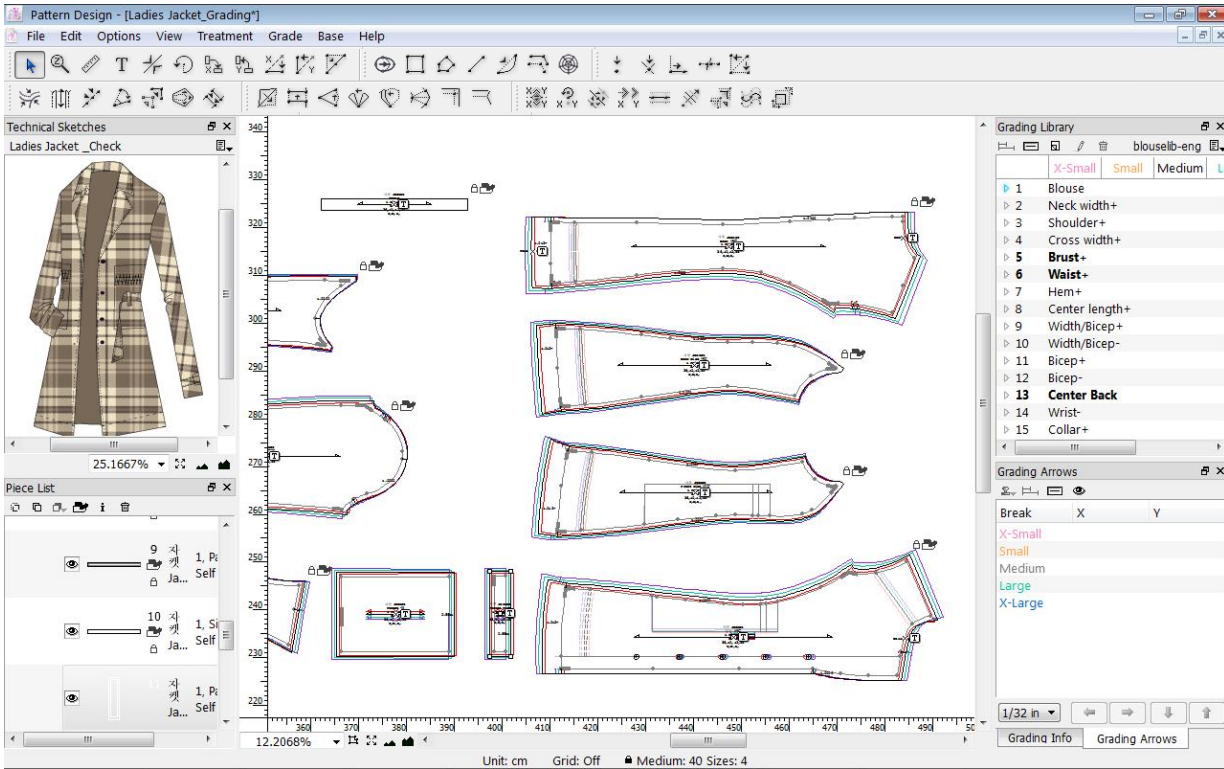Or dragging another new window to the existing item in the floating window.

The Technical Sketches access to the same window. And user can navigate the item by clicking the appropriate tab at the bottom of the window.
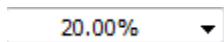
Separate into Multi Windows

Zoom Menu

20.00%

You can find the Zoom Menu (with 5 functions) at the lower left-hand corner of main application window.

The Zoom Menu is for controlling the zoom level. You can select pre-set zoom scale from the drop-down menu or directly input desired value in the box.

20.00%

The Zoom scale range from 0.1% 2000%(maximum).The Global View displays all the visible pattern pieces in the working area.

| Global |
| Selection |
| 10% |
| 20% |
| 25% |
| 33% |
| 50% |
| 100% |
| 200% |

20.00%
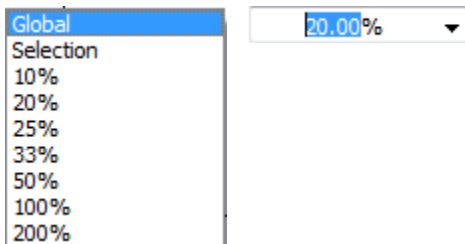
The Zoom - shows the selected piece(s) at the center of window.
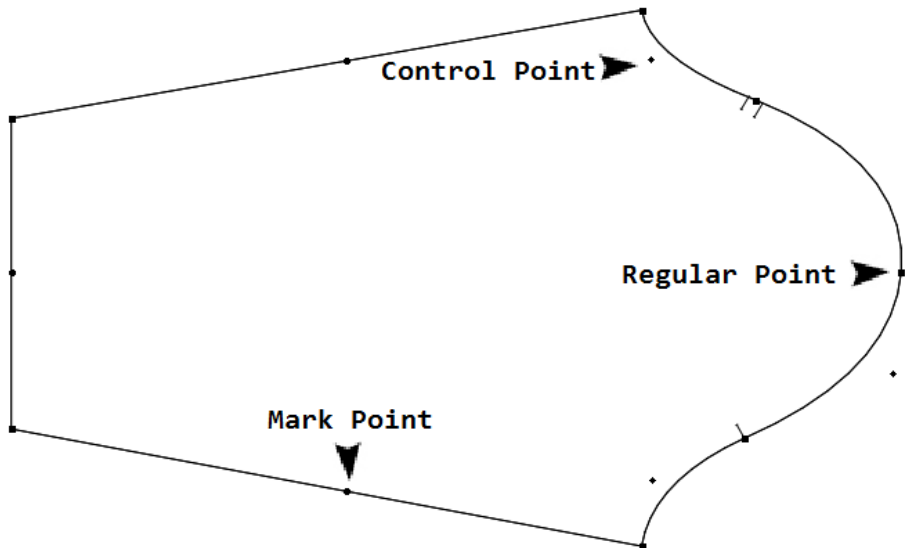
The Global View - displays all the visible pattern piece in the working area.

The Zoom Out / In - click to elarge / reduce piece view of pre-set level, Ex: 200%, 100%, 50%, 33%, 25%, 20%, 10%, 8%, 6%, 5%, 4% , 3% , 2%, 1% or 0.5%.

Contextual Menu

You can choose to display a contextual window by right-clicking the piece (Windows / Linux) or by holding the **Control** key or clicking the piece (Macintosh). This window enables you to *Set Piece*, verify or modify the grading, work on the pattern inside the seam allowance, open the *Piece Info* dialog box and *Zoom* on piece.

Set Piece from Cut...
Set Piece from Contour...

Work on Grading
Work on Sewing Line
Show Sewing Line Grading

Piece Info...

Zoom on Piece
Create Pattern Template
Attach Image...
Pattern Assistant...
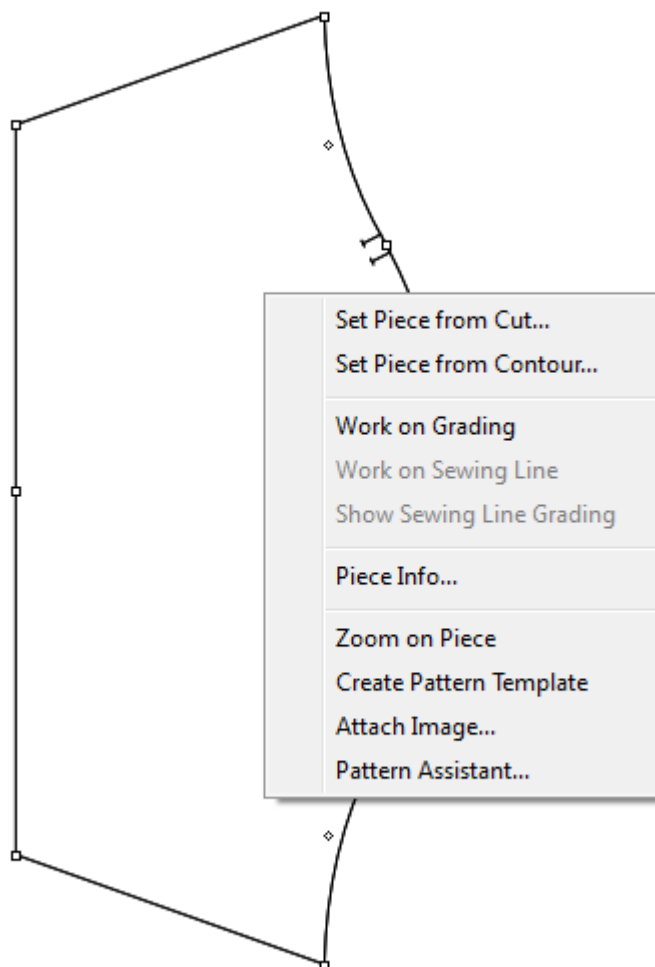
Types of Points

Points use to define both the contour and inner indication of the pattern. PAD System™ has three types of points:

Regular Point: It uses to mark the beginning and the end of a segment. The system reads a segment from one Regular point to the next one, including the points between both ends. Regular points are added when working on the pattern piece.

Mark Point: Mark points are added to the contour of a pattern piece, by using either the *Add Point to Segment* or *Point* tool.

Control Point: It uses to create a curve by pulling particular point of a segment where curve draws based on Beizer curve principle.

> **Note:** Please refer to Points section of User Manual for further details.

Points can also be used for making *Notches, Punch Holes, User's Notches, User's Punch Holes, Matching Point, Start Point, Lift and Plunge, Symmetrical Start/End Point, Internal Start Point.* You can perform above functions by selecting *Point characteristics* dialog box or the *Points* and *Notches* option from the *Treatment* menu.

PAD's pattern applications allow you to place a matching reference on a regular or mark point to create plaid and striped fabrics in PAD System™ *Marker Enterprises (previously known as Opticut AutoMarker).* You can put the matching reference on pieces from the *Pieces View* or in the marker. These matching points snap on matching guidelines.

You can use points for CNC cutter. PAD System's pattern applications allow you to remark the reference points on a regular or mark point that can be used in the marker.

Each point is the coordinates of the grading X and Y.   You can use the Grade View tool box to modify the grading coordinates by entering specific coordinate's value in the Grading Info dialog box, or by retrieving record from Grading, or by using Grading Arrows directly.

Segments

A segment can be shown as one of following style:

• A polygon contour,

• A style line, or

• A construction line between two points located inside or outside of a shape.

Contour Line
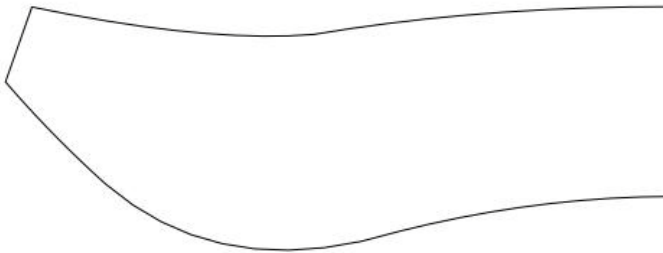
Style Line
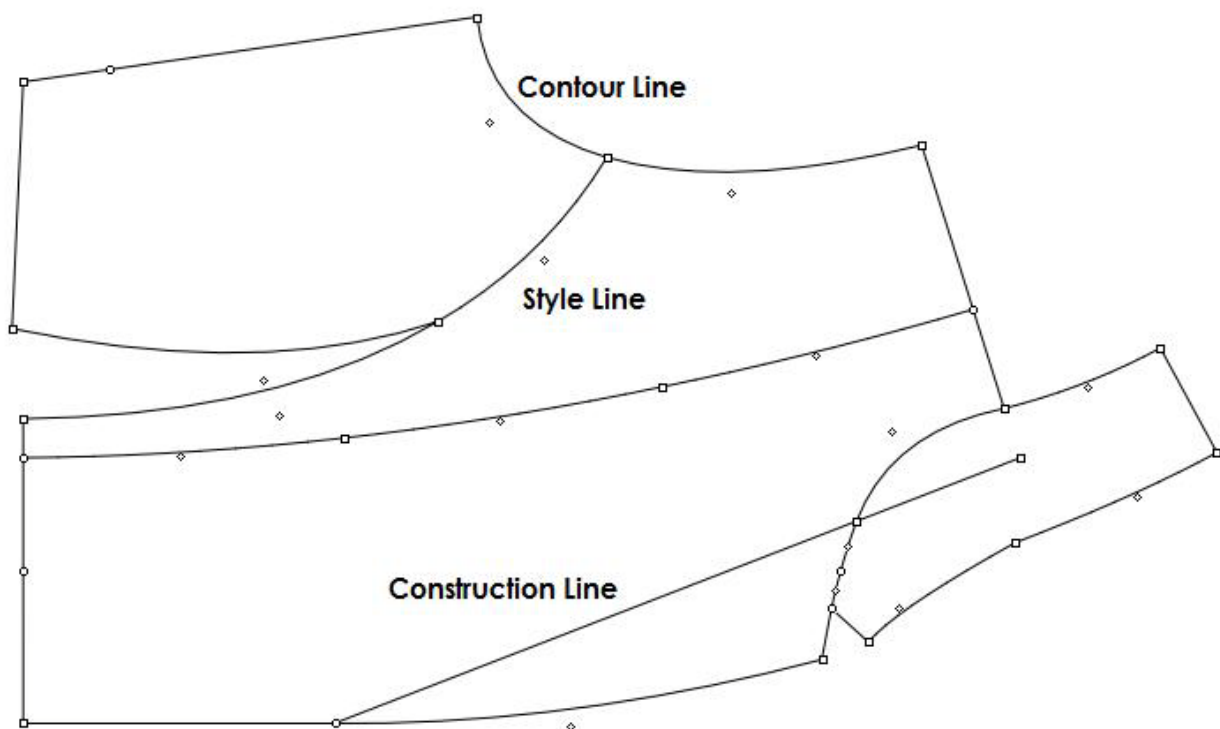
Construction Line

A segment, without define any elements of pattern, is considered as a construction line only; but can serve as a guide for further development.

You can perform many functions on a segment by using Toolbox / Toolbar of Plan View / Piece view to access information of Segment Length and Segment Angle.
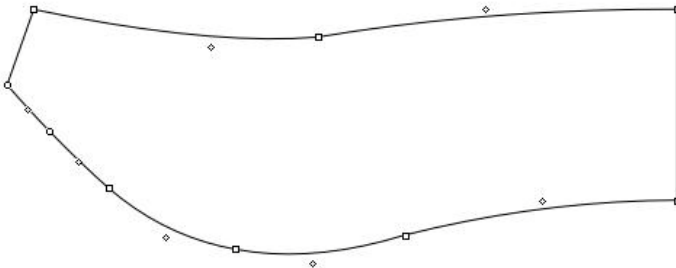
Keyboard Selection

You can press left mouse button (for Windows) / mouse button (for Macintosh), together with the keys of keyboard, to perform different functions.

Use the **Shift** key (Windows, Macintosh and Linux) to:

• Select more than one element.
• Restrict any movement along X, Y coordinates or on every 15°. (Define the angle by the setting "Round Angle" in the Preference menu.)
• To select a continuous selection from the listed items (from …to).

Windows keys   Shift

Macintosh keys   Shift

Linux keys   Shift

Use the **Alt** (Windows) / **Option** (Macintosh) / **Alt +Windows** (Linux) to:
• Select an entire piece instead of just one segment or point.
• Move one piece or group of pieces in the Piece list.
• Provide precise measurements in a dialog box.

Windows keys   Alt

Macintosh keys   Option

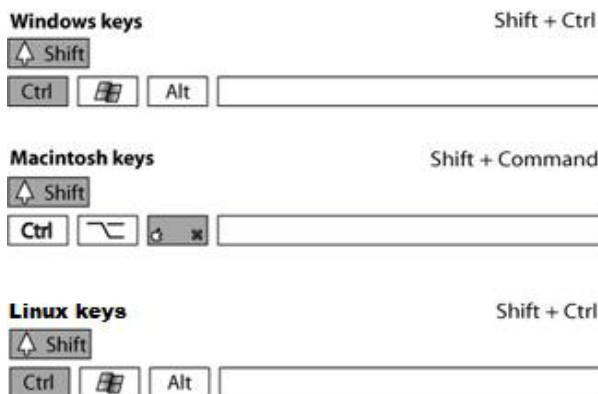**Linux keys**   Windows + Alt

Use the **Ctrl** (Windows / Linux) / **Command** (Macintosh) to:

• Temporarily show the *Pointer* tool while other tool of toolbox is selected

• Uncheck a selected element
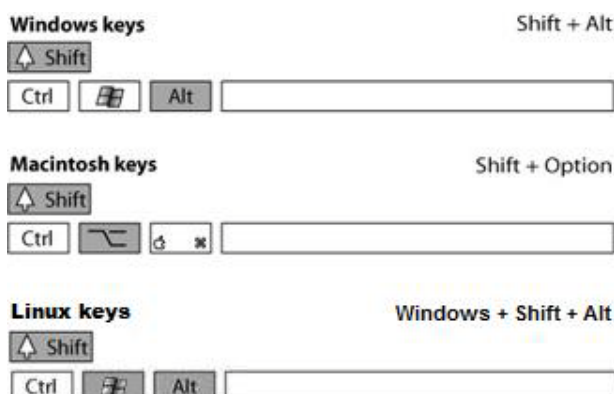
• Remove a continuous selection from the list

Windows keys   Ctrl
Shift
Ctrl | 田 | Alt |

Macintosh keys   Command
Shift
Ctrl | ⌥ | ⌘ |

Linux keys   Ctrl
Shift
Ctrl | 田 | Alt |

You can perform different functions by using multiple keys together.

Use either **Shift + Ctrl** (Window/ Linux) / **Shift + Command** (Macintosh) to select more than one element (if the function is already activated).

Windows keys   Shift + Ctrl
Shift
Ctrl | 田 | Alt |

Macintosh keys   Shift + Command
Shift
Ctrl | ⌥ | ⌘ |

Linux keys   Shift + Ctrl
Shift
Ctrl | 田 | Alt |

Use either **Shift + Alt** (Windows) / **Shift + Alt + Windows** (Linux) / **Shift + Option** (Macintosh) to select more than one piece using the *Pointer* tool.

Windows keys   Shift + Alt
Shift
Ctrl | 田 | Alt |

Macintosh keys   Shift + Option
Shift
Ctrl | ⌥ | ⌘ |

Linux keys   Windows + Shift + Alt
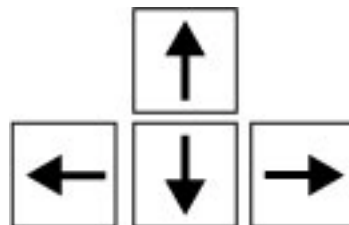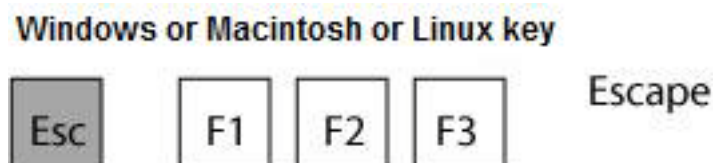Shift
Ctrl | 田 | Alt |

Use **Shift + Alt + Ctrl** (Windows / Linux) / **Shift + Option + Command** (Macintosh) to select more than one piece or a group of pieces while other function is in use.
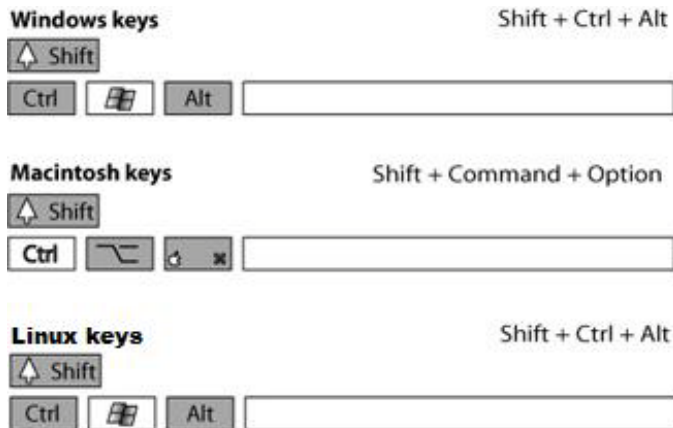
Instead, you can use the directional keys (Up, Down, Left, Right) to adjust the insertion point in a text box or move the selected pieces in the working area (using grids).
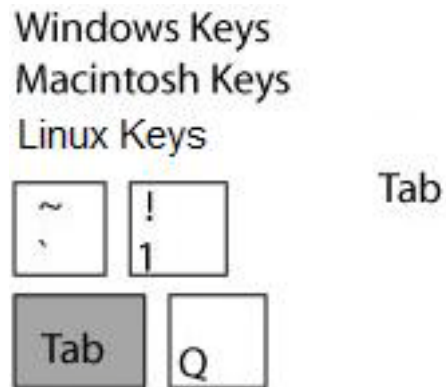

Use the **Esc** (Windows, Macintosh and Linux) to quit the dialog box or cancel any action in progress.

Use the **Tab** key to make a quick move from one field to the next or button to another in a dialog box.

Windows Keys
Macintosh Keys
Linux Keys

Tab

Press **Shift and Tab** at the same time to move backward to previous field.

Windows Keys
Macintosh Keys
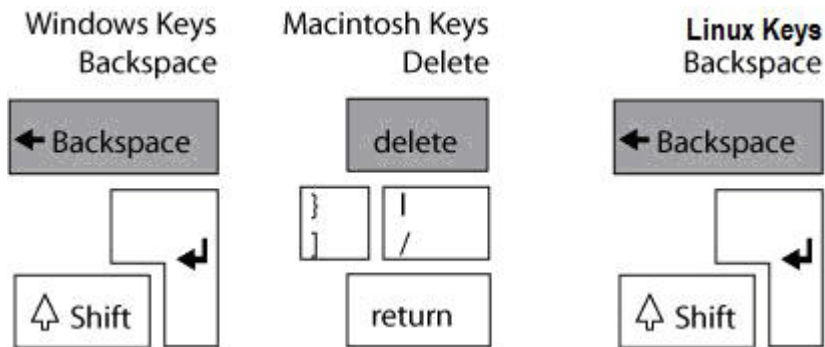**Linux Keys**

Tab + Shift
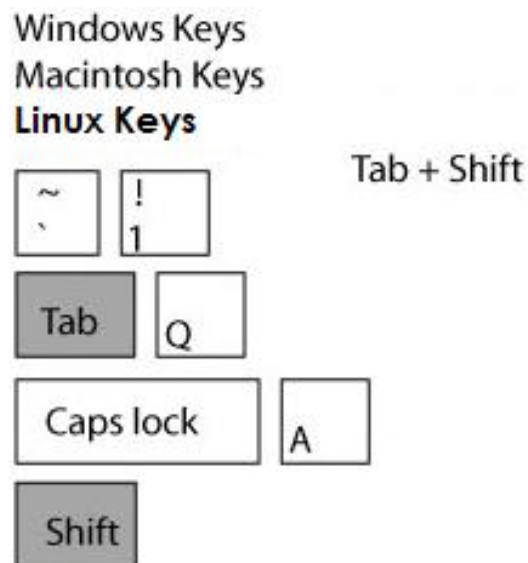
You can click to choose the field and double-click to select all the text within the field.

To cancel a selection:

To perform delete, please select the unwanted materials and press **Backspace** (Windows / Linux) / **Delete** (Macintosh).

| Windows Keys Backspace | Macintosh Keys Delete | Linux Keys Backspace |

To scroll the view of the working area:

Press and hold the **Space** bar (Windows, Macintosh and Linux) until a hand icon appears.
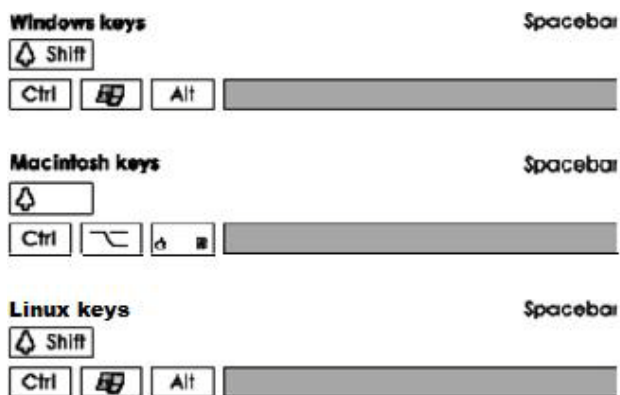
A hand icon:

Hold the left mouse button (Windows/Linux) / mouse button (Macintosh) to move and view your desired part.

Info Bar

| Unit: in	Grid: Off	Medium: 10	Sizes: 8	X: 93.678	Y: 62.969			
Unit: in	Grid: Off	Medium: 10	Sizes: 8	X: 81.729	Y: 69.623	Angle: 8.1022	Angle X: 98.102	Open.: 7.4991
Unit: in	Grid: Off	Medium: 10	Sizes: 8	X: 94.305	Y: 61.645	dX: 5.7308	dY: -0.069675	Dist.: 5.7312
Unit: in	Grid: Off	Medium: 10	Sizes: 8	X: 93.033	Y: 67.759	Length: 4.7573	Depth: 0.25313	

The *Info bar* displays:

• Default measurement units, as configured in the *Options* menu
• Grid status (on or off)
• Default medium size
• The quantity of sizes in the grading nest
• The cursor coordinates on the working area

It may display:

• Angle's Info
• Segment's Info
• Curve's length and depth
• Radius's Info
• The X and Y coordinate and distance of a rectangle.

Piece List
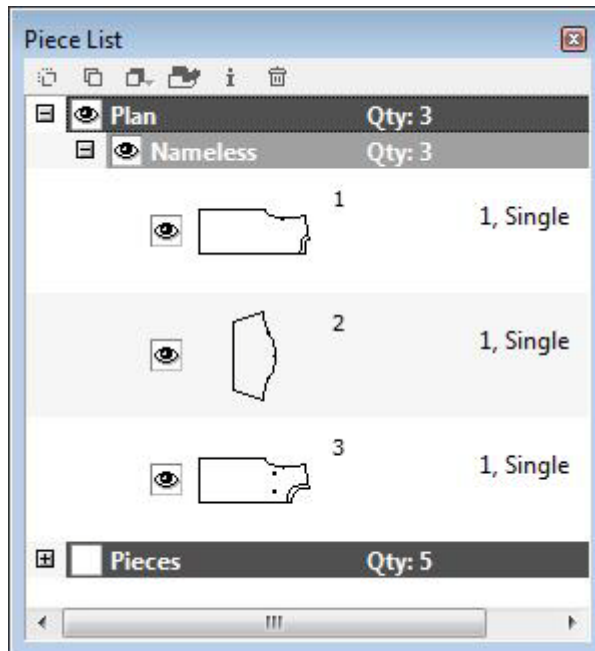
The *Piece List* window shows the pieces on the working area.

Click minus ⊟ to hide or plus ⊞ to show the full piece list.

Click the **+/-** symbol to open the subjacent menu. Press **Alt** (Windows) / **Option** (Macintosh) / **Alt +Windows** (Linux) and click **+** / **-** sign to open or close the entire section (all the subjacent menus and elements)

The button before each piece allows you to *Show* or *Hide* the corresponding piece. The button before each group allows you to *Show* or *Hide* the corresponding group. Press **Alt** (Windows) / **Option** (Macintosh) / **Alt + Windows** (Linux) keys and click the button to *Show* or *Hide* the whole section (all the subjacent menus and elements) with a single click.

The Icon shows you the display status of the corresponding element or group of elements.

Means corresponding piece or group of pieces is hidden on the working area.

Means one or more pieces of the corresponding group are hidden on the working area.

Means corresponding piece or all the pieces in the corresponding group show(s) on the working area.

Task menu bar (with six buttons) of *Piece List* window allows you to work on the multiple pieces selected previously.

Piece List Buttons

Click to cut and paste the selected piece(s) onto the clipbard temporarily for future use.

Click to copy the selected piece(s) while it still keeps in the *Piece List* window and the clipboard for future use.

Click to paste the piece(s) kept in the clipboard by using *Cut* or *Paste* command.

Click to display the Clone Hierarchy of the selected piece(s), available in both *Pattern Professional* and *Pattern Enterprise* editions.

Click to display the *Piece Info* dialog box or double-click a piece instead.

Click to *delete* the selected piece(s) and will remind to reconfirm before execution. Delete to confirm or Cancel to keep.

Customizing your Piece List by Contextual Menu

Go to the Piece List Menu of Piece List window and right click mouse button to open the Contextual Menu to customize the way of information shown.
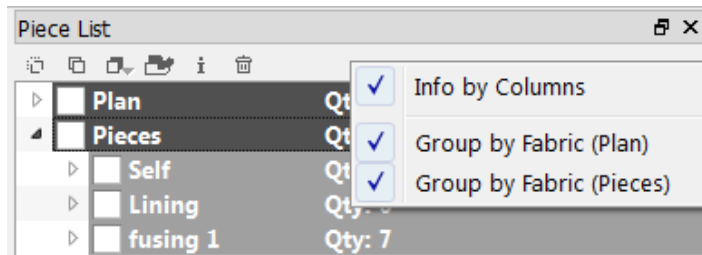
Check the criteria to choose the way of information displayed, you can make multiple choice as well.

Piece information: Info By Columns

Info by Columns - Piece information will list in column
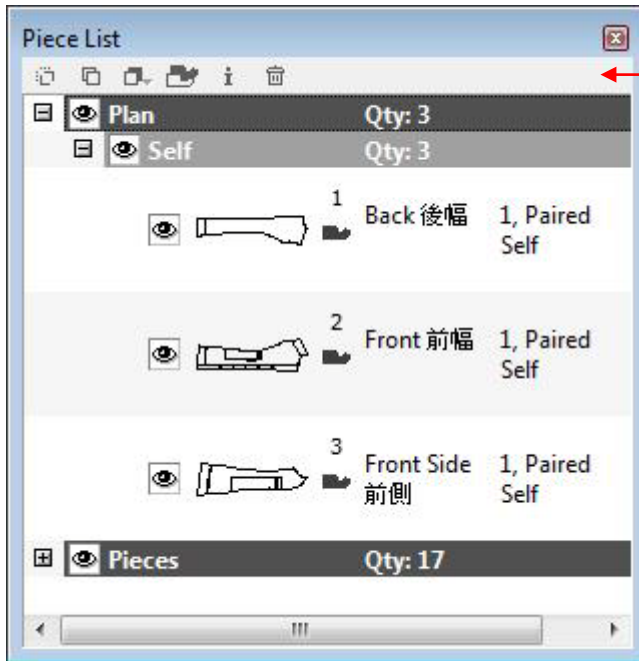
Right click the title bar to choose the option by mouse left click

✓ Info by Columns
✓ Group by Fabric (Plan)
✓ Group by Fabric (Pieces)

Uncheck to list each piece information in row, details separate with comma (,)

Right click the menu bar and uncheck by clicking left mouse button

Info by Columns
✓ Group by Fabric (Plan)
✓ Group by Fabric (Pieces)

Contextual menu allows you to select the criteria of viewing pieces in the Pieces List window. You can list your pieces grouped with fabric or list all together without grouping under All Fabrics

Piece List Style: Group by Fabric (Plan)

Group by Fabric (Plan) - pieces listed one by one in the *Piece List* without grouping under All Fabrics.
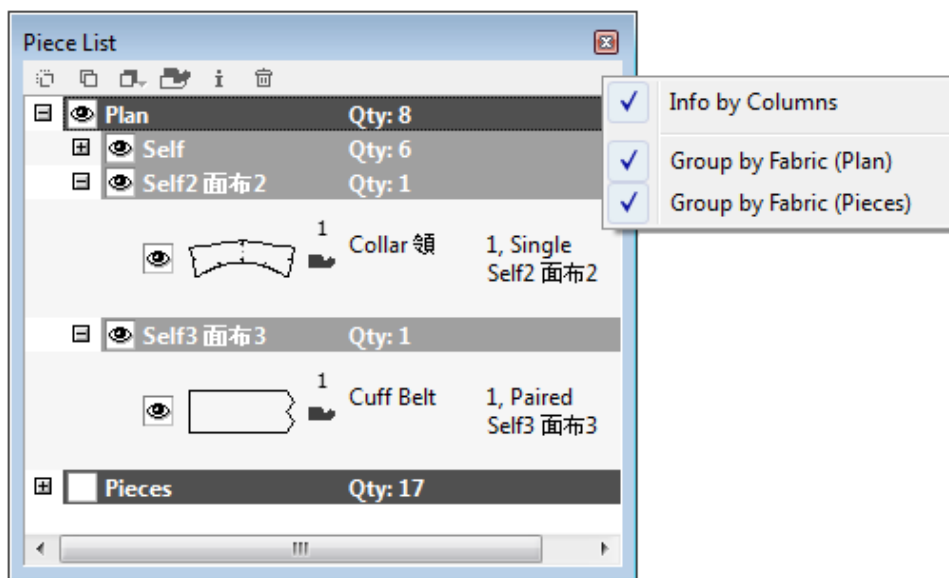
Uncheck to list the pieces group under All Fabrics.
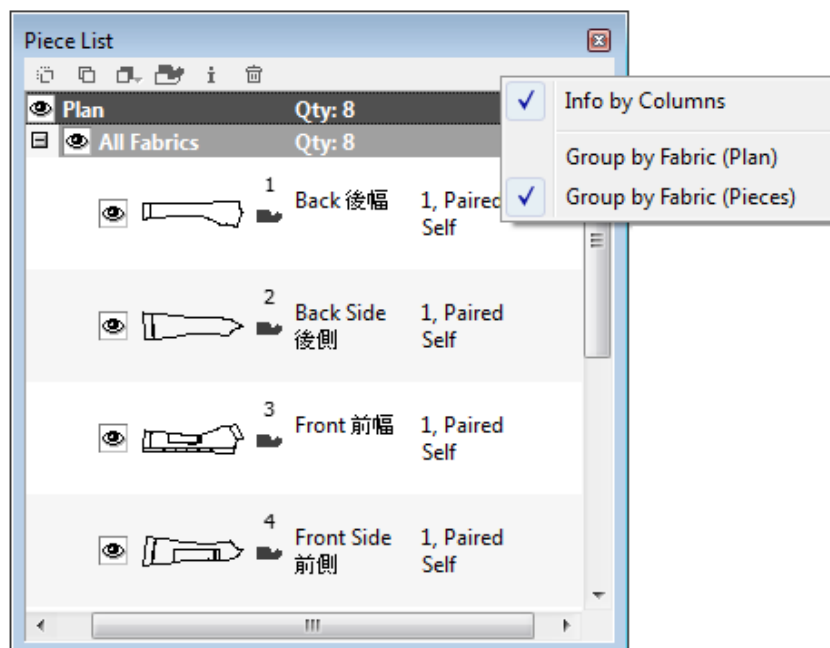
Piece List Style: Group by Fabric (Pieces)

Group by Fabric (Pieces) - pieces listed one by one in the *Piece list,* without grouping under All Fabrics.
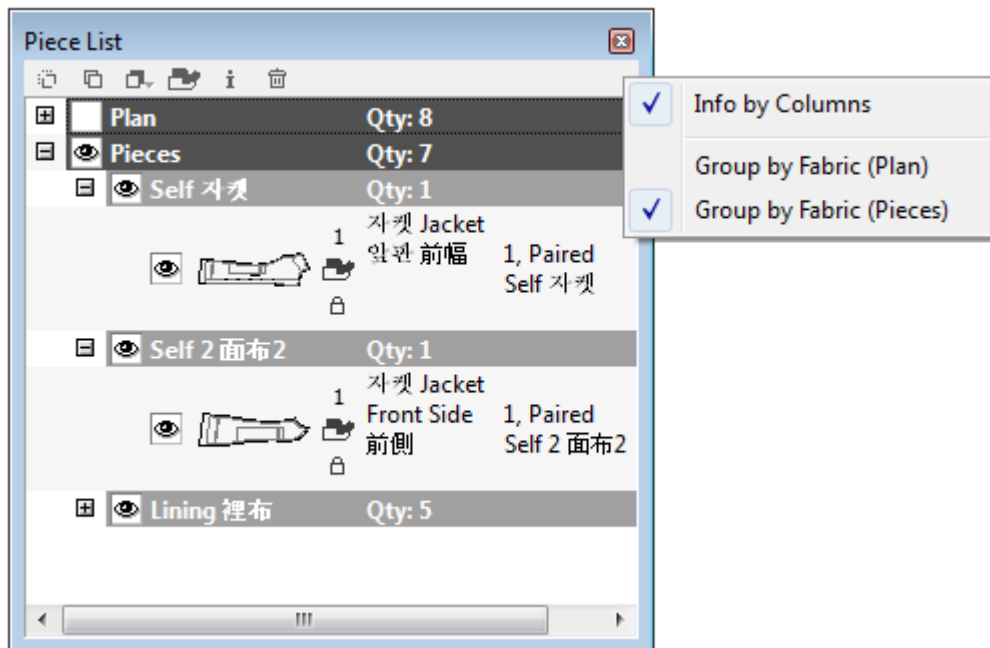
Uncheck to list the pieces group under All Fabrics.
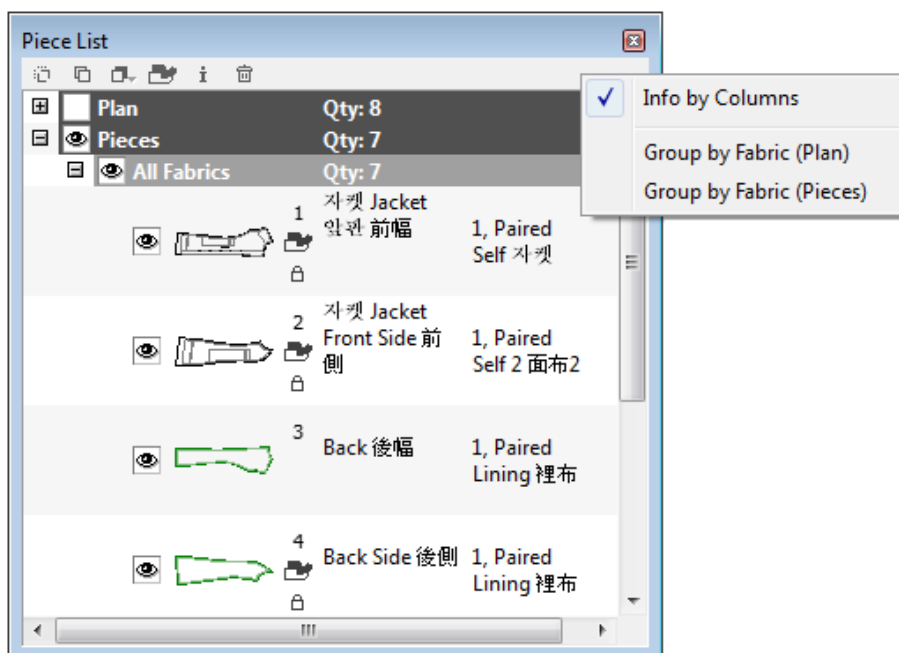
Allow to select both *Group by Fabric (Plan)* and *Group by Fabric (Pieces).*

Technical Sketches

Technical Sketches window builds the link between pattern file with sketch.

File formats support:

- BMP files (*.bmp)
- GIF files (*.gif)
- JPEG files (*.jpg, *.jpeg)
- MNG files (*.mng)
- PBM files (*.pbm)
- PGM files (*.pgm)
- PNG files (*.png)
- PPM files (*.ppm)
- TIFF files   (*tif, *.tiif)
- XBM files (*xbm)
- XPM files (*xpm)

To build the link between the sketch and pattern file:

1 Select Show Technical Sketches from Option menu or click right mouse button on Menu bar and choose Technical Sketches on Contextual menu to open the Technical Sketch window.

2 Click the button on top right corner of the window to open the
menu and select Link to Image.....
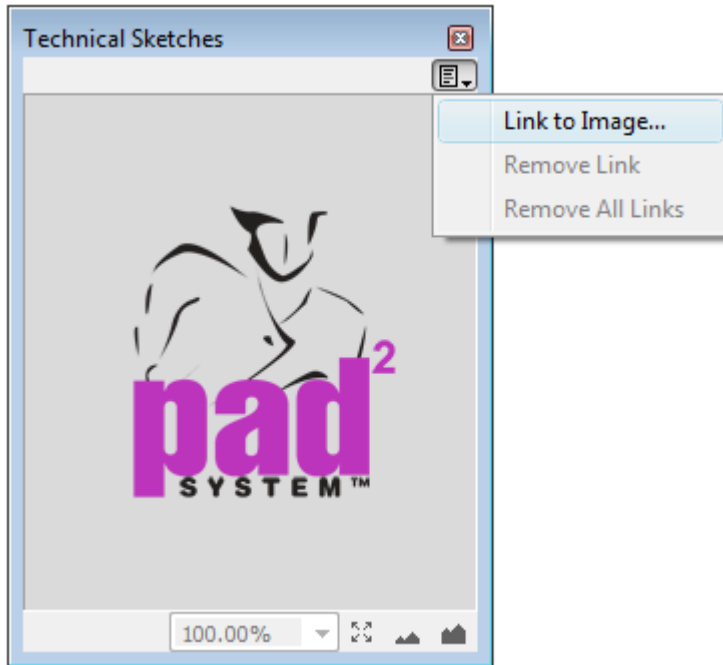
3 Follow the directory, select the file and click open. Sketch will resize
to fit in the window.

Three ways to adjust the sketch viewing size:
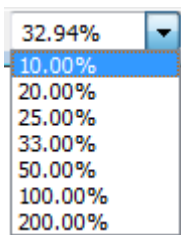
    Zoom (drop-down menu) - select as per pre-set percentage.

    Global view icon - view whole sketch fit into the window

    Zoom In / Out icons - reduce / enlarge the size by 100%
as default.

Remove link from the pattern file

Click the button at the top-right corner and select the *Remove Link to* remove the current sketch file or use the *Remove All Links* to remove all links saved in the pattern file.

Navigate through linked sketch files

Click the button at the top-right corner and a list of linked files will shown at bottom of drop-down menu.   You can view each linked file one by one.

Missing Files

If you change pattern file name or move without saving those linked files to the pattern file, it may result in file missing and dialogue box will pop-up and request for locating the path of those missing file as below:

Technical Sketch - File Not Found

⚠ Cannot link C:/Users/May/Desktop/Demo Files/Jacket.jpg. Do you want to replace it?

[Yes] [Ignore] [No]
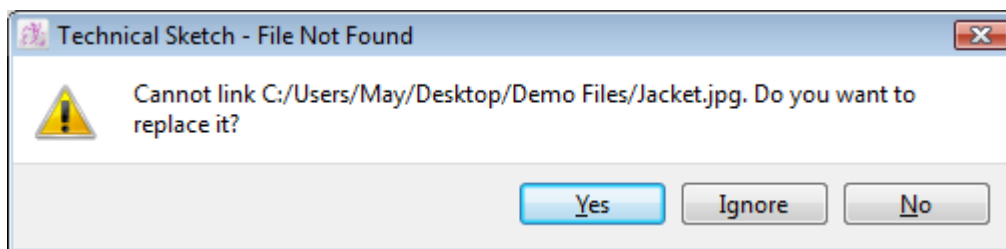
Yes – To replace the file by selecting the file from directory and click Open. If missing more than one file, system will scan and locate all missing files under the same folder / path of previous selected one. You may be required to provide exact location of each missing files if this search fails.

No – To remove the link with respective missing file

Ignore - to retain the file with missing link

Default Hot Key Shortcuts

You can use Hot Keys to increase working speed and efficiency.

It preconfigured Hot Key to enable you carry out tasks in more convenient way.

Hot Key list as follows:

Menu	Windows / Linux	Macintosh
File: New	Ctrl+N	Command+N
File: Open	Ctrl+O	Command+O
File: Close	Ctrl+W	Command+W
File: Save	Ctrl+S	Command+S
File: Save as	Ctrl+Shift+S	Command+Shift+S
File: Print	Ctrl+P	Command+P
File: Plot	Ctrl+T	Command+T
File: Export	Ctrl+H	Command+H
File: Quit	Ctrl+Q	Command+Q
Edit: Undo	Ctrl+Z	Command+Z
Edit: Redo	Ctrl+Y	Command+Y
Edit: Cut	Ctrl+X	Command+X
Edit: Copy	Ctrl+C	Command+C
Edit: Paste	Ctrl+V	Command+V
Edit: Replace	Ctrl+=	Command+=
Edit: Select All	Ctrl+A	Command+A
Options: Snap to Grid	Ctrl+R	Command+R
View: Plan View	Ctrl+1	Command+1
View: Pieces View	Ctrl+2	Command+2
View: Grade View	Ctrl+3	Command+3
View: Show Checked	Ctrl+4	Command+4
View: Clone View	Ctrl+5	Command+5

| Menu	Windows / Linux	Macintosh
View: Frame View	Ctrl+6	Command+6
View: Work on Sewing Line	Ctrl+7	Command+7
View: Zoom – Global View	Ctrl+0	Command+0
View: Zoom – On Selection	Ctrl+9	Command+9
View: Zoom – Zoom In	Ctrl + +	Command + +
View: Zoom – Zoom Out	Ctrl + -	Command + -
Treatment: Set Piece	Ctrl+E	Command+E
Treatment: Piece Info	Ctrl+D	Command+D
Treatment: Item Info	Ctrl+I	Command+I
Treatment: Group	Ctrl+G	Command+G
Treatment: Ungroup	Ctrl+U	Command+U
Treatment: Align Shapes	Ctrl+K	Command+K
Treatment: Pattern Assistant	Ctrl+Shift+P	Command+Shift+P
Grade: Library – Open	Ctrl+L	Command+L
Grade: Grading Info	Ctrl+J	Command+J

Tool	Windows / Linux	Macintosh
Selection: Ruler	R	R
Drawing: Rectangle	T	T
Drawing: Segment	S	S
Drawing: Curve	C	C
Drawing: Parallel Line	Y	Y
Point: Point	Q	Q
Point: Add Point to Segment	D	D
Segment: Walking Piece	W	W
Segment: Segment Length	E	E
Characteristics: Seam Allowance	A	A

Note: You can customize your shortcuts in Preferences menu and Hot Key.

Floating Windows

Floating window (Piece List, Grading Arrows, Grading Info…

You can group two or more windows into one by simply dragging the head of floating window into others; thus, allows you to work on different elements under one window.   You can click the tab to navigate each element one by one.
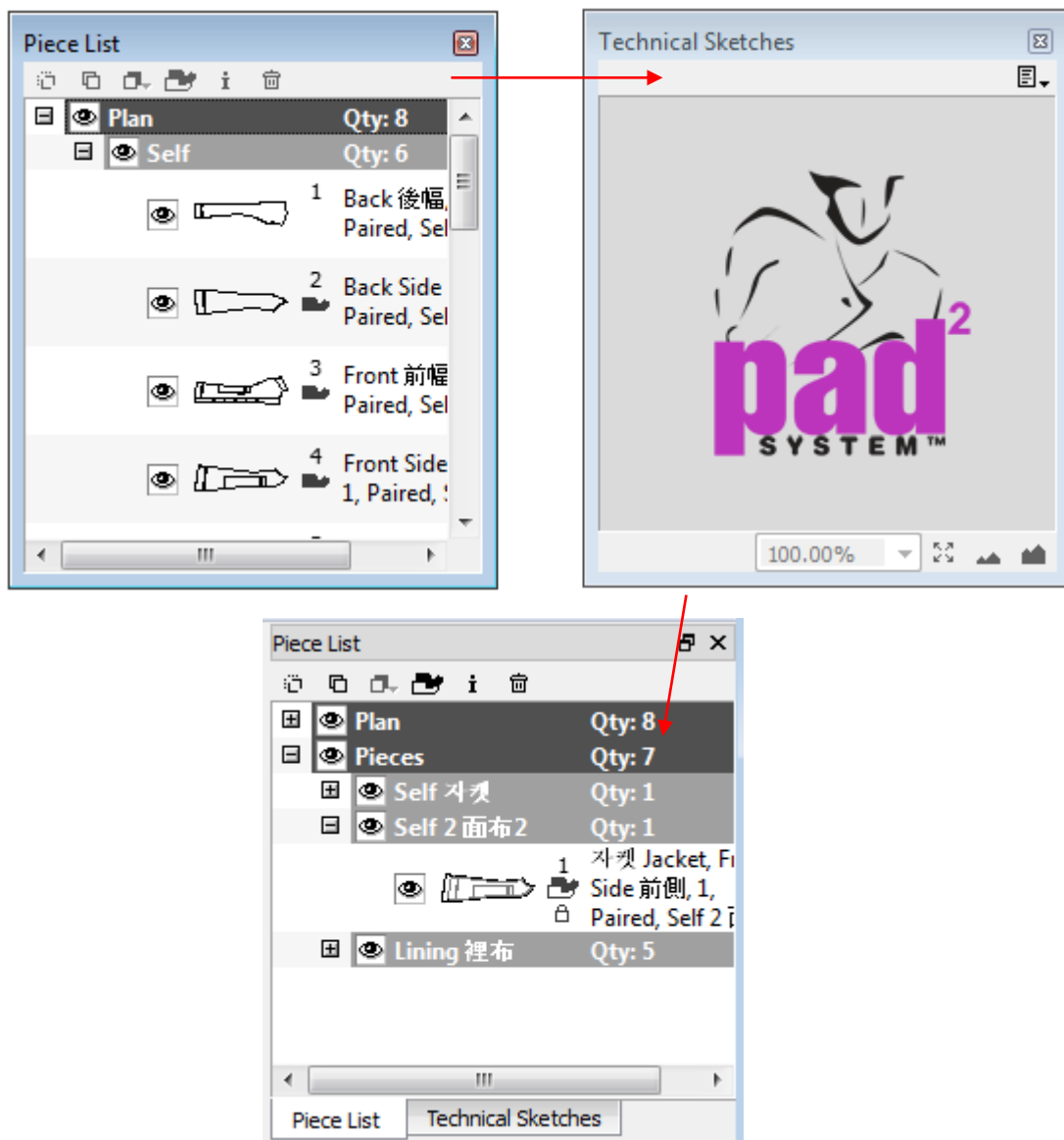
Each window shows one element only. You can select the tab / header and drag outside the window to separate from the rest.

Intelligent Dialog Box

Dialog box allows to perform calculation function by using + (add), - (minus), x (times), / (divide) to calculate the measurement
Any dialog box with intelligent calculation. You can put +, -, * and / to calculate your new measurement.

| 0.25+0.125 | ➜ | 0.3750 |

You can change to present decimal point number in fraction.

| 3/8 |

You can include the Inline unit in the measurement by choosing the option in file menu Preference→General→ Inline unit.
Inch = 30 in
Centimeter = 30 cm

You can also change the measurement unit to inch or centimeter by simply putting "in" (for inch) or "cm" (for centimeter) at the end of the dialog box. It will convert the new measurement as per unit indicated automatically.
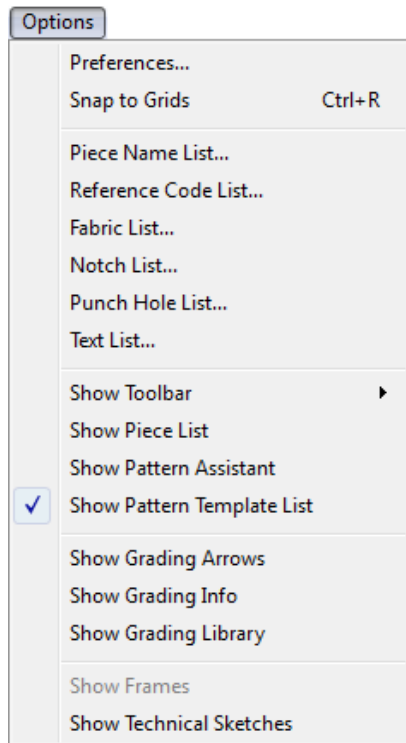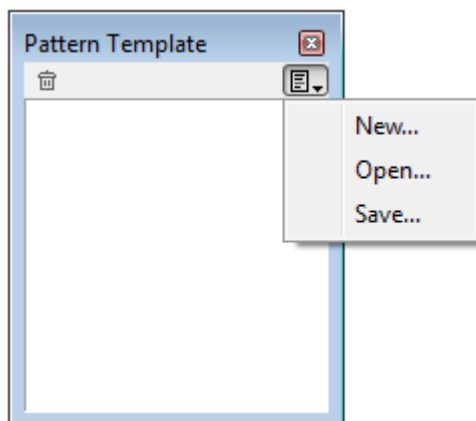
Pattern Template

It allows saving the most used Pattern Pieces into a list.
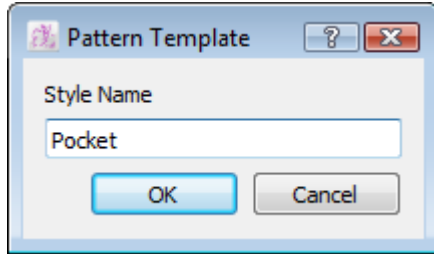
To do so:

1 Open the file with some pieces need to save to Pattern Template

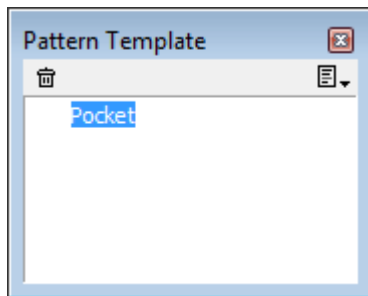**2** Go to Option menu and select Show Pattern Template List.

3 The Pattern Template displays on the floating window. And press "New" from the sub-menu.
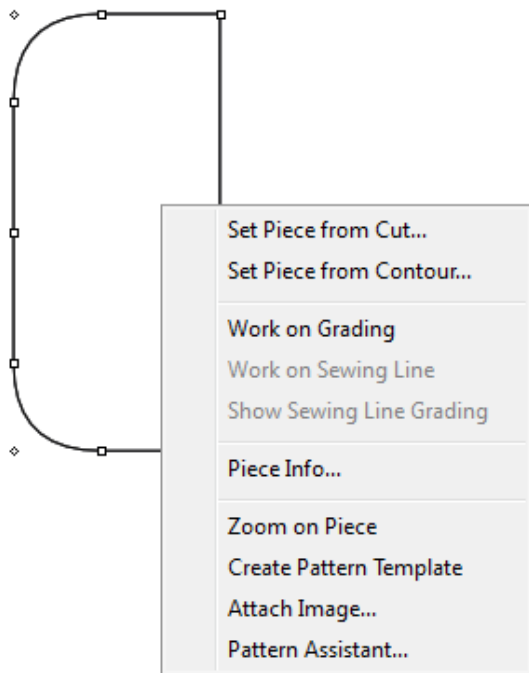
4 A dialog box appears and please input the name for Pattern Template List.

5 The item of the Pattern Template List displays on the floating window.

6 To activate the item (Pattern Template List) as the above screen shot. And activate the piece, click right button on mouse and choose the item **Create Template.**

7 Then it saves this piece to the Pattern Template List as the following screen shot.
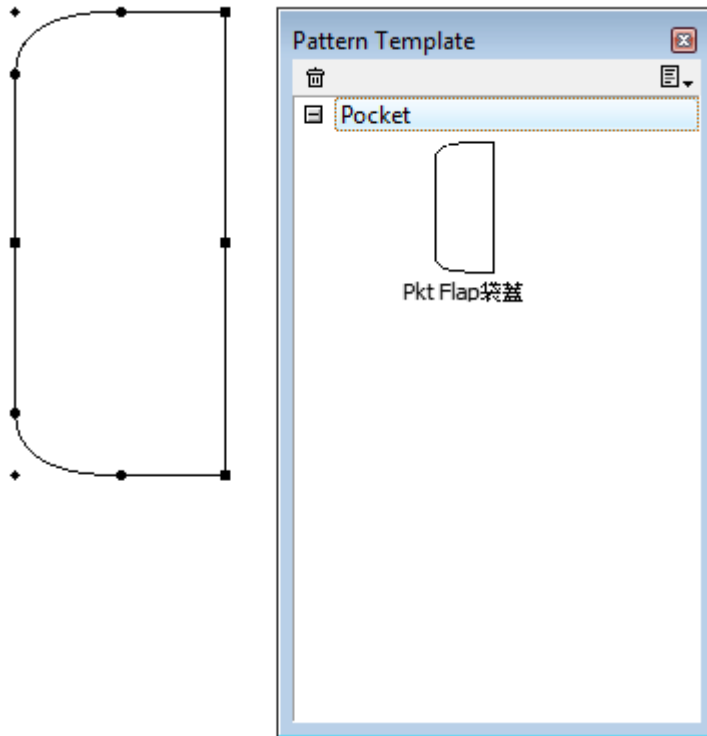
8 If you would like to save another list for keeping body shape. You can press "New" to create a new **Pattern Template List** and name to "Body.

9 The Pattern Template will save its automatically to the location as follows.
C:\Users\May\AppData\Local\PAD System 6\Pattern Design\template
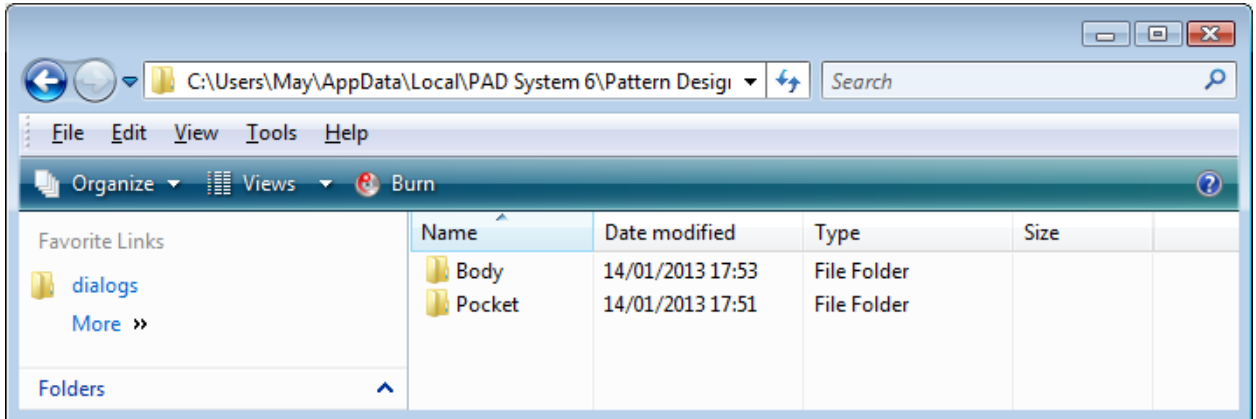
When you start Pattern Design, it will load the Pattern Template List automatically.

To Save and Open Pattern Template List to another PC

How to do:

1 Press "Save" item from the sub-menu.

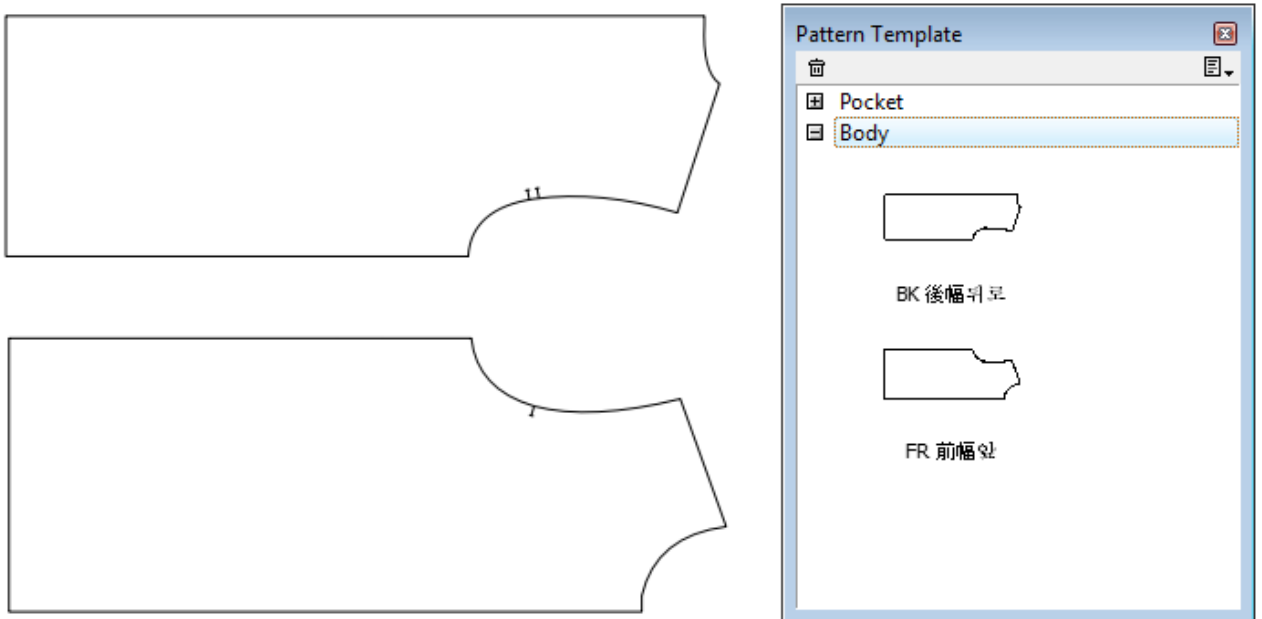**2** A dialog box appears and enter the name for the Pattern Template List and choose the directory to save the file(.temp).

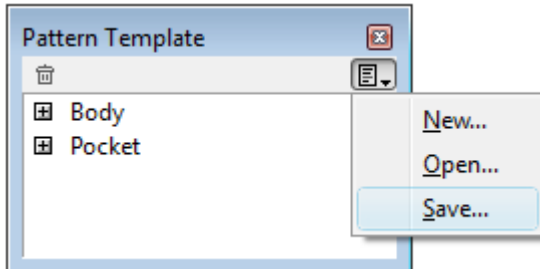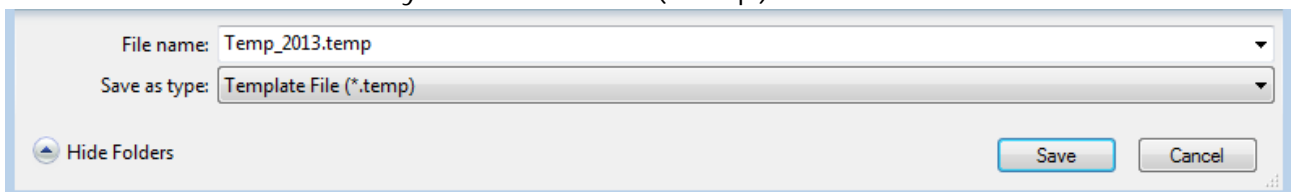**3** To open the Pattern Template List to another pc. Please pass this temp file .temp to the station need to open. Start Pattern Design and open or create a new file. Click on the item **Open** from the sub-menu and choose the file to be opened.
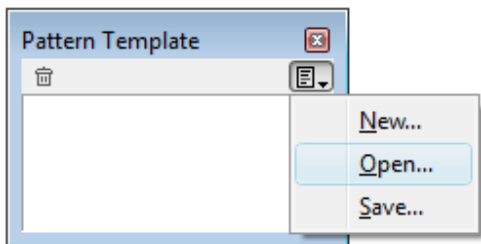
4 A window appears to show all of Pattern Template List of the selected file.
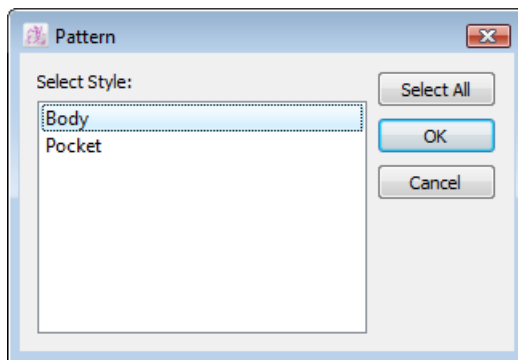
5 You may choose one of them or Select All.

6 To get a piece from the list. Activate the item and drag it to the working area. The selected piece will copy on the current file.

Note: For the pieces setting with Frames, it will keep them to the pieces and save to Pattern Template List.

Seam Allowance Library

The Seam Allowance Library allows you to create a list including the frequent used seam values.   It also allows you to manage a Master Seam List and share it with other Pattern Makers.

Show Seam Allowance Library from Options menu that you can use the Seam Allowance Library window to add seam allowance on a segment(s) or even several pieces at the time more easily in doing so.
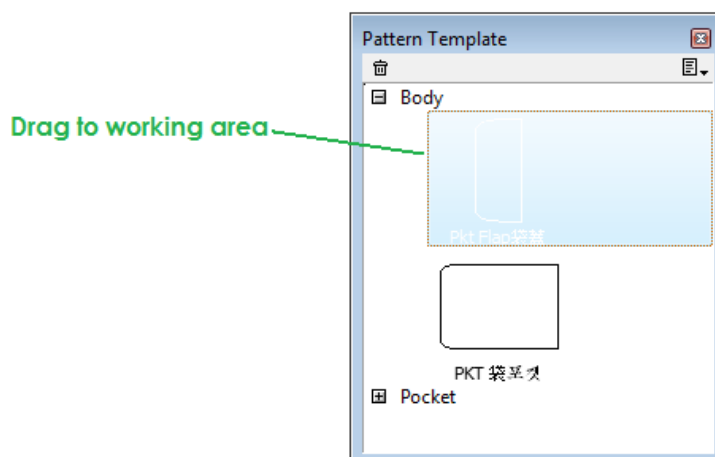A tick (□) will show if you choose to Show Seam Allowance Library.
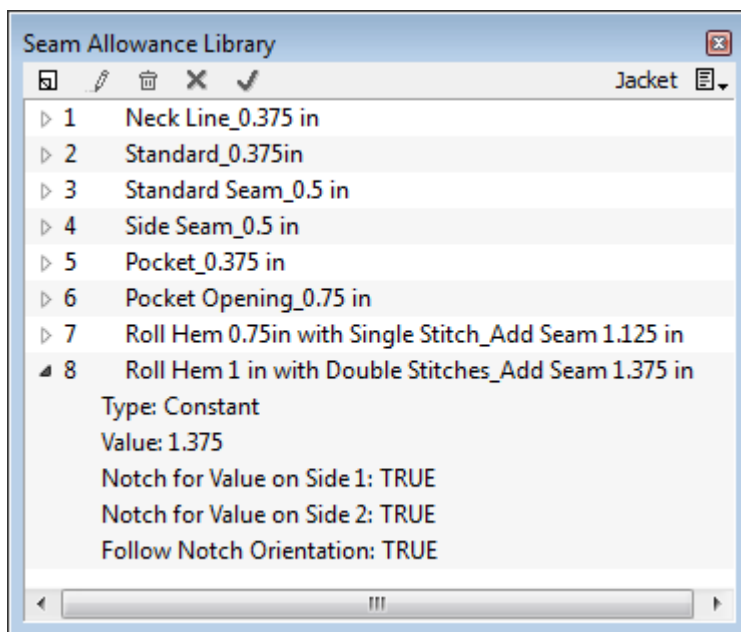
A Seam Allowance Library allows you to keep the seam value in a database. You can create as many Seam Allowance Libraries as you need. Each library may contain up to 999 seam evolutions available on screen through the Seam Allowance Library window. The Seam Allowance Library window lists the number and name (if any) of each seam evolution.

Next to each element of the Seam Allowance Library, there is an arrow that opens a drop- down menu showing the Seams Characteristics of the element. It contains the numbers and names of the Seam Evolutions. Only one Seam Allowance Library can be open at a time.

Seam Allowance Library Drop-Down Menu
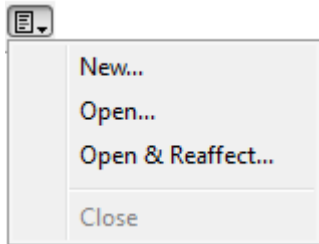
Library commands are available in the drop-down menu, to the upper right of the Seam Allowance Library window.

The Library drop-down menu offers the following options:
New...: It creates a new Seam Allowance Library.
Open...: It opens a Seam Allowance Library that already exists.
Open & Reaffect...: It replaces the current Seam evolutions to the pattern pieces with those from a chosen Library.
Close: It closes the open Seam Allowance Library.

To create a New Seam Allowance Library:
1 Select the New… item in the sub-menu from the window of the Seam Allowance Library. The Save new library as dialog box opens.

2 Enter the library name in the File name text field.

3 Press the Save button once you have located the proper folder. The library window appears; enter the name for the Seam Allowance Library file **(.seam).**To return to the previous window, press on the Cancel button.

Note: All seam evolutions adding to Seam Allowance Library. It saves automatic to the Seam Allowance Library.

Seam Allowance Library Buttons

⊡ ✎ 🗑 ✗ ✓

⊡ **New :** It adds a new seam evolution to the Seam Allowance Library.

✎ **Edit:** It allows modifying information about the seam evolution that is selected. Or get the dialog box on the selected item by mouse double clicks.

🗑 **Delete:** It removes the selected seam evolution.

✗ **Cancel:** It removes the link between the selected seam evolution and the segment(s). Once the linking is removed, the selected item turn to black color.

✓ **Apply:** It applies the updated Seam Evolution to the segment(s).
If there are more than one item in RED color in Seam Library and it need to update the value to the pieces. It can press **Apply** to update one by one.

Just select the item in REB color and press Apply to validate.
A dialog box appears:
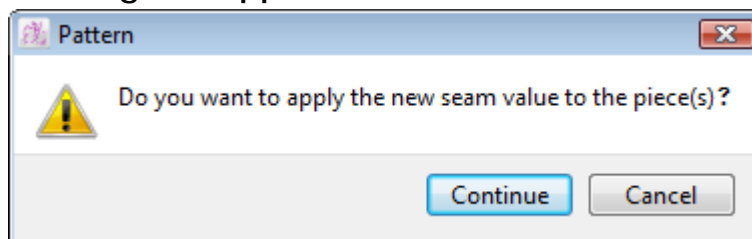
Click **Continue** button to confirm or click **Cancel** to close the dialog.

To open an existing Seam Allowance Library (.seam) file and apply Seam evolutions to the piece (s):

1 Select the Open… item in the library sub-menu from the window of the Seam Allowance Library. A dialog box opens.

2 Select the library you wish to open and click the Open button.
The Seam Allowance Library appears:

Seam Allowance Library	
🔲 ✏ 🗑 ✗ ✓	Jacket ▤▾
▷ 1	Neck Line_0.375 in
▷ 2	Standard_0.375in
▷ 3	Standard Seam_0.5 in
▷ 4	Side Seam_0.5 in
▷ 5	Pocket_0.375 in
▷ 6	Pocket Opening_0.75 in
▷ 7	Roll Hem 0.75in with Single Stitch_Add Seam 1.125 in
▷ 8	Roll Hem 1 in with Double Stitches_Add Seam 1.375 in
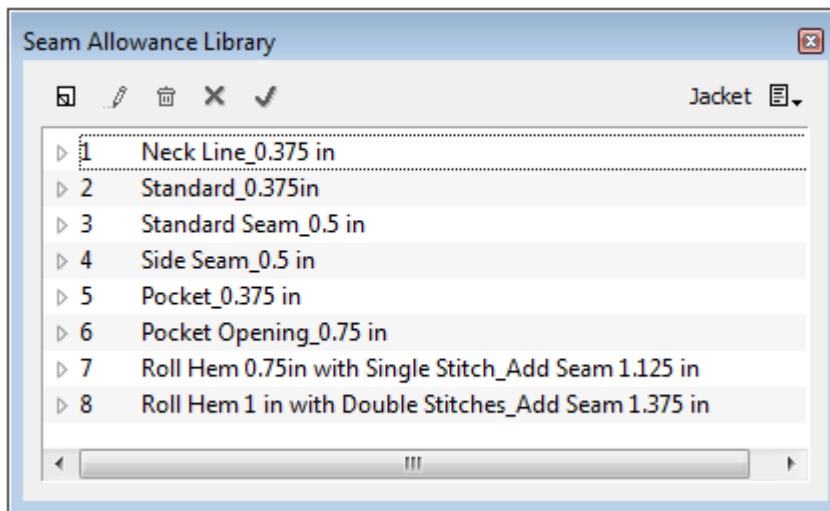
3 Select the segment (s) that you want to add seam allowance on.
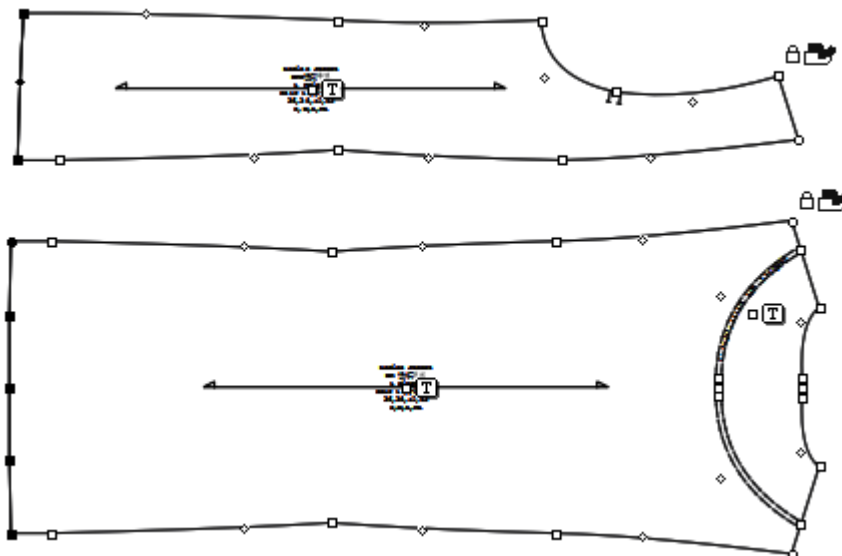
4 Click on the seam evolution in the Seam Allowance Library window.

Seam Allowance Library			☒
		Jacket	
▷ 1	Neck Line_0.375 in		
▷ 2	Standard_0.375in		
▷ 3	Standard Seam_0.5 in		
▷ 4	Side Seam_0.5 in		
▷ 5	Pocket_0.375 in		
▷ 6	Pocket Opening_0.75 in		
▷ 7	Roll Hem 0.75in with Single Stitch_Add Seam 1.125 in		
▷ 8	**Roll Hem 1 in with Double Stitches_Add Seam 1.375 in**		
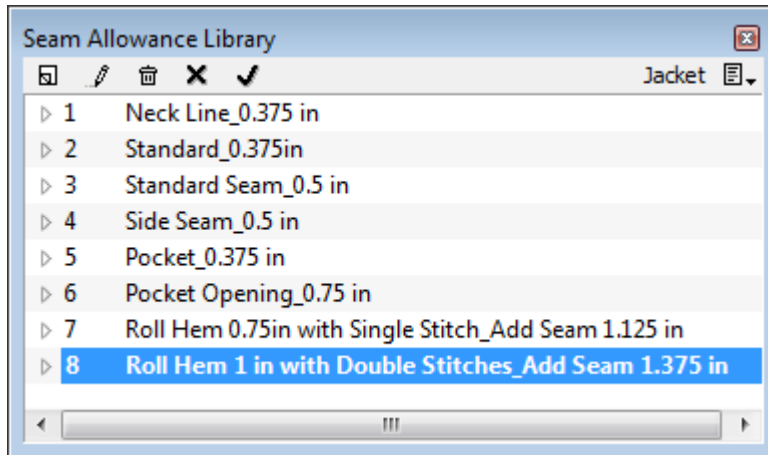
The selected segments add the seam value by the selected item.

Seam Allowance Library			☒
		Jacket	
▷ 1	Neck Line_0.375 in		
▷ 2	Standard_0.375in		
▷ 3	Standard Seam_0.5 in		
▷ 4	Side Seam_0.5 in		
▷ 5	Pocket_0.375 in		
▷ 6	Pocket Opening_0.75 in		
▷ 7	Roll Hem 0.75in with Single Stitch_Add Seam 1.125 in		
▷ 8	**Roll Hem 1 in with Double Stitches_Add Seam 1.375 in**		
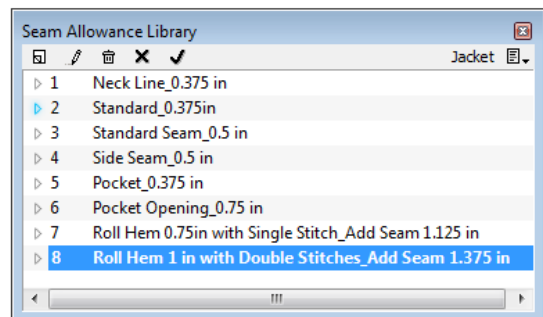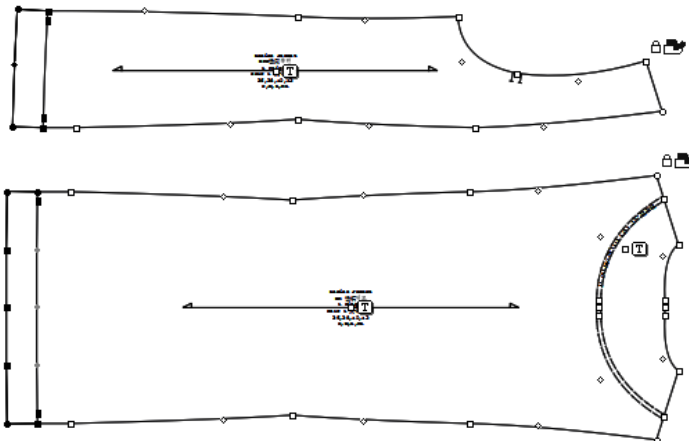
To replace all seam evolutions from a chosen Library:

1 Select Open and Reaffect... in the library sub-menu from the window of the Seam Allowance Library.

2 An Open dialog box appears. Select the updated library that will replace the current seam evolutions to the piece(s).
A dialog box appears:
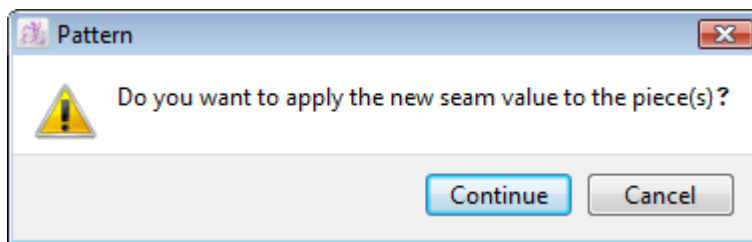
Click **Continue** button to confirm or click **Cancel** to close the dialog.

The seam item of the library is applied according to the numbering process and the seam value on the open pattern.

Attach Image on a Pattern Piece

Attach Image allows you to add it on the pattern pieces. A rectangle is surrounded the image, two regular points show on top right corner and left bottom corner that let you to manage the image. Image file treats as an internal shape; it supports all of operation as working on the internal section.

File formats support as following:

- BMP files (*.bmp)
- GIF files (*.gif)
- JPEG files (*.jpg, *.jpeg)
- MNG files (*.mng)
- PBM files (*.pbm)
- PGM files (*.pgm)
- PNG files (*.png)
- PPM files (*.ppm)
- TIFF files (*tif, *.tiif)
- XBM files (*xbm)
- XPM files (*xpm)

To attach an Image on the piece by using the Contextual menu:

1 Right-click the piece (Windows / Linux) or click the piece while holding
down the **Control** key (Macintosh).

2 Select the Attach Image… from the Contextual menu.
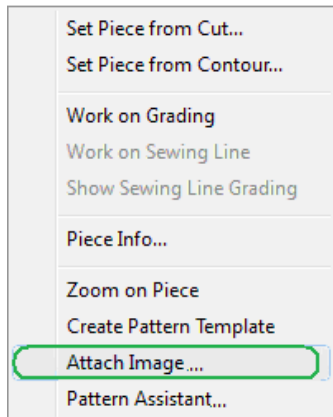
3 Follow the directory, select the file and click open. Image will resize to fit
in the Pattern simulation area.
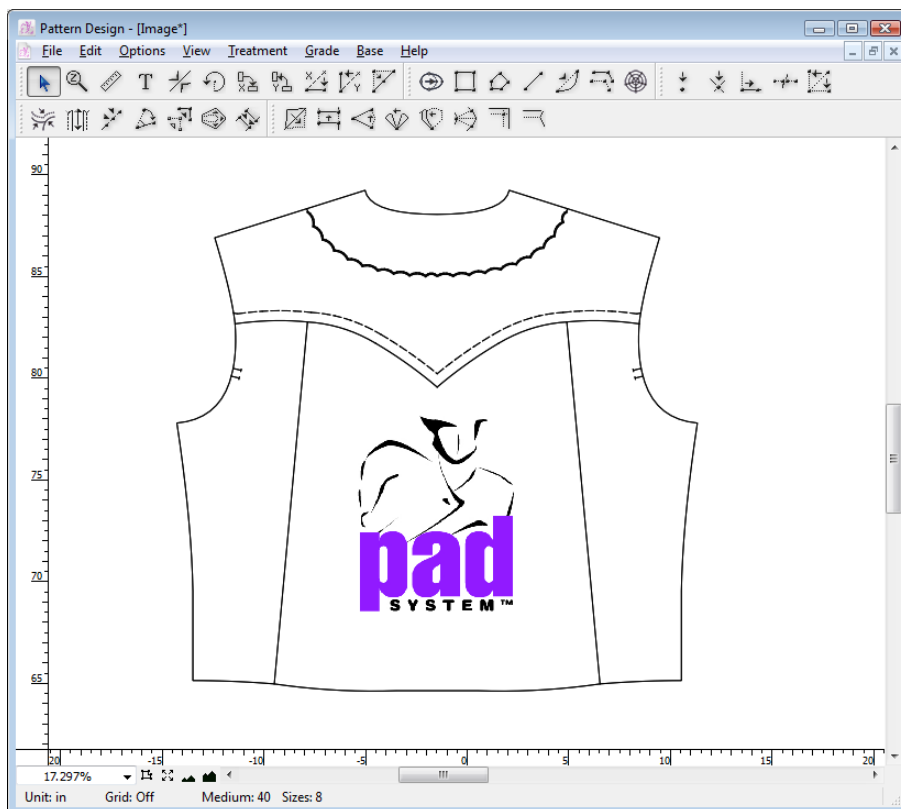
Reposition the Image File

To activate the Image and freehand to move it by using Pointer tool to the new position.
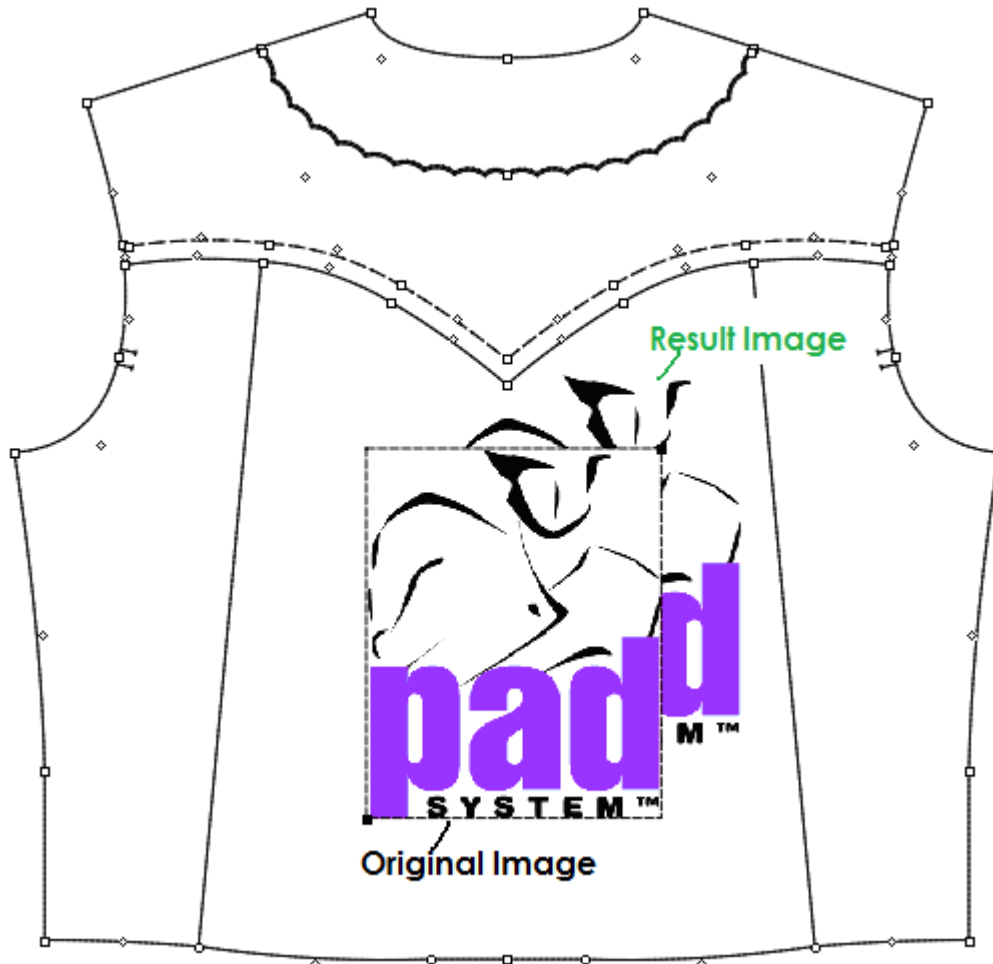
Or, to move the selected Image using the keyboard arrows:

1 Select the *Pointer* tool.

2 Select the Image(s) you wish to move.

3 Use the directional arrows (Up, Down, Left, Right) to move the image(s) to the desired location.

Rotate the Image File

To rotate the Image freehand or to a precise angle X, Y or every 15°
(Define the angle by the setting "Round Angle" in the Preference menu.)

To rotate selected images by freehand:

1 Select the image(s) you wish to rotate.

2 Select the *Rotation* tool.

3 Click the fixed point (pivot point).

4 Click the second reference point and hold down the left mouse button
(Windows/Linux) or the mouse button (Macintosh). A reference dash
guideline going from the first point to the second point appears. Those
two lines represent an angle.

Result Image

Original Image

5 Pivot the guideline to the desired rotation angle.

Hold down the **Shift** key (Windows and Macintosh) to constrain the rotation angle (X, Y or every 15°).

Windows keys   Shift
[⇧ Shift]
[Ctrl] [⊞] [Alt] [   ]

Macintosh keys   Shift
[⇧ Shift]
[Ctrl] [⌥] [⌘ ✕] [   ]

Linux keys   Shift
[⇧ Shift]
[Ctrl] [⊞] [Alt] [   ]
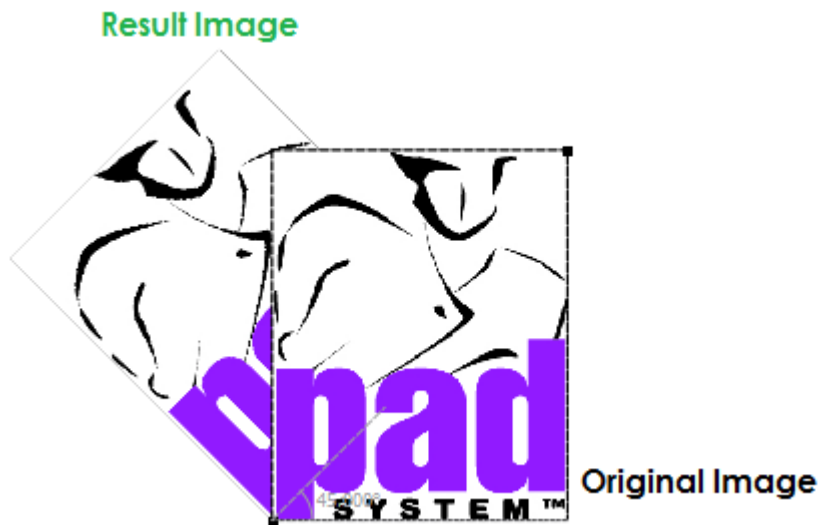
When you hold and move the reference guideline, you can view the rotation angle at the fixed point (pivot point) or in the info bar.

Unit: in	Grid: Off	Medium: 40	Sizes: 8	X: 11.7053	Y: 73.5092	Angle: 45	Angle X: 45	Open.: 5.57007

To rotate the image to a precise angle using numerical values:

1 Activate the image(s) you wish to rotate.

2 Select the *Rotation* tool.

3 Hold down the **Alt** key (Windows), the **Option** key (Macintosh), the **Alt + Windows** keys (Linux).

4 Click the pivot point. The *Rotate* dialog box appears:

> **Rotate**   [✕]
>
> Angle: [0.000°]   [OK]
>   [Cancel]

5 Enter the desired value of rotation.

**6** Click the *OK* button to execute the function.

Resize the Image by Freehand

1 Select the Pointer tool.

2 Select the Image(s) you wish to resize.

3 Click one of the points at the corner and drag the mouse to resize the image.

Click on this point and
drag to resize the image

Able to Scale the Image

To scale an image, activate the desired image and click the *Scale...* item in the *Treatment* menu. The *Scale* dialog box appears. To scale an image, select the appropriate radio button and enter the desired scale values.
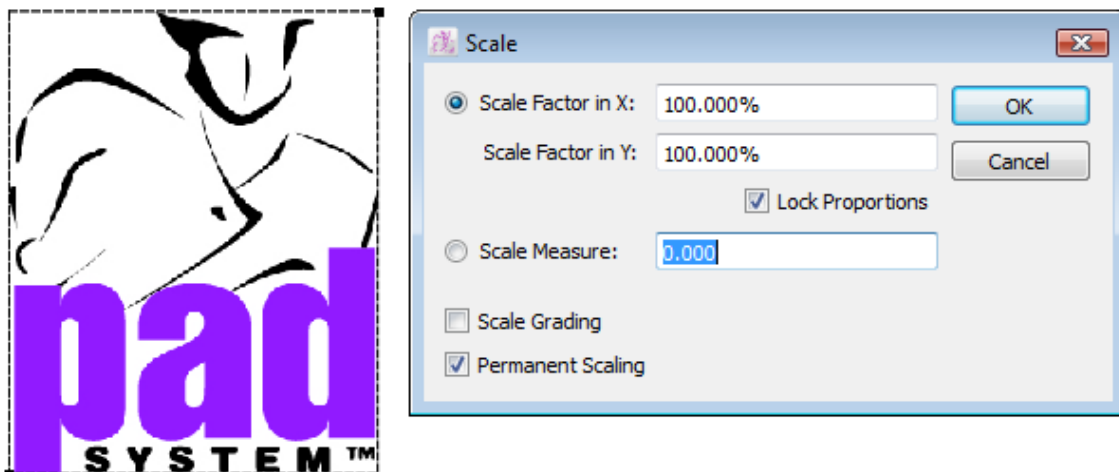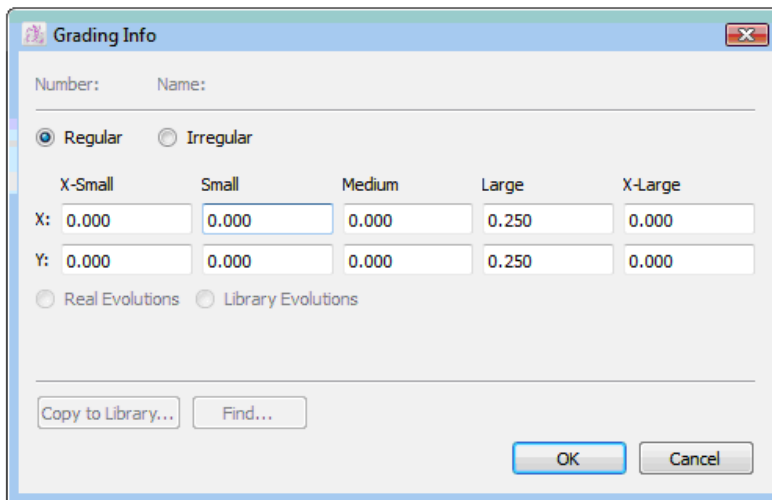
Add Grading Value to the Image

It allows adding grading value to the regular point located at 2 corners.

1 Select the point(s) required on the image.

2 Select the *Grading Info...* item in the *Grade* menu or press Ctrl+J.
The *Grading Info* dialog box appears.

3 Enter the X and Y coordinate values of the point(s) in the dialog box.

4 Press on the *OK* button to validate the operation.

Show the Image on the Pattern

The *Show* menu and *Image* item in the *View* menu allows you to view or hide the Image(S) in the working area:

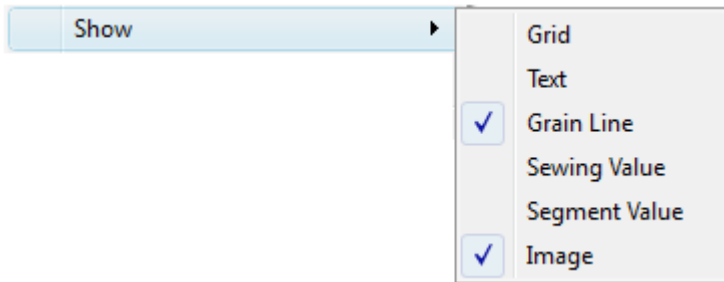**Image:** By checking *Image*, you can display all the Images to the pieces.

| Show	▸	Grid
		Text
	✓	Grain Line
		Sewing Value
		Segment Value
	✓	Image

Image Show

Image Hide

Saving Image Files

It saves the Image file automatic when you save the Style file. The extension of the Image file is .pmg. Please be sure to put the Style file(.sty) and the Image file (.pmg) into the same directory.

Image.pmg

Missing Image Files

If you change the name of the Style file (.sty) or the Image file (.pmg), it may result in file missing and dialogue box will pop-up as below:
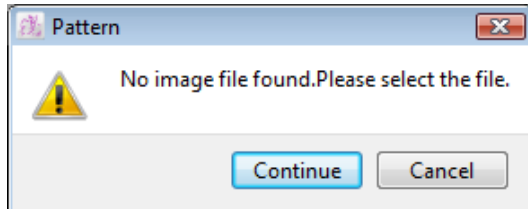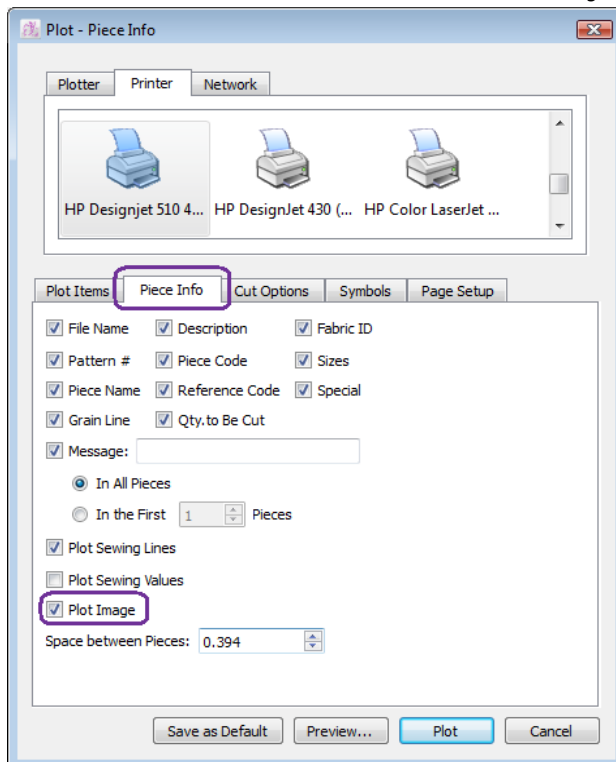
Continue – Choose the directory of the Image file

Cancel – Close the dialogue box. If the image file is not found, it will show a rectangle instead.

Plot Image on the Piece from Wide Printer

The item in Plot and Piece Info allows you to plot the image on the piece.

Note: It will plot out a rectangle in DASH LINE if the plotter does not support Image plotting.

Convert Style File with Image to Another File Format

When exporting Style file to the file format as follows:

DXF-AAMA

DXF-ASTM

Illustrator(.txt)

Plot File(.plt)

Images on the piece will become a rectangle (Regular Line) if converting to DXF, Illustrator(.txt) and Plot file(.plt).
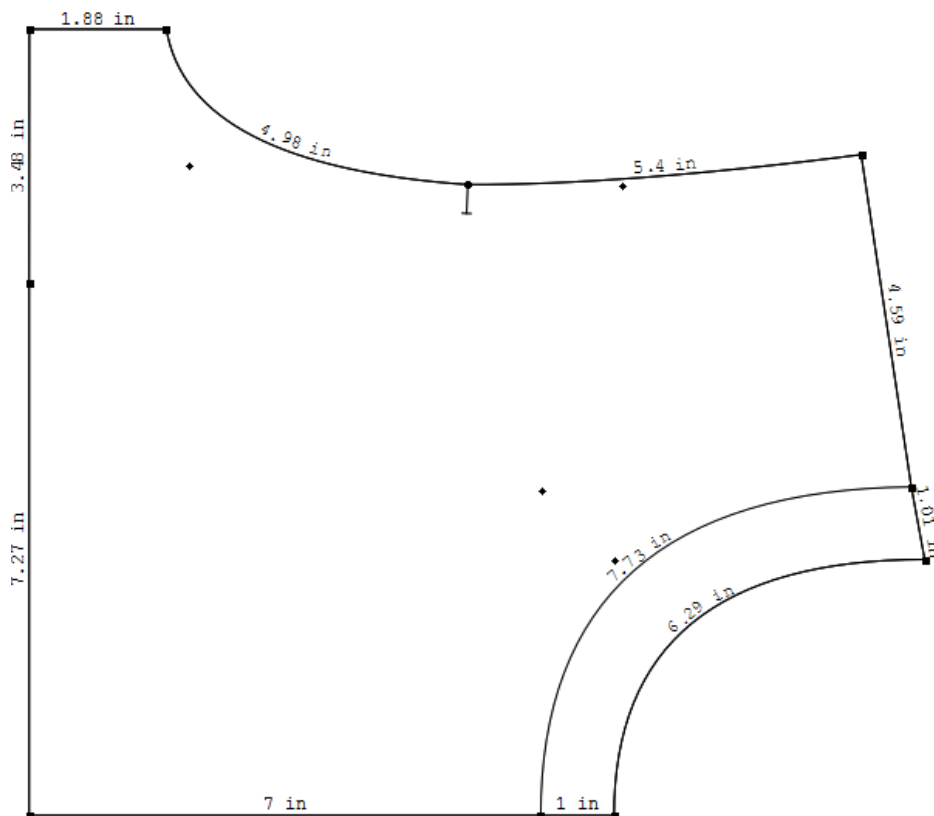
Display Measurement on Segment

It can show the measurement on Whole Pattern Piece or the selected Segment. It allows showing value for the piece with Seam Allowance. But this feature does not support on Graded Pieces.

Showing Measurement on Whole Pattern Piece

By checking Segment Value from View menu and Show
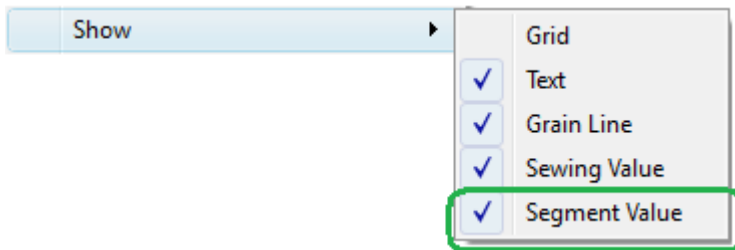
The whole piece shows the value calculated by each segment. It calculates along the segment between 2 Regular Points. Curve point and Mark point are included.
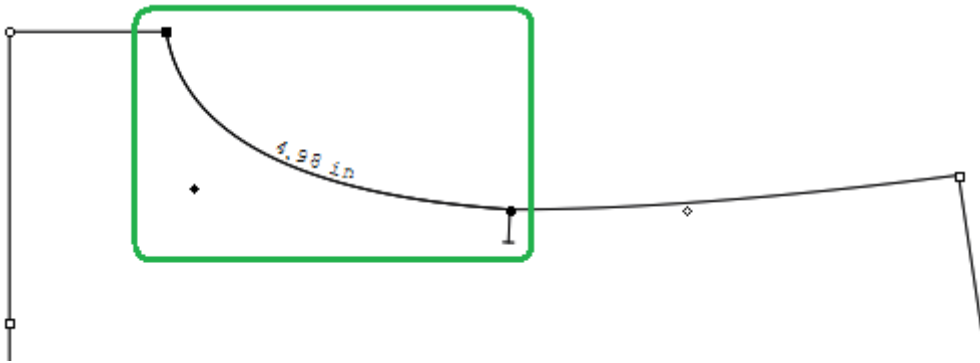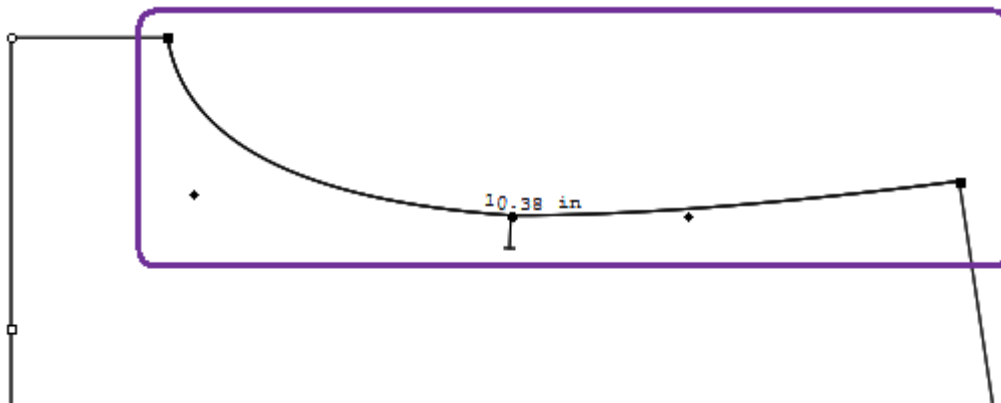
Showing Measurement on the Selected Segment

To do so:

1 Select the desired segment(s)

2 Select the **Ruler** tool

Or, Press "**R**" key for the Hot Key of Ruler tool

3 Press "**R**" key again

4 The value displays on the selected segment as follows.

Sample 1: The value calculates for one segment.

Sample 2: The value is two segments combined.

5 The value keeps showing with the piece until remove it.

6 Support to show the value on Seam Allowance

## Remove Measurement on the Selected Segment

1 To remove the value, select the desired segment(s).

2 Select the **Ruler** tool.   Or, Press "**R**" key for the Hot Key of Ruler tool

3 Press "**R**" key again

Show Grid on Background

Show Grid to the Background. You can select the Unit of the Grid size under Options menu, Preferences… and Display tag page. The dimension of the Grid's Resolution is default to 1/1.

By checking **Grid** from **View** menu and **Show** to show Grid in background
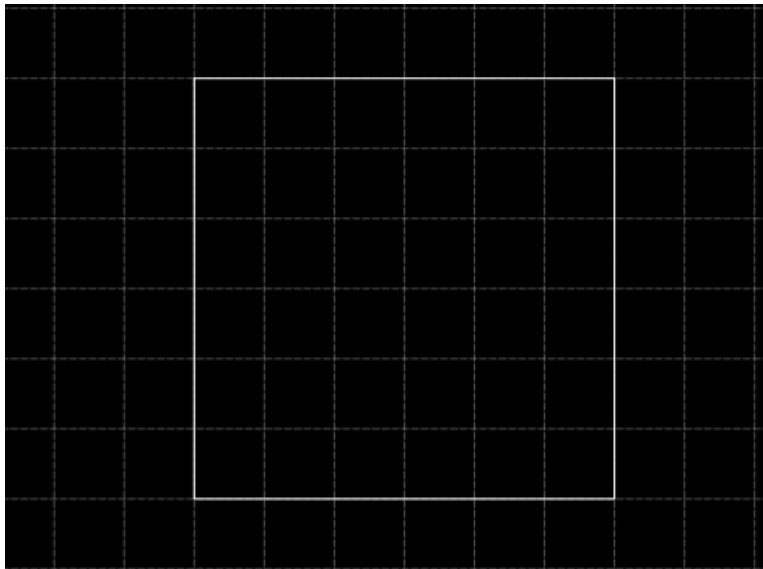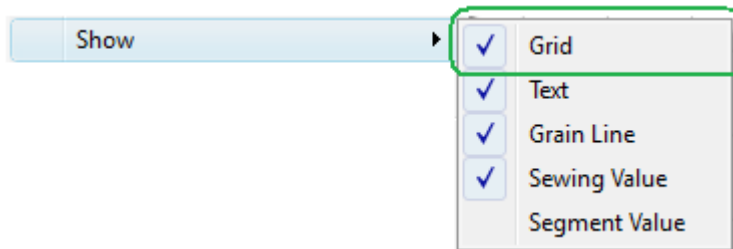
Uncheck View menu→ Show→ Grid

To check if the **Snap to Grids** is activated, it allows moving the pieces or elements on the working area using pre-defined grid steps. You can deactivate it at any time.
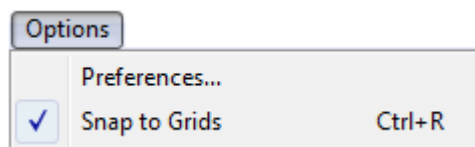
Chapter 2
The Menu Bar
● ● ● ● ● ● ●

File Menu

| File		
New...	Ctrl+N	
Open...	Ctrl+O	
Open Digitizer...		
Open Other...		
Close	Ctrl+W	
Save	Ctrl+S	
Save Changeset		
Save as...	Ctrl+Shift+S	
Revert to Saved		
Recent Files	▶	
Search...		
Summary Info...		
Page Setup...		
Print...	Ctrl+P	
Plot...	Ctrl+T	
Import...		
Export...	Ctrl+H	
Quit	Ctrl+Q	
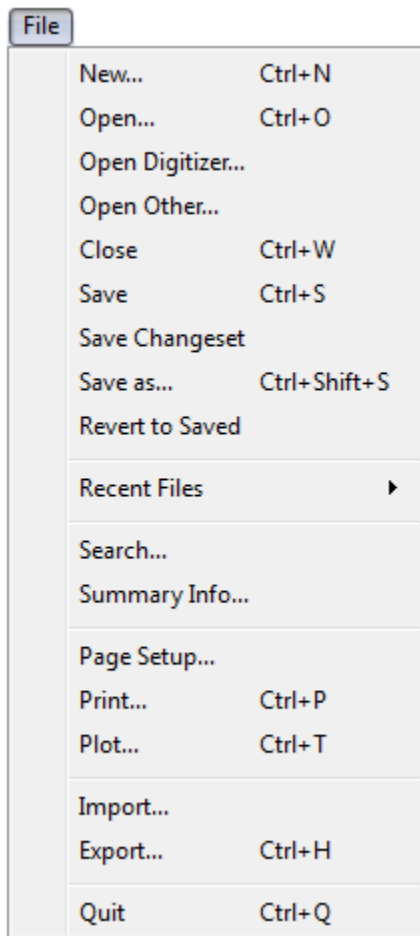
Before getting start, *you had to know how to use the File Menu.*

File Menu: New…

To create a new pattern document, a Base Algorithm window allows you to choose pre-set Algorithm (Skirt, Bodice, Pants or Sleeve) or New Style to open a blank for you to work on.

An Algorithm has already created the base block of Skirt, Bodice, Pants or Sleeve for you to work on directly.
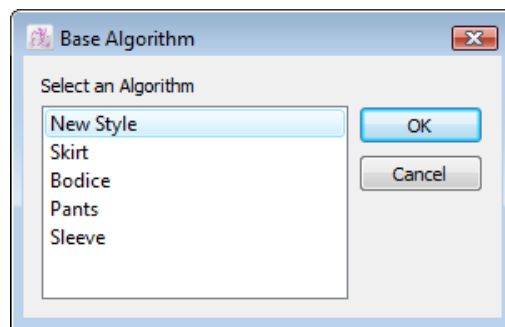
Skirt: A skirt base block allows you to create your own skirt style at ease

Bodice: A bodice base block enables you to create your own bodice style at ease

Pants: A pants base block enables you to create your own pants style at ease

Sleeve: A sleeve base block enables you to create your own sleeve style at ease

You can either open one of the algorithm or New Style for a blank one; click cancel button to go back previous step.

The file of Algorithms is in base format (*.bas). It can be modified by using the *Base* menu but you need to save yours in style format (*.sty). Please go to Save and the Save As… to learn details.

File Menu: Open…

To open file either in Style format (.sty) or Base format (.bas) that already created.

How to do:

1 Select *Open…* from the *File* menu and list the entire file (in .sty / .bas format) available in the folder.
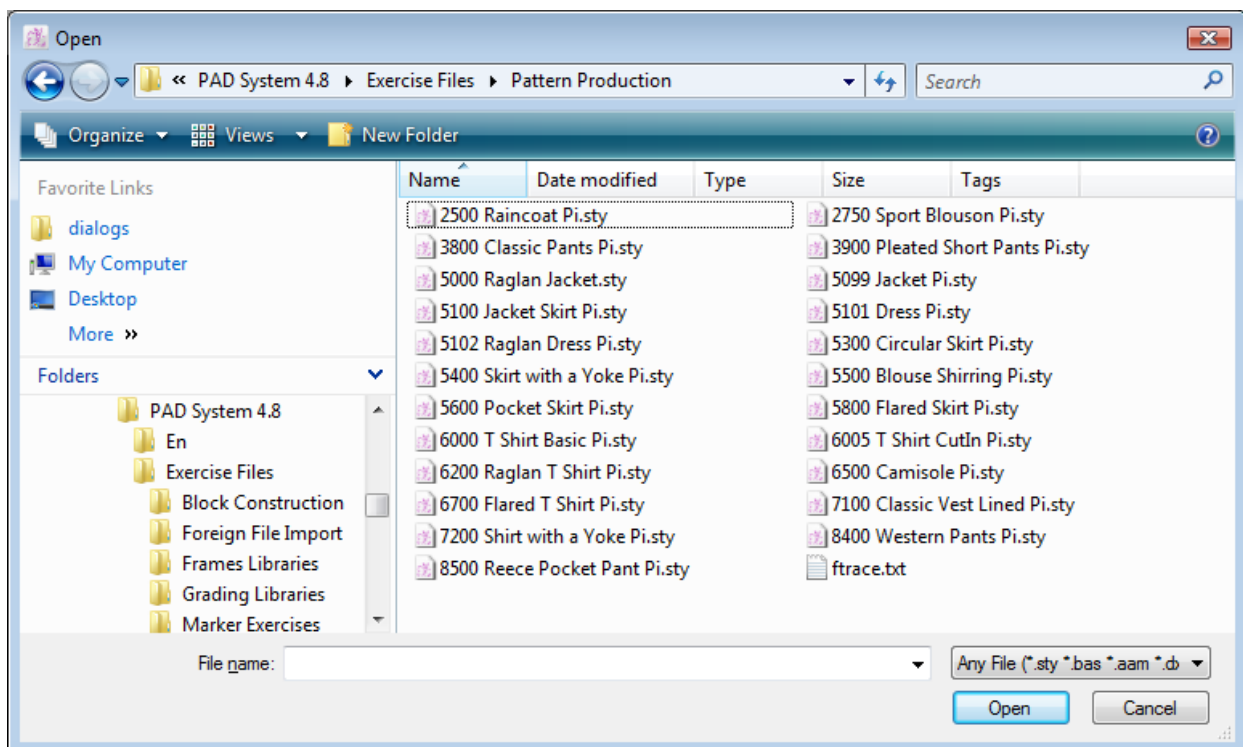
2 Browse to select file or change the path if necessary.

3 You can also sort the file available by selecting the file type drop-down menu next to File name field so as to narrow down your selections.
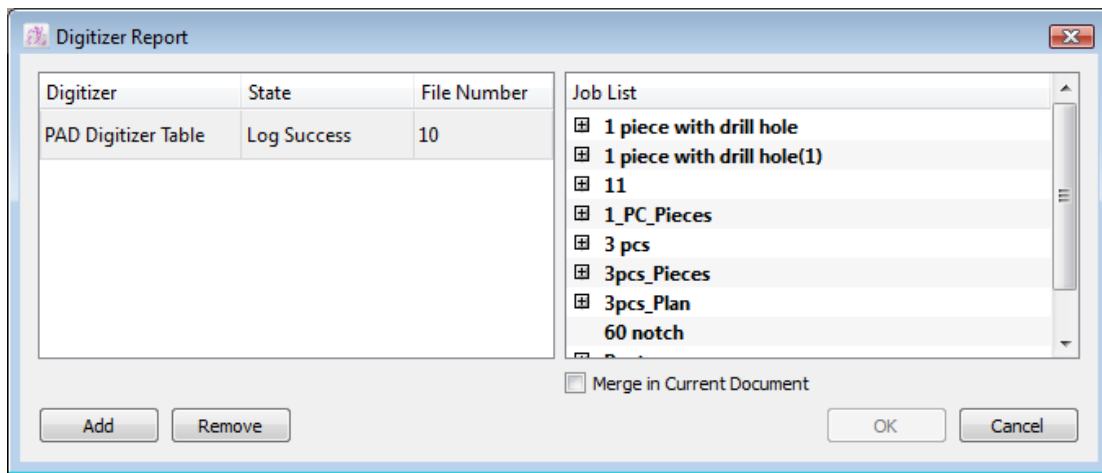
4 Select the file and click Open afterwards

Start from Pad2 V.5.0 support both Gerber native file (.zip) and Lectra native file (.iba/.vet) and can be opened directly.

File Menu: Open Digitizer…

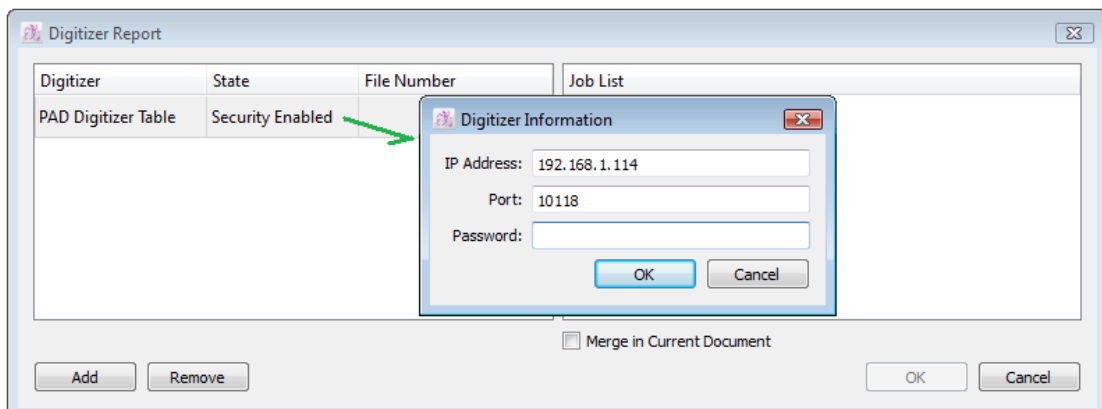Open a digitize file into a New Style (blank) or current working window.

How to do:

1 Select the *Open Digital Pieces…* from *File* menu and the *Open Digital Pieces* windows pop up.

2 Choose the digitizer(s) you wish to take the files. All of files are showing from the Job List.

Digitizer: The account of the digitizer.

State: It shows the state of the digitizer. The state under **Log Success**, you can open the files from right side of the Job List window. If the state is in **Security Enabled,** please double click on the selected account. A dialog box appears and allow input the password.

File Number: The number of digitize files you allow to take.

3 Select and Click OK to open
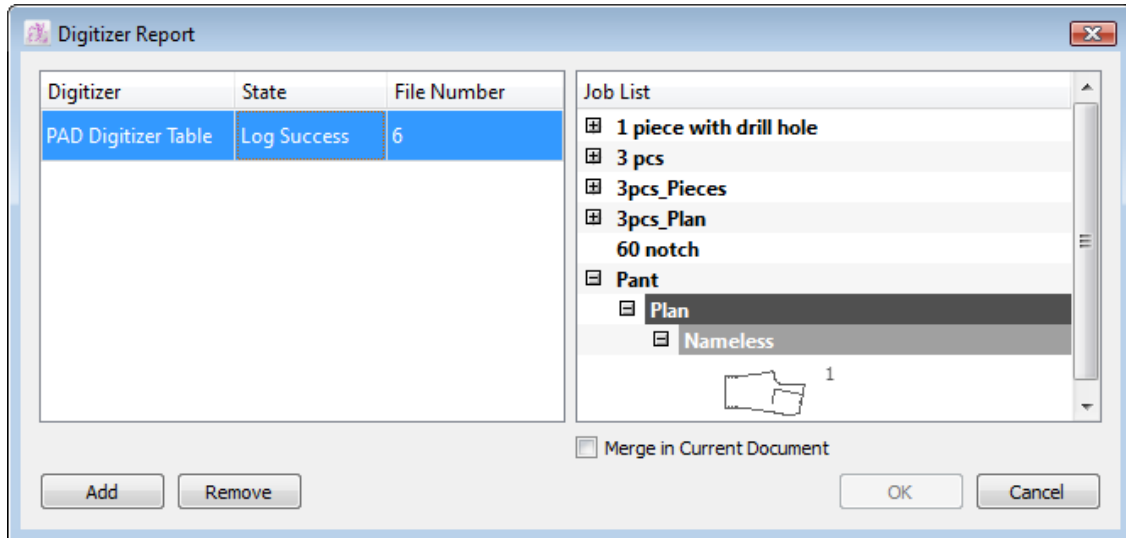
4 The pieces of the selected file will open in a New Style (blank) or current working window. If the pieces were digitized to Pieces View by Digitizer Manager, file will be opened in Piece View automatically.

File Menu: Open Other…

To open the pattern plan and pieces file into a style format (.sty) in the working area

How to do:

1 Select the *Open Other…* from the *File* menu and dialog box pop up.

2 Browse to select or click browse button to change directory.

3 Select file in style format (.sty) and click *Open.*

The selected piece file will open in current working window. The size of piece will be fit in the existing window. All pieces are added in Plan View to Piece List (if applicable). It can still support different Piece characteristics, i.e. Frames, Clone, Grading etc.

> **Note:** For the *Open Other…* item to be unlocked, the active file must be a Style file and the file you are opening must be a Style file.

File Menu: Close

To close the active file or the file you are now working on. A dialogue box will be pop-up to remind you when you have made any modification without saving.
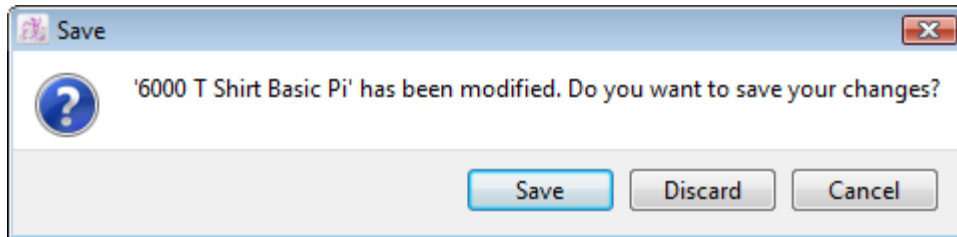
Discard: Close immediately without updating any latest changes

Cancel: Close the dialogue box and continue to work on file

Save: Save the latest update. A dialogue box will remind you if you want to replace existing one (saved under same file name) or create a new file. You are required to make a name and directory path if save as new.   File will be saved and closed accordingly.

File Menu: Save

Remember to save the file once you make any change of existing file or create a new one.

How to do:

1 Select *Save* from *File* menu. If you work on existing file, file will be saved under the same name.

2 If you are working on a new file, you are request to enter the file name and choose the directory, together with the file format (in *.sty / in *.bas) to be saved.

3 Click *Save* to execute

Note: Four basic blocks can only be saved as Style (.sty) that can be opened in others environment for modification.

File Menu: Save Changeset

This feature is for the management of changes to documents. Users are able to view the changes on each piece; it does not allow doing any modification on the pieces. It keeps the maximum number of Changeset to 3 copies. And it will overwrite the last copy if it reaches the maximum number of files. This feature is available in Pattern Design only.

To do so:

1 Open a pattern file and change the measurement on one of the piece. Ex: Add 2 inch at the Sleeve Length

2 Select **Save Changeset** from File menu; it keeps the previous file in the first copy. Please choose Close from File menu to close this file.

3 Select **Open**… from File menu; to open the file save with changeset and is able to compare the all of files in Changeset View.

4 Go to **Changeset View** from View menu to choose the Changeset file to be compared.

Changeset View	▶	V6_Changeset_1
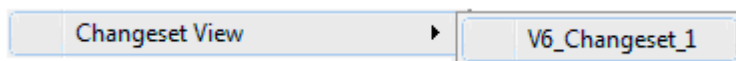
5 Once the Changeset file is selected; it goes to **Changeset View** to display the current file and the first Changeset file. And you can choose the pieces to be compared from the Changeset window. All of pieces in the first Changeset file display in Pink color. The pieces will align at the center point.
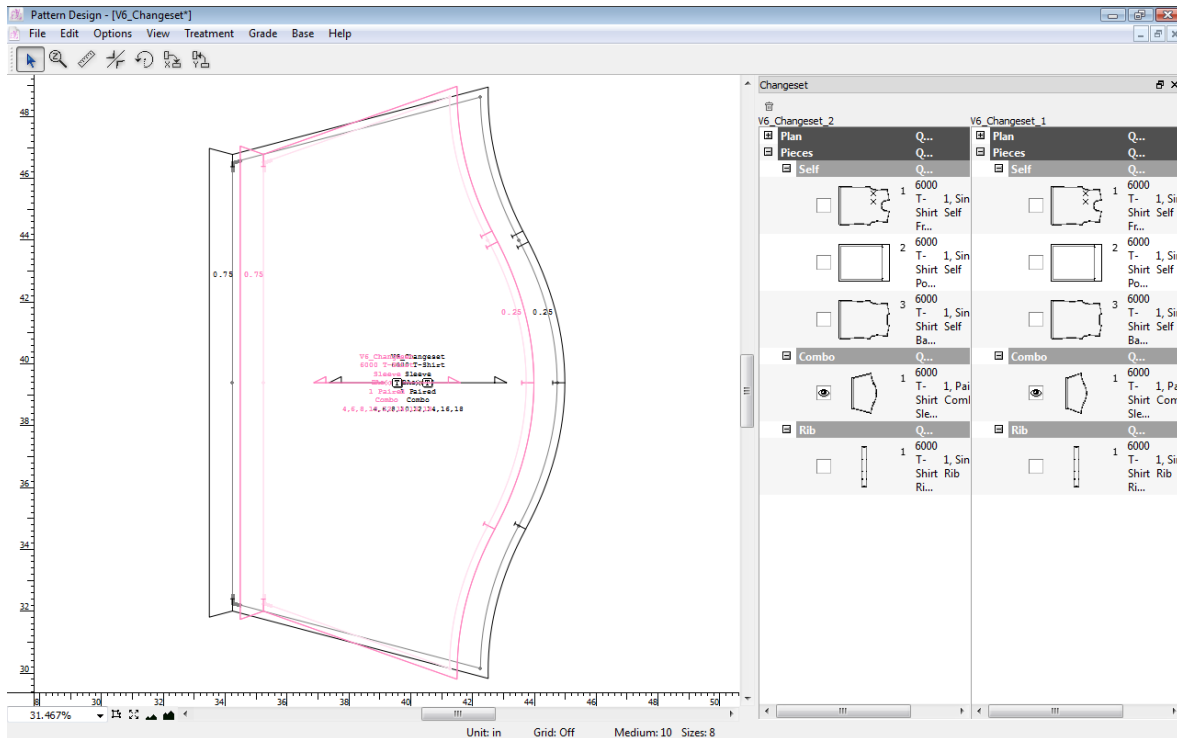
6 The Toolbar allows you to make some actions on pieces in Changeset View. All of the tools are the same function as in Plan / Pieces View.
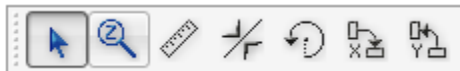

7 Or you allow using Align Shapes… from Treatment to align pieces.

8 To left the Changeset View, just go to Plan View / Pieces View. The latest file displays on screen. And the Changeset file is hidden until you choose it to view again.

Restore Changeset File to a New File

You allow copying the whole style to a new .sty file. Put the cursor on the title bar and right click on mouse, the contextual Menu appears; please select **Copy to a New File.** A new file appears and all of pieces pastes in it.
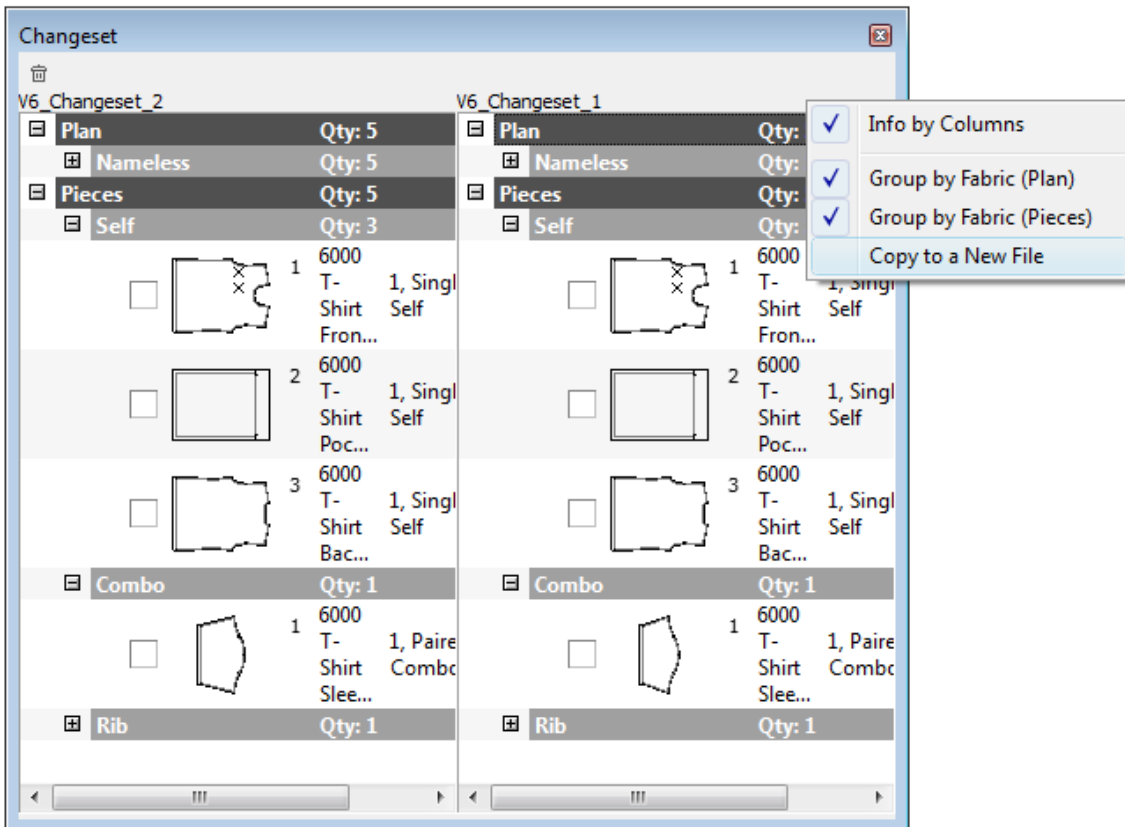
Set Number of Copy for Changeset Files

Predetermine the maximum number (Between1 to 3) to save for changeset files. The item **Version Control** in Preference and General allows you to set the value. The maximum number is between1 to 3. The default number is 3.

File Menu: Save as...

To save an existing file under different name or other directory. If you just change the location without renaming, all changes would be updated on the file of latest saved location only.

Save as... item also allows saving the file in the format of previous version of PAD System. It serves as a platform to communicate with users using previous PAD's versions, like 4.0, 4.1, 4.5, 4.6, 4.8 and 5.0.

How to do:

1 Select *Save as...* from *File* menu. If you work on existing file and you want to change directory without renaming it, all changes will be updated on file of new locations. If you want to rename it, you are required to save with new file name and new location (if necessary).

2 You can choose the version to save as in Save as Type drop-down menu.
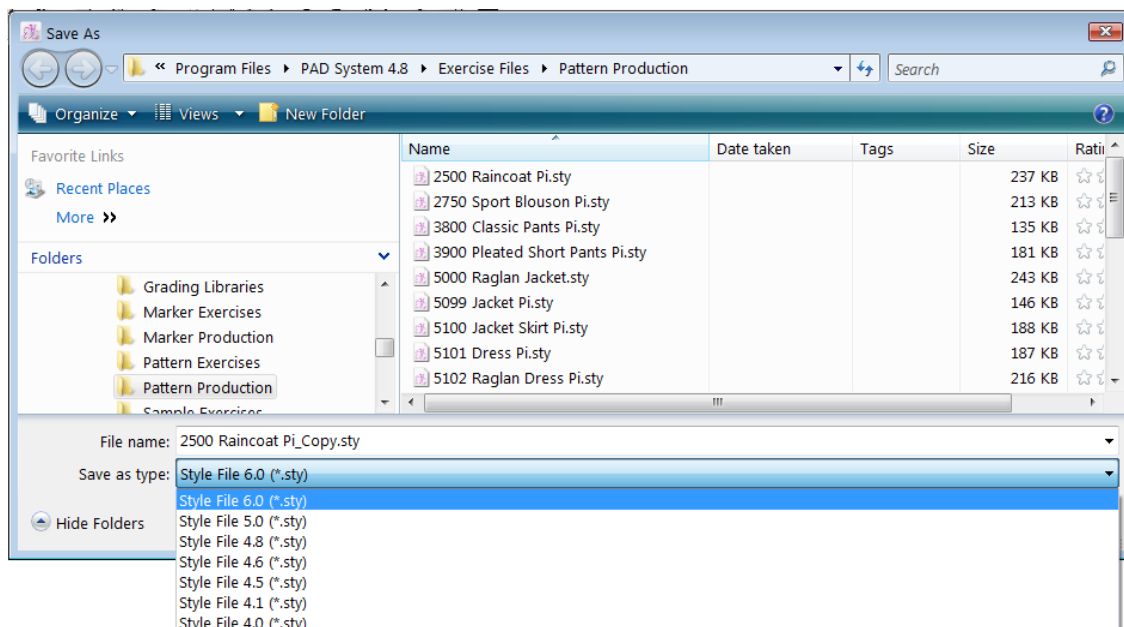

The *Save Current Style As* (for a style file) or the *Save Current Base As* (for a base file) window appears. Enter the name of the file, select its type if it applies and select the folder you would like to save the file in.

3 It is default using the same file name with _Copy at the end and you can rename it as well.

4 Click the *Save* to execute.

5 *Text Conversion* dialog box pop up and ask to choose language used.
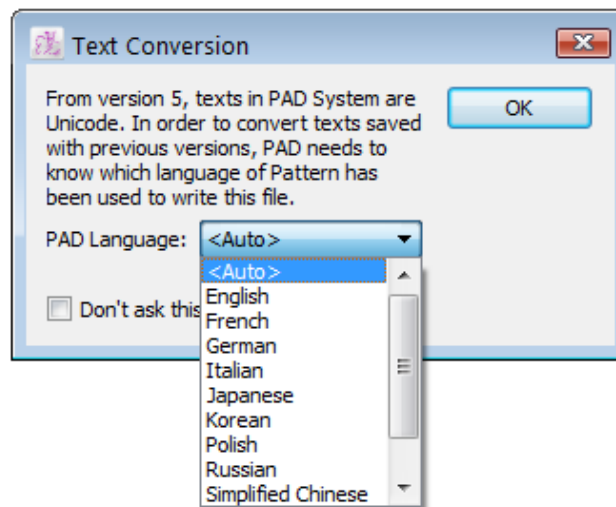
PAD Language: Select Auto to save the file as per operating system language used or select language from this list.

6 Click the *Save* to execute.

Note: Four basic blocks can only be saved as Style (.sty) that can be opened in others environment for modification.
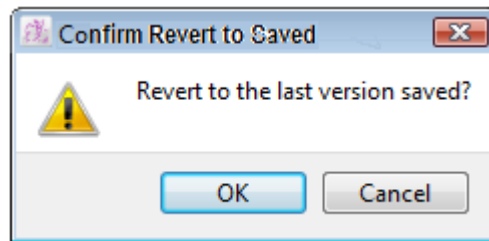Save a Copy is only available in Pattern Enterprise edition.

File's format and saved version will be indicated in both Summary Info and Comments box.
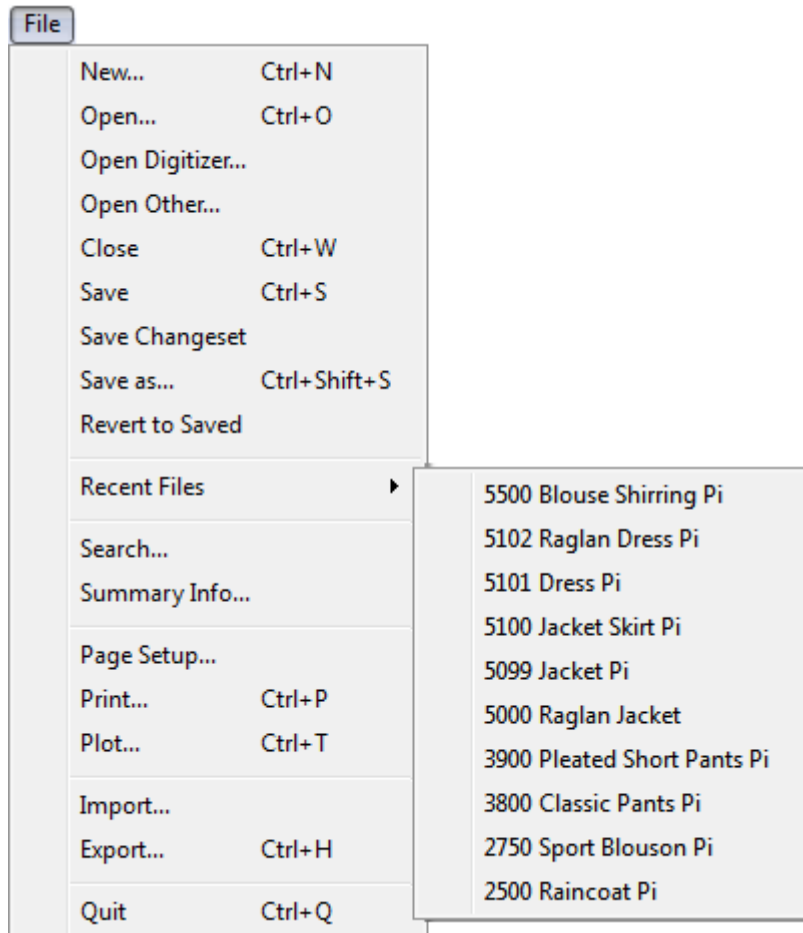
File Menu: Revert to Saved

To undo all the steps after the last saved. You can undo all the steps of pattern modifications by one click; however, you cannot recover the undo steps once you execute this function.

Click *OK* to revert since last saved.

File Menu: Recent Files

To open a list of pattern file you worked on recently

Recent Files record the last 10 pattern files you have opened.

Recent Files only record the recent opened file path. If file location / path has been changed or removed, a dialogue box will remind that file cannot be found and require you to find out the file manually.

File Menu: Search...

To open a dialog box to search any files (can be identified by system) with different search criteria for sorting purpose.
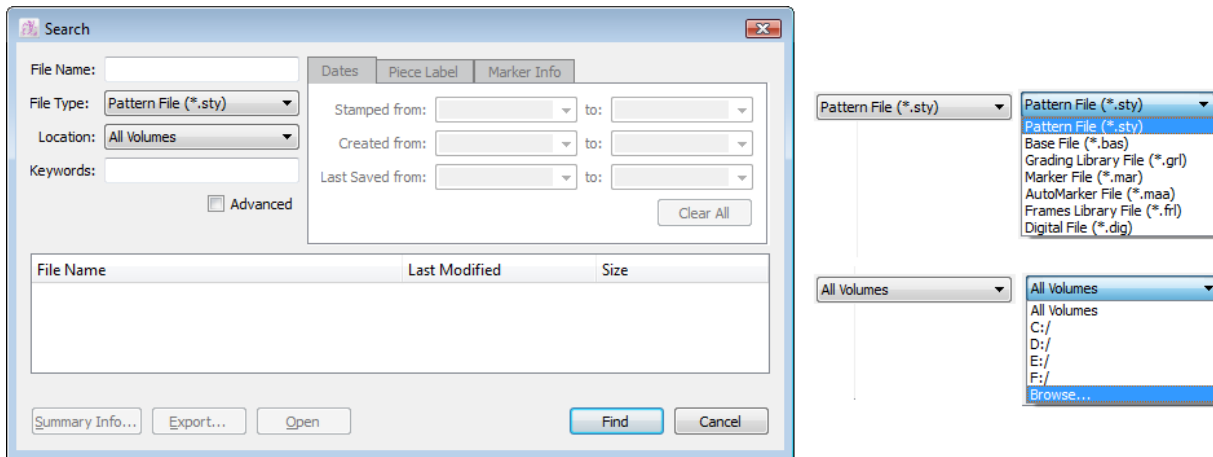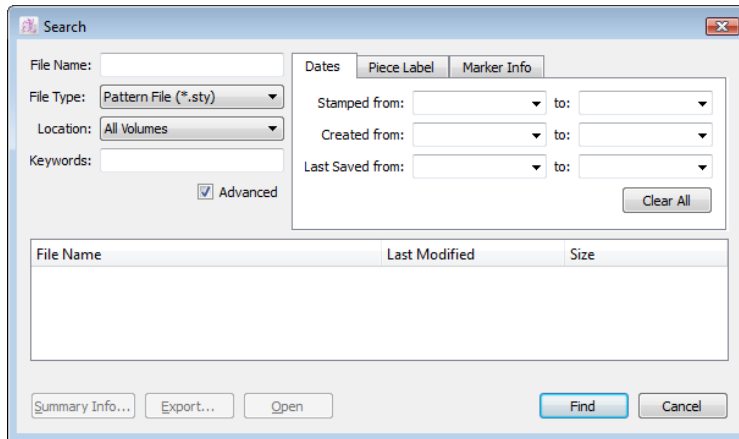

You can use following criteria to help the search results :

• File name or part of the file name (use * as a wildcard);
• File type;
• File location – from Specific drive, or All volumes (all drives);
• Keywords included in Summary Info.

Advance Search

You can apply the advance search criteria to narrow down your search results. list. Advance search features listed below.

Dates...

Search by date of file create, last updated and/or stamp date
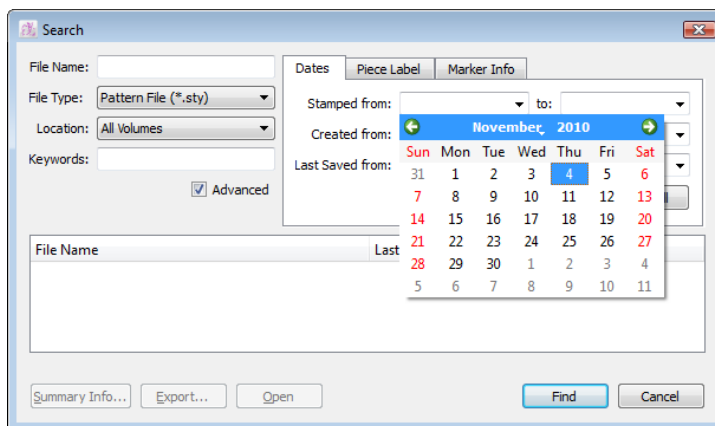
- **Date Stamp from and Date Stamp to:** Search as per file stamp date being indicated

- **Created from and Created to:** Search as per file create date being indicated.

- **Last Saved from and Last Saved to:** Search as per file last saved date being indicated.

Click *Clear All* to clear all fields' information.

Piece Label…

Search as per specific piece information.

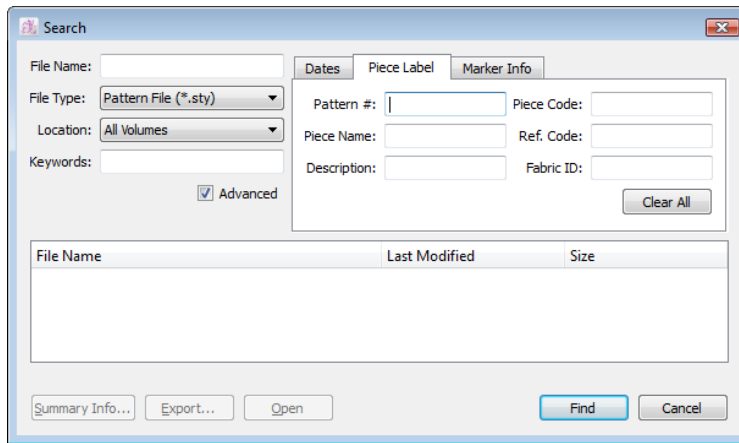Search criteria as follows:

- **Pattern #:** Enter a piece pattern number directly (if any)
- **Piece Name:** Enter a piece name directly (if any).
- **Description:** Enter description of a piece directly (if any)
- **Piece Code: Enter** a Piece Code on a piece directly (if any)
- **Reference Code***:* Enter a Reference code (if any)
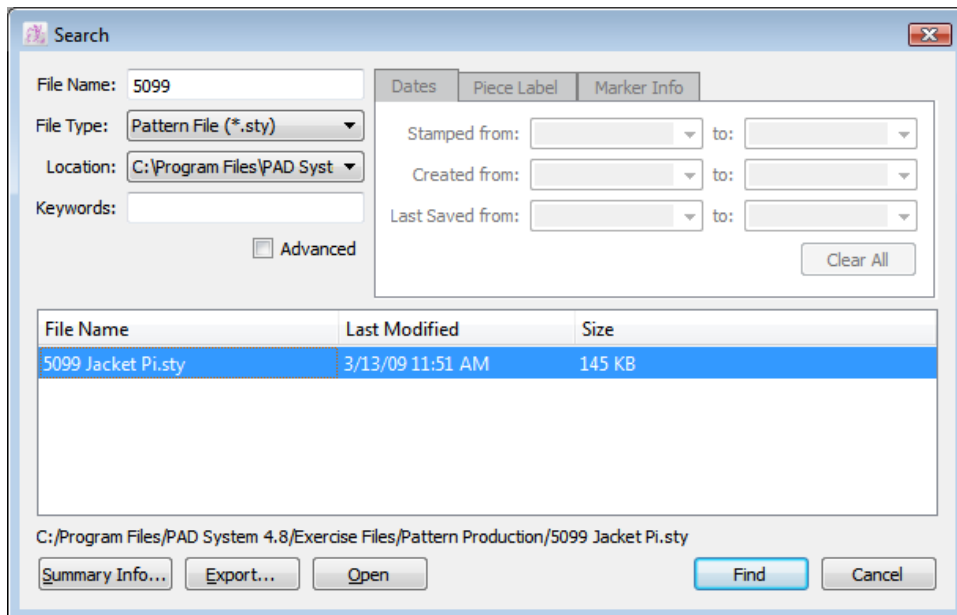
Click *Clear All* to clear all fields' information

Marker Info…

Search as per the marker file name
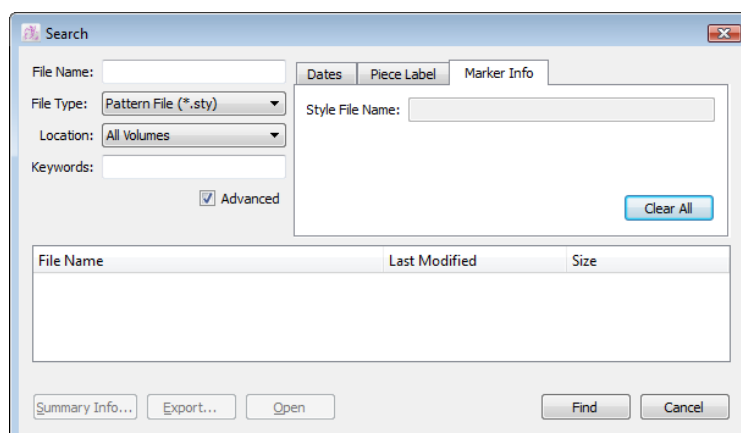
Search, Files Found

Results come with a list of files that match your search criteria. Browse and select the file and click OPEN.

Select a file to display its directory and path under the search list.

The *Files Found* dialog box offers the following options:

Summary Info...: It enables you to read the summary of a file.

Export...: Export the file search results in PAD System Manager (xml) or Text File format.
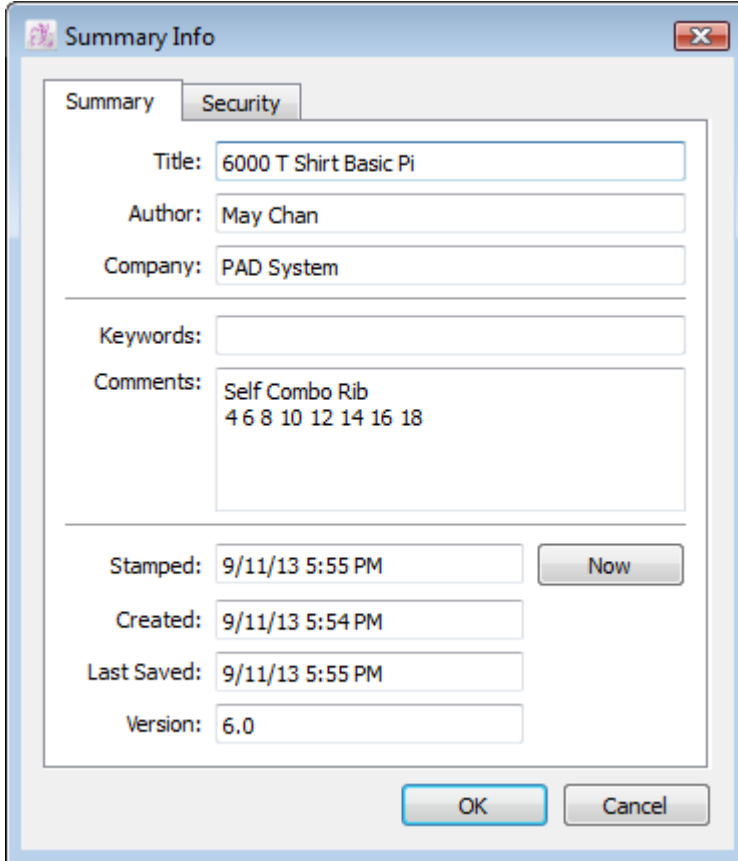
Open: *Open* the selected file (in case it can be opened in current working environment, i.e.: *.mar in Marker or *.sty in Pattern.

Find: *Find* to start searching.

Cancel: Cancels to stop *search*

No File Found means no file match your search criteria.   Please reset your criteria and click Find to search again.

File Menu: Summary Info...

To enter or save useful information to describe the file and facilitates file search easily.

Summary Info: Summary

Title: The name of file.

Author: The person who create the file.

Company: The Company name.

Keywords: Keywords that describe the file.

Comments: Text box to enter and save personal comments.

Stamped: To assign a date to the file. Click Now if you want to enter current date.

Created: Date of file first created.

Last Saved: Date of file last saved.

Version: PAD's version of file being saved.

Summary Info: Security
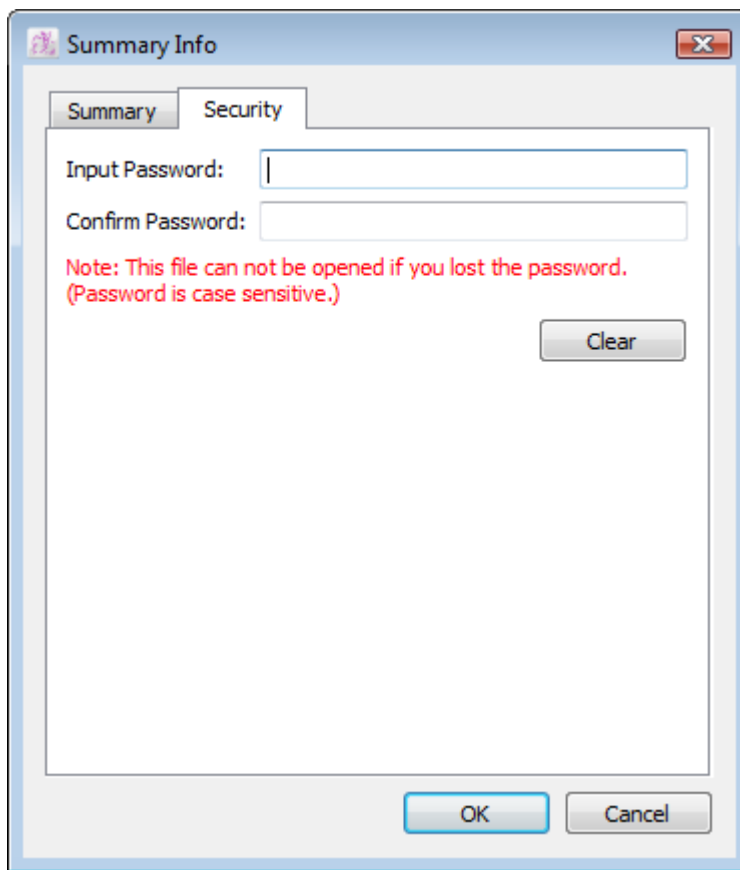
Input Password: Allow to input the password to secure the file. Please be aware that password is case sensitive.

Confirm password: To input the password for confirmation.

Clear: To remove the current password.

File Menu: Page Setup…

To set up the page for file printing by setting the Printer, Paper Size, Printer Tray, Paper Orientation, etc.

Note: Please refer to your printer manual and/or user manual of different platform for page setup details.

File Menu: Print...

To set your print instructions before printing. Print results would be based on your selection and you can click preview the view the results before sending to print.
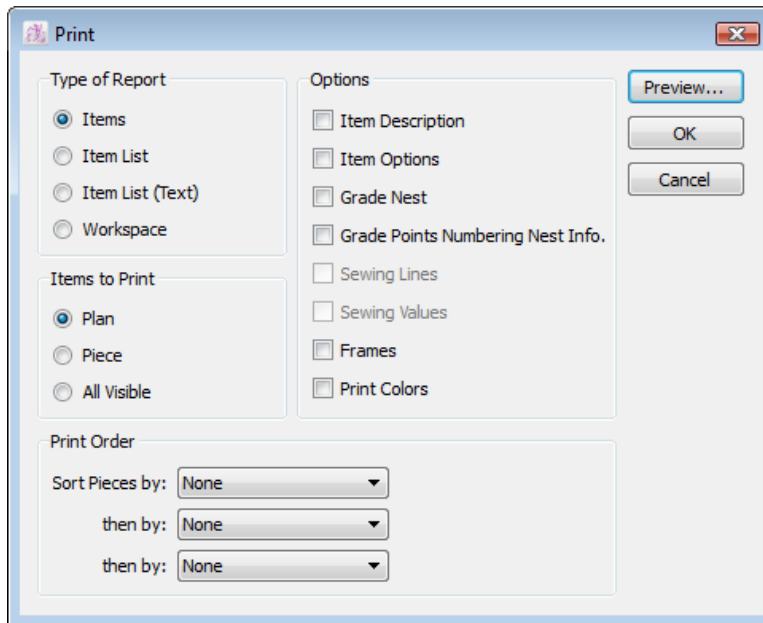
Type of Report

Items: One item per page with the information being selected from the *Options* list at the right.

Item List: List all the items within a page with information being selected from the Options list at the right.

Item List (Text): Print the Text information, such as Name, Description, Quantity to Be Cut and Fabric of the pieces only.

Workspace: To select the work area printing options - the whole plan, the pieces or the visible elements, in the *Items to print* section.

Items to Print

Plan: Print all pieces in Plan View.

Pieces: Print all pieces in Pieces View.

All visible: Print items can be seen on screen.

Options

Item Description: Print information about the pieces.

Item Options: Print the options of the pieces.

Grade Nest: Print the grade nest of each piece.

Grade Points Numbering Nest Info: Each grading evolution points with a numbering.

Sewing Lines: Print the non-graded sewing lines for each piece.

Sewing Values: Print the values of the sewing.

Frames: Print the frames on the pieces.

Print Colors: Select and check the print color box for the color you choose to print.

Note: Options available depends on your selection of the Type of Report and Items to Print sections.

Print Order

None: Organize the print sequence, allow to sort pieces by Fabric Id., Piece Name and Plan/Pieces. You can make multiple selections or non of these options.   You can make your preliminary selection in the Sort Pieces by menu; and then go to Then by menu for 2nd and 3rd level sorting criteria that the printed items would be based on preliminary selection.
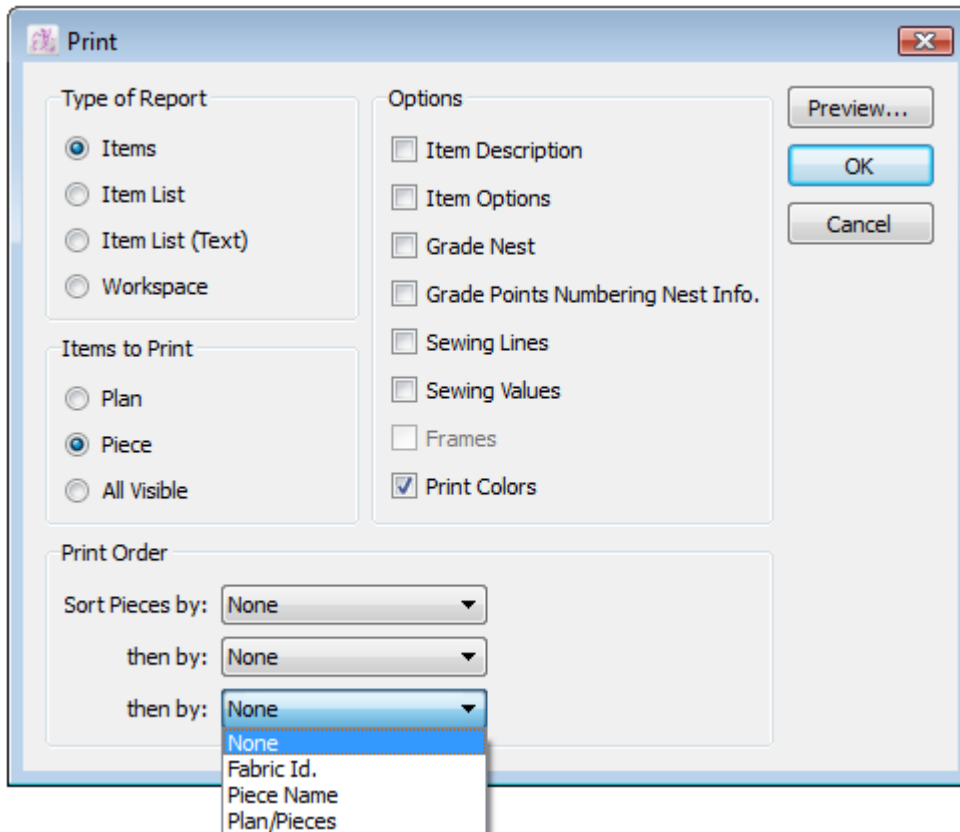
Preview: Show the printing preview

OK: Execute printing

Cancel: Cancel printing

File Menu: Plot...

To plot the Pattern pieces either in Plan View or Pieces View and also allow you to select information being plotted in the pattern pieces
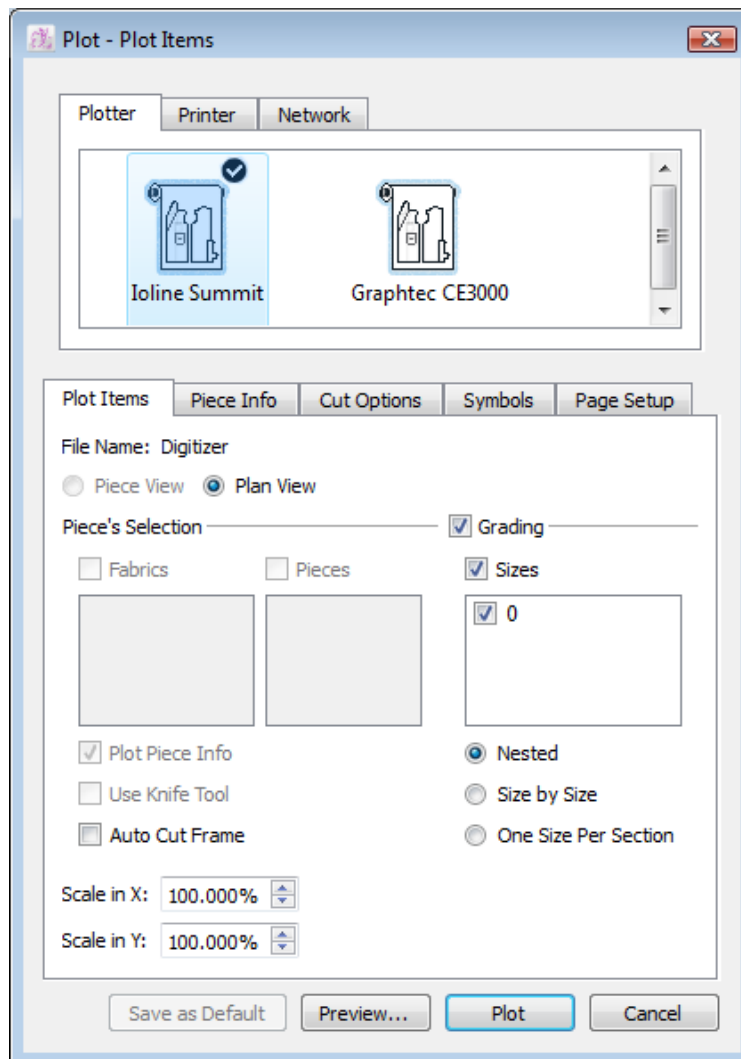
Plot window allows you to click the tab and choose different criteria in plotting, including *Piece Info, Cut Options, Symbols and Page Setup, to specify your plotting instruction.*

Plotter Drivers / Printer Drivers

The top part is the hardware setup that allows you to select Preference and Plotter / Printer where you may select more than one driver from the plotter list.

Plotter
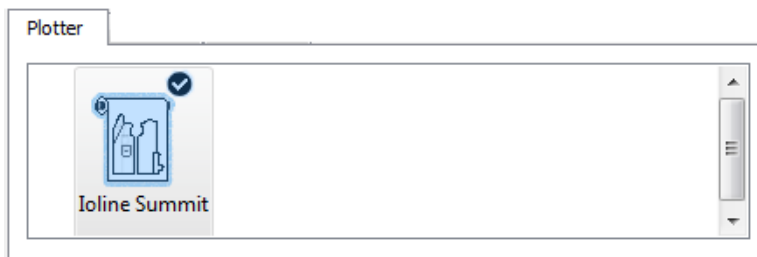
Printer
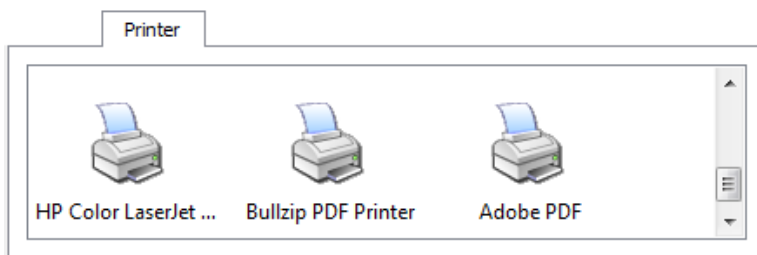
Network

The Plot Manager activates the network options and allows you to connect the plotter / printer being found in the network.
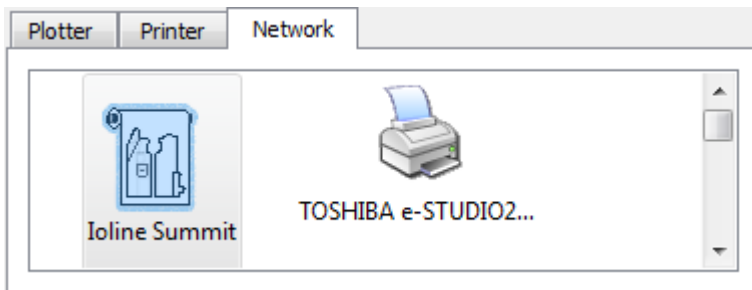
If Plot Manager' plotting service is not ready, it shows the message as below.
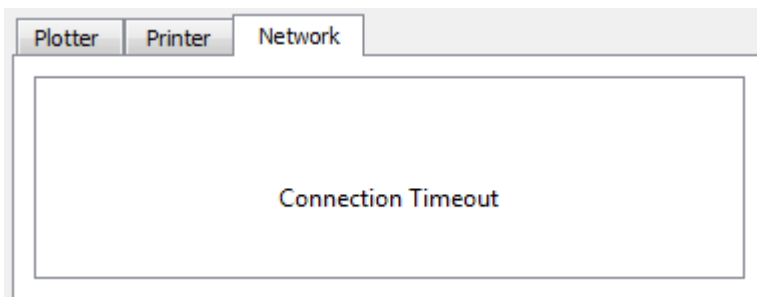
Note: Please refer to the Plotter section under Preference menu for details.

Plot Items
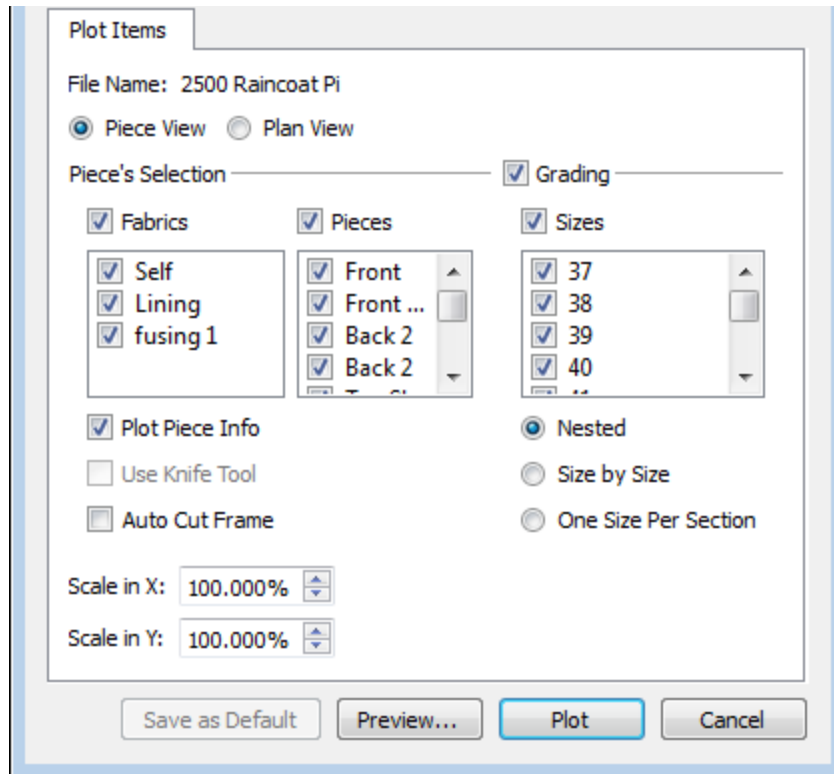
Plan: Plot all pieces in Plan View.

Pieces: Plot all established pieces or selected pieces from the Piece List, the pieces from all fabrics; or, the selected fabrics from the fabric list.

Grading

Check and select to plot either all grading sizes or specific sizes; it can be nested or plotted separately.

Nested: Plot as Nest Pattern

Size by Size: Plot separately

One Size per Section: Plot separately and a size put in a section

**Plot Pieces Info:** Activate if Piece has bee selected and plot the piece info as you have already checked the box in the Piece Info page.

Use Knife Tool: Activate if Pieces option has already been selected. Check if you use plotter-cutter.

Auto Cut Frame: Cut Sheet in each Frame

Scale in X or Y: Scale the plotting items on both X or Y axis. Number value indicates the percentage of real size.

Press *Plot* to execute plotting.

Press *Preview* to view the plot job before plotting.

<u>Piece Info</u>

Select specific information to be plotted inside the pattern pieces.

File Name: Plot the file name.

Pattern #: Plot the pattern number of a piece (from the *Set piece* dialog box).

Piece Name: Plot the name of a piece (from the *Set piece* dialog box).

Grain Line: Plot the Grain line of each piece.

Description: Plot the description assigned to a piece (from the *Set piece* dialog box).

Piece Code: Plot the code of a piece (from the *Set piece* dialog box) on the piece.

Reference Code: Plot the reference code of a piece (from the *Set piece* dialog box)

Qty. to Be Cut: Indicate number of times the pieces to be cut (from the *Set Piece* dialog box).

Fabric ID: Plot the name of fabric.

Sizes: Indicate the size of a piece.

Special: Plot alphanumeric information or other special name (if any) given in the *Grade Working Sizes* dialog box.

Message: Plot as per the text in *Message* field from the *Plot* dialog box. Select to plot the message in either all pieces or the first (or more page from the first) of pieces.

Plot Sewing Lines: Plot the sewing lines of seam allowances.

Plot Sewing Values: Plot the sewing values of seam allowances.

Plot Image: Plot the image attach on a piece.

Space between Pieces: Add some space between pieces within a rectangle when plotting.

Save as Default - Save current settings as default.

Preview – Preview plot job before sending to plotter.

Plot - Execute plotting

Cancel - Close the dialog box

Cut Options

Allow you to specify setting for plotters equipped with cutters.
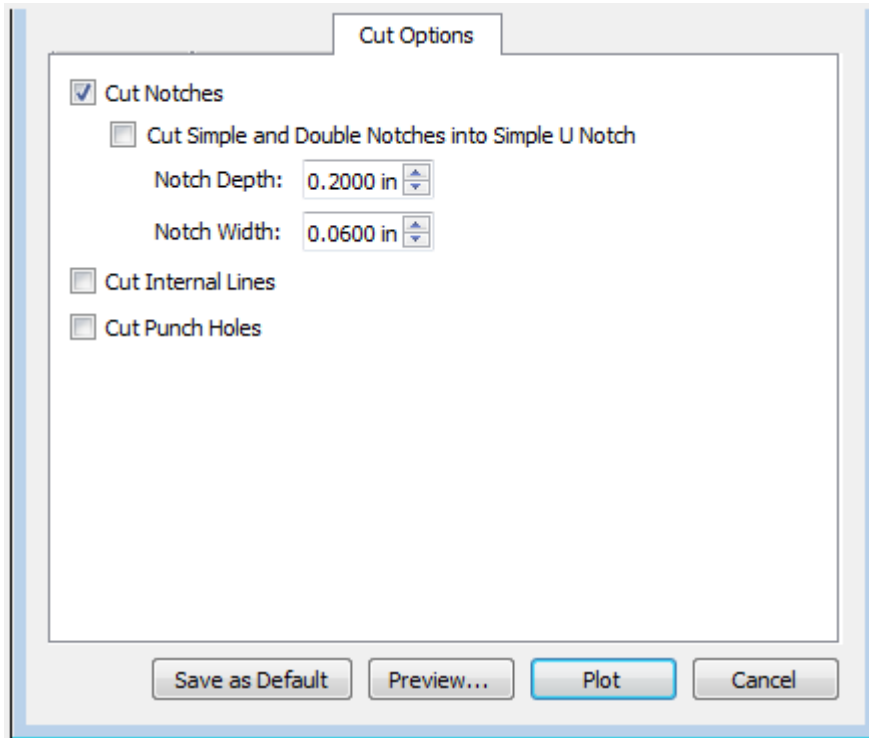
Cut Notches: Cut the notches.

Cut Simple and Double Notches into Simple U Notch: Cut the simple and double notches on your pattern as simple U notches and give you a new width and depth, regardless of the original notch value.   The notches still keep the original shape on the pattern.

Notch Depth: Set the depth of U notches to be cut.

Notch Width: Set the width of U notches to be cut.

The preset range listed as follows -

Values			
	Min	**Default**	**Max**
Notch Width	0,1 cm/0,039 inch	0,15 cm/0,0585 inch	2,54 cm/1 inch
Notch Depth	0,1 cm/0,039 inch	0,5 cm/0,195 inch	2,54 cm/1 inch

Cut Internal Lines: Cuts internal lines without stitch attributes.

Cut Punch Holes: Cut punch holes on the pieces.

Save as Default - Save current settings as default.

Preview – Preview plot job before sending to plotter.

Plot - Execute plotting.

Cancel - Close the dialog box

Symbols

Define and modify the length and type of both Notches and Punch holes; and also set the letter size of the piece description.
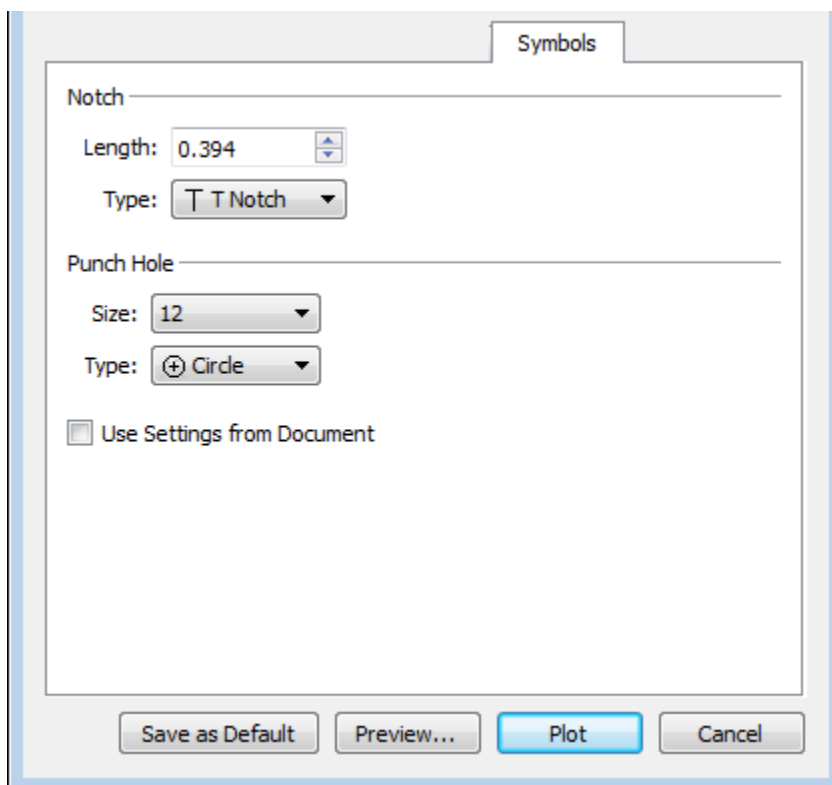
Notch Length: maximum 2.54 cm (1 inch).

Notch Type: Standard setting as T or I notches are available

Punch Hole Size: Four sizes options - from largest to smallest (28, 18, 12 & 10)

Punch Hole Type: Three standard punch hole types (Cross, Butterfly, Circle).

Use Setting from Document: Check to read the Symbol setting from the file.

Save as Default - Save current settings as default.

Preview – Preview plot job before sending to plotter.
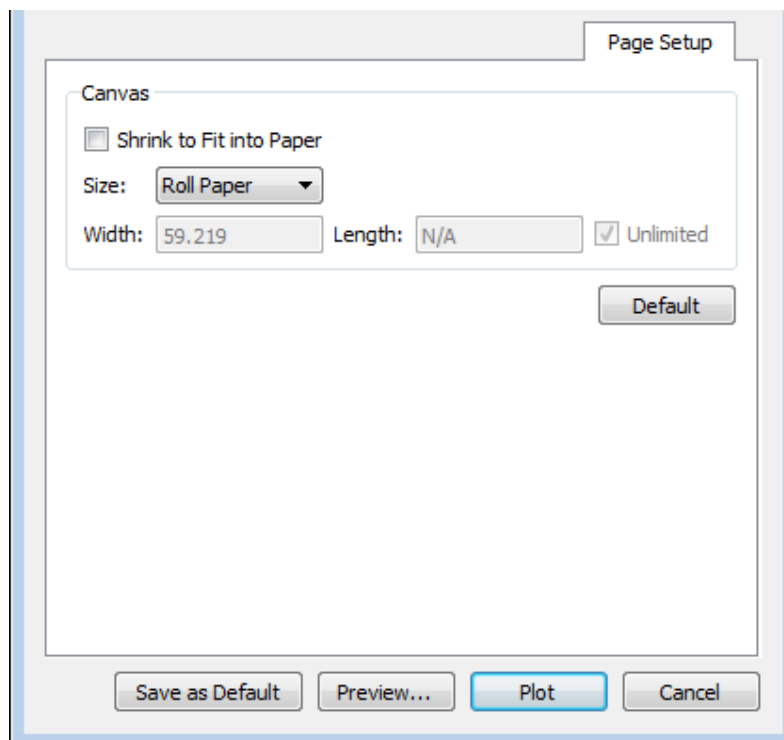
Plot - Execute plotting

Cancel - Close the dialog box

Page Setup
Define the paper size or use the paper setting from the Plotter driver.

Canvas: Indicate the width and length of the paper or choose Custom… from the scroll menu to customize your paper size of selected plotter.

Shrink to Fit into Paper: Check to resize all pieces fit into paper printed.

Size: Choose the Printer / Plotter listed in scroll menu. Plotter shows the Roll Paper or Custom; and printer shows the pre-set Paper size and Custom.

Width: Indicate / set paper width

Length: Indicate / set paper length

Unlimited: Check to set paper length to be unlimited.
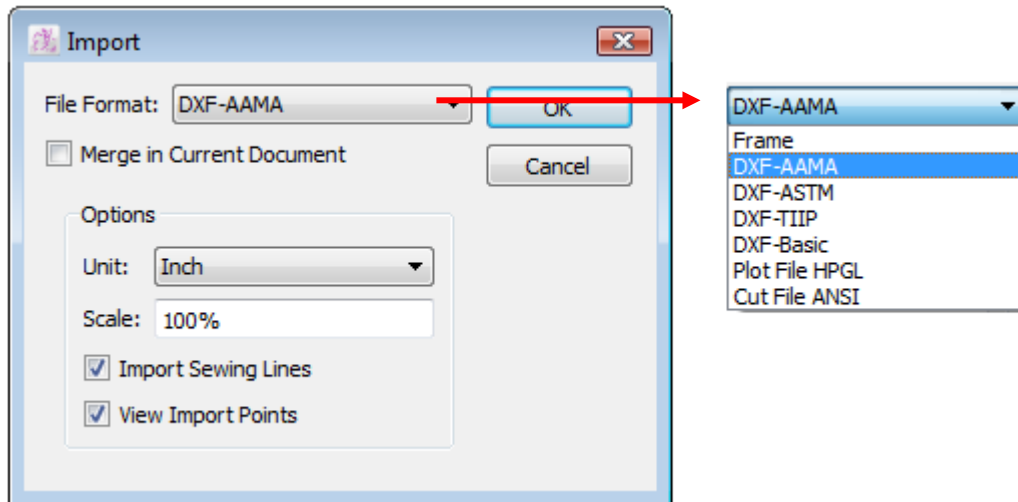
Default: Change back to default value.

Press *Save as Default* button to save the current settings as default.

Plot - Execute plotting

Cancel - Close the dialog box

File Menu: Import…

Select *Import…* item from *File* menu to import pattern pieces from directory. Choose the imported file format and specify other options of the pattern pieces.

Merge in Current Document: Merge the imported file into current working document.

File Format: Select the imported file format, supported format listed as follows:

- **Frame:** import Frame measurements from a tab-separated text file.
- **DXF-AAMA:** Import pattern piece file in AAMA standards.
- **DXF-ASTM:** Import Pattern Pieces file in ASTM standards.
- **DXF-TIIP:** Import Pattern Pieces file in TIIP standards.
- **DXF-Basic:** Import Pattern Pieces file in DXF standards.
- **Plot file HPGL:** Import Pattern Pieces files created in Hewlett- Packard Graphic Language (HPGL) format.
- **Cut file ANSI:** Import pattern pieces file from an automatic cutter's cut file.
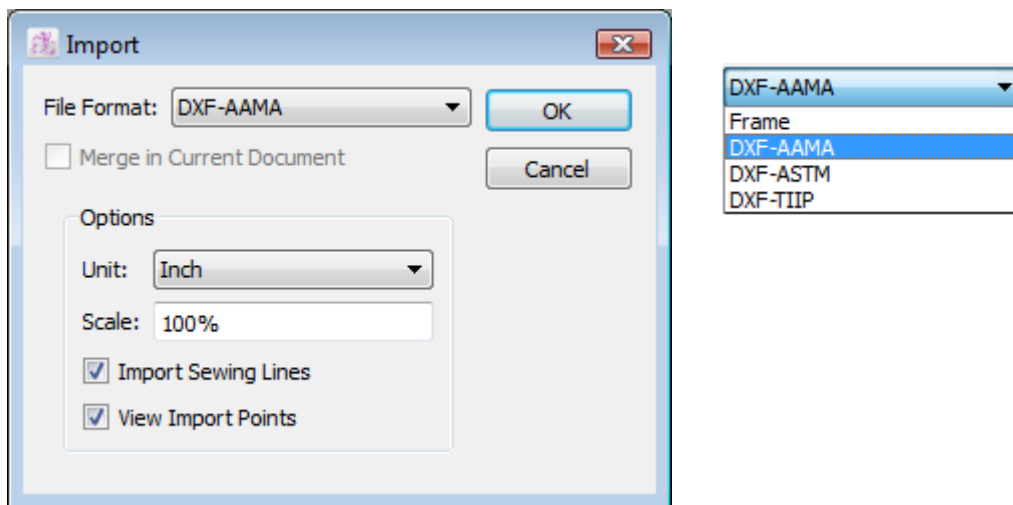
Importing Frames

Please refer to Frame Chapter to learn more about import Frames.

Importing DXF-AAMA , DXF-ASTM and DXF-TIIP Files

If you import the DXF-AAMA, DXF-ASTM and DXF-TIIP format files, the dialog box shows as follows.

Merge in Current Document: Imported file merge as current working document.

Units: Select the unit of measurement, i.e. inches, centimeters, millimeters, 1/32 inch.

Scale: Select the percentage of size of imported piece file (max is 100%)

Import Sewing Lines: Check to include sewing lines of imported piece file.
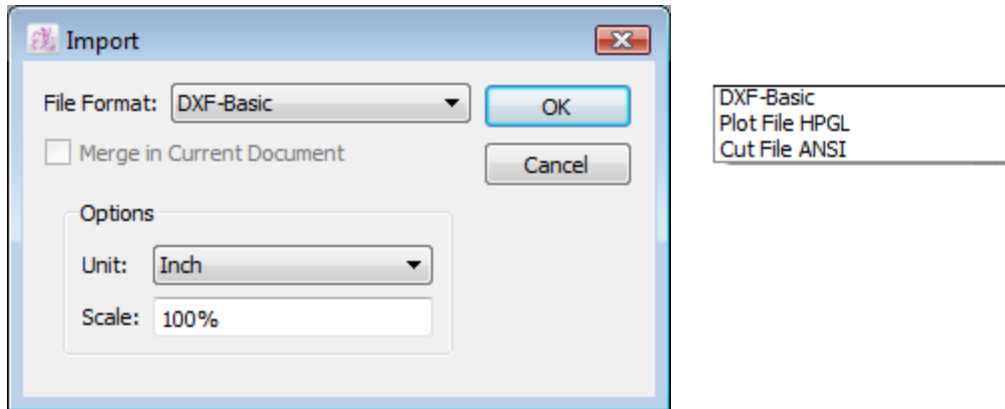
View Imported Points: Check to show the Imported Points in a template so as to check accuracy of results.

Note: The file is imported in *Pieces View* with grading, if any.

Importing DXF-Basic

If you import DXF-Basic format files, the dialog box shows as follows.

Units: Select the unit of measurement, i.e. inches, centimeters, millimeters, 1/32 inch).

Scale: Select the percentage of size of imported piece file (max is 100%)

Importing HPGL and ANSI Files

When you choose to Import HPGL or ANSI files, the following dialog box appears.
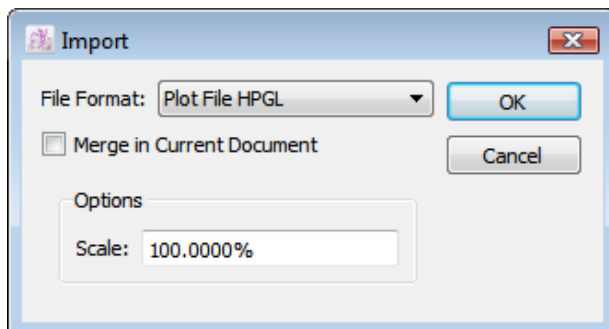
Scale: Select the percentage of size of imported piece file (max is 100%)

The file is imported in *Plan View*, with grading information, where you cannot re-create the grade nest through the *Create Graded Shape* function in the *Treatment* menu.

File Menu: Export

Send selected files to foreign systems or compatible software. PAD System can create several file types or by different means to communicate with the others.

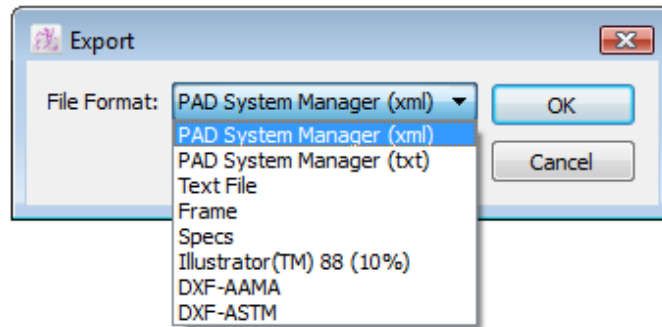**File Format:** Select the exported file format and supported export file format listed as follows.

- **PAD System Manager (xml):** Export pattern information from the PAD System™ Manager database (in XML format).

- **PAD System Manager (txt):** Exports pattern information from the PAD System™ Manager old version database (in text format).

- **Text File:** Export the text information based on selected options

- **Frame:** Export the Frame measurements to a tab-separated text file.

- **Specs:** Export the frame specs to a tab-separated text file. Specs are the specification measurements obtain from the results of Formulas, Frames (Measurements and/or Levels), the Links and the Segments.

- **Illustrator™ 88 (10%):** Export the Pattern to Postscript file format.

- **DXF-AAMA:** Export the Pattern Pieces to a file in AAMA standard.

- **DXF-ASTM:** Export the Pattern Pieces to a file in ASTM standard.

After you select the file format and click OK, a save dialog box requests you to enter file name, select the directory and click save to confirm.

Note: *Expor*t feature of PAD Manager, DXF and Frame are available in *PAD Enterprise* only.

Export to PAD System™ Manager in txt or xml format

You can choose to export the file via PAD System™ Manager into xml or txt database format. Click OK to confirm.
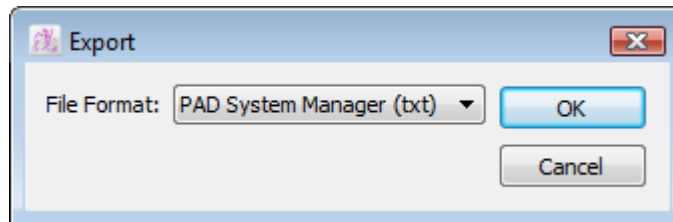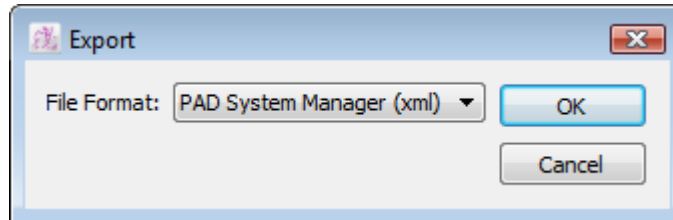
Afterwards, you need to select directory and name the file.

The PAD System™ Manager uses these files to compile a full and comprehensive database, including PAD System™ marker file information such as cost calculations, sewing specifications and the supplier, buyer and sub-contractor databases.

Export as a Text File

If choosing export as *Text* File, the *Text File* option dialog box shows as follows.
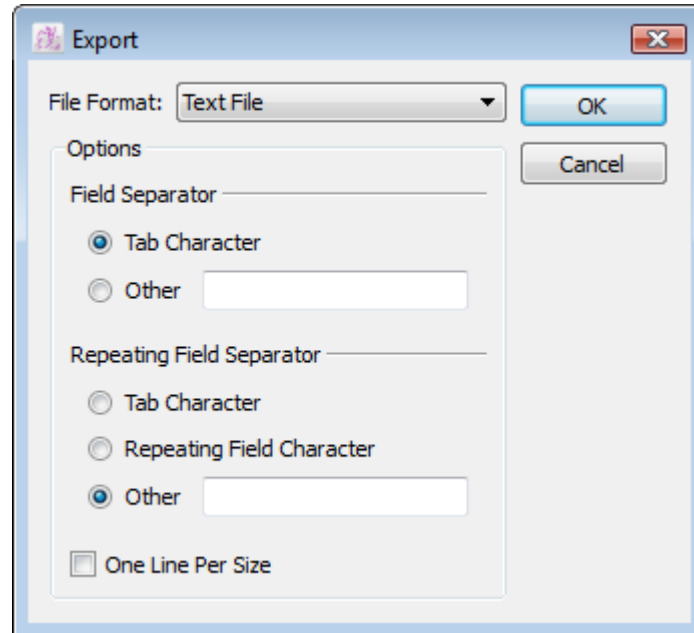
You can select following option to customize the file format.

Tab Character: Default as field separator.

Other: You can specify another field separator by putting something inside the field.

Repeating Field Character: Several field separator options are available and option Other allow you to customize your own

One Line Per Size: Arrange to show information of each size in single line

Please OK to save your selections or Cancel to close the window without save.
An Export format dialogue box follows with clicking OK.
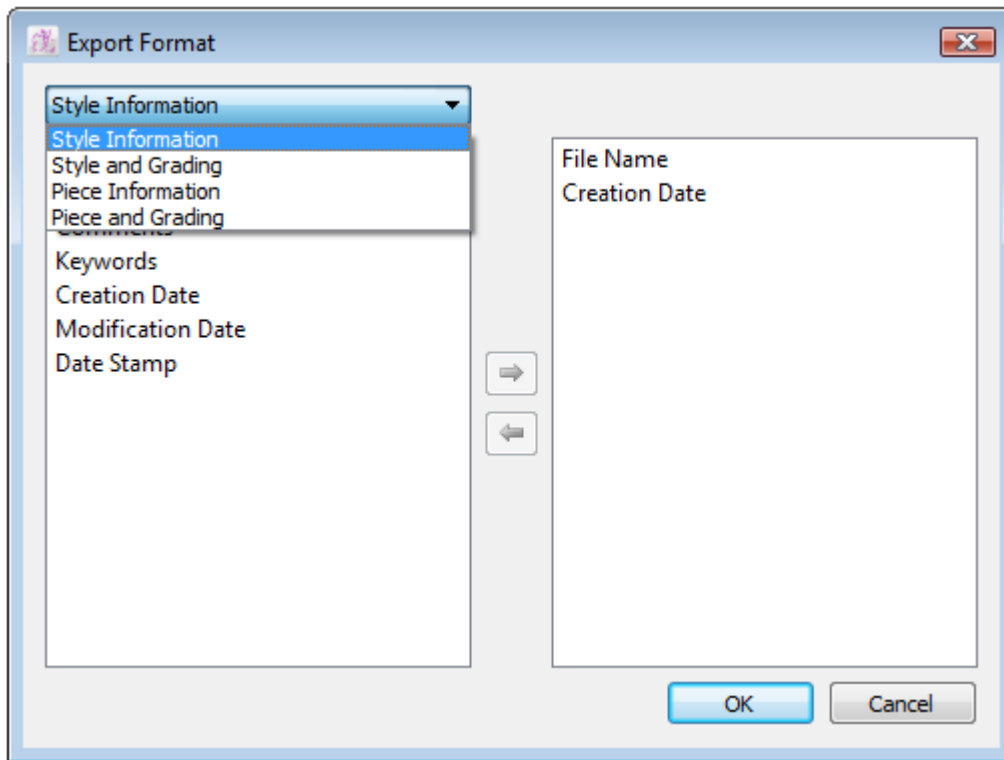
You can select 4 categories of export information from the drop-down menu in the left; i.e. Style information, Style and Grading, Piece Information and Piece and Grading.

You can select list of criteria of the export file format on the left and click Right Arrow in the middle to move the chosen criteria to the confirmed list on the right. You can also select any chosen criteria from the confirmed list and click Left Arrow to remove.

There are list of options to export under 4 categories of information, details listed as follows

Style Information ▼	Style and Grading ▼
File Name Location Comments Keywords Creation Date Modification Date Date Stamp	Amount of Sizes Sizes Breaks Specials

Piece Information ▼	Piece and Grading ▼
Pattern # Piece Name Decription Piece Code Reference Code Qty.to Be Cut Single/Paired Fabric Id Simple Notches Double Notches	Piece Area Straight Perimeter Curved Perimeter

Click *OK* to confirm export or Cancel to quit file export window. Once confirm export, Export Document as... window will request you to name the file and click Save to export the file as per your instruction made previously. You had to choose various options of export file format after naming the file.
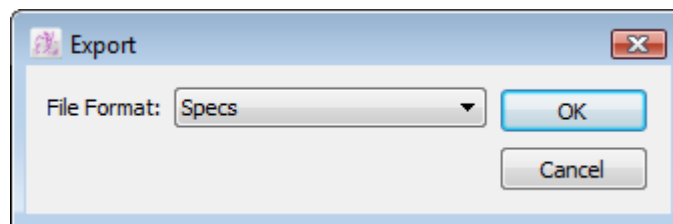
Export Frames

Export the specification information and measurements obtained from the *Frame* function.
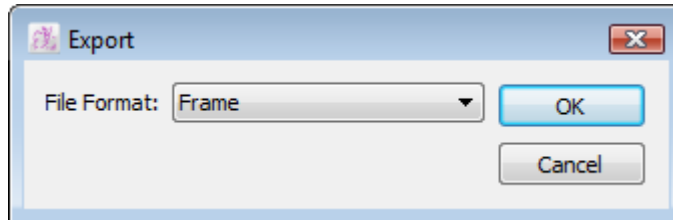
You can open by using spreadsheet software, like MS Excel. You can read, modify or even use the file to compile different charts by adding value to the raw information.

Export Specs

Export the Specs calculation generated from *Frame* window.

Specs generated from Frame calculations can be exported through *Export Specs* option; and thus, the file can be opened by using spreadsheet program, like MS Excel™. You can read, modify and even using it to make different charts afterwards.

Note: You must select a style file with *Frames* before exporting Frames or Specs; and, it is only available in PAD Enterprise only. Please refer to Frame section of this User Manual for further details.

Export to Illustrator (TM) Format

It would be useful for the one who use this format file to import the pattern pieces in vectors to this application.
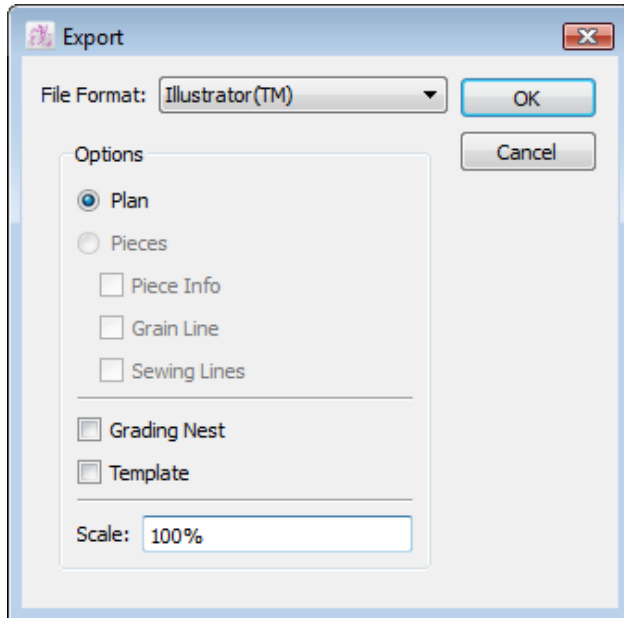
If choosing this format, you had to choose different options to customize your results and multiple selections are allowed. You can export -

Plan: Export the Construction plan or the graded Construction plan, with or without Template.

• Grading Nest
• Template

Pieces: Exports the pieces, the graded pieces with piece information (from the piece identification dialog box) and Grain Line, and/or Sewing Lines, with or without Template.

• Piece Information
• Grain Line
• Sewing Lines
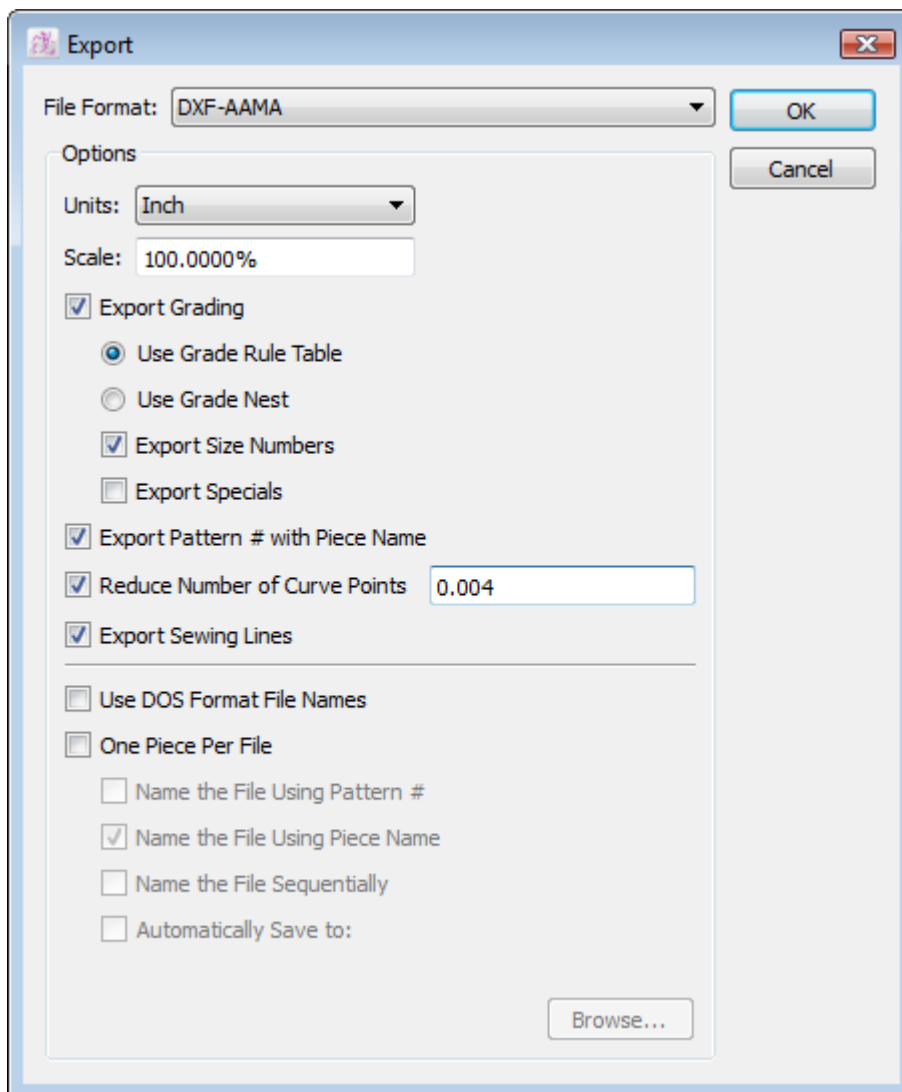• Grading Nest
• Template

Scale: Enter the value to specify the export size of selected unit.
The maximum is 100%; it is between **10%** to**100%**.

Export as a DXF-AAMA File

The DXF-AAMA format pattern file format can only be read by systems with translator or file converter.

How to do:

Select the *DXF-AAMA* format from the drop-down menu and dialog box shows as follows -

Units: Select the measurement unit

Scale: Enter the value to specify the export size of selected unit, max. 100%

Export Grading: Export the current Grading Nest.

Using Grade Rule Table: Create two distinctive file format: Base Size (*.dxf) and Grade Rule Table (*.rul).

Using Grade Nest: Create a single DXF file incorporating both pattern and grading.

Export Size Numbers: Export the numbers of each size.

Export Specials: Export the special names assigned in the Grade Working Sizes dialog box.

Export Pattern # with Piece Name: Export pattern number.

Reduce Number of Curve Points: Reduce to least number of points of a curve.

Export Sewing Lines: Export the sewing lines.

Use DOS Format File Names: Export a file with a DOS-compatible name, i.e. 8 characters, no space, all capitals with file extension).

One Piece Per File: Create a specific file for each pattern piece and allow you to set your format preference and export location. Exported file can be named by pattern number, piece name or in ascending number. You can combine or separate above options as per your preferences.

Name the File Using Pattern #: Named by Pattern number

Name the File Using Piece Name: Named by Piece name.

Name the File Sequentially: Name by ascending no. of each new piece file.

Automatically Save to: Pre-define the specific path/location to save the export file automatically.   This is once and for all action, saving your time in repeating path selection afterwards.
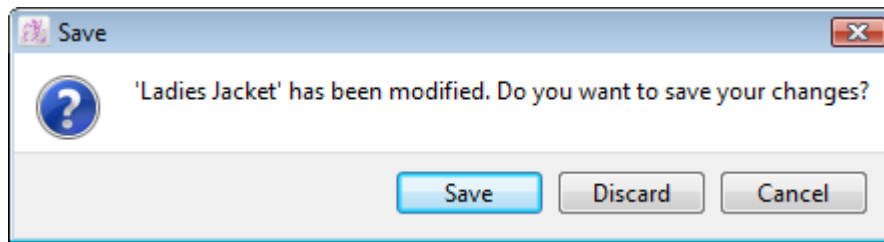
Browse…: Browse the directory and save the exported file accordingly.

File Menu: Quit

Close this application and all the open files.

If there is any modification unsaved, system will remind you to save or discard the changes; or, cancel to go back.

Save: Save the unsaved and exit afterwards

Discard: Quit without saving the unsaved

Cancel: Return to previous windows in use

Edit Menu

```
Edit
        Undo Move      Ctrl+Z
        Redo Move      Ctrl+Y

        Cut            Ctrl+X
        Copy           Ctrl+C
        Paste          Ctrl+V
        Replace        Ctrl+=
        Clear

        Select All     Ctrl+A
```
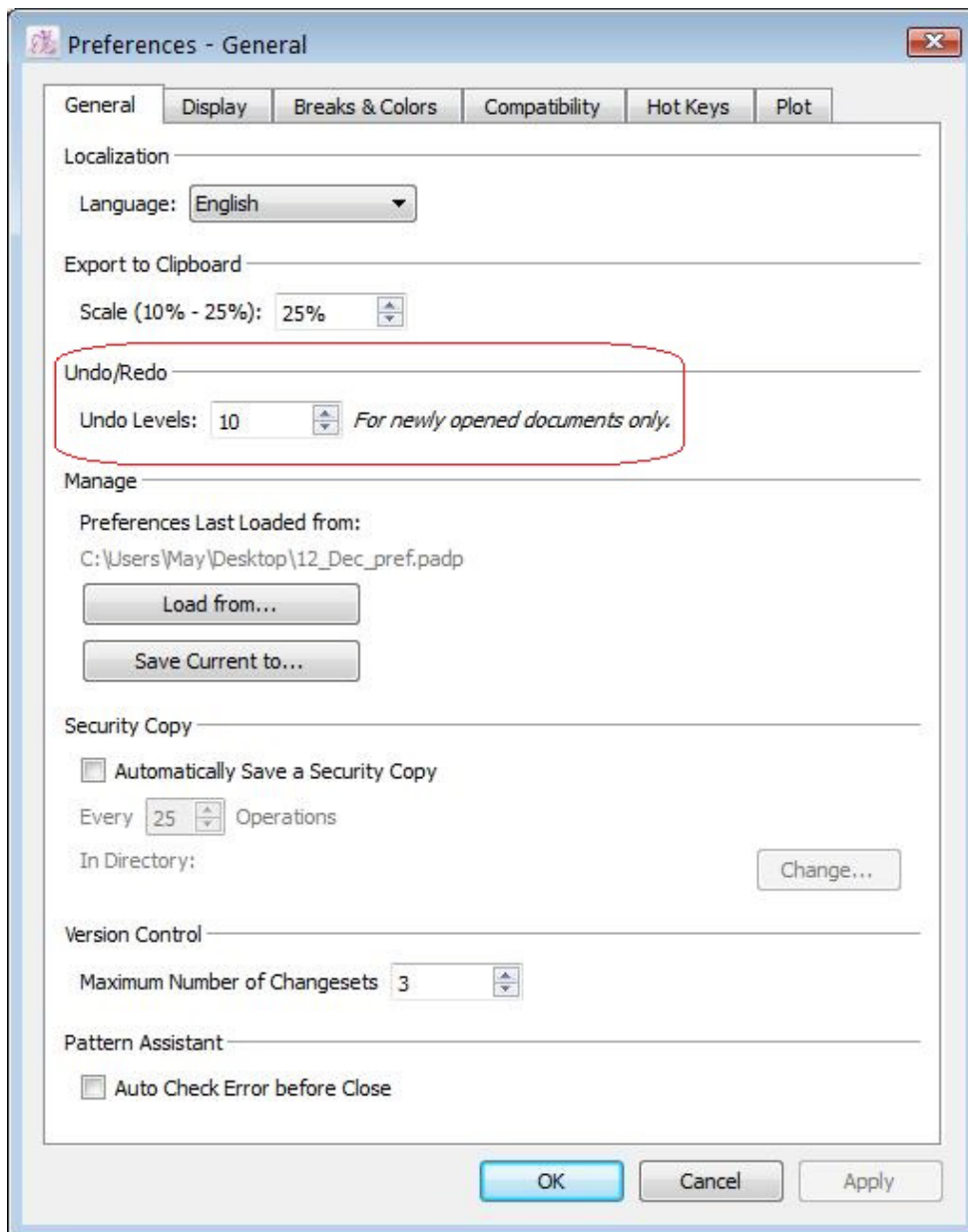
Perform editing on current working area or on specific pieces.

Edit Menu: Undo/Redo

Undo - Go back to the latest 3 – 20 moves done on the current working area at one time.

You can configure the number of moves recorded in systems. go to Options menu; then select Preferences -> General and change the Undo Levels (3-20) in the field.

Redo - Revert any moves cancelled by Undo command.

Edit Menu: Cut

Cut – Remove the working piece(s) or group of pieces from the working area. The cut piece(s) is/are temporarily kept at the clipboard and can be pasted to somewhere else of the same working area or in other files. Please be careful that the cut pieces will be removed from the clipboard permanently if any cut or copy action taken place afterwards.

Edit Menu: Copy

Copy - Copy selected working piece(s) or group of pieces from the working area. The origin is/are still kept in the working area while copied piece(s) is/are temporarily kept at the clipboard for you to paste on somewhere else in the same working area or in other files. Please be careful that the copied pieces will be removed from clipboard permanently if any cut or copy action taken place afterwards.

Edit Menu: Paste

Paste - Paste the previous copied/cut piece(s) or a group of pieces onto the current working area. Copied/Cut piece(s) can be pasted in other file. You can paste the same piece(s) repeatedly, provided that the copied piece(s) is / are still kept in the clipboard.
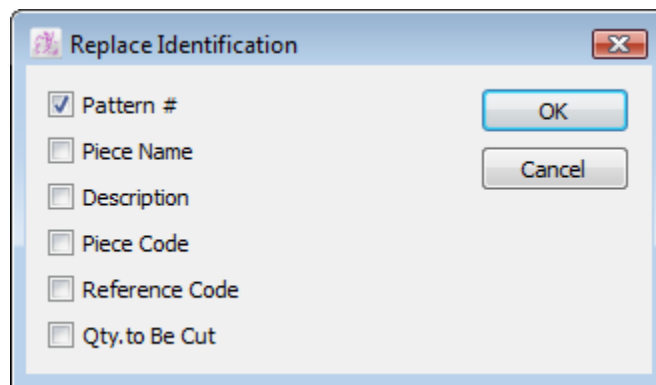
Edit Menu: Replace

Replace - Copy selected piece identification from one piece and to replace identification of one or more pieces.

How to use:

1 Select the reference piece.

2 Select *Copy* from *Edit* menu.

3 Select the targeted piece(s)

4 Select *Replace* from Edit menu.

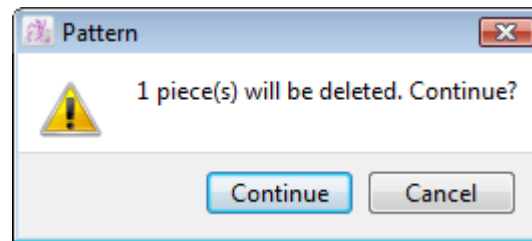*Replace Identification* dialog box shows as follows:

5 Check the options to be replaced on the selected piece(s).

6 Click the *OK* button to confirm

Copied information will replace the previous copied information.

Edit Menu: Clear

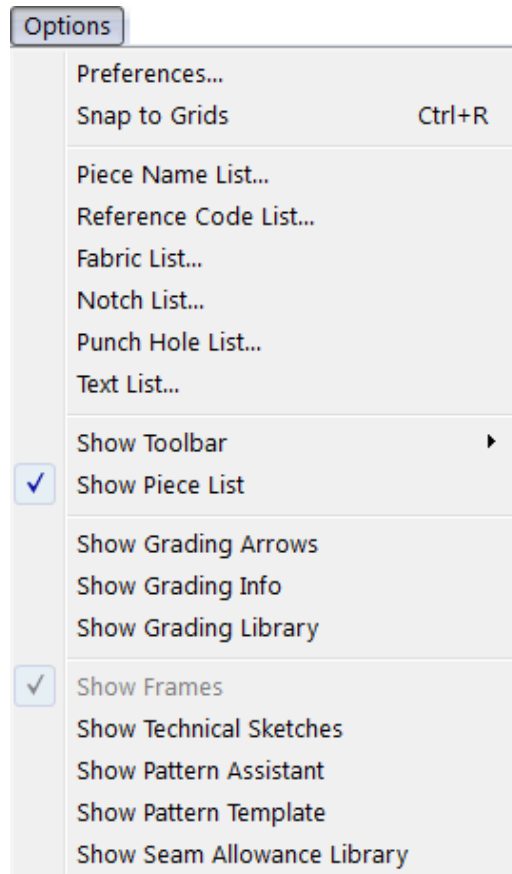*Clear* – Delete the elements selected or in use

A dialog box reminds you to confirm deletion or cancel it before taking actual Clear action.
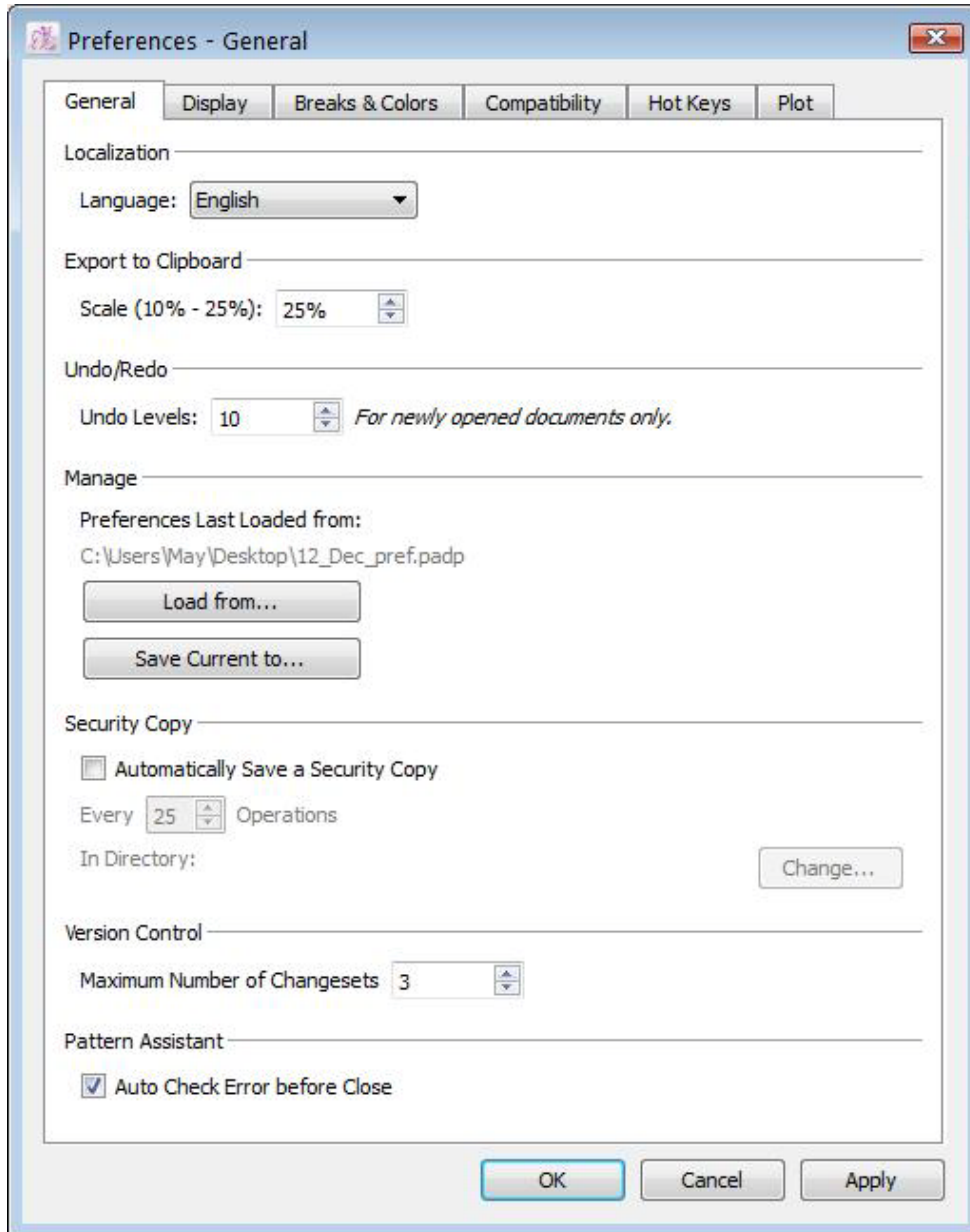

Edit Menu: Select All

Select All - Select all visible elements on the working area.

Options Menu

Options - List different options to customize your working area and facilitate you to work with PAD System.
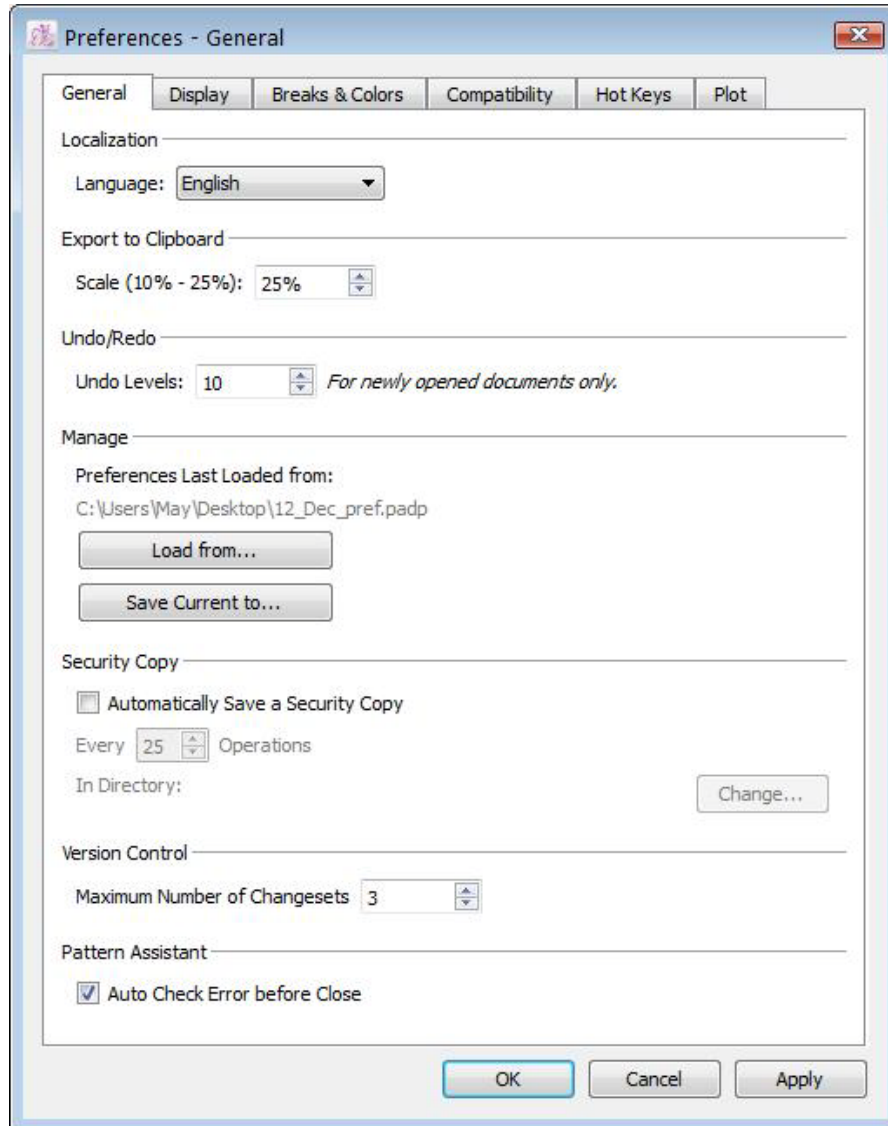
Options Menu: Preferences

Preferences - Set different parameters to customize your working area.

Preferences: General

Select preferences to customize your working area and offer following options -

Localization

Language: Define the language used. To choose *Auto from the list*, the language used will be the same as your operating system in use.

Export to Clipboard

Scale: Set the scale percentage (between10 to 25) of the pasted image by simply entering the number (or adjust by arrow).

Undo/Redo

Undo Levels: Pre-determine the number of undo levels by entering a value (between three to twenty) and only apply to the *newly opened documents*.

Manage

Allow to save or recall all modifications being made to the Preferences under Manage, where your customized preferences are saved with .padp extension.

```
Manage
Preferences Last Loaded from:
C:\Users\May\Desktop\Demo Files\pref.padp
     Load from...
     Save Current to...
```

Load from: Browse and retrieve the preference file from directory
Save Current to...: Save the current preferences in selected location.

Security Copy

Security Copy... – check to save a Security copy of your work at pre-determined time intervals automatically.

To configure your application to save a security copy:

```
Security Copy
 ☑ Automatically Save a Security Copy
 Every  25  ⬍ Operations
 In Directory:  C:\Users\May\Desktop\Demo Files     Change...
```

1 Check Automatically Save a Security Copy to backup any updates and will ask you to give the location of the security copy being saved afterwards. Click OK to confirm. Uncheck to deactivate the function.

2 Specify the auto save time interval by determining number of actions taken place after the last auto save.

3 Click *Change…* to change the Security copy saved location

Click *OK / Apply* to execute; or click *Cancel* to return previous action.

Version Control

Maximum Number of Changesets:

Predetermine the maximum number (Between1to 3) to save for changeset files. The maximum number is between1 to 3. The default number is 3.

Pattern Assistant

Auto Check Error before Close: Check this option to start checking before close.

Preferences: Display

Customize your working area as per options selected. *Display* offers variety of options:
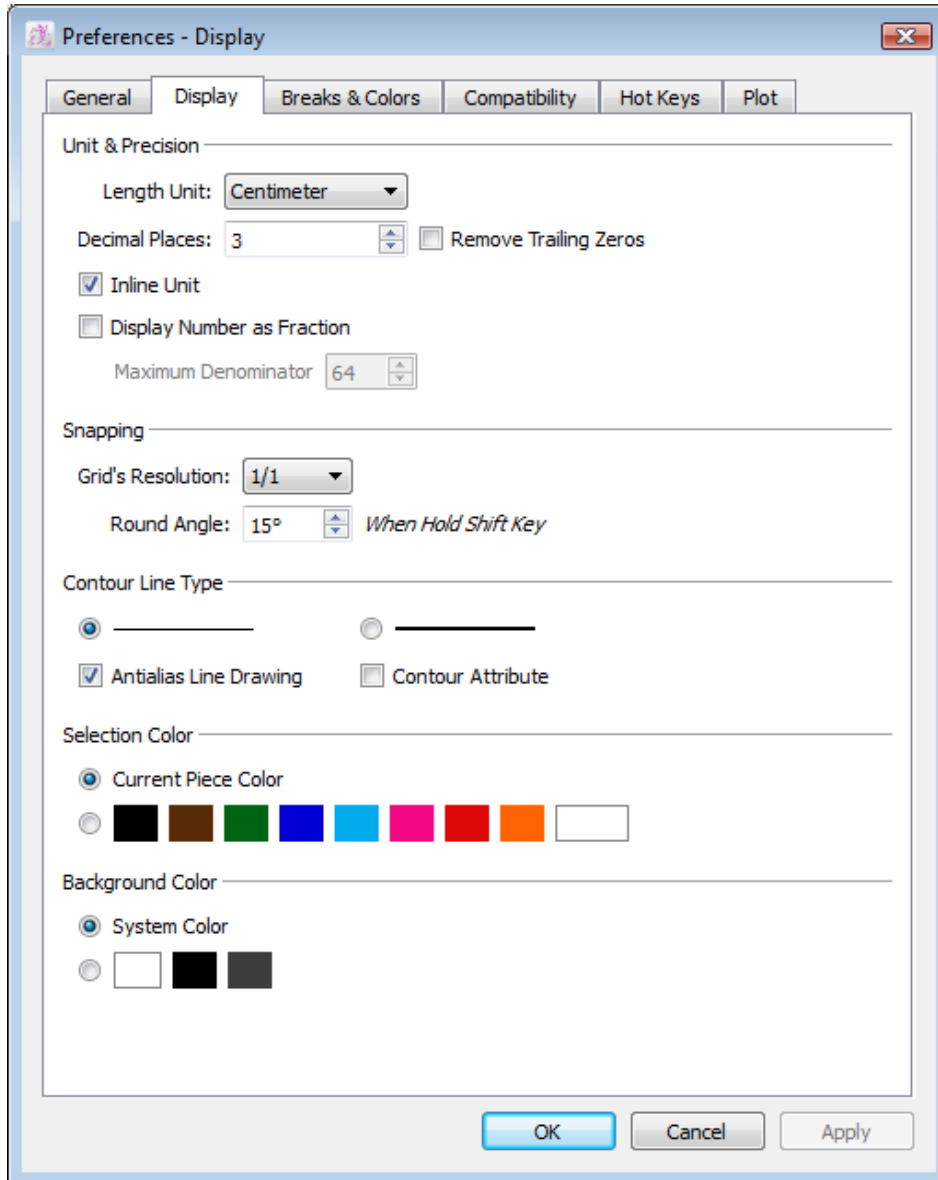
Unit & Precision

Length Unit: Select the measurement unit, i.e. centimeter, millimeter and inch

Decimal Places: Define the figure from one (0.X) to six (0.XXXXXX) decimal places. You can input number in the field directly or adjust the number by arrow cursor.

Remove Trailing Zeros: Check to remove zero in measurement.

**Inline Unit:** Check to convert measurement displayed as follows -

Segment length	Measurement Box
18 inch	18 in
45.72 cm	45.72 cm
457.2mm	457.2mm

Display Number as Fraction: Check to show all measurement in fraction but require to set the maximum denominator for fraction presentation

Maximum Denominator: Select from 0 to 99

Snapping

Grid's Resolution: The Grids value is established for freehand selection and arrow manipulations. It allows you to move step-by-step according to the chosen value.
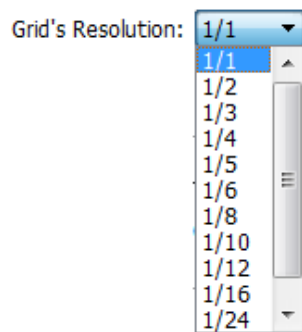
Round Angle: Input the value in the field directly or adjust by arrow. Then, you can create the round angle by holding shift key and moving on each step as per the angle set at the same time.
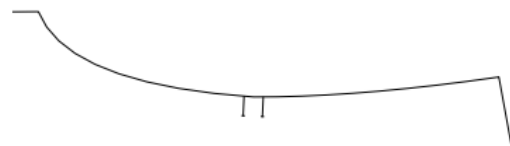
Contour Line Type

Select the contour line present in either fine or thick line.

Antialias Line Drawing: Check to smooth out the segment line, no matter curve or straight, to achieve more precise drawing.

Uncheck Antialias Line Drawing   *Check Antialias Line Drawing*

Contour Attribute: Check this option to show point characteristic

point

Click to show the characteristic of the selected point

Selection Color

Select the color of line to highlight the selected segments for easier identification. You can choose either from current piece color or from the color options available.

Background Color

Choose the Background Color so as to make a contrast with your piece for easier identification. You can choose System Color (as per default) or different colors available (White, Black or Grey).

Choose and click OK to confirm or click Cancel to return.

Preference: Breaks & Colors

Differentiate different Grading Breaks by their color and name to facilitate grading work.
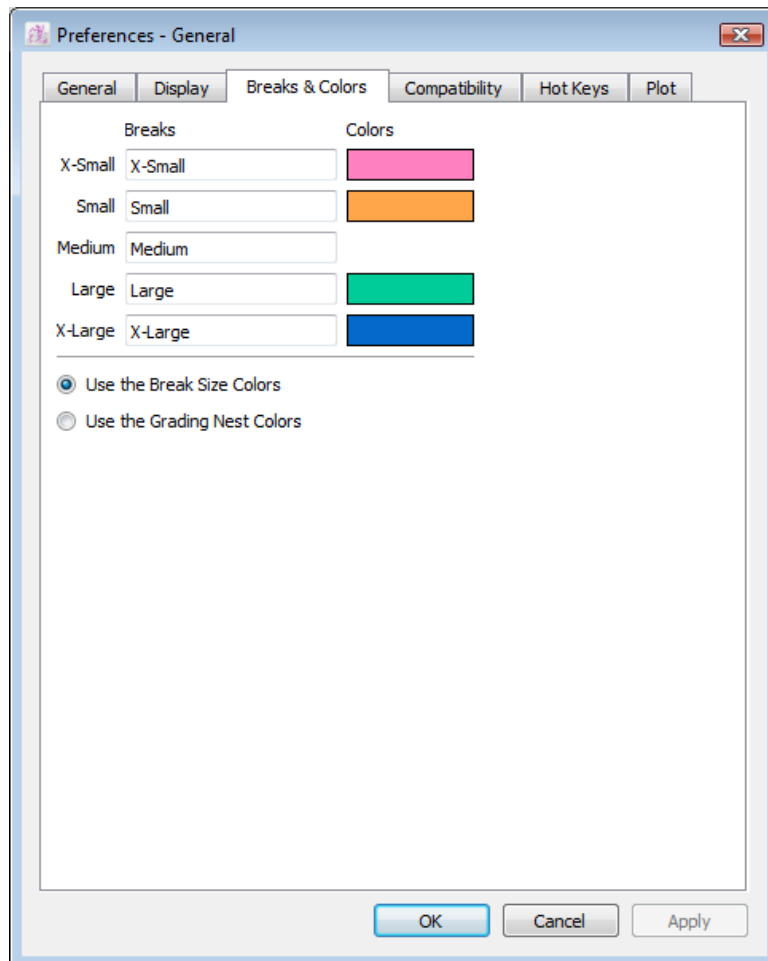
To assign colors and/or names to Grading Breaks:

1 Select and change the color of respective grading group by choosing color from the color chart.

2 Rename of each break to replace existing one set by default

3 Choose to display the above color to be applied in break size (Use the Break Size Color) or grading nest (Use the Grading Nest Color).   Please refer to Colors in the Working Sizes section to learn more about configuring Grading Nest Colors.

 Click OK / Apply to confirm or click Cancel to return.

Preference: Compatibility

Customize your working area by setting language used and its look and feel.
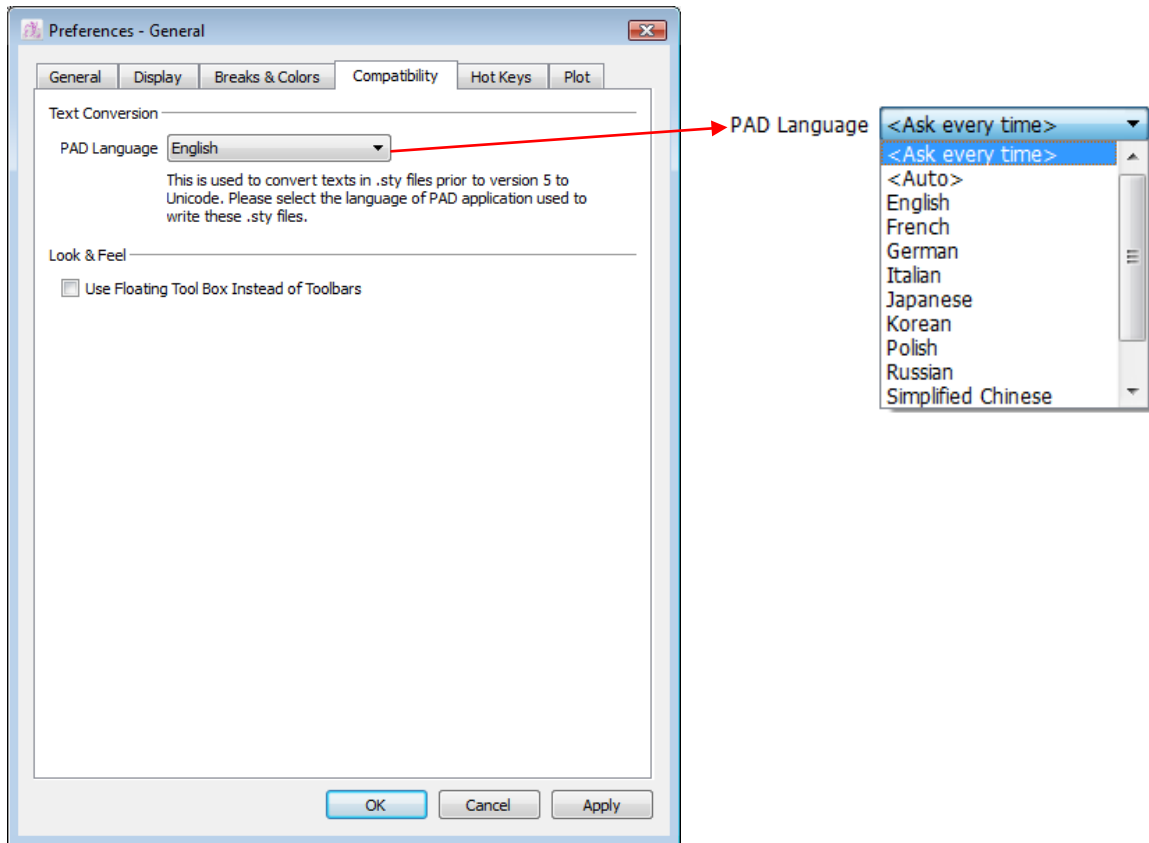
Text Conversion

Convert text in .sty files saved in previous version (prior to v5.0) to Unicode

PAD Language: Choose the language used from the language list available. Choose "Auto" means it will follow as per the default language of operating system. "Ask Every Time" means the system will remind you to choose language when you open any file saved in previous version anytime.

Look & Feel

Use Floating Toolbox Instead of Toolbars: Check to switch from Toolbars to Floating Toolbox.

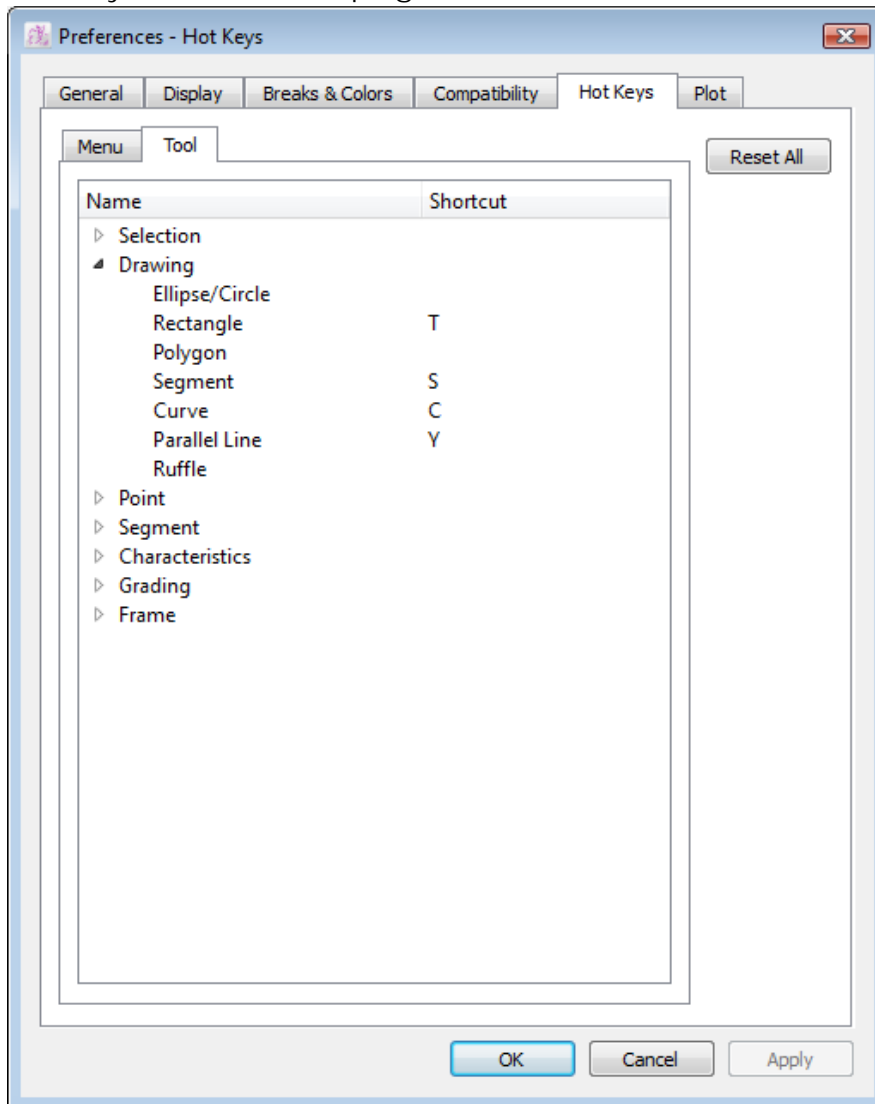Click *OK / Apply* to confirm or click *Cancel* to return

Preference: Hot Keys

Create shortcuts to facilitate you to carry out different functions so as to increase work efficiency. You can use the default one or re-configure your hot key by your own.

Hot Keys and Menu tab page shows as follows -
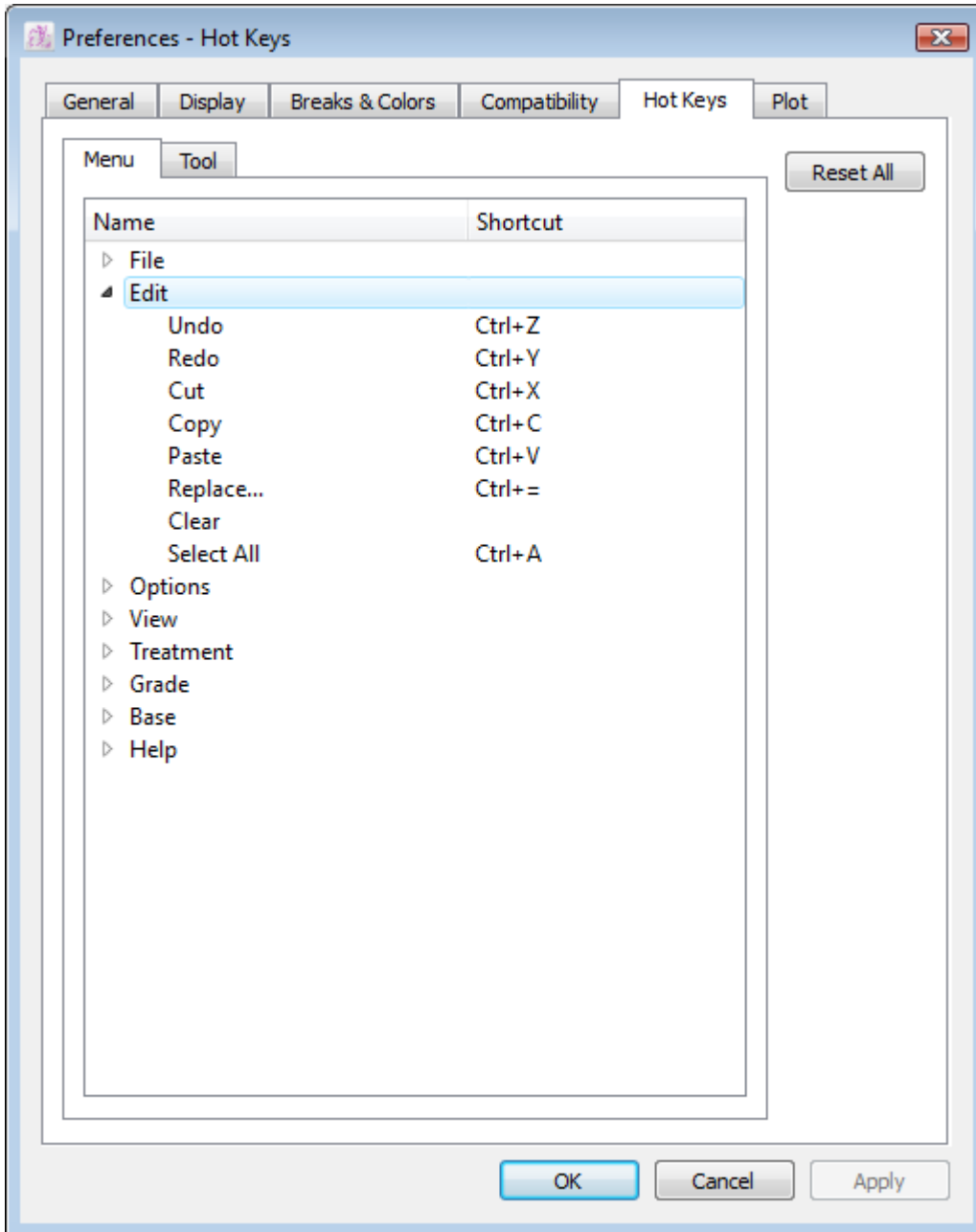
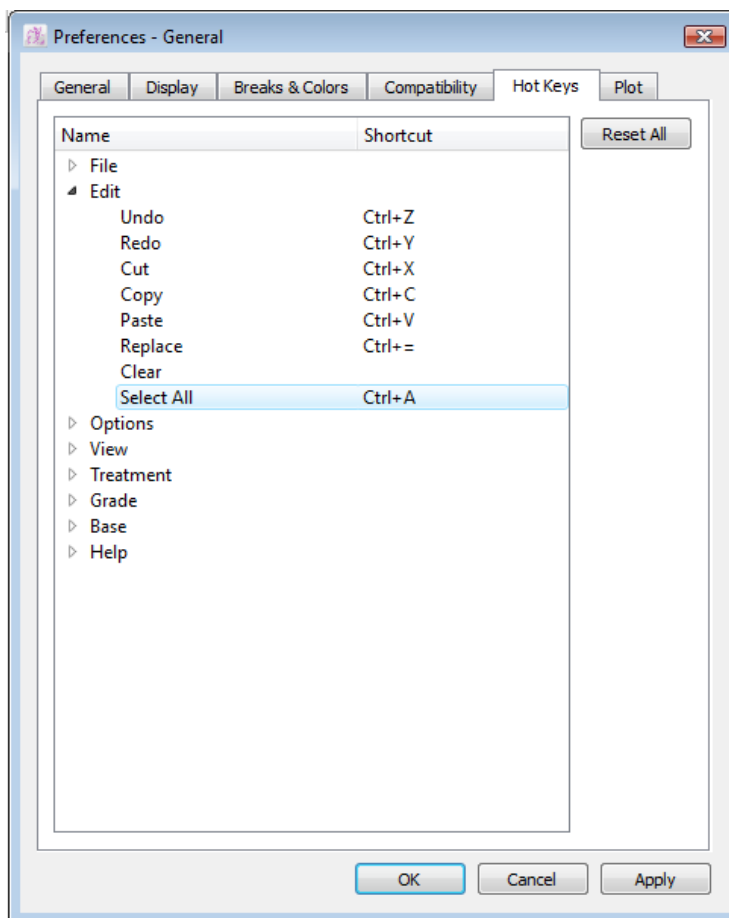Hot Keys and Tool tab page shows as follows -

Hot Key for the tools most frequent used:

Ruler -- R

Rectangle -- T

Segment -- S

Curve -- C

Parallel -- Y

Point -- Q

Add Point to Segment --D

Walking Piece -- W

Segment Length -- E

Add Seam -- A

How to do:

1 Select *Options* -> *Preferences- General* -> *Hot Keys* and select Menu or Tool tab page.

2 Highlight specific function to set the Hot Key

3 Enter the keys on keyboard to create new Hot Key

Preferences - General

General	Display	Breaks & Colors	Compatibility	Hot Keys	Plot

Name	Shortcut	Reset All
▷ File		
◢ Edit		
Undo	Ctrl+Z	
Redo	Ctrl+Y	
Cut	Ctrl+X	
Copy	Ctrl+C	
Paste	Ctrl+V	
Replace	Ctrl+=	
Clear		
Select All	Ctrl+A	
▷ Options		
▷ View		
▷ Treatment		
▷ Grade		
▷ Base		
▷ Help		

OK   Cancel   Apply

4 Click *OK / Apply* to confirm or click *Cancel* to return

Permitted Hot Keys

Not all Hot Key configurations are allowed to be set in Windows / Macintosh. System may prompt a warning message to remind the Hot Key you set is not valid. Please review and try again.
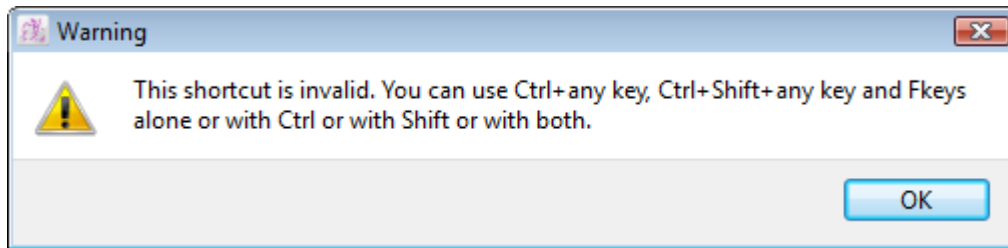
Invalid Hot Keys, per operating system

Below shows the Hot Keys configuration that is not permitted in Windows and Macintosh operating system.

Hot Key combinations not permitted by Windows / Linux	
F4 + Ctrl	Num lock + Ctrl
F4 + Ctrl + Shift	Num lock + Ctrl + Shift
F6 + Ctrl	Insert + Ctrl
F10	Caps Lock + Ctrl
F10 + Ctrl + Shift	Caps Lock + Ctrl + Shift
F10 + Ctrl	Space bar + Ctrl
F10 + Shift	Space bar + Ctrl + Shift
Esc + Ctrl	Tab + Ctrl
Esc + Ctrl + Shift	Tab + Ctrl + Shift
Print Screen + Ctrl	0 (w/NumLock) + Ctrl
Print Screen + Ctrl + Shift	0 (w/NumLock) + Ctrl + Shift
Scroll lock + Ctrl + Shift	

Hot Key combinations not permitted by Macintosh

F9 + Shift	Q + Command + Shift
F10 + Shift	3 (Print Screen) + Command + Shift
F11 + Shift	4 (Print Screen Selection) + Command + Shift
Esc + Command	Page Up + Command
Esc + Command + Shift	Page Up + Command + Shift
Num Lock + Command	Page Down + Command
Home + Command	Page Down + Command + Shift
Home + Command + Shift	Caps Lock + Command
End + Command	Caps Lock + Command + Shift
Insert + Command	Backspace + Command
Insert + Command + Shift	Backspace + Command + Shift
Speaker Key + Command	Enter + Command
Speaker Key + Command + Shift	Space bar + Command
Tab + Command + Shift	Space bar + Command + Shift
Tab + Command	Return + Command
H + Command	Return + Command + Shift
Q + Command	Enter + Command + Shift

Preferences: Plot

Open the *Plotter* page to set your printer / plotter, select drivers and configure different settings and preference accordingly.

You can select the plotters already connected with COM Port (Windows / Linux) or Serial Port (Linux) of your workstation / servers. You can select and system will scan and detect if there is any printer / plotter connected.
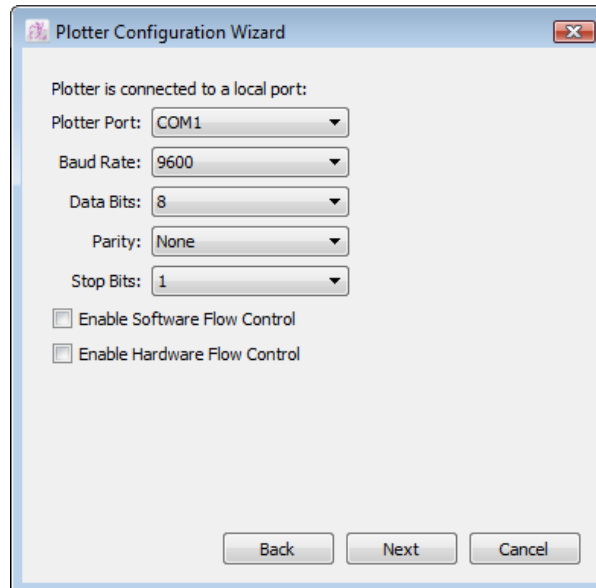
Note: You may require a Keyspan adapter.

To configure plotter driver:

1 Select *Options-> Preferences -> Plotter:*
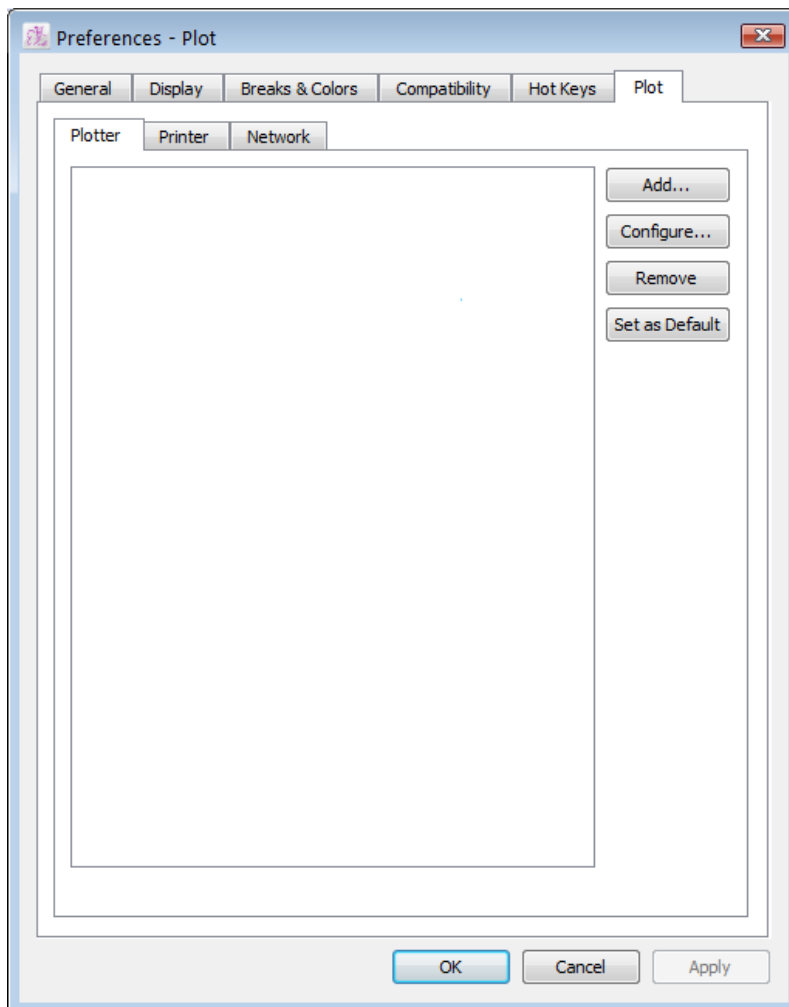
2 Click *Add...* Select the plotter driver from list. Click Add... to select specific plotter. If you can't find any suitable one from the list, you can use "Plotter Configuration Wizard" to connect and set up the plotter at ease.

To configure the port setting COM Port (Windows) / Serial Port (Macintosh) if necessary.

Plotter Port: Drop-down menu to select the port that connected with respective plotter.

Baud Rate: Drop-down menu with various bauds rate options - 2400, 4800, 9600, 19200 or 38400

Data Bits: Drop-down menu with data bits options - 7 or 8

Parity: Drop-down menu with Parity options - EVEN, ODD or NONE.

Stop Bits: Drop-down menu with data bits options - 1, 1.5 or 2.

Enable Software Flow Control: Check to activate the software flow control

Enable Hardware Flow Control: Check to activate the hardware flow control

Click *Next* to continue the configuration process.

3 Choose the Plotter and click *Next* to continue.
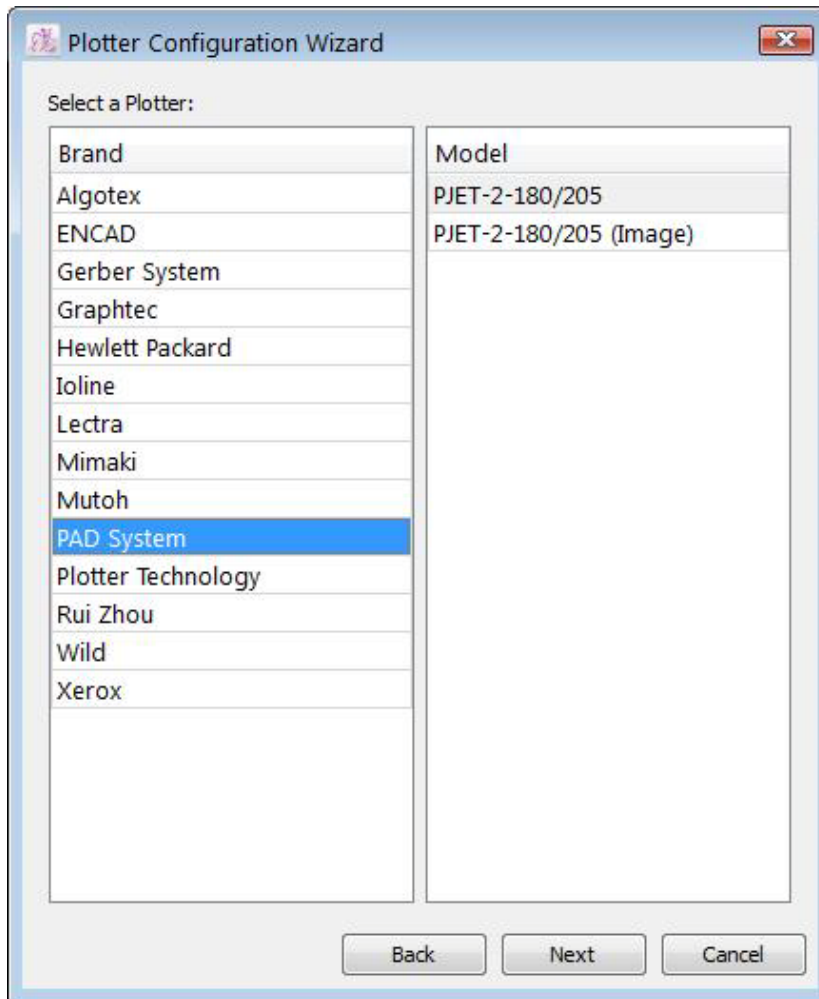
Support Plotter Drivers

Brand	Model
Algotex	PowerJet-ProJet
ENCAD	CADJET2
Gerber System	SP 200
	GGT AccuMark 100
	GGT AccuMark 300
	GGT AccuMark 700
	GGT AccuMark Silhouette
Graphtec	CE2000
	CE3000
	CE5000
	FC8000
	GP3000
Hewlett Packard	HPGL 2
	HPGL 2 Basic
	HPGL 2 Color
Ioline	Flexjet
	Signature 5000
	Studio 8
	Studio Cutter
	Stylist 2000
	Summit
Lectra	E33
	FlyPen
	Investronica
	Microdynamic
	Plot CF
Mimaki	CG-90 AP
	CG-90 APR
Mutoh	AC-1650
	AC-1650 – Take-Up Roll
PAD System	PJET-2-180/205
	PJET-2-180/205 (Image)

Plotter Technology	Neon
	TX
Rui Zhou	R Series
Wild	TA40
	TA400
	TA500
Xerox	2230ij

4 Define the paper sizes with some default options available.
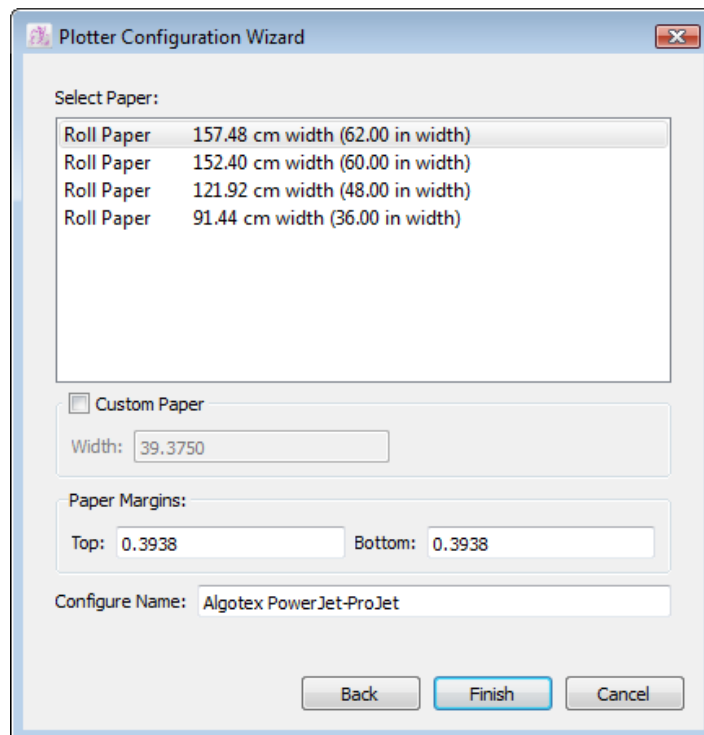
Select Paper: Choose the default *Paper Width* from the list.

Example: Roll Paper 157.48 cm width (62.00 in width)

User had to enter the print margins since print size usually smaller than paper size. (measurement in cm)

Custom Paper: If none of the default paper width found, you can check and customize the paper width

Paper Margins: Set paper margins - Left, Right, Top and Bottom.

Configure Name: Show selected plotter name from previous settings.

Click *Finish* to confirm.

Paper Margin Setting
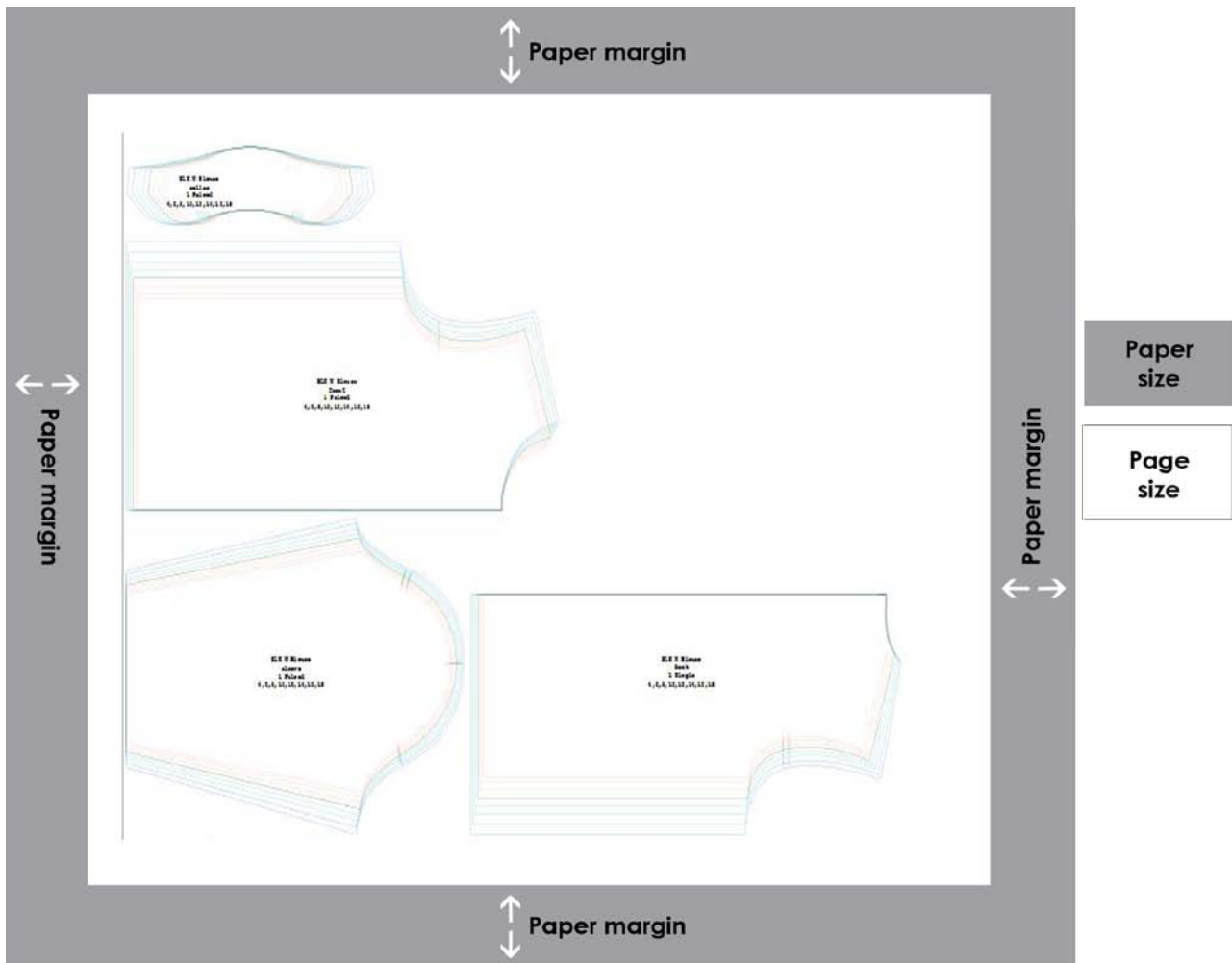
5 Default Plotter will be chosen in Plot dialog box.
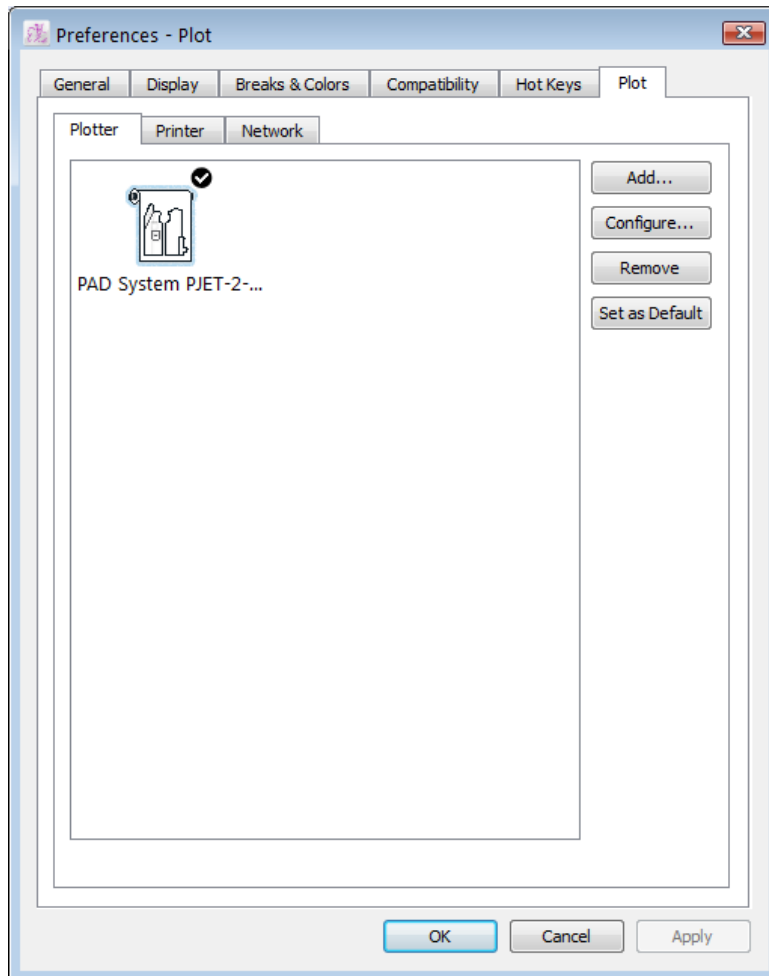
Configure…: Configure or Change the setting of selected driver. Click Configure… or double click on selected driver to change the setting Change the setting of the selected driver. Click *Configure…* or double click the mouse button on selected driver to change the setting or the driver of existing Plotter.

Remove: Select and Click *Remove* to remove the driver.

Set as Default: Select the Plotter then click setting as default.

To configure printer driver:

Besides selecting plotter / driver, you also need to install driver of respective plotter; and it will update in Printer list once the driver successfully installed.
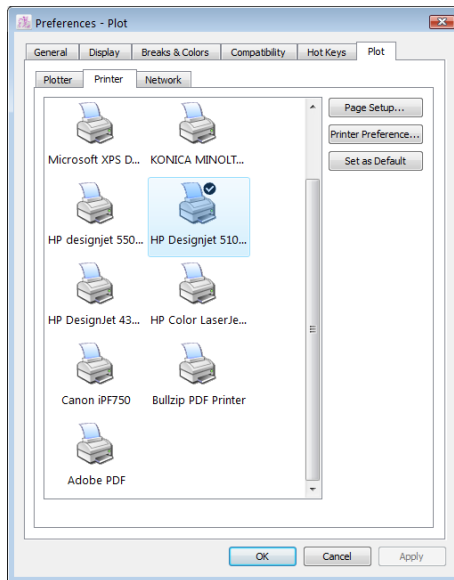
Page Setup...: Choose paper size, set margins and/ or orientation. Click *OK* to confirm.
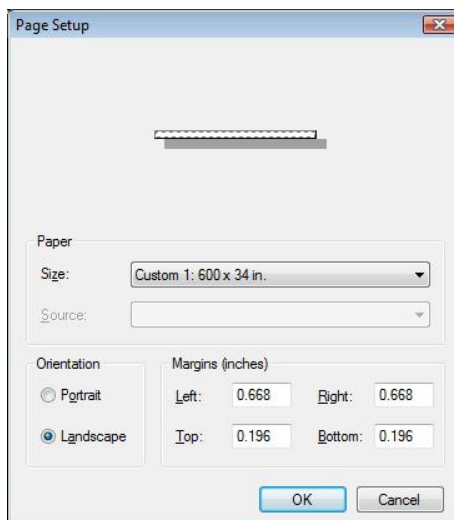
Set as Default: If you want to save the previous changes of setting, click Set as Default to save all of the current setting as default.

The printer driver will show on the File menu, Plot dialog box.

Network Plotting

Connect the plotter via TCP/IP (LAN, Wireless or Internet) and send plot command to network plotter directly. Please refer to Network section under Plot Chapter for details.

How to do:
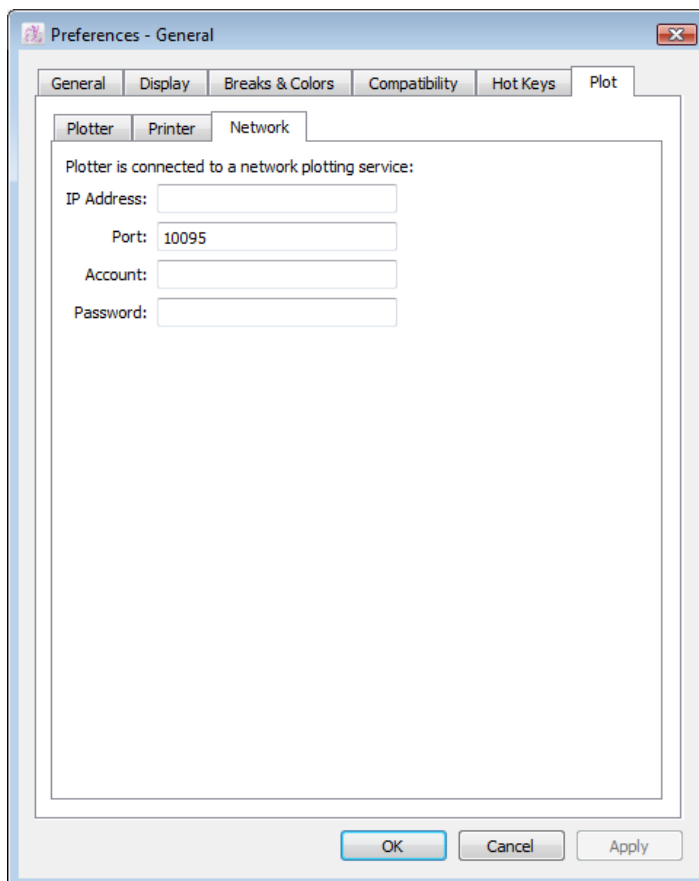
Address: Enter the server IP Address that connected with the plotter.

Port: Enter the TCP/IP Port number

Account: Username (who is allowed to send the plot command)

Password: Password for that account

Click *OK* to confirm

Options Menu: Snap to Grid

Check to activate the grid that allows you to move the pieces or elements on the working area using pre-defined grid steps. You can deactivate it at any time.

Please refer to the Snapping under Preference Chapter to learn on setup the grid.

To check if the Snap to grid function is activated, a small tick has put next to it. Check the box to control function activation.
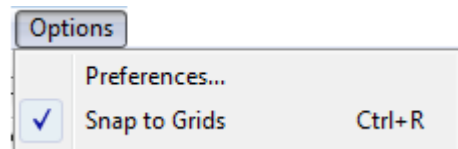
Info Bar shows the existing settings status. "Grid: On / Off" indicates the grid is activated or not.

Options Menu: Piece Name List...

You can create the entire most used pieces name into a list so as to facilitate you in working with the pattern pieces. Select the Piece Name List… and a list of piece name drawn from Piece Info and Set Piece will be enlisted, making it easier to build and a list of the most frequently used piece names. The *Piece Name List* dialog box appears:
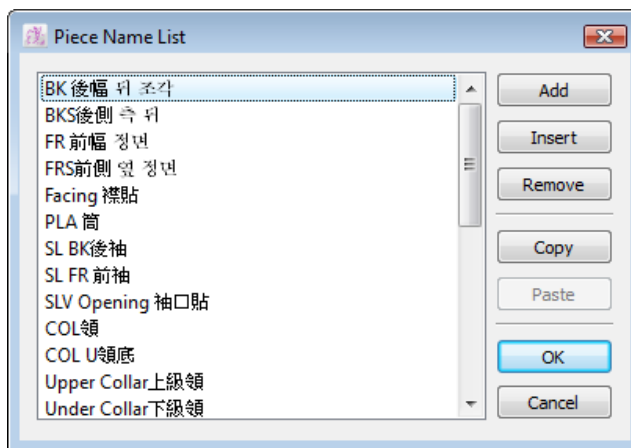
Add: Add and name a new blank piece name at the end of the list.

Insert: Insert and name a new blank piece name above the selected piece name of the list

Remove: Remove the selected piece name from the *List*.

Copy: Copy the Piece name from the *List* to clipboard where you can paste this onto target destination in the list or outside, like a database or word processing application.   This is particularly useful to move the name position within the list.

Paste: Paste the Piece name from clipboard to the list. The source may be from current list or outside. Paste function will be activated if only you have copy something on the clipboard, regardless the source from.
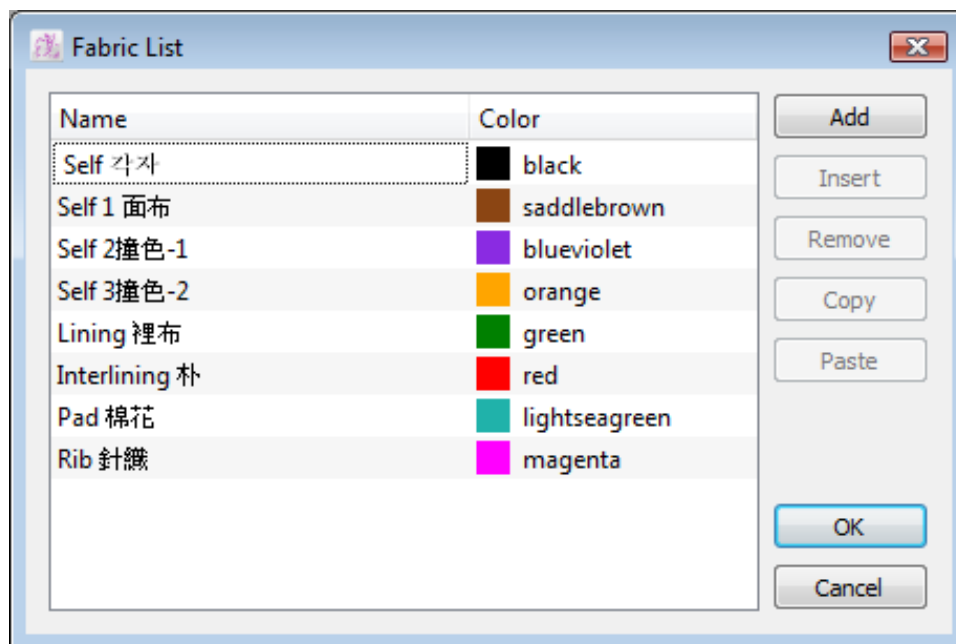
To rename an existing piece name: Select existing name and rename it, avoid duplication.

All items in the *Piece Name List* are saved in the Pattern Preferences file.

Options Menu: Reference Code List...

Create or modify a reference code list and the list is available in Piece Info and Set Piece that facilitate you to build and access the most-used reference code list. Select the *Reference Code List...* from *Options* menu. It shows -
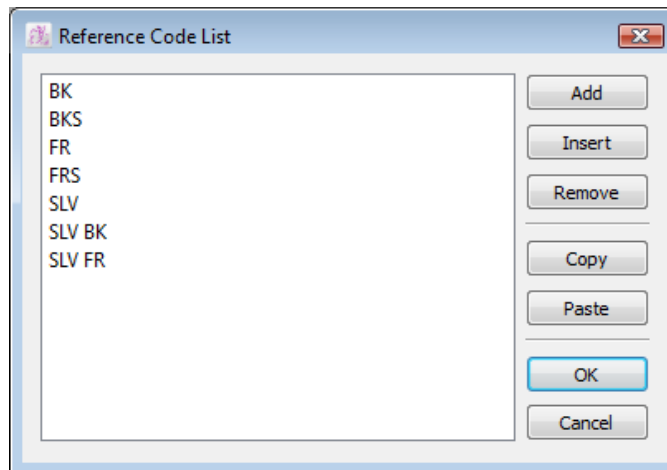
Add: Add and name a new blank reference code at the end of the list.

Insert: Insert and name a new blank reference code above the selected reference code of the list.

Remove: Remove the selected reference code from the *List*.

**Copy:** Copy the Reference Code from the *List* to clipboard where you can paste this onto target destination in the list or outside, like a database or word processing application. This is particularly useful to move the reference code position within the list.

Paste: Paste the Reference Code from clipboard to the list. The source may be from current list or outside. Paste function will be activated if only you have copy something on the clipboard, regardless the source from.

To rename an existing reference code: Select the existing reference code and rename it, avoid duplication. You can do it by simple cut and paste or direct entry.

All items in the Reference Code List are saved in the Pattern Preference file.

Options Menu: Fabric List...

Create or modify a Fabric List and the list is available in the *Piece Info* and *Set Piece* that facilitate you to build and access the most-used fabric list.

Select the *Fabric List* from *Options* menu. It shows -

Name	Color	
Self 각지	■	black
Self 1 面布	■	saddlebrown
Self 2撞色-1	■	blueviolet
Self 3撞色-2	■	orange
Lining 裡布	■	green
Interlining 朴	■	red
Pad 棉花	■	lightseagreen
Rib 針織	■	magenta

Buttons: Add, Insert, Remove, Copy, Paste, OK, Cancel

Add: Add and name a new blank fabric entry at the end of the list.

Insert: Insert and name a new blank fabric entry above the selected fabric name of the list.

Remove: Remove the selected fabric from the fabric list.

Copy: Copy the fabric name from *list* to the clipboard where you can paste this onto target destination in the list or outside, like a database or word processing application.   This is particularly useful to move the fabric within the list.

Paste: Paste the Fabric name from the clipboard to the list . The source may be from current list or outside. Paste function will be activated if only you have copy something on the clipboard, regardless the source from.

To rename an existing fabric name: Select the existing reference code and rename it, avoid duplication. You can do it by simply copy and paste or direct entry.

Besides fabric name, you can also change the color by selecting the color from the drop-down menu (found at the right).
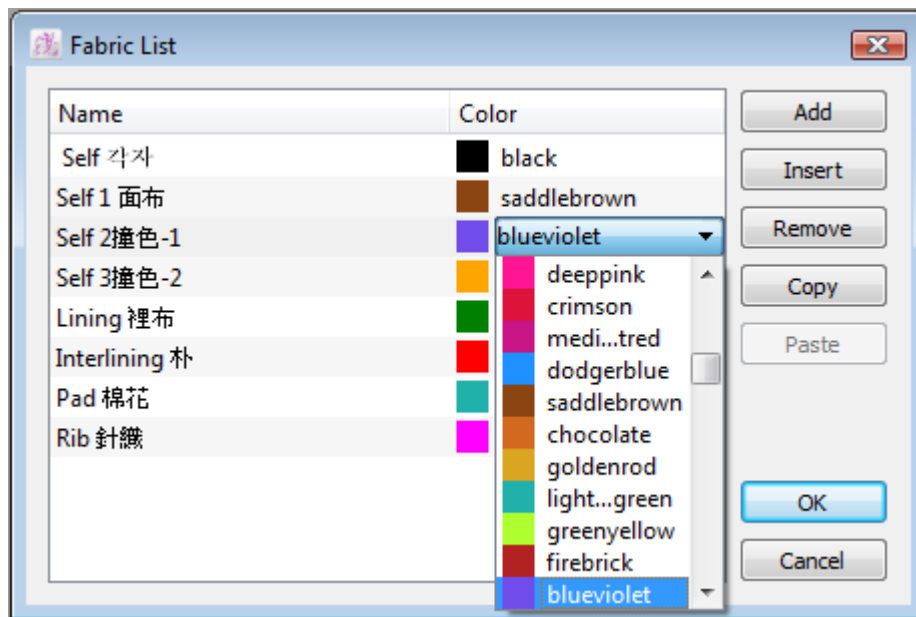
All items in the *Fabric List* are saved in the Pattern Preferences file.

Options Menu: Notch List...

PAD System™ Pattern software offers three types of system Notches:
the Simple Notch, the Double Notch and the V Notch.

To create new Notch types:

Select the *Notch List...* from Options menu. It shows -
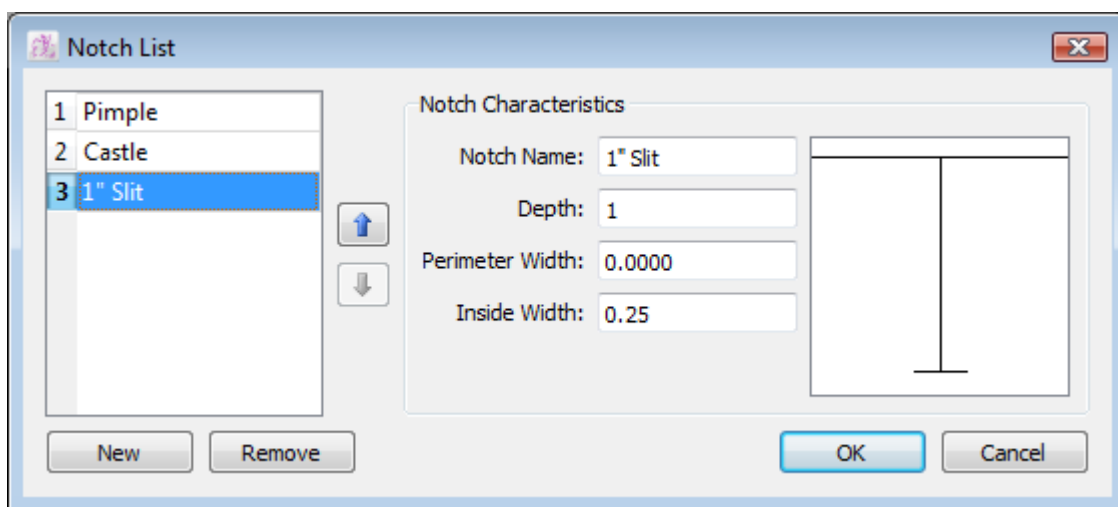
New: Create a new Notch.

Remove: Remove a Notch from the list.

You can modify the characteristics of the notch easily by inputting specifications in the Notch Characteristic directly and click OK to confirm changes. Newly created notches are shown to the *Notches* function in the *Treatment* menu.
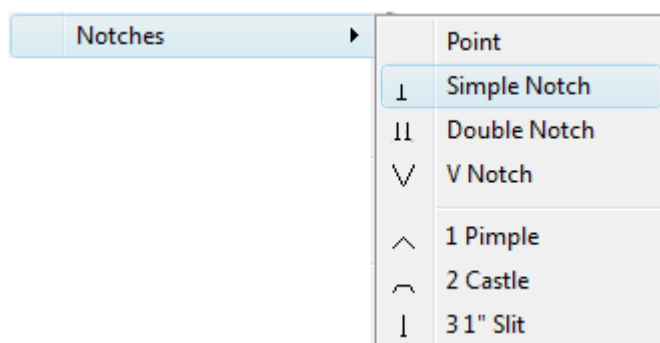
Creating a Notch

Click *Notch List…from Option menu and click New to create a new notch..*
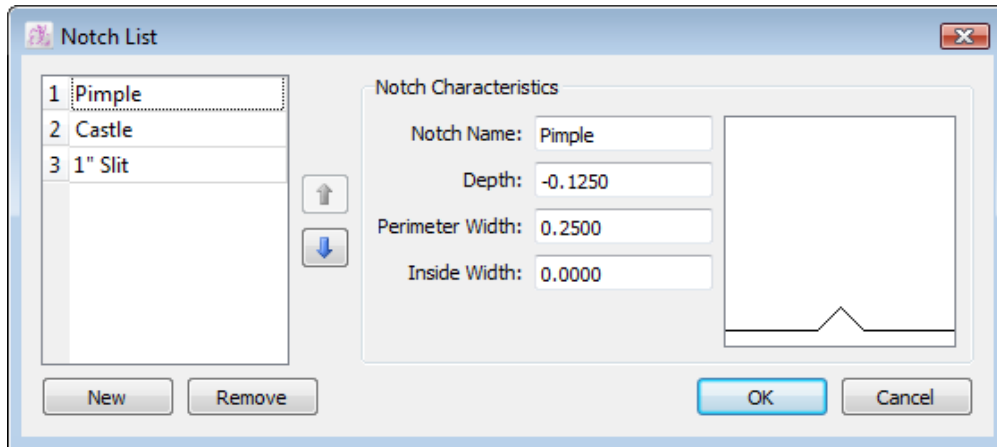
Notch Number: A number will assign to the new notch automatically and it also helps to identify the 16-button digitization process as well.   This number also determines the position of the Notch in the Notches sub-menu under Treatment menu.   You can select the notch and adjust by clicking Up or Down cursor to change the notch ranking. You can create a new or select to remove existing notch by clicking New or Remove.

Notch Name: Name to identify each notch.

You can use three measurements to define a Notch: (max. value 1 inch / 2.56cm)

• **Depth:** Specify the length of the interior (positive value) or exterior (negative value) of the shape.

• **Width Perimeter:** Specify the width of the notch on the perimeter of the shape.

• **Inside Width: Specify the** width of the notch at its internal end.

The full size notch diagram will be shown as per the perimeter you set.

Note: All characteristics in the Notch list are saved in the Pattern Preferences file.

Options Menu: Punch Hole List...

Create a new or modify existing punch holes by defining its characteristics

Select *Punch Hole List...from Options* menu. It shows-
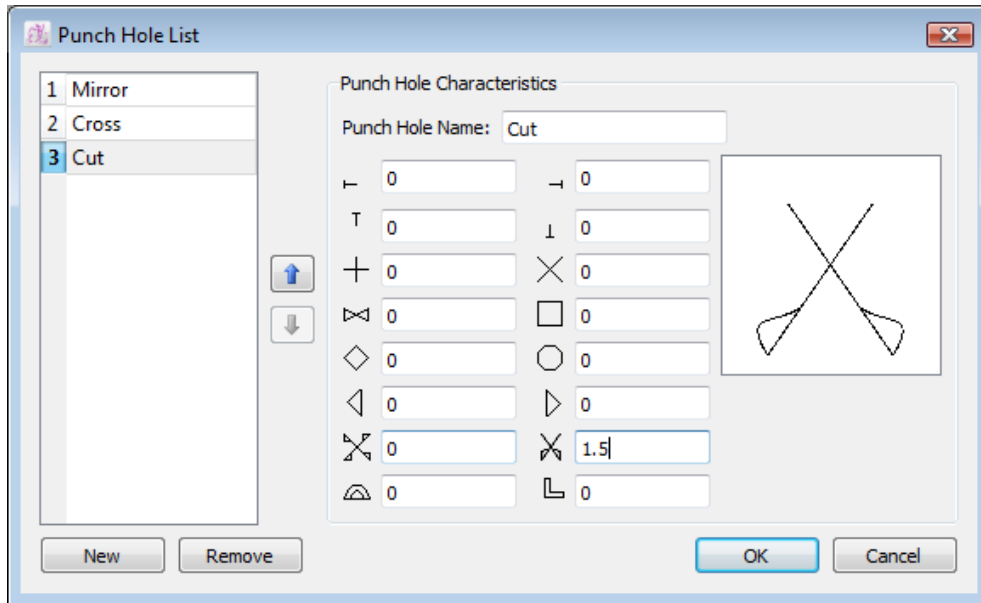
New: Create a new punch hole.

Remove: Remove a punch hole from the list.

You can modify the characteristics of the punch hole easily by inputting specification in the Punch Hole Characteristics and click OK to confirm changes. Newly created punch holes are shown to the Notches function in the Treatment menu.

Creating a Punch Hole

Click *Punch Hole List…*from *Option* menu and click *New* to create new punch hole.
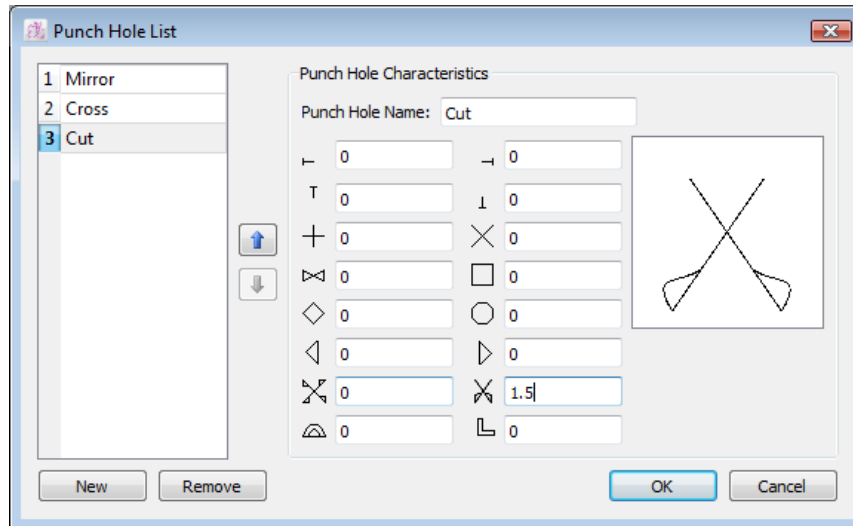
Punch Hole Number: A number will assign to the new punch hole automatically and it also helps to identify the 16-button digitization process as well.   This number determines the position of the Punch hole in Punch Hole sub-menu under Treatment menu.   You can select the punch hole and adjust by clicking Up or Down cursor to change the punch hole ranking. You can also create a new or select to remove existing punch hole by clicking New or Remove.

Punch Hole Name: Name to identify each punch hole

You can create or customize the punch hole by selecting ten forms of punch hole with modifiable measurements in the list where each form of punch hole can be used individually or group together.
The full size punch hole diagram will be shown as per the perimeter you set. Click OK to confirm and save the settings.

Punch Hole Measurement: max. value 1 inch / 2.54 cm

Click the *OK* button to confirm your punch hole.

Note: All characteristics in the *Punch Hole List* are saved in the Pattern Preferences file.

Options Menu: Text List...

Create a new and modify existing text list that include the most used text to facilitate your daily routine operation.

To define or modify the text list:

1 Click *Text List...* from the Options menu. It shows –
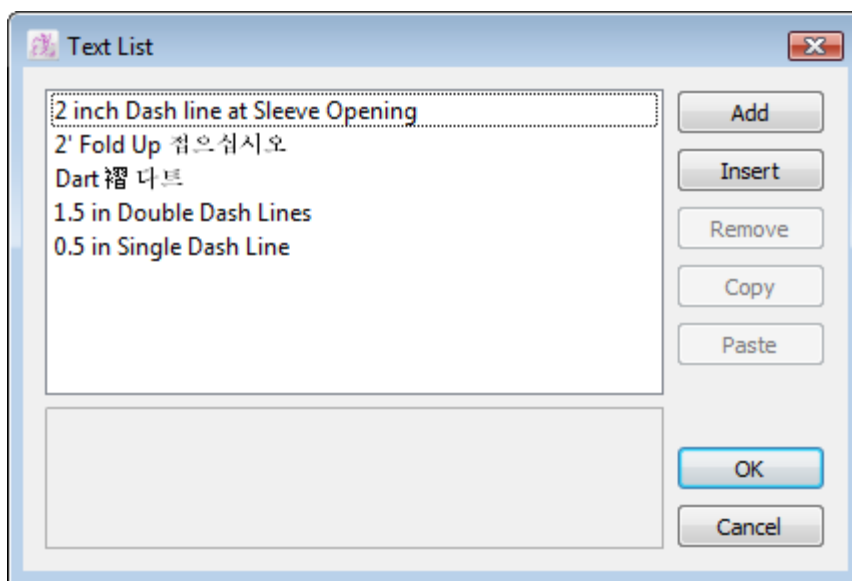
2 Click *Add* to add and name a new text element at the end of the list; click Insert to add and name a new text element above the item selected.

3 Select the items and then edit the text at the bottom box

The *Text List* dialog box offers the following options:

Add: Add a new blank element at the end of the list.

Insert: Insert a new blank element above the selected item.

Remove: Remove the selected item from the list.

Copy: Copy the selected text to the clipboard and the paste it to the system or outside.

Paste: Paste the text from the clipboard to the list; however, you had to make sure something on the clipboard before pasting.

Note: *Text List* is saved in the Pattern Preferences file.

Options Menu: Show Toolbox/Toolbars

Check the *Show Toolbox* from *Options* menu to show toolbox and a tick (✓) will show next to it accordingly. Click again to hide the Toolbox.

On the other hand, check the Toolbars to show toolbars instead. However, you cannot choose both options at the same time. Please refer to Toolbox section to learn more on using tools available in toolbox/toolbars.
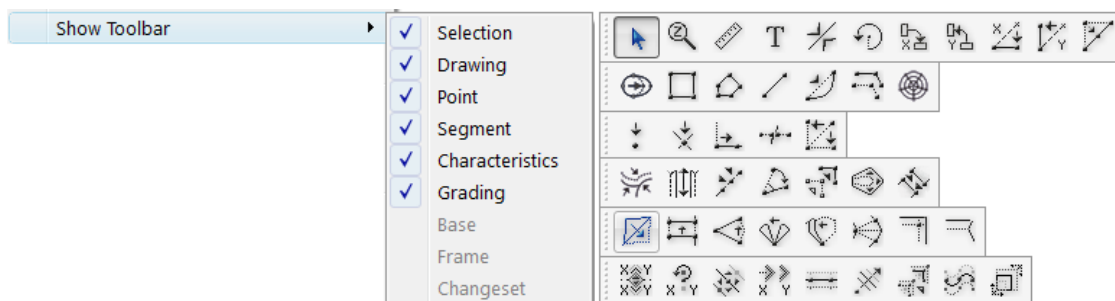
Options Menu: Show Piece List

Check the *Show Piece List* from Options menu to show piece list and a tick
(✔) will show next to it accordingly.   Please refer to Patter Basics to learn
more on using Piece List.
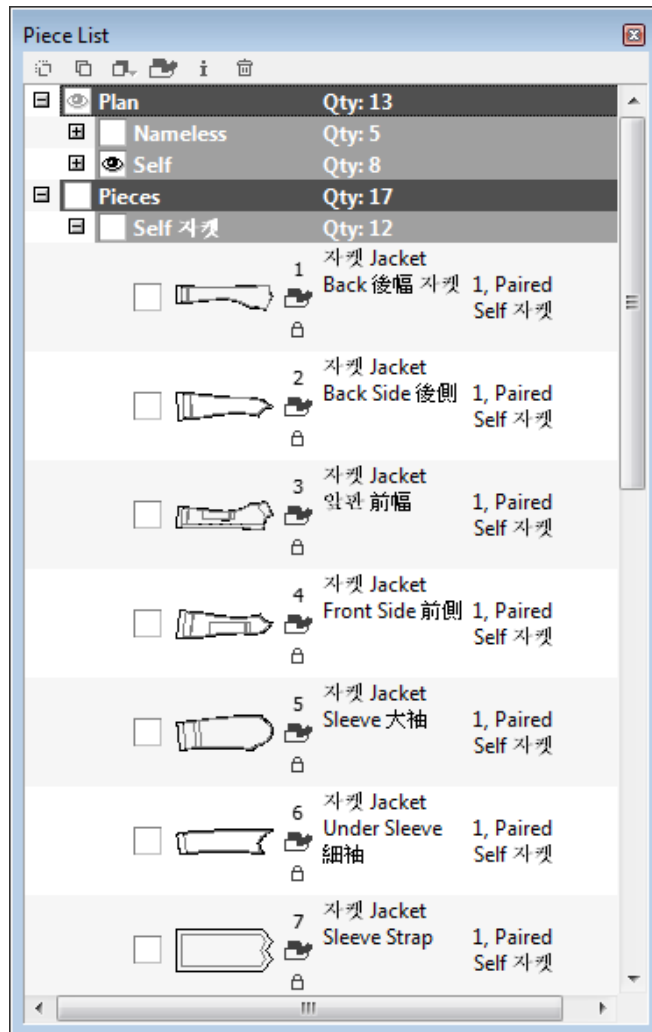
Note: Pad Academic editions allow *you to save 20 production pieces in style file format*.

Options Menu: Show Grading Arrows

Show Grading Arrows from Options menu that you can use the Grading Arrow window to grade a point, a segment, a part of pattern or even several pieces at the time in more easier and practical way in doing so. A tick (✓) will show if you choose to Show Grading Arrows. Please refer to Grading Basic section to learn more on Grading Arrows window.
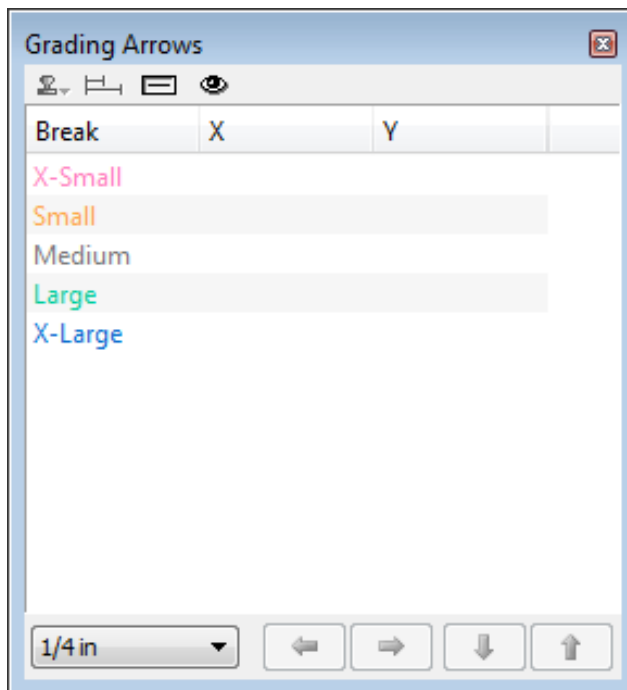
Options Menu: Show Grading Info

Choose *Show Grading Info* to show grading information of each selected point and a tick (✔) will shows *accordingly*. Please refer to Grading Basics to learn more about Grading Info window.

Grading Info						41 point(s) selected
		X-Small	Small	Medium	Large	X-Large
▲ 1	Regular:					
	X:	0.0000	0.2487	0.0000	-0.2487	0.0000
	Y:	0.0000	0.1448	0.0000	-0.1448	0.0000
▲ 2	Regular:					
	X:	0.0000	0.2481	0.0000	-0.2481	0.0000
	Y:	0.0000	0.2119	0.0000	-0.2119	0.0000
▲ 3	Regular:					
	X:	0.0000	0.1780	0.0000	-0.1780	0.0000
	Y:	0.0000	0.2138	0.0000	-0.2137	0.0000
▲ 4	Regular:					
	X:	0.0000	0.0000	0.0000	0.0000	0.0000
	Y:	0.0000	0.2184	0.0000	-0.2184	0.0000
▲ 5	Regular:					
	X:	0.0000	0.0000	0.0000	0.0000	0.0000
	Y:	0.0000	0.2388	0.0000	-0.2388	0.0000
▲ 6	Regular:					
	X:	0.0000	0.0000	0.0000	0.0000	0.0000
	Y:	0.0000	0.2525	0.0000	-0.2538	0.0000
▲ 7	Regular:					
	X:	0.0000	0.0000	0.0000	0.0000	0.0000
	Y:	0.0000	0.2646	0.0000	-0.2646	0.0000
▲ 8	Regular:					
	X:	0.0000	0.0000	0.0000	0.0000	0.0000
	Y:	0.0000	0.2500	0.0000	-0.2500	0.0000

Options Menu: Show Grading Library

Choose Show Grading Library from Options menu to show the Grading Library that provides detail information of the Grading and a tick (✓) will show accordingly. Please refer to Grading Basics section to learn more about the Grading Library window.
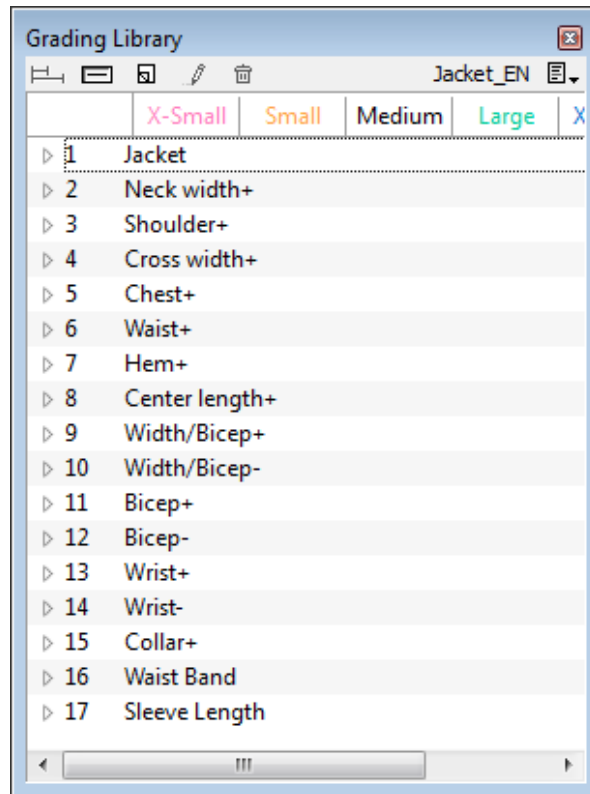
Options Menu: Show Frames

Choose *Show Frames from Options* menu to show the *Frame* window and a tick (✔) will show accordingly. Please refer to Frame section to learn more about Frame window.

Frames	Small 38	Medium 40	Large 42	
⊟ Ladies Jacket				
⊟ Centers				
⊞ Back				
⊞ BK Side				
⊟ Front				
▽ Chest FR				
𝑓ₓ Measures:	10.7082	11.3018	11.8954	
𝑓ₓ Levels:	0.0000	0.0000	0.0000	
▽ Waist FR				
𝑓ₓ Measures:	7.9075	8.4656	9.0238	
𝑓ₓ Levels:	6.4095	6.4095	6.4095	
▽ Hip FR				
𝑓ₓ Measures:	9.3446	9.8489	10.3531	
𝑓ₓ Levels:	13.4970	13.4970	13.4970	
▽ Hem FR				
𝑓ₓ Measures:	10.8325	11.3049	11.7774	
𝑓ₓ Levels:	20.7316	20.9816	21.2316	
▷ Center FR				
▷ Across FR				
▷ Shoulder FR				
▷ NK Width FR				
▷ NK Drop FR				
⊞ FR Side				
⊞ Sleeve				
⊞ Under Sleeve				
⊞ Links				
⊞ Segments				
⊞ Specs				

Note: This feature is only available in *Pattern Enterprise*.
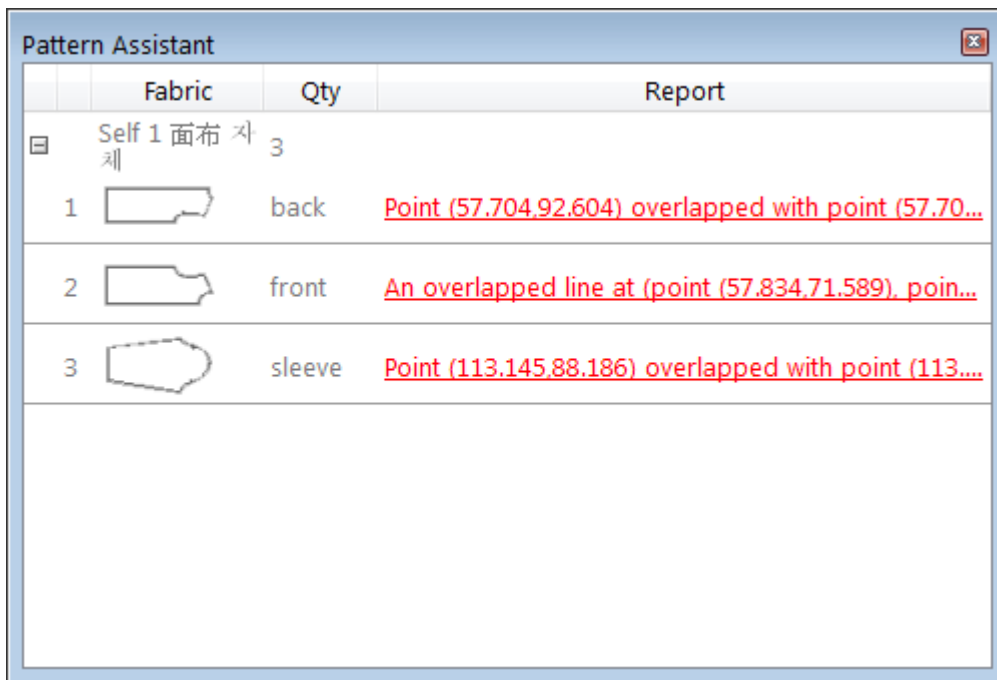
Options Menu: Show Technical Sketches

Choose Show Technical Sketches to show the Technical Sketches window that use to build the link between related sketch with the pattern file and a tick (✓) will show accordingly. Please refer to Basic Chapter to learn more about Technical Sketches window.

Options Menu: Show Pattern Assistant

Choose Show Pattern Assistant to show the Pattern Assistant window that use to check error from the pattern file and a tick (✔) will show accordingly. Please refer to Treatment menu to learn more about Pattern Assistant window.

Options Menu: Show Pattern Template

Choose Show Pattern Template to show the Pattern Template window that use to save the most used pattern pieces into a list and a tick (✓) will show accordingly. Please refer to Basic Chapter to learn more about Pattern Template window.
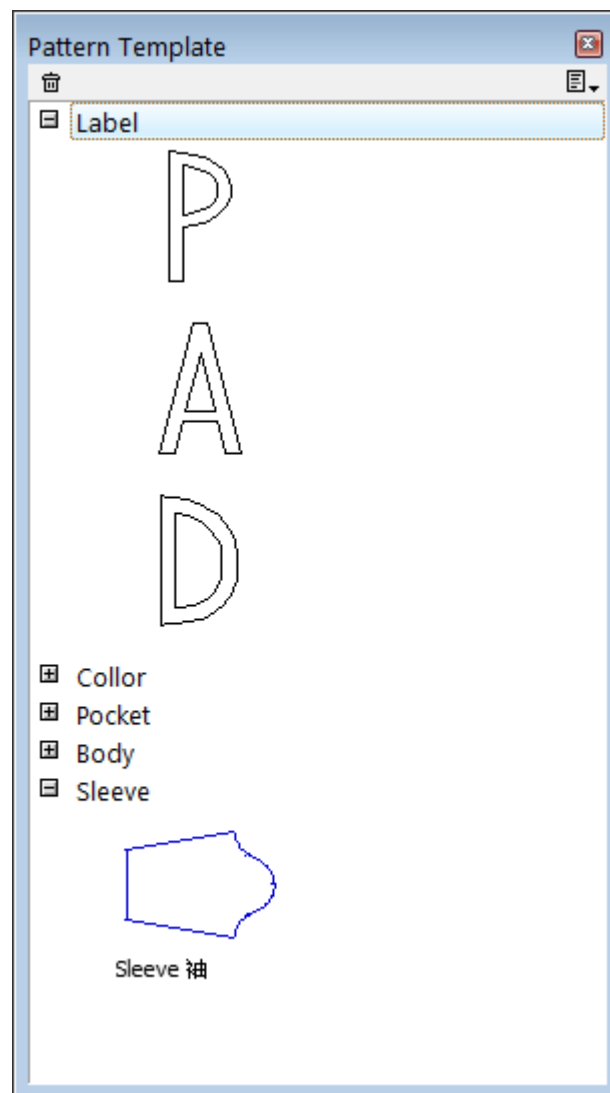
Options Menu: Show Seam Allowance Library

Choose Show Seam Allowance Library to show the Seam Allowance Library window that use to create a list including the frequent used seam values and a tick (✓) will show accordingly. Please refer to Basic Chapter to learn more about Seam Allowance Library window.
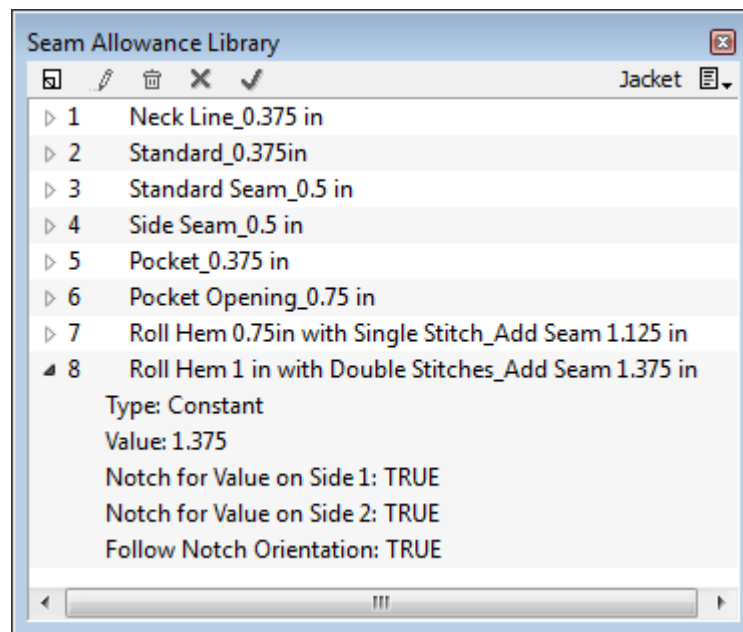
View Menu

Open different views and use variety features of PAD System's Pattern applications.
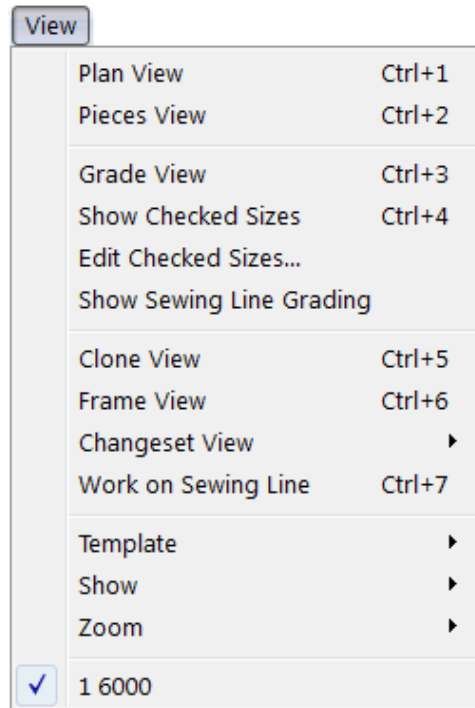
Note: Some features and views are only available with the selected options and versions, such as *Frame View* for PAD Enterprise edition only.

View Menu: Plan View

Plan View is a working area that allows you to create or modify the pattern plan by using various tools from toolbox/toolbars, menu and the dialog boxes.

You open a Pattern Design file in Plan View as default. You can also open the Grade View from the View menu to view the Construction Plan with the grading.

You can simply open Frame View from the View menu to view the Pattern Frames in Plan view. You can use Frame menu windows to modify the Frames measurements of the file with Frames.

View Menu: Pieces View

Use the Set Piece function from Treatment menu to view the pieces extracted from the Construction Plan.   The pieces can be obtained from digitization or imported from other file format.

You can add Seam Allowance of pre-defined Pattern Pieces in Pieces View mode only; and, pieces can be viewed or modified no matter whether Seam Allowances is visible or not.

Select Work on Sewing Line from the View Menu or Contextual Menu to work on the sewing lines of a piece without altering Seam Allowances. You can control any modification that may affect the sewing lines until ……To work on the sewing lines of a piece while preserving the same Seam Allowances, select Work on Sewing Line in the View menu or Contextual Menu. The sewing line becomes non-editable to allow any type of internal modifications and is updated upon their return.

You can select the piece then choose Piece Info from Treatment menu to modify piece information.

View Menu: Grade View

Select Grade View from the View menu to view pieces' grading or the construction plan. The Grading View shows all sizes of Grading Nest. To view specific sizes, you can select Edit Checked Sizes…from View menu then you can select and view sizes.

You can use grading tools to modify the grading coordinates in both Plan View and Piece View. The grading coordinates can be adjusted by entering values in the field of Grading Evolutions under Grading Library or simply using Grading Arrows to determine.

View Menu: Show Checked Sizes...

The *Grading View* displays all sizes on the grading nest.

To view specific sizes:

1 Click the *Edit Checked Sizes...* from *View* menu.

2 Click Show / Hide to show / hide the select sizes

3 Select Show Checked Sizes…from the View menu to open selected sizes.
  Meanwhile, the base size is always shown at the same time.
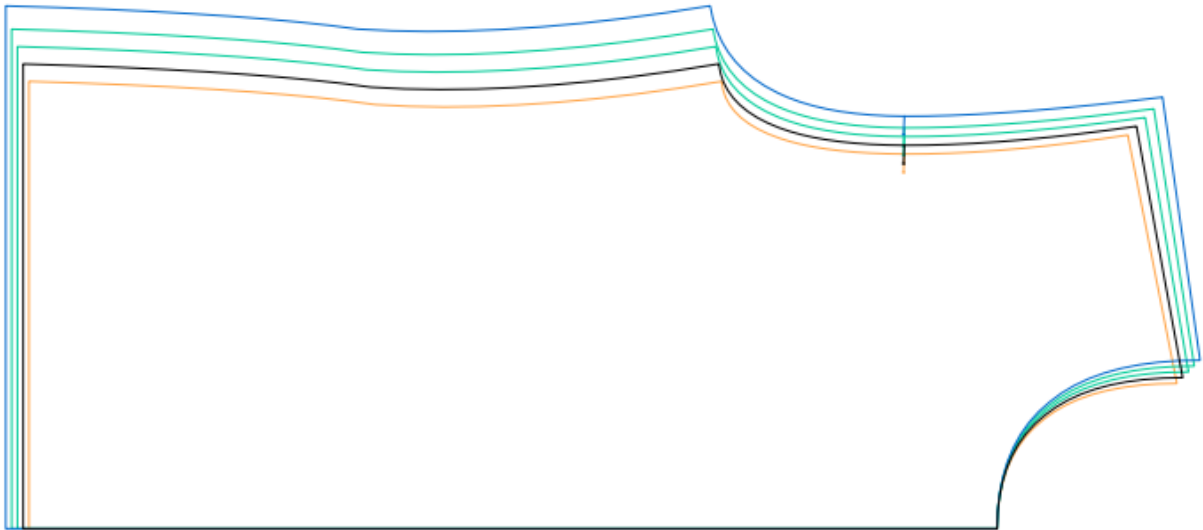
The particular sizes with Grading information will show if both Grading View and Show Checked Sizes are selected from the View menu.

View Menu: Edit Checked Sizes...

You are suggested to hide some sizes when you view particular sizes grading to have clearer view.

To change the viewing status of one or more sizes:

Select the Edit Checked Sizes...from View menu to select which sizes to be visible or not. The visible one will have a tick(✓) on it, no matter you used Windows, Macintosh or Linux; and uncheck to change it to be invisible.
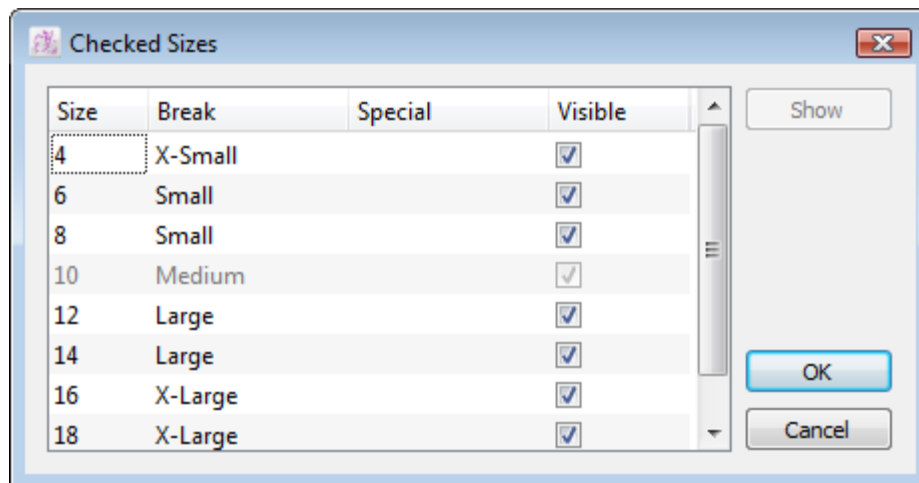
Note: All sizes will be shown, no matter whether it marks to be visible or not in the Checked Sizes box, if the Show Checked Sizes…is not open.

View Menu: Show Sewing Line Grading

Check *Show Sewing Line Grading* option to show the sewing line grading. For it to work, you must be in *Pieces View*. To see the effect of this function, being in *Grade View* is mandatory.

The *Sewing Line Grading* status after you have clicked on the *Show Sewing Line Grading* option changes according to the *Sewing Line Grading* status of the majority. For example, if the Sewing Line Grading of three pieces over four is hidden from view, the Sewing Line Grading of every piece is made visible.

View Menu: Clone View

The *Clone View* item in the *View* menu (available in Pattern Enterprise) allows you to view the selected master pieces and all their corresponding clones lined up.

Regular view:
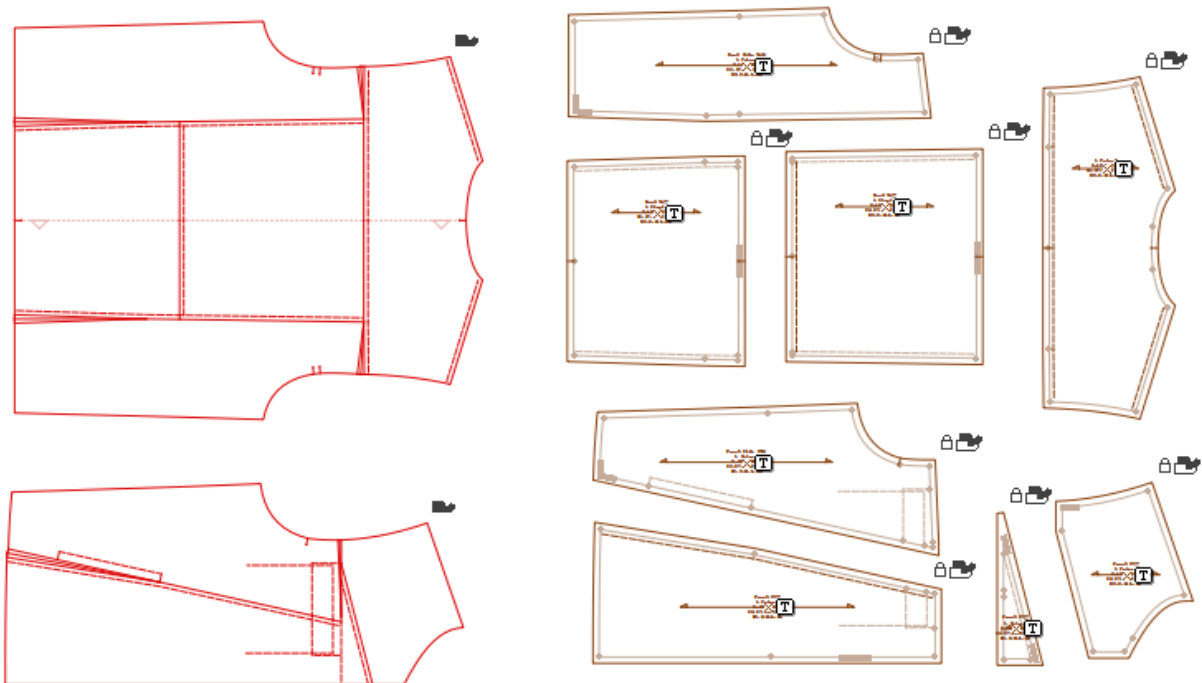
Clone View:
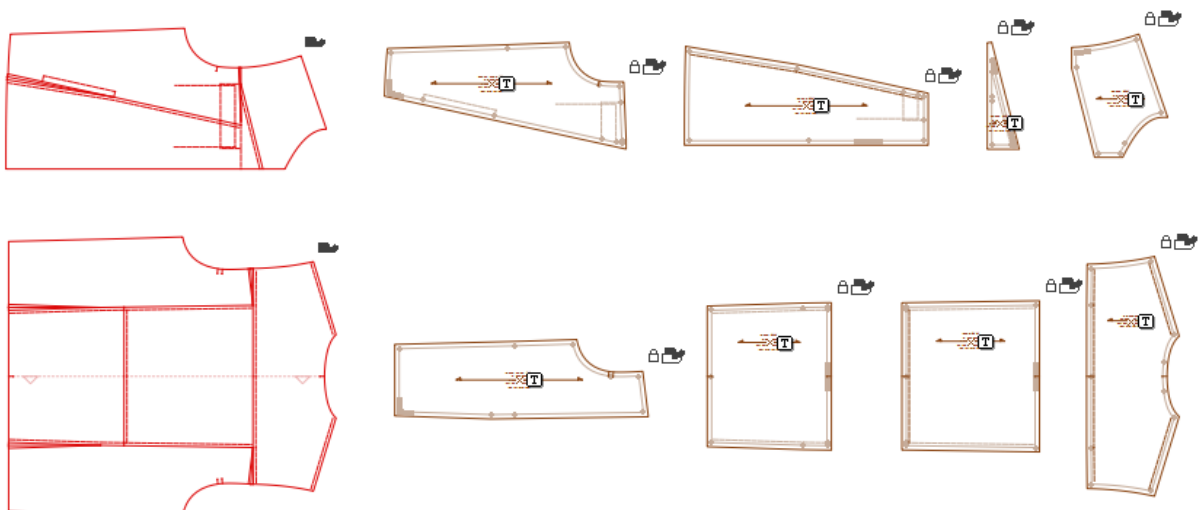
View Menu: Frame View

The *Frame View* item in the *View* menu shows you the Frames.

This function is available in PAD System™ *Pattern Enterprise.*

Note: Given the complexity of the Frames, please refer to the MTM-Frames section of this User Manual for further details.

View Menu: Save Changeset View

Check Changeset View to view the changes on each piece in between two files. For it to work, you must choose to save the file in File menu and Save Changeset. Please refer to File Menu and Save Changeset to learn more about Save Changeset.

View Menu: Work on Sewing Line

To work with the seam allowances on the pieces and have them recalculated, select the *Work on Sewing Line* item in the *View* menu.

The seam allowances remain visible in grey and follow the modifications made to the sewing lines.
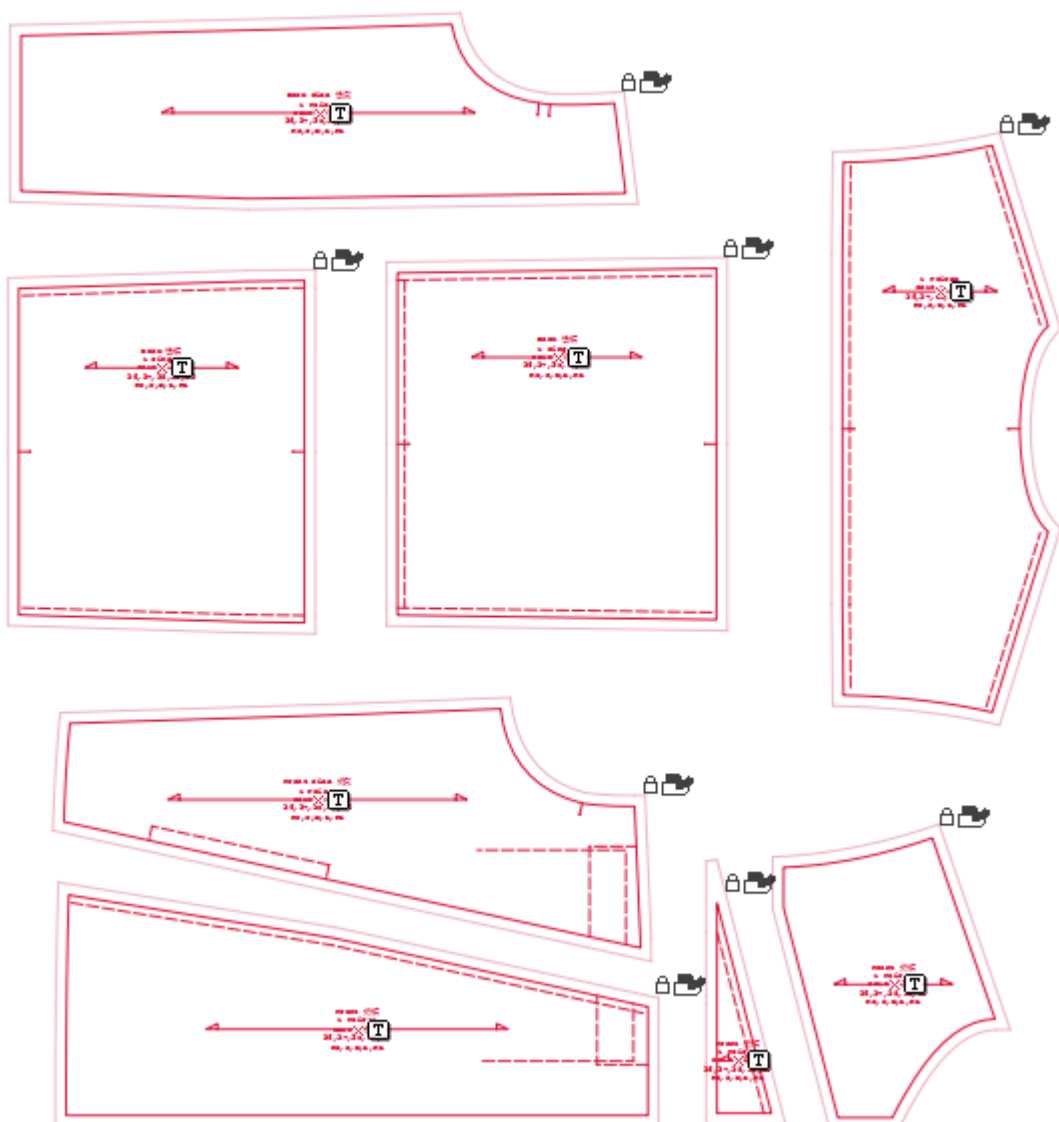
Note: Manual modifications made on the Seam Allowances do not modify sewing lines and are not necessarily maintained after internal modifications.

View Menu: Template

The *Template* item in the *View* menu allows you to view or hide specific information about templates:

• The template of the contour
• The template of the grading
• The template of the sewing line

Template	▶	✓	Template
		✓	Template Grading
		✓	Template Sewing Line
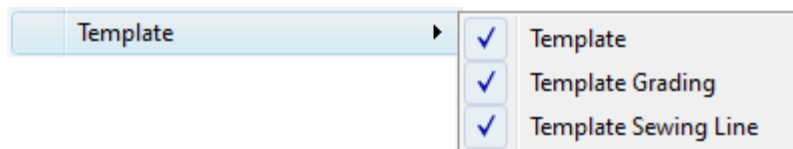
Template: By checking *Template,* you can display the defined templates on the pieces according to the Piece Information (*Treatment* menu).

Template Grading: It shows all the template grading. You must be in *Grade View* to view the result.

Template Sewing Line View: It shows all the template sewing lines. The *Show Sewing Line Grading* option must be active for that function to work.

View Menu: Show

The *Show* item in the *View* menu allows you to view or hide the following elements in the working area:

- The grid on the background
- The text in each piece
- The grain line of the piece
- The numerical sewing value of the sewing lines
- The numerical value of the segments
- The image in each piece

Show	▶	✓	Grid
Zoom	▶	✓	Text
		✓	Grain Line
		✓	Sewing Value
		✓	Segment Value
		✓	Image

Grid: By checking Grid to show Grid in background

Text: By checking *Text*, you can display the Text on the piece and place it to the required location. *Show Text* posts the defined text on the piece according to the Piece information (*Treatment* menu).

Grain Line: By checking *Grain Line*, you can display the grain line and place it on the piece. You can define the length of the line using *Piece info* (*Treatment* menu) and clicking the *Grain line...* button.

Sewing Value: By checking *Sewing value,* you can display all the numerical sewing values on all the sewing lines.
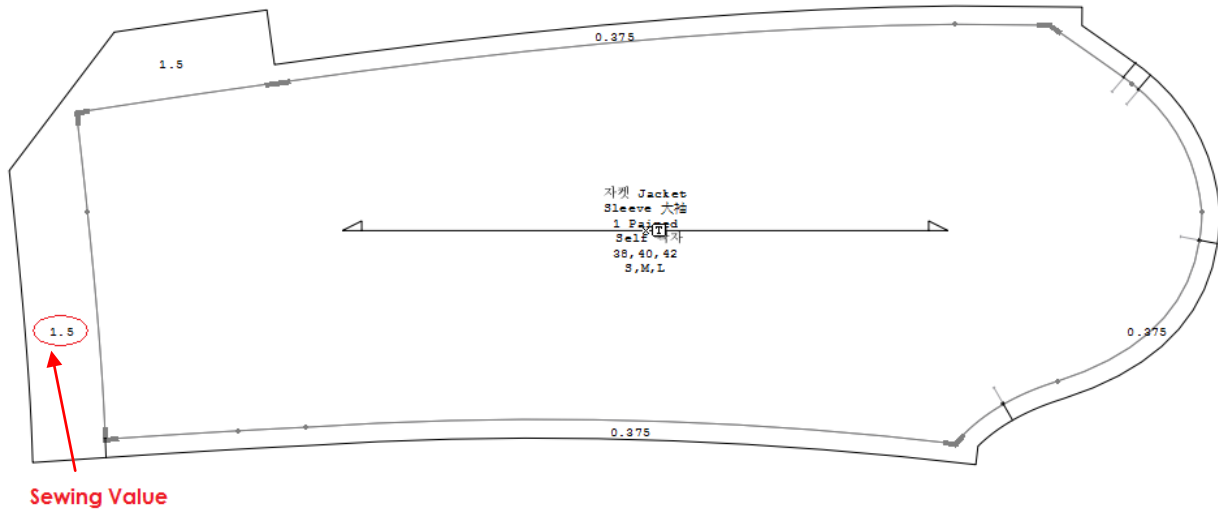
Sewing Value

Segment Value: By checking *Segment Value,* you can display all the numerical sewing values on all the segments.

Image: By checking Image to show Image on the piece

View Menu: Zoom

The *Zoom* item in the *View* menu allows you to select from the menu a preset visualization of the working area or a customized zoom level. The zoom level can be set at any value between 0.5% and 2000%.

Global View: It displays all the pattern pieces on the screen, regardless of their position on the working area.

Zoom on Selection: It zooms on the selection and displays it in the center of the screen. It is available if one or more pieces are selected.

Click the **Zoom Out/Zoom In** icons to obtain preset zoom views based on the screen resolution (0.5%, 1%, 2%, 3%, 4%, 5%, 6%, 8%, 10%, 20%, 25%, 33%, 50%, 100% and 200%).

These options are available in the *Zoom* Menu as well, which is located to the bottom left side of the Pattern application. For further details, refer to the Basics chapter of this user manual.

Zoom	▶		
	✂	Global View	Ctrl+0
	☐	On Selection	Ctrl+9
	▲	Zoom In	Ctrl++
	▲▲	Zoom Out	Ctrl+-
		10%	
		20%	
		25%	
		33%	
		50%	
		100%	
		200%	
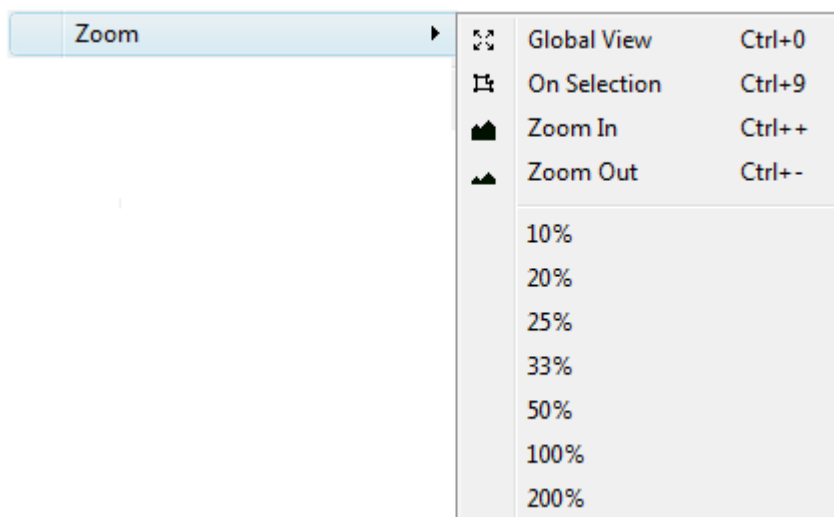
Navigating Through the Open Files

In the last section of the *View* menu, you can see the files that you have opened. The active file has a check mark next to it. It is unlimited on files opened at the same time.

First file is selected

View		
✓ Plan View	Ctrl+1	
Pieces View	Ctrl+2	
Grade View	Ctrl+3	
Show Checked Sizes	Ctrl+4	
Edit Checked Sizes...		
Show Sewing Line Grading		
Clone View	Ctrl+5	
Frame View	Ctrl+6	
Changeset View	▶	
Work on Sewing Line	Ctrl+7	
Template	▶	
Show	▶	
Zoom	▶	
✓ 1 BLK_M_Classic Vest Gr		
2 BLK_M_Pants Gr		

Second file is selected

View		
✓ Plan View	Ctrl+1	
Pieces View	Ctrl+2	
Grade View	Ctrl+3	
Show Checked Sizes	Ctrl+4	
Edit Checked Sizes...		
Show Sewing Line Grading		
Clone View	Ctrl+5	
Frame View	Ctrl+6	
Changeset View	▶	
Work on Sewing Line	Ctrl+7	
Template	▶	
Show	▶	
Zoom	▶	
1 BLK_M_Classic Vest Gr		
✓ 2 BLK_M_Pants Gr		

Treatment Menu

Treatment

Set Piece...	Ctrl+E	
Piece Info...	Ctrl+D	
Item Info...	Ctrl+I	
Points	▶	
◀ Notches		
Punch Holes	▶	
Segments...		
Group	Ctrl+G	
Ungroup	Ctrl+U	
Align Shapes...	Ctrl+K	
Scale...		
Optimize	▶	
Pathfinder	▶	
Pattern Assistant...	Ctrl+Shift+P	

Points submenu

	Point
⊥	Simple Notch
II	Double Notch
V	V Notch
∧	1 Pimple
⌢	2 Castle
I	3 1" Slit

Notches submenu

	Regular
	Mark
	Control
○	Matching
■	Start Point
◇	Lift and Plunge
⊕	Symmetrical Start Point
⊛	Symmetrical End Point
⬡	Internal Start Point

Punch Holes submenu

	Point
⊕	Punch Hole
I	1 1 inch
∞	2 Butterfly 0.75"

Optimize submenu

Simplify...
Create Graded Shape
Create Curves

Pathfinder submenu

Intersect Lines
Create Outlines
Smooth Curves

The *Treatment* menu provides many useful tools to create and/or modify your work. One or more pieces must be selected to unlock the different items of the menu.

Treatment Menu: Set Piece and Piece Info

The *Set Piece* and *Piece Info* functions are very alike, so they are explained together.

You must first identify the pieces to create the pattern pieces from the Construction Plan to the *Pieces View*.

There are two methods to set a piece.

To set pieces using the Treatment menu:

1 Select the polygon to set as a piece, including its internal references, which must be grouped to the piece.

2 Select the *Set Piece...* item from the *Treatment* menu to describe the piece.

3 The *Set Piece* dialog box appears. You can enter information about the piece.

To set pieces using the Contextual menu:

1 Right-click the piece (Windows / Linux) or click the piece while holding down the **Control** key (Macintosh).

2 Select the *Set Piece…* or the *Piece Info...* item from the Contextual menu. To set a piece, you have two options:

• **Set Piece from Cut:** The system detects the contour of the smallest polygon within the click position and set it as a piece.

• **Set Piece from Contour:** The system selects the contour of the Pattern piece, including the internal darts and punch holes.

To set pieces using double Left Clicks to select the polygon and set it as a piece.

1 Put the cursor on the piece

2 Double left clicks on the piece and the cursor will change to "+" sign.
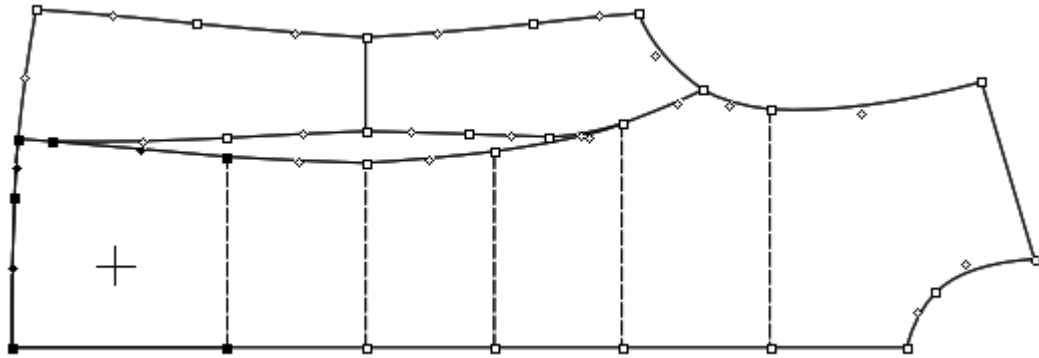
3 Then drag the cursor to the polygons, a guideline in Pink color appears to identify the pieces. The contour lines of the selected pieces activated as follows.
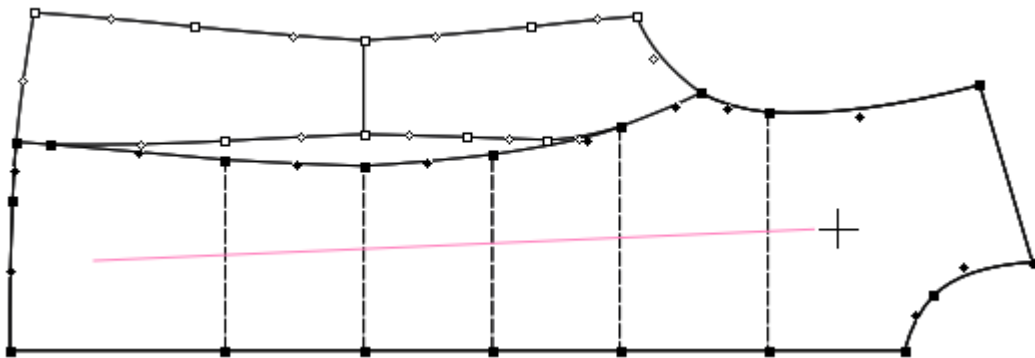
4 Then right click on mouse, Piece Info dialog appears.

Note: To ensure the success of this operation, all the lines of the piece must be attached and/or grouped together.

The *Piece Info...* item allow you to view or edit information about the selected piece(s). You can access this dialog box via the *Piece Info* function in the *Treatment* menu, using the Contextual menu, or through the *Piece List* window by pressing on the button.

To get the info of a piece:

1 Activate the piece you want to get info about.

2 Click the *Piece Info...* item in the *Treatment* menu. The *Piece Info...* dialog box appears.

The *Set Piece* and *Piece Info* dialog boxes offer the following options:
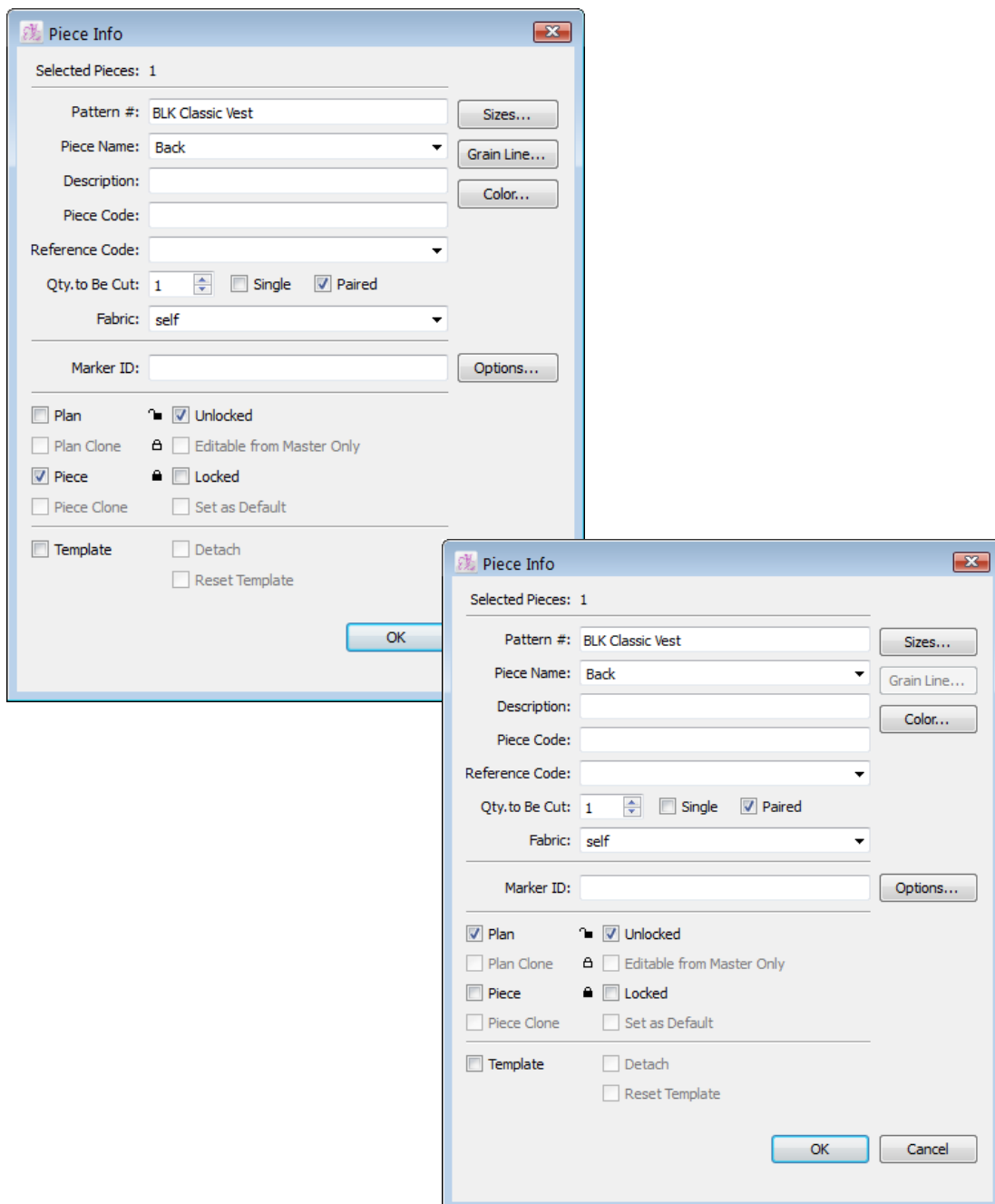
The first section in the dialog box indicates the number of selected pieces.

The second section is the piece identification. It displays piece information as it appears on the piece.

- **Pattern #:** It is the style number. It has to be entered for the first piece only. The subsequent pieces set get the same number, but it can still be changed if needed.

- **Piece Name:** The piece name, which can be selected from a predefined list in the *Piece Name List…* dialog box.

- **Description:** Additional information describing the piece.

- **Piece Code:** It indicates the need for special piece treatment or any additional information.

- **Reference Code:** It is an identification code for the piece or any additional information that can be selected from a predefined list in the *Option* menu –> *Reference Code List...* by clicking the pop-up menu that has the shape of a triangle next to the text field.

- **Quantity to Be Cut:** The quantity of pieces needed for a complete garment. *Single* means a right-side-up piece and *Paired* means two pieces: a left piece and a right piece.

- **Fabric:** It identifies a fabric for a given piece or group of pieces, which can be selected from a predefined list in the *Options menu – Fabric List* item by clicking the pop-up menu that has the shape of a triangle next to the text field. If a color code is given, the piece changes/adds color automatically.
  The item of Fabric in Set Piece's dialog box, it can memorize the last selected fabric. Then the next piece will choose to the same fabric until you choose the new one.

The third section allows you to add a Marker ID on chart pieces when a marker is made with this pattern.

- **Marker ID:** A two-letter code to identify special treatment of the piece on the chart of the *Marker Experience* and *Marker Enterprise* products. You can modify or add this information at the marker level. It does not affect the link function if the pattern is linked to the marker file (the marker user has priority).

The fourth section allows you to identify or determine whether the piece is in *Plan View* or *Pieces View*, or if it is set as a Cloned piece.

Additional information indicates the piece status: whether the piece is Locked or Unlocked, or Editable from master only.
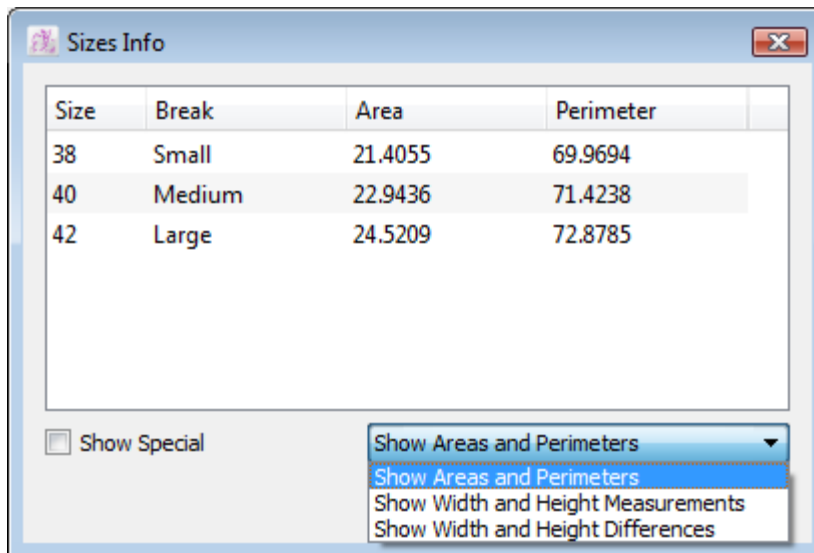
- **Plan:** It indicates that a pattern piece is set in *Plan View* for future modifications.

- **Plan Clone :** It indicates that a piece in *Plan View* is linked to the Master Piece in the Plan. All modifications made to the master are reflected on the Clone Piece.

- **Piece:** It indicates the creation of a Pattern piece for the *Piece List* window. This allows you to add seam allowances and modify patterns. Pieces in *Pieces View* appear in *Pad System Marker* product.

- **Piece Clone :** It indicates that a piece in *Pieces View* is linked to the Master Piece in the Plan / Pieces. All modifications made to the master are reflected on the Clone Piece.

- **Unlocked**: It allows modifications on the piece.

- **Editable from Master Only**: When checked, it blocks the cloned piece from any modifications made on its contour, allowing modifications only from the master on the contour. Internal references can still be added, modified or removed from the clone.

- **Locked:** It disallows any modifications. The piece is available as a reference (read only) until unlocked.

- **Save as Default:** It saves the current settings as default.

The fifth section allows you to Add, Remove, Detach or Reset a Template to/from the selected piece(s).

- **Template:** It creates a carbon copy (Template) of selected pieces. The carbon copy remains intact, even if the pieces are moved or modified with any graphic tools. To remove the template, simply uncheck this box.

- **Detach:** It retrieves the original piece used as a carbon by selecting the *Detach* check box. *Detach* becomes available once the *Template* check box is not selected.

- **Reset Template:** It deletes the template of the piece and creates a new one according to the current shape of the piece.

179

The *Set Piece* and *Piece Info* dialog boxes' buttons:

Sizes...: It brings up the *Sizes Info* dialog box, which allows you to view the following size information:

- **Show Areas and Perimeters:** It displays the area and perimeter of the selected piece(s) for all sizes.
- **Show Widths and Heights measurement:** It displays the width and height measurements of the selected piece(s) for all sizes.
- **Show Width and Height Differences:** It displays the width and height differences of the selected piece(s) from the Medium for all established Working Sizes in the *Grade* menu for all sizes.
- **Show Special:** It displays the special name used in the *Working sizes* dialog box, in the *Grade* menu.

Click the *Done* button to close the *Sizes Info* dialog box.

Grain Line…: Click the *Grain Line…* button to establish grain line options. You can set the location of the arrowhead (to the left and/or to the right) and adjust the length of the arrow (in percentage [%] within the piece). This option is available in *Pieces View.*
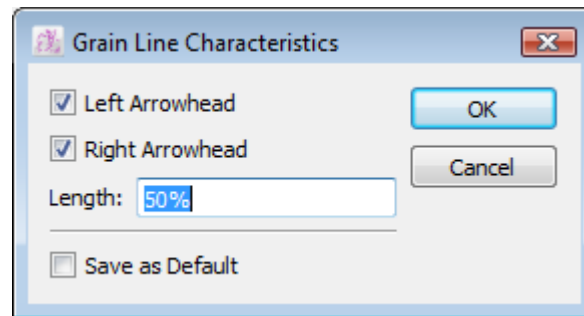
- **Left Arrowhead:** You can obtain a left arrowhead on the grain line.
- **Right Arrowhead:** You can obtain a right arrowhead on the grain line.
- **Length %:** It determines the length of the grain line using the total length of the piece.
- **Save as Default:** It saves the current settings as default.

Click the *OK* button to validate the settings.

Color…: It brings up the *Piece Color* dialog box. It allows you to assign a color to the piece, providing better visual identification of the piece on the current working area or when making future modifications. If the color of the fabric has been preset in the *Options menu > Fabric List*, the *OK* button is not be available.
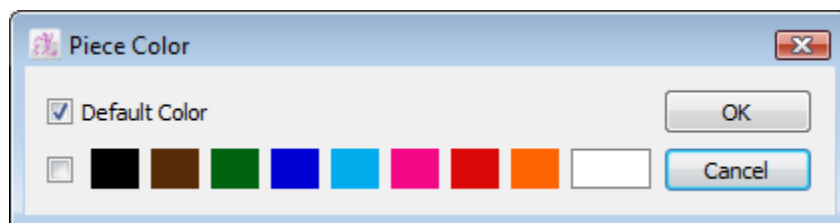
Click the *OK* button to save your selection and close the dialog box.

Options...: It brings up the *Piece Treatment Tolerance* dialog box, which lets you remove or allow various manipulations on the piece in Pad System's marker applications.
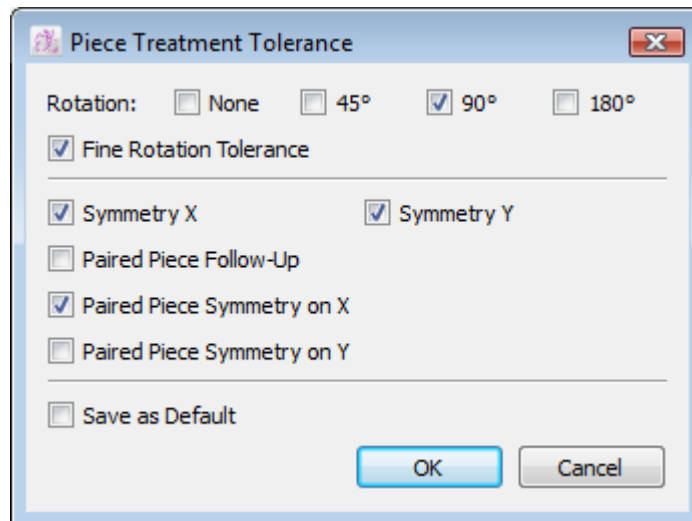
Piece Treatment Tolerance: By selecting the *Save as default* check box, you can assign treatment tolerances to each piece or the entire garment. These characteristics constrain the manipulation of a piece in the PAD System™ Marker application.

The Tolerances for piece treatment are:

• **Rotation:** At 45°, 90°, 180° or none.
• **Fine Rotation Tolerance:** It allows you to use or inhibit a fine rotation (tilt).
• **Symmetry:** In X, Y or both or can be allowed or inhibit.
• **Paired Piece Follow-up:** It applies symmetry and rotation to the other side of a paired piece.
• **Paired Piece Symmetry on X or on Y:** It places the other side of the paired piece – in X or Y symmetry – next to the first piece in the pair.
• **Save as Default:** It saves the *Piece Treatment Tolerance* parameters as default. They are applied to all other pieces set afterward

Press the *OK* button to validate the settings.

Set Pieces in Pieces View

You can define pieces in *Pieces View*.. This function is very useful when you want to obtain an identical piece in another type of fabric.

To set a piece with the active seam allowances:

1 Select the entire piece.

2 Select the *Set Piece* function in the *Treatment* menu.

3 Enter the fabric in the appropriate zone.

4 The piece appears on the list with the associated fabric.

To set part of a piece when a piece already has Sewing Lines:

1 Select the *Work on Sewing Line* item in the *View* menu to suspend seam allowance values.

2 Select the entire piece or the portion to be set as a new piece.

3 Select the *Set Piece* function in the *Treatment* menu.

For example, if style lines are drawn and a piece is set from a portion of it, the original seam allowance is created.   If the two extremities of the style line have the same seam allowance, the seam on the separated edge gets the same value. If the extremities have a different seam allowance, a variable seam allowance is added to the edge.

Note: Any type of pattern modification may be applied to the pattern piece when the *Working on Sewing Line* function is active.

Treatment Menu: Item Info

The *Item Info...* option in the *Treatment* menu allows you to obtain/edit information on selected elements. Using this command, you can modify all types of Points, curved Segments and PAD System™ intelligent objects, such as Mirrors, Darts, Pleats, Shirring, Seam Allowances, Seam Corners and Seam Ends.

To get the information about selected elements:

1 Select the item(s) you want to obtain information about or edit information of.

2 Select the option *Item Info...* in the *Treatment* menu.

3 You obtain a different dialog box depending on the item(s) you selected (Notch, Darts...) which contains useful information. Each one is described on the following pages.

Point Characteristics… (Points, Notches, Punch holes)

If you selected a point, the *Point Characteristics* dialog box appears, allowing you to modify a selected type of point. You can modify a point type by combining it with other types of points, depending on the required result.

The *Point Characteristics* dialog box is divided into two sections:

The first section displays the number of selected points.

The second section displays the types of points that can be modified or combined with a different type of point attribute.
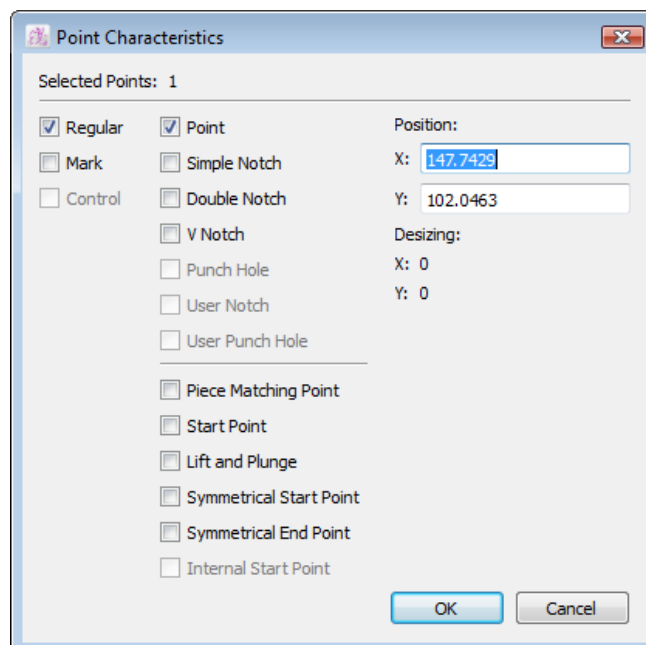
Regular point: This type of point appears at the beginning and at the end of a segment. The system reads a segment from one Regular point to the next Regular point, including all points between the two ends. Regular points are added when working on the pattern piece.

Mark point: Mark points are added to the contour of a pattern piece, by using either the Add a point to a line or Add point tool.

Control point: These points pull on the segment to hold your curve. They are based on the Bezier curve principle.

Piece Matching Points: It is used by the Marker product to align pattern pieces to guidelines or plaid and striped lines.

Pre-Set CNC Cutter Functionalities in Pattern application

Start Points: This option allows you to pre-set the cutting Start Point from pattern application. These points are control where, on an automatic cutter, the knife will plunge to start cutting a piece.

Lift and Plunge: This option allows you to pre-set the Lift and Plunge command from pattern application. The *Lift and Plunge* point tells the cutting knife where to lift, pivot and plunge while cutting a piece. This tool is particularly useful to ensure precision when cutting a sharp corner or other detail.

Symmetrical Start / End Point: This option allows you to pre-set the Symmetrical Start / End command from pattern application. The *Symmetrical Cut* tool tells the cutting knife to cut in two directions at once while cutting a piece from the fabric. The knife will cut half of the piece clockwise and the other half of the piece counter-clockwise. By doing so, you can obtain a more precise cut.

Internal Start Point: This option allows you to pre-set the start point command on the Internal Lines from pattern application. The *Internal Start Point* controls the knife will plunge to start cutting on the internal line.

Note: Some of Points features for CNC cutter are available in Pattern Enterprise.

Position: It indicates the X and Y coordinates of the point on the working area.

Desizing: If a temporary desizing is applied, these fields will show the desizing value for the selected point.

Note: If more than one point has been selected, the *Position* and *Desizing* fields are empty if the values for each point are not identical.

Curve Characteristics…

You can obtain information on a curve by selecting the curve segment and selecting *Item Info…* in the *Treatment* menu.

The *Curve Characteristics* dialog box calculates the Length and the Depth of the selected curve (the deepest point of the curve from a straight line calculated between the two [2] stand points).

You can modify both Length and Depth, but not during the same operation.
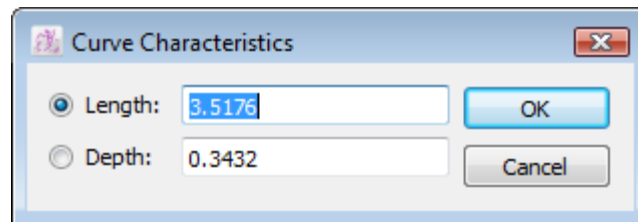
Dart Characteristics...

You can obtain information on a dart by selecting the dart and clicking the *Item Info...* item in the *Treatment* menu. Select the dart by clicking its center segment. All information in the *Dart Characteristics* dialog box can be modified.
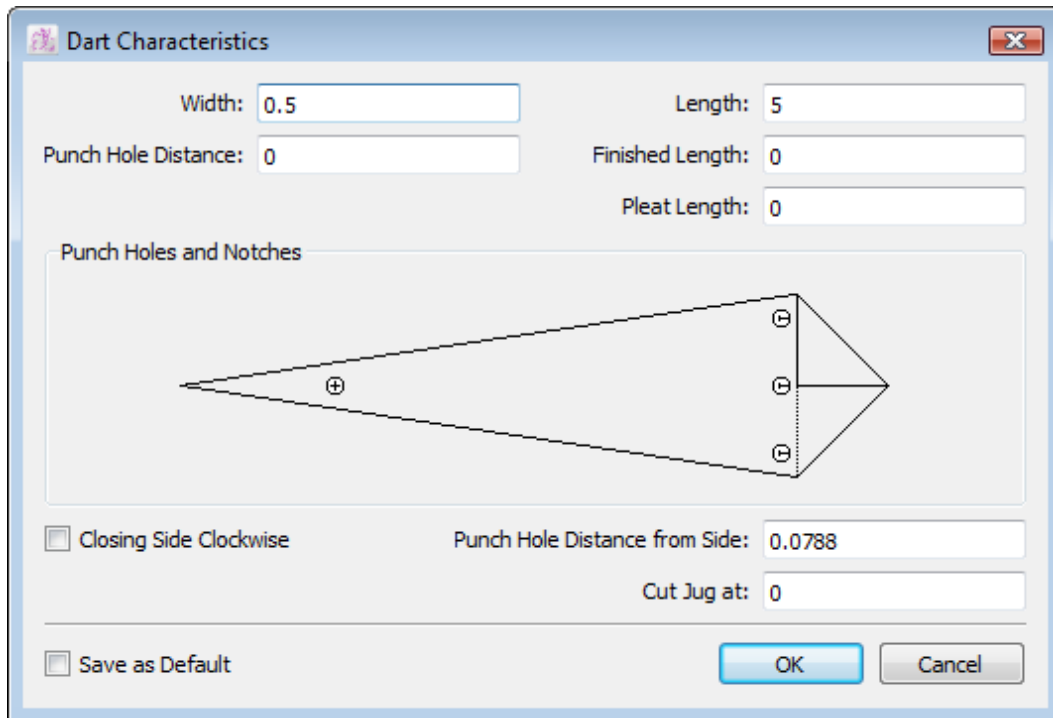
You can add punch holes and notches to the dart. In the *Dart Characteristics* dialog box; simply click the small circles inside the dart representing the location of punch holes and notches.

Along with the Width and the Length, the *Dart Characteristics* dialog box allows you to view and modify the following characteristics:

Cut Jug at: It gives a specific length to the tip of a dart.

Closing Side Clockwise: It folds the dart clockwise, if checked, or counter clockwise, if unchecked.

Finished Length: It calculates the position of the punch hole from the top for an open dart.

Pleat Length: It obtains a pleat dart, applies the value of the dart width parallel to a distance calculated from the top of the dart.

Punch Hole Distance: It calculates the distance of the punch hole from the pivot point of the dart.

Punch Hole Distance from Side: It customizes the distance of the punch hole from the edges of the dart for punches of open darts and pleat darts (does not apply to pivot point punches).

Save as Default: It saves the dart's settings and reapplies them on all future darts and its punches.

Remove Characteristics: It removes the dart graphic and leaves the contour information and its punch holes and notches.

Pleat Characteristics...

You can obtain information about a pleat by selecting the pleat and clicking the *Item Info...* item in the *Treatment* menu. All information in the *Pleat Characteristics* dialog box can be modified.
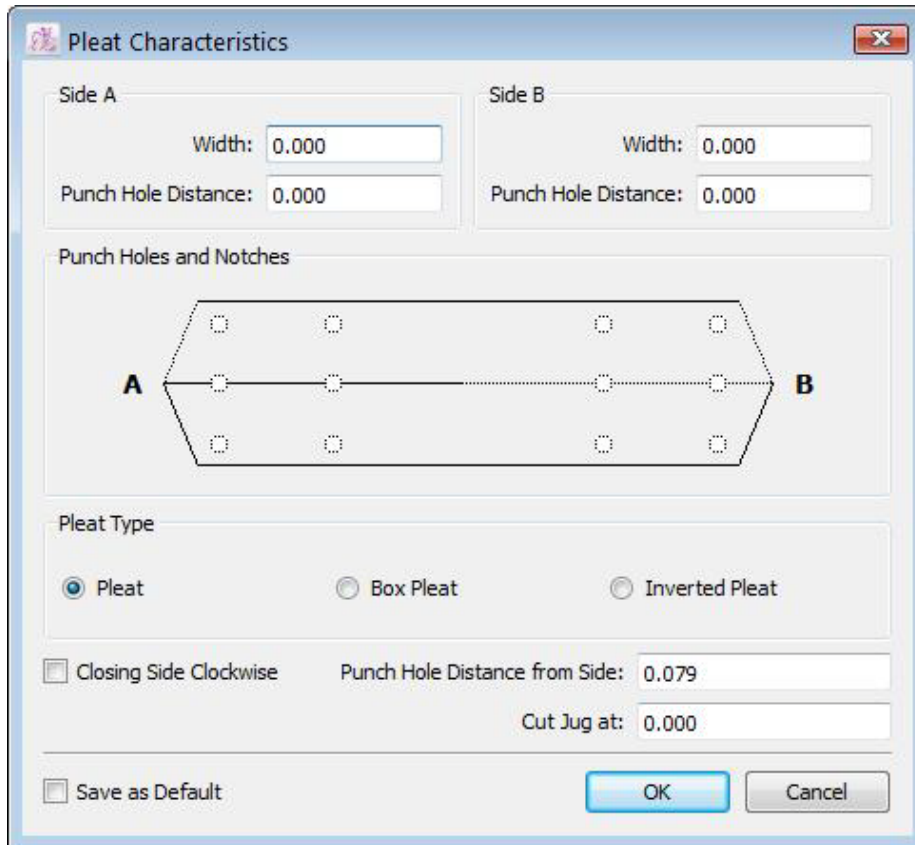
You can add punch holes and notches to the pleat. In the *Pleat Characteristics* dialog box, simply click the small circles inside the pleat representing the location of punch holes and notches.

The *Pleat Characteristics* dialog box allows you to view and modify the following characteristics:

Width: It is used to enter or modify the width of the pleat. If you require a radial pleat, enter measurements into the A and B text boxes.

Pleat Type: To choose the pleat type to develop; Pleat, Box Pleat and Inverted Pleat.

Punch Hole Distance: It marks a finished measurement from the end of your pleat. You can assign different values to Side A and Side B.

Punch holes and notches can be added to each side of the pleat (Side A and Side B) using the pleat graphic in the dialog box. Simply click the small circles that represent the location of punch holes and notches.

Closing Side Clockwise: It folds the pleat clockwise, when checked, or counter- clockwise, when unchecked.

Punch Hole Distance from Side: It customizes the distance of the punch hole from the edges of the pleat.

Remove Characteristics: It removes pleat information from the pattern shape.

Save as Default: When checked, it keeps the settings of the pleat (punch hole distance and notch locations) and reapplies them on all future pleats.

Shirring Characteristics…

You can obtain information on a shirring by selecting the shirring and clicking the *Item Info…* item in the *Treatment* menu. All the information in the *Shirring Characteristics* dialog box can be modified.
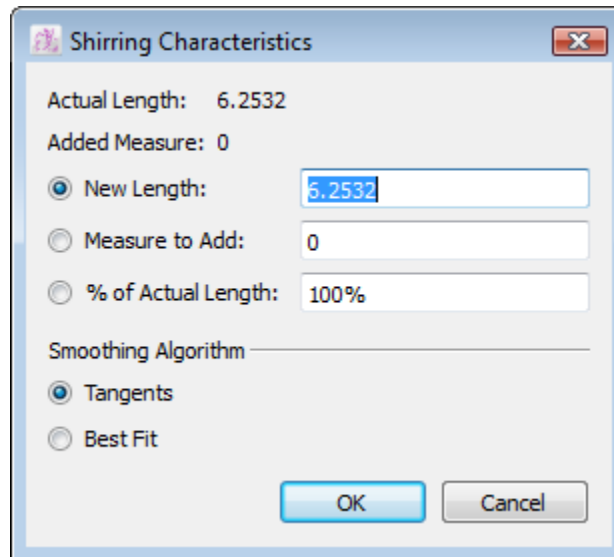
Shirring Characteristics

Actual Length: 6.2532
Added Measure: 0
- ◉ New Length: 6.2532
- ○ Measure to Add: 0
- ○ % of Actual Length: 100%

Smoothing Algorithm
- ◉ Tangents
- ○ Best Fit

OK   Cancel

The *Shirring Characteristics* dialog box allows you to view and modify the following characteristics:

New Length: It modifies the length of the selected segment.

Measure to Add: It adds a measure to the selected segment.

% of Actual Length: It adds a value in percentage (%) to the selected segment.

Smoothing Algorithm: Select *Tangents* to keep tangents at the intersection of lines, while opening the piece. Select *Best Fit* if the tangent cannot be reached. The algorithm chooses the best fit possible.

Modifications can be made to side A and B (if applicable).

Seam Characteristics…

You can obtain information on a seam by selecting the seam's internal line and clicking the *Item Info…* item in the *Treatment* menu. All information in the *Seam Characteristics* dialog box can be modified.
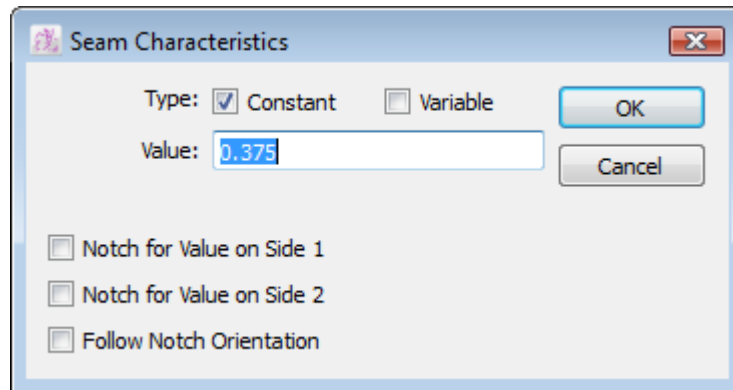
The Seam Characteristics dialog box allows you to choose between two types of seam allowances:

Constant: It is a seam allowance that is parallel to the piece perimeter.

Variable: It is a seam allowance with a different value at the beginning and at the end of the selection.

Notches can be added independently for each extremity if the ***Notch for Value on Side 1 and Notch for Value on Side 2*** check boxes are checked.

Follow Notch Orientation: It projects notches on the sewing line(s) according to the notch orientation.

Seam Corner Characteristics...

A seam corner is created whenever two seam allowances meet. A seam corner can be created on any sewing line's mark or regular points.

You can obtain information on a seam corner by selecting the seam corner and clicking the *Item info...* item in the *Treatment* menu. All information in the *Seam Corner Characteristics* dialog box can be modified.
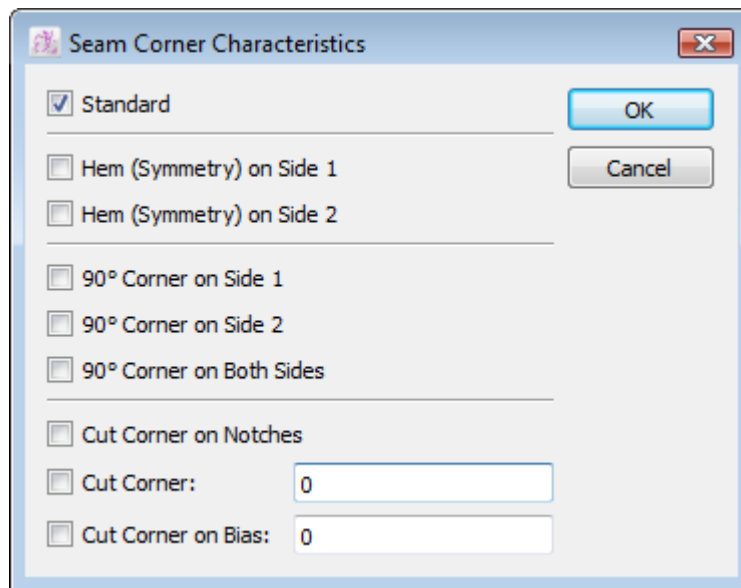
The Seam Corner Characteristics dialog box offers the following options:

Standard: It creates an even seam allowance all around the pattern pieces.

Hem (Symmetry) on Side 1: It mirrors the hem allowance on identified side 1.

Hem (Symmetry) on Side 2: It mirrors the hem allowance on identified side 2.

90° Corner on Side 1: It squares off the seam allowance on identified side 1.

90° Corner on Side 2: It squares off the seam allowance on identified side 2.

90° Corner on Both Sides: It squares off the seam allowances on both seam allowances (sides 1 and 2).

Cut Corners on Notches: It removes the corner edge at the seam allowance value.

Cut Corner: It enters a value to remove calculation from the garment.

Cut Corner on Bias: It removes the seam allowance from both seams, on the bias.

Seam's End Corner Characteristics...

Each extremity of a seam allowance is called the Seam's End. You can adjust Seam's Ends if no other seam allowance is to be added.

You can obtain information on a seam's end by selecting the Seam's end reference(s) and clicking the *Item Info…* item in the *Treatment* menu. All information in the *Seam's End Corner Characteristics* dialog box can be modified.
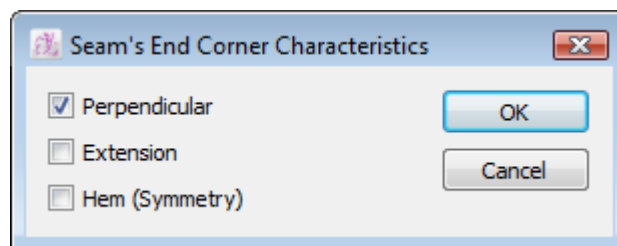
The Seam's End Corner Characteristics dialog box offers the following options:

Perpendicular: It adds a parallel seam allowance.

Extension: It adds the seam allowance on the same axis.

Hem (Symmetry): It mirrors the seam value.

Text Info

When a text element is selected, this *Item Info...* item in the *Treatment* menu opens the *Text Info* dialog box.
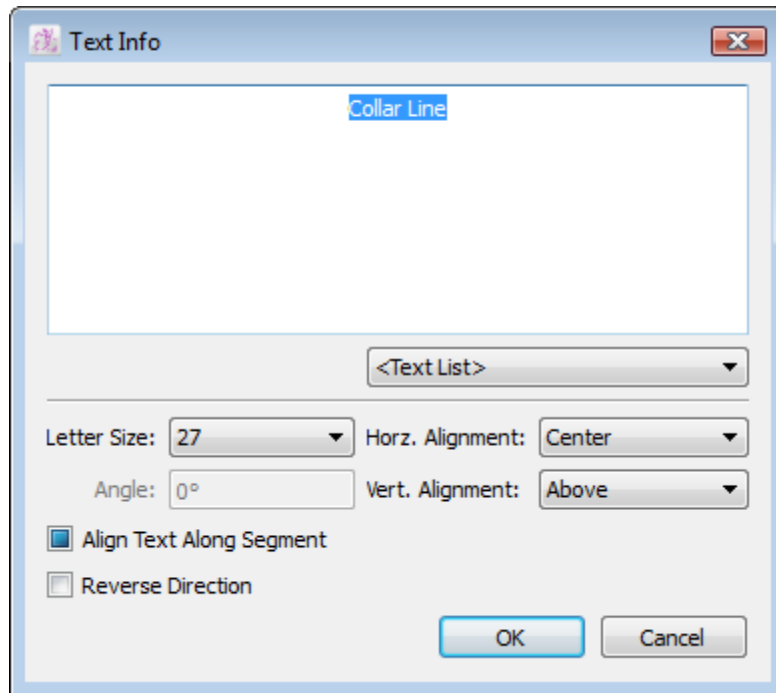
Note: For further details about this box, see the *Text* tool section in this user manual.

Treatment Menu: Points

PAD System™ offers three different types of Points (Regular, Mark and Control), which are described in Chapter 1. The *Points* function is available through the *Treatment* menu.

You can modify or swap Points depending on whether they are being used for a pattern, marker or automatic cutter.

Treatment Menu: Notches

PAD System™ offers three types of Notches by default. These Notches are available in the *Treatment* menu under the *Notches* option.

- Simple Notch
- Double Notch
- V Notch

To create a Notch:

1 Select the Point(s) on the piece (regular or mark) that you want to define as a Notch.

2 Select the desired Notch in the *Treatment* menu.

You can personalize System Notches using *Plot and Symbols* in the *File* menu. The *Symbols* item in the *Plot* window lets you set the length of plotted or cut notches (up to a maximum of 2.56 cm or 1 inch) and adjust the type to either a Slit or T Notch.

You can create your own User Notch List. To customize a variety of shapes, open the *Option* menu and select *Notch List*. Once created, the customized list is available in the *Treatment > Notches* item.

To restore a Notch to a Point, select the Notch you wish to convert and return to the *Notches* option in the *Treatment* menu and select *Point*.

Example of system notches:
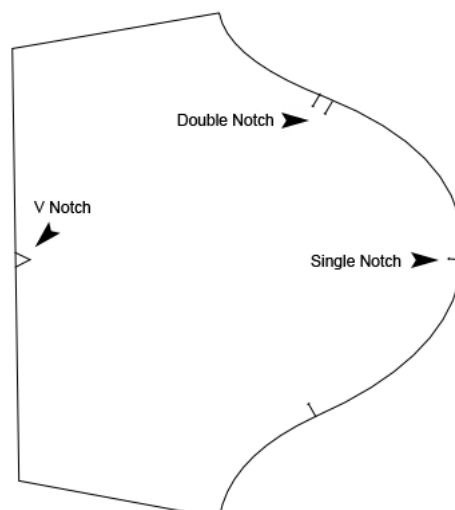
Treatment Menu: Punch Holes

To create a system Punch Hole, you must group a Point inside the piece that is to be converted to a Punch Hole. To do so, use the *Punch Holes* function that is in the *Treatment* menu.

System Punch Holes can be modified using *Plot and Symbols* in the *File* menu. The Symbols item in the *Plot* window lets you set the size of the plotted Punch Holes (28, 18, 12 and 10) and the Shape to X, Bow or Drill Hole.

You can create your own Punch Hole List. To customize a variety of shapes, open the *Option* menu and select *Punch Hole List*. Once created, the customized list is available in the *Treatment* menu under *Punch Holes*.

To restore a Punch Hole to a Point, select the Punch Hole you wish to convert and return to the *Punch Hole* option in the *Treatment* menu. Select the *Point* option.

Example of punch holes
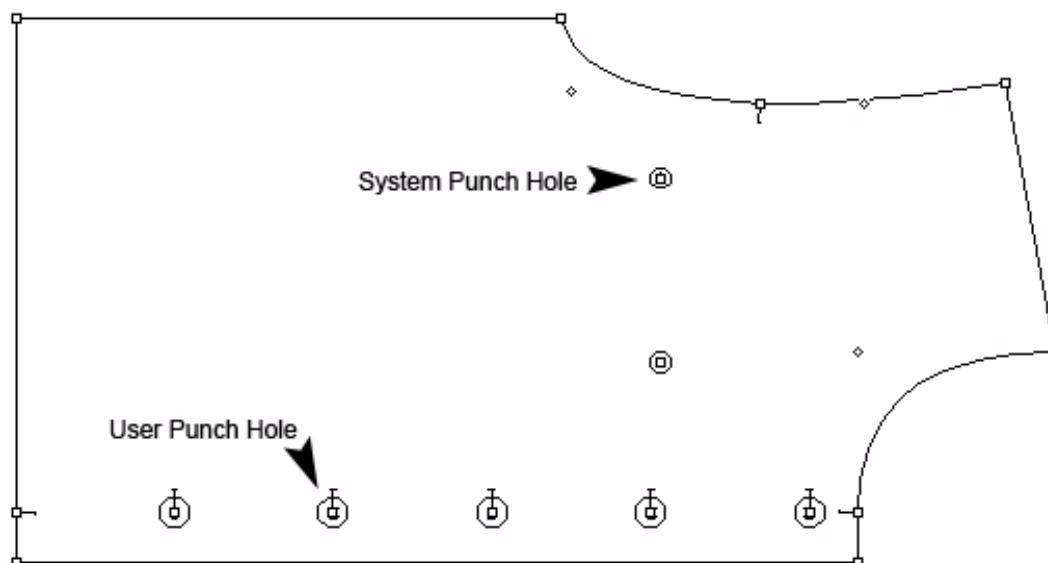
Treatment Menu: Segments

The *Segment type* dialog box enables you to edit the appearance of an internal segment.
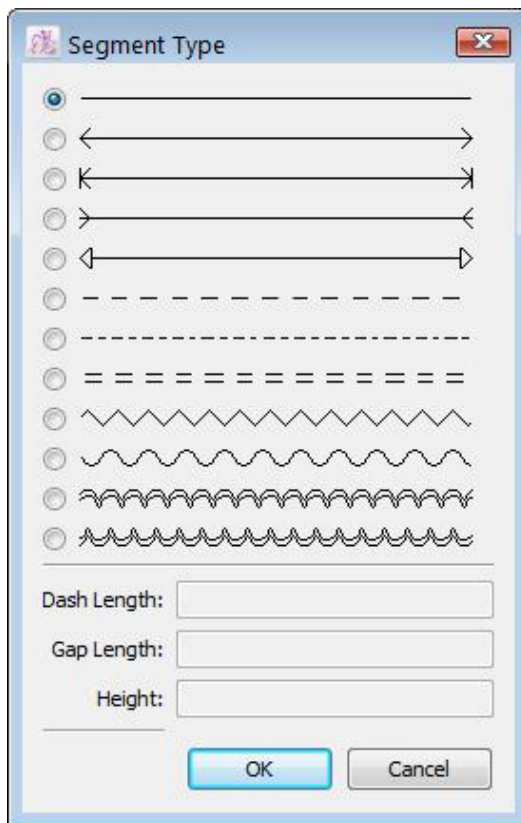
To use this function:

1 Select the segment(s) you wish to change (internal segments only).

2 Select the *Segment* item in the *Treatment* menu.

3 Select the desired type of segment.

4 Enter the desired value (by Dash Length, Gap Length and/or Height) into the text boxes at the bottom of the dialog box.

Note: You can cut Straight Line Segments. Other types of lines can be plotted, but not cut.

Example of segments:
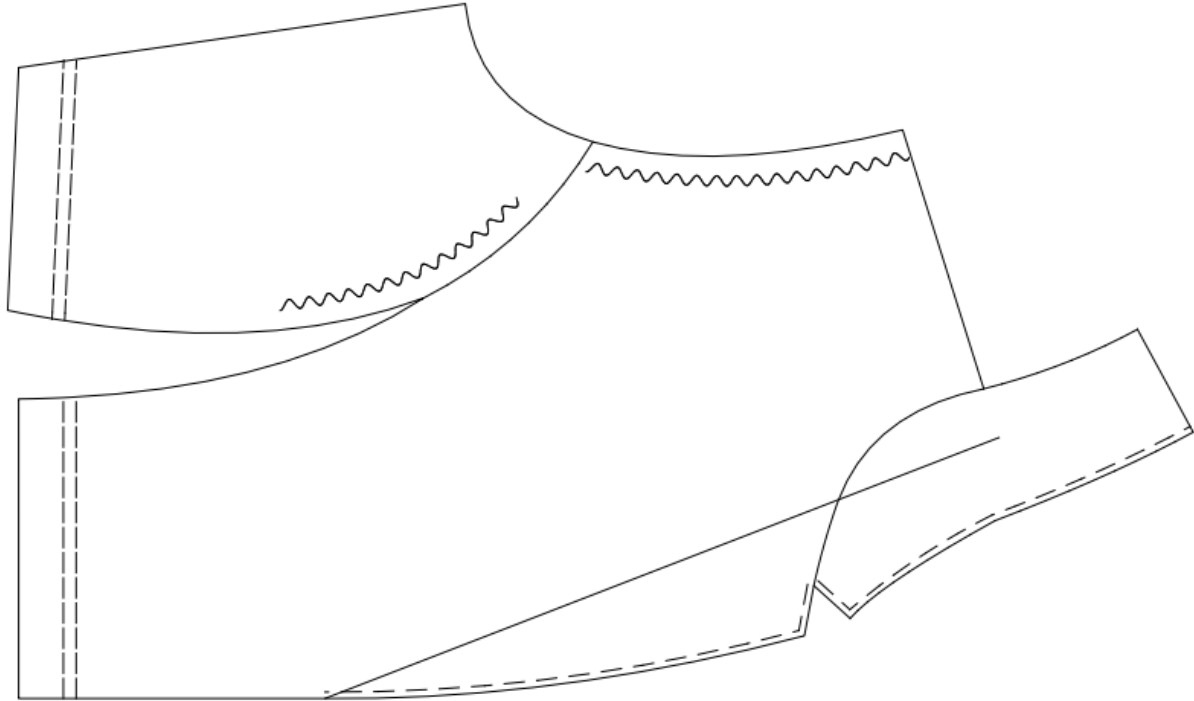
Treatment Menu: Group/Ungroup

The *Group* item in the *Treatment* menu group elements from the plan together. Alternately, the *Ungroup* item ungroup elements.

A point or a piece can be a primary group. You can group these elements together so that they are selected as if they were one element. The internal references, like punch holes or pockets, can be created and grouped to Pattern pieces prior to setting the pieces.

To group items, select the elements to be grouped and select the item *Group* in the *Treatment* menu.

To ungroup items, select the elements to be ungrouped and select the *Ungroup* item from the *Treatment* menu.
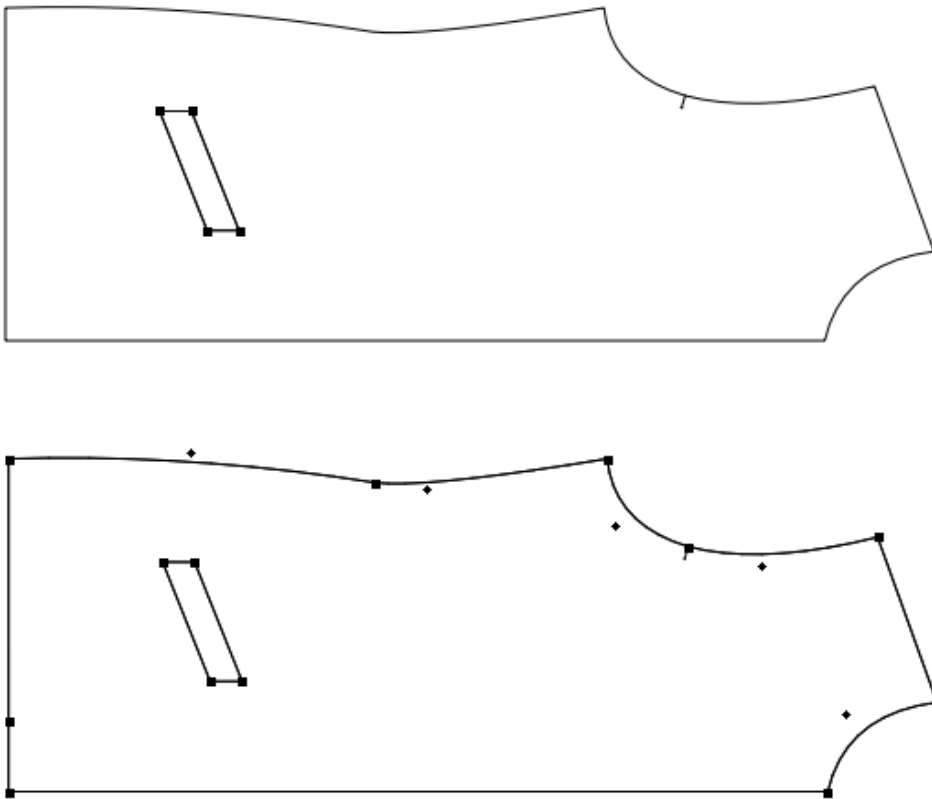
Note: The *Group/Ungroup* functions are available in *Plan View*.

Treatment Menu: Align Shapes...

To align selected shapes together in the Construction plan or in *Piece view*, select two or more points, with at least two of which are on two different pieces. Select the *Align Shapes…* item from the *Treatment* menu.

There are two different types of alignment available

<u>Align on Enclosing Rectangles</u>

When two points or more per shape (or group) are selected, the shapes are tilted to align on the selected axis identified by the selected points. Different alignments are offered for a Horizontal or Vertical Axis: Left Side, Vertically Centered, Right Side, Top, Horizontally Centered and Bottom.
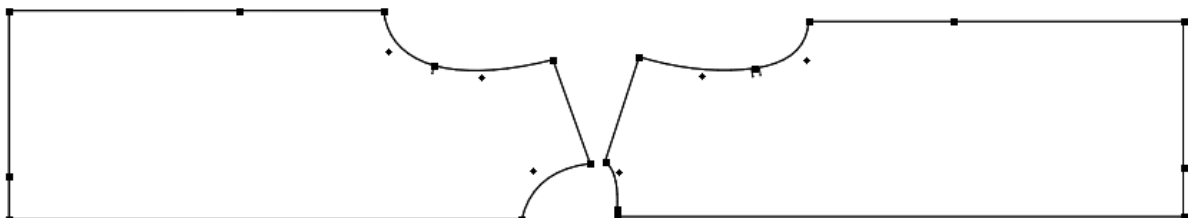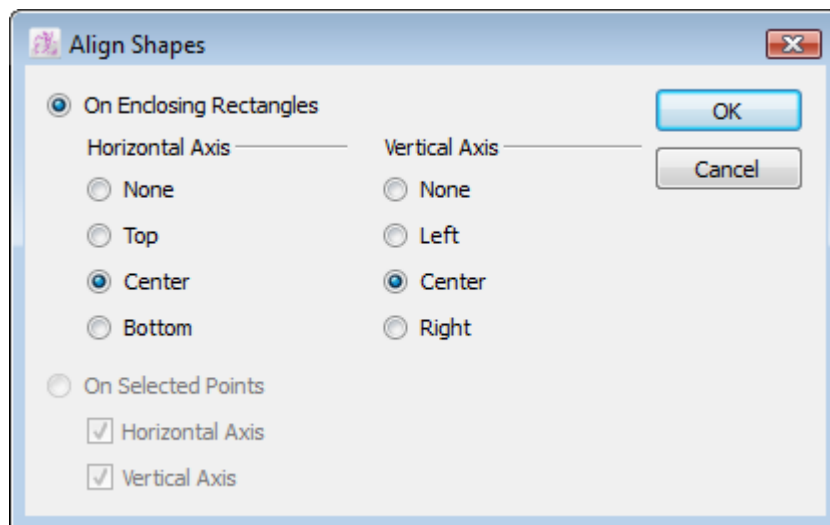
Align on Selected Points

Alignment can be based on two or more selected points (including curve points).When one point per shape (or group) is selected, the shapes can be moved horizontally or vertically (or both) to be aligned on those selected points.
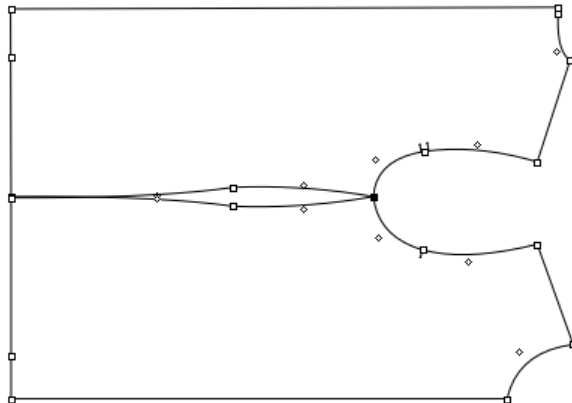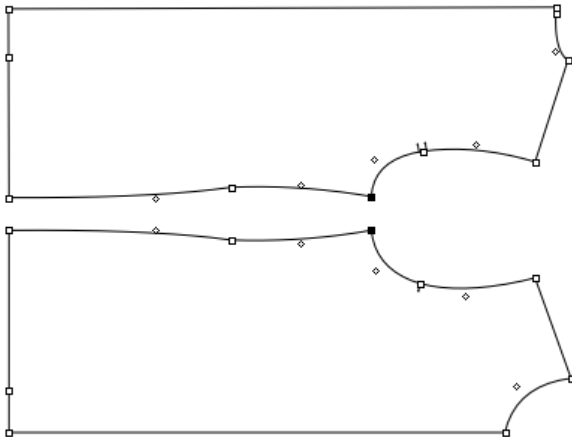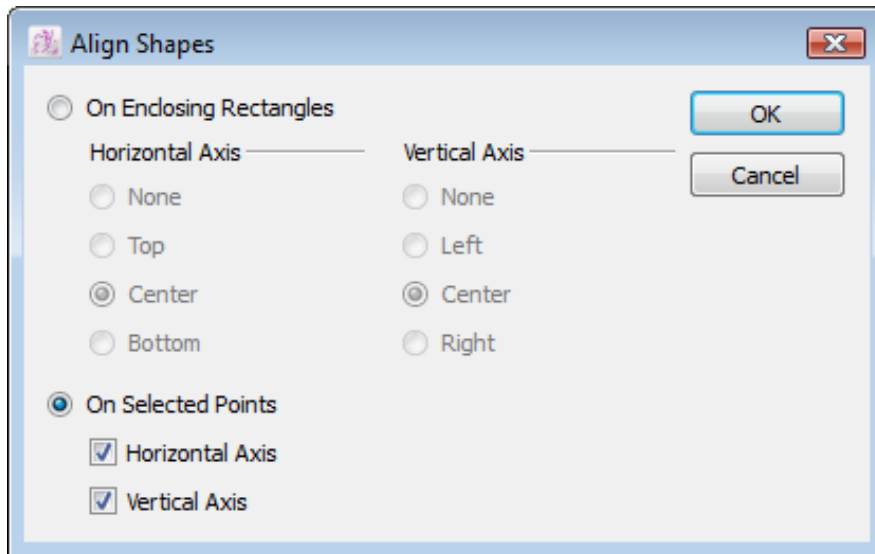
Treatment Menu: Scale...

The *Scale...* item in the *Treatment* menu scales the selected Pattern pieces. The scale can be done independently in X and Y or measured around the piece. If you wish to scale the piece according to one axis but want the other axis to scale proportionately, check the *Lock Proportions* check box.

To scale a shape, activate the desired shape and click the *Scale...* item in the *Treatment* menu. The *Scale* dialog box appears. To scale a piece, select the appropriate radio button and enter the desired scale values.
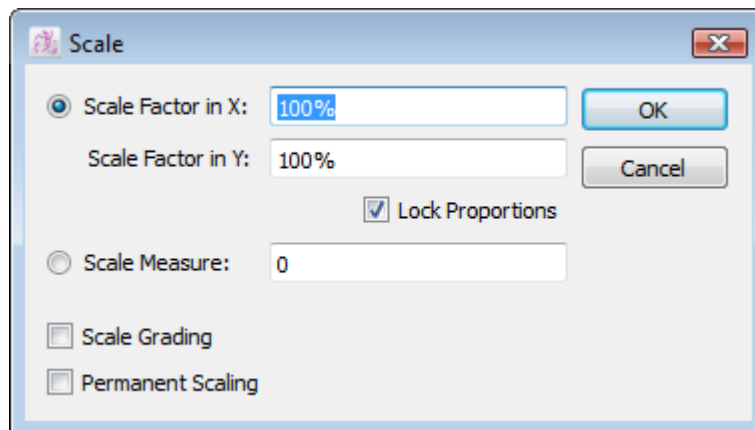
The *Scale Measure* reflects values entered in the *Scale Measure* dialog box. If the value is negative, a portion with the entered value parallel to the contour of the piece is removed (going inside the piece, making it smaller). If the value is positive, a portion with the entered value parallel to the contour of the piece is added (going outside the piece, making it bigger).

When using a percentage (%) scale, select the *Scale Grading* check box to proportionately scale grading evolutions.

Master Pattern remembers the original size of the piece that is scaled. That way, you can always get the piece back to its original size. If you wish to make the scaling permanent, you must check the *Permanent Scaling* check box in the *Scale* dialog box. The new size is considered the original size for any subsequent scaling.

Treatment Menu: Optimize

Optimize	▶	Simplify...
		Create Graded Shape
		Create Curves
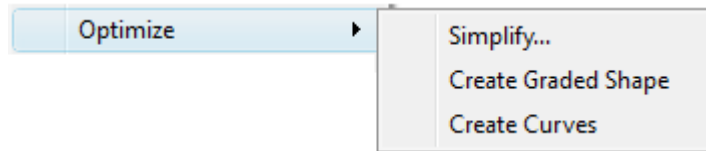
The *Optimize* submenu modifies your pattern to give you optimal results.

Optimize: Simplify

In some instances, after gathering shapes and style lines and finishing the initial manipulation for creating new starting blocks or basic shapes, it is necessary to optimize shapes.

The *Simplify...* command removes any superficial points (curve and regular) on a shape, within the user's defined values.

After Optimization
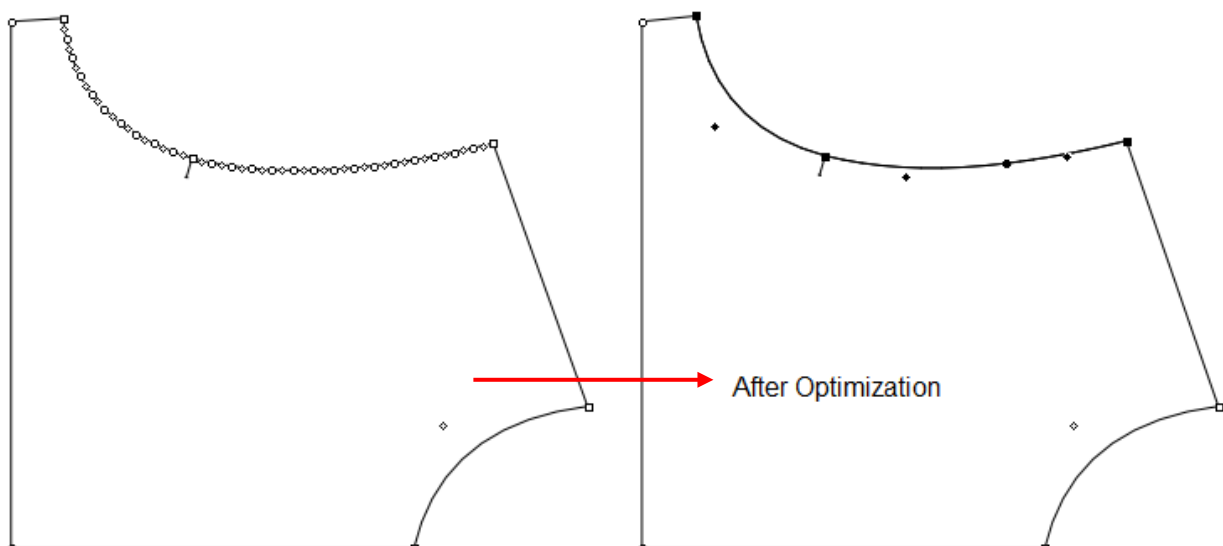
Treatment > Optimize > Simplify... is useful after importing files from other CAD Systems, which may create too many points.

To simplify a shape:

1 Activate the desired shape(s).

2 In the *Treatment* menu, select the *Simplify…* item in the *Optimize* sub-menu to open the *Optimize* dialog box:
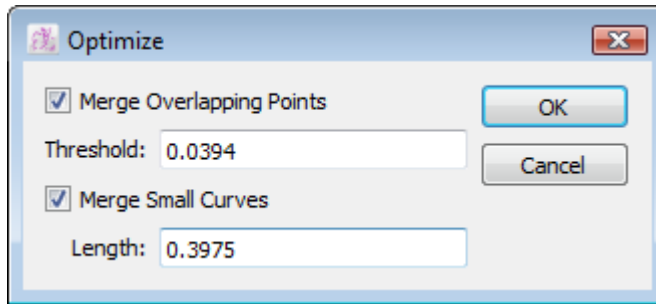
3 Select the appropriate check box:

- **Merge Overlapping Points (Regular and/or Mark):** It removes any extra points within a defined value.
- **Merge Small Curves:** It remove any extra curves within a defined value.

4 Press the *OK* button to execute the function.

Optimize: Create Graded Shape

The *Create graded shape* command creates a graded pattern shape from separate pattern pieces. This command is useful when you cannot obtain a grading nest in a usual way. For example, to create a graded pattern shape from pieces that were digitized separately or imported from plot files.

To create a graded shape from independent shapes:

1 From the *Grade* menu, select the *Working Sizes...* item to establish the desired grading nest in the dialog box.

2 On all pieces, select a common point and change it to the start point (*Treatment > Points > Start Point*).

3 Select and align as desired the pattern pieces along the desired grading nest.

4 Keep the start point selected and go to *Create Graded Shape* in the *Treatment* menu, *Optimize* sub-menu:

Some conditions are mandatory to create a graded pattern shape through *Create graded shape*.

You must have:

- The same number of regular points for each pattern piece.
- The same start point on each pattern piece.
- All curves must be located at the same position on each pattern piece.
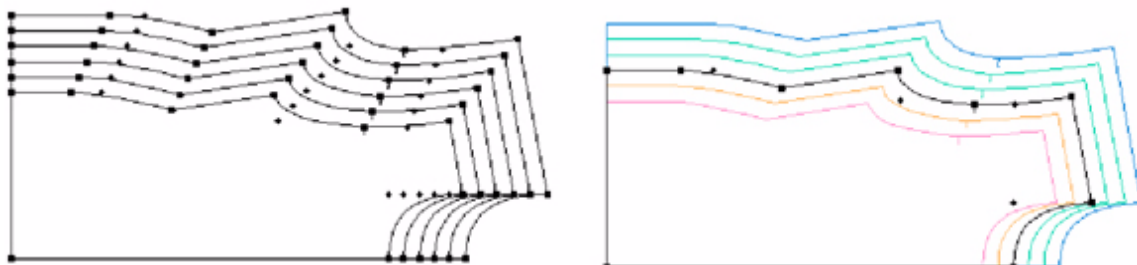
Optimize: Create curves

The *Create curves* command creates PAD System™ curves in imported files from other systems (Gerber, Lectra, etc.).

To create curves out of straight lines:

1 Select the straight lines you wish to convert to curves. You must select a minimum of three points. Selected points must not pass through darts, pleats or shirring.

2 In the *Treatment* menu, select the *Create curves* item from the *Optimize* sub- menu.

Example of a created curve:
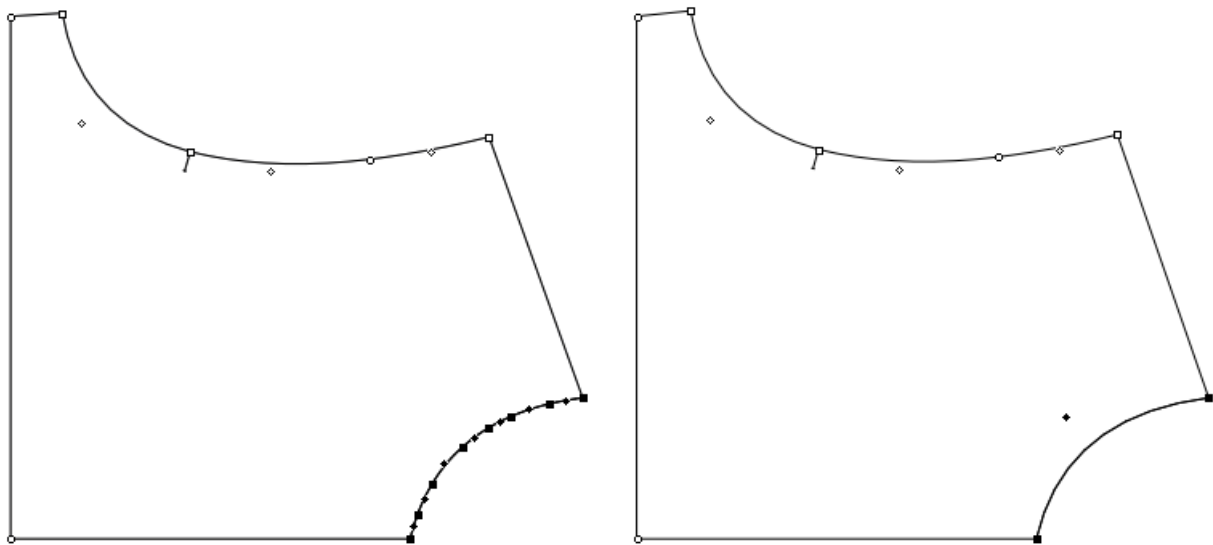
Treatment Menu: Pathfinder

Pathfinder	▶	Intersect Lines
		Create Outlines
		Smooth Curves

The *Pathfinder* sub-menu in the *Treatment* menu finds the intersecting point of two intersecting segments, creates an outline of superimposed shapes and transform corners into smooth edges.

Pathfinder: Intersect Lines

Intersect Lines, in the *Pathfinder* sub-menu, *Treatment* menu, finds an intersection point between two segments. This is useful when you wish to project a point on a segment based on a selected line.

To intersect lines:

1 Select the two segments (only two points per segment) that intersect each other.

2 Select the *Pathfinder > Intersect Lines* option, in the *Treatment* menu. This adds a point each time the two lines intersect each other. The point will be projected if the segments do not touch one another.

Example of the *Intersect lines* function result:
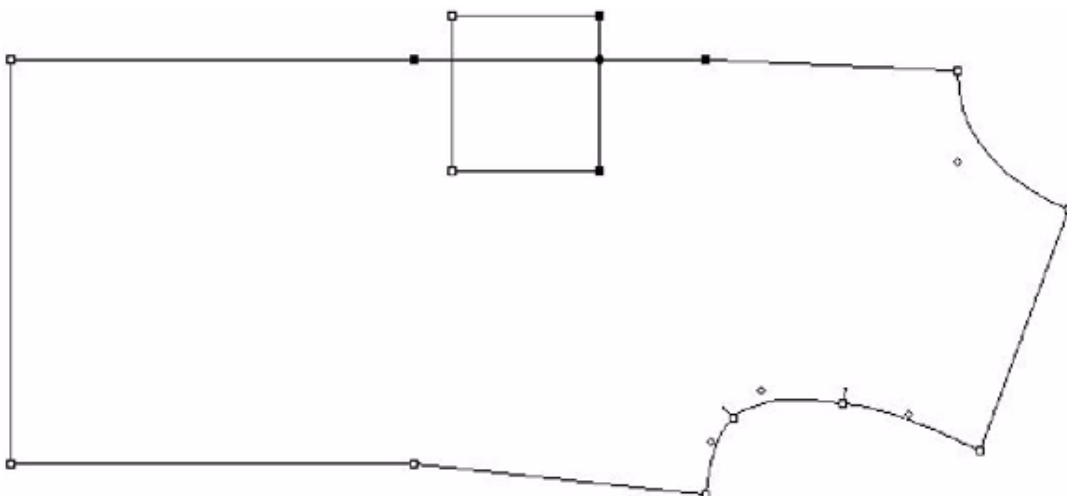
Pathfinder: Create Outlines

Create Outline finds the outline of superimposed shapes and builds a clean polygon out of internal lines. This function is useful when you need to define a new contour.

To create an outline:

1 Select all polygons (they must touch or intersect one another).

2 Select *Pathfinder > Create Outline* in the *Treatment* menu. *Create Outline* adds a point each time a segment intersects another.

All internal segments will be retained.

3 Erase the internal segments if you wish the pieces' juncture to create a new, clean polygon.

Example of the *Create Outline* function:

Before Create outline
2 pieces

After Create outline
1 piece

After deleting the non-desired points
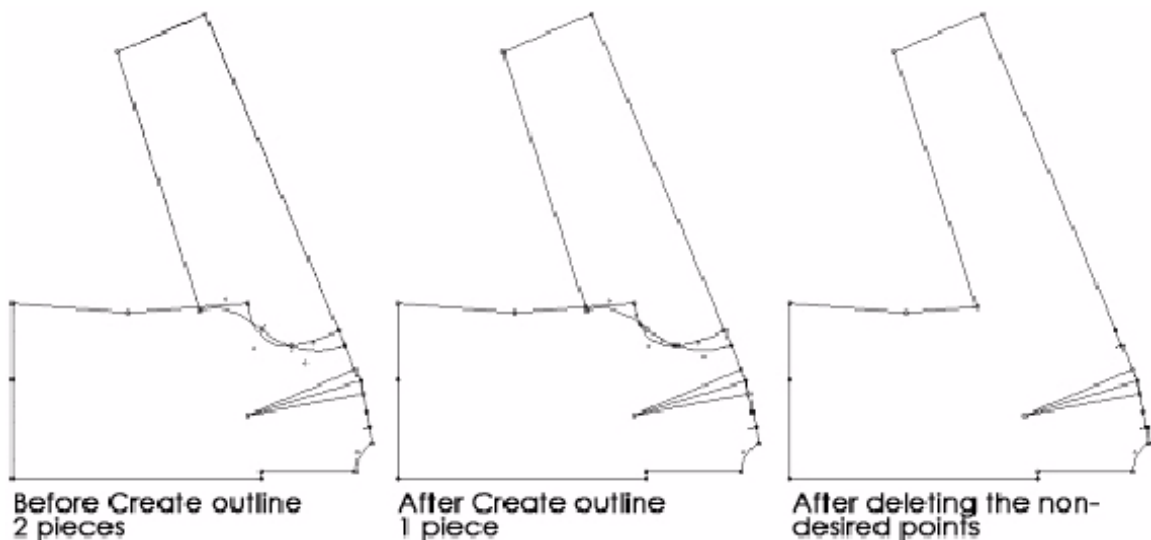
Pathfinder: Smooth Curves

The *Smooth Curves* function in the *Pathfinder* menu, *Treatment* menu, transforms corners and sharp edges into a smooth shape by creating curves.

To smooth curves:

1 Select the segment(s) you wish to modify.
2 Select *Pathfinder > Smooth Curves*, from the *Treatment* menu.

This process modifies all the selected lines and adds curve points to the reshaped pattern pieces:

Before	After
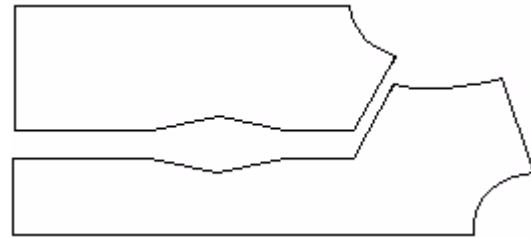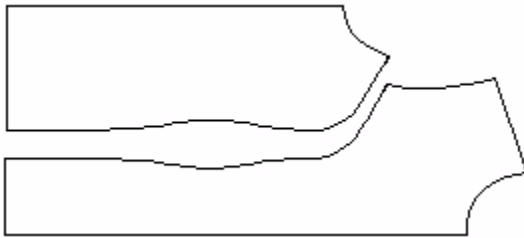
Treatment Menu: Pattern Assistant

The Pattern Assistant… option in the Treatment menu assists users to check error from the pattern file.

To do so:

1 Select the option Pattern Assistant in the Treatment menu.
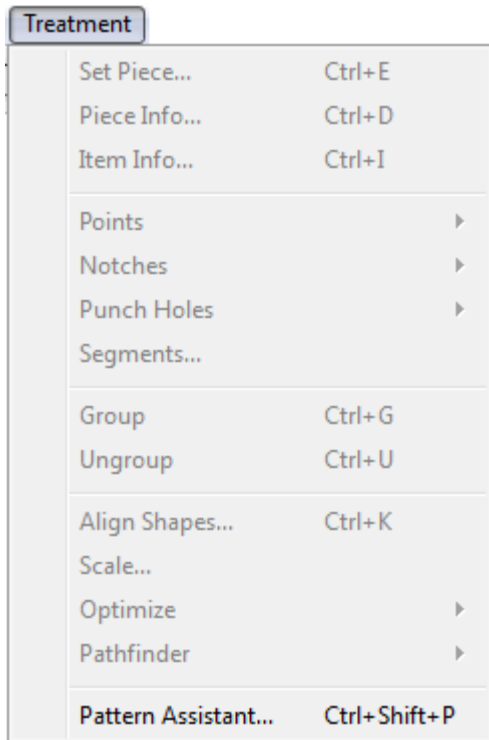
2 A dialog box appears and all of options to be default on it.
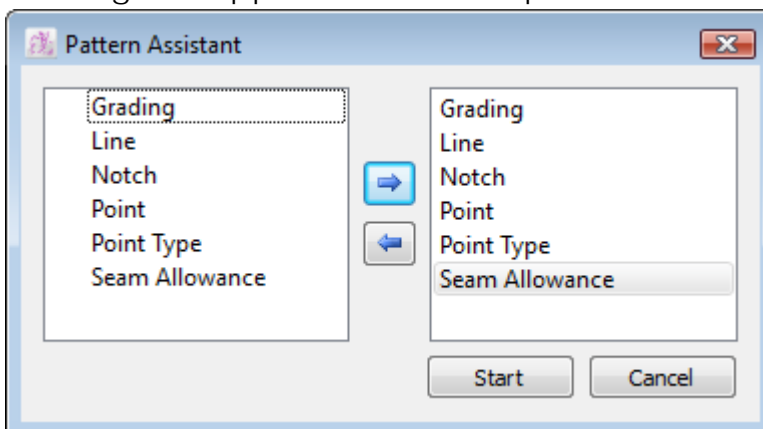
3 Press **Start** button and search the error for all of pieces. The floating window for Pattern Assistant displays all of the items of the error pieces.
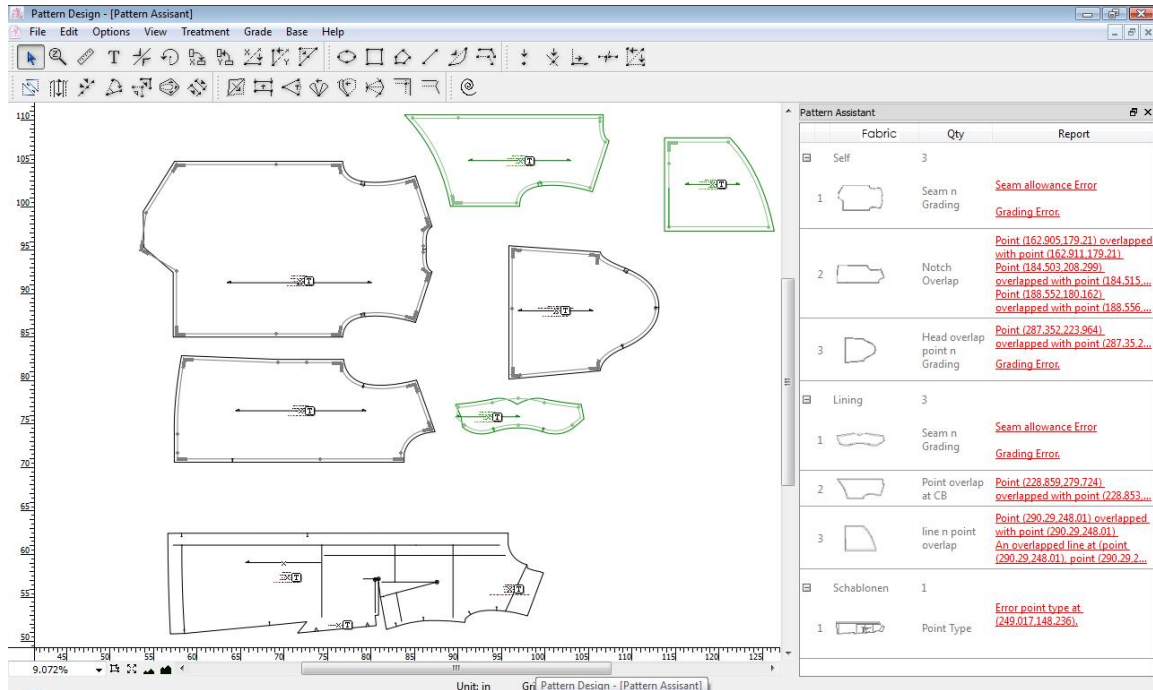
4 Click one of the items from the floating window. It will indicate the piece on full screen. Here is the error message for **Seam Allowance**.
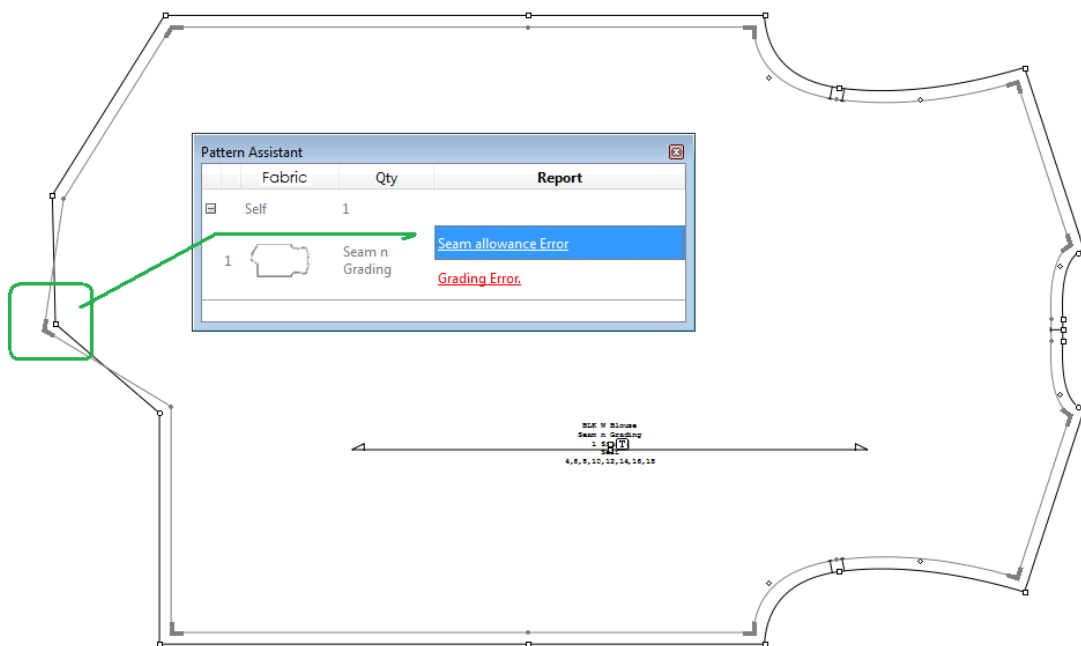
An error message for grading
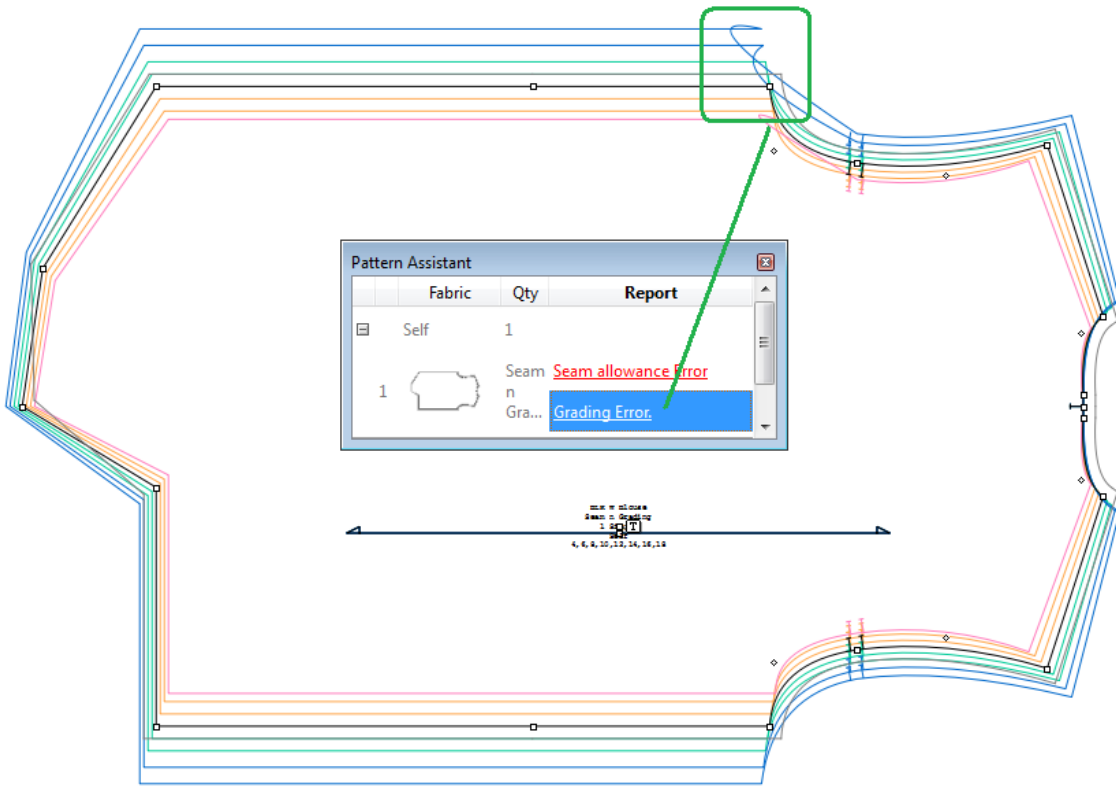
An error message for Point overlap, it will indicate the position (coordinates) of the overlapped point.
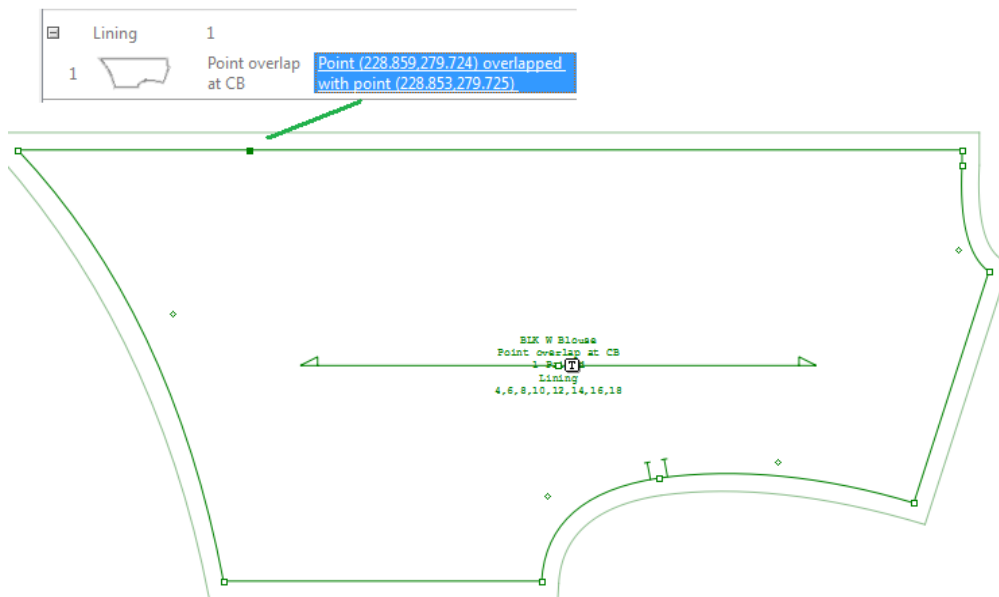
An error message for Notch overlap, it will indicate the position (coordinates) of the overlapped point.
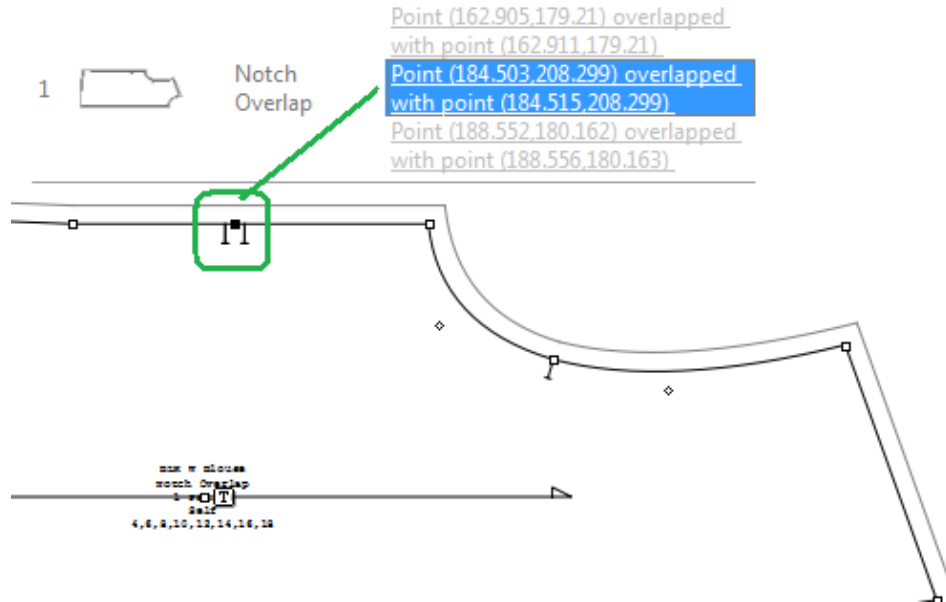
An error message for Line overlap, it will indicate the position (coordinates) of the overlapped point.
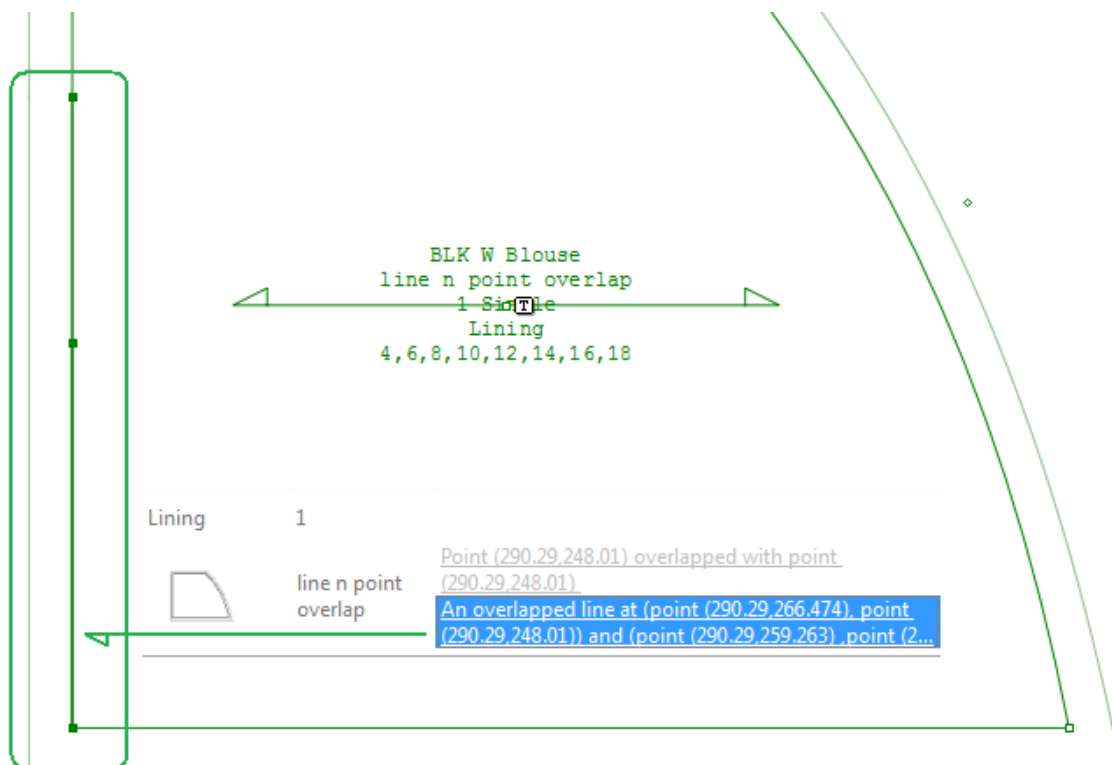
5 Once the error message is being chosen, it will turn it to Grey color.

Check Error on the Selected Piece

Right click on mouse to choose Pattern Assistant. A dialog box appears and press Start button to search the error on the selected piece.
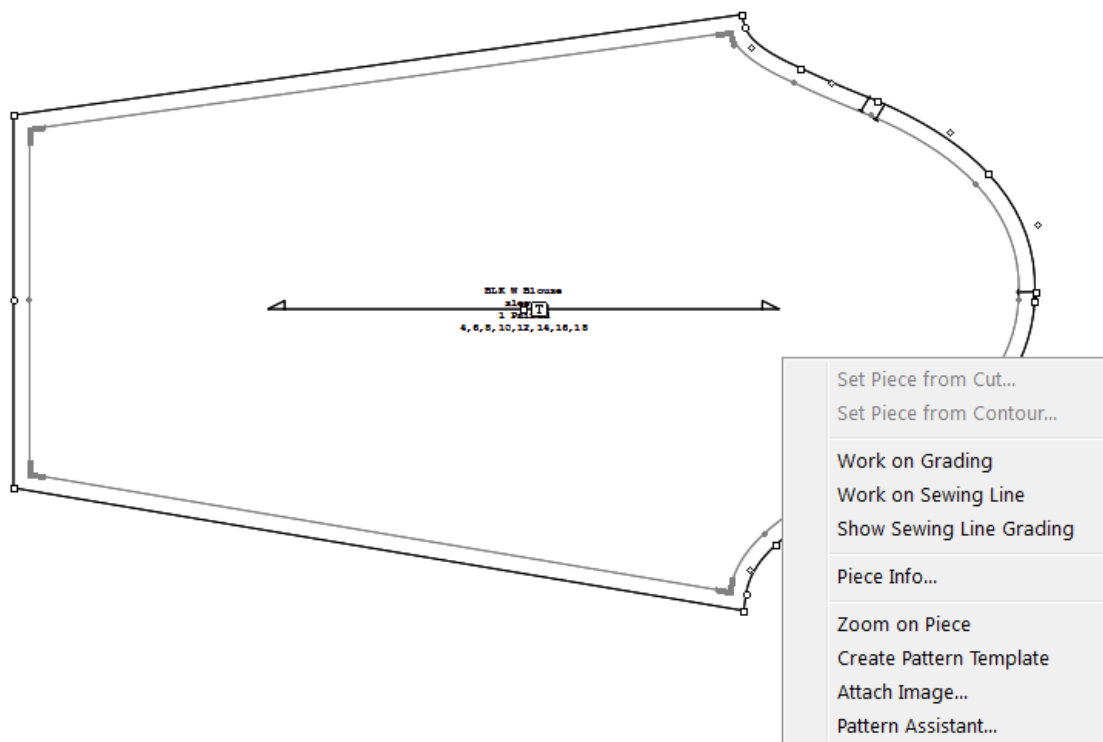
Check Error When Closing File

Go to Option menu, Preference and General tag page.
The item is checked, it will start Pattern Assistant if you close the existing file.
You may press "**Esc**" button from keyboard to Force Quit this function.

Grade Menu
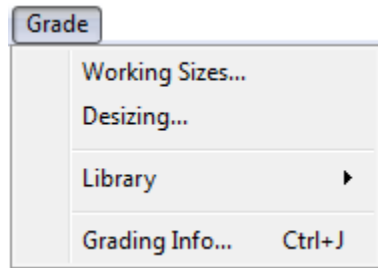
When developing a new style, the grading of pattern pieces is updated, according to the grading of the original pattern pieces.

If you require a specific Grading evolution, the modification can be done in a number of ways, by:

• Using *Grade View* tools
• Modifying the coordinates of a point in the *Grading Info* dialog box
• Using the *Grading Library* to apply an evolution
• Using the *Grading Arrows* function

This menu is described in the *Grading* chapter of this manual.

Base Menu
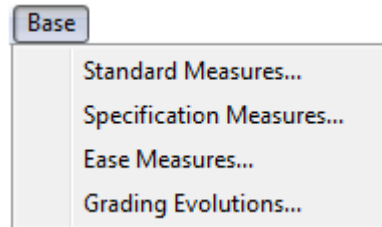
To open Pattern Basic Blocks:

1 Select the *New* item from *File* menu.

A dialog box appears:
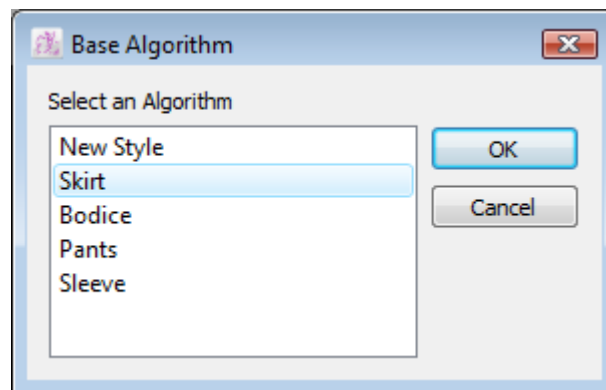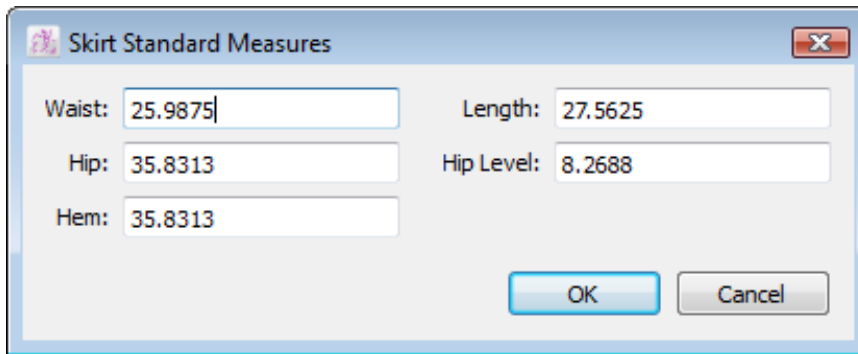
2 Select one of the four Algorithms, for example, the Skirt.

3 Click the *Open* button.

Once the block is open, the *Base* menu becomes accessible for modifications.

Different types of adjustments are possible through the four items of the menu. For each Base, the measures can be changed and saved as a new Base files (*.bas) for future pattern developments.

Base Menu: Standard Measures...
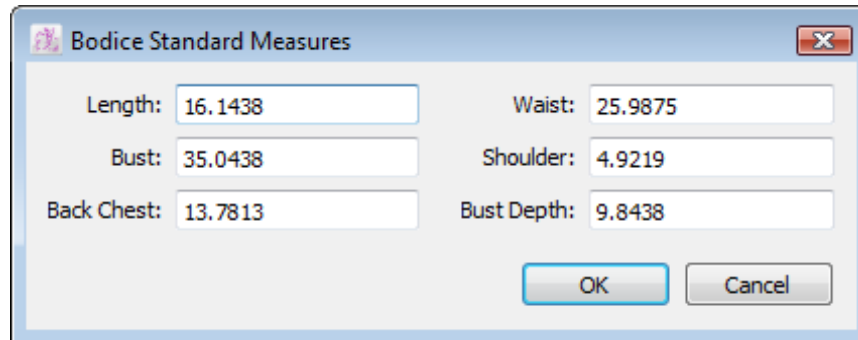
The *Standard Measures...* item in the *Base* menu displays the basic measurements according to the chosen algorithm.

Skirt Standard Measures

Waist:	25.9875	Length:	27.5625
Hip:	35.8313	Hip Level:	8.2688
Hem:	35.8313		
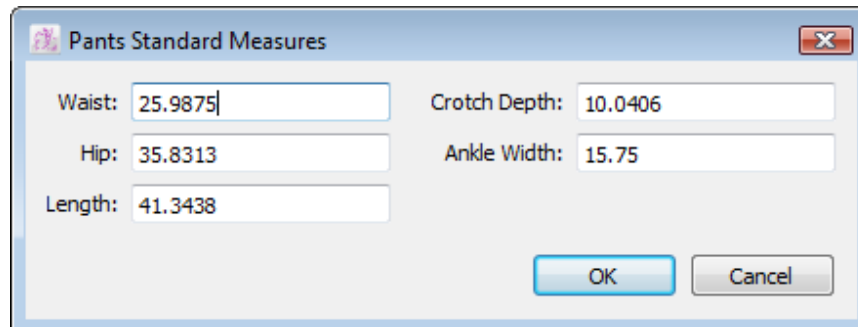
OK   Cancel

Bodice Standard Measures

Length:	16.1438	Waist:	25.9875
Bust:	35.0438	Shoulder:	4.9219
Back Chest:	13.7813	Bust Depth:	9.8438
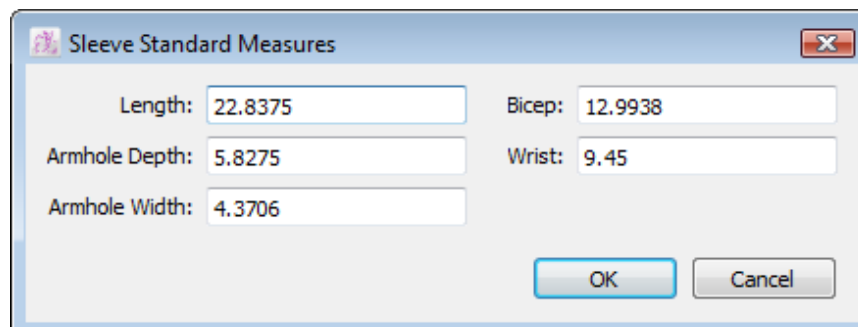
OK   Cancel

Pants Standard Measures

Waist:	25.9875	Crotch Depth:	10.0406
Hip:	35.8313	Ankle Width:	15.75
Length:	41.3438		

OK   Cancel

Sleeve Standard Measures

Length:	22.8375	Bicep:	12.9938
Armhole Depth:	5.8275	Wrist:	9.45
Armhole Width:	4.3706		
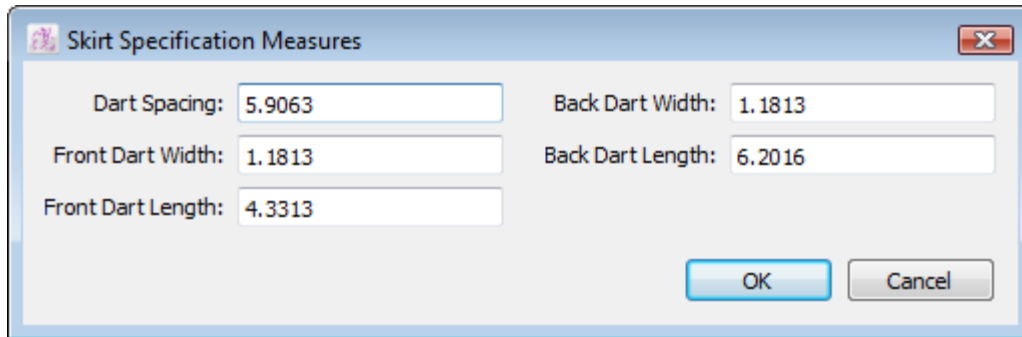
OK   Cancel

You can modify all these measurements as a total body measurement.

Base Menu: Specification Measures...
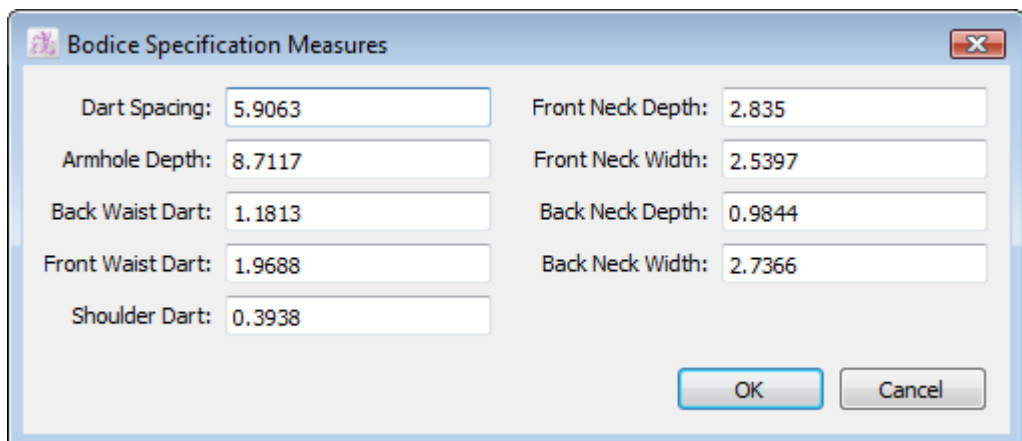
The *Specification Measures...* item in the *Base* menu allows you to modify specific pattern values according to the chosen algorithm.

Skirt Specification Measures

Dart Spacing:	5.9063	Back Dart Width:	1.1813
Front Dart Width:	1.1813	Back Dart Length:	6.2016
Front Dart Length:	4.3313		
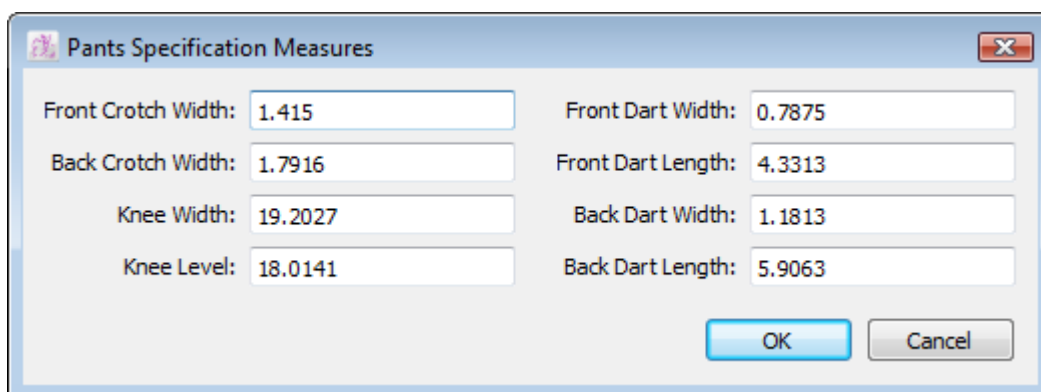
OK   Cancel

Bodice Specification Measures

Dart Spacing:	5.9063	Front Neck Depth:	2.835
Armhole Depth:	8.7117	Front Neck Width:	2.5397
Back Waist Dart:	1.1813	Back Neck Depth:	0.9844
Front Waist Dart:	1.9688	Back Neck Width:	2.7366
Shoulder Dart:	0.3938		

OK   Cancel

Pants Specification Measures
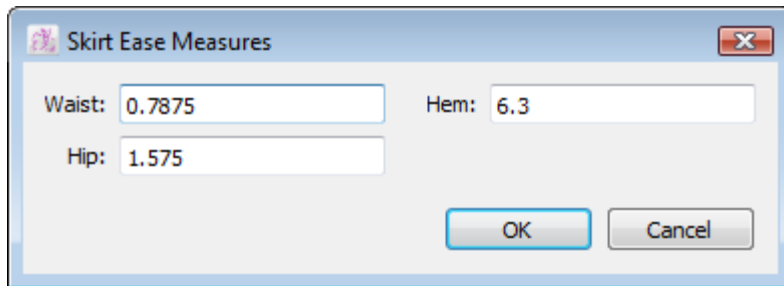
Front Crotch Width:	1.415	Front Dart Width:	0.7875
Back Crotch Width:	1.7916	Front Dart Length:	4.3313
Knee Width:	19.2027	Back Dart Width:	1.1813
Knee Level:	18.0141	Back Dart Length:	5.9063

OK   Cancel

Note: There is no specification measures for the Sleeve.

Base Menu: Ease Measures...
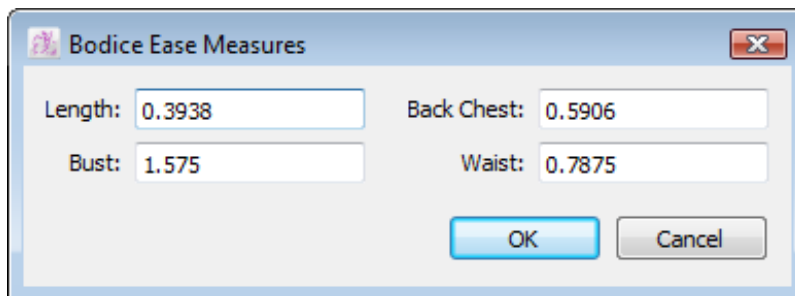
The *Ease Measures...* item in the *Base* menu allows you to modify the ease measurements of the pattern according to the chosen algorithm.

Skirt Ease Measures

Waist: 0.7875   Hem: 6.3
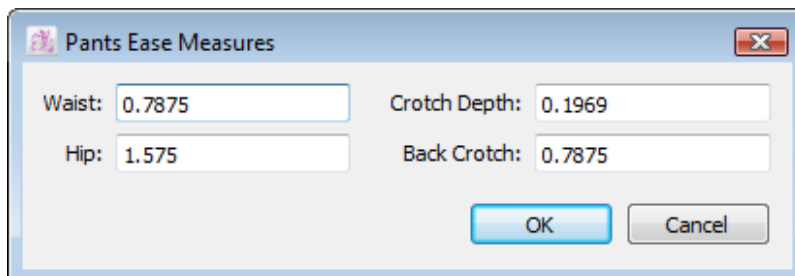
Hip: 1.575

OK   Cancel

Bodice Ease Measures

Length: 0.3938   Back Chest: 0.5906

Bust: 1.575   Waist: 0.7875

OK   Cancel

Pants Ease Measures

Waist: 0.7875   Crotch Depth: 0.1969

Hip: 1.575   Back Crotch: 0.7875

OK   Cancel
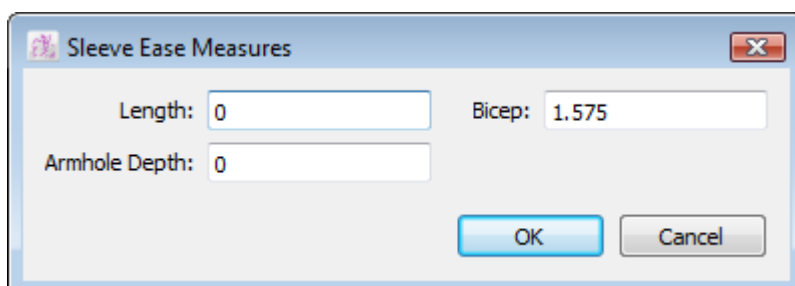
Sleeve Ease Measures

Length: 0   Bicep: 1.575

Armhole Depth: 0

OK   Cancel

Base Menu: Grading Evolutions

Pants Grading Evolutions

		X-Small	Small	Large	X-Large
Waist	Measure	0	0	0	0
	Level	0	0	0	0
Hip	Measure	0	0	0	0
	Level	0	0	0	0
Knee	Measure	0	0	0	0
	Level	0	0	0	0
Ankle	Measure	0	0	0	0
	Level	0	0	0	0
Crotch	Measure	0	0	0	0
	Level	0	0	0	0

OK Cancel

Sleeve Grading Evolutions

		X-Small	Small	Large	X-Large
Bicep	Measure	0	0	0	0
	Level	0	0	0	0
Elbow	Measure	0	0	0	0
	Level	0	0	0	0
Wrist	Measure	0	0	0	0
	Level	0	0	0	0
Width	Measure	0	0	0	0
	Level	0	0	0	0

OK Cancel

Help Menu: About Pattern Design...
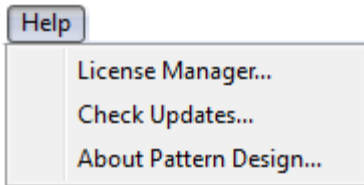
License Manager... item, a dialog box appears to show the info of the license
code.
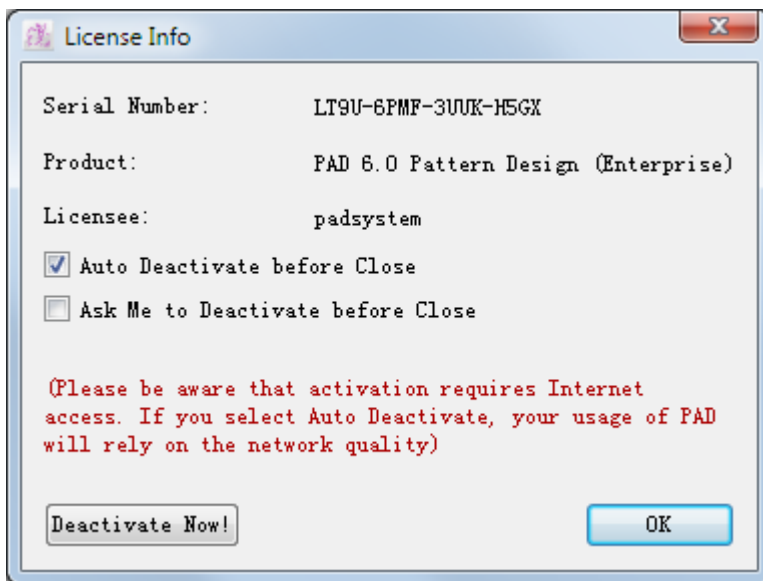
Check Updates... item, a dialog box appears to remind you the updates is
available to download.
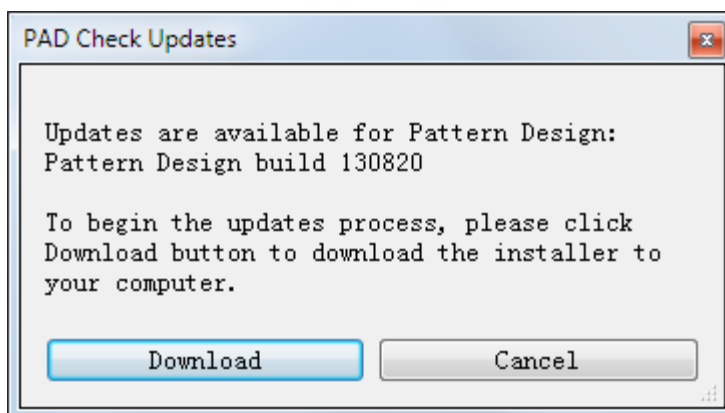
By clicking the **About Pattern Design...** item from the *Help* menu, you can view:

- The name and version of the application installed.
- The License Code and User's Name as entered during the initialization of the application.

Chapter 3
The Toolbox / Toolbars
• • • • • •

The Toolbox allows you to make and types of pattern modification.

Pattern pieces can be modified using different views: Plan, Pieces, Clone and Grading.

The Toolbars allow you to make and types of pattern modification.
Toolbars are divided by 8 sections: **Selection**, **Drawing**, **Point**, **Segment**, **Characteristics**, **Grading**, **Base and Frame**.

Pattern pieces can be modified using different views: Plan, Pieces, Clone and Grading.
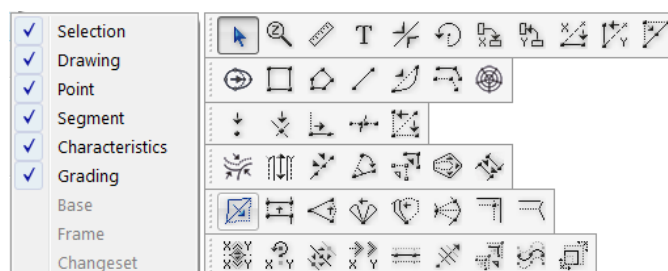
Description of the Tools

Function of each tool in the Toolbox / Toolbars

Pointer	Zoom In/Out	Ruler

Text	Symmetry	Rotation

Orient in X	Orient in Y	Align Two Points in X

Align Two Points in Y	Align Points	Ellipse / Circle

Ruffle	Rectangle	Polygon

Segment	Curve	Point

Attach Segments	Add Point to Segment	Divide Segment

Intersection Points	Segment Length	Walking Piece

Segment Angle	Copy/Paste Shape/Measure	Irregular Scale

Segment Sync	Join/Split Shapes	Mirror

Pleat	Dart	Dart Pivot

Dart Transfer

Shirring

Seam Corner

Parallel Line

Seam Allowance

Function of each grading tool in the Toolbox / Toolbars

Symmetry Grading

Rotate Grading

Manipulate Grading

Copy/Paste Grading

Parallel Grading

Align Grading

Copy/Paste Path
Grading

Smooth Path
Grading

Distribute
Grading

Pointer

The *Pointer* tool activates or selects the desired elements and/or move them within the working area.

To move the selection using the keyboard arrows:

1 Select the *Pointer* tool.

2 Select the element(s) you wish to move.

3 Use the directional arrows (Up, Down, Left, Right) to move the elements to the desired location.
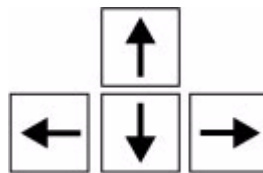
Select the *Snap to Grid* item, in the *Options* menu, to move elements according to the active grid.

Activate the grid by selecting the *Snap to Grid* item from the *Options* menu to move the symmetry reflection line according to the active grid.

Snap to Grid is OFF	Snap to Grid is ON

Options
Preferences...
✓ Snap to Grids   Ctrl+R

Options
Preferences...
Snap to Grids   Ctrl+R
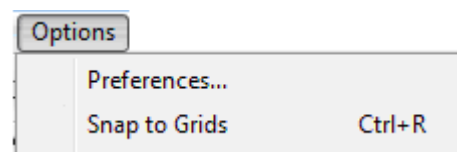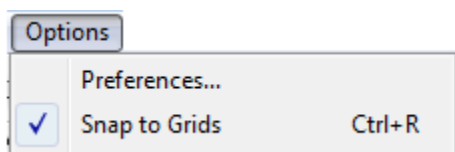
Note: For more information about *Snap to Grid*, please refer to the *Options* menu, select Preference, Display section.

To move the selection using the mouse:

1 Select the *Pointer* tool.

2 Select the element(s) you wish to move.

3 Move the selected element(s) by clicking one of its sides with the left mouse button (Windows / Linux) or the mouse button (Macintosh) and holding your click.

Hold down the **Shift** key (Windows, Linux and Macintosh) to constrain the movement either in X, Y or in every 15°. (Define the angle by the setting "Round Angle" in the Preference menu.)

To activate the *Pointer* tool when another tool is selected:

Hold down the **Ctrl** key (Windows / Linux) or the **Command** key (Macintosh).

To select several segments of a piece:

With the *Pointer* tool, hold down the **Shift** key (Windows, Linux and Macintosh) and click as many elements (points, segments...) as you want.

To select the entire piece with just one click:

With the *Pointer* tool, hold down the **Alt** key (Windows) or the **Option** key (Macintosh) or **Alt +Windows** keys (Linux) and click one segment of the piece you want to select.

You can combine these functions, if you wish.

To adjust or move the selection using numeric values:

1 Select the *Pointer* tool.

2 Select the element(s) you wish to move.

3 Hold down the **Alt + Ctrl** keys (Windows / Linux) or the **Option + Command** keys (Macintosh).

4 Click the *Pointer* tool icon in the Toolbox.
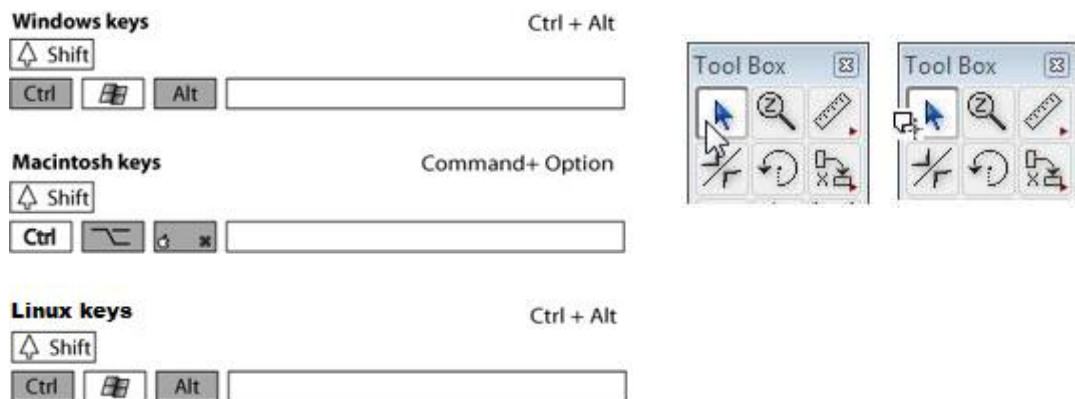
A dialog box appears:
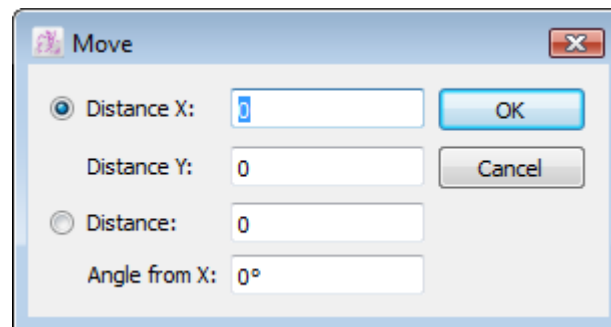
5 Enter the X and Y values (in user predetermined measurement units) to move the selected element(s) in precise horizontal (X) or vertical (Y) directions. A positive value moves the selection to the right/top. A negative value moves the selection to the left/down.

6 Click the *OK* button to save your changes.

Or,

1 Select the *Distance* radio button and enter the distance and angle from X.
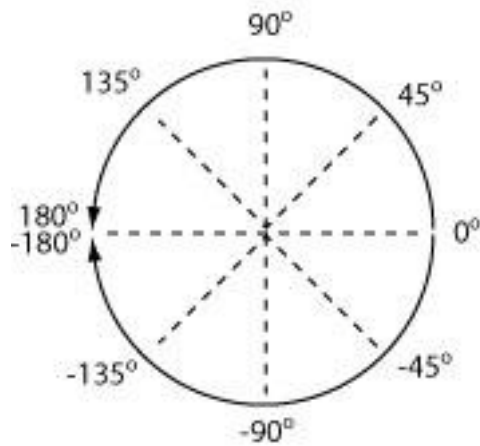
2 Click the *OK* button to save your changes.

To orient a notch:

1 Select the tip of the notch.

 2 Move the notch tip to the desired notch orientation.

The notch is oriented like a radius on a pivot:
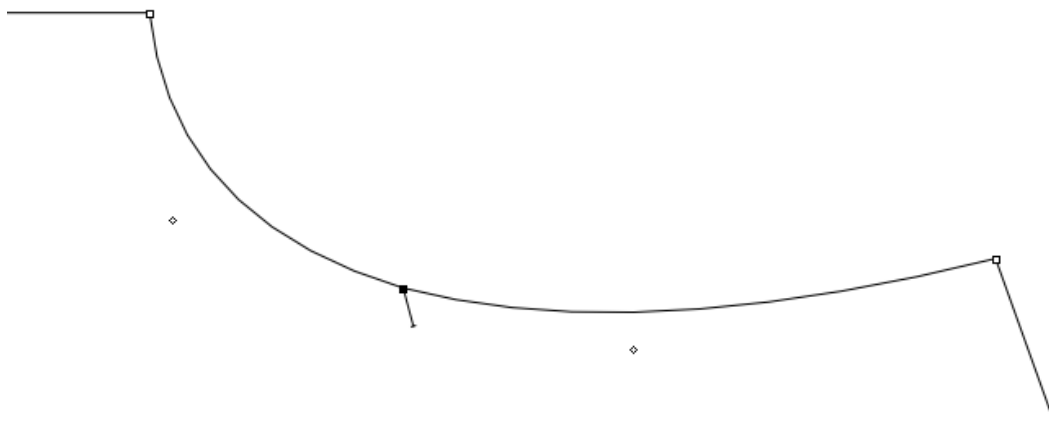
The *Pointer* tool allows you to move the origin of the Grading Nest around the shape. The grading can be moved according to one or two selected points.

To move the Grading Nest:

1 Click *Grade View* in the *View* menu if you are not already in Grade view.

2 Select the *Pointer* tool.

3 Select the point or the segment associated to the grading you want to move.

4 Hold down the **Alt + Ctrl** keys (Windows / Linux) or the **Option + Command** keys (Macintosh) and click the *Pointer* tool icon in the Toolbox.
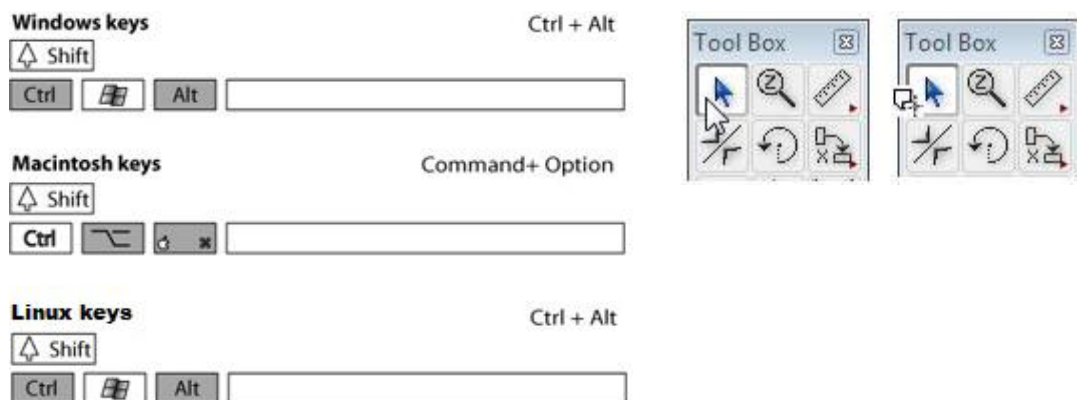
The Grading Nest moves to the new origin or orient itself according to the selected points.

Before moving
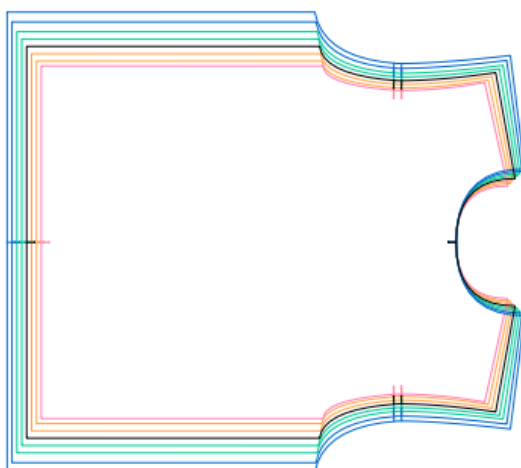
After moving
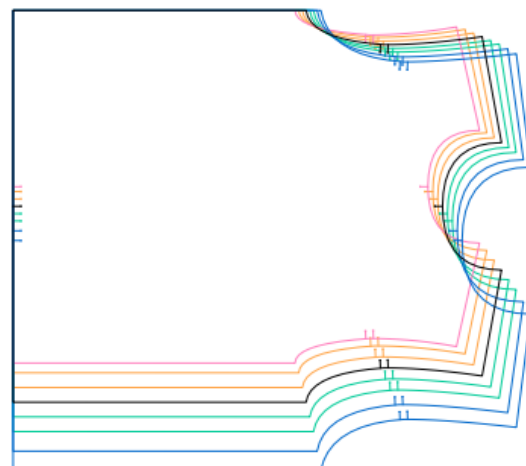
Zoom In/Out

The *Zoom In/Out* tool allows you to enlarge or reduce the general working area view.

To get a closer view of the working area:

1 Select the *Zoom In/Out* tool in the toolbox.

2 The *Pointer* converts to a magnifying glass. The *Zoom In* tool is activated by default.

3 Click the area you want to enlarge, and repeat if necessary. You can enlarge the view to a maximum of 200%.

To get a farther view of the working area:

1 Select the *Zoom In/Out* tool in the toolbox.

2 The pointer converts to a magnifying glass.

3 Hold down the **Alt** (Windows) key or the **Option** (Macintosh) key or **Alt + Windows** (Linux) keys.

4 Click the area you want to get a farther view of, and repeat if necessary. You can reduce the view to a minimum of 0.5%

To get a closer view of a specific section:

Use the *Zoom In/Out* tool to click and drag the area that you wish to see more closely. This displays a temporary enclosing rectangle around the selected area. When you release the mouse button, this enlarged area appears at the center of the screen. Using this method, you can set a zoom level up to a maximum of 2000%.

When another tool is selected, the pointer can be transformed into the *Zoom In / Out* tool.

To activate the *Zoom In* tool when another tool is selected, hold down the **Ctrl** key + **Space bar** (Windows / Linux) or the **Command** key + **Space bar** (Macintosh).
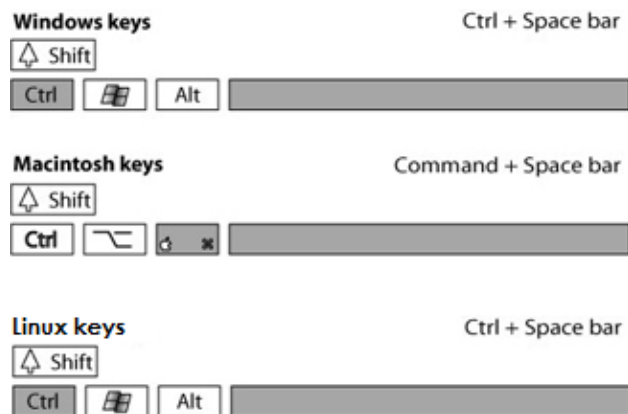
To activate the *Zoom Out* tool when another tool is selected, hold down the **Alt** + **Ctrl** + **Space** bar keys (Windows / Linux) or the **Command** + **Option** + **Space** bar keys(Macintosh) .
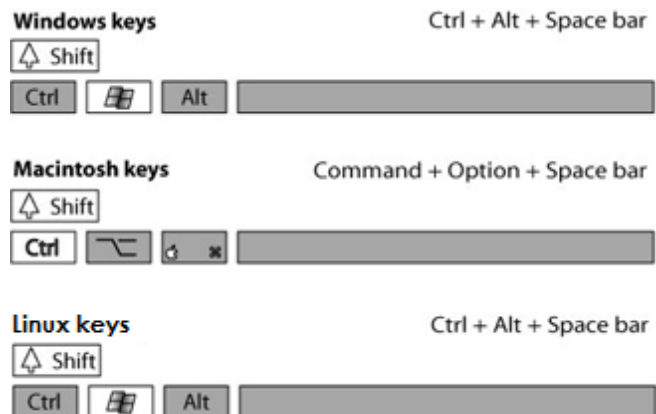
Or,

To activate the Zoom In when another tool is selected,
hold down **Space** bar key + **Move up mouse wheel**.

To activate the Zoom Out tool when another tool is selected,
hold down **Space** bar key + **Move mouse wheel down**.

Ruler

The *Ruler* tool allows you to get information on the distance between any two clicks, which can be on points or anywhere else on the working area. When the cursor closes to the point or the segment, a text (point, control, outline, center and 1/3 segment) shows next to the cursor.

If you do not see the *Ruler* tool in the toolbox, it may be hidden beneath the *Text* tool. To activate it, hold down the left mouse button (Windows / Linux) or the mouse button (Macintosh) on the *Text* tool until the *Ruler* tool appears. Move the mouse over the *Ruler* tool and release the mouse button. The *Text* or the *Ruler* tool is the third tool in the Toolbox, at the top-right corner.

To take a measurement based on two references:

1 Select the *Ruler* tool.

2 Click a first reference, Click a second reference

Or,

1 Click on first point and hold down left mouse button (Windows / Linux) or the mouse button (Macintosh).Then drag to second point.

The *Point to point distance* dialog box opens:
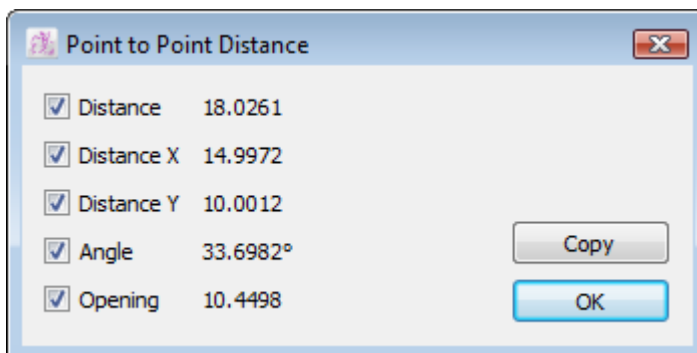
The information displayed includes:

• Distance on a straight line between the two points.

• Distance on the X axis between the two points.

• Distance on the Y axis between the two points.

• The Angle formed by the line created by the two points and the X axis.

• The Opening calculation of the angle formed by the line created by the two points and the X axis.

The *Copy* button copies the selected values to the clipboard. Check a value to include it in the copied information, uncheck a value to exclude it from the copied information. You can paste these values into Notepad or another word processing application.

You can keep the dialogs open and take measure on another piece. Two dialogs appear and allow you to compare the measurement.

Graded Selection's Lengths
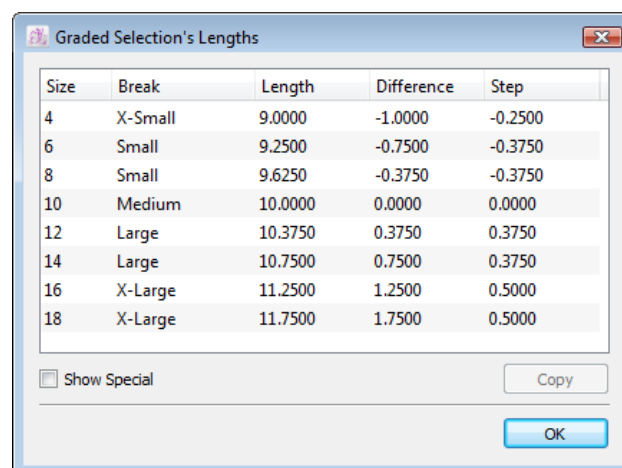
This function allows you to get information on the Graded Selection's Lengths of the selected segment(s). You can access information on many related segments if you select all of them.

To do so:

1 Select the segment(s).

2 Select the *Ruler* tool.

3 Hold down the **Alt** key (Windows) or the **Option** key (Macintosh) or **Alt +Windows** keys (Linux) and click anywhere within the working area.

A dialog box appears. It displays all the Graded selection's lengths information.

The dialog displays the length for each size, the measurements between each size and the medium (*Difference*) and the measurements between each size (*Step*).

To select and copy Grading Values:

1 Select the sizes you wish to copy using the *Graded Selection's Lengths* dialog box. Click the *Copy* button.

To make a multiple continuous selection in the list, select the first item then, while holding the **Shift** key (Windows, Macintosh and Linux), click the last one; this selects all items in between as well.

To make a discontinuous multiple selection in the list, hold the **Ctrl** key (Windows / Linux) or the **Option** key (Macintosh) and click all the sizes you wish to select; do the same procedure to deselect a selected item.

2 These values can be pasted into Notepad or another compatible word processing application. Alternately, you can paste them into the *Graded Segment Lengths* dialog box.

Show Special

Select the *Show Special* item to show the special alphanumeric values established in the *Grading Working Sizes* dialog box.

Note: For more information about Graded Segment Lengths, please refer to the section on the Segment Length tool.

T. Text

The *Text* tool allows you to write notes on the selected piece or on the working area. While this information remains independent, you can group it with a Pattern Piece.

The *Text* tool may be hidden under the *Ruler* tool in the toolbox. To activate it, hold down the left mouse button (Windows / Linux) or the mouse button (Macintosh) on the *Ruler* tool until the *Text* tool appears. Move the mouse over the *Text* tool and release the mouse button. The *Text* or the *Ruler* tool is the third tool in the Toolbox, at the top completely at the right.

To input new text:

1 Select the *Text* tool.

2 Click the desired text location inside a pattern piece. Or Click on the desired text location (Start Point)along any segments. Or anywhere else on the working area (if you want the text inside a shape to be grouped with it, the piece has to be activated prior typing the text).

3 When the dialog box appears, write the text in the space and select the text size as well as the preferred alignment. The size affects the printed version of the text and not the way it is displayed on the working area.

4 To use the text list, click the arrow drop-down menu next to the *Text List* label. The text elements entered in the text list are listed. Click the *Edit...* item to open the *Text List* dialog box. For further information about this box, see the section of this user manual about the *Text List...* option in the *Options* menu.

To see the content of the Text, you must check the text item under the menu *View -> Show*.
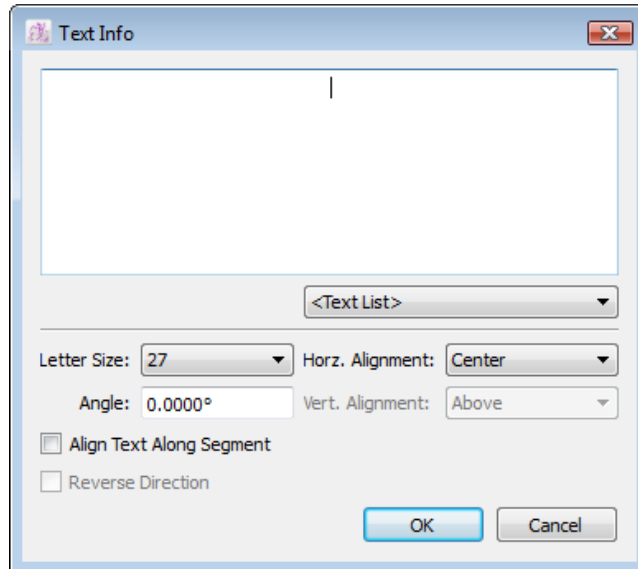
The *Text Info* dialog box offers the following options:

Text List: It is a drop-down menu that includes text from a list defined by the user. For further details about this list, refer to the section of this user manual about the *Text List...* item in the *Options Menu.*

Letter Size: It sets the text size to be plotted. You can select 10, 18, 24, 27, 30 and 36 Point text sizes.

Angle: It sets the angle of the text on the piece.

Horz. Alignment: It defines the alignment of your text according to where you click on the working area or on the segment. You can select Left, Center, or Right.

Vert. Alignment: It defines the alignment of your text according to where you click on the segment. You can select Above, Middle, or below. (This function is active when Align Text Along Segment is being selected.)

Align Text Along Segment: It allows setting the text along any segments.

Reverse Direction: It reverses the text to another direction. (This function is active when Align Text Along Segment is being selected.)

When the text area is displayed on screen, a small "T" icon is next to the text point. The text is permanently visible on screen at a Zoom Level of 100% or higher. (Text is hidden when the *Text* option is unchecked in the *View -> Show* menu.)

To read the text: Simply click the small "T" and hold your click.

2' Fold Up 점으십시요
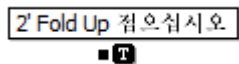
The text point can be moved around, graded and/or grouped to any shapes or pieces. But it does not apply on the text with Align Text Along Segment function.

To modify Text or Text of Piece Information:

1 Select the text reference point right next to the text icon.

2 Select *Item Info…* in the *Treatment menu.* The *Text info* dialog box appears, allowing you to change the text.

3 Click the *OK* button to validate the changes and close the dialog box.

Symmetry

The *Symmetry* tool allows you to flip selected element(s) or a complete pattern piece on an axis defined by two reference points.

To apply symmetry by two clicks:

1 Select the element(s).

2 Select the *Symmetry* tool.

3 Click a first reference point.

4 Click a second reference point and hold down the left mouse button (Windows / Linux) or the mouse button (Macintosh), it previews an image of the symmetry piece. A line represents the symmetry axis appears.

5 Move the line to the desired symmetry axis.
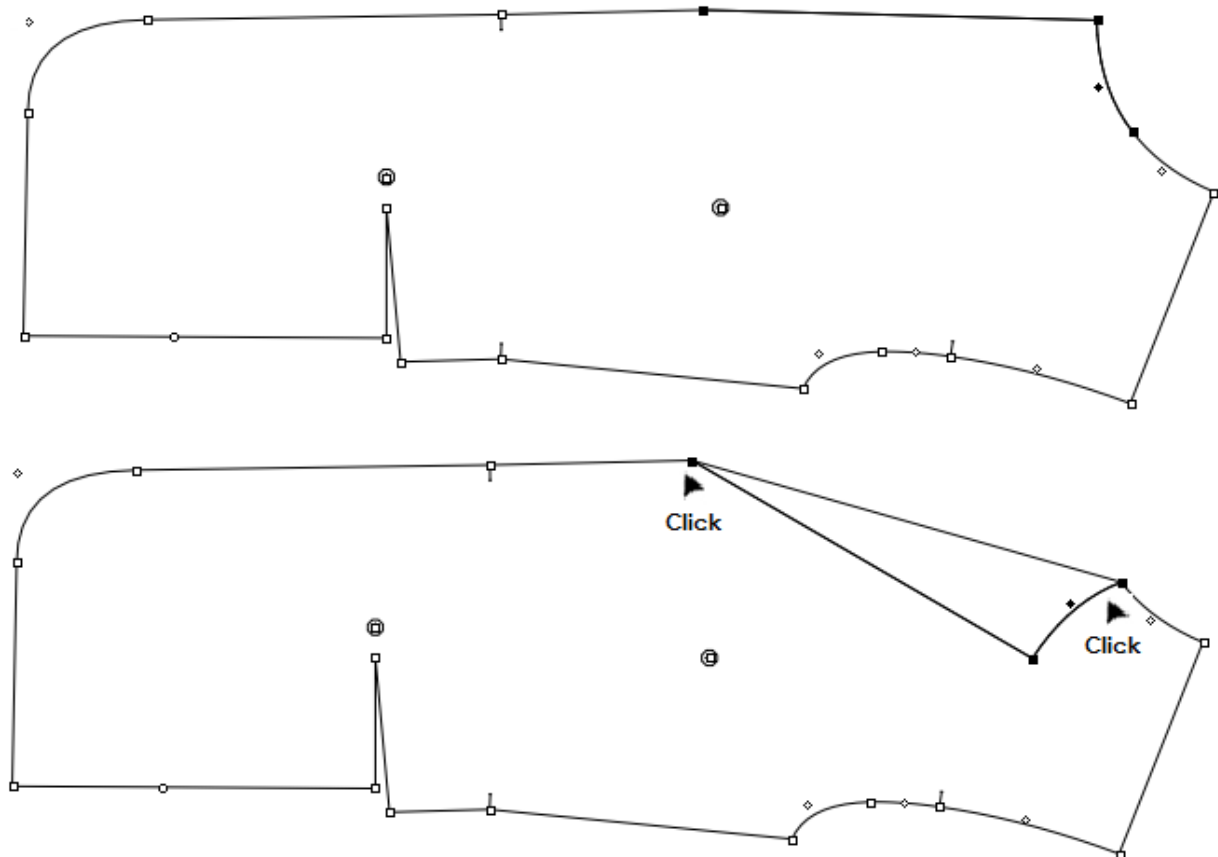
Click

Click

Or,

To apply symmetry by one click:

1 Select the element(s).

2 Select the *Symmetry* tool.

3 Click the first reference point and hold down the left mouse button (Windows / Linux) or the mouse button (Macintosh), then drag to the second reference point. It previews an image of the symmetry piece.

A line represents the symmetry axis appears.

Preview
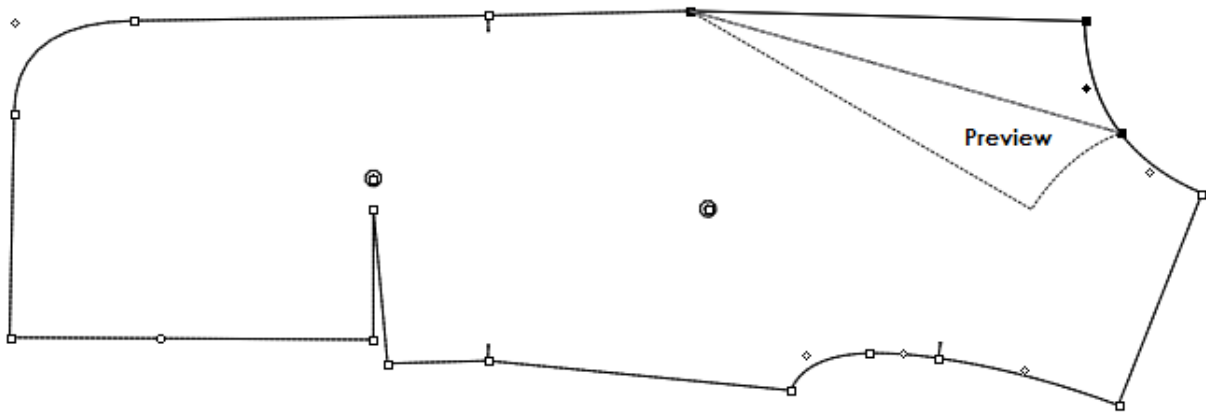
4 Move the line to the desired symmetry axis.

When you hold and move the point, you can view the symmetry angle in the info bar.

Angle X: -15.7382   Open.: 3.25567

Hold down the **Shift** key (Windows, Macintosh or Linux) if you want to constrain the symmetry axis in either the X or Y axis, or 15°.(Define the angle by the setting "Round Angle" in the Preference menu.)

Windows keys   Shift
△ Shift
Ctrl | ⊞ | Alt |

Macintosh keys   Shift
△ Shift
Ctrl | ⌥ | ⌃ ⌘ |

Linux keys   Shift
△ Shift
Ctrl | ⊞ | Alt |

Select the *Snap to Grid* item, in the *Options* menu, to move elements according to the active grid.

Activate the grid by selecting the *Snap to Grid* item from the *Options* menu, select Preference and Display to move the symmetry reflection line according to the active grid.

Snap to Grid is OFF	Snap to Grid is ON

Options
　　Preferences...
✓　Snap to Grids   Ctrl+R

Options
　　Preferences...
　　Snap to Grids   Ctrl+R
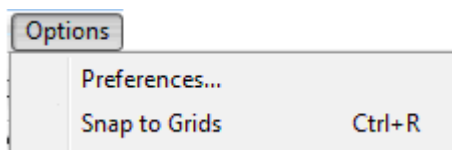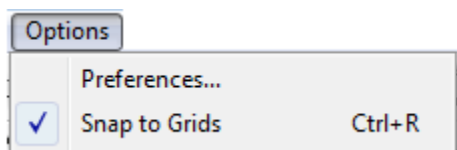
Note: For more information about *Snap to Grid*, please refer to the *Options* menu, select Preference and Display section.

To flip a selection according to a precise axis using numeric values:

1 Select the element(s).

2 Select the *Symmetry* tool.

3 Hold down the **Alt** key (Windows), the **Option** key (Macintosh) and the **Alt + Windows** Keys (Linux) and click anywhere on the working area.
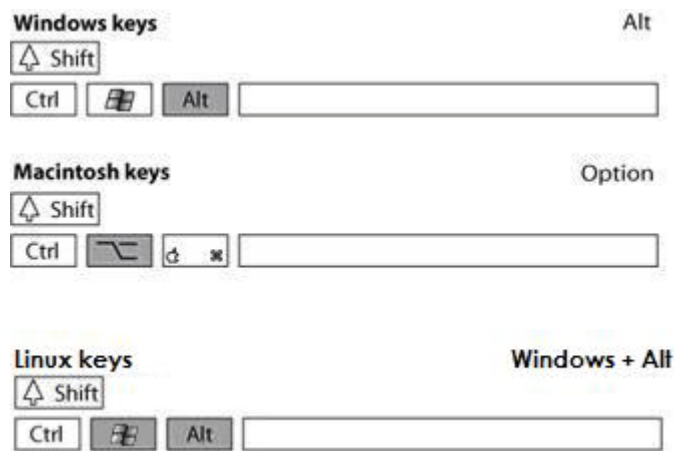
4 The *Symmetry* dialog box opens. Select the axis of symmetry (Horizontal or Vertical) or angle.
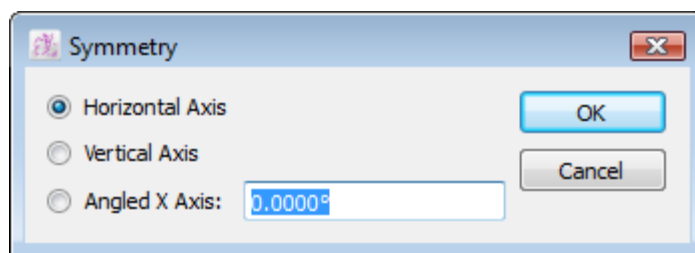
5 Click the *OK* button to execute the function.
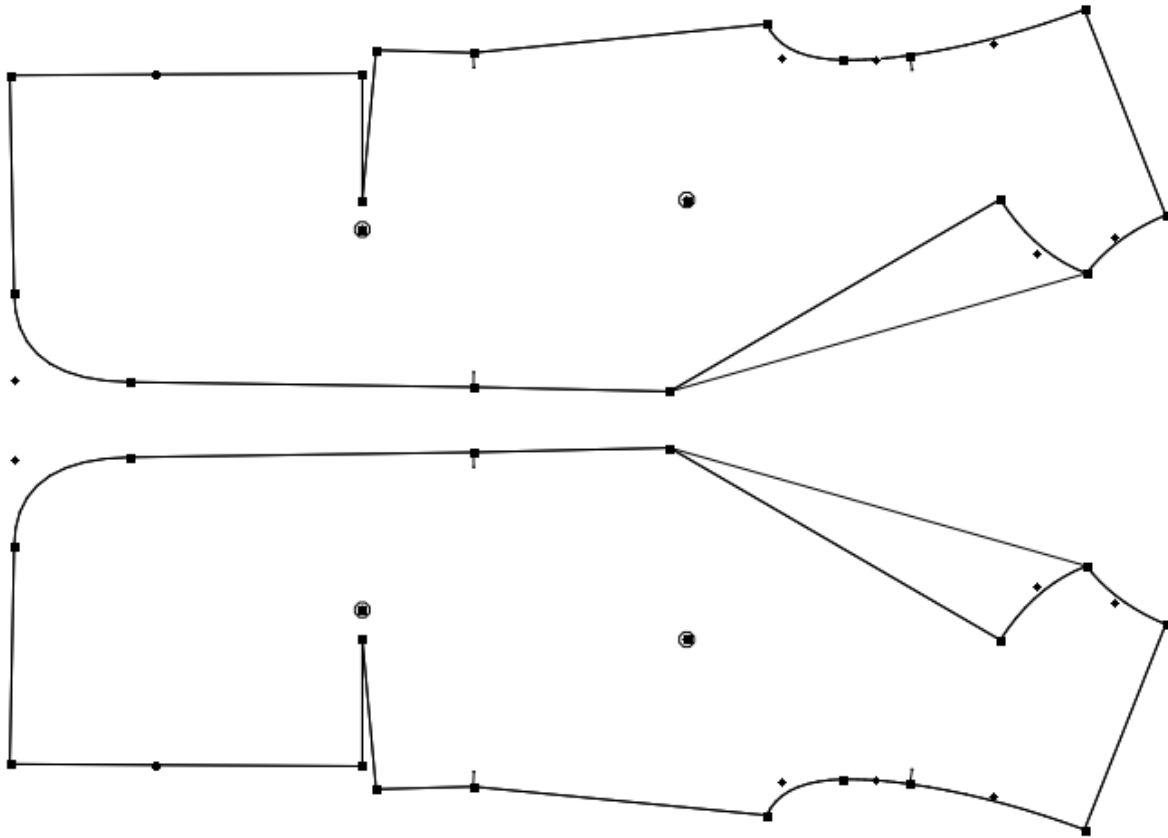
Rotation

The *Rotation* tool allows you to rotate the selection freehand or to a precise angle X, Y or every 15° (Define the angle by the setting "Round Angle" in the Preference menu.)

To rotate selected elements:

1 Select the element(s) you wish to rotate.

2 Select the *Rotation* tool.

3 Click the fixed point (pivot point).

4 Click the second reference point and hold down the left mouse button (Windows/Linux) or the mouse button (Macintosh). A reference dash guideline going from the first point to the second point appears. Those two lines represent an angle.

5 Pivot the guideline to the desired rotation angle.

Hold down the **Shift** key (Windows and Macintosh) to constrain the rotation angle (X, Y or every 15°).

Windows keys   Shift

| △ Shift |
| Ctrl | 🪟 | Alt | |

Macintosh keys   Shift

| △ Shift |
| Ctrl | ⌥ | ⌘ ✽ | |

Linux keys   Shift

| △ Shift |
| Ctrl | 🪟 | Alt | |

When you hold and move the reference guideline, you can view the rotation angle at the fixed point (pivot point) or in the info bar.

Angle: -5.92599   Angle X: -184.631   Open.: 10.4304
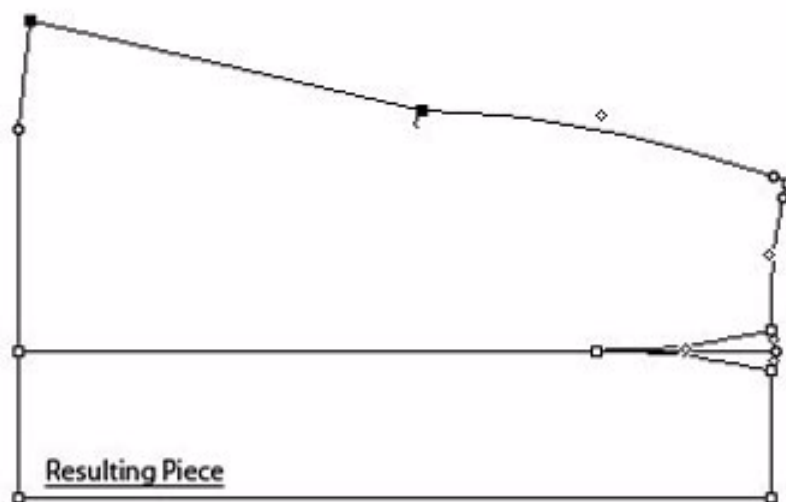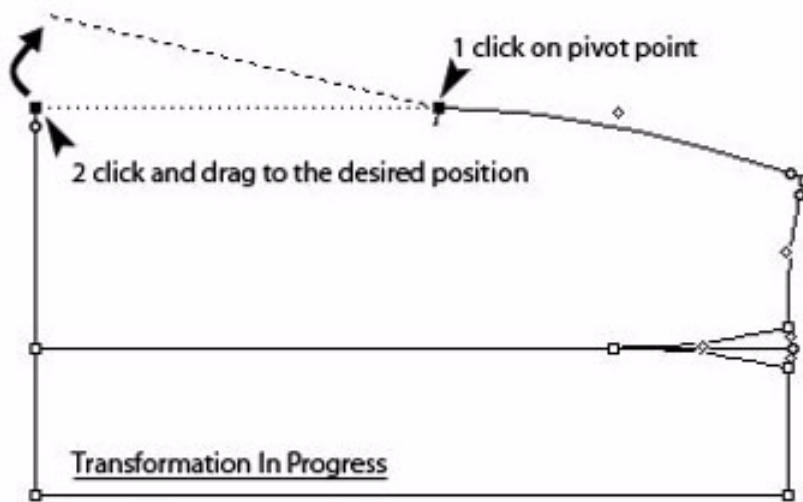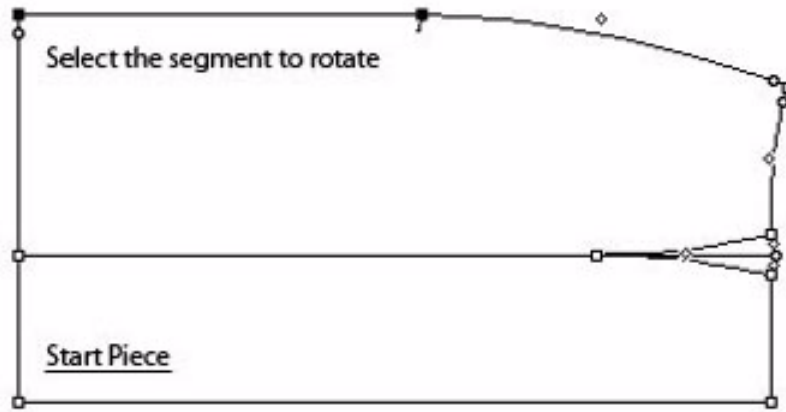
Select the segment to rotate

Start Piece

1 click on pivot point

2 click and drag to the desired position

Transformation In Progress

Resulting Piece

Select the *Snap to Grid* item, in the *Options* menu, to move elements according to the active grid.

Activate the grid by selecting the *Snap to Grid* item from the *Options* menu, select Preference and Display to move the rotation according to the active grid.
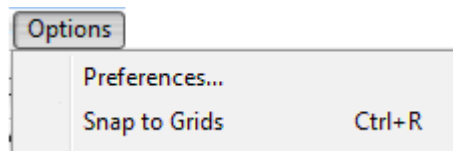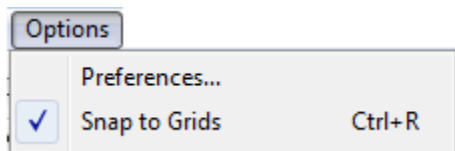
Snap to Grid is OFF	Snap to Grid is ON

Note: For more information about *Snap to Grid*, please refer to the *Options* menu, select Preference and Display section.

To rotate the selection to a precise angle using numerical values:

1 Activate the element(s) you wish to rotate.

2 Select the *Rotation* tool.

3 Hold down the **Alt** key (Windows), the **Option** key (Macintosh), the **Alt + Windows** keys (Linux).

4 Click the pivot point. The *Rotate* dialog box appears:
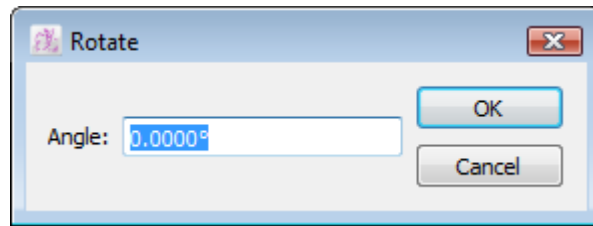
5 Enter the desired value of rotation.

6 Click the *OK* button to execute the function.
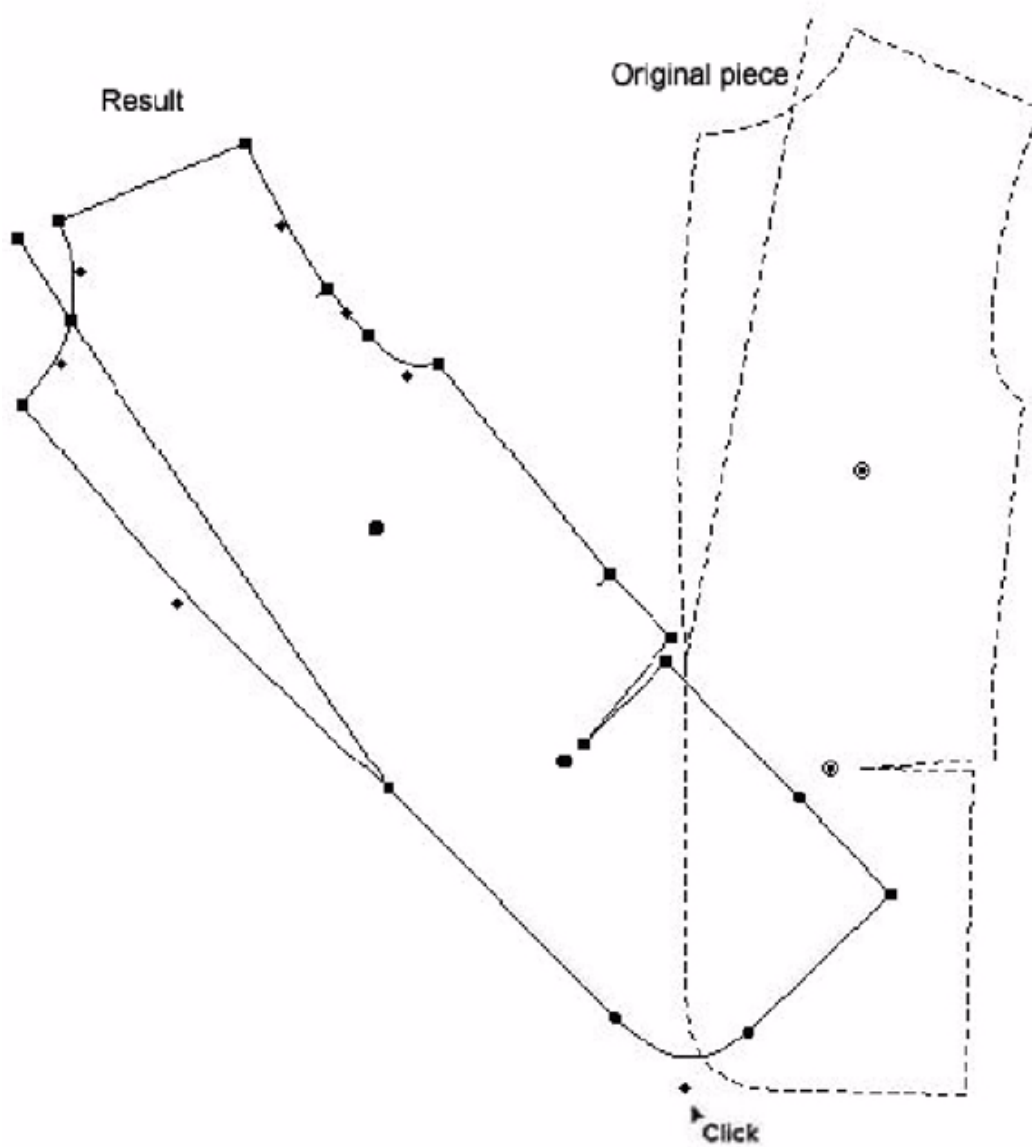
When you enter a positive angle, the rotation occurs counter-clockwise.

When you enter a negative angle, the rotation occurs clockwise.
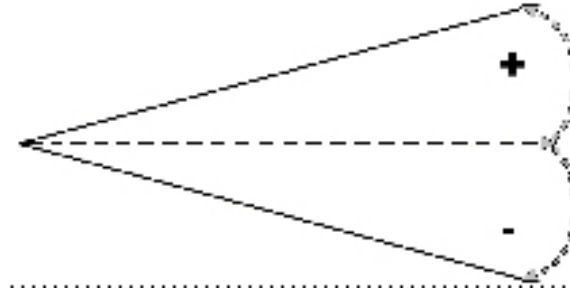
Orient in X

The *Orient in X tool* (horizontal) allows you to orient the activated piece(s) starting from two reference points on the horizontal axis.

The *Orient in X tool* may be hidden beneath the *Orient in Y* tool in the Toolbox. To activate it, hold down the left mouse button (Windows / Linux) or the mouse button(Macintosh) on the *Orient in Y* tool until the *Orient in X* tool appears. Move the mouse over the *Orient in X* tool and release the mouse button.

To orient activated elements in the X axis:

1 Activate the element(s).

2 Select the *Orient in X* tool.

3 Click the first reference point.

4 Click the second reference point.

The activated element(s) are oriented on a horizontal line according to the reference points.
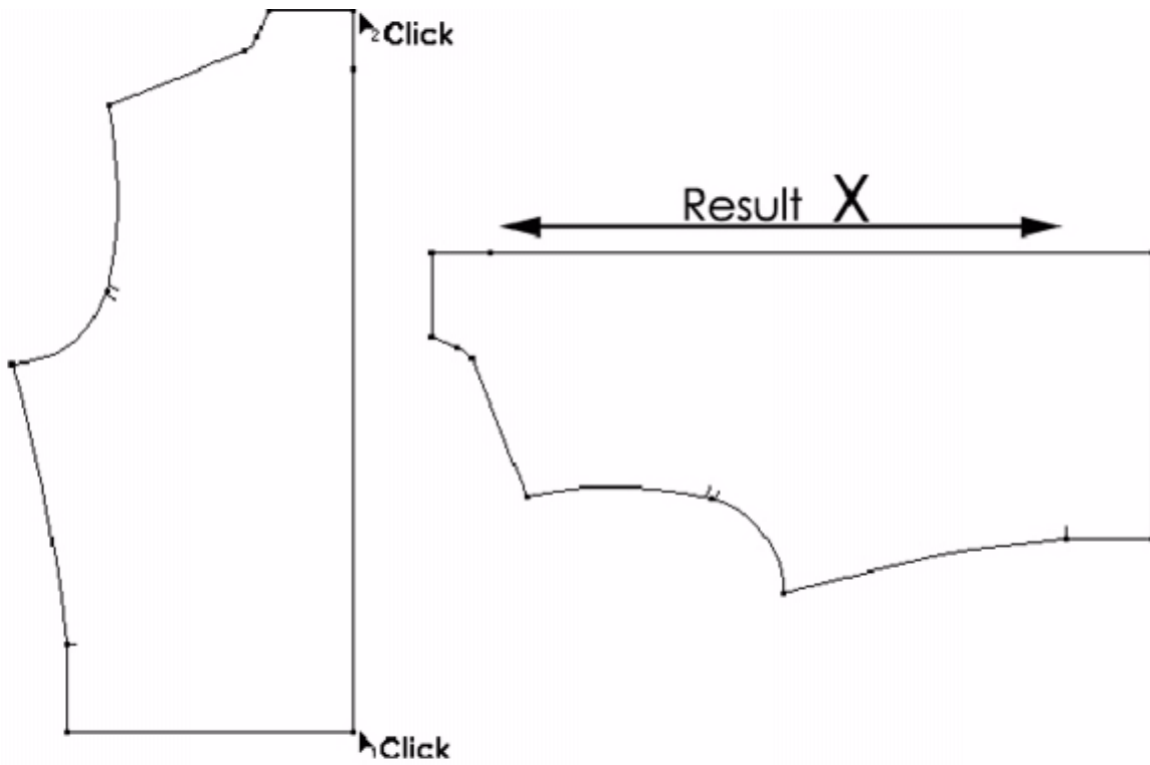
Orient in Y

The *Orient in Y* tool (vertical) allows you to orient the activated piece(s) starting from two reference points on the vertical axis.

The *Orient in Y* tool may be hidden beneath the *Orient in X* tool in the Toolbox. To activate it, hold down the left mouse button (Windows / Linux) or the mouse button (Macintosh) on the *Orient in X* tool until the *Orient in Y* tool appears. Move the mouse over the *Orient in Y* tool and release the mouse button.

To orient activated elements on the Y axis:

1 Activate the element(s).

2 Select the *Orient in Y* tool.

3 Click the first reference point.

4 Click the second reference point.

The selected element(s) are oriented on a vertical line according to the reference points.
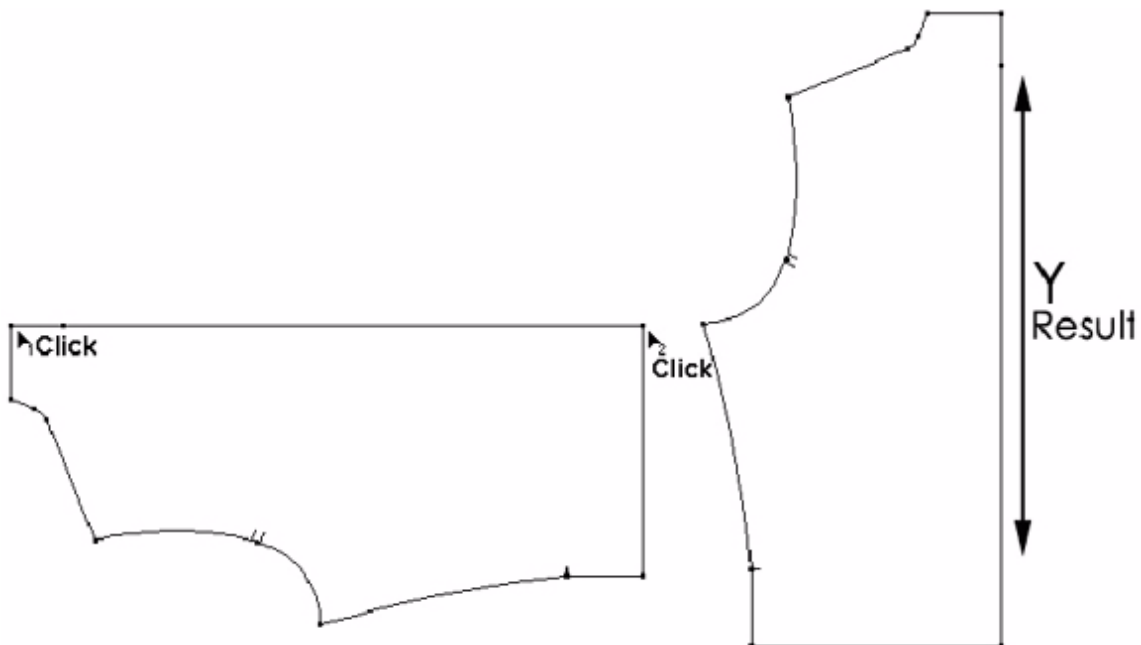
Align Two Points in X

The *Align Two Points in X* tool allows you to align two points or more on the same horizontal axis.

To align two points on the X axis:

1 Activate the piece(s) the two points you want to align are on.

2 Select the *Align Two Points in X* tool.

3 Click the fixed reference point.

4 Click the point to be aligned.

The second point moves according to a vertical axis for horizontal alignment with the fixed reference point.
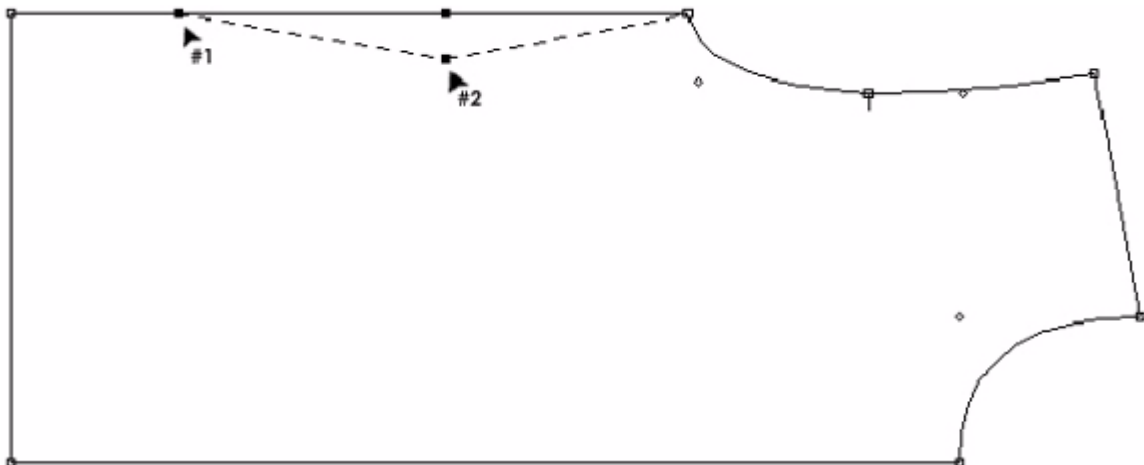
To align many points on the X axis:

1 Activate the piece(s) on which are the points you want to align.

2 Select the *Align Two Points in X* tool.

3 Click the fixed reference point.

4 Hold down the **Shift** key (Windows, Macintosh and Linux).

A plus sign appears next to the cursor.

5 Align as many points as you want with the reference point by clicking each one of them. Release the **Shift** key for the last point to align.

Align Two Points in Y

The *Align Two Points in Y* tool allows you to align two points or more on the same vertical axis.

To align two points on the Y axis:

1 Activate the piece(s) the two points you want to align are on.
2 Select the *Align Two Points in Y* tool.
3 Click the fixed reference point.
4 Click the point to be aligned.

The second point moves according to a horizontal axis for vertical alignment with the fixed reference point.
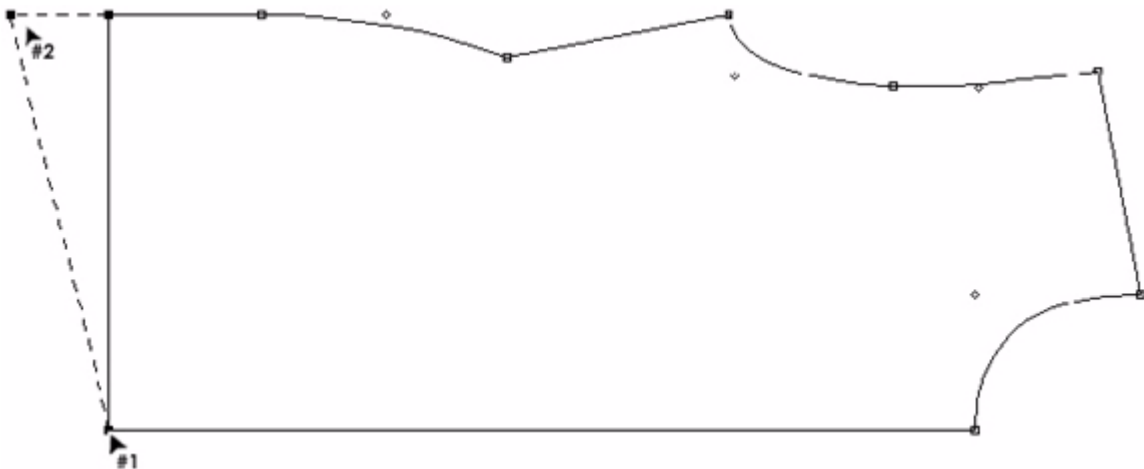
To align many points on the Y axis:

1 Activate the piece(s) the points you want to align are on.
2 Select the *Align Two Points in Y* tool.
3 Click the fixed reference point.

4 Hold down the **Shift** key (Windows, Macintosh and Linux).

A plus sign appears next to the cursor.

Windows keys   Shift

△ Shift

| Ctrl | ⊞ | Alt | |

Macintosh keys   Shift

△ Shift

| Ctrl | ⌥ | ⌘ ✻ | |

Linux keys   Shift

△ Shift

| Ctrl | ⊞ | Alt | |

5 Align as many points as you want with the reference point by clicking each one of them. Release the **Shift** key for the last point to align.

Align Points

The *Align Points* tool allows you to align all the points that are on the selected segment(s) according to two reference points.

To align points by two clicks:

1 Select the segment(s) the points you want to align are on.

2 Select the *Align Points* tool.

3 Click the first reference point.

4 Click the second reference point.

Or,

To align points by one click:

1 Select the segment(s) the points you want to align are on.

2 Select the *Align Points* tool.

3 Click the first reference point and hold down the left mouse button (Windows / Linux) or the mouse button (Macintosh).

4 Drag to the second reference point and release the button.

All points (except control points) within the selected segment(s) are aligned on the straight line created by the two reference points.
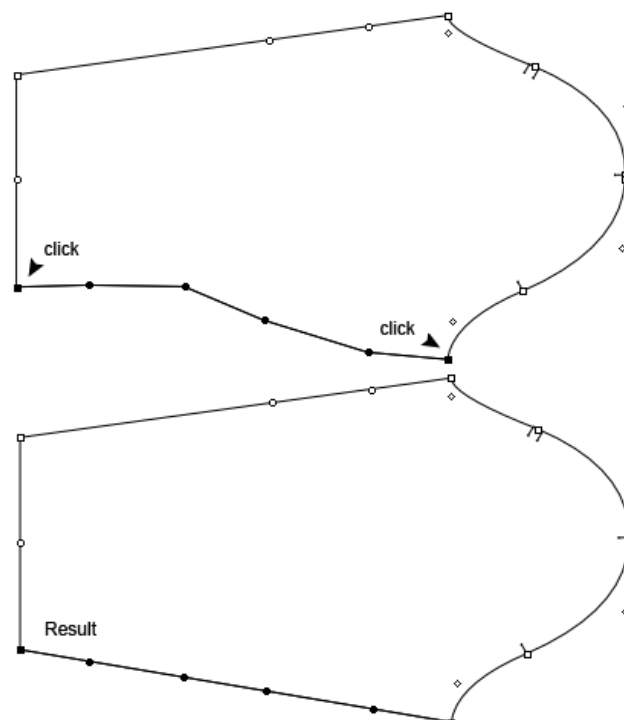
Ellipse / Circle

The *Ellipse / Circle* tool allows you to create a circle freehand or according to a precise radius or diameter.

The *Ellipse / Circle* may be hidden under the Ruffle in the toolbox. To activate it, hold down the left mouse button (Windows / Linux) or the mouse button (Macintosh) on the Ruffle until the *Ellipse / Circle* appears. Move the mouse over the Ellipse / Circle and release the mouse button.

To draw a Circle by free hand by one click:

1 Select *Ellipse / Circle*

2 Hold down **Shift** key and hold down the left mouse button

3 Move the cursor to the desired radius and release the mouse button

Or,

To draw a circle freehand by two clicks:

1 Select the *Ellipse / Circle* tool.

2 Click the starting point and release the left mouse button (Windows/Linux) or the mouse button (Macintosh). The first click point is the center of the circle.

3 Move the cursor and click the mouse button to the desired radius.

To draw a circle freehand by one click with Ctrl key (Windows/Linux) or Command key (Macintosh):

1 Select *Ellipse / Circle*

2 Hold down **Shift** key, click the starting point and hold down the left mouse button (Windows/Linux) or the mouse button (Macintosh). The first click point is the center of the circle.

3 Move the cursor to the desired radius, hold down **Ctrl** key (Windows/Linux) or **Command** key (Macintosh) and release the mouse button. The first point changes to the corner of the rectangle bounding the circle.

The radius measurement is indicated in the *Info* bar.
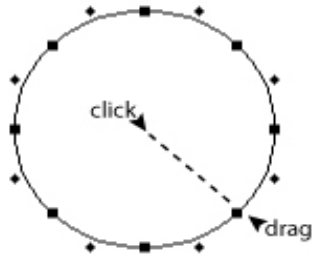
Select the *Snap to Grid* item, in the *Options* menu, to move elements according to the active grid

Snap to Grid is OFF	Snap to Grid is ON
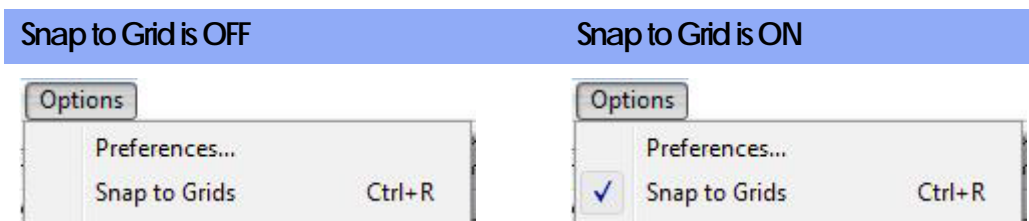
Note: For more information about Snap to Grid, please refer to the Options menu, Select Preference and Display section.

To draw an Ellipse by free hand:

1 Select *Ellipse / Circle*

2 Move the cursor to the desired radius and release the mouse button

 Or,

To draw an ellipse freehand by two clicks:

1 Select the *Ellipse / Circle*

2 Click the starting point and release the left mouse button (Windows/Linux) or the mouse button (Macintosh). The first click point is the center of the ellipse.

3 Move the cursor and click on the desired size of the ellipse.

The measurements on the X and Y axis are indicated in the *Info* bar.

Select the *Snap to Grid* item, in the *Options* menu, to move elements according to the active grid.

Snap to Grid is OFF	Snap to Grid is ON

Options
   Preferences...
   Snap to Grids   Ctrl+R

Options
   Preferences...
✓ Snap to Grids   Ctrl+R
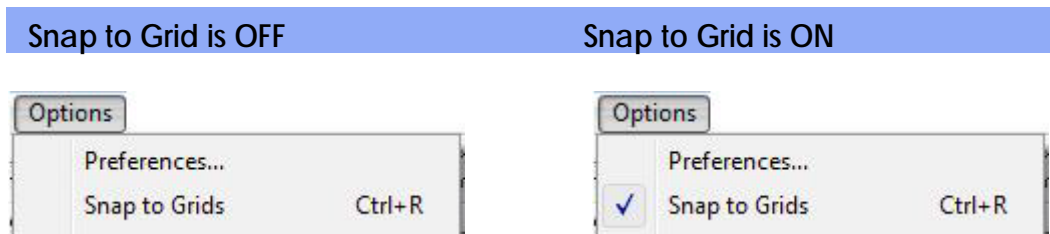
Note: For more information about Snap to Grid, please refer to the Options menu, Select Preference and Display section.

To draw an Ellipse freehand by one click with Ctrl key (Windows/Linux) or Command key (Macintosh):

1 Select *Ellipse / Circle*
2 Click the starting point and hold down the left mouse button (Windows/Linux) or the mouse button (Macintosh). The first click point is the center of the ellipse.
3 Move the cursor to the desired radius, hold down **Ctrl** key(Windows/Linux) or **Command** key (Macintosh) and release the mouse button. The first point changes to the corner of the rectangle bounding the circle.

To draw an Ellipse / Circle, using precise measurements:

1 Select *Ellipse / Circle*
2 Hold down the **Alt** key (Windows), the **Option** key (Macintosh) or **Alt** + **Windows** Keys (Linux).
3 The Draw Ellipse dialog box opens:
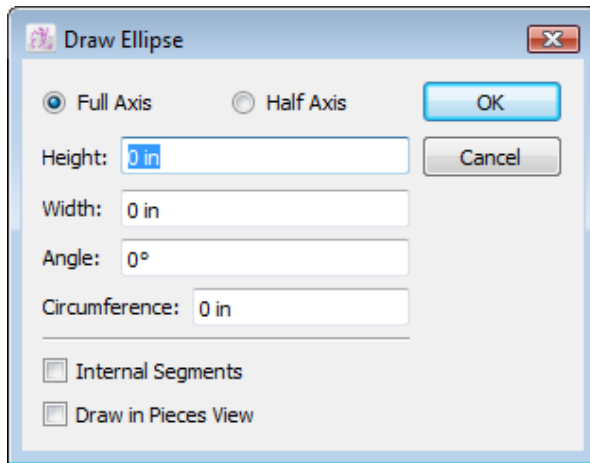
4 Choose the radio button for Full Axis or Half Axis

5 Enter the desired Height, Width, Angle or Circumference measurement.

6 Click the OK button to execute the function.

Options in the Draw Ellipse dialog box:

Full Axis or Half Axis: The height and width measurements represent either half of the full height and width or the full height and width of the ellipse.

Height: It determines the height of the Ellipse/Circle.

Width: It determines the width of the Ellipse/Circle.

Angle: It determines the orientation of the Ellipse.

Circumference: It creates a circle with a circumference equal to the value entered in the text field.

Internal Segments: The Ellipse/Circle is drawn with internal segments attached to one another. They can be deleted so that the piece will not be a closed polygon anymore. Otherwise, the Ellipse/Circle is drawn with contour segments and remains a closed polygon if segments are deleted.

Draw in Pieces View: The drawn Ellipse/Circle appears Pieces View.

Ruffle

The *Ruffle* allows you to create pieces as circle shaped piece.
The *Ruffle* may be hidden under the *Ellipse / Circle* in the toolbox. To activate it, hold down the left mouse button (Windows / Linux) or the mouse button (Macintosh) on the *Ellipse / Circle* until the *Ruffle* appears. Move the mouse over the Ruffle and release the mouse button.

1 Select *Ruffle* tool and click the desired location where you want the shape to be.

2 The Draw Ruffle dialog box opens. Enter the Length and Height measurements:

Draw Ruffle	
Length: 25 in	OK
Height: 3 in	Cancel
Gap: 0	
☐ Internal Segments	
☐ Draw in Pieces View	
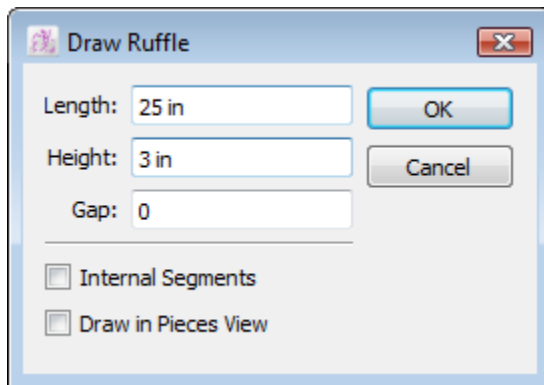
3 Press OK button to validate and get a piece as follows.
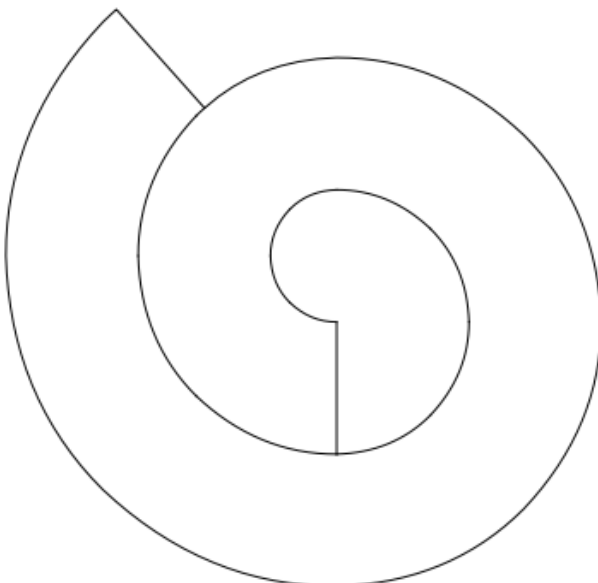
Or, make a Ruffle with a gap, enter Gap value as follows.

Draw Ruffle

Length:	25 in
Height:	3 in
Gap:	0.25

☐ Internal Segments
☐ Draw in Pieces View

OK   Cancel
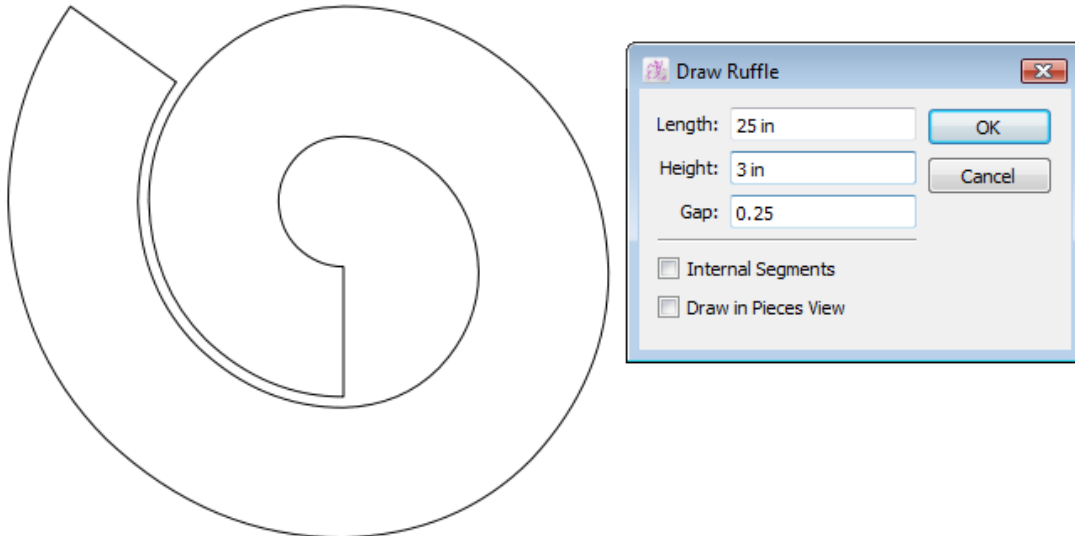
Or, make a Four Flared Skirt as the following screen shot.

Draw Ruffle

Length:	8 in
Height:	25 in
Gap:	0 in

☐ Internal Segments
☐ Draw in Pieces View

OK   Cancel
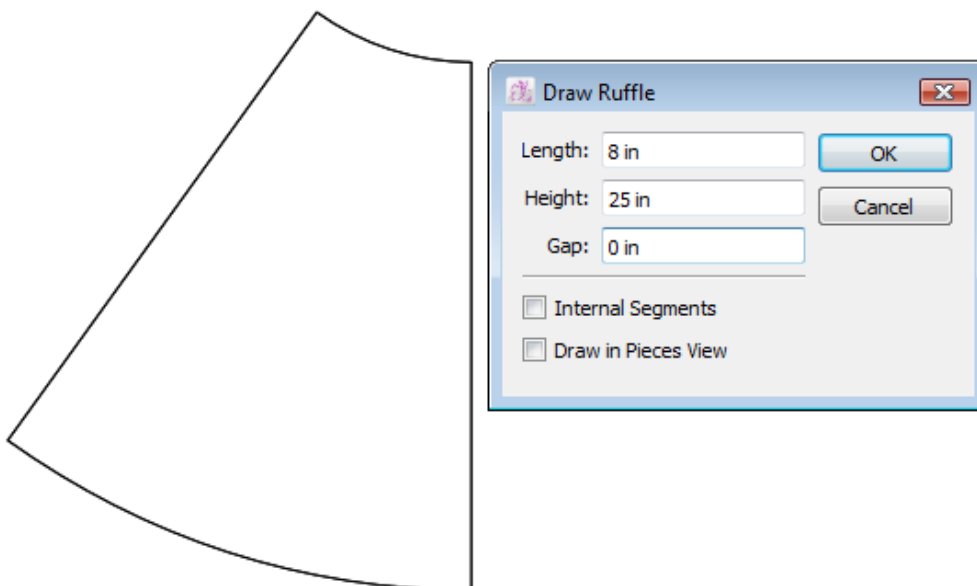
Internal Segments: The Ruffle is drawn with internal segments attached to one another. They can be deleted so that the piece will not be a closed polygon anymore. Otherwise, the Ruffle is drawn with contour segments and remains a closed polygon if segments are deleted.

Draw in Pieces View: The drawn Ruffle appears in Pieces View and is missing from the Plan View.

▢ Rectangle

The *Rectangle* tool allows you to create a square or a rectangle freehand or according to precise measurements.

To draw a rectangle freehand by one click:

1 Select the *Rectangle* tool.

2 Click at the starting point and hold down the left mouse button (Windows/Linux) or the mouse button (Macintosh).The first point is the center of the rectangle.

3 Drag the cursor diagonally to the desired dimension.

To draw a rectangle freehand by two clicks:

1 Select the *Rectangle* tool.

2 Click at the starting point and release the left mouse button (Windows/Linux) or the mouse button (Macintosh).

3 Move the cursor diagonally to the desired dimension and click the left mouse button again.
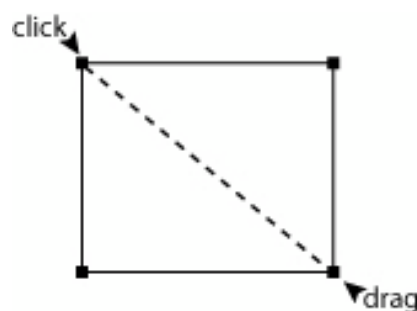
To draw a square freehand by one click:

1 Select the *Rectangle* tool.

2 Hold down the ***Shift*** key (Windows, Macintosh and Linux).

3 Click the starting point and hold your click.

4 Move the cursor diagonally until you reach the desired dimension.
The widest side of the clicked and dragged area is the measurement taken for the square sides.

To draw a square freehand by two clicks:

1 Select the *Rectangle* tool.

2 Hold down the ***Shift*** key (Windows, Macintosh and Linux).

3 Click at the starting point and release the left mouse button (Windows/Linux) or the mouse button (Macintosh).

4 Move the cursor diagonally to the desired dimension and click
the left mouse button again.

The square or rectangle measurements are indicated in the *Info* bar when
you are creating it, before you release the button of the mouse.

Width: 42   Height: 11

Select the *Snap to Grid* item, in the *Options* menu, to move elements according
to the active grid.

Activate the grid by selecting the *Snap to Grid* item from the *Options* menu
to move the symmetry reflection line according to the active grid.

Snap to Grid is OFF	Snap to Grid is ON

Options
Preferences...
Snap to Grids   Ctrl+R

Options
Preferences...
✓ Snap to Grids   Ctrl+R

Note: For more information about *Snap to Grid*, please refer to the *Options* menu,
Select *Preference* and *Display* section.

To draw a rectangle using precise measurements:

1 Select the *Rectangle* tool.

2 Hold down the **Alt** key (Windows), the **Option** key (Macintosh) or
Alt + **Windows** Keys (Linux).

Windows keys   Alt
⇧ Shift
Ctrl   ⊞   Alt

Macintosh keys   Option
⇧ Shift
Ctrl   ⌥   ⌘   ✖

Linux keys   Windows + Alt
⇧ Shift
Ctrl   ⊞   Alt

3 Click the desired location where you want the shape to be.

4 The *Draw Rectangle* dialog box opens. Enter the width and height measurements:
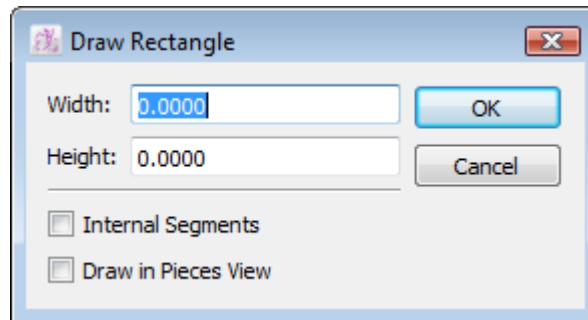
5 Click the *OK* button to execute the function.

The *Draw Rectangle* dialog box offers the following options:

Width: It is the width of the rectangle.

Height: It is the height of the rectangle.

Internal Segments: The Square is drawn with internal segments attached to one another. They can be deleted so that the piece will not be a closed polygon anymore. Otherwise, the square is drawn with contour segments and remains a closed polygon if segments are deleted.

Draw in Pieces View: The drawn rectangle appears in *Pieces View* and is missing from the *Plan View.*

To draw a rectangle with precise measurements using on the **Alt** key(Windows), Option key (Macintosh) or **Alt** + **Windows** Keys (Linux). You are able to combine with **Ctrl** key (Windows/Linux) or **Command** key(Macintosh) function.

Polygon

The *Polygon* tool allows you to create a polygon freehand.
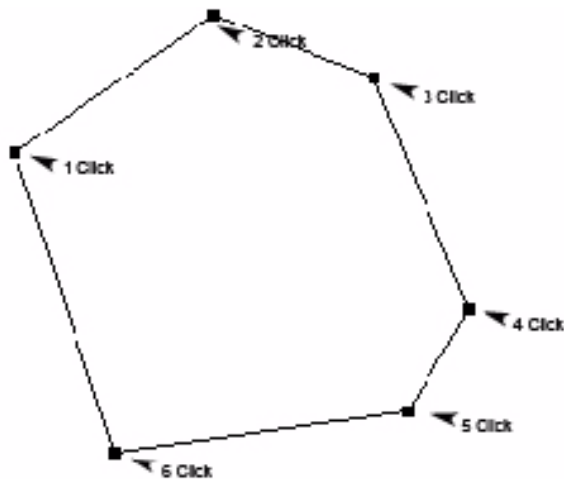
To draw a polygon:

1 Select the *Polygon* tool.

2 Click the starting point.

3 Move to the desired location and click a mouse button. When dragging the line, you can see the distance in X, Y and point to point for each segment you create at each click in the Info Bar.

| dX: 24.0687 | dY: 10.4583 | Dist.: 26.2427 |

4 Repeat the last step as many times as necessary to get the polygon that you want.

To restrain movement according to the X or Y axis and/or 15° angle (Define the angle by the setting "Round Angle" in the Preference menu.), hold down the **Shift** key (Windows, Macintosh and Linux).

The polygon shape closes itself once at least three points have been set.

Select the *Snap to Grid* item, in the *Options* menu, to move elements according to the active grid.

Activate the grid by selecting the *Snap to Grid* item from the *Options* menu to move the symmetry reflection line according to the active grid.

Snap to Grid is OFF	Snap to Grid is ON

Note: For more information about Snap to Grid, please refer to the Options menu, Select Preference and Display section.

Segment

The *Segment* tool allows you to draw a segment. It can start and/or end on an existing point or be drawn anywhere on the working area.

To draw a segment freehand by one click:

1 Select the *Segment* tool.

2 Click the starting point and hold down the left mouse button (Windows / Linux) or the mouse button (Macintosh).

3 Drag the cursor to the desired location.

Or,

To draw a segment freehand by two clicks:

1 Select the *Segment* tool.

2 Click the starting point and release the left mouse button (Windows / Linux) or the mouse button (Macintosh).

3 Move the cursor to the desired location and click the left mouse button (Windows / Linux) or the mouse button(Macintosh)again.
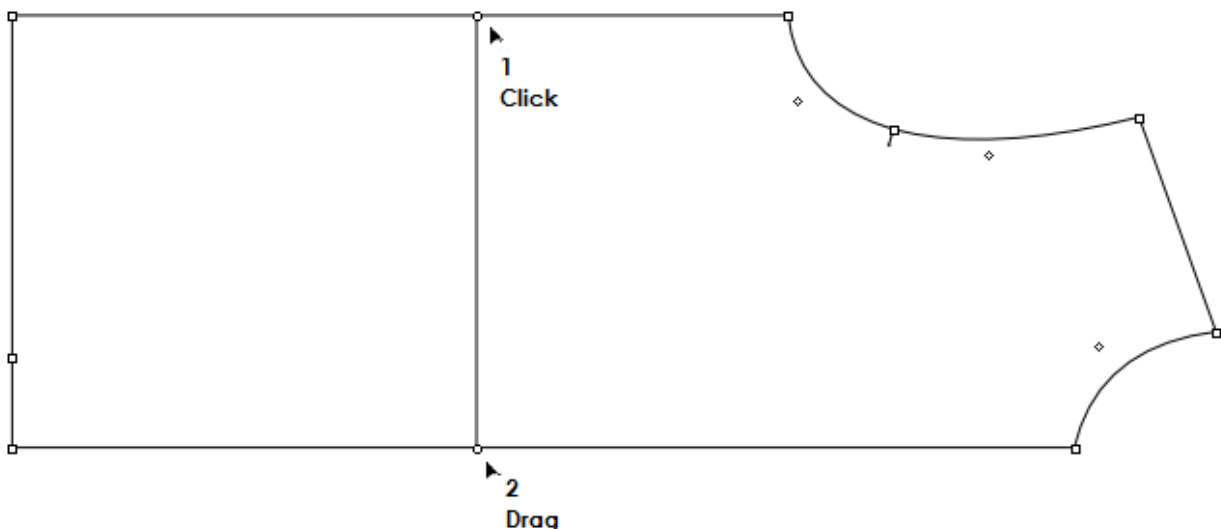
Note: For the segment to be attached/grouped to an existing piece, the piece must be activated prior drawing the segment.

To restrain movement on an X or Y-axis, or on an angle of +/- 15° (Define the angle by the setting "Round Angle" in the Preference menu.), as well as to get a straight line, hold down the **Shift** key (Windows, Macintosh and Linux).

Windows keys   Shift

⬆ Shift

| Ctrl | ⊞ | Alt | |

Macintosh keys   Shift

⬆ Shift

| Ctrl | ⌥ | ⌘ ✖ | |

Linux keys   Shift

⬆ Shift

| Ctrl | ⊞ | Alt | |

The X and Y coordinates and the distance of the segment are indicated in the Info bar while dragging the cursor.

dX: 7.46018   dY: 26.4853   Dist.: 27.5159

Select the *Snap to Grid* item, in the *Options* menu, to move elements according to the active grid.

Activate the grid by selecting the *Snap to Grid* item from the *Options* menu to move the symmetry reflection line according to the active grid.

Snap to Grid is OFF   **Snap to Grid is ON**

Options				Options		
Preferences...				Preferences...		
Snap to Grids	Ctrl+R			✓ Snap to Grids	Ctrl+R	
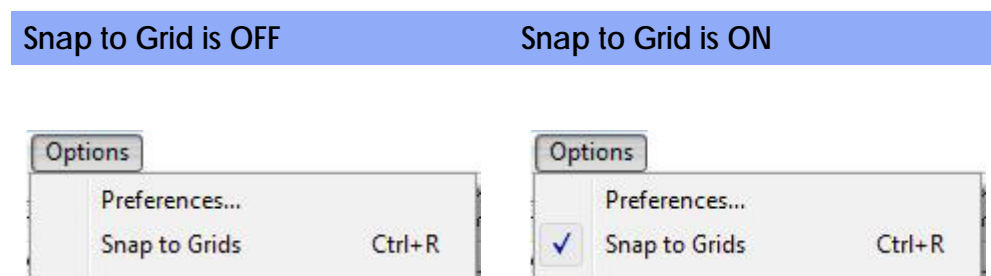
Note: For more information about Snap to Grid, please refer to the Options menu, Select Preference and Display section.

To draw a Segment with precise measurements:

1 Select the Segment tool.

2 Hold down the **Alt** key (Windows), the **Option** key (Macintosh) or
the **Alt** + **Windows** keys (Linux).

3 Click the point where you want your segment to start. If the segment
has to be grouped or attached to a piece, the piece must be
activated prior drawing the segment.

The *Draw Segment* dialog box appears:
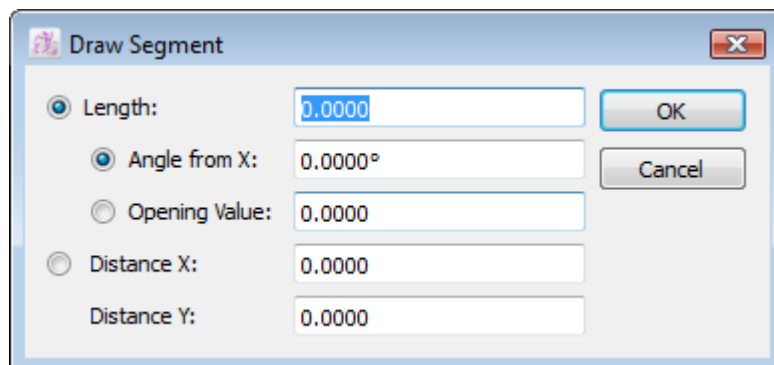
4 Enter the desired Length, Angle from X, Opening Value, or X and Y
distances of the segment.

5 Click the *OK* button to execute the function.

The *Draw Segment* dialog box offers the following options:

Length: To indicate the length of the segment to be drawn.

Angle from X: To create an angle on the X axis.
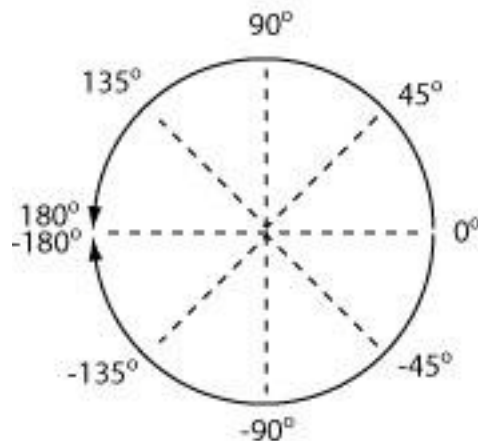
Opening Value: When you enter a positive value, the rotation occur counter- clockwise. When you enter a negative value, the rotation occurs clockwise.
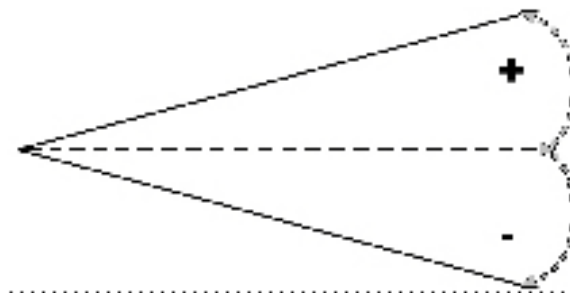
If you prefer to draw a segment according to the X-axis and/or Y-axis, use the following measurements:

Distance X: To indicate the length of the segment on the X-axis.

Distance Y: To indicate the length of the segment on the Y-axis.

Curve

To curve a segment:

1 Activate the piece of the segment you want to curve is on.

2 Select the Curve tool.

3 Click the segment that you want to curve and hold down the
   left mouse button (Windows /Linux) or the mouse button (Macintosh).

4 Drag the cursor to get the desired curve.

To obtain information about a selected curve, select *Item Info...* in the
Treatment menu.
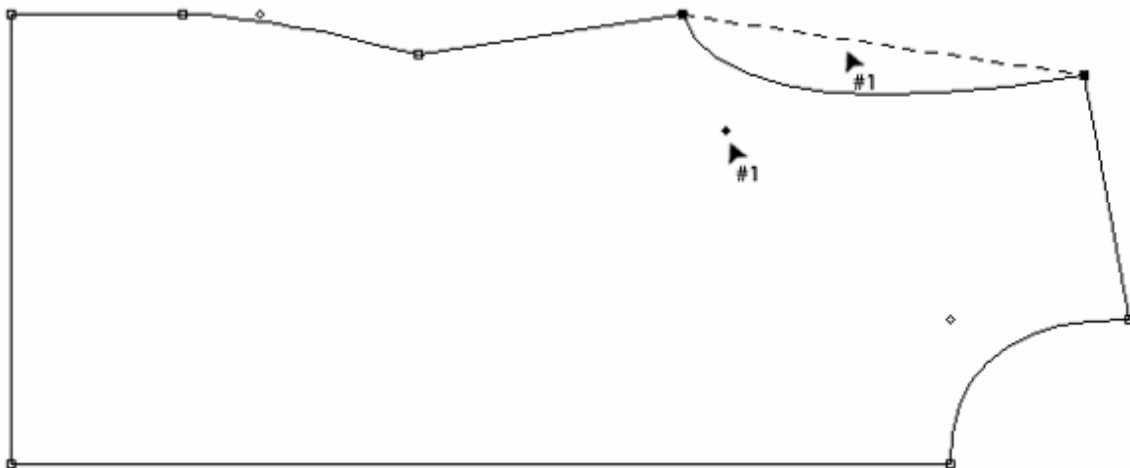
To manipulate the shape of a curve, select and move its control point.

To get rid of a curve, select and delete the control point (**Backspace**
key for Windows / Linux, **Delete** key for Macintosh).
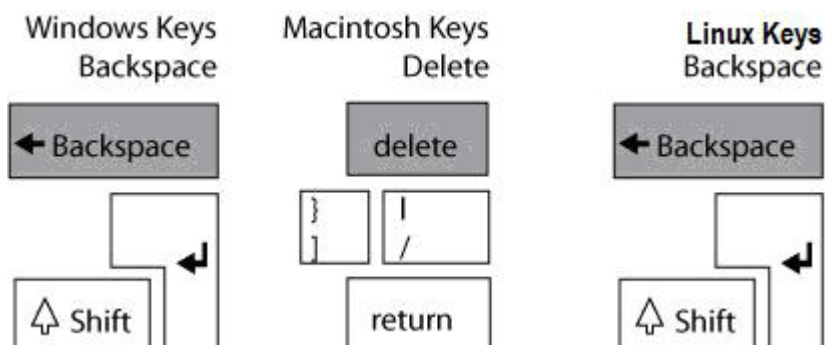
To Draw a Curve Line by Freehand

To select Curve tool and click on the define positions.   It allows drawing a curve line by three clicks only.
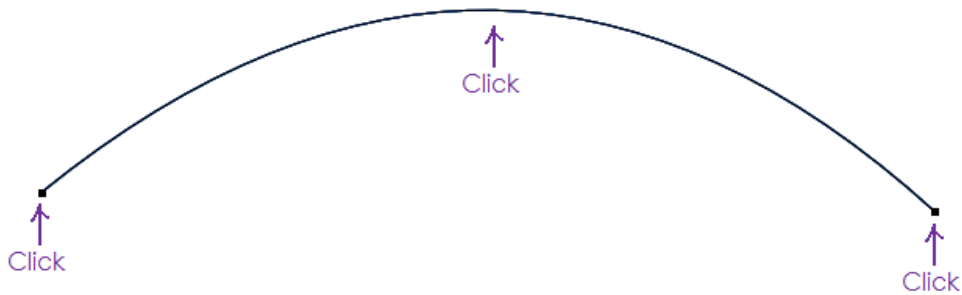
Click

Click

Click

To Move a Group of Control / Regular Points by Freehand

1 To activate the segments you would like to modify curve on.

2 To select the Curve tool

3 Click one of the Control / Regular point on the selection

4 Hold down the left mouse button and drag to the desired position, the result will preview as stitch line on screen.

Click one of the Control point and drag
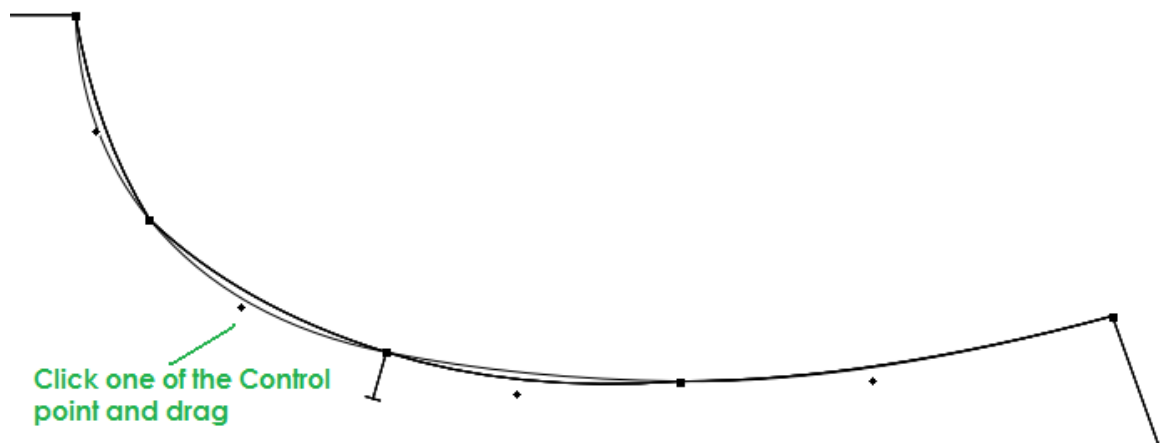
To Move a Group of Control / Regular Points with Numeric Values

1 To activate the segments you would like to modify curve on.

2 To select the Curve tool

3 Click one of the Control / Regular point on the selection

4 Hold down the **Alt** key (Windows), the **Option** key (Macintosh) or **Alt** + **Windows** Keys (Linux).

5 Move the cursor, click on the desired location where you want the shape to be. A dialog box appears:
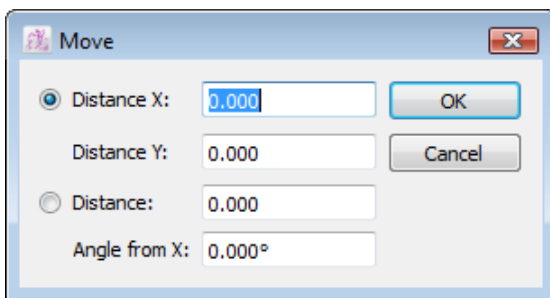
6 Enter the X and Y values (in user predetermined measurement units) to move the selected point in precise horizontal (X) or vertical (Y) directions. A positive value moves the selection to the right/top. A negative value moves the selection to the left/down.

7 Click OK button to validate.
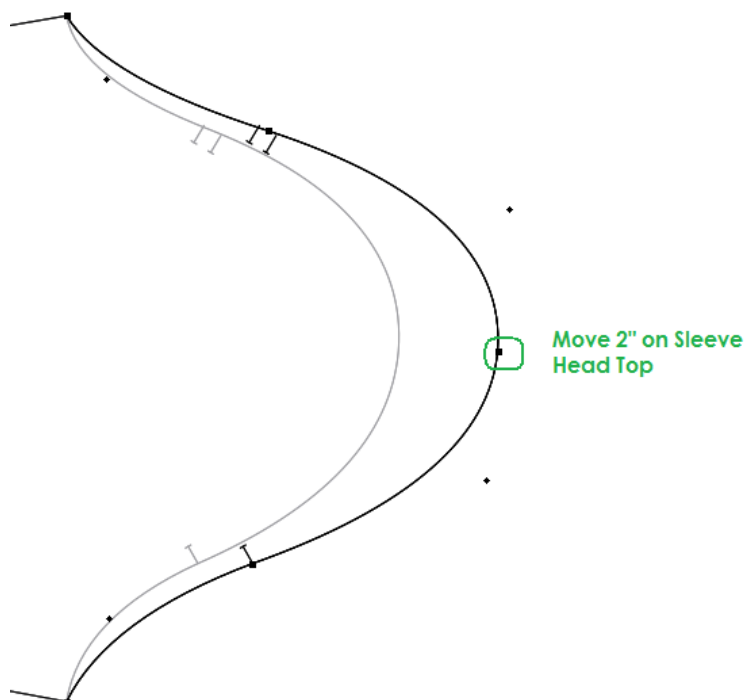
Point

The *Point* tool allows you to add a point on a shape or within the working area where the click is made. Points can be added freehand or by using X and Y coordinate.

The *Point* may be hidden under the *Attach Segments* in the Toolbox. To activate it, hold down the left mouse button (Windows / Linux) or the mouse button (Macintosh) on the *Attach Segments* until the *Point* appears. Move the mouse over the *Point* and release the mouse button.

To add a point:

1 Select the *Point* tool.

2 Click the desired location.
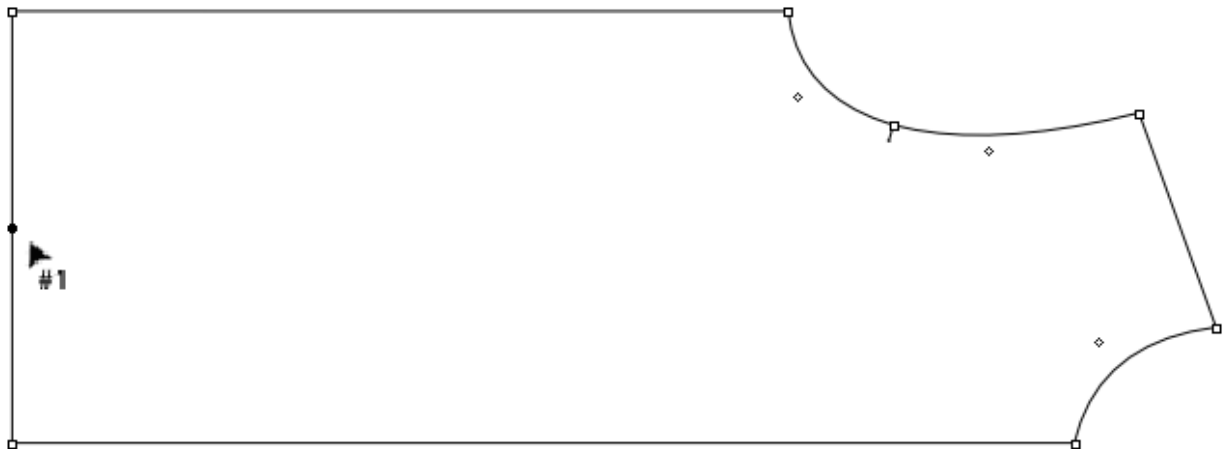
Note: To add a point to a segment, activate the piece of the segment is on. The point is grouped with the segment it has been added to.

To add a point, using precise distances:

1 Select the *Point* tool.

2 Hold down the **Alt** key (Windows), the **Option** key (Macintosh) or the **Alt** + **Windows** keys (Linux).

Windows keys   Alt

Macintosh keys   Option

Linux keys   Windows + Alt

3 Click a reference point, which represents the origin of the plan (point with the coordinates 0, 0), to open the *Point* dialog box:
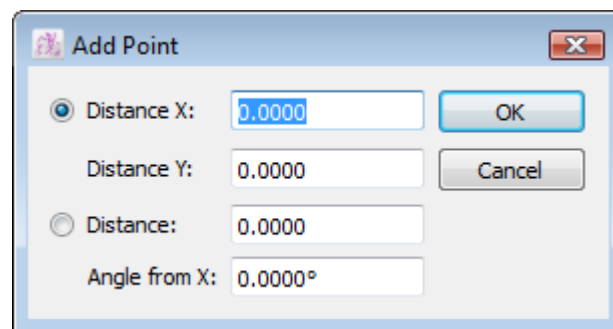
4 Enter the X and Y coordinates.

Distance X: Enter the length where the point is desired according to the X axis from the origin click.

Distance Y: Enter the length where the point is desired according to the Y axis from the origin click.

Distance: Enter the length where the point is desired according to the specified distance from the origin click.

Angle from X: Enter the angle where the point is desired according to an angle based on an X axis based on the reference point (the origin).
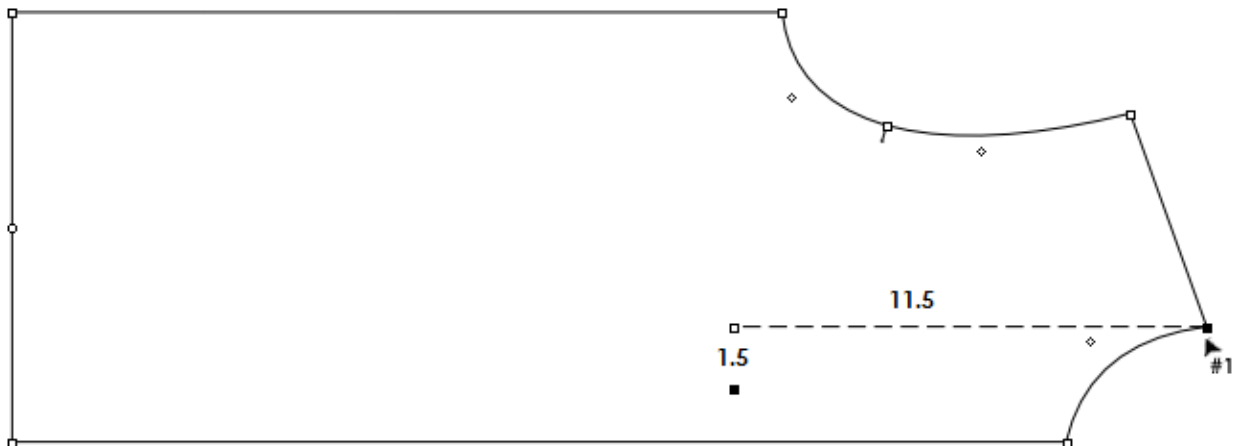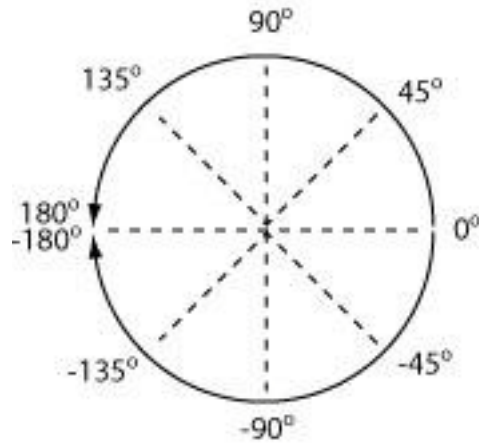
5 Click the *OK* button to execute the function.

Attach Segments

The *Attach Segments* tool allows you to add a point on an intersection between two lines or to merge two points one on top of the other. To attach segments, the elements you intend to merge must be part of the same group. To know how to make a group, see the part of this documentation about the *Group* item in the *Treatment* menu.

The *Attach Segments* may be hidden under *Point* in the toolbox. To activate it, hold down the left mouse button (Windows / Linux) or the mouse button (Macintosh) on the *Point* until the *Attach Segments* appears. Move the mouse over the *Attach Segments* and release the mouse button.

To attach two segments:

1 You must have 2 segments intersecting and they must be part of the same group (if not, select the elements to be grouped and go the *Treatment -> Group* item).

2 Select the *Attach Segments* tool.

3 Click the intersection.

This process adds a point to the intersection, linking both segments together.
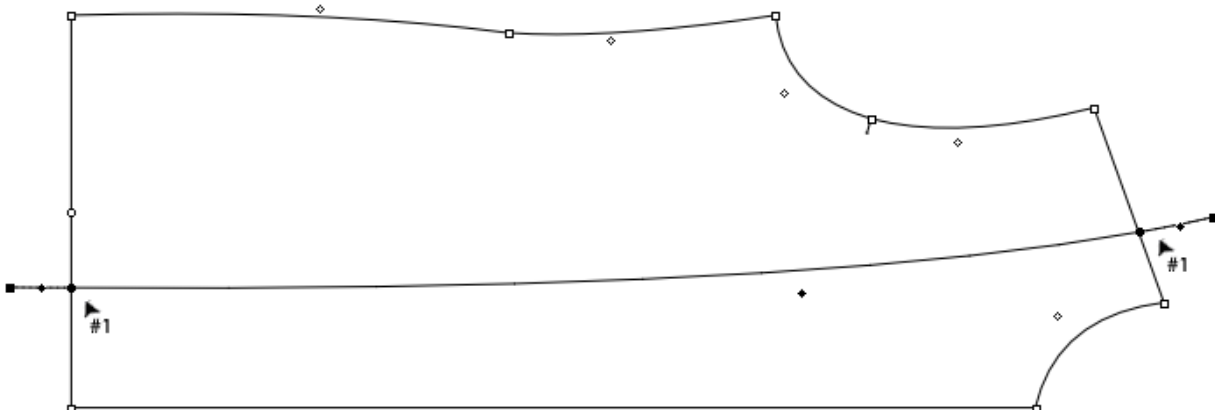
Add Point to Segment

To add a point to a segment:

1 Select the segment(s).

2 Select the *Add Point to Segment* tool.

3 Click the starting point, which must be one of the extremities of the segment(s).

The *Add Point to Segment* dialog box appears:
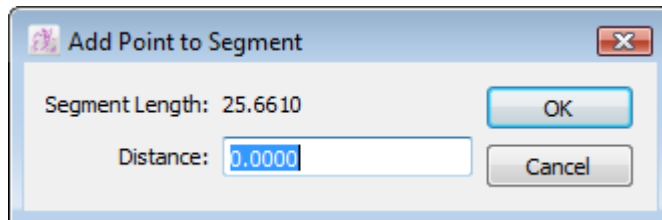
4 Enter the distance and click the *OK* button to execute the function.
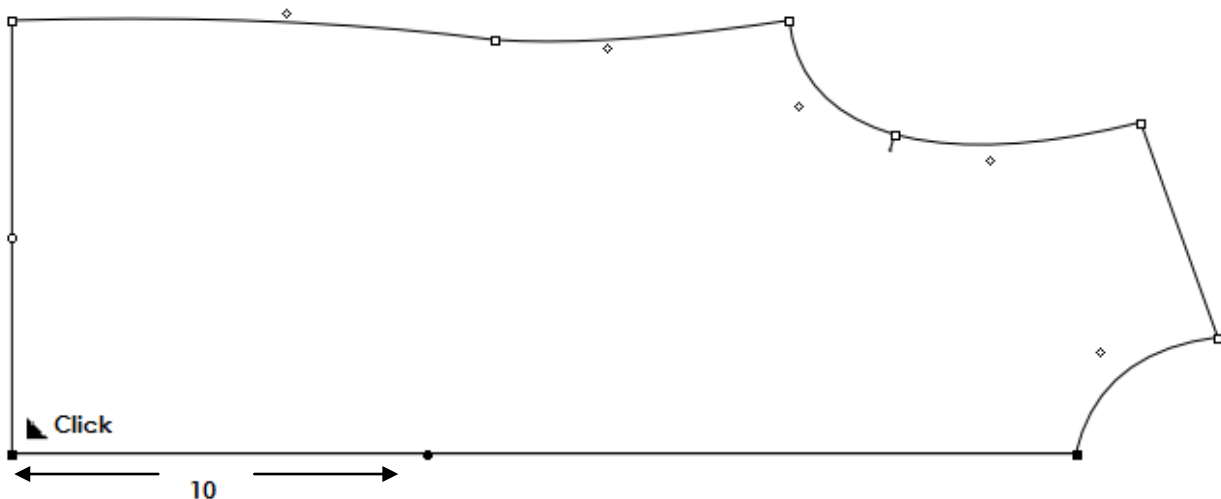
If the measurement exceeds the segment length, the point is added to the continuation of the selection.

Enter a negative value to extrapolate a point when extending a selection outside of the shape from the starting point.

To add a Graded Point to a segment or to access its grading information:

1 Select the segment(s)

2 Select the *Add Point to Segment* tool.

3 Hold down the **Alt** key (Windows), the **Option** key (Macintosh) and the **Alt** + **Windows** keys (Linux).

Windows keys			Alt
⇧ Shift			
Ctrl	⊞	Alt	

Macintosh keys			Option
⇧ Shift			
Ctrl	⌥	⌘ ✦	

Linux keys			Windows + Alt
⇧ Shift			
Ctrl	⊞	Alt	

4 Click the starting point.

A dialog box appears:

Add Point to Segment

Size	Break	Length	Distance	Difference	Step
8	Small	4.5561	0.0000	0.0000	0.0000
10	Medium	4.7500	0.0000	0.0000	0.0000
12	Large	4.9439	0.0000	0.0000	0.0000
16	X-Large	5.1379	0.0000	0.0000	0.0000
18	X-Large	5.3317	0.0000	0.0000	0.0000

☐ Show Special   Paste

OK   Cancel
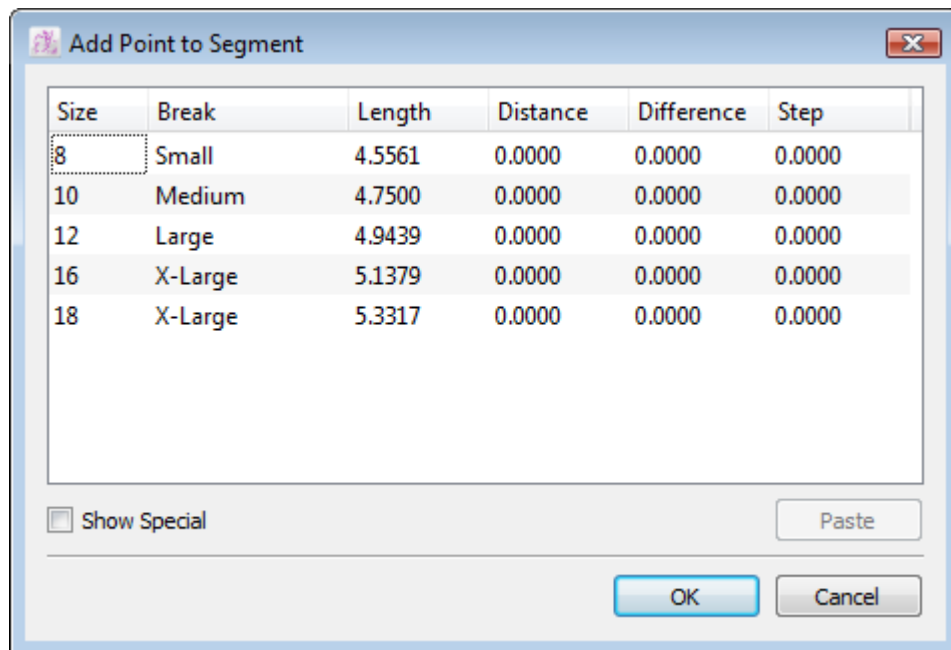
5 Select each size separately, if you need a different length for each size or select them all at once if they need the same value. Enter the value of the desired distance in the text box.

Use the *Paste* button to paste the copied distance or copied differences from the medium or copied step between each size. The values must be copied from the *Graded Selection's Lengths* dialog box (*Ruler* tool with the *Alt* key for Windows, the *Option* key for Macintosh and the *Alt + Windows* keys for Linux).

The *Show Special* check box allows you to hide the break name and display special characters established in the *Grading Working Sizes* dialog box.

6 Click the *OK* button to execute the function.

Divide Segment

The *Divide Segment* tool allows you to divide a segment equally by adding as many points as necessary, all at an equal distance from each other, dividing the segment in as many divisions as you need, up to 1000.

To divide a segment:

1 Select the segment.

2 Select the *Divide Segment* tool.

3 Click the segment.

The *Division Segment* dialog box opens:
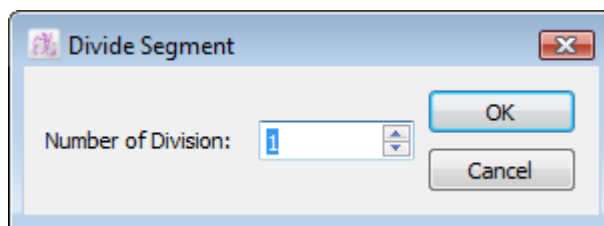
4 Enter the desired quantity of division.

5 Click the *OK* button to execute the function.
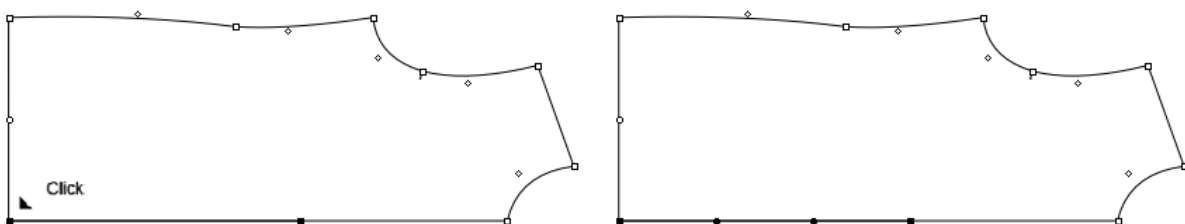
If several segments are selected, they are considered as one segment.

Intersection Points

The Intersection Points tool allows you to add points on selected segments that are aligned from a projection guideline.

To add points:

1 Select the segment(s) where points are required.

2 Select the *Intersection Points* tool.

3 Click the desired location of the first reference point.

4 Click the desired location of the second reference point and hold down the left mouse button (Windows / Linux) or the mouse button (Macintosh).

5 A guideline appears; drag it to the desired location.

6 Release the mouse button. Points appear on all the selected segments intersecting the guideline.

click 1

click 2

Resulting piece
Points added following the projection guide line
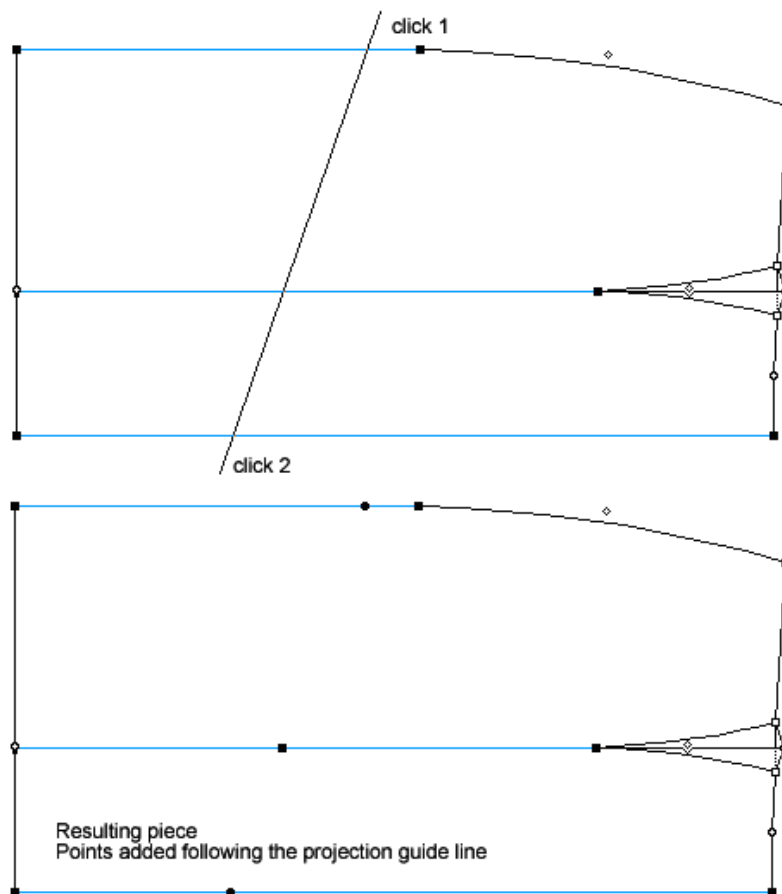
Note: The *Add Points* tool does not function if two shapes are active at the same time.

You can restrain the projection guideline in X and Y by holding down the *Shift* key (Windows, Macintosh and Linux).

Windows keys   Shift

Macintosh keys   Shift

Linux keys   Shift

To add points on selected segment(s) with precise measurement from a reference point horizontally or vertically:

1 Select the segment(s) where points are desired.

2 Select the Add Points tool.

3 Hold down the **Alt** key (Windows) or the **Option** key (Macintosh) or **Alt +Windows** keys (Linux).

Windows keys   Alt

Macintosh keys   Option

Linux keys   Windows + Alt

4 Click the desired location of the reference point to open the Add points dialog box:

Add Points at Intersection

Distance: 0.0000   OK

◉ Horizontally   Cancel
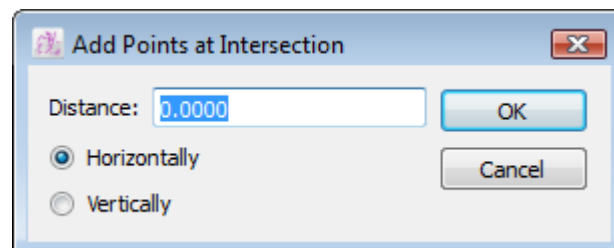
◯ Vertically

5 Enter at which distance from the reference point you want to add a point and select the radio button for the required axis (horizontal or vertical).

6 Click the OK button to execute the function.
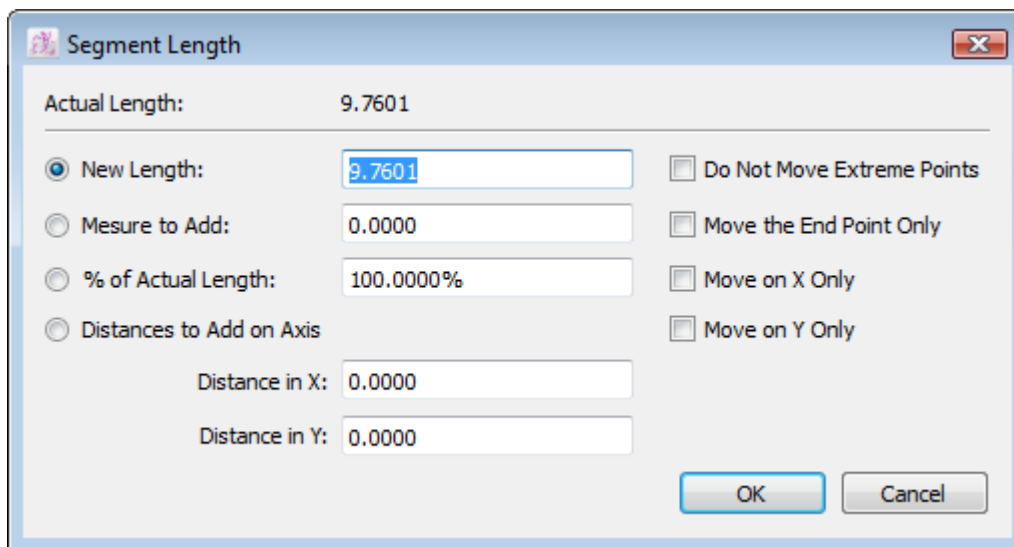
Segment Length

The *Segment Length* tool allows you to obtain or modify information about the length of the selected segment(s).

To obtain or modify information on the length of a segment:

1 Select the desired segment(s).

2 Select the *Segment Length* tool.

3 Click the fixed point where the measurement starts. The point must be at the extremity of a segment.

The *Segment Length* dialog box opens:

4 Change the measurements of the segment(s) if you want, and check the required option check box(es).

You can determine if the added measurement is allotted to the entire segment in a proportional way or added to its end.

If no options are selected, the added measurement is added proportionally to the entire segment.

You can modify the segment length by a different means:

New Length: It allows you to enter a new length value.

Measure to Add: It adds the value entered to the actual length; a negative value subtracts the value from the actual length.

% of Actual Length: The actual length represents 100%; enter the % value of the segment desired.

Distances to Add on Axis

Distance in X: It recalculates the shape after applying the distance move to the end point of the segment in X.

Distance in Y: It recalculates the shape after applying the distance move to the end point of the segment in Y.

Do Not Move Extreme Points: It keeps the two extreme points in their positions while changing the length of the segment.
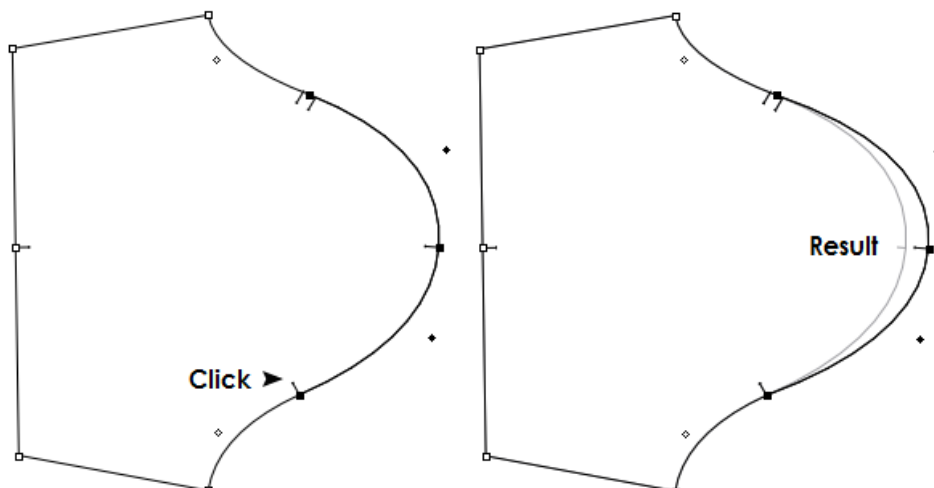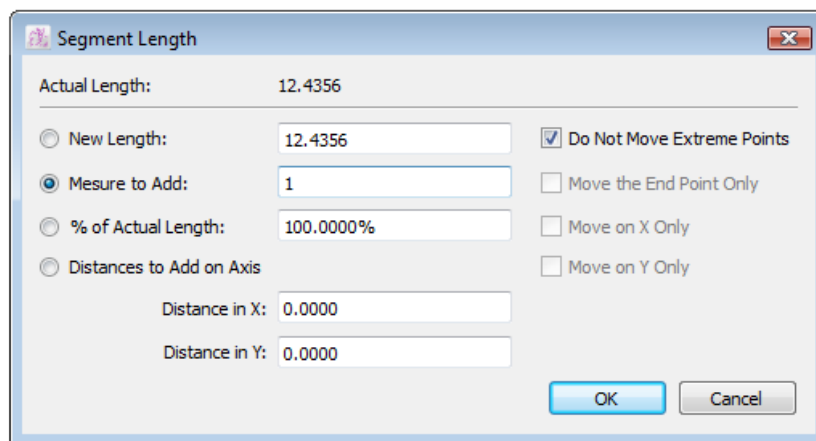
Move the End Point Only: The measurement to be added or subtracted is done at the end of the segment, without taking into account the point(s) located on the selected segment.
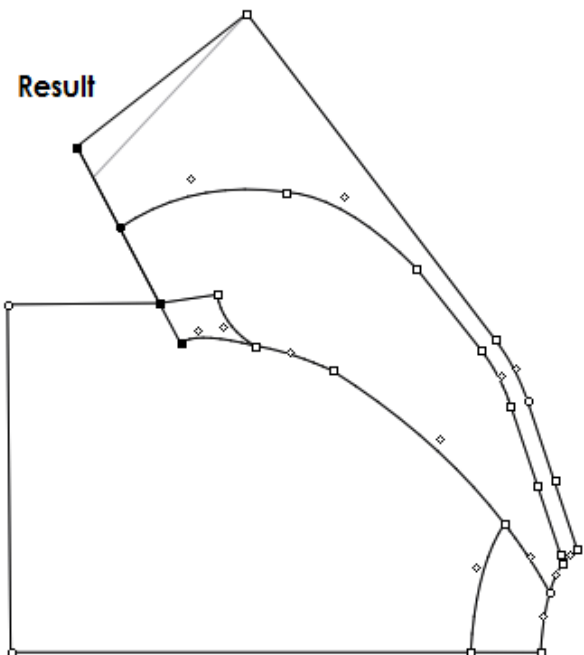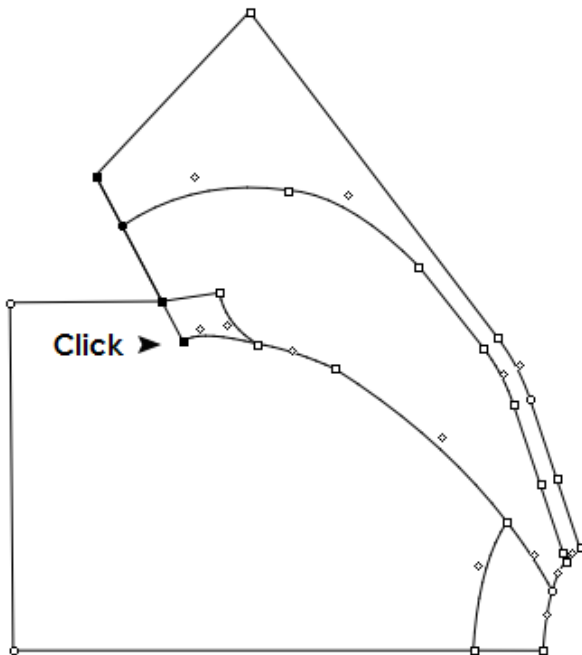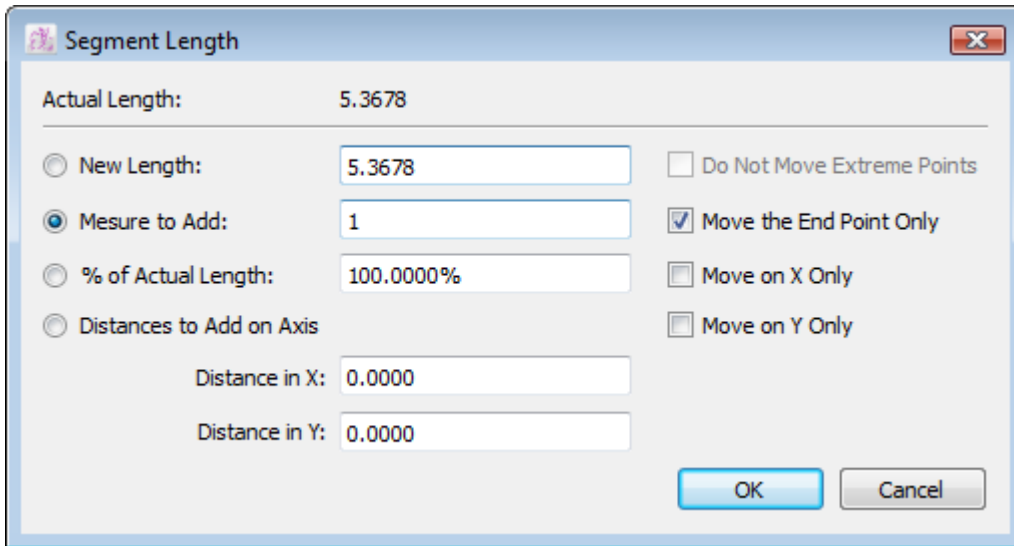
Move on X Only: To change the length of the segment while following the X axis.
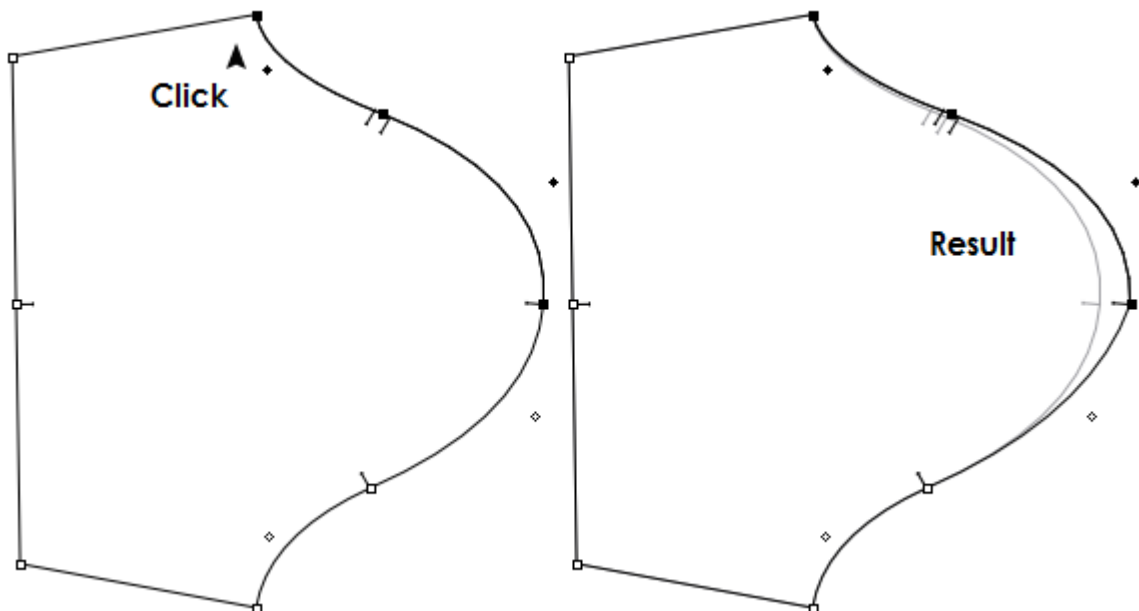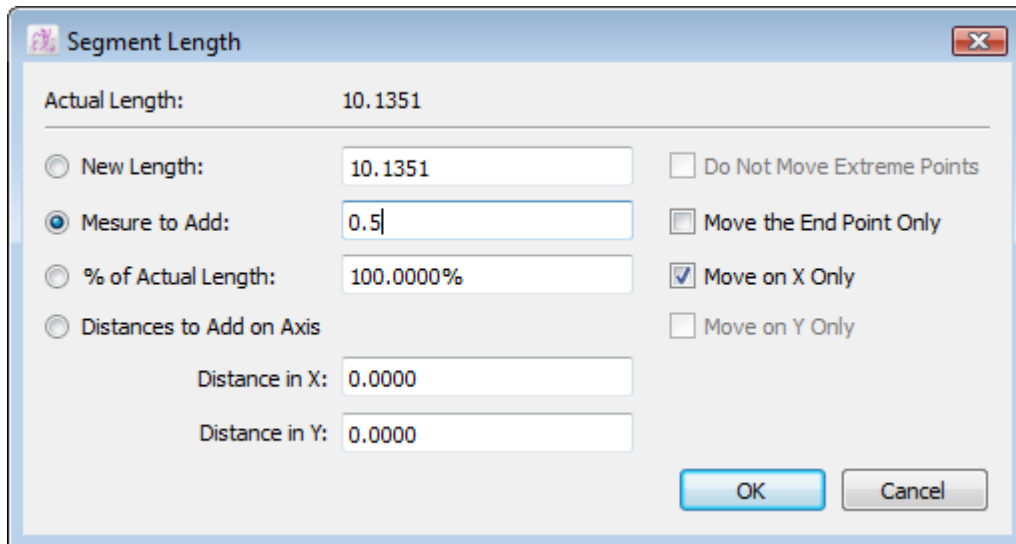
Move on Y Only: To change the length of the segment while following the Y axis.
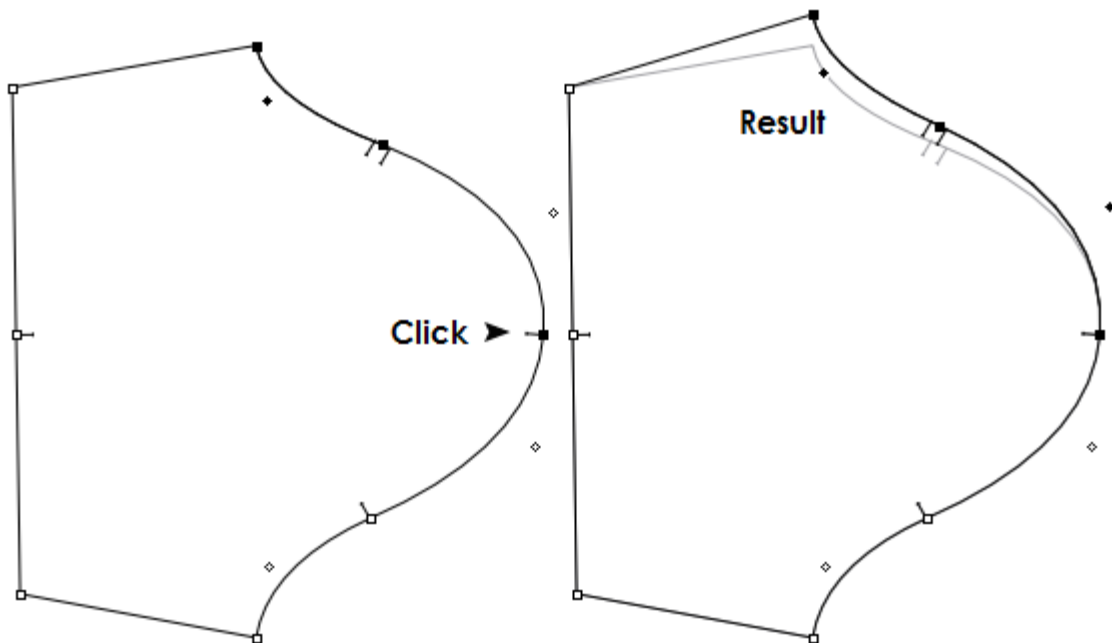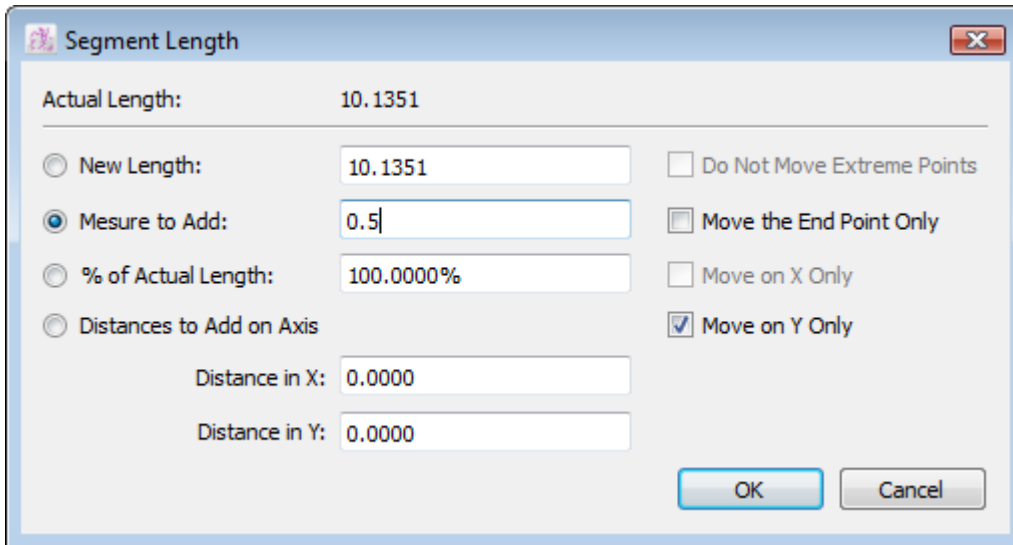
Graded Segment Lengths

This function allows you to get grading information on a segment.

To use the Graded Segment Lengths function:

1 Select the segment(s).

2 Select the *Segment Length* tool.

3 Hold down the **Alt** key (Windows) or the **Option** key (Macintosh) or **Alt +Windows** keys (Linux).

Windows keys   Alt

△ Shift

| Ctrl | ⊞ | Alt | |

Macintosh keys   Option

△ Shift

| Ctrl | ⌥ | ⌘ ⌘ | |

Linux keys   Windows + Alt

△ Shift

| Ctrl | ⊞ | Alt | |

4 Click the fixed point where the measurement starts. The point must be at the extremity of a segment. The *Graded Segment Lengths* dialog box appears. It displays the length for each size, the difference in measurements from the medium, and the step between each size. You can select and modify any size.

5 Select the size(s) to be modified.

6 You can select a size and select the *Modify* button to make any modifications to it; this can be done successively for all sizes. Or you can make a multiple selection of sizes in the list and paste either the length, difference or steps of the corresponding sizes previously copied in the *Graded Selection Length* dialog box. (See the *Ruler* tool for more info)

The *Graded Segment Lengths* dialog box offers the following options:
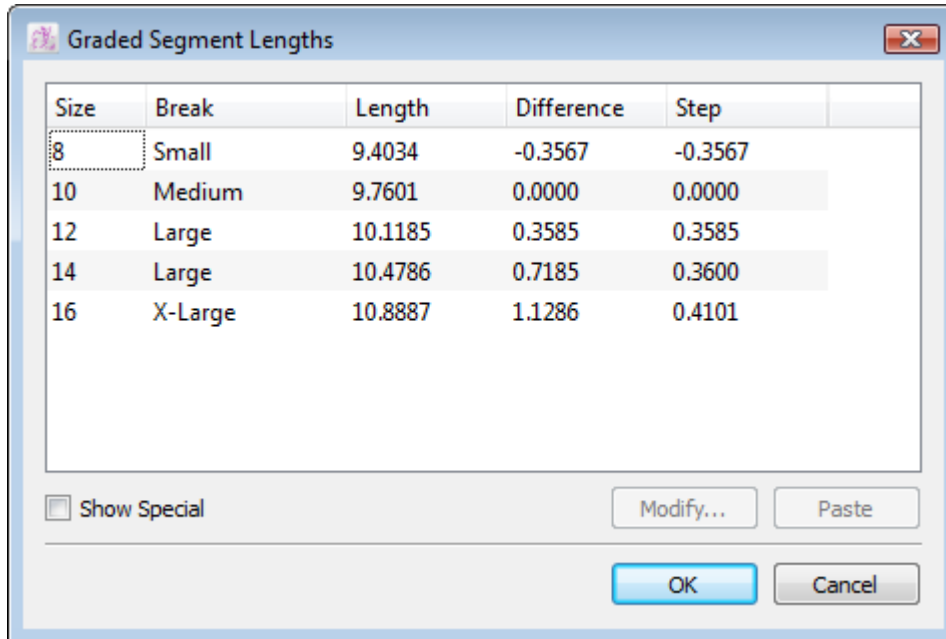
Modify: It modifies the selected size in the *Graded Segment Lengths* dialog box.

Paste: It pastes the copied value(s) from the *Graded Selection's Lengths* dialog box.

Show Special: It hides the break name and displays special characters established in the *Grading Working Sizes* dialog box.

Walking Piece

Walking Piece allows you to view the walking process of two pattern pieces, and then modify the precise value through the measurement box.

To do so:

1 Select the segments from two pieces (Pattern A and Pattern B)

2 Select Walking Piece tool

3 The first click on one of the segment is the start point of the fixed piece. The second click is the start point of the moving piece.

Pattern B is the moving piece.

Start point on Pattern A
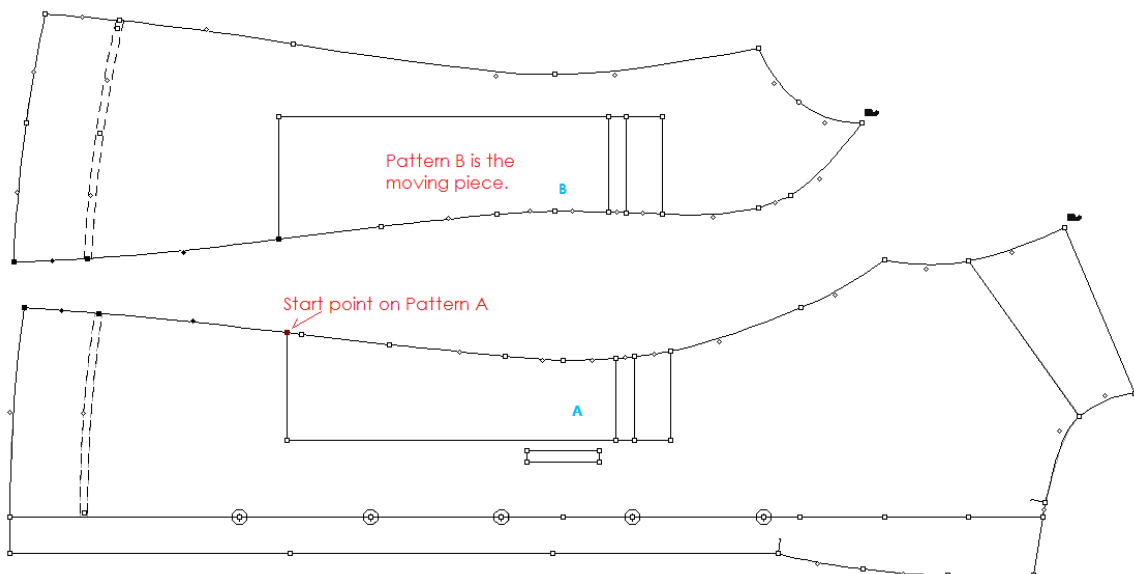
4 Walking Piece dialog box appears to show the measurement for Pattern A and Pattern B.
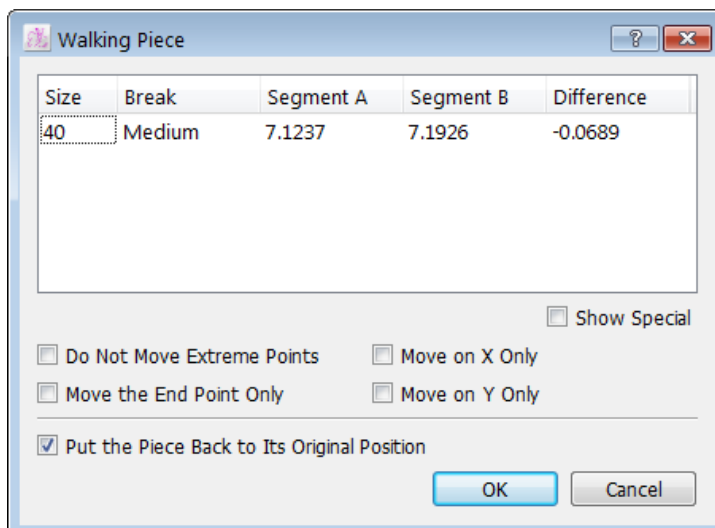
Size	Break	Segment A	Segment B	Difference
40	Medium	7.1237	7.1926	-0.0689

☐ Show Special

☐ Do Not Move Extreme Points   ☐ Move on X Only

☐ Move the End Point Only   ☐ Move on Y Only

☑ Put the Piece Back to Its Original Position

OK   Cancel

Change the measurements of the segment(s) if you need, and check the required option check box(es).

● Press *Space Bar* key to skip the walking process

Show Special: It hides the break name and displays special characters established in the *Grading Working Sizes* dialog box.

Do Not Move Extreme Points: It keeps the two extreme points in their positions when changing the length of the segment.

Move the End Point Only: The measurement to be added or subtracted is done at the end of the segment, without taking into account the point(s) located on the selected segment.

Move on X Only: To change the length of the segment while following the X axis.

Move on Y Only: To change the length of the segment while following the Y axis.

Put the Piece Back to Its Original Position: The piece will put back to the original position after the measurements adjustment.

Click the *OK* button to execute the function.

Apply Walking Piece function to Grading Nest

To do so:

1 Select the graded segments from two pieces (Pattern A and Pattern B)

2 Select *Walking Piece* tool

3 Holding down **Alt** key (Windows), **Option** key (Macintosh) or **Alt +Windows** keys (Linux).

The first click on one of the graded segment is the start point on fixed piece. The second click is the start point of the moving piece.
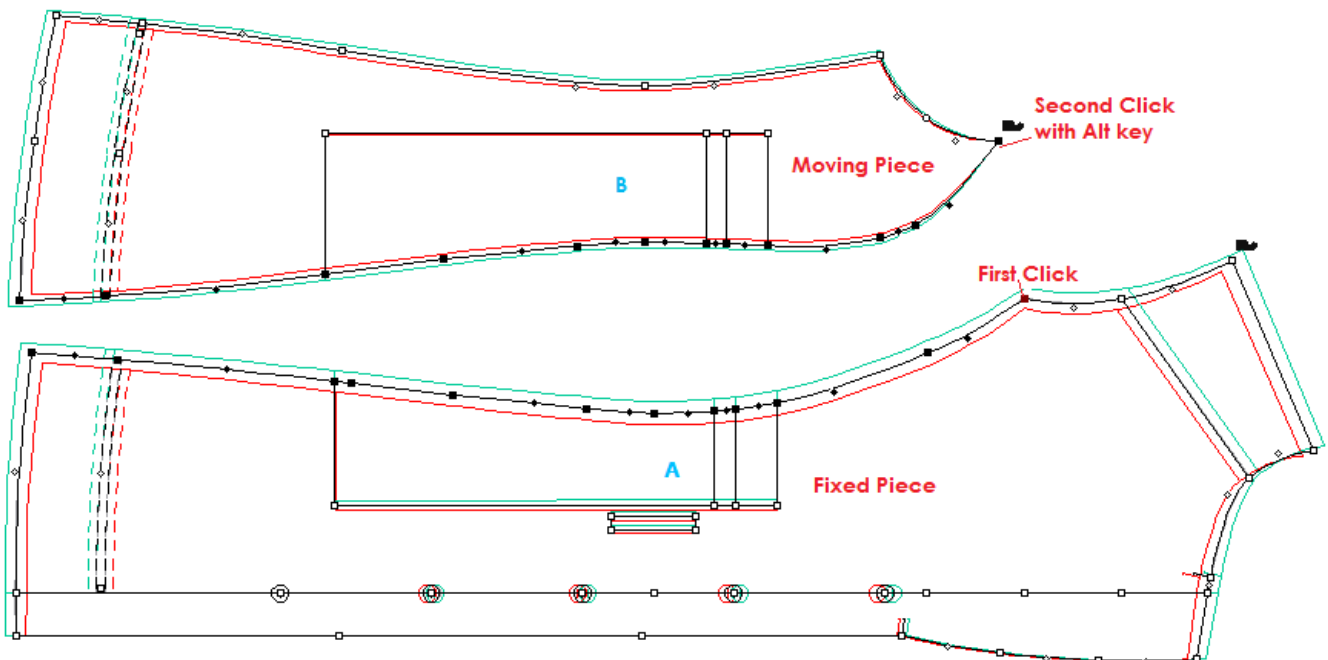
4 Walking Piece dialog box appears to show the graded measurement for Pattern A and Pattern B.
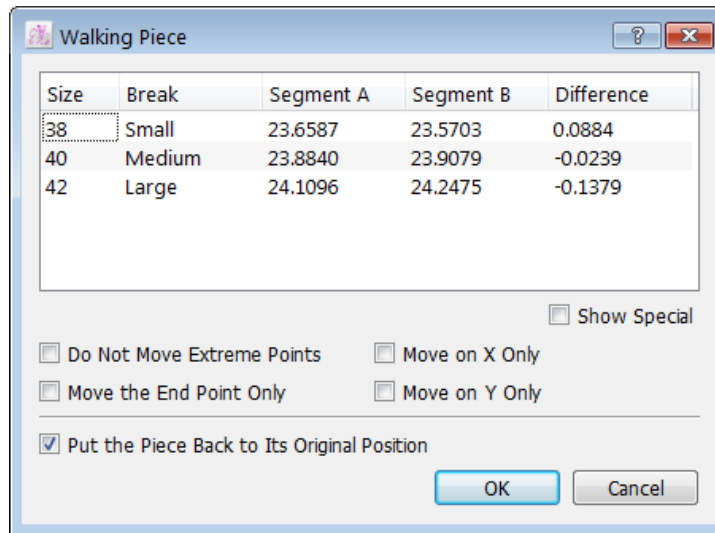
Change the measurement of the segment(s) if you need, and check the required option check box(es).

Click the *OK* button to execute the function.

Segment Angle

The Segment Angle tool allows you to read the angle of a segment and change it to a precise angle, if necessary.

The angle is calculated as follows:
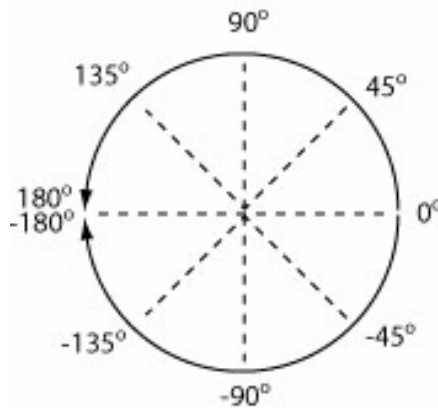
To obtain or modify information for a Segment Angle:

1 Select a segment or segment path.

2 Select the *Segment Angle* tool.

3 Click one end point of the segment, which should be the starting point of the angle you wish to modify. A dialog box displaying the actual angle of the segment based on the X axis appears:
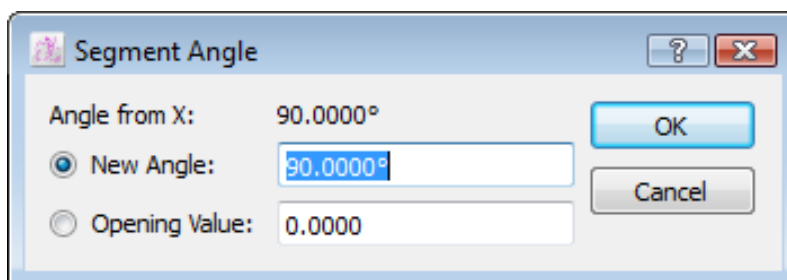
4 Enter the desired angle or a rotation value. The angle can change positively or negatively and relies entirely on the X axis. The angle is calculated from one end of the segment to the other end in a straight line. When modified, the selection pivots from the first click to adjust the end point to the new location corresponding to the new angle entered. Modifications to the angle can be entered in degrees in the *New Angle* text field or in CM or inch (according to your *Options -> Preference ->Display*) by using the *Opening Value* text field.
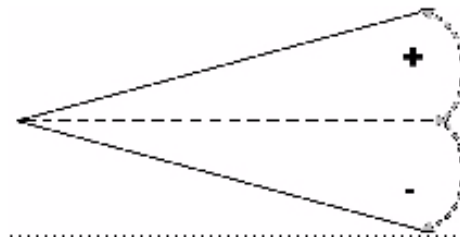
5 Click the *OK* button to execute the function.

Example with the *New Angle* option:
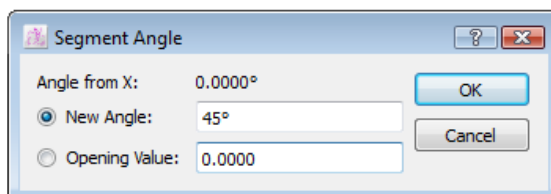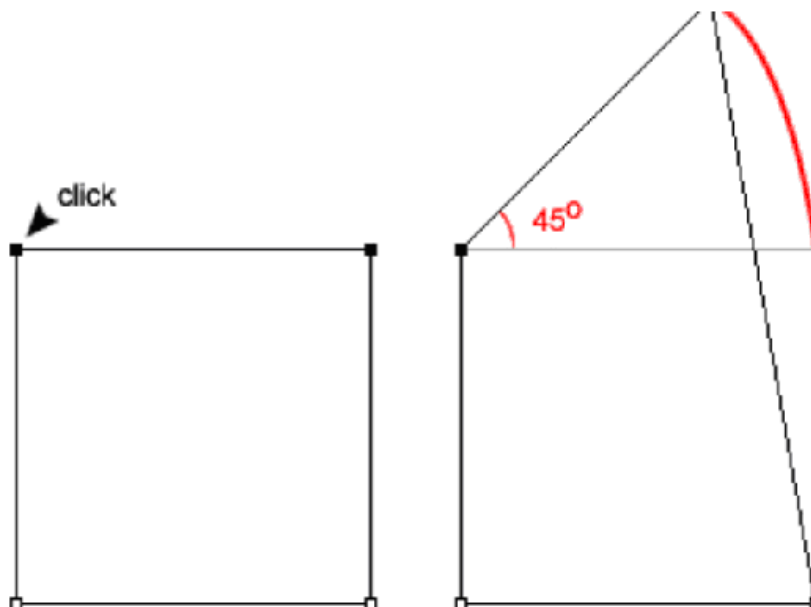
Example with the *Opening Value* option:
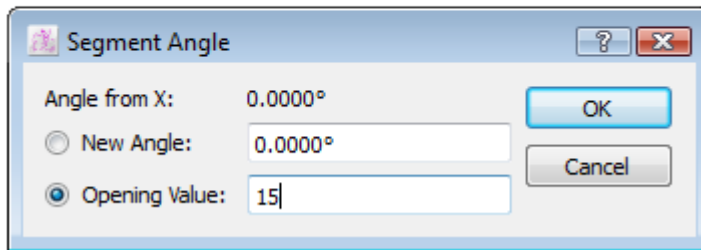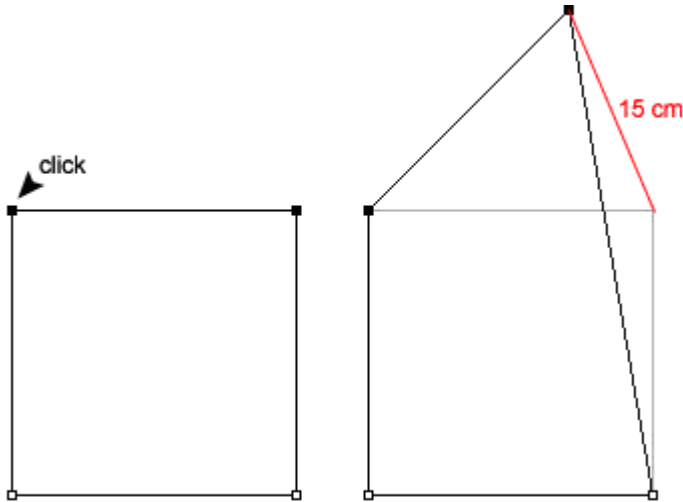
Using the tool to slash and spread:

1 Select the portion of the shape to be rotated.

2 Select the *Segment Angle* tool.

3 Hold down the **Alt** key (Windows), the **Option** key (Macintosh) or **Alt +Windows** keys (Linux).
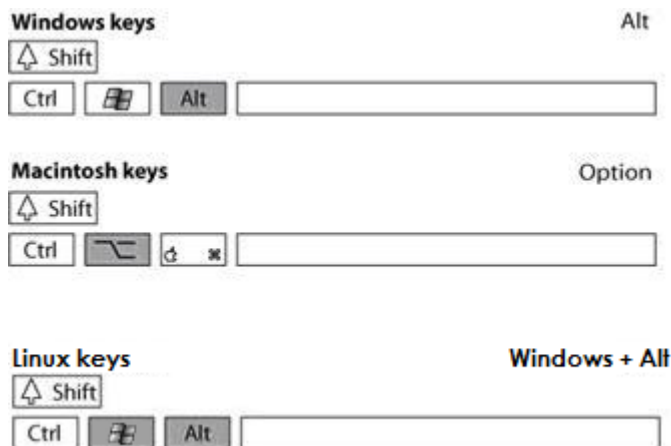
4 Click the point to be slashed and spread (opening side) and the *Slash and Spread* dialog box appears.

5 Enter the opening measure.

6 Click the *OK* button to execute the function.

Example using the Tool to Slash and Spread:
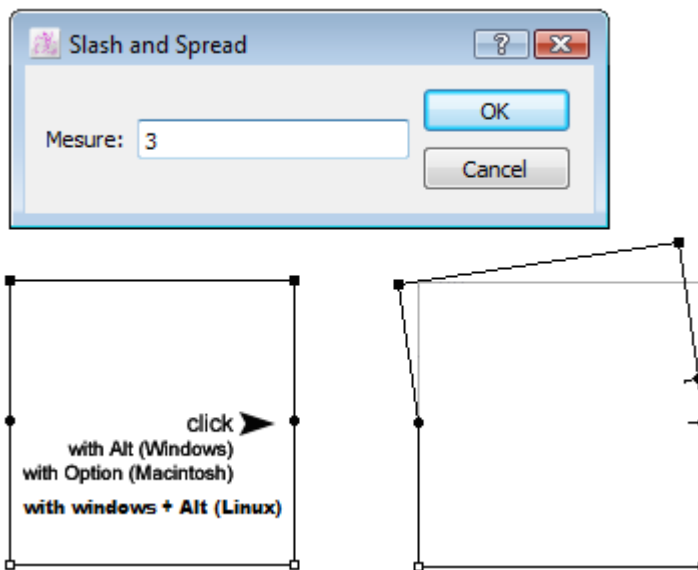
Copy/Paste Shape/Measure

The *Copy/Paste Shape/Measure* tool allows you to copy the shape and/or measure of a segment and paste it over another segment.

The *Copy/Paste Shape/Measure* tool may be hidden under the *Irregular Scale* tool in the Toolbox. To activate the *Copy/Paste Shape/Measure* tool, hold down the left mouse button (Windows / Linux) or the mouse button (Macintosh) on the *Irregular Scale* tool until the *Copy/Paste Shape/Measure* tool appears. Move the mouse over the *Copy/Paste Shape/Measure* tool and release the mouse button.

To Copy/Paste Shape/Measure:

1 Select the segment you wish to copy.

2 Select the segment to be altered (over which the first segment shape and/or measure will be pasted) using the **Shift** key (Windows, Macintosh and Linux).

Windows keys   Shift

⬆ Shift			
Ctrl	⊞	Alt	

Macintosh keys   Shift

⬆ Shift			
Ctrl	⌥	⌘ ✻	

Linux keys   Shift

⬆ Shift			
Ctrl	⊞	Alt	

Important: The two segments cannot be from the same shape!

3 Select the *Copy/Paste Shape/Measure* tool.

4 Click the starting point of the segment to be copied.
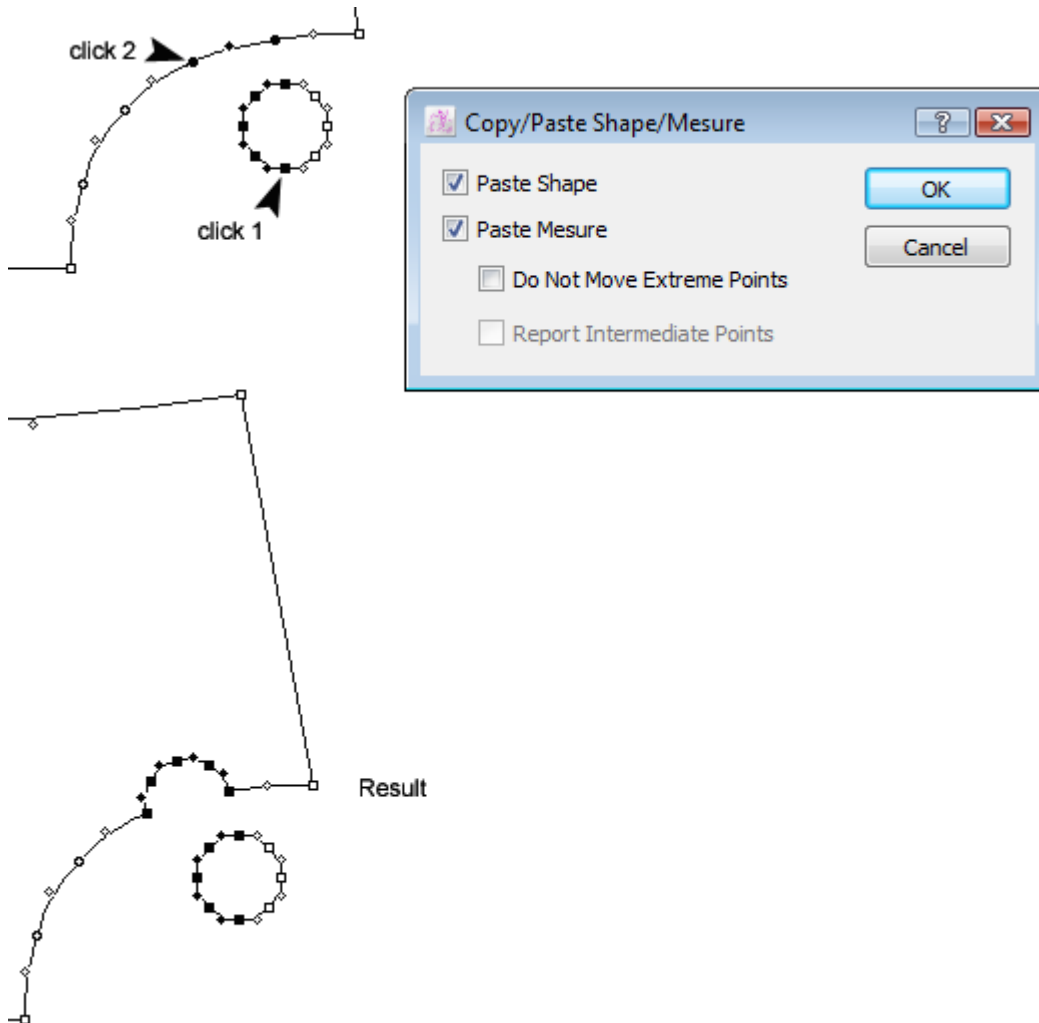
5 The *Copy/Paste Shape /Measure* dialog box opens. Select the required options:

Paste Shape: It pastes the segment shape (the copied shape stretches or shrinks to fit).

Paste Measure: It pastes the segment measurements.

Do Not Move Extreme Points: It pastes the segment measure without moving the extreme points, if possible.

Report Intermediate Points: It reports all intermediate points (Marks, Notches, etc.) on the second segment and transform them into Mark Points (This is not available with the *Paste Shape* option).

6 Click the *OK* button in the dialog box.

7 Click the starting point of the shape to be pasted upon.

Pasting a Shape Multiple Times

To paste a segment shape multiple times:

1 Select the segment you wish to copy.

2 Select the segment(s) to be altered (overwritten by Pasted segments).

3 Select the *Copy/Paste Shape/Measure* tool.

4 Click the starting point of the segment to be copied.

5 Select the desired options in the *Copy/Paste Shape/Measure* dialog box, as seen above and click the *OK* button.

6 Hold down the Shift key (Windows, Macintosh and Linux) and click the starting point of the shape to be pasted upon.

7 Continue holding down the **Shift** key to paste the shape/measure on as many segments as you require, by clicking their respective starting point. Release **Shift** when you paste the shape for the last time.

Note: If you wish to paste the shape on the same piece as it is copied, you need to select the segment to copy and click the starting point to copy with the tool. The dialog box appears. Select the appropriate options and click the *OK* button. To paste the shape, you have to select the segment where to paste it using the **Ctrl** key (Windows / Linux) or **Command** key (Macintosh). This activates temporarily the pointer tool, allowing you to make your selection without losing the copied information. Once the selection is done, click the starting point of the selection where you wish to paste the shape. You can use *Shift* to paste the shape multiple times using this technique, too.

Irregular Scale

The *Irregular Scale* tool allows you to reshape a piece on selected points, using X and Y measurements.

The *Irregular Scale* tool may be hidden under *Copy/Paste Shape/Measure* tool in the Toolbox. To activate the *Irregular Scale* tool, hold down the left mouse button (Windows / Linux) or the mouse button (Macintosh) on the *Copy/Paste Shape/Measure* tool until the *Irregular Scale* tool appears. Move the mouse over the *Irregular Scale* tool and release the button.

To scale a segment in an irregular way:

1 Select a segment with at least three contour points to be moved according to measurements in X and Y.

2 Select the *Irregular Scale* tool.

3 Click the first selected point of the path.

4 Click the last selected point of the path.

The Irregular scale dialog box appears:

#	X	Y	Distance	Angle
1	0.0000	0.0000	0.0000	0.0000°
2	0.0000	0.0000	0.0000	0.0000°
3	0.0000	0.0000	0.0000	0.0000°
4	0.0000	0.0000	0.0000	0.0000°
5	0.0000	0.0000	0.0000	0.0000°

◉ Permanent ○ Simulation

OK   Cancel
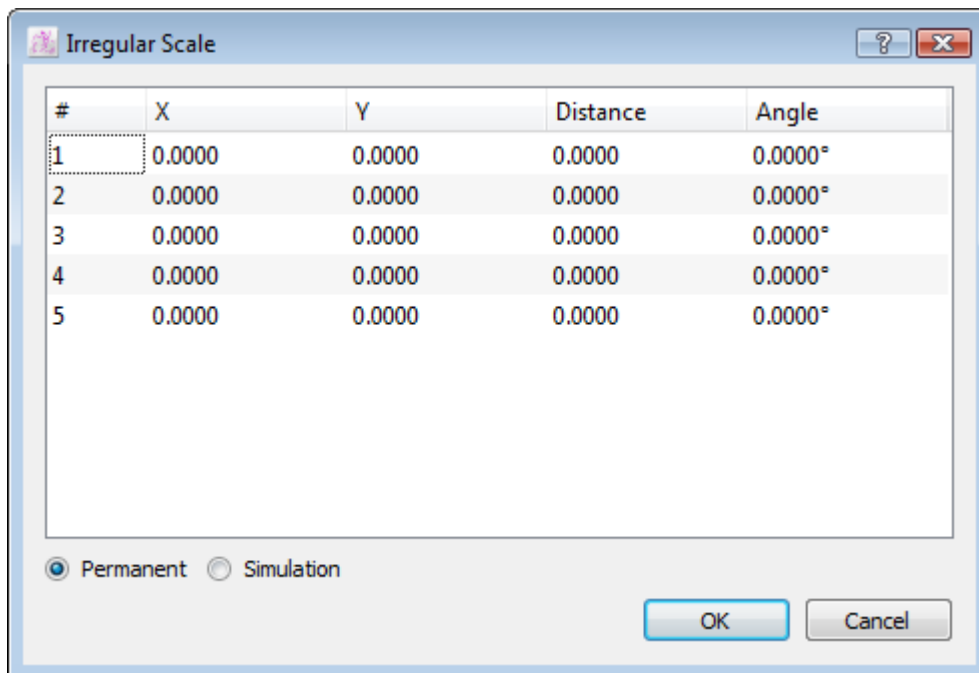
Each point in the list corresponds to a selected regular or mark point on the shape.
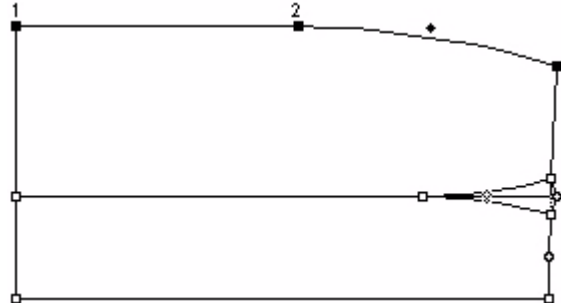
5 Select the points and enter the appropriate moving value where required.

6 Select *Show X and Y Distances* to enter the X and Y distances or select *Show distance* and angle to enter distances and angles.

7 Select *Permanent* to move the selected points or select *Simulation* to keep the original segment and add a new one with the modifications.

Permanent example:

#	X	Y	Distance	Angle
1	0.0000	-0.25	0.0000	0.0000°
2	0.0000	0.2500	0.2500	90.0000°
3	0.0000	-0.5000	0.5000	-90.0000°

○ Permanent   ○ Simulation

Result

Simulation example:

#	X	Y	Distance	Angle
1	0.0000	-0.2500	0.2500	-90.0000°
2	0.0000	0.2500	0.2500	90.0000°
3	0.0000	-0.5000	0.5000	-90.0000°

Permanent ● Simulation

Result
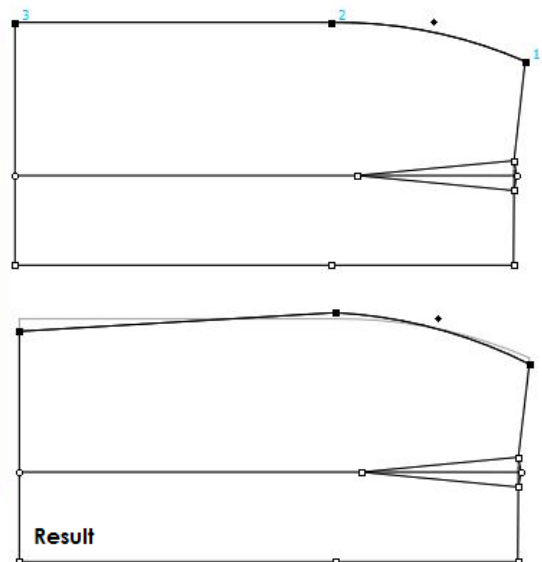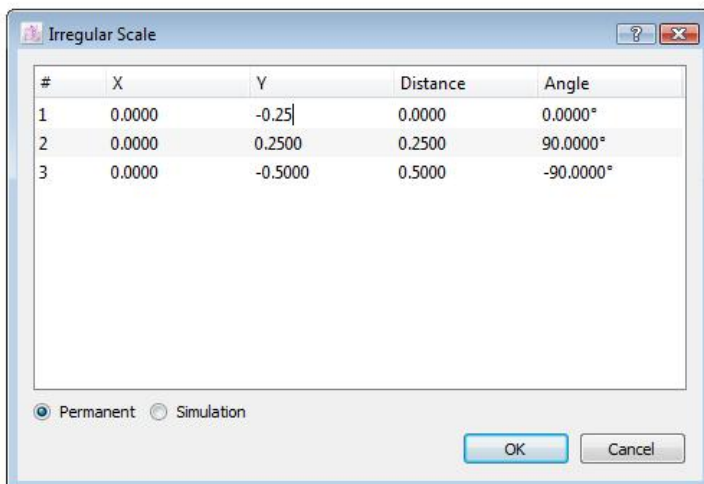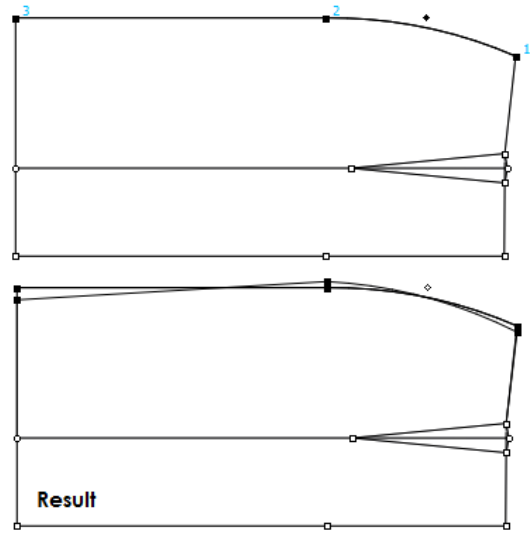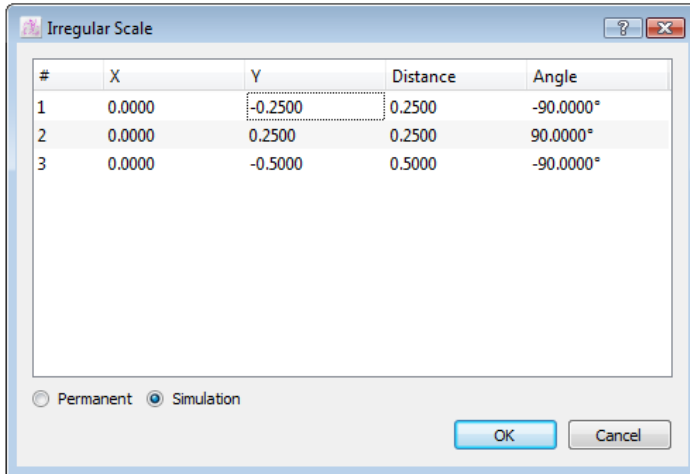
Segment Sync

Segment Sync is to copy the selected segments as image and join with another segment. Then it allows modifying the shape on the IMAGE and able to put modification to the original pieces.

Several Pieces Combine Together

To do so:

1 Select the segments need to join together as the follows:
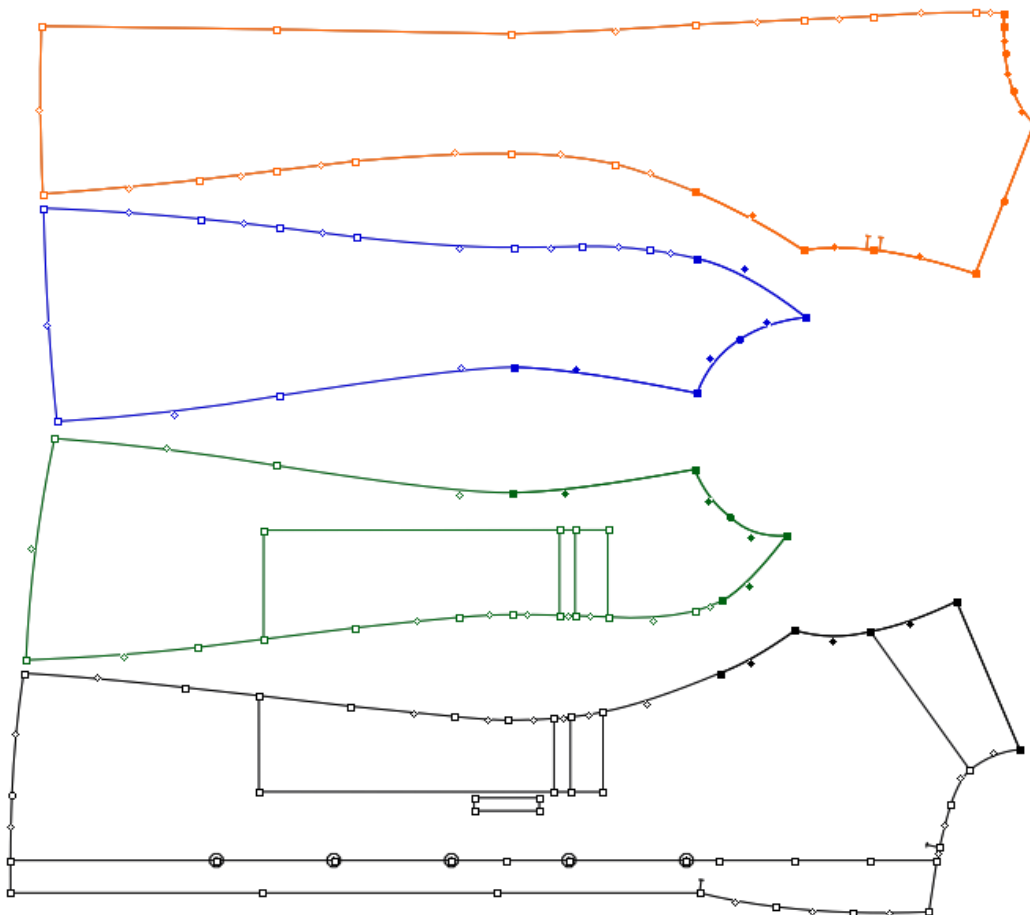
2 Choose **Segment Sync** tool

3 Click on each piece of the joined point, and the first click on the piece that is the fixed piece.

Click this point for
the last piece

Click on the
third piece

Click on the
second piece

First click on
the fixed piece
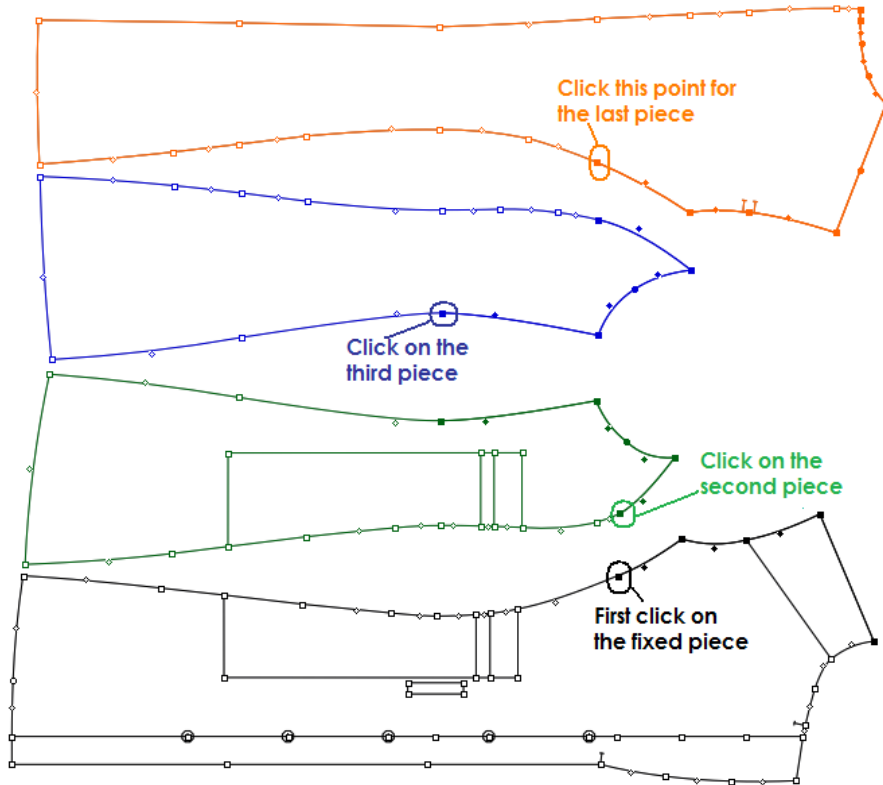
4 Then all of selected segments will join as following screen.
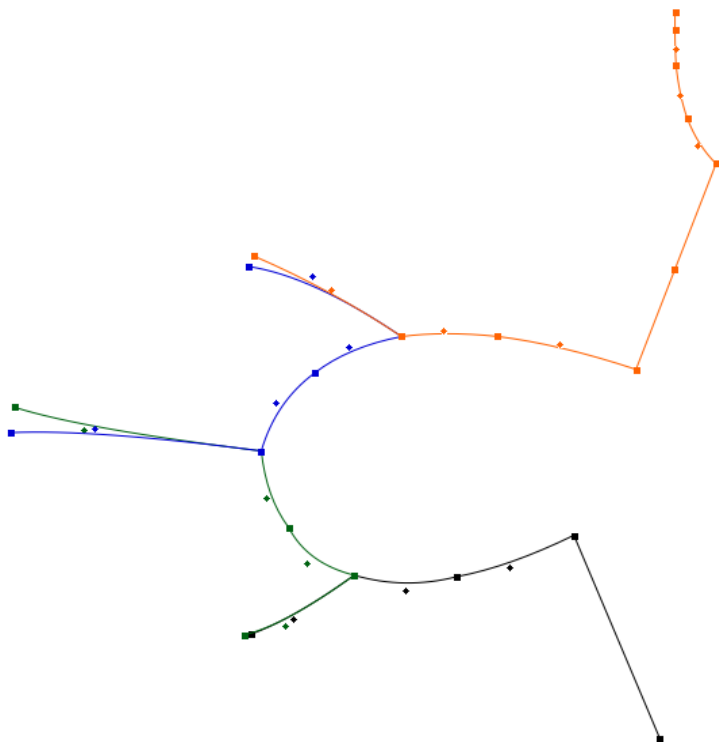
5 Move the cursor to the desired position and adjust the shapes what you need.

Adjust the shape at the Armhole
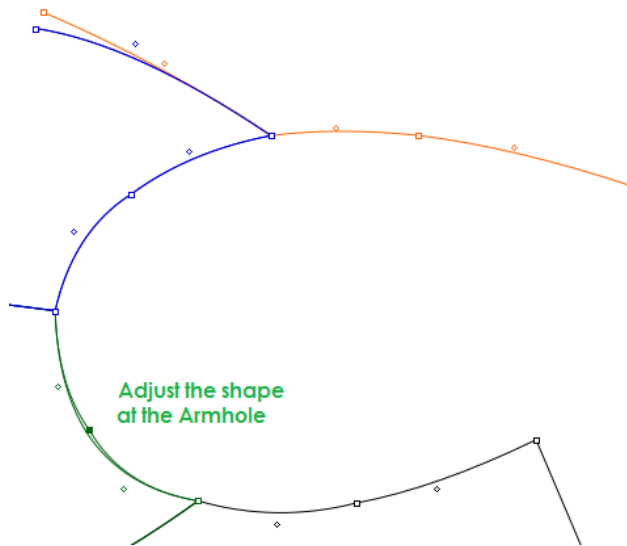
6 After modified, please right click on mouse to validate. You can see the difference if the pieces added with Template.
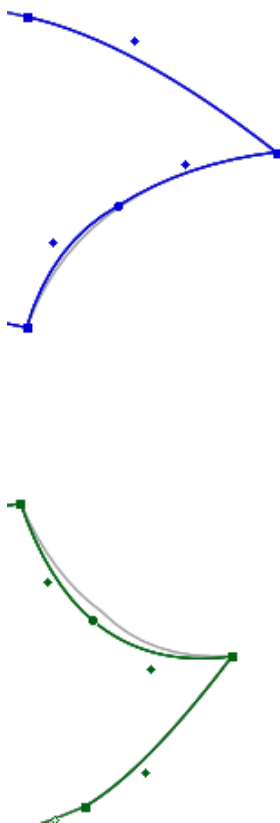
Close a Dart and Change the Shape

Closing a Dart temporary and let you to adjust the shape of this piece
To do so:

1 Select the segment with a Dart located

2 Choose **Segment Sync** tool and click on the fixed point
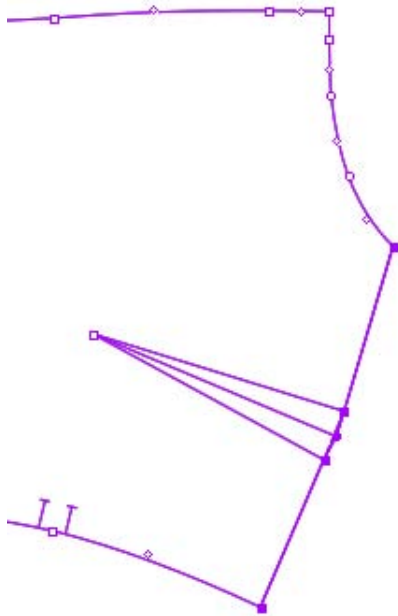
Click on the
fixed point
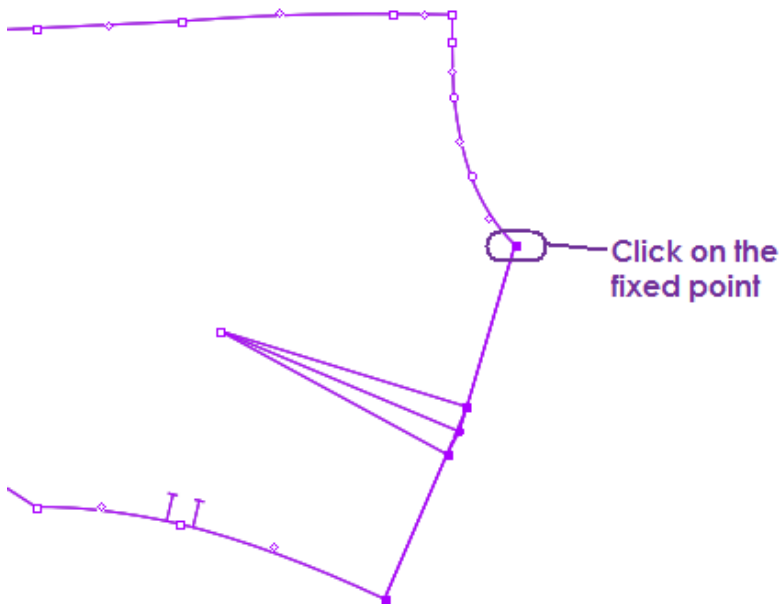
3 The Dart is closed and may change the shape as follows.
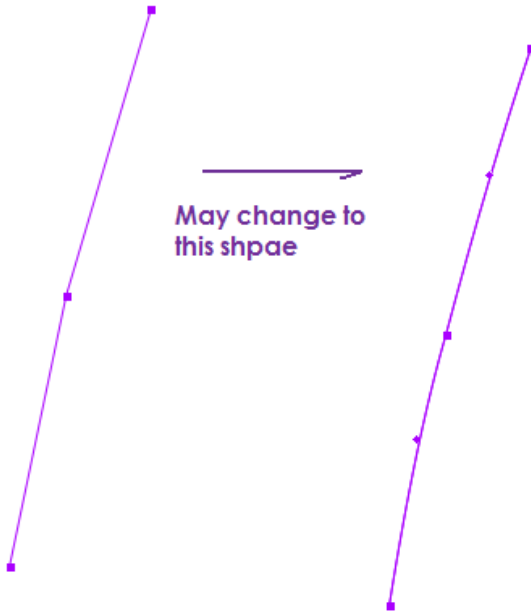
May change to
this shpae

4 After modified, please right click on mouse to validate. You can see the difference if the pieces added with Template.
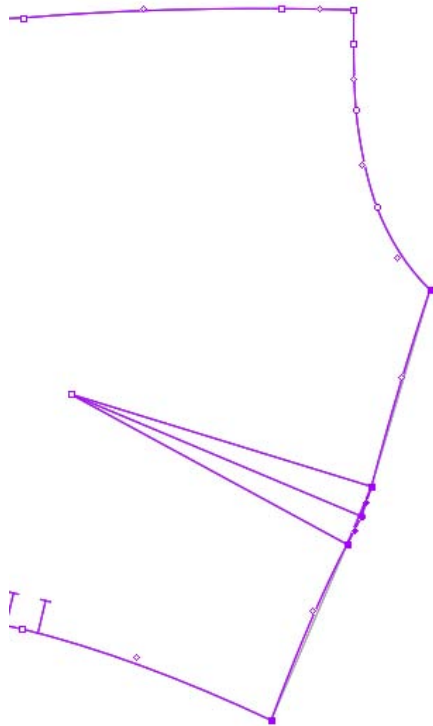
Close a Pleat and Change the Shape

Closing a Pleat temporary and let you to adjust the shape of this piece.

To do so:

1 Select the segment with a Pleat located

2 Choose **Segment Sync** tool and click on the fixed point
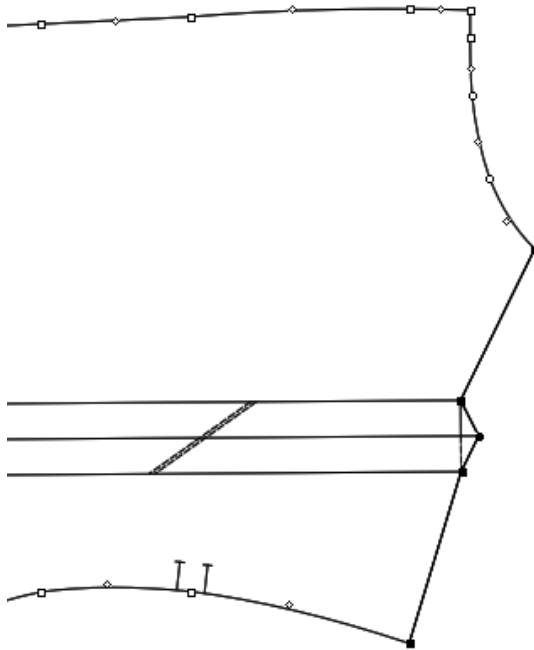
Click on the
Fixed point
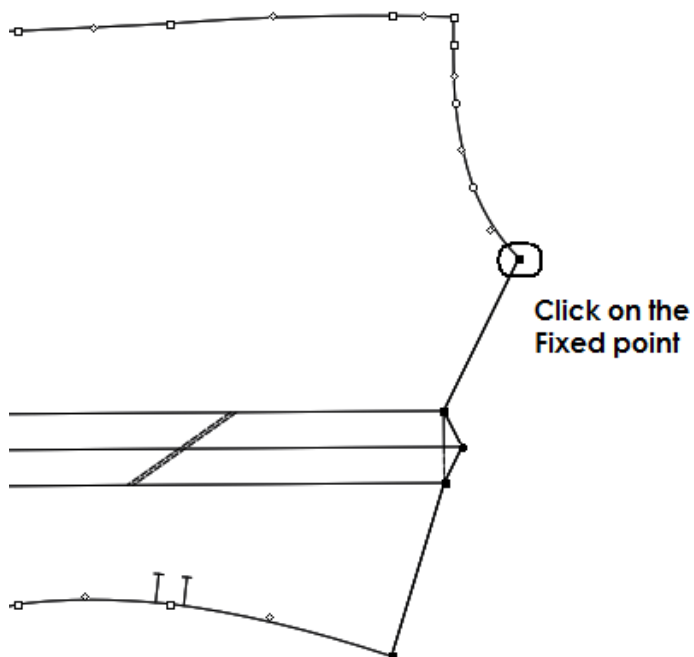
3 The Pleat is closed and may change the shape as follows.
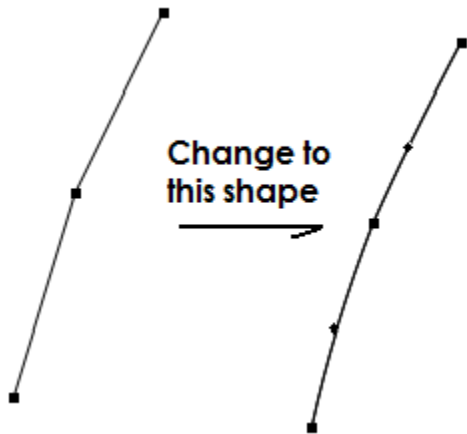
Change to
this shape

4 After modified, please right click on mouse to validate. You can see the difference if the pieces added with Template.
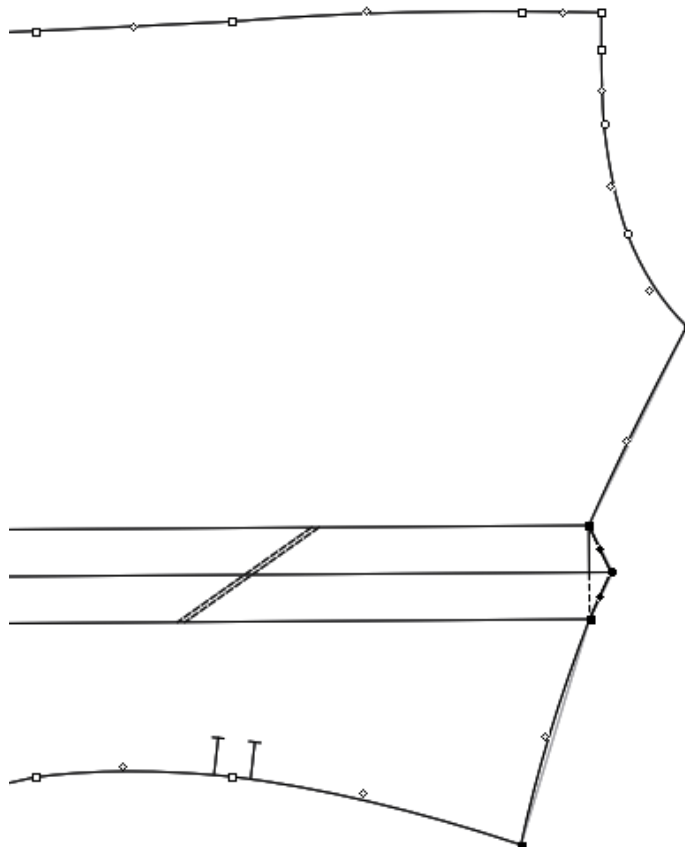
Join/Split Shapes

The *Join/Split Shapes* tool allows you to join two different shapes. You can attach and adjust a secondary shape to a primary shape. And it allows you to split one piece into two split pieces (with the internal points and lines) from a created style line.

How to JOIN Shapes:

1 Select two segments need to join together

2 Select *Join/Split Shapes*

3 Click the fixed point of the first segment or segment path (this shape remains in position).

4 Click the corresponding fixed point of the second segment or segment path (this shape moves to fuse to the first one)
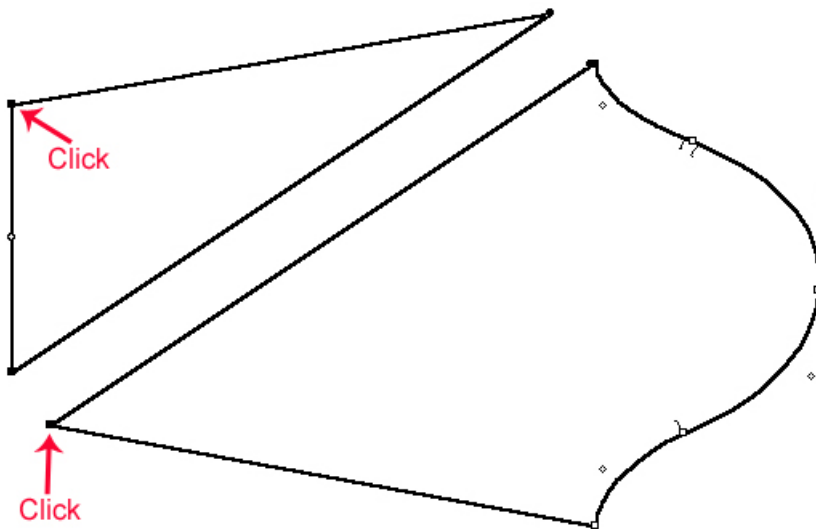
The secondary shape gets adjusted to the primary shape.
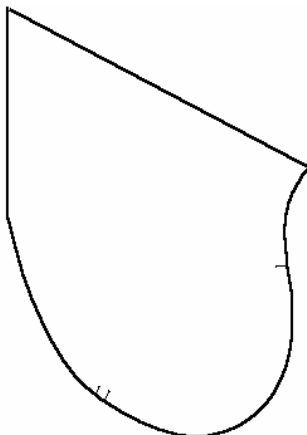
To save the style line as an internal line, use the **Shift** key (Windows, Macintosh and Linux) while doing the steps 3 and 4.
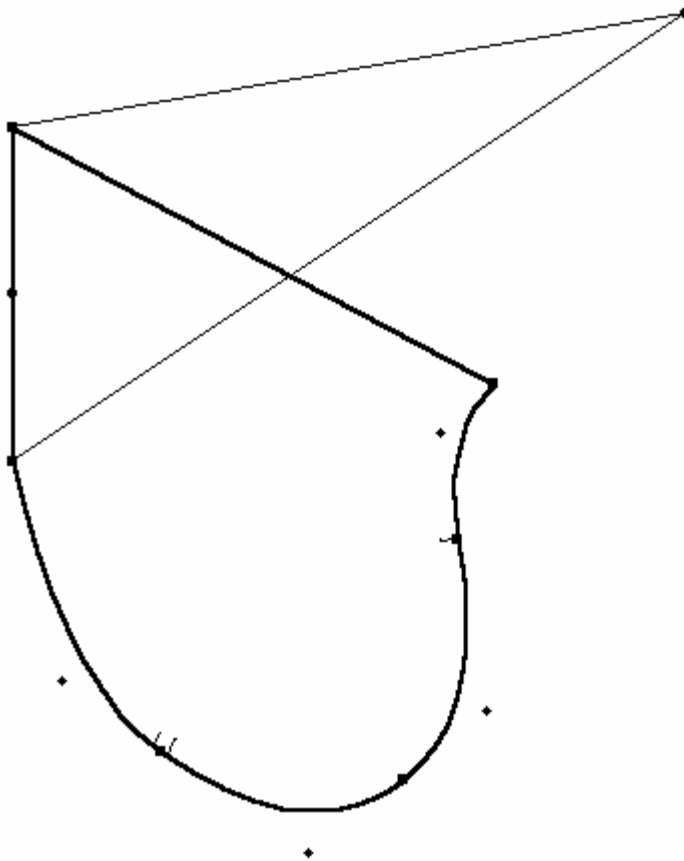
How to SPLIT a Shape:

1 Select the style line and all the segments that are on one side of the shape need to be split. (It does not matter which side you choose).

2 Select *Join/Split Shapes*

3 Click on the style line.

Click
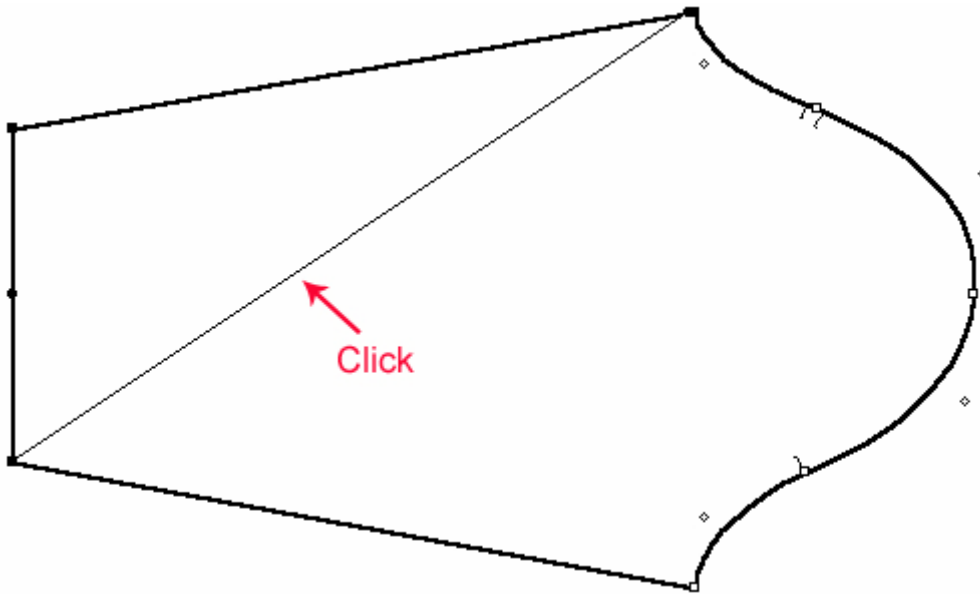
4 The piece splits to two pieces.
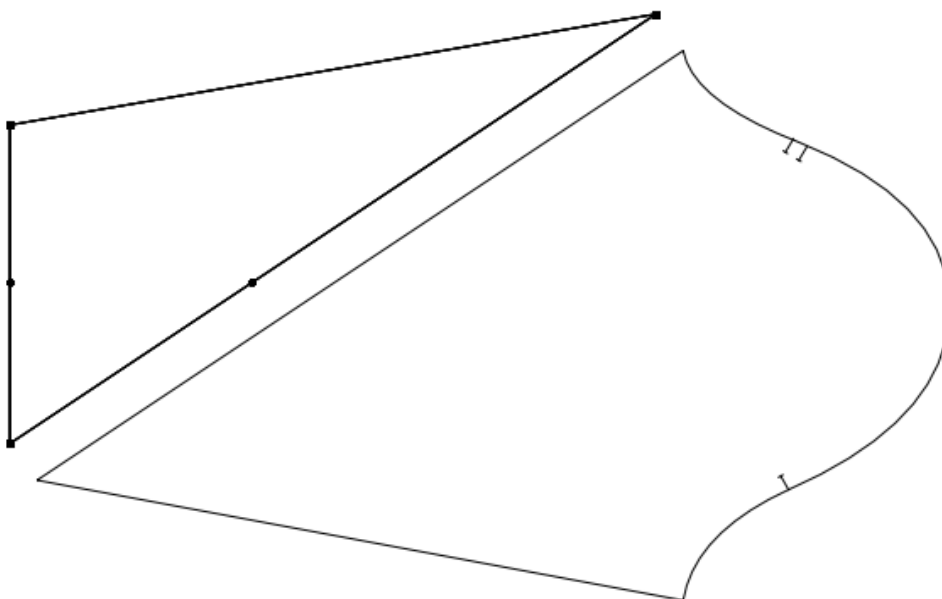
Mirror

The *Mirror* tool allows you to mirror a shape or create a reflection of the shape and its internal information at a defined width.

To mirror the piece:

1 Select the axis of reflexion of the piece you wish to reflect.

2 Select the *Mirror* tool.

3 Click the selected segment.

Click

▼
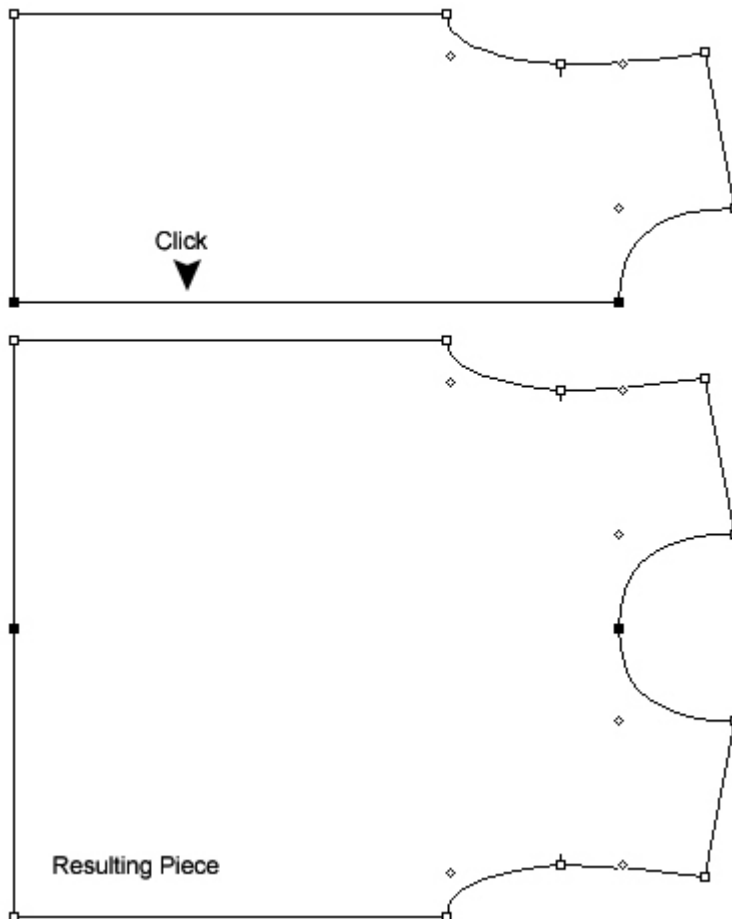
Resulting Piece

Note: If your application supports the intelligent mirror (*Pattern Professional or Pattern Enterprise*), make sure that the resulting piece is a polygon, otherwise the mirror tool does not work. Refer to the Clone chapter for additional information on how to use the intelligent mirror.

To mirror a piece and cut the reflection at a defined width:

This feature is very useful to create cross-over or facing. It creates
a mirror image on the reflection line but cut it at a specific value.

1 Select the axis of reflection of the piece you wish to reflect.

2 Select the *Mirror* tool.

3 Hold down the **Alt** key (Windows) or the **Option** key (Macintosh) or
   Alt + Windows keys (Linux).

Windows keys   Alt
Shift
Ctrl | Alt

Macintosh keys   Option
Shift
Ctrl

Linux keys   Windows + Alt
Shift
Ctrl | Alt

Click
with Alt (Windows)
with Command (Macintosh)

Mirror

Cut Reflection at: 5   OK

☐ Same Value for All Sizes   Cancel
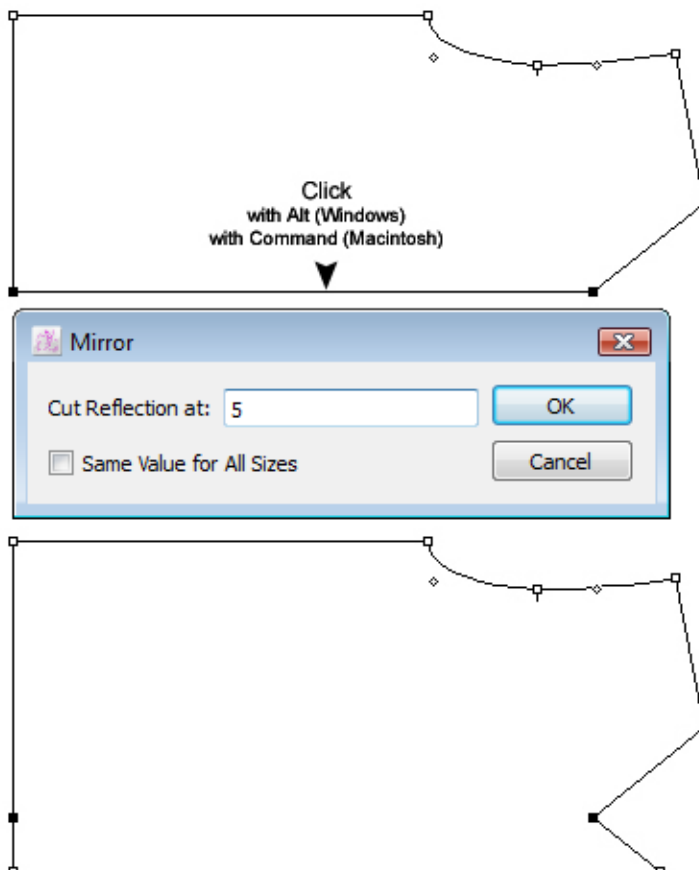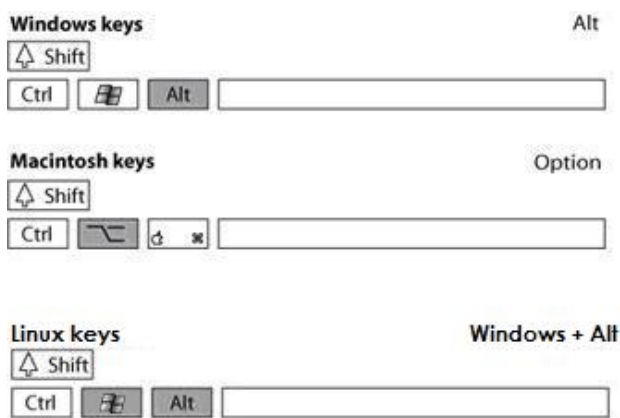
4 The *Mirror* dialog box opens. Enter the value the reflection must be cut at. You can request the reflection to keep the same width for all sizes by checking the option box. Otherwise, the grading at the cut remains the same as the original side.

5 Click the *OK* button to execute the function.

Cut Reflexion examples:
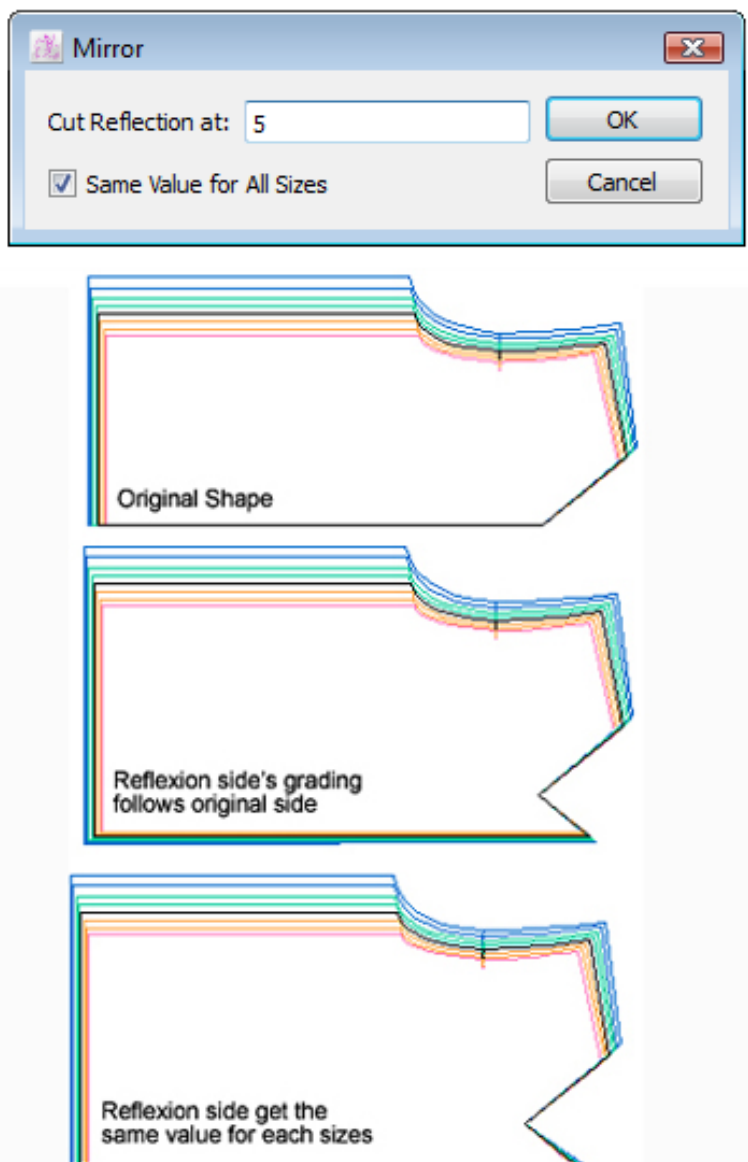
Note: If you use *Pattern Professional or Pattern Enterprise* with Clone option, please refer to Intelligent Mirror in the Clone chapter in this manual.

Pleat

The *Pleat* tool allows you to develop a pleat on a shape using existing points.

To develop a pleat:

1 Activate the shape.

2 Select the *Pleat* tool.

3 Click the first reference point (A).

4 Click the second reference point (B).

5 Click the fixed part of the pattern piece.
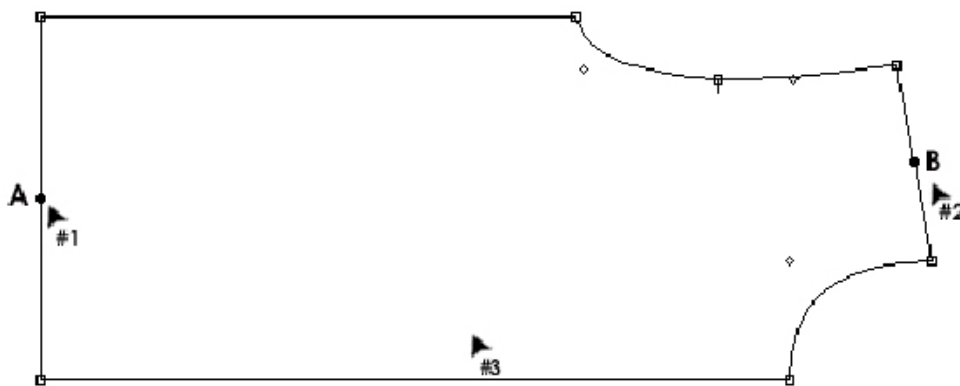
The *Pleat Characteristics* dialog box opens:
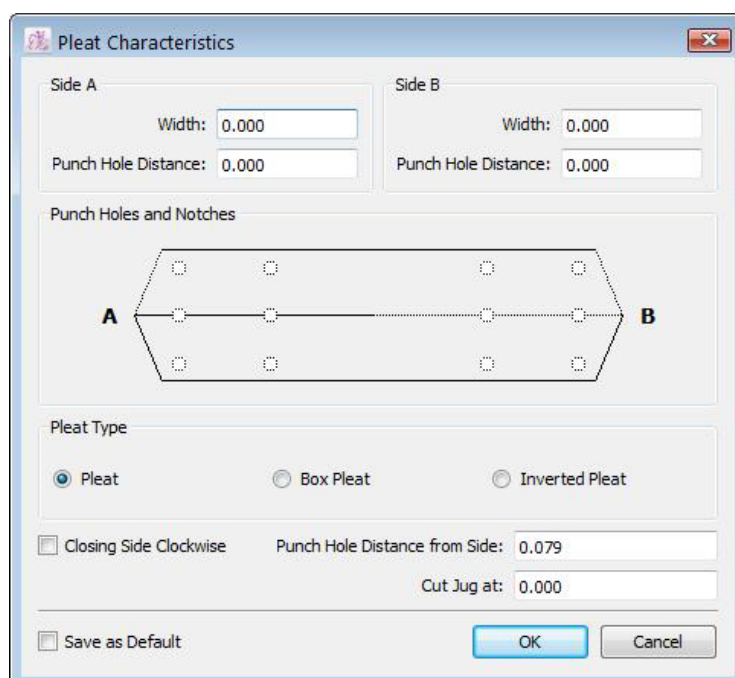
6 Enter the desired values.

7 Click the OK button to execute the function.

To select a Pleat: On the working area, click the central segment of the pleat to select all attached points

To modify a Pleat: Select the pleat and select *Item Info* from the *Treatment* menu and the *Pleat Characteristics* dialog box opens.

To remove a Pleat: Select the pleat and press **Backspace** (Windows / Linux) or **Delete** (Macintosh).
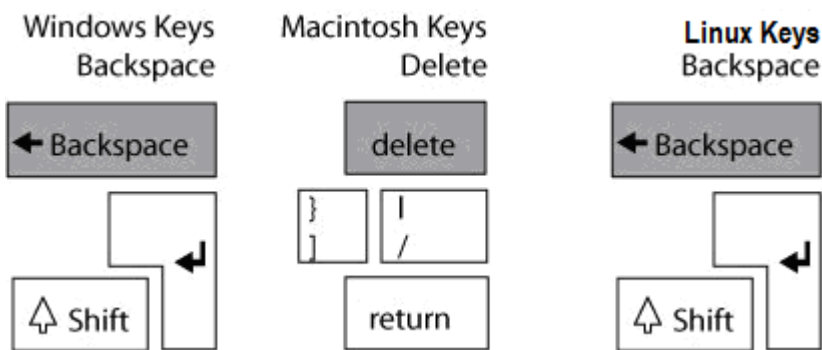
Piece with completed pleat:
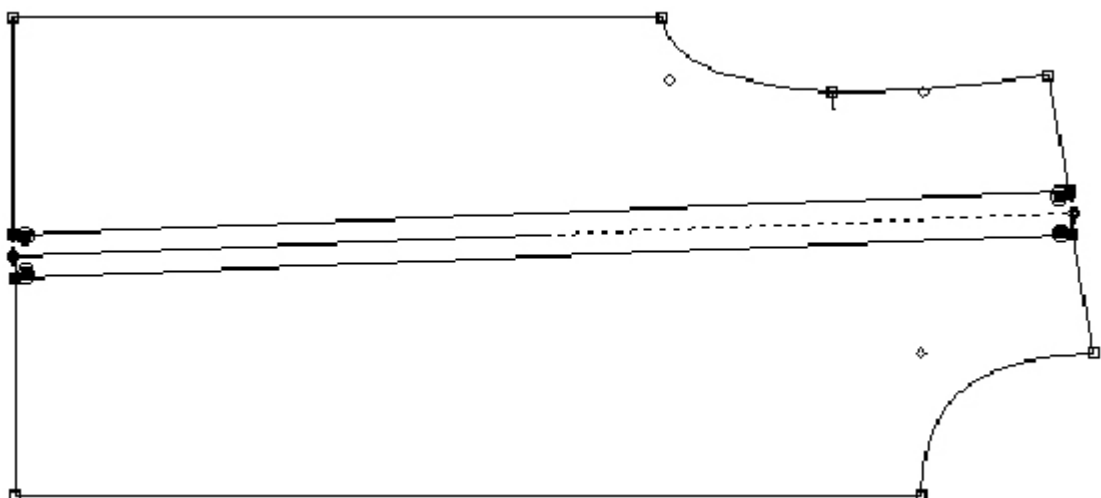
You can add notches and punch holes to each side of the pleat (side A and side B). Click the small circles representing the location of notches and the punch holes in the pleat.

Options in the *Pleat Characteristics* dialog box:

Width: To enter the width of the pleat. For a radial pleat, enter measurements in both A and B.

Punch Hole Distance: It assigns the location of the punches from the edge of a the piece. You can assign different values in A and B.

Pleat Type: To choose the pleat type to develop; Pleat, Box Pleat and Inverted Pleat.

Closing Side Clockwise: It closes the pleat clockwise if checked or counter- clockwise if not checked.

Punch Hole Distance from Side: It sets a distance from the Punch Hole starting from the side of the pleat going inward.

Cut Jug at: It assigns a specific measurement at which to cut the extremity of the head of the pleat.

Remove Characteristics: It erases the characteristics of a pleat and keeps its contour and references (punch holes and notches).

Save as Default: It keeps the current settings of a pleat and reapplies these settings to all future pleats.

The *Pleat* tool allows you to restore a pleat after the digitization process.

To add pleat characteristics:

1 Draw a segment to define the center of the pleat.

2 Select the segment and the surrounding points that form the pleat.

3 Select the *Pleat* tool.

4 Hold down the **Alt** key (Windows), the **Option** key (Macintosh) or

Alt +Windows keys (Linux).

Windows keys   Alt

Shift

Ctrl   ⊞   Alt

Macintosh keys   Option

Shift

Ctrl   ⌥   ⌘ ✖

Linux keys   Windows + Alt

Shift

Ctrl   ⊞   Alt

5 Click the central segment of the pleat position that you added at step
1.The *Pleat Characteristics* dialog box appears with the width already
filled in. You can add any other necessary information in the dialog box.

6 Click the *OK* button to execute the function.

Example of adding a pleat characteristic:

click + Alt

Resulting piece
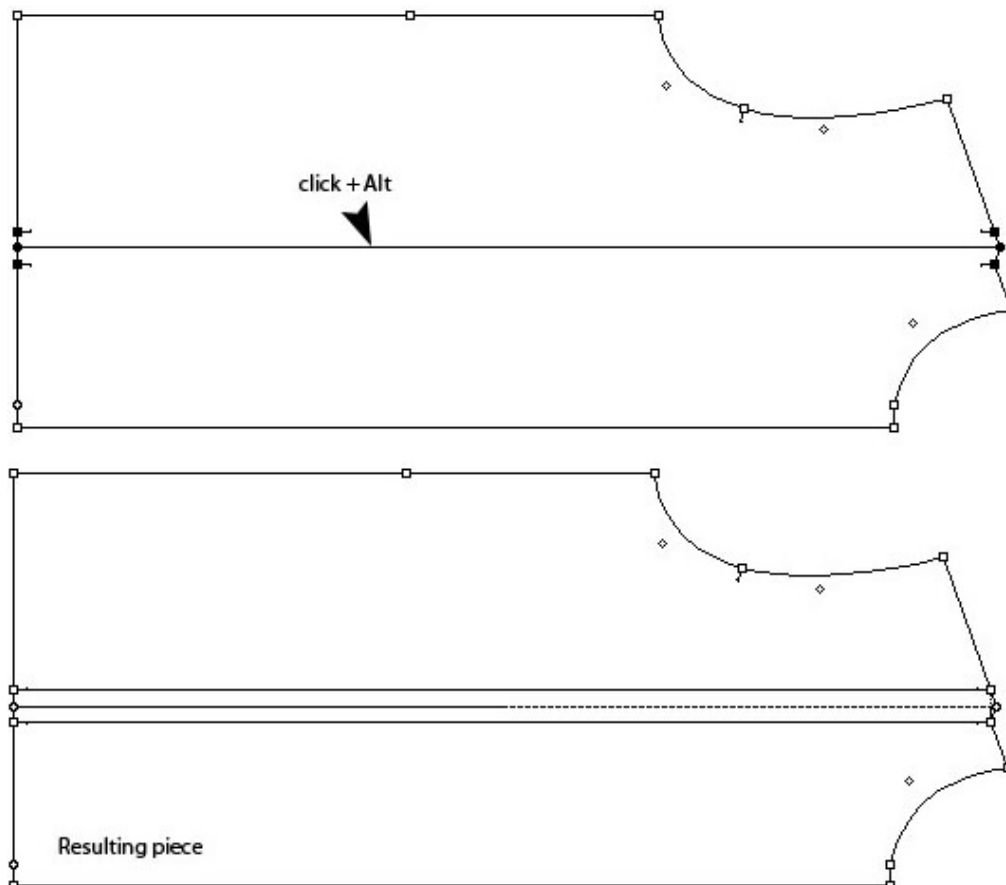
To Develop Multiple Pleats

The Pleat tool allows you to develop multiple pleats in one step.

To develop multiple pleats:

1 Activate existing points on the shape

2 Select the Pleat tool

3 Click the first reference point (A)

4 Click the second reference point (B)

Point B   Point A
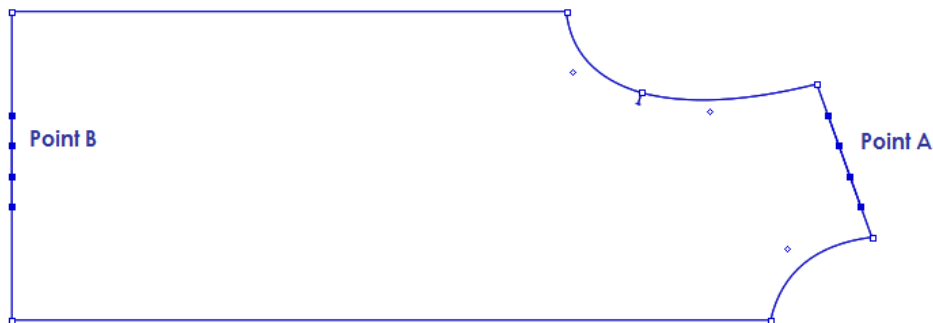
5 Click the fixed part of the pattern piece

The Pleat Characteristics dialog box opens:
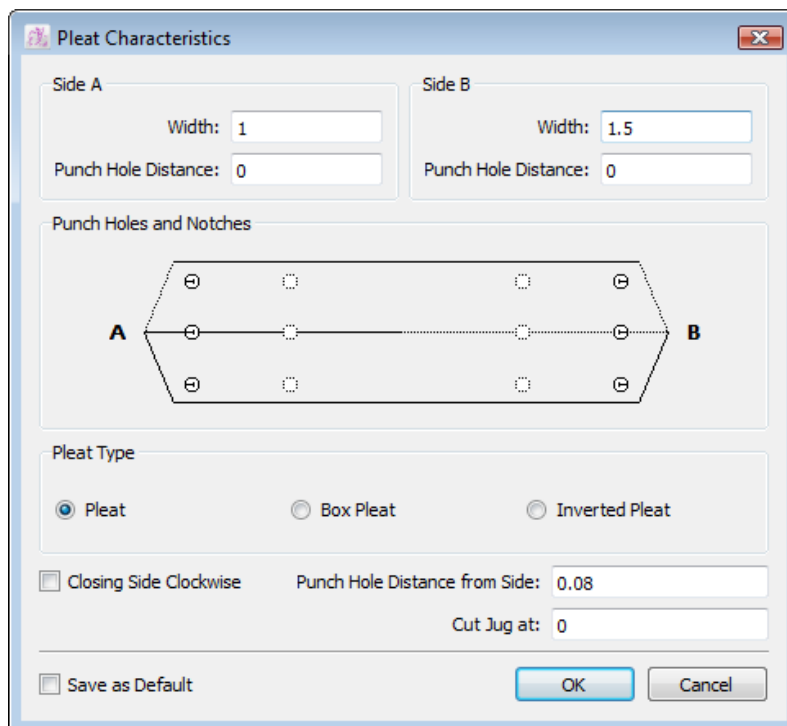
6 Enter the desired values. Click the OK button to execute the function.
Each pleat has a symbol for folding direction.
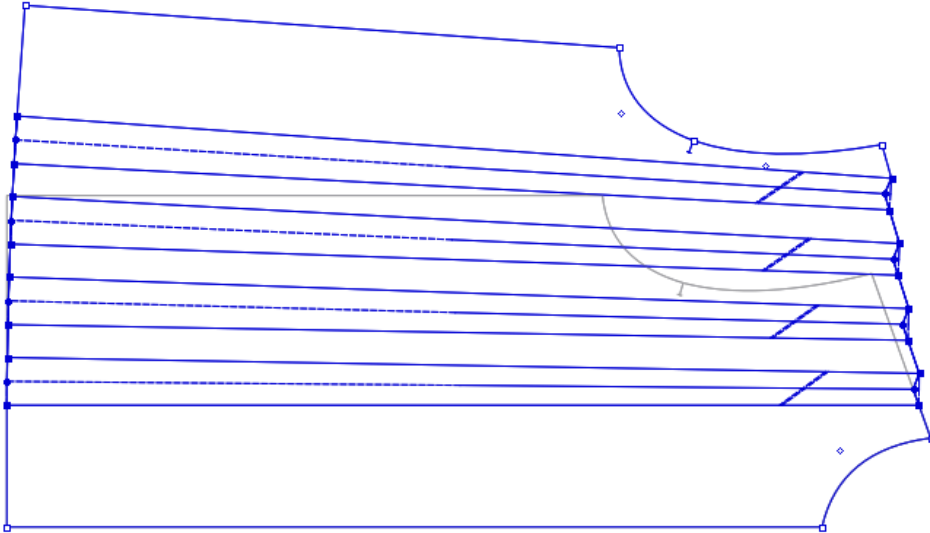
New Pleat Characteristics

There are 2 items in Pleat Type for you to choose:

Box Pleat
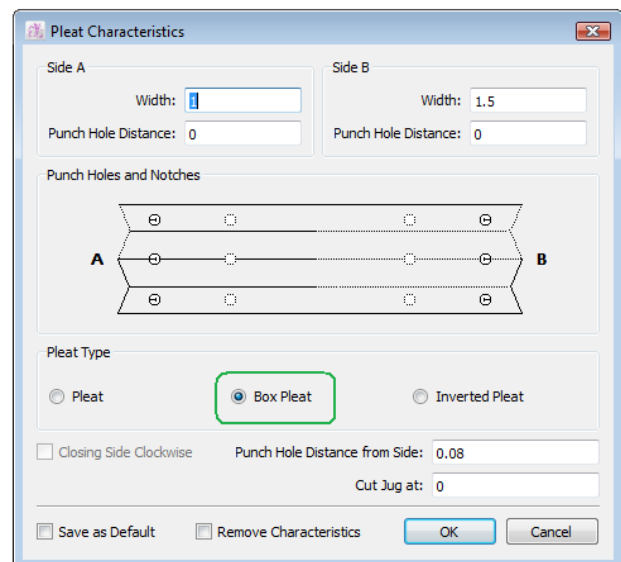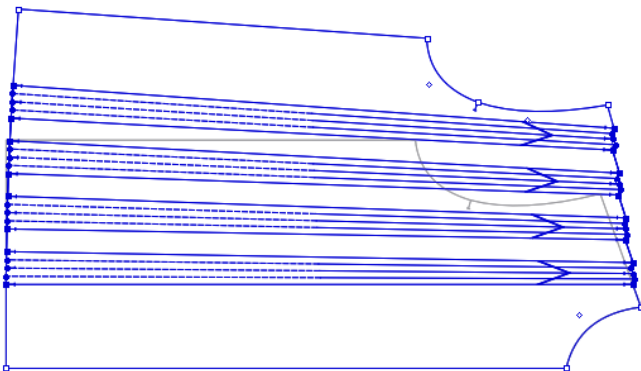
Inverted Pleat
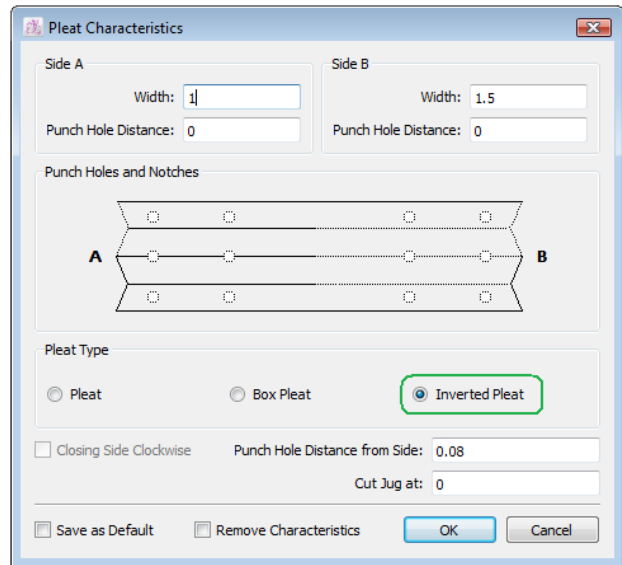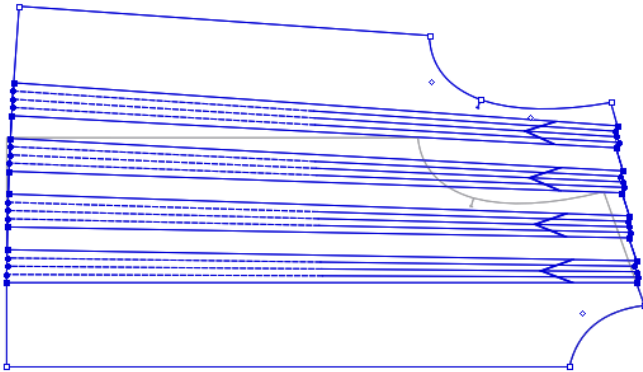
Support 0 Value on Pleat A

It supports the value in 0 of the Width for Side A (Pleat A).
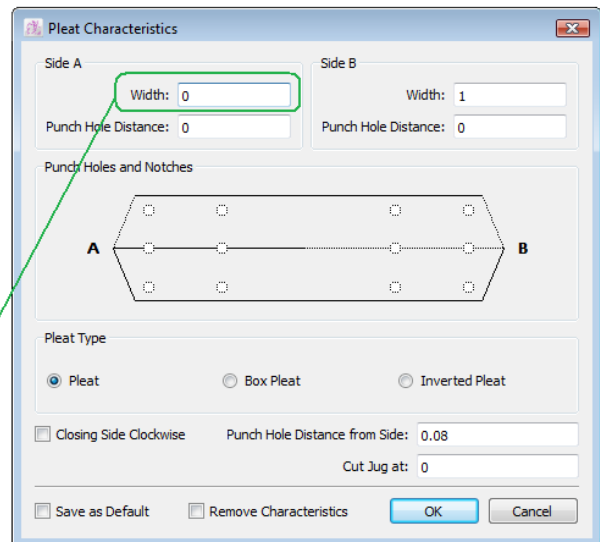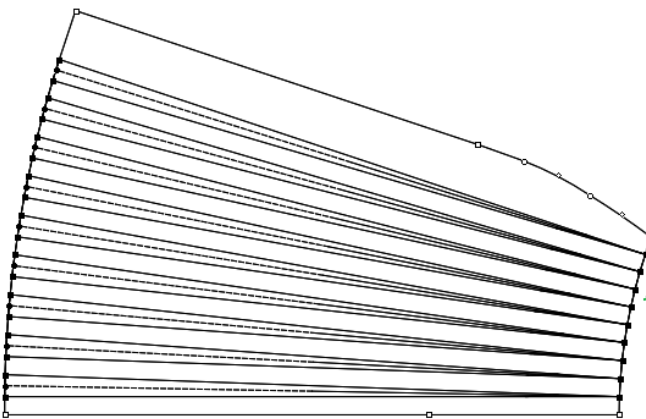
Dart

The *Dart* tool allows you to create a dart within a shape from its contour. The Dart is opened and the shape rotated on a pivot point located on the contour.

To develop a dart:

1 Draw a segment attached to the contour of the piece where you want to set your dart.

2 Select the pivot point (#1) and the segment (#2).

3 Select the *Dart* tool.

4 Click the pivot point (#1).

5 Click the segment (#2) indicating the position of the dart.

6 Click the part of the piece (#3) that remains fixed.

7 The *Dart Characteristics* dialog box opens. Enter the dart parameters in the dialog box (detailed on next page).

8 Click the *OK* button to execute the function.

Example:
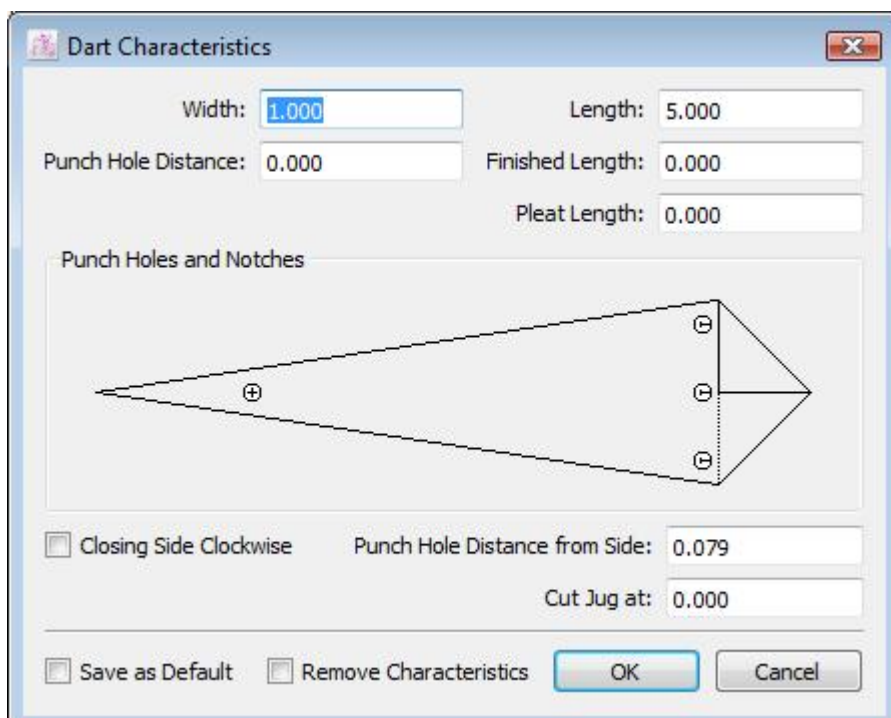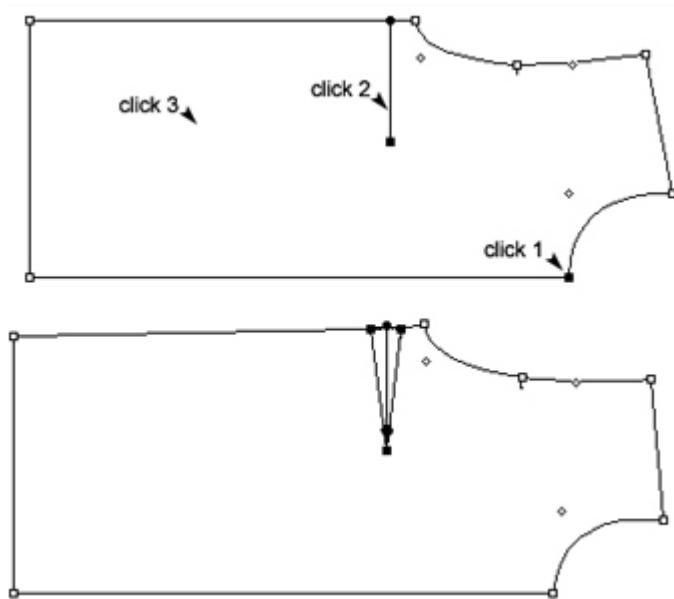
You can add punch holes and notches to each section of the dart.
Click the little circles, representing punch hole and notch locations
in the dart.

To Select a Dart: Select the dart by clicking its center segment.
This selects the whole dart.

To Modify a Dart: Select the dart and select *Item Info...* in the *Treatment*
menu to reopen the *Dart Characteristics* dialog box.

To Delete a Dart: Select the dart and press **Backspace** (Windows / Linux)
or **Delete** (Macintosh). This removes the attributes of the dart and keeps
the opening of the dart.
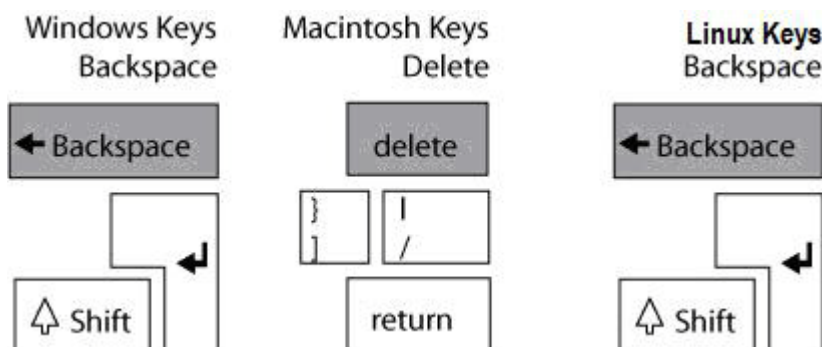
The *Dart Characteristics* dialog box offers the following options:

Cut Jug at: It assigns a specific length to the dart head.

Closing Side Clockwise: If checked, this option folds the dart clockwise. If unchecked, this option folds the dart counter-clockwise.

Finished Length: It calculates the position of the punch hole from the dart head to create an open-end dart.

Pleat Length: It applies the dart width value at a distance calculated from the dart head. This results in a dart pleat.

Punch Hole Distance: It is the distance of the punch hole from the dart pivot point.

Punch Hole Distance From Side: It customizes the distance of the punch hole from the sides of the dart.

Save as Default: It keeps the settings of the dart (finished length, punch hole, etc.) and reapply these settings to all future darts.

Remove Characteristics: This option is only available when you edit a dart already created. Check it to remove the characteristics you set to your piece.

To Select a Dart: Select the dart by clicking its center segment. This selects the full dart.

Without Dart Characteristics:
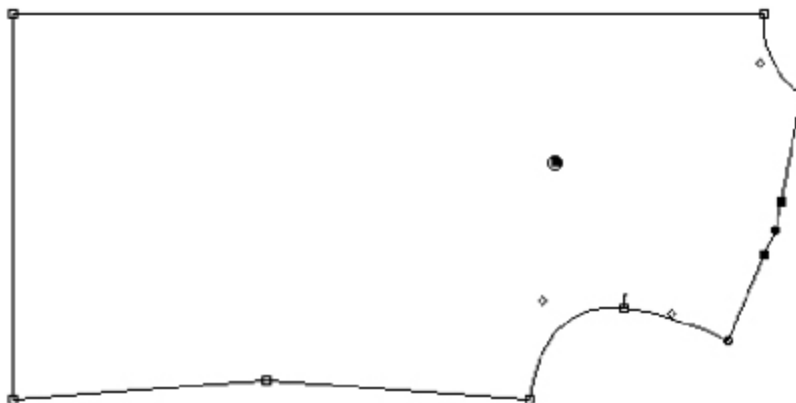
With Dart Characteristics:
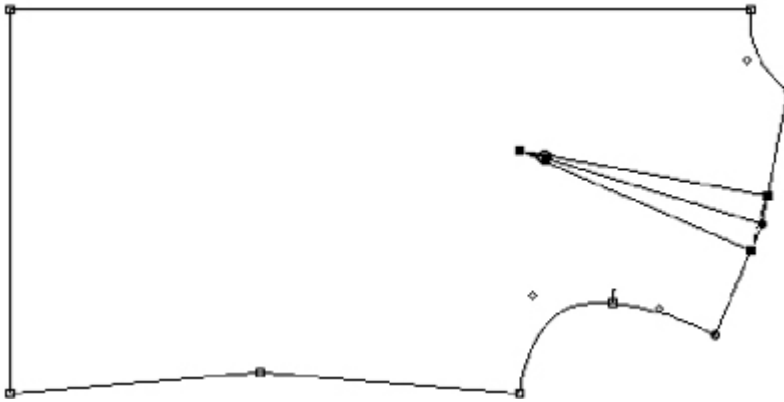
Deleted Dart:
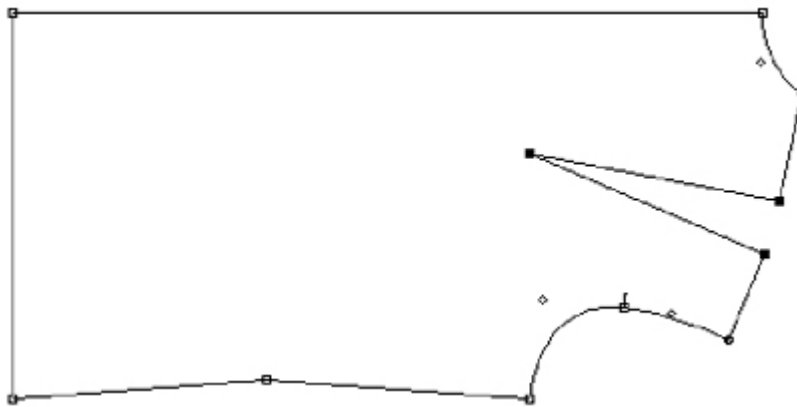
The *Dart* tool allows you to add an Internal Dart to a segment.

To develop an internal dart:

1 Activate the piece that you want to add a dart in.

2 Draw a segment of the desired internal dart length inside the activated piece.

3 Select the *Dart* tool.

4 Click one extremity of the segment.

5 The *Internal Dart Characteristics* dialog box opens. Enter the internal dart parameters in the dialog box.

6 Click the *OK* button to execute the function.

Example of an Internal Dart:
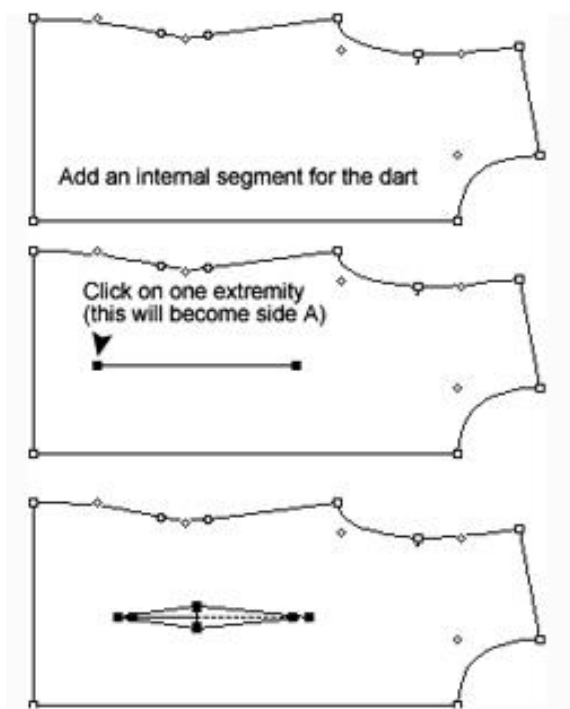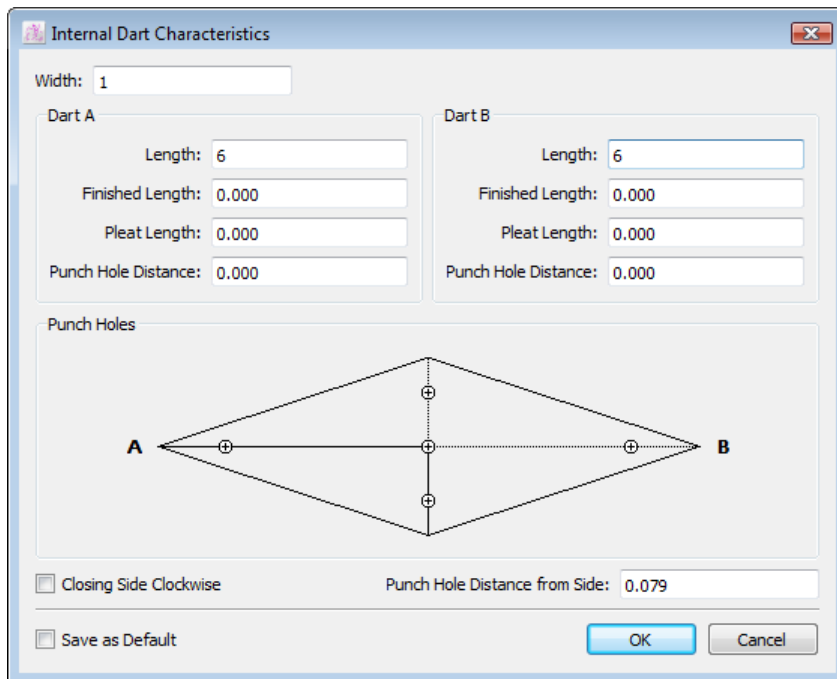
You can add punch holes and notches to each section of the internal dart (Dart A and Dart B). Click the little circles, representing punch hole and notch locations, located on the shape of the dart in the center of the *Internal Dart Characteristics* dialog box.

The *Internal Dart Characteristics* dialog box offers the following options:

Width: Width of the internal dart.

Closing Side Clockwise: If checked, this option folds the internal dart clockwise. If unchecked, this option will fold the internal dart counter-clockwise.

Length: Length of the internal dart.

Finished Length: It calculates the position of the punch hole from the top of the internal dart to create an open dart on one or both sides.
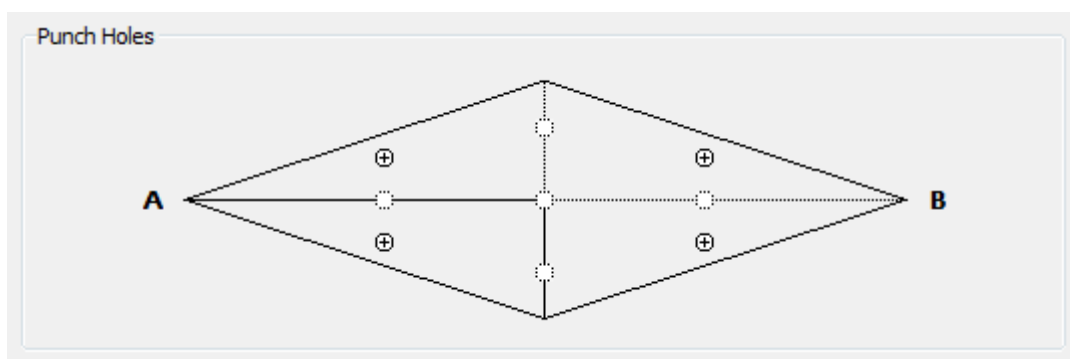
Pleat Length: To apply the internal dart width value to a distance calculated from the center of the dart. This results in a pleated dart. It can be done on one or both sides.
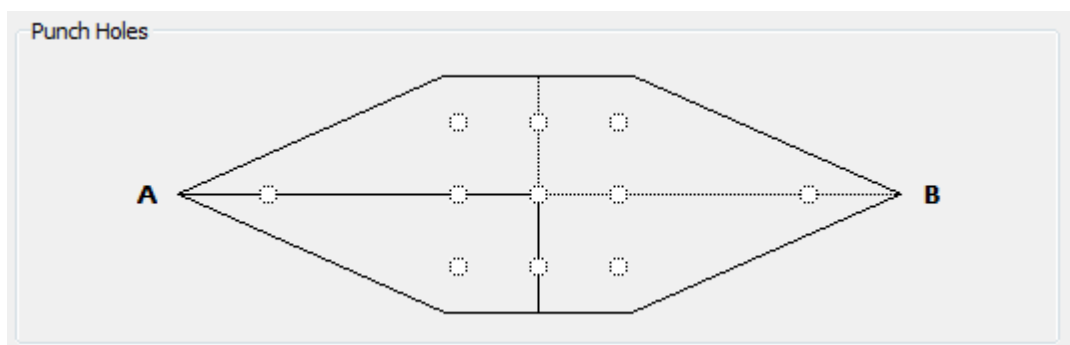
Punch Hole Distance: To provide the distance of the punch hole from the internal dart pivot point.

Punch Hole Distance from Side: To customize the distance of the punch hole from the sides of the internal dart.

Save as Default: To keep the current settings of the internal dart (finished length, punch hole distance, etc.) as default and reapply these settings to all future internal darts.

Adding a dart into an opening

The *Dart* tool can assign dart characteristics into an opening after digitizing or in pattern development.

To Add Dart Characteristics:

1 Activate the shape where you want to add the dart into an opening.

2 Select the *Dart* tool.

3 Hold down the **Alt** (Windows), the **Option** (Macintosh) key or **Alt +Windows** keys (Linux) and click the dart pivot point.

Windows keys	Alt

Macintosh keys	Option

Linux keys	Windows + Alt

4 The *Dart Characteristics* dialog box opens. The width and length of the dart corresponds to the size of the opening. Modify the values and characteristics as needed.

5 Click the *OK* button to execute the function.

Example of adding a dart into an opening:

Dart Characteristics

Width: 1.000	Length: 5.000
Punch Hole Distance: 0.000	Finished Length: 0.000
	Pleat Length: 0.000

Punch Holes and Notches

Closing Side Clockwise

Punch Hole Distance from Side: 0.079

Cut Jug at: 0.000

Save as Default   OK   Cancel

click ►
with ALT (Windows)
with Command (Macintosh)
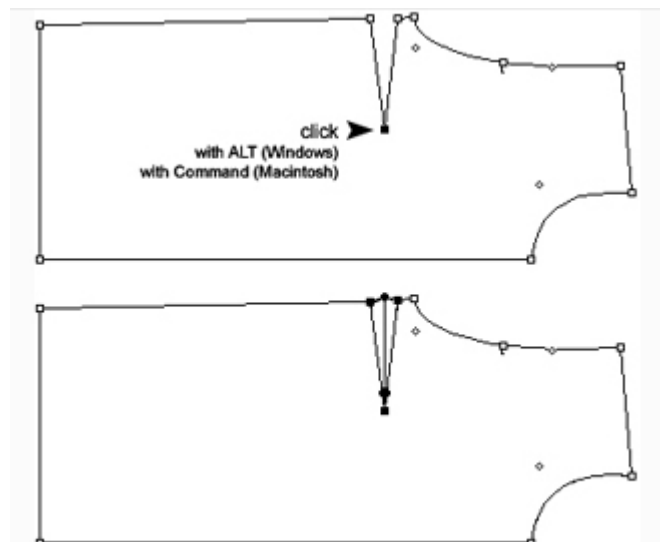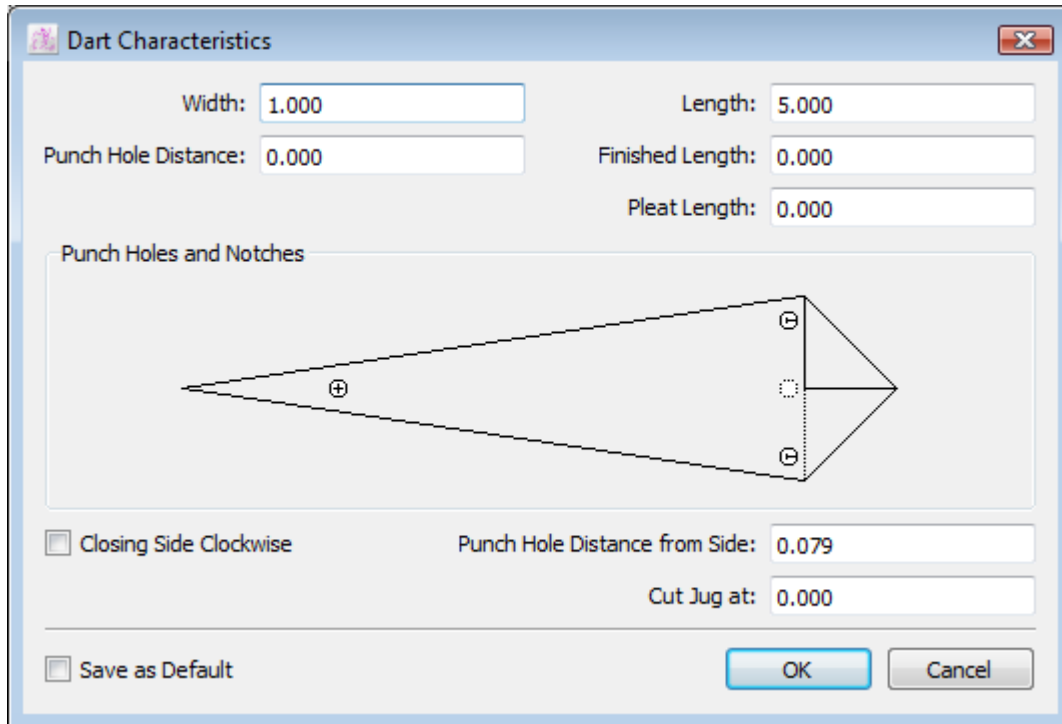
Create Multiple Darts & Define Dart Orientation

The Dart tool allows you to create multiple Darts within a shape from its contour.

To create multiple darts:

1 Draw segments attached to the contour where the darts are located.
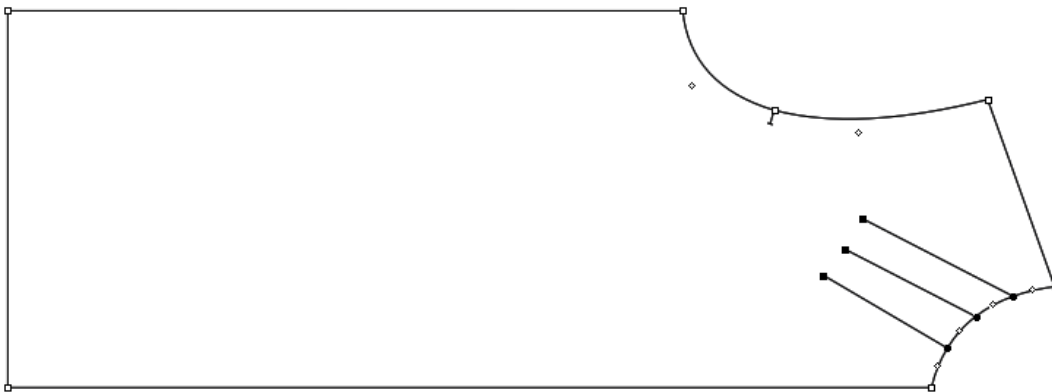
2 Select the Dart tool

3 Click the pivot point (#1)

4 Click one of the segments (#2) indicating the position of the dart

5 Click the part of the piece (#3) that remains fixed
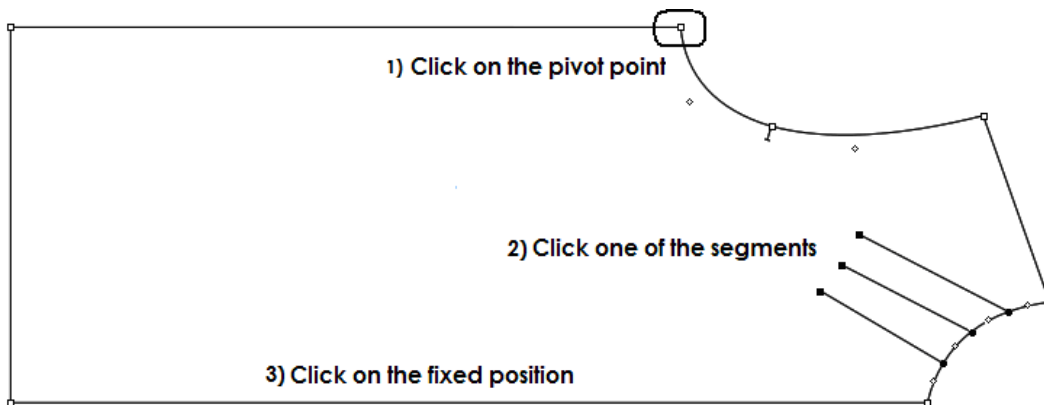
1) Click on the pivot point

2) Click one of the segments

3) Click on the fixed position

6 The Dart Characteristics dialog box opens. Enter the dart parameters in the dialog box.
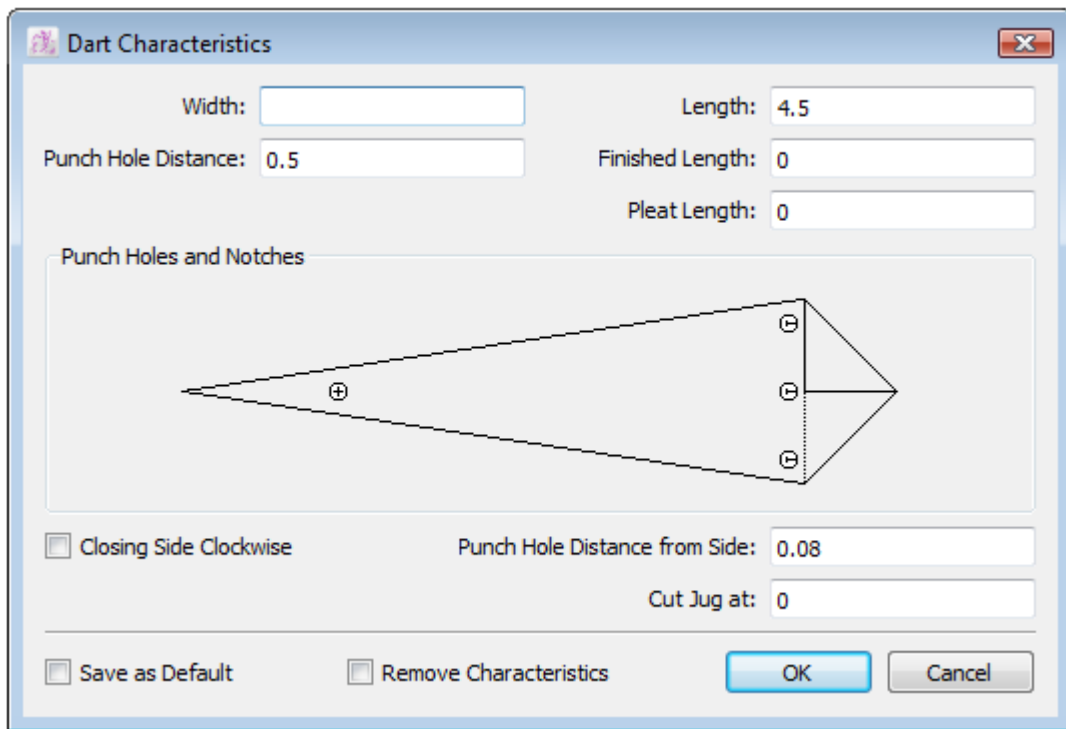
7 Click the OK button to execute the function
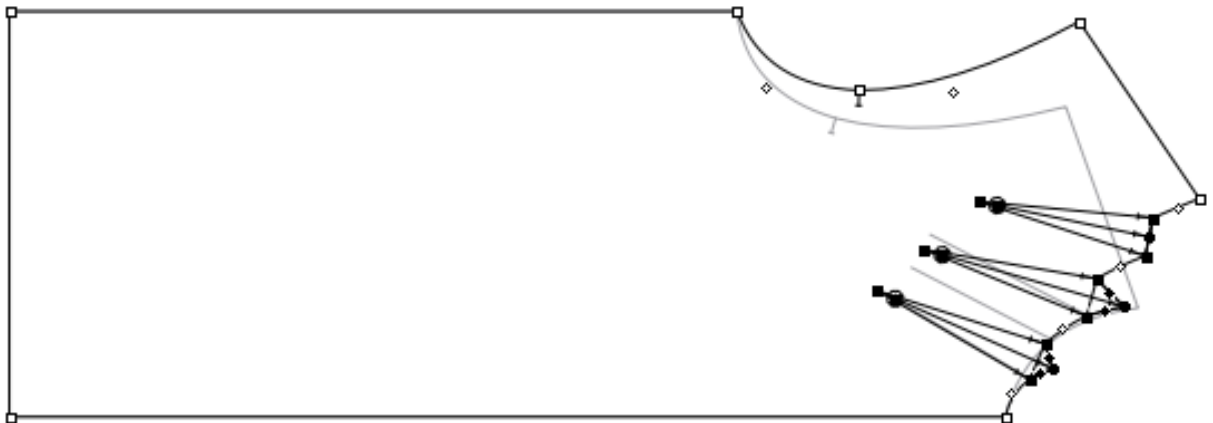
Dart Orientation at the Center

To do so:

1 Draw a segment attached to the contour where the dart is located.
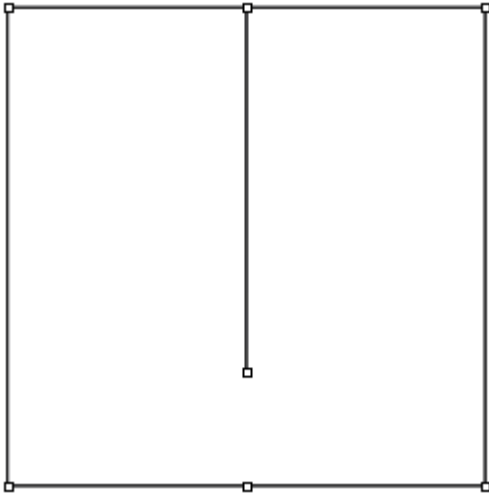
2 Select the Dart tool

3 Click the pivot point (#1)

4 Click on the segment (#2) indicating the position of the dart

5 Click the segment again (#3) that remains fixed
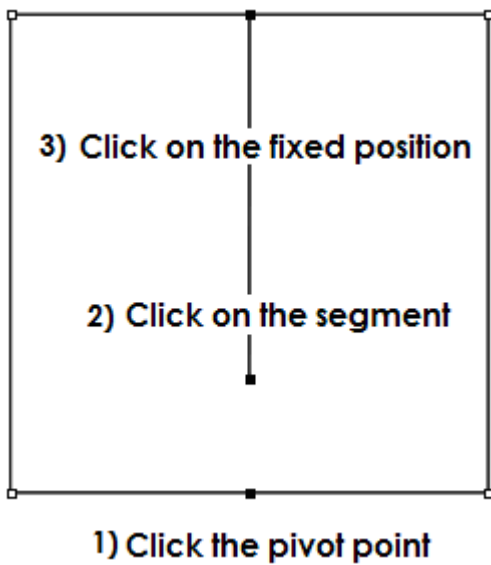
3) Click on the fixed position

2) Click on the segment

1) Click the pivot point

6 The Dart Characteristics dialog box opens. Enter the dart parameters in the dialog box.
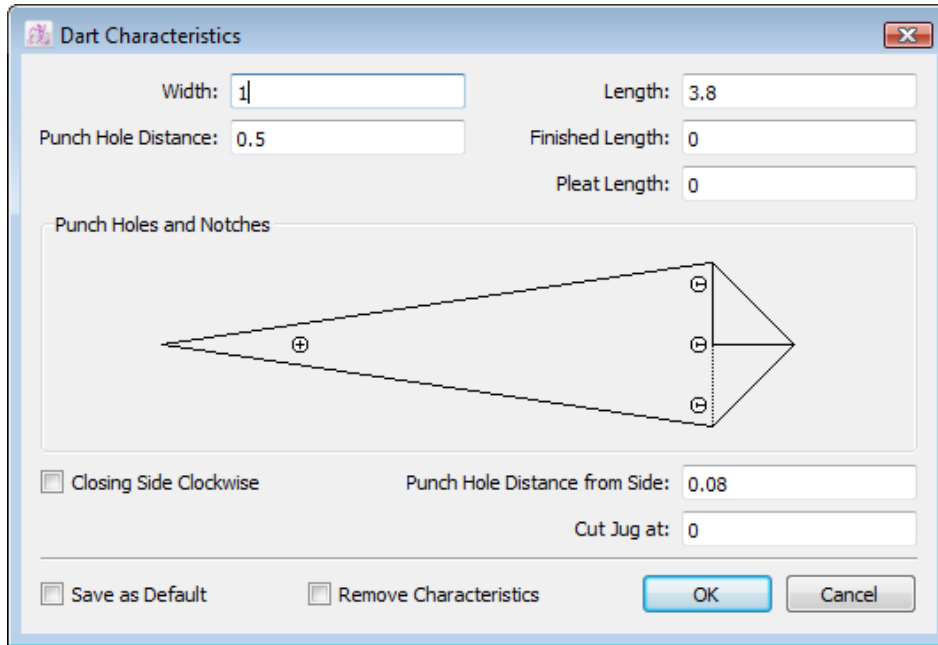
7 Click the OK button to execute the function.
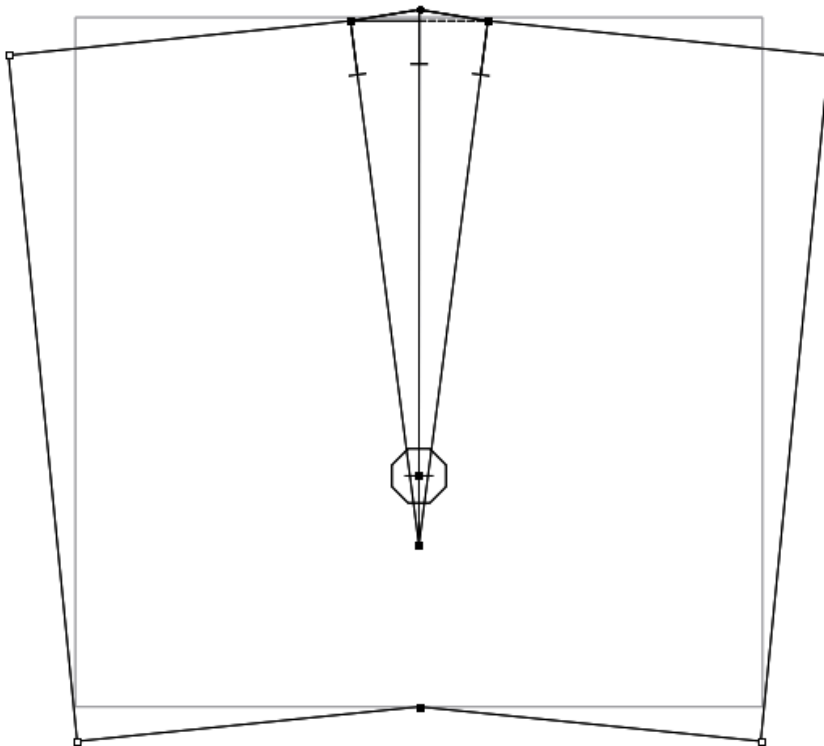
Enhance Dart Characteristics

The Dart tool can assign dart characteristics into an internal line after digitizing or in pattern development.

To do so:

1 Activate the internal line where you want to add the dart characteristics.
2 Select the *Dart* tool.
3 Click on the tip of the internal line.

Click on the tip of the Internal Line.
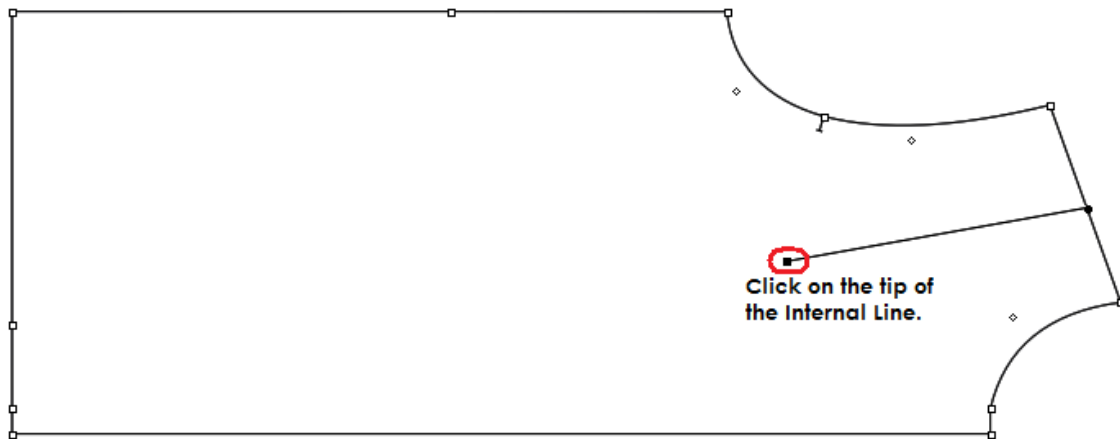
4 The External Dart Characteristics dialog box opens. The length of the dart corresponds to the length of the internal line. Put the values and characteristics as needed.
5 Click the *OK* button to execute the function.

Example of adding a dart width with 2 difference values into an Internal Line:
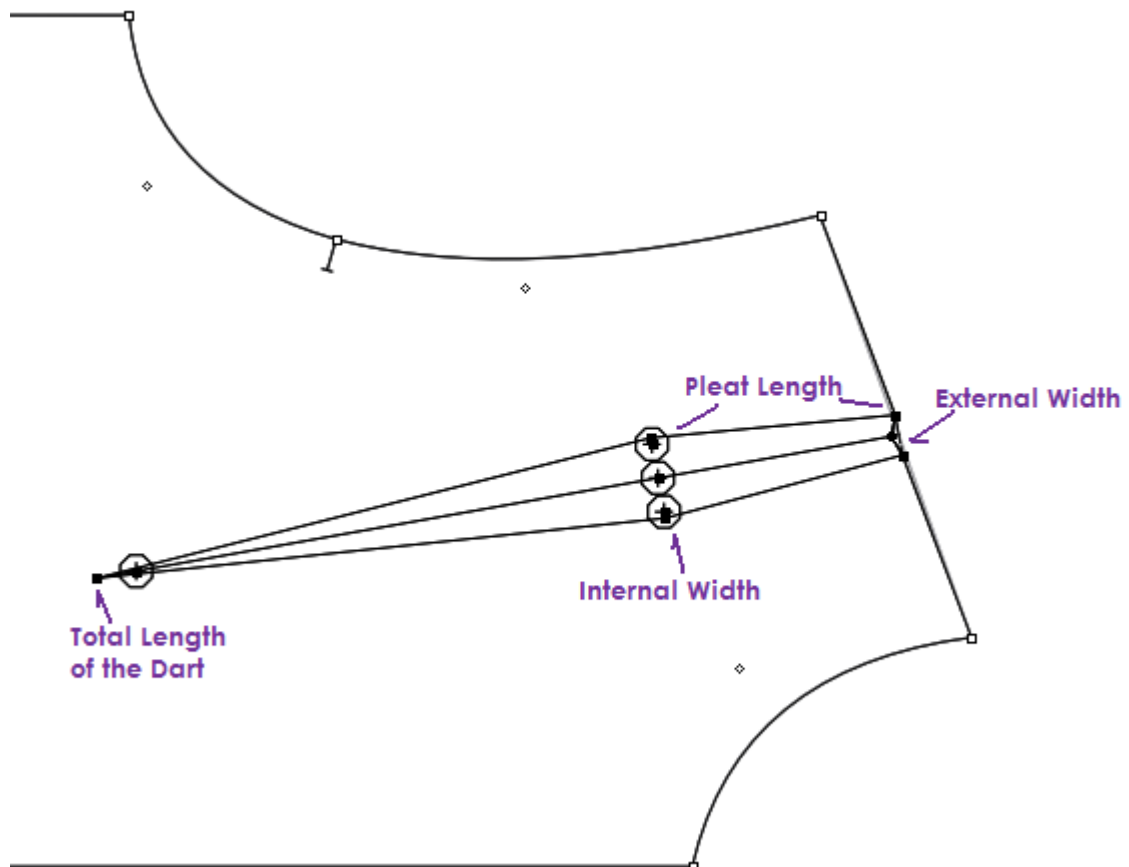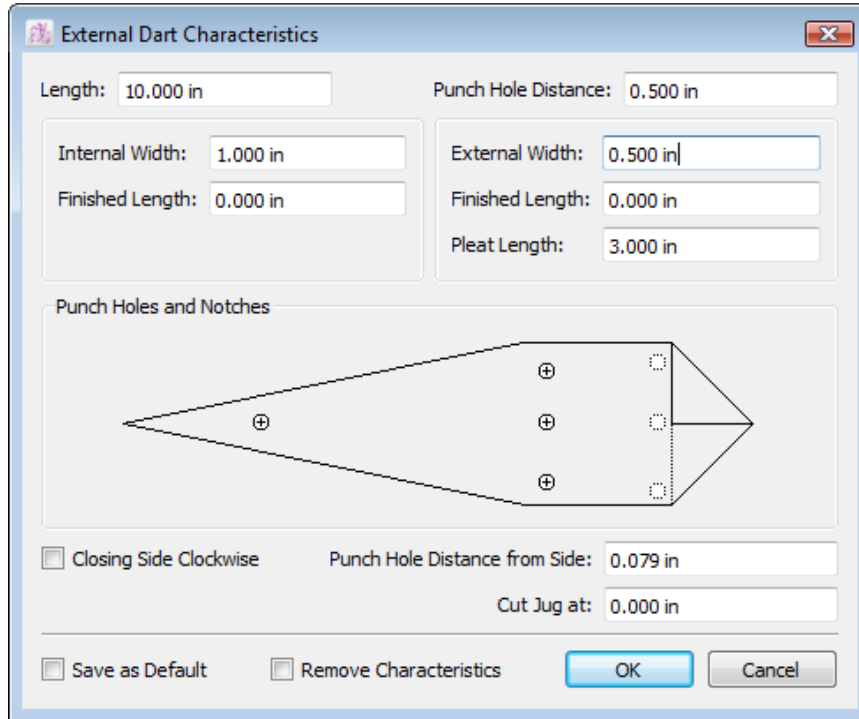
Example of adding a dart into an Internal Line:

External Dart Characteristics

Length: 6.000 in   Punch Hole Distance: 0.5 in

Internal Width: 0.000 in   External Width: 0.75 in
Finished Length: 0.000 in   Finished Length: 0.000 in
                                   Pleat Length: 0.000 in

Punch Holes and Notches

☐ Closing Side Clockwise   Punch Hole Distance from Side: 0.079 in
                                          Cut Jug at: 0.000 in

☐ Save as Default   OK   Cancel

External Width
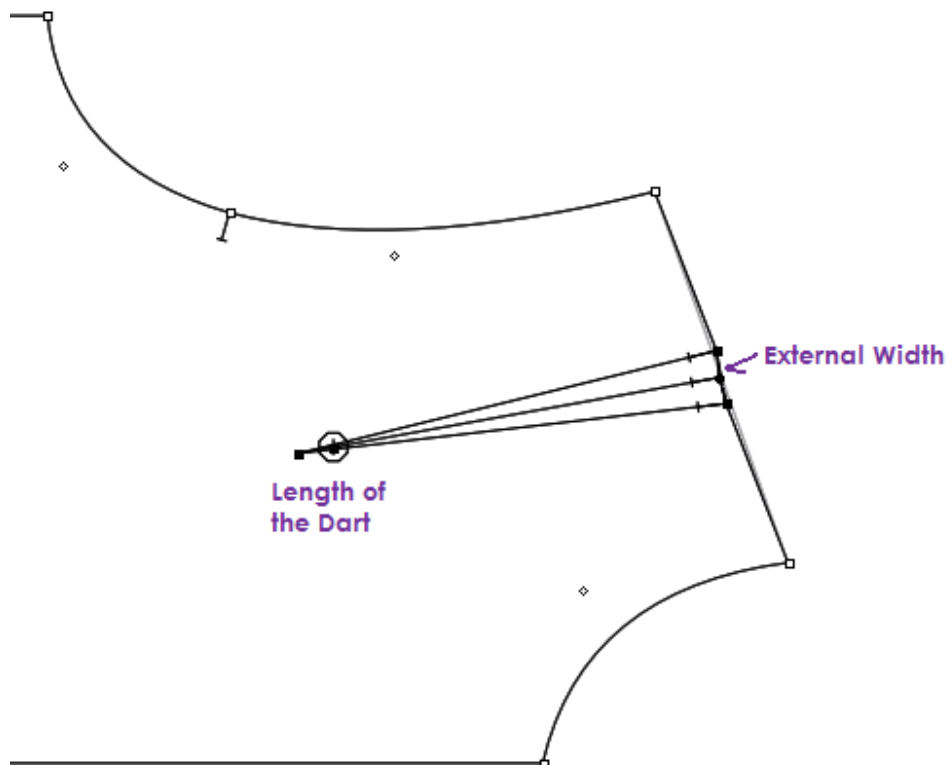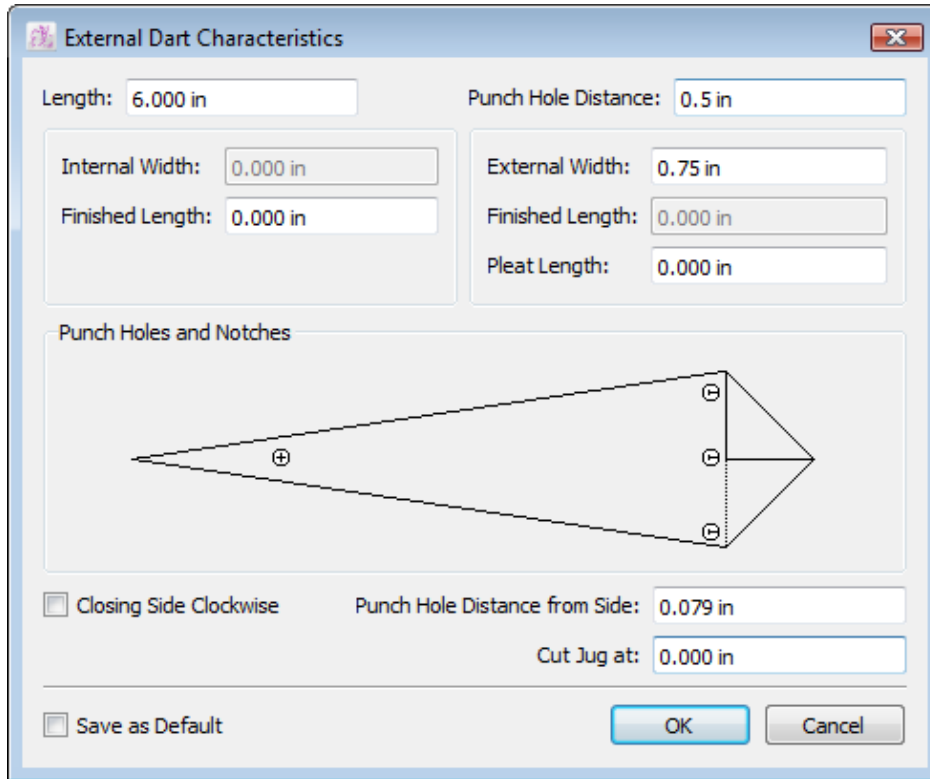
Length of the Dart

The External Dart Characteristics dialog box offers the following options:

Length: Length of the internal dart.

Punch Hole Distance: It is the distance of the punch hole from the dart pivot point.

Internal Width: Width of the internal dart.

Finished Length: It calculates the position of the punch hole at the center (Internal Width of the Dart) to the Dart tip.

External Width: Width of the external dart (locate at the contour line).

Finished Length: It calculates the position of the punch hole from the dart head to the center of the Internal Dart.

Pleat Length: It applies the dart width value at a distance calculated from the dart head to the center of the Internal Dart. This results in a dart pleat.

Closing Side Clockwise: If checked, this option folds the dart clockwise. If unchecked, this option folds the dart counter-clockwise.

Punch Hole Distance From Side: It customizes the distance of the punch hole from the sides of the dart.

Cut Jug at: It assigns a specific length to the dart head.

Save as Default: It keeps the settings of the dart (finished length, punch hole, etc.) and reapply these settings to all future darts.

Remove Characteristics: This option is only available when you edit a dart already created. Check it to remove the characteristics you set to your piece.

To Select a Dart: Select the dart by clicking its center segment. This selects the full dart.

To Modify a Dart: Select the dart and select *Item Info...* in the *Treatment* menu to reopen the External Dart Characteristics dialog box.

To Delete a Dart: Select the dart and press **Backspace** (Windows / Linux) or **Delete** (Macintosh). This removes the attributes of the dart and keeps the opening of the dart.

Dart Pivot

The *Dart Pivot* tool allows you to pivot a dart to a new location.

The *Dart Pivot* may be hidden under the *Dart Transfer* in the Toolbox. To activate the *Dart Pivot*, hold down the left mouse button (Windows/Linux) or the mouse button (Macintosh) on the *Dart Transfer* until the *Dart Pivot* appears. Move the mouse over the *Dart Pivot* and release the mouse button.

To pivot a dart:

1 Select the dart.

2 Select the point where you would like to move the dart.

3 Select the *Dart Pivot* tool.

4 Click the point where the dart has to be closed.

5 Click the point where you would like to move the dart.

6 The *Dart pivot* dialog box opens. Enter the required pivot percentage (%) or pivot value (inch or cm). The remainder of the dart stays at the original location sharing the same pivot point.

7 Click the *OK* button to execute the function.

Example of dart pivot with *Pivot %*:
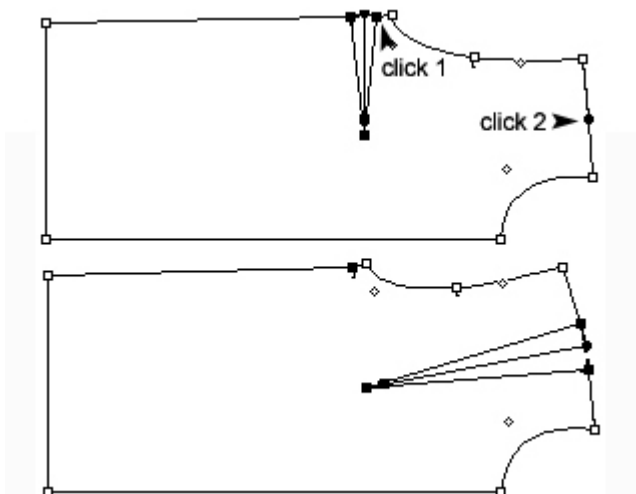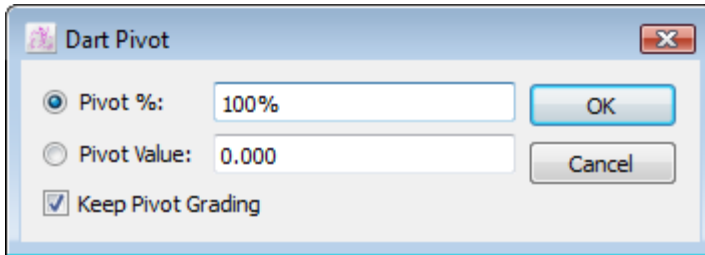
Example of Dart Pivot with *Pivot Value*:
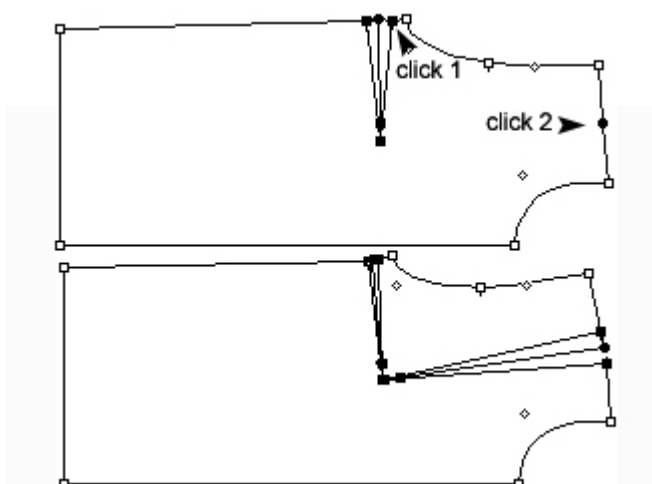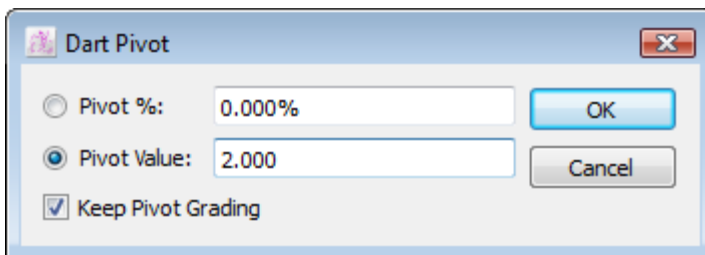
Dart Transfer

The *Dart Transfer* tool allows you to transfer a dart to a new location on a segment. You can transfer the same dart on multiple segments, at once.

The *Dart Transfer* may be hidden under *Dart Pivot* in the Toolbox. To activate the Dart Transfer, hold down the left mouse button (Windows/Linux) or the mouse button (Macintosh) on the *Dart Pivot* until the *Dart Transfer* appears. Move the mouse over the *Dart Transfer* and release the mouse button.

To transfer a dart:

1 Draw an internal segment attached to the contour where you wish to transfer the dart. You can draw more than one segment if you wish to transfer portions of the same dart to more than one location.

2 Select the dart and destination segment(s).

3 Select the *Dart Transfer* tool.

4 Click the point on which the dart will be closing.

5 The *Dart Transfer* dialog box opens. Enter the transfer percentage (%) or transfer value (inch or cm).

6 Click the *OK* button to execute the function.

Examples of dart transfer with *Transfer %:*
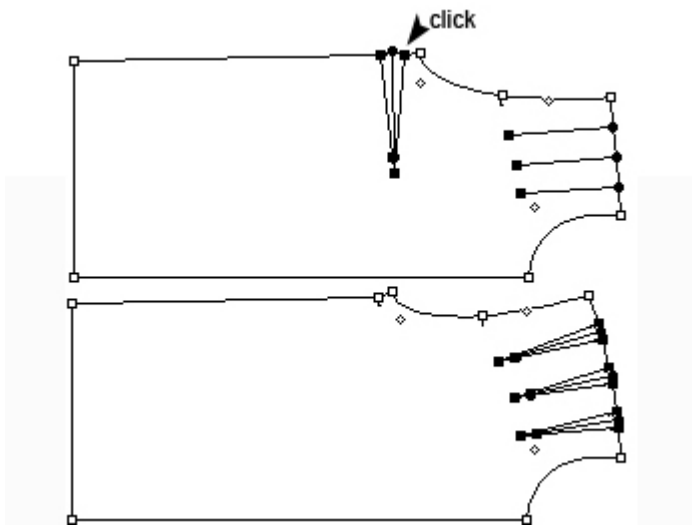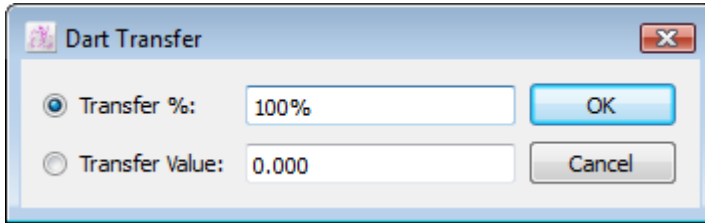
Example of Dart Transfer with *Transfer Value:*
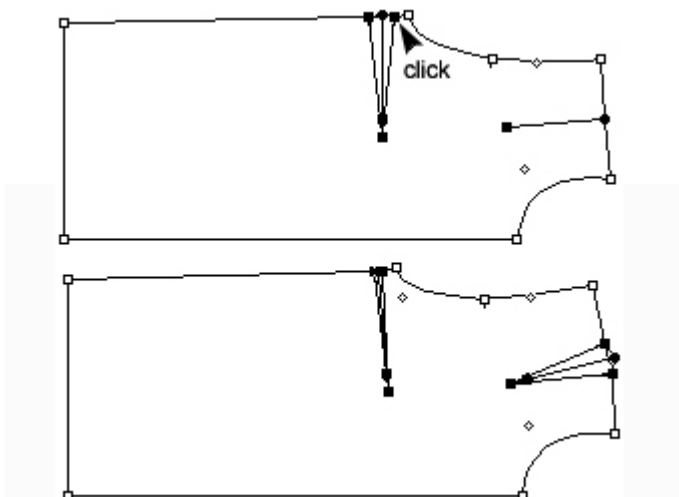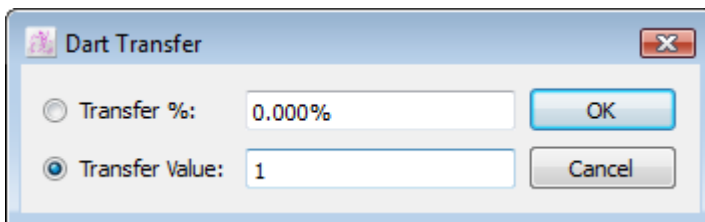
Shirring

The *Shirring* tool creates shirring. You can open the shirring and rotate it on a pivot point located on the contour.

To develop shirring:

1 Select a pivot point (#1) and the segment where you wish to place the shirring (#2).
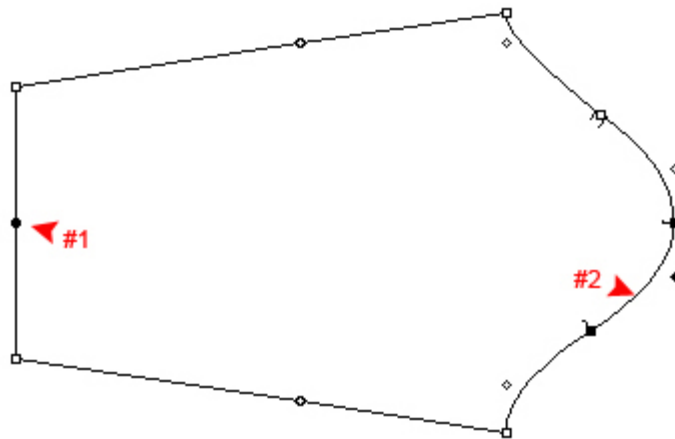
2 Select the *Shirring* tool.

3 Click the fixed point of the shirring.
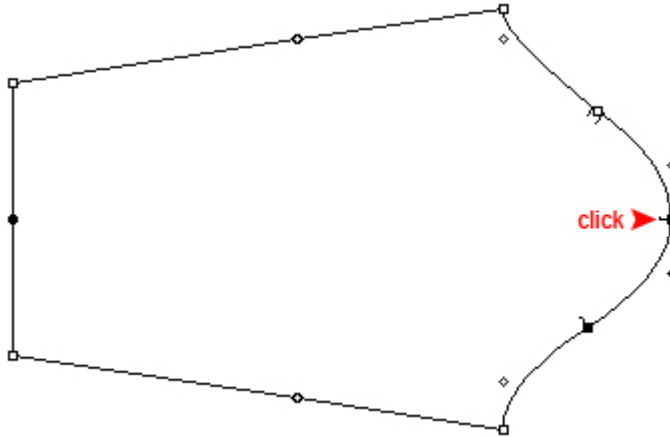
The *Shirring Characteristics* dialog box opens:
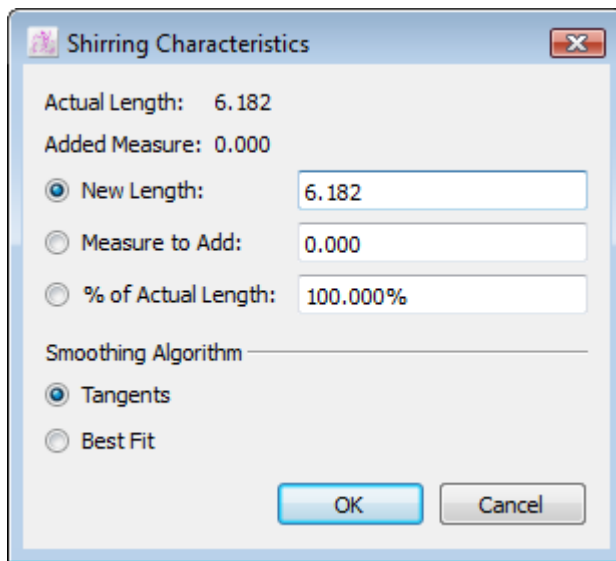
4 Enter the desired values either in *New Length, Measure to Add* or *% of Actual Length.*

5 Click the *OK* button to execute the function.

Pattern piece with shirring:
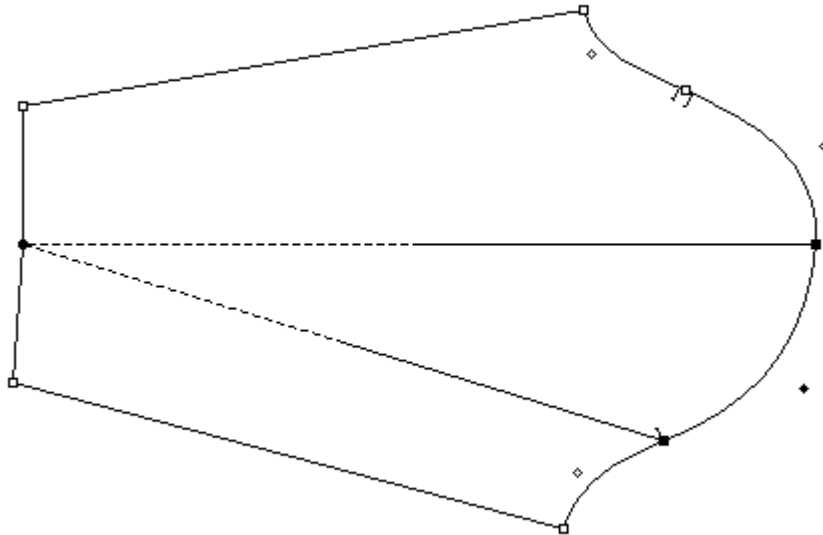
The *Shirring Characteristics* dialog box (for two ends of a piece) offers the following options:

New Length: This value modifies the length of the selected segment.

Measure to Add: This value adds a measure to the selected segment.

% of Actual Length: This value takes a percentage of the actual length and adds it to the selected segment.

Smoothing algorithm

Tangents: It keeps tangents at the intersection of the lines while opening the piece. This option works best on curves.

Best Fit: It allows you to add points to calculate the best curve, without tangents. This option works best on straight lines.

To Restore a Shirring after Digitizing

The *Shirring* tool allows you to restore or assign shirring characteristics following digitization.

To add shirring characteristics:

1 Select a pivot point (#1) and the segment where you wish to place the shirring (#2).
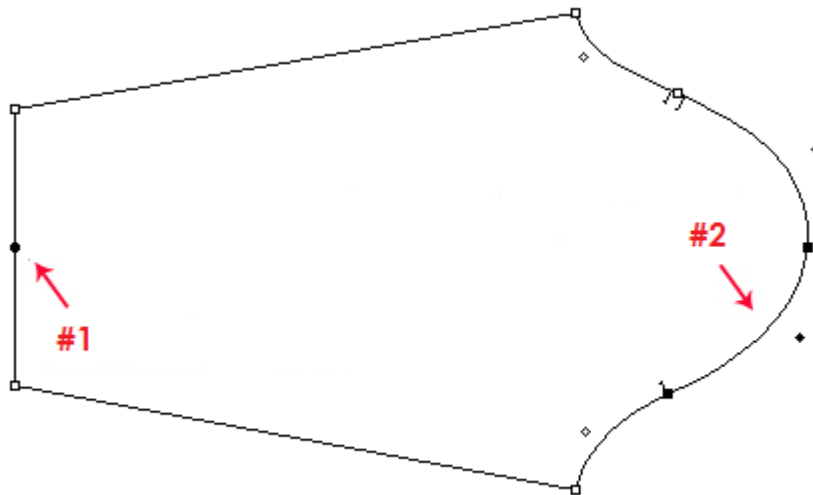
2 Select the *Shirring* tool.

3 Hold down the **Alt** (Windows) ,the **Option** (Macintosh) key or **Alt +Windows** keys (Linux).

4 Click one of the end points of the segment.
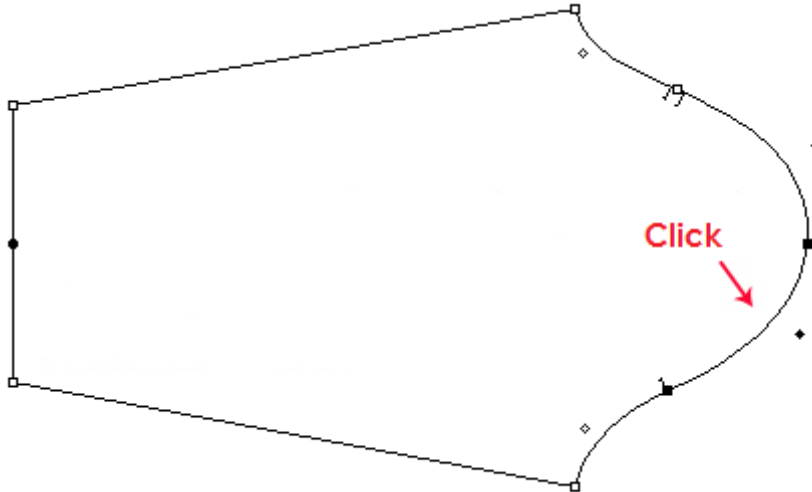
5 The *Shirring Characteristics* dialog box opens. Enter the desired values.

6 Click the *OK* button to execute the function.

Result:
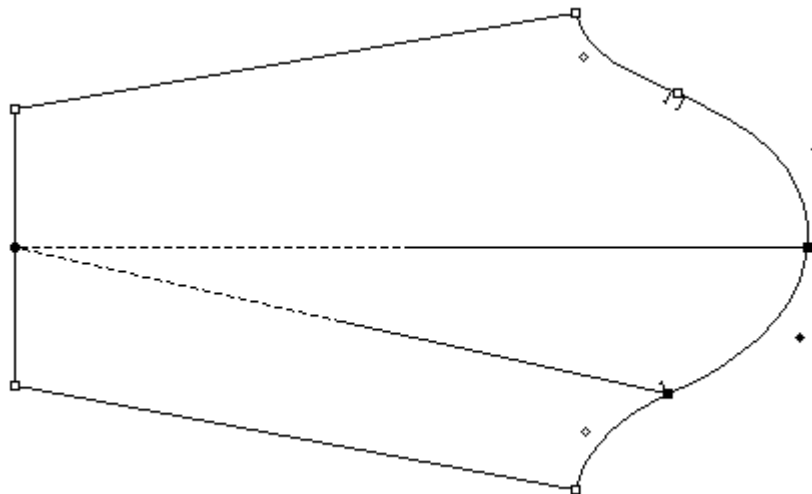
To add shirring characteristics at each end of a pattern piece:

1 Select the two segments where you wish to place the shirring.

Select Segment #1
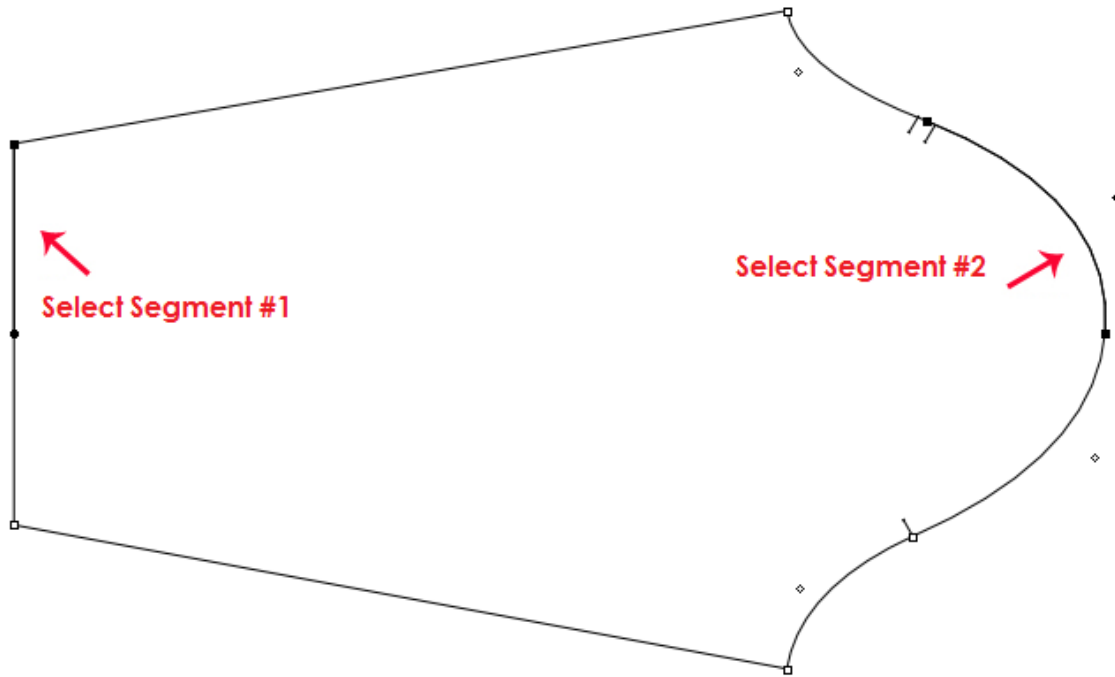
Select Segment #2

2 Select the *Shirring* tool.

3 Hold down the **Alt** (Windows) or the **Option** (Macintosh) key or

Alt +Windows keys (Linux).

4 Click one of the end points of one of the segments

Click ⟶

5 The Digitized *Shirring Characteristics* dialog box opens. Enter the desired values.

Digitized Shirring Characteristics

A

Actual Length: 6.253

Added Measure to Original Length

◉ Value: `0.000`

○ % of Actual Length: 0.000%

B

Actual Length: 3.958

Added Measure to Original Length

◉ Value: 0.000

○ % of Actual Length: 0.000%

OK   Cancel
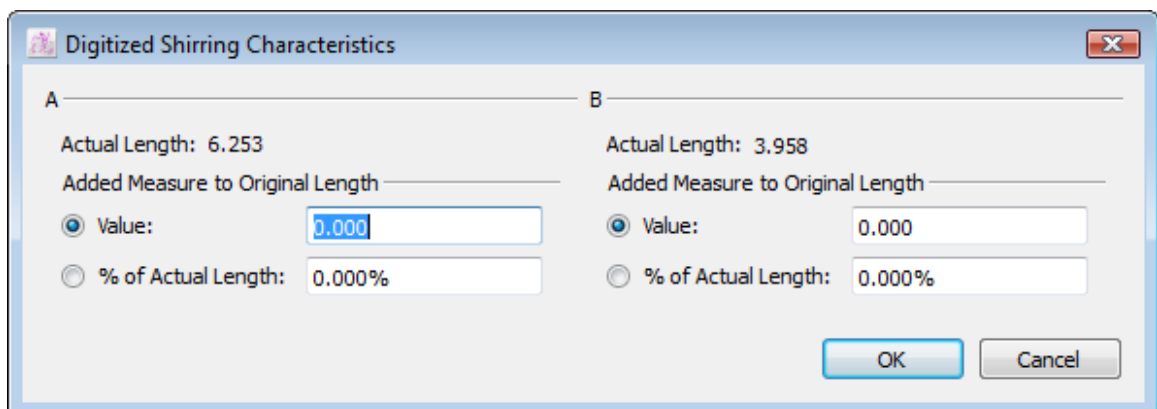
6 Click the *OK* button to execute the function.

Result: A pattern piece with shirring characteristics:
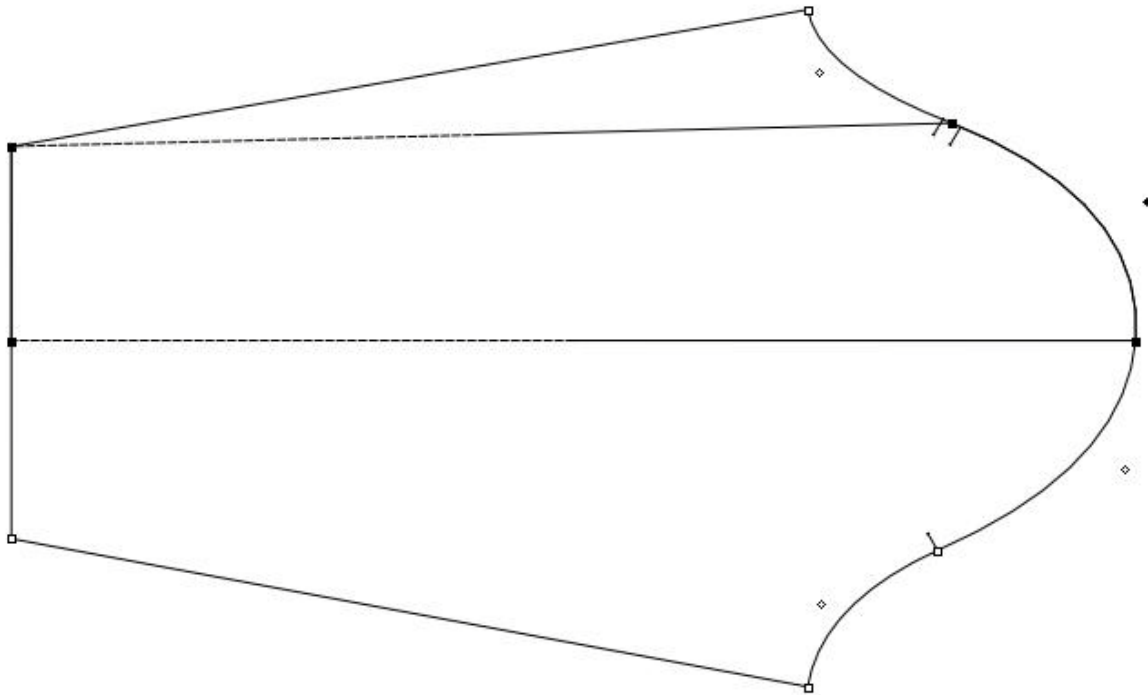
Seam Corner

The *Seam Corner* tool allows you to create a Seam Corner on any sewing line's mark or regular point. This tool creates a Seam Corner whenever two Seam Allowances meet. To use this tool, you need seam allowances. See the *Seam Allowance* section of this manual.
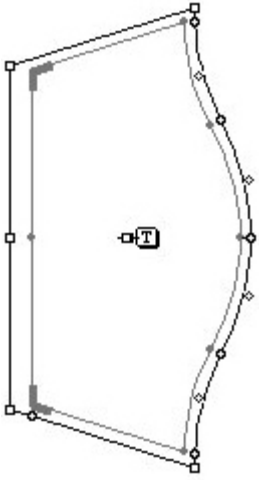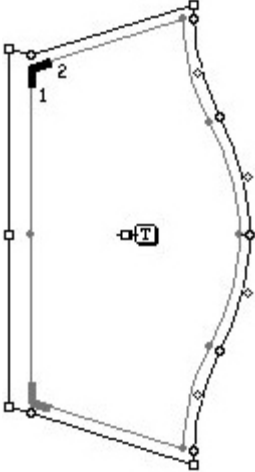
To add a seam corner:
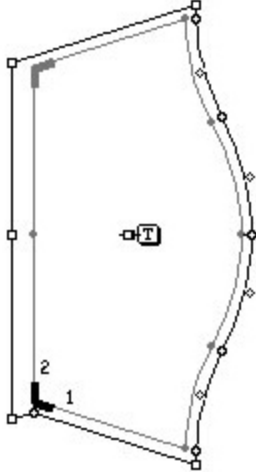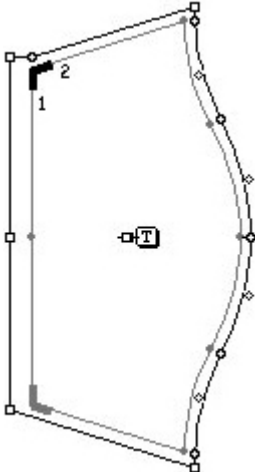
1 Activate the shape you wish to add a seam corner to.

2 Select the *Seam Corner* tool.

3 Click the sewing line point that requires the seam allowance corner. The chosen point can be neither the end of seam allowance nor a seam allowance corner.
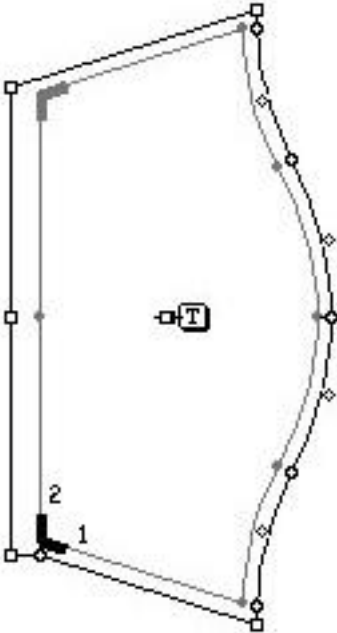
The *Seam Corner Characteristics* dialog box appears:
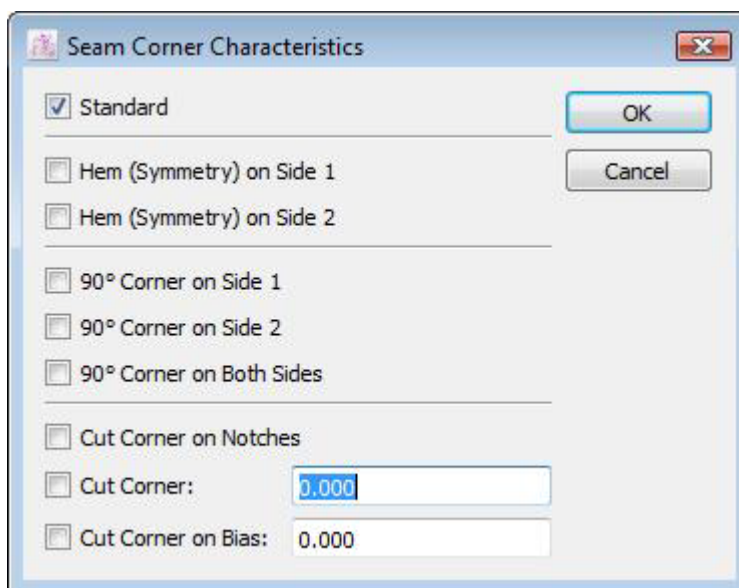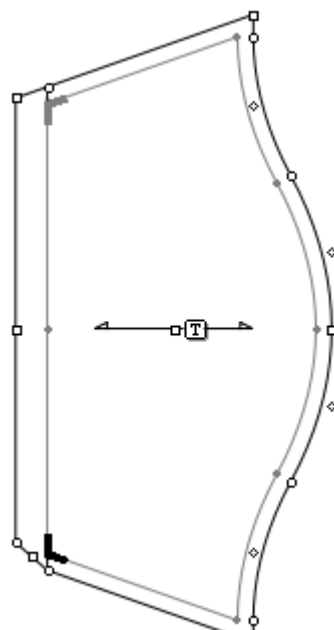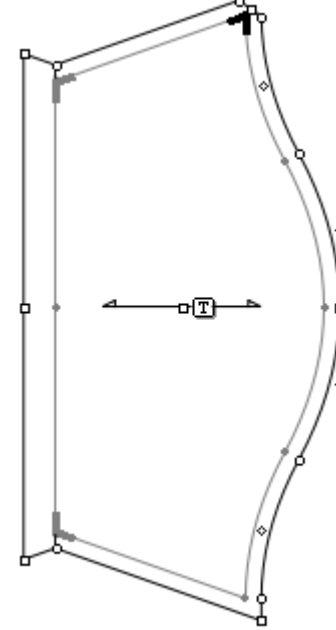
4 Select the radio button corresponding to the characteristics of the desired seam corner and enter the required information.

5 Click the *OK* button to execute the function.

Standard	Hem (Symmetry) on Side 1
For an even seam allowance all around the pattern pieces.	It symmetries the hem value on identified side one (1).

Hem (Symmetry) on Side 2	90° Corner on Side 1
It symmetries the hem value on identified side two (2).	It squares off the seam value on identified side one (1).

90° Corner on Side 2	90° Corner on Both Sides
It squares off the seam value on identified Side two (2).	It squares off the seam value of both seam allowances.

Cut Corner on Notches	Cut Corner
It removes the corner edge at seam value.	It enters value to remove calculation from the garment.

Cut Corner on Bias

It removes, on the bias, the seam value on both seam allowances.
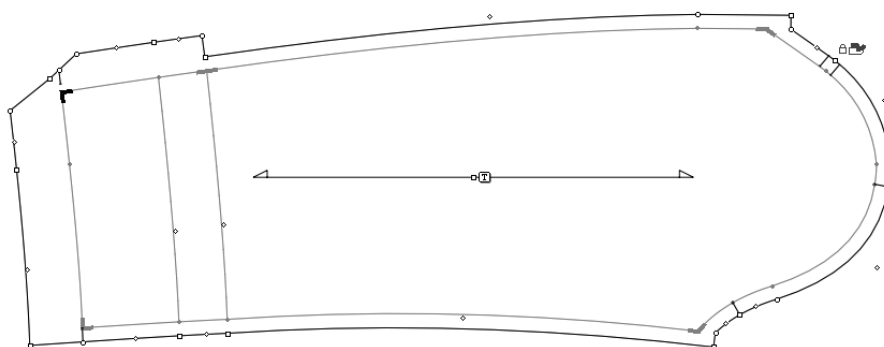
Both extremities of a seam allowance are called Seam's End. They can be adjusted to create a proper Seam's End if no other seam allowance is to be adde

To modify existing Seam's End(s) Characteristics:

1 Select the Seam's End reference(s).
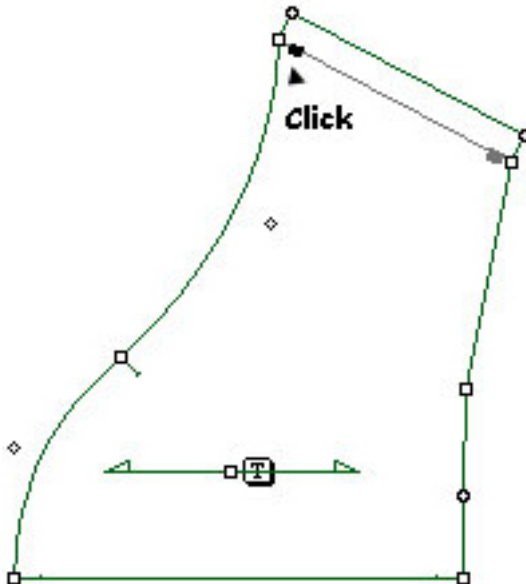
2 Select *Item Info...* in the *Treatment* menu.

3 The *Seam's end characteristics* dialog box appears:
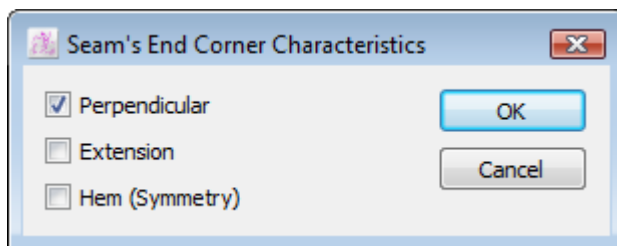
4 Change the Seam's End Characteristics to meet your needs.

5 Click the *OK* button to execute the function.

Seam's End Characteristics dialog box options are defined below:

Perpendicular: It adds a perpendicular seam allowance.
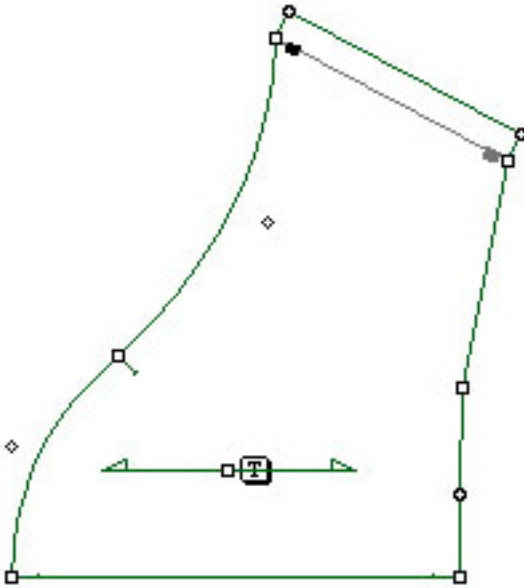
Extension: It adds the seam allowance on the same axis.
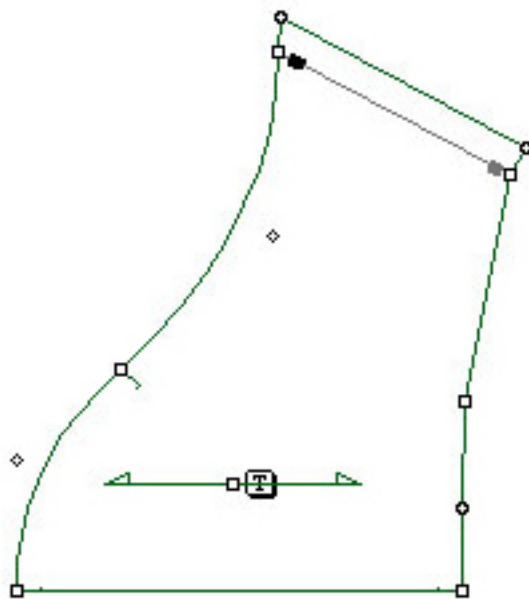
Hem (Symmetry): It mirrors on the seam value.
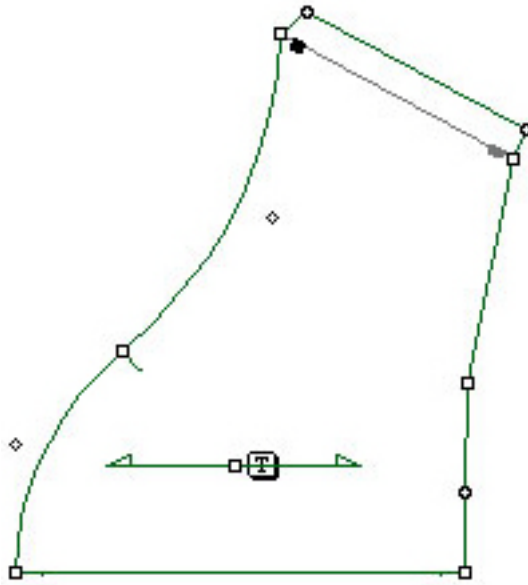
Seam Allowance

The *Seam Allowance* tool allows you to add seam allowances to the contour of a pattern piece. This tool works on Pieces View, not on Plan View.

The *Seam Allowance* may be hidden under the *Parallel Line* in the Toolbox. To activate the *Seam Allowance*, hold down the left mouse button (Windows / Linux) or the mouse button (Macintosh) on the *Parallel Line* until the *Seam Allowance* appears. Move the mouse over the *Seam Allowance* and release the mouse button.

Two types of seam allowances are available:

Constant: A seam allowance that is parallel to the perimeter of the piece.

Variable: A seam allowance with a different value at the beginning and at the end of the selection.
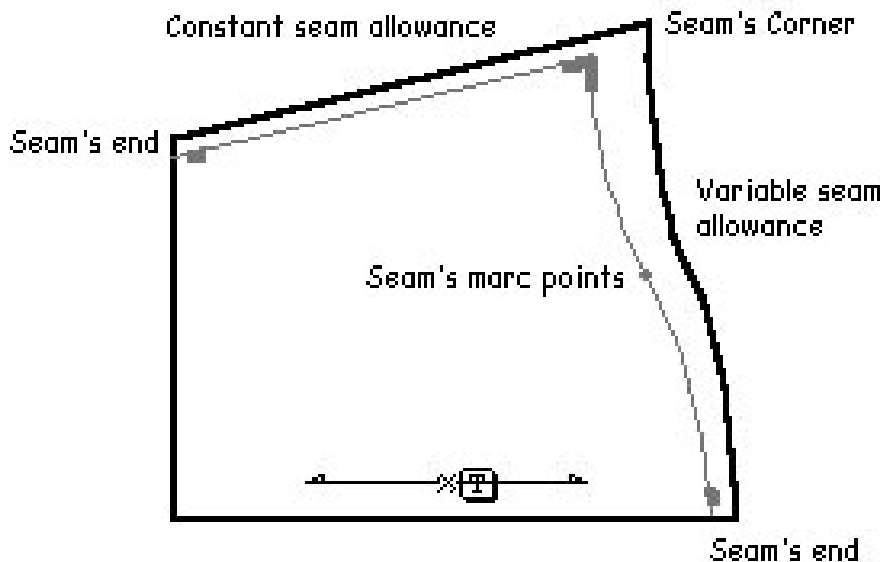
To add a Seam Allowance:

1 Make sure that you are in *Pieces View* and working on a piece item,

not a plan item. See the section about the *View* menu to know more about *Pieces View*.

2 Select the segment(s) the seam allowance is to be added to.
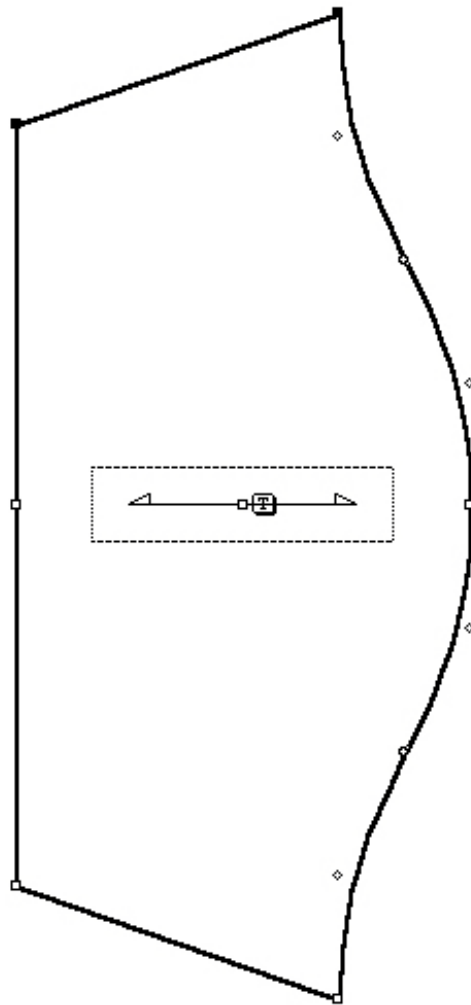
3 Select the *Seam Allowance* tool.

4 Click any selected segment. Seams are not added on segments that already have one.

The *Seam Characteristics* dialog box opens:
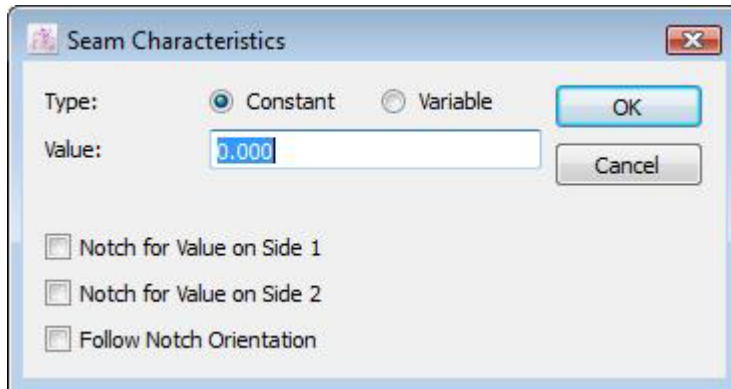
5 Enter the desired values and characteristics.

6 Click the *OK* button to execute the function.

You can add notches independently for each extremity if the respective *Notch for Value on Side 1* and *Notch for Value on side 2* check boxes are checked.

1.500

Seam Characteristics

Type: ☑ Constant ☐ Variable

Value: 1.500

OK

Cancel

☑ Notch for Value on Side 1
☑ Notch for Value on Side 2
☐ Follow Notch Orientation
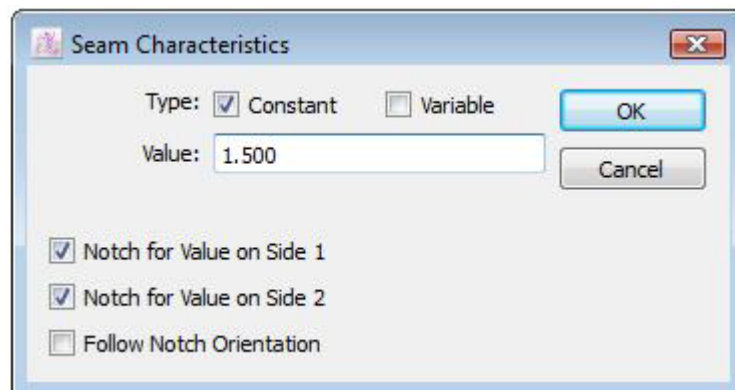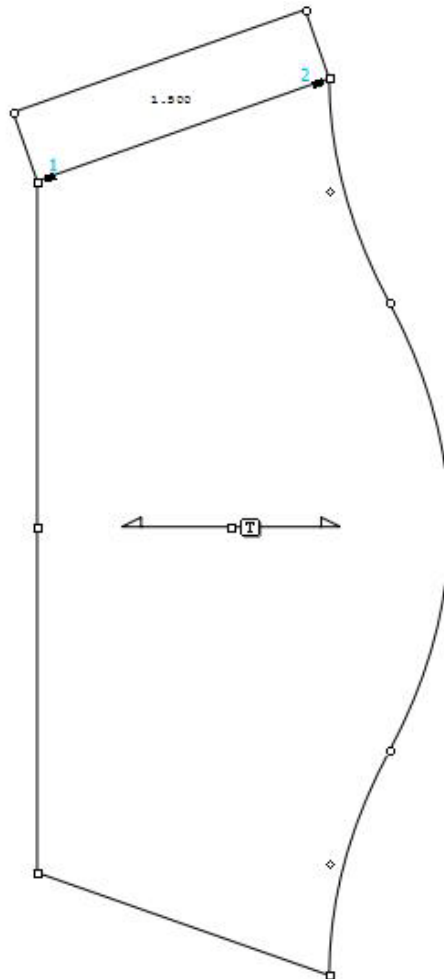
Follow Notch Orientation: To project any notches on the contour line(s) according to orientation.

No Sewing Line	Does not Follow Notch Orientation	Follows Notch Orientation
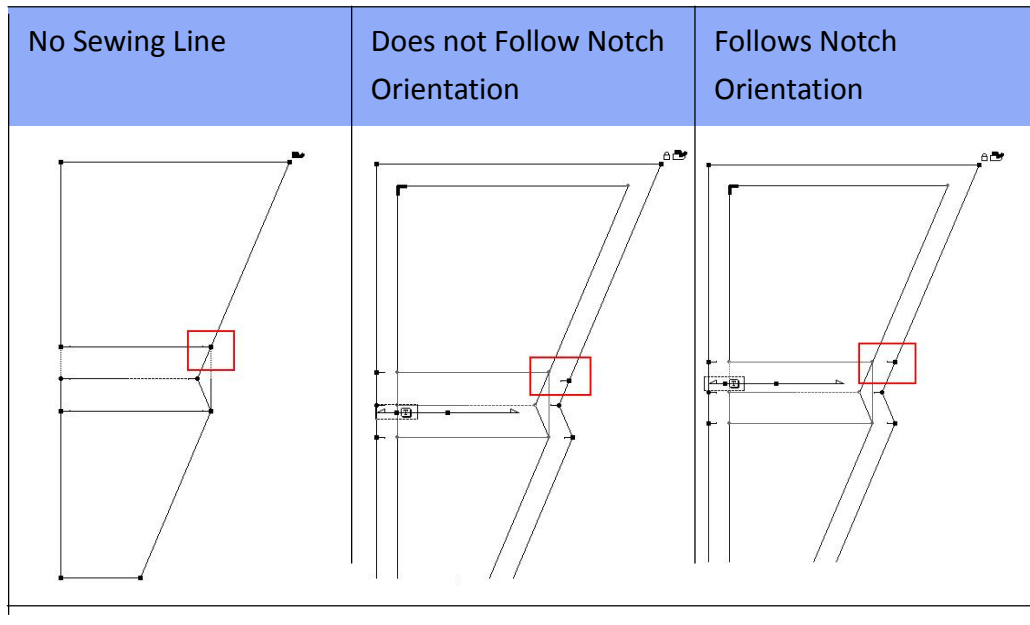
To follow the notch orientation, check *Follow Notch Orientation* in the *Seams Characteristics* dialog box.

To add a variable seam allowance, make sure that you have selected *Variable* in the *Seams Characteristics* dialog box. Then, you can choose which value to add on both side 1 and side 2 of your segment(s).
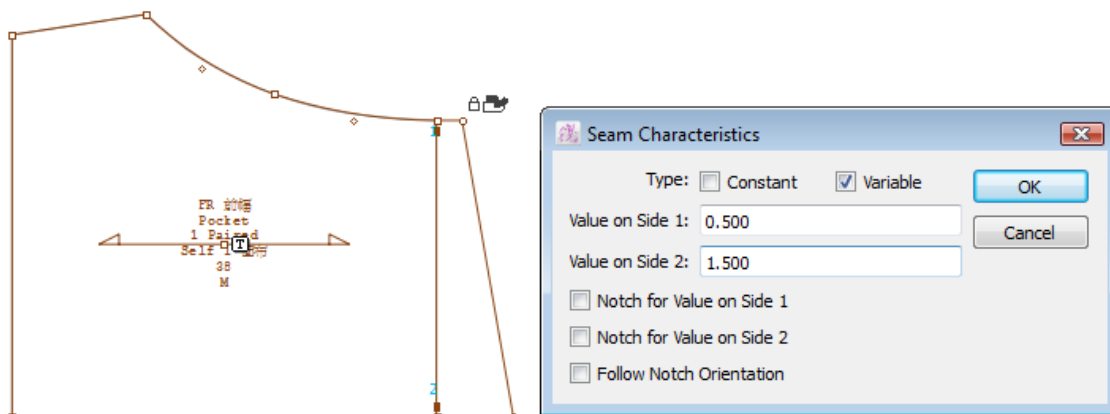
Parallel Line

The *Parallel Line* tool allows you to make multiple parallel lines on the contour and internal lines.

The *Parallel Line* may be hidden under the *Seam Allowance* in the Toolbox. To activate the *Parallel Line*, hold down the left mouse button (Windows / Linux) or the mouse button (Macintosh) on the *Seam Allowance* tool until the *Parallel Line* appears. Move the cursor over the *Parallel Line* tool and release the mouse button.

To draw parallel lines:

1 Select the segment(s) next to which you want to draw parallel line(s).

2 Select the *Parallel Line* tool.

3 Click either side of the selected segment(s), depending on which side you want the parallel line(s) to be.

The *Draw Parallel Lines* dialog box opens:
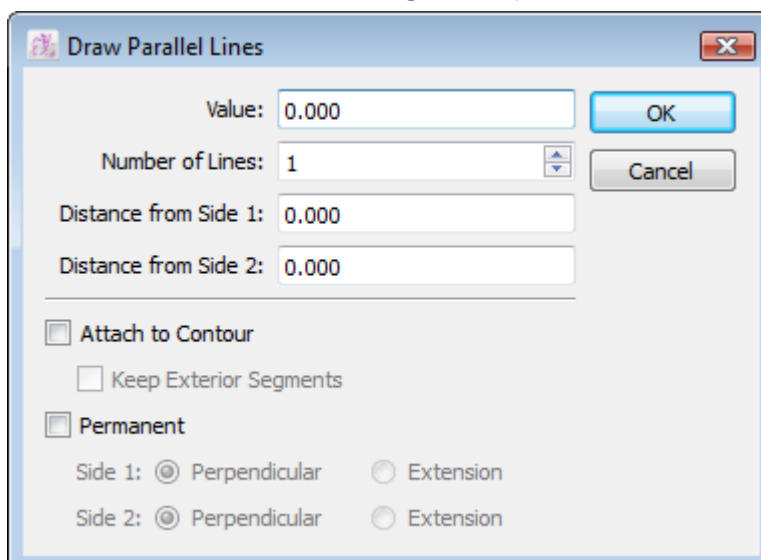
4 Enter the desired values or data.

5 Click the *OK* button to execute the function.

The *Draw Parallel Lines* dialog box offers the following options:

Value: The distance from the selected segment(s).

Number of Lines: The desired quantity of lines.

Distance from Side 1: Enter a value; it will be subtracted from side 1 of the new line.

Distance from Side 2: Enter a value; it will be subtracted from side 2 of the new line.

Attach to Contour: It attaches the new line(s) to the contour line.

Keep Exterior Segments: When attaching to contour, to keep the segments that are outside the contour of the piece.

Permanent: This option is available when you create one line from the contour. It allows you to move the contour line to its new location. When you select Permanent, you can move towards the interior or exterior.

To pre-select this option, hold down the **Alt** key (Windows) or **Option** key (Macintosh) or **Alt +Windows** keys (Linux) while clicking the desired side.

Windows keys   Alt

Shift

Ctrl   ⊞   Alt

Macintosh keys   Option

Shift

Ctrl   ⌥   ⌘   ✖

Linux keys   Windows + Alt

Shift

Ctrl   ⊞   Alt

Perpendicular: It makes the extended segment perpendicular to the contour.

Extension: The contour extends to complete the new segment (projection).

Parallel Lines created on a pattern piece:
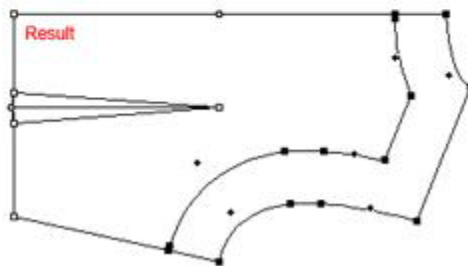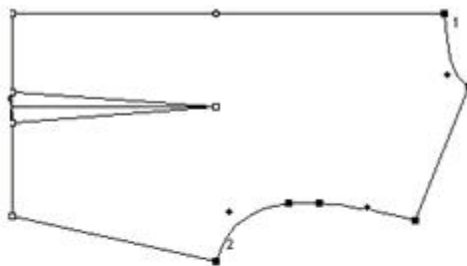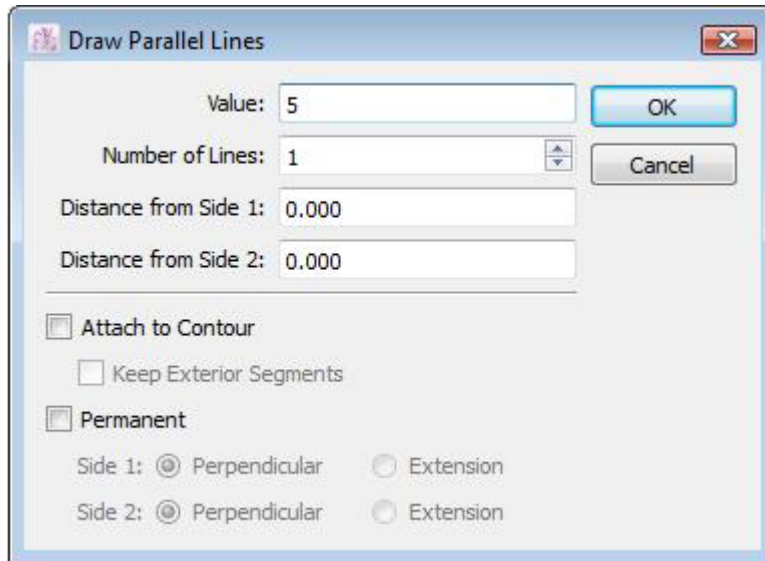
Note: You may have to readjust grading after creating parallel lines.

Draw Parallel Line by Free Hand

To do so:

1 Activate the shape to create a parallel line

2 Select Parallel Line tool

3 Click on the shape and drag the direction to create a parallel line.

Click and Drag
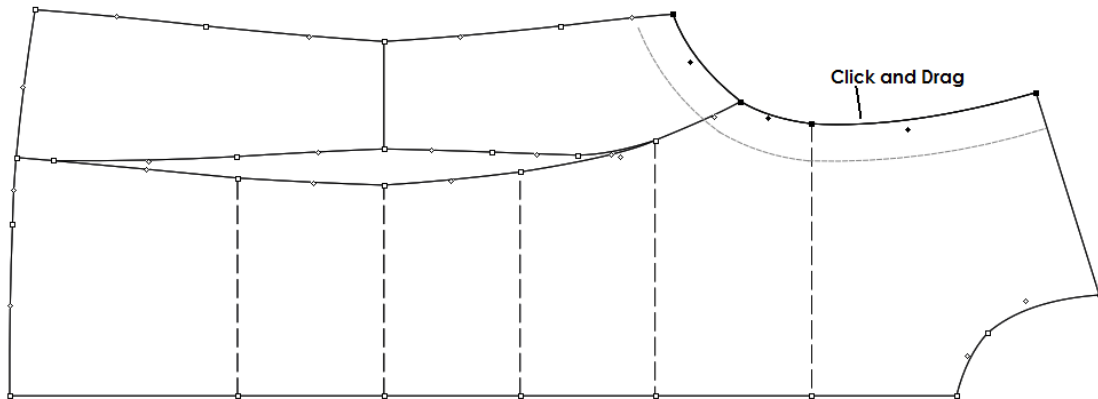
4 Dash line appears and indicates the position of the parallel line. The distance value displays on the Info bat at the right side bottom. Mouse left click to confirm the location.
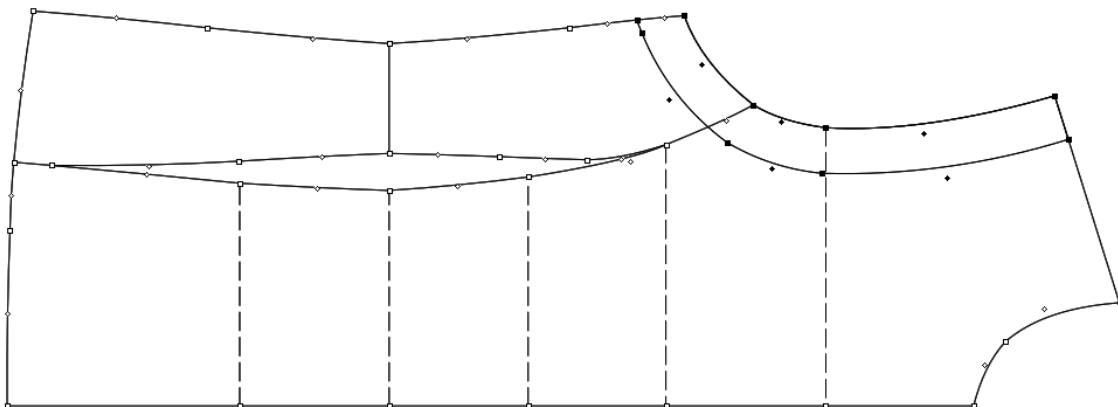
Grading Tools

The Grading Toolbox / Toolbar section allows you to modify the grading coordinates of a grading nest. These tools are useful to further manipulate the grading evolution.

 Toolbox

 Toolbar

For more information about the Grading tools, see the Grading chapter of this user manual.

Chapter 4
The Grading

• • • • • •

The Grading Basics

The PAD System Pattern product offers a wide variety of tools and options to grade your patterns. The PAD System grading process allow you to easily apply the principle of proportionally increasing or decreasing your master pattern according to any customized set of body measurement to assure the fit your need.

Grading Arrows

If the *Grading Arrows* window does not appear on screen, click the *Show Grading Arrows* item in the *Options* menu. Or the mouse right click on menu bar.
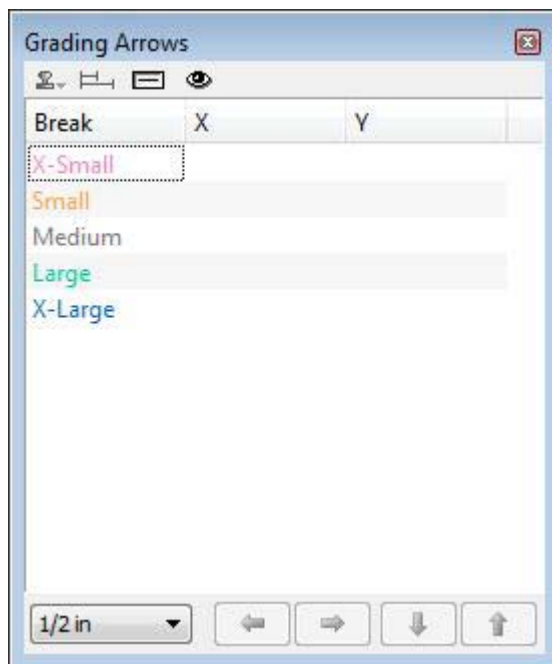
To perform grading using Grading Arrows:

1 Select the points to be graded.

2 Select the increment in the pop-up menu at the bottom of the window.

3 Select (highlight) the sizes to be graded or modified in the list.

4 Use the arrows and click as many times as necessary to get the desired grading. Successive clicks increase the grading value according to the increment you chose. For example, 4 clicks at 1/32″ give you a grading of 1/8″.

Note: You must be in *Grade View* to view the changes on screen.

By using the Grading Increment list located left lower corner of the Grading Arrows dialog box. You can drag the end of the list. Click on *Edit…* item.
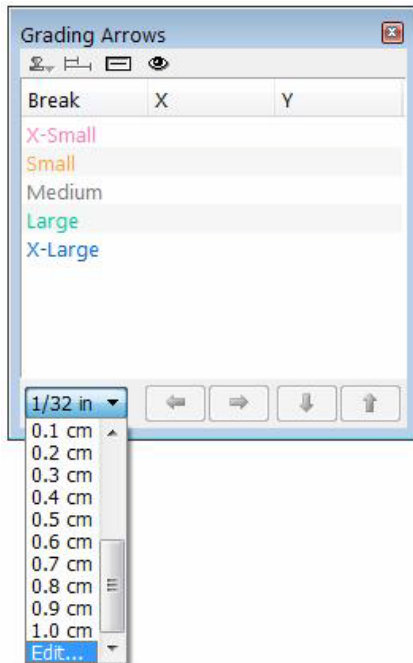
Evolutions dialog box opens:
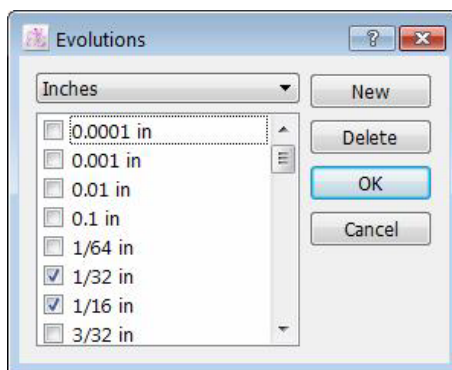
The *Evolutions…* option allows you to Edit / Add the list of Grading increments to create a personalized list. In the drop-down menu at the top of the window, select Inches or Centimeters. The lower window displays the available increments; check the increments on to display from the pop-up menu in the *Grading Arrow* window.

Or Click on the *New* button on the right upper corner, a new item creates and shows at the end of the Grading Increment list. Check and input the measurements.

Ex: input the value to 3 in
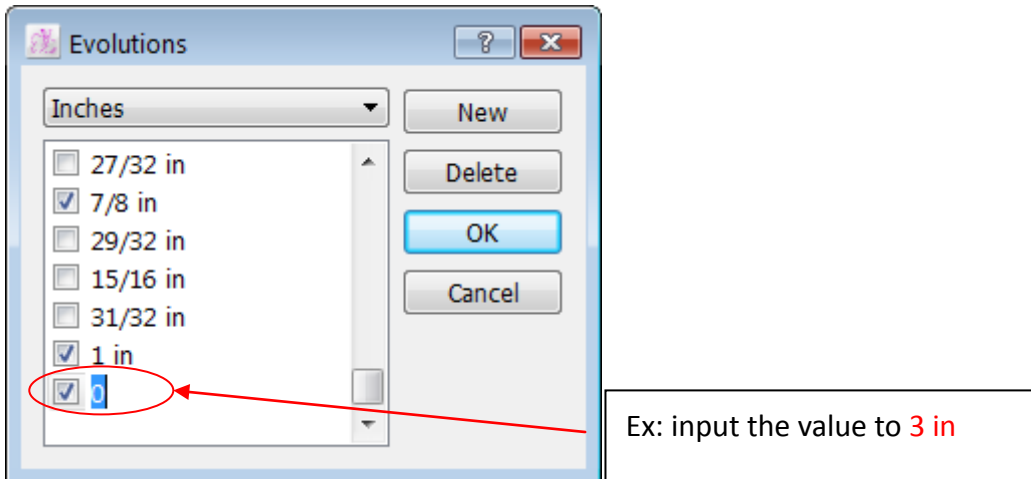
The newly-added item will show in the Grading Increment list on the Grading Arrows window.
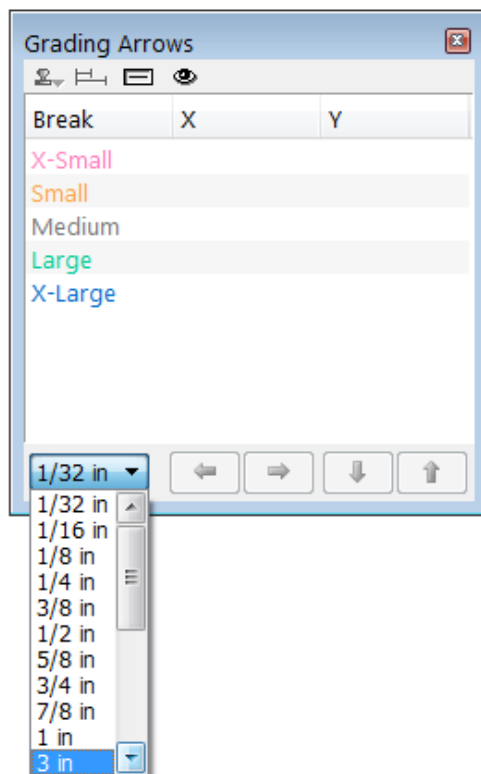
Display Options

The *Grading Arrows* dialog box allows you to determine what size name appears in the window. To show the option by choosing mouse right click on the title bar.
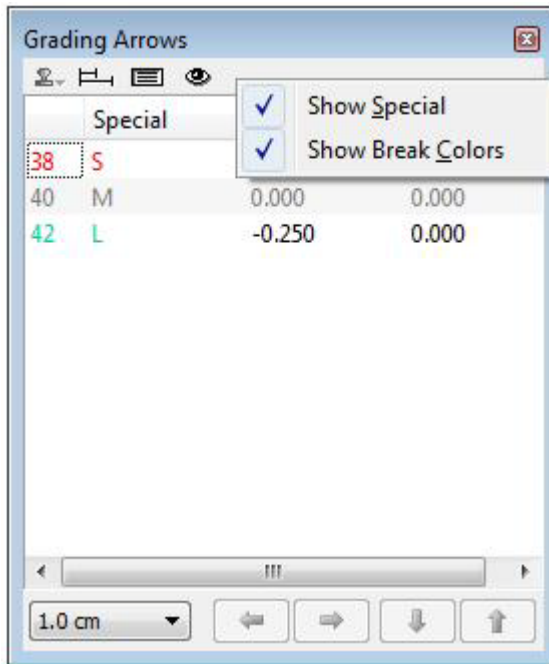

Show Special displays the customized name that you may have assigned to each size in the *Grade Working Sizes* dialog box. If *Show Special* is not activated, Breaks defined in the *Preferences –> Breaks & Colors* item in the *Options* menu are displayed.

Show Break Colors displays the list in the same color as the grading. You can define break colors using the *Breaks & Colors* function under the *Preferences* sub- menu in the *Option* menu. If *Show Break Color* is not selected, the list is displayed in black.

Modify Grading

The *Modify Grading* button allows you to restore the grading of the selected size(s) to zero. Click the *Modify Grading* button and do not release the mouse button. Drag your cursor to the *Reset* option and release the mouse button.
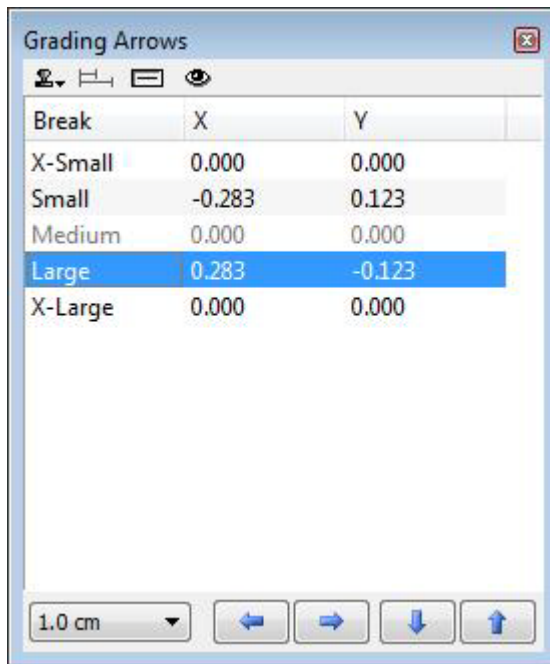
Distance/Steps

The *Distance/Steps* function allows you to view:

- • The distance between the Medium size and other sizes

- • The step between each size

This function is only active for irregular grading.

Regular/Irregular

The *Regular/Irregular* function allows you to transform an Irregular Grading into a Regular Grading for each group of sizes.

• The *Regular Grading* function can be found under the icon.

• The *Irregular Grading* function can be found under the icon.

Grading/Modification

If you wish, you can add or withdraw a value from the existing grading for one or many sizes. To do so, simply click the eye icon. Only the current modification is posted rather than the cumulative grading modifications.

Example:

Black Eye = Cumulative *of the grading*			
Before modifications		X	Y
4	X-Small	0.125	0.250

Red Eye = Current Modification			
Before modifications		X	Y
4	X-Small	0.00	0.00

Red Eye = Current Modification			
Modifications Made		**X**	**Y**
4	X-Small	-0.125	0.125
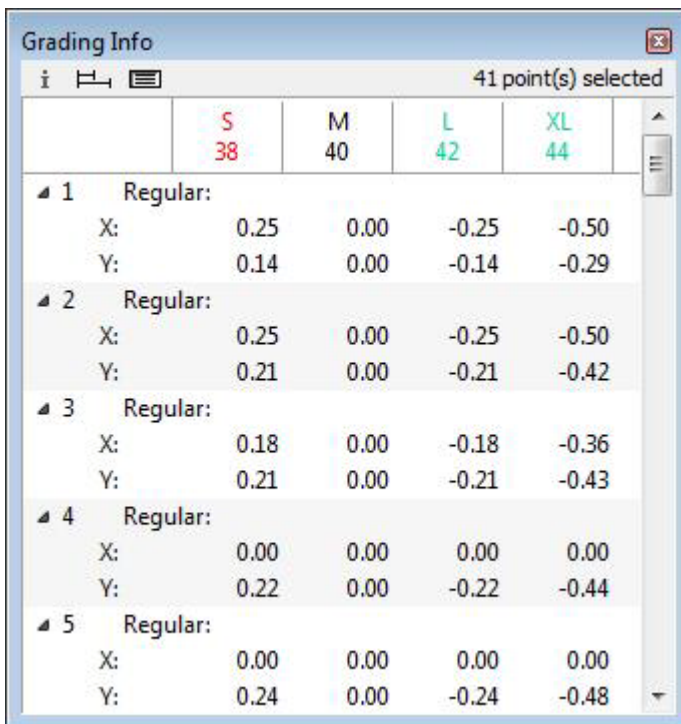
Black Eye = Cumulative of the grading			
Result		**X**	**Y**
4	X-Small	0	0.375

The current modification is posted if you do not modify the position of the respective points or the previously modified selection.

As soon as you modify the selection (i.e.: removing or adding a point to the selection, selecting or deselecting a segment), the value is reset to zero in the *Modification View*.

Grading Info

The *Grading Info* window gives information about the grading of each selected point. If the *Grading Info* window does not appear on screen, click the *Show Grading Info* item in the *Options* menu. Or the mouse right click on menu bar.

To get information about the grading of selected points, select the point(s) you want to get grading information about. A number appears next to each one of the selected points. In the *Grading Info* window, the grading information about the selected point(s) is displayed, sorted by the number that has been assigned to each point.

The *Grading Info* dialog box displays the number of selected points in the top left corner of the window. It has three buttons in the bottom right corner, which are described below.

i
L **Grading/Library:** If at least one point has a library value, the *Grading/Library* button shows or hide from view the library values.

Distance/Steps: This button allows you to view:

- The distance between the Medium size and other sizes

- The step between each size

This function is only active for irregular grading.

Regular/Irregular: This button allows you to view:

- The grading in Regular format

- The grading in Irregular format

The *Regular/Irregular* function is not available if at least one selected point is irregular. In this instance, the grading of all selected points are shown in irregular format.

The *Grading Info* dialog box allows you to determine what size name appears in the window. To show the option by choosing mouse right click on the title bar.
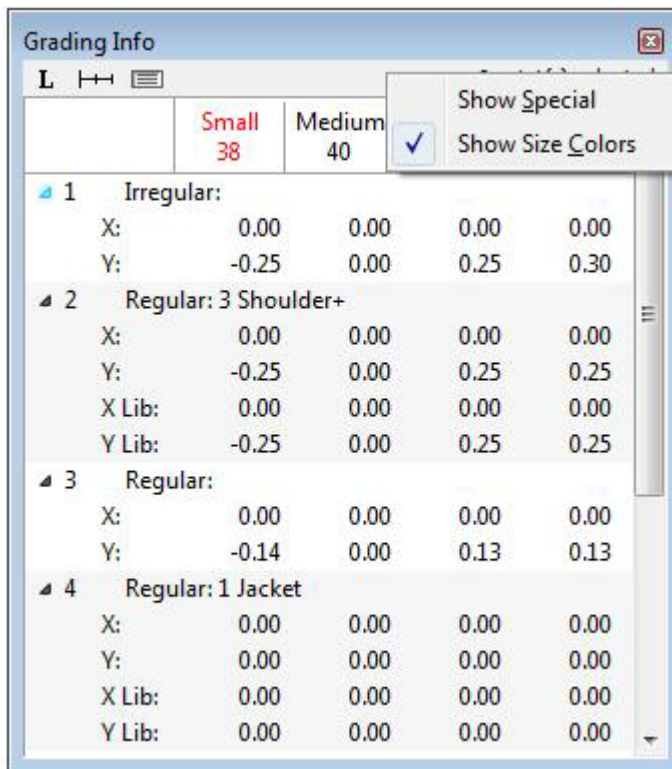
Show Special displays the customized name that you may have assigned to each size in the *Grade Working Sizes* dialog box. If *Show Special* is not activated, Breaks defined in the *Preferences –> Breaks & Colors* item in the *Options* menu are displayed.

Show Size Colors displays the list in the same color as the grading. You can define break colors using the *Breaks & Colors* function under the *Preferences* sub- menu in the *Option* menu. If *Show Size Colors* is not selected, the list is displayed in black.

Grading Library

A grading library allows you to keep the grading evolutions, or points, in a database.
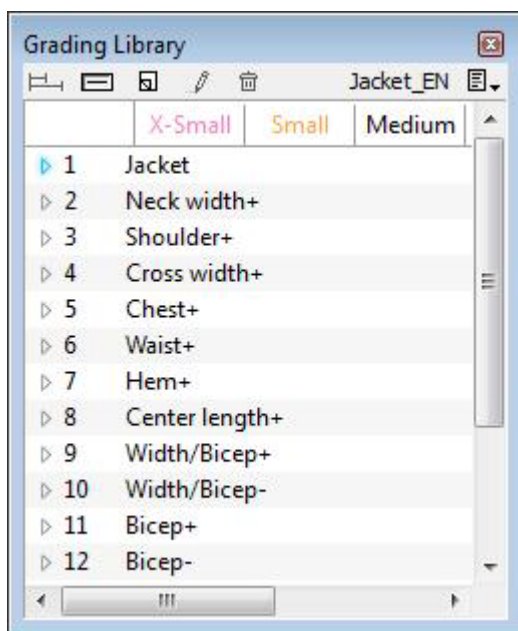
You can create as many grading libraries as you need. Each library may contain up to 999 grading evolutions available on screen through the *Grading Library* window. The *Grading Library* window lists the number and name (if any) of each grading evolution.

Next to each element of the Grading Library, there is an arrow that opens a drop- down menu showing the X and Y coordinates of the element. At the top of the window, you can see each size.

The Grading Library is displayed on the screen in a window that contains the numbers and names of the Grading Evolutions. Irregular Evolutions appear in bold characters. Only one Grading Library can be open at a time.

If you see a padlock icon next to an element, that means that the Medium size of this element has grading and the Grading Evolution of this element cannot be applied on a selected point because the Medium size is locked. To unlock it, uncheck the *Lock medium size* check box in the *Grading Working Sizes* dialog box.

Grading Library Drop-Down Menu
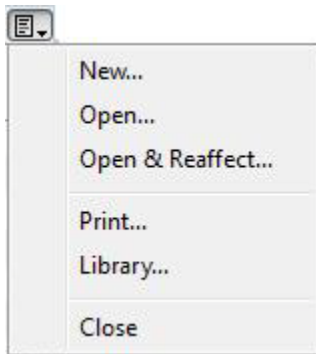
Library commands are available in the drop-down menu, to the upper right of the *Grading Library* window. The first three commands are accessible via the Grading Library drop-down menu or the *Library* sub-menu in the *Grade* menu.

The Library drop-down menu offers the following options:

New...: It creates a new Grading Library.

Open...: It opens a Grading Library that already exists.

Open & Reaffect...: It replaces the current Grading evolutions of the pattern pieces with those from a chosen Library.

Print…: It prints the open Grading Library.

Library…: It adds Grading Evolutions to another Grading Library.

Close: It closes the open Grading Library.

The *Grading Library* dialog box allows you to determine what size name appears in the window. To show the option by choosing mouse right click on the title bar.
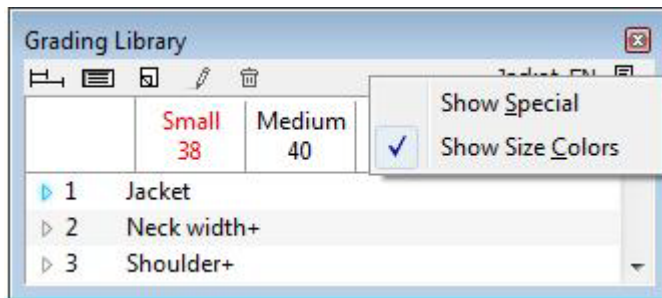
A special is a customized name that you may have assigned to each size in the *Grade Working Sizes* dialog box. If *Show Special* is not activated, Breaks defined in the *Options > Preferences > Breaks and Colors* dialog box is displayed. You can define break colors using the same dialog box.

To create a New Grading Library:

1 Select the *New…* item in the *Library* sub-menu that can be found in the *Grade* menu. Alternately, you can click the *New…* item in the drop-down menu of the *Grading Library* window. The *Save new library as* dialog box opens.

2 Enter the library name in the *File name* text field.

3 Press the *Save* button once you have located the proper folder. The library window appears, with the name you gave to the library. To return to the previous window, press on the *Cancel* button.

To open a Grading Library (.grl) file that already exists:

1 Select the *Open…* item in the *Library* sub-menu in the *Grade* menu. Alternately, you can click the *Open…* item in the drop-down menu of the *Grading Library* window. A dialog box opens.

2 Select the library you wish to open and click the *Open* button.

To replace Grading evolutions with evolutions from a chosen Library:

1 Select *Open and Reaffect...* in the *Library* sub-menu that can be found in the *Grade* menu. Alternately, you can click the *Open & Reaffect...* item in the drop-down menu of the *Grading Library* window*.*

2 An *Open* dialog box appears. Select the new library that will replace the current Grading evolutions. The grading of this Library is applied according to the numbering process on the open pattern.

To add Grading evolutions to the current Grading library from another Grading library:

1 Select the *Library...* item from the *Grading Library* drop-down menu. The *Grading Library* dialog box opens:
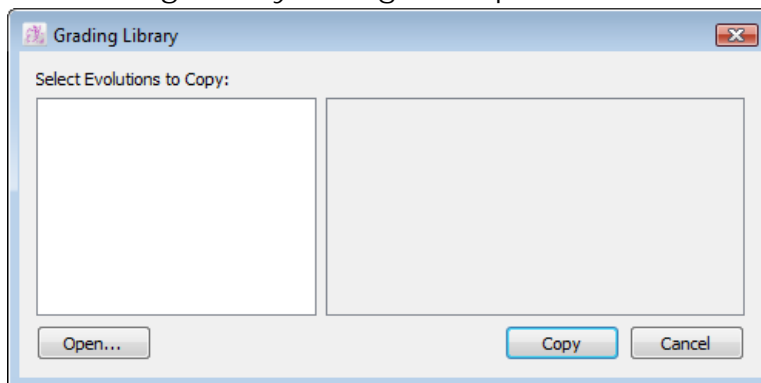
2 Click the *Open* button. An *Open* dialog box appears.

3 Select a Grading library and click the *Open* button.

The Grading Library appears:
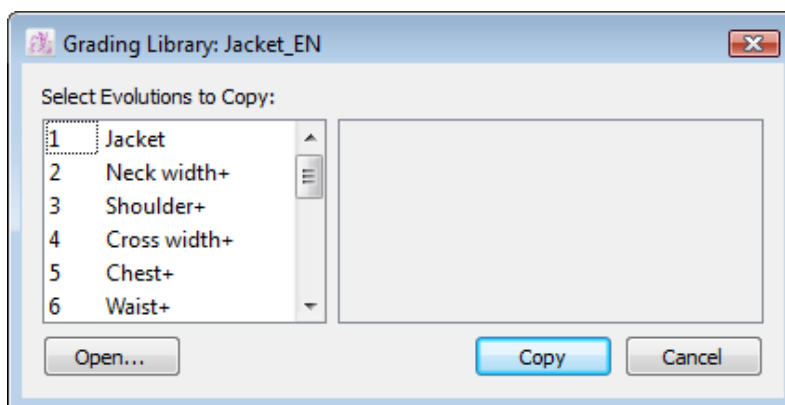
4 To view the information about the selected Grading evolution before merging it. You can click any Grading evolution to see its information on the right side dialog box.

Grading Library: Jacket_EN						
Select Evolutions to Copy:						
		X-Small	Small	Medium	Large	X-Large
1	Jacket					
2	Neck width+	X: 0.00	0.00	0.00	0.00	0.00
3	Shoulder+	Y: 0.00	-0.25	0.00	0.25	0.00
4	Cross width+					
5	Chest+					
6	Waist+					
7	Hem+					
8	Center length+					

Open...   Copy   Cancel
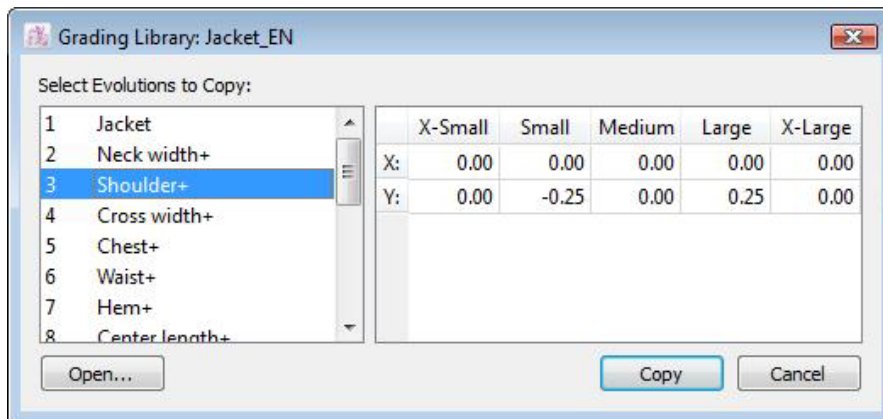
5 Select the grading evolutions that you want to copy in the *Grading Library* dialog box.

6 Press *OK*. If you try to copy a number that already exists in the library, the application asks you whether you wish to replace the number that already exists.
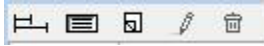
Pattern

⚠ The following number(s) already exist and will be replaced:
2

Would you like to continue?

Continue   Cancel

Grading Library Buttons

Distance/Steps: This button allows you to view:

- The distance between the Medium size and other sizes

- The step between each size

This function is only active for irregular grading.

Regular/Irregular: This button allows you to view:

- The grading in Regular format

- The grading in Irregular format

The *Regular/Irregular* function is not available if at least one selected point is irregular. In this instance, the grading of all selected points are shown in irregular format.
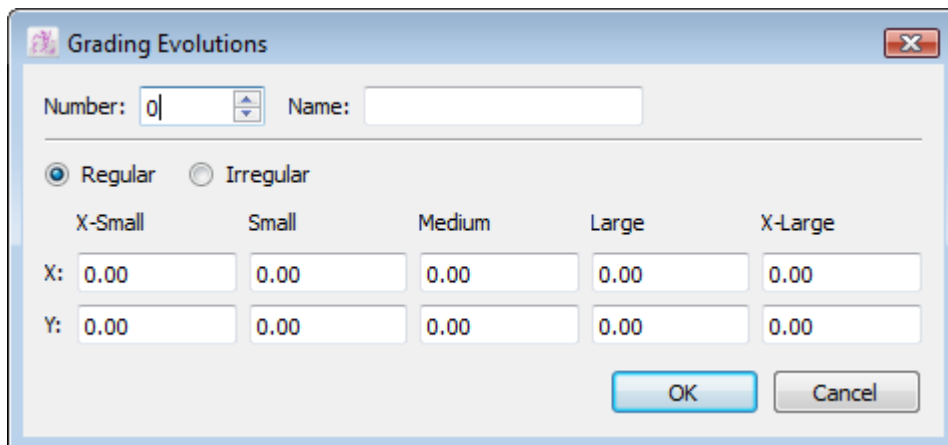
New : It adds a new grading evolution to the Grading Library. More details on next page.

Edit : It allows you to modify information about the grading evolution that is selected.

Delete: It removes the selected grading evolution.

Creating or Editing a Grading Evolution

At the top of the *Grading Library* window, select either the *New* button to create a new Grading Evolution or the *Edit* button to modify the selected one. Whichever choice you made, the *Grading Evolutions* dialog box appears.

Two radio buttons allow you to decide whether it is a Regular or an Irregular Grading Evolution.

For regular grading:

For irregular grading:
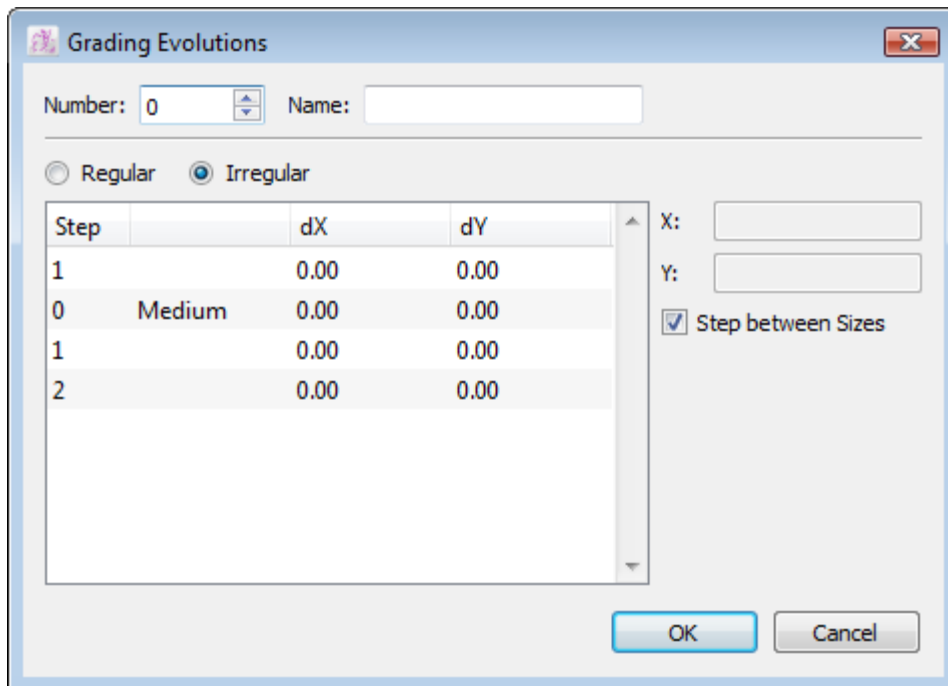
Three different sections allow the entry of a new Grading evolution:

- The first text box identifies the number under which the Grading evolution is listed.
- The second text box describes the name of the grading evolution.
- The third section is different depending of the type of grading evolution selected. Grading specifications contain dX and dY coordinates within each break size for a Regular Grading Evolution; or within the sizes, according to the current grading nest, for an Irregular Grading Evolution.

Applying a Grading Evolution on selected points

To apply a grading evolution on selected points:

1 Select a grading evolution in the *Grading Library* window.

2 Click the point(s) on the piece(s) that you want to apply the grading evolution to.

The Grade Menu
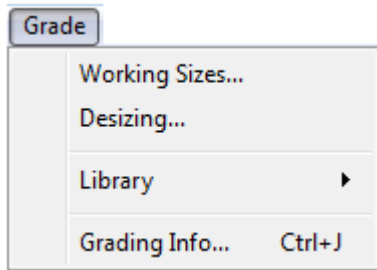
Grade
Working Sizes...
Desizing...
Library ▶
Grading Info...   Ctrl+J

When developing a new style, the grading of pattern pieces is updated, according to the grading of the original pattern pieces.

If you require a specific Grading evolution, the modification can be done in a number of ways, by:

• Using *Grade View* tools
• Modifying the coordinates of a point in the *Grading info* dialog box
• Using the *Grading Library* to apply an evolution
• Using the *Grading Arrows* function

Grade Menu: Working Sizes...

At first, the Grading Working Size is always set at one size by default, which is the base size. There are two ways to create a grade nest with multiple sizes: you can either use the *Change…* button or the *Generate…* button in the *Grading working sizes* dialog box.

To open the *Grading Working Sizes* dialog box, open the *Grade* menu and select *Working Sizes…*

The *Grading Working Sizes* dialog box opens:
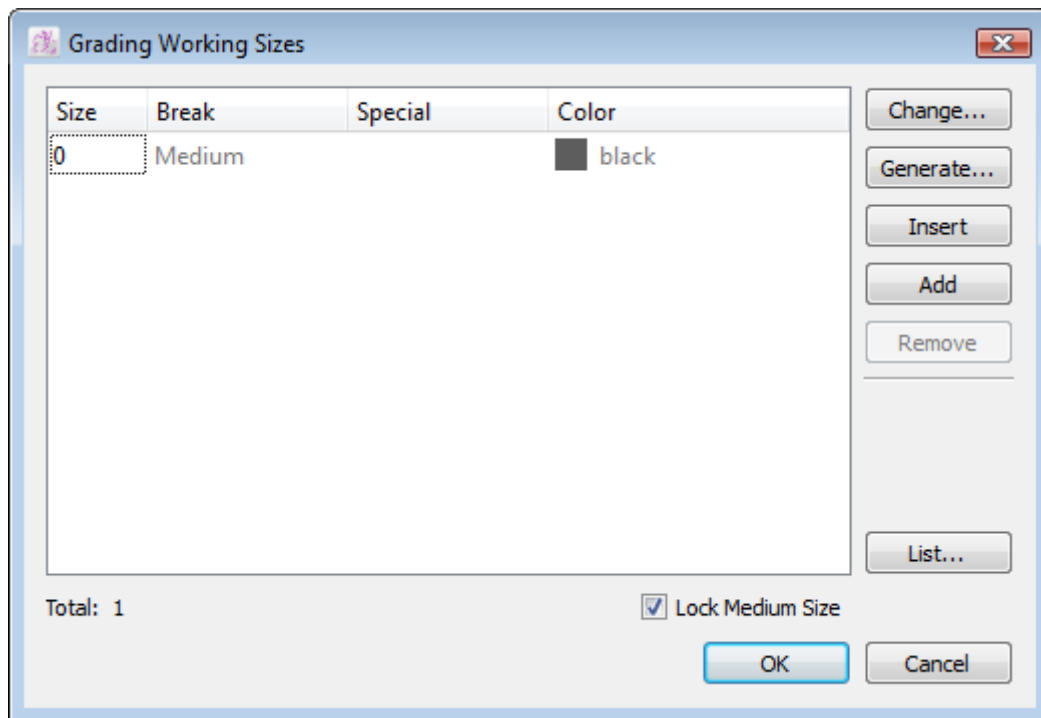
To create a new Grading nest using the *Change…* button:

1 Press the *Change…* button to open the *Grading nest information* dialog box.

2 In the text box, enter the number of sizes needed for a particular style, including the medium size (base). Alternately to press arrow up or down from the Change dialog box.
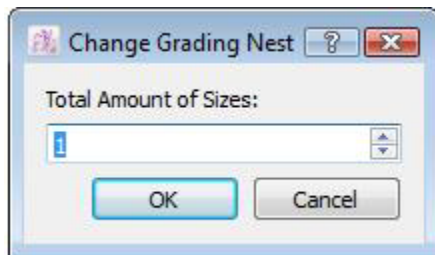
3 Press the *OK* button to validate the information.

Establishing Different Grading Evolutions and Sizes

Five regular breaks are available for grading. Their default names are X-Small, Small, Medium (being the base size), Large and X-Large. These names can be customized by going into *Options -> Preferences -> Break & Colors* .Different grading evolutions can be established per group.

Establishing Size List

In the *Grading Working Sizes* dialog box, select (highlight) the first item in the list and change the number in the *Size* text box on the right side of the dialog box to your smallest desired size. In the same manner, do the same for all the other items in the list getting to the last one, which would be your biggest size.

If you do not work with numeric sizes, you can use special names (alphanumerical sizes) in the *Special* text box to identify the label of each one of your sizes.

Setting the Size Break

In your size list, identify which size corresponds to your base pattern. The base size must be set at break medium.
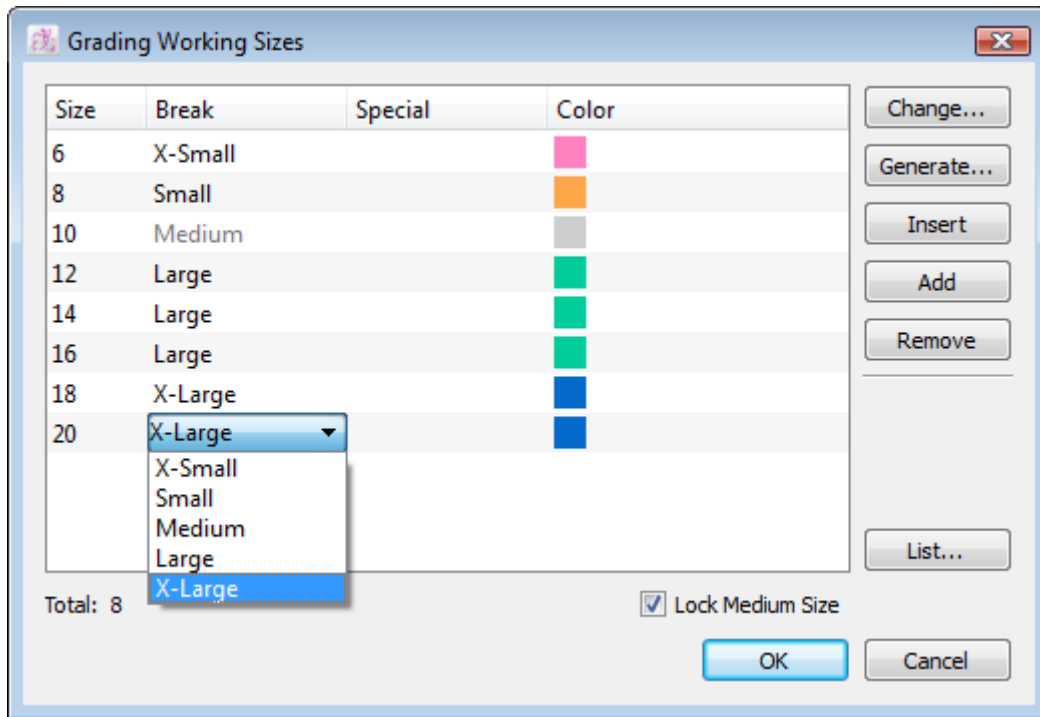
Modify the other size breaks according to the grading group you want them in.

Note: Make sure that the plotter options item from the *File* menu are properly set up to plot either Sizes, Specials, or both.

Locking the Medium size

To lock the medium size to forbid future modifications to it, just check the *Lock Medium Size* check box. The grading of the medium size will be removed. Uncheck the *Lock Medium Size* check box to unlock the medium size. If you lock the medium size, the application warns you that you will lose all the changes made to the medium size and ask you whether you want to continue.
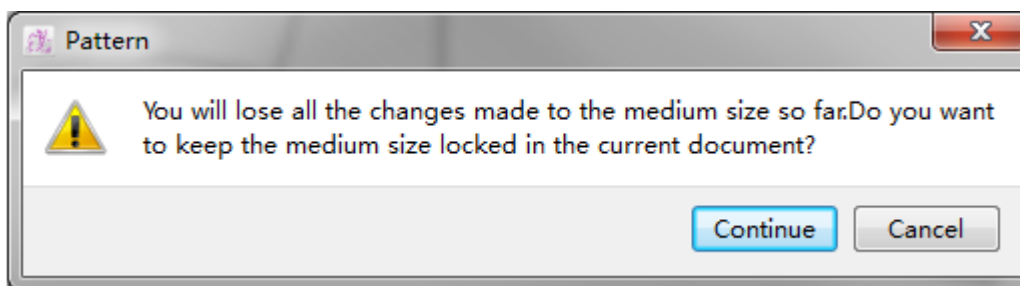
To create a new Grading Nest using the Generate… button:

1 Click the *Generate…* button in the *Grading Working Sizes* dialog box.

2 The *Generate Grading Nest* dialog box opens.
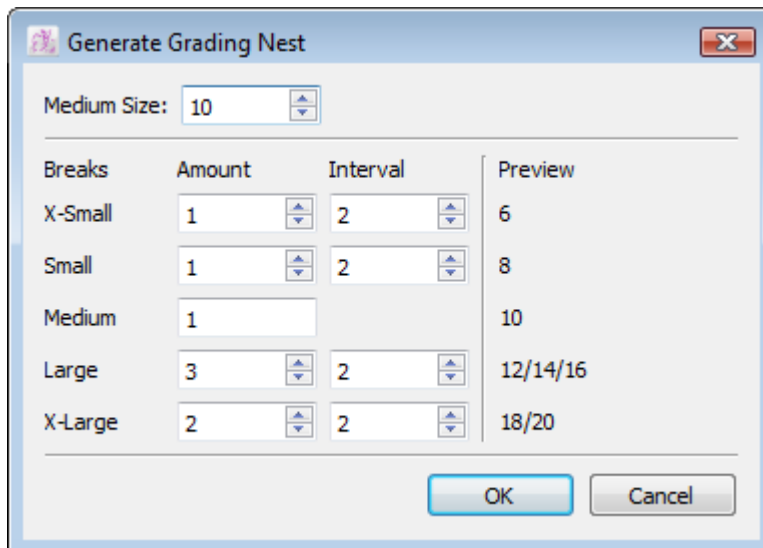
3 Set your medium size by entering the size that represents the medium break (your base size) into the *Medium Size* text box.

4 Below, you can input the number of sizes you would like for each break size(*Amount*), and enter the size interval between each size (*Interval*). You can see a preview of the resulting size to the right of the window.

5 Click the *OK* button to save your new grading nest.

6 Special names can be added afterward; Refer to Establishing Size List in the previous section.

Insert button

The *Insert* button enables you to insert a new size, anywhere within the grading nest.

To Insert a new size in the Grading nest:

1 In the size window in the *Grading Working Sizes* dialog box, highlight the place in the grading list above which you would like to add a new size.

2 Click the *Insert* button.

3 A new size appears above the size that you highlighted.

4 Click the *OK* button to save your changes.

Add button

The *Add* button adds a new size to the end of the Grading Nest.

To add a new size to the end of the Grading nest:

1 Click the *Add* button in the *Grading Working Sizes* dialog box.

2 A new size appears at the end of the Grading nest list.

3 Click the *OK* button to save your changes.

Remove button

The *Remove* button deletes a selected size from the Grading Nest.

To remove a size from the Grading nest:

1 In the size window in the *Grading Working Sizes* dialog box, highlight the size that you wish to remove.

2 Click the *Remove* button.

3 The selected size is deleted from the Grading Nest list.

4 Click the *OK* button to save your changes.

Color

When you create multiple sizes of the same break (for example, several size breaks "small"), you can use the *Color* feature in the *Grading Working Sizes* dialog box to assign a unique color to each size.

In the grading nest, each size within the same break group can appear as a different color.

To assign a unique color to each size:

1 Make sure that you have selected *Use the Grading Nest Colors* in the *Breaks & Colors* dialog box that you can find in the *Preferences* sub-menu, *Options* menu. See the section of this User Manual about the *Options* menu for further details.
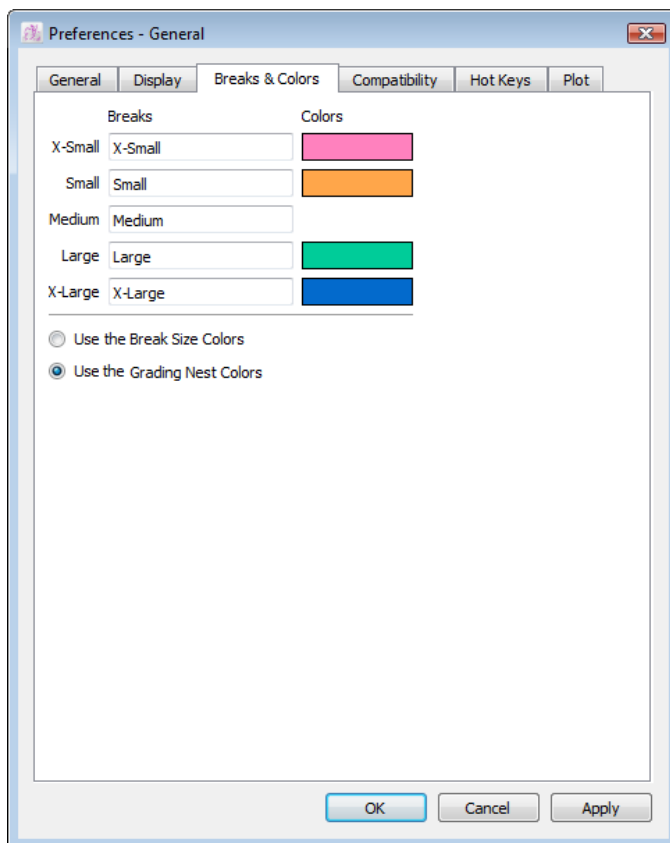
2 In the *Grading Working Sizes* dialog box, select the size you wish to assign a grading nest color to.

3 Click the color box next to the size.
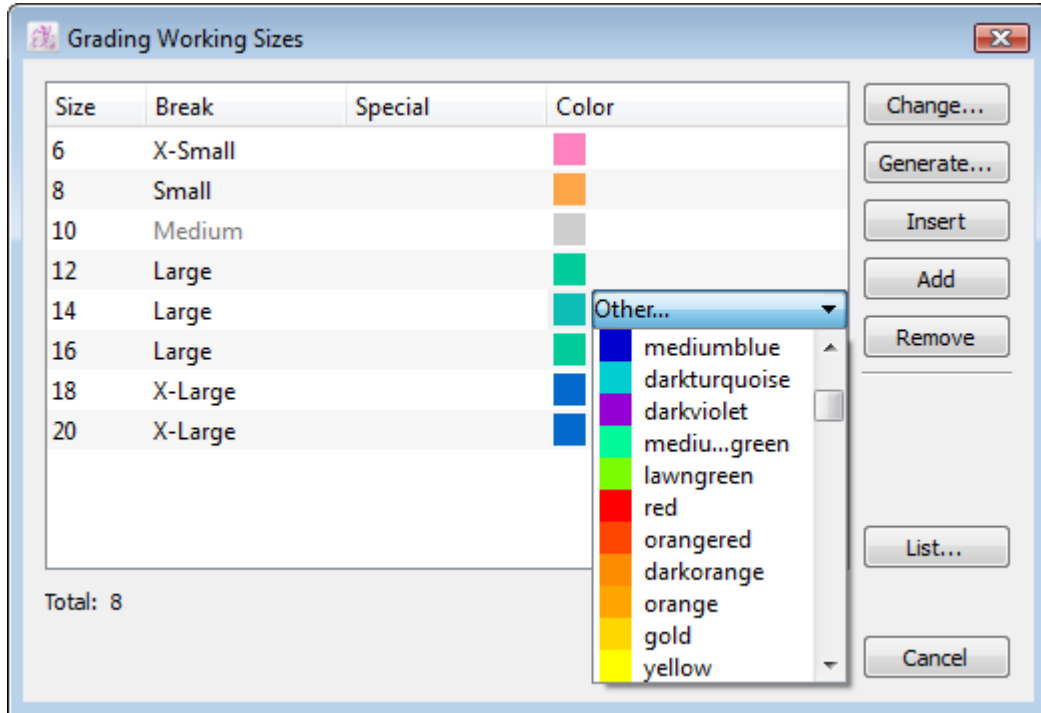
4 Select the color you wish to use from your Operating System's color picker.

5 Repeat these steps to add unique colors to the other sizes you wish to customize.

Your grading nest shows all sizes in the colors that you have selected.

Grading Nest List

Instead of going through the same process again, you can save your *Grading Working Sizes* information and reuse it for another pattern file if the same nest is required.

Press the *List…* button in the *Grading Working Sizes* dialog box. A second dialog box opens where the previously saved grading nest information is listed (if any):
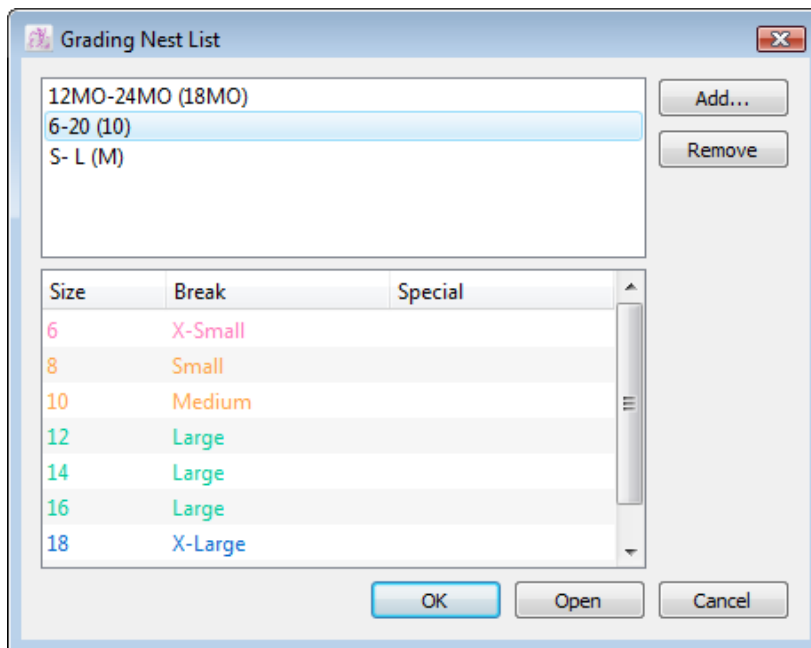
To register the current grading working sizes to the Grading Nest List:

1 Press the *Add* button.

2 Enter the name of the current Grading nest.

3 Click the *OK* button.

4 Select the Grading Nest Name, the Grading Nest details shows on the second part of the dialog box.
  This grading nest appears in the *Grading Nest list* dialog box.

Buttons in the *Grading nest List* dialog box offer the following options:

Remove: To delete the selected grading nest from the list.

Open: To validate the Grading Nest List to the open pattern file.

Grade Menu: Desizing...

The *Desizing...* item in the *Grade* menu allows you to select another size from the Grading Nest and consider it as the working size (Medium). Desizing is always applied to all the pieces in the current style and you cannot Undo/Redo (*Edit* menu) a desizing.

Two methods are available to desize a style: desizing without shape modification and desizing with shape modification.

To desize Without Shape Modification:

1 Select the *Desizing* item in the *Grade* menu.

The *Desizing* dialog box opens:
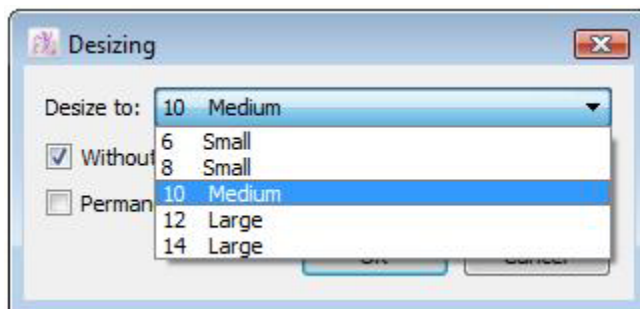
2 From the drop-down menu, select the size that you want to become your working size.

3 Check the *Without Shape Modification* check box.

4 Click the *OK* button to apply the desizing without shape modification.

> **Note:** You cannot select *Without Shape Modification* and *Permanent Desizing* check boxes at the same time.

The desizing Without Shape Modification modifies the grading nest by moving the medium size to another size of the existing grading nest. The grading nest breaks (*Grading working sizes* dialog box) and the grading evolutions (*Grading Info* dialog box) change to keep the same shapes and measurements for all sizes in all pieces.

The desizing Without Shape Modification allows you to verify the measurements of a specific size. To go back to the original medium size, open the *Desizing* dialog box, select the original medium size number in the drop-down menu, select the *Without Shape Modification* check box and click the *OK* button.

For example, if your medium size is 10, you can change it to size 14 or another size number.

Before desizing Without Shape Modification – the Medium size is listed as Size 10:
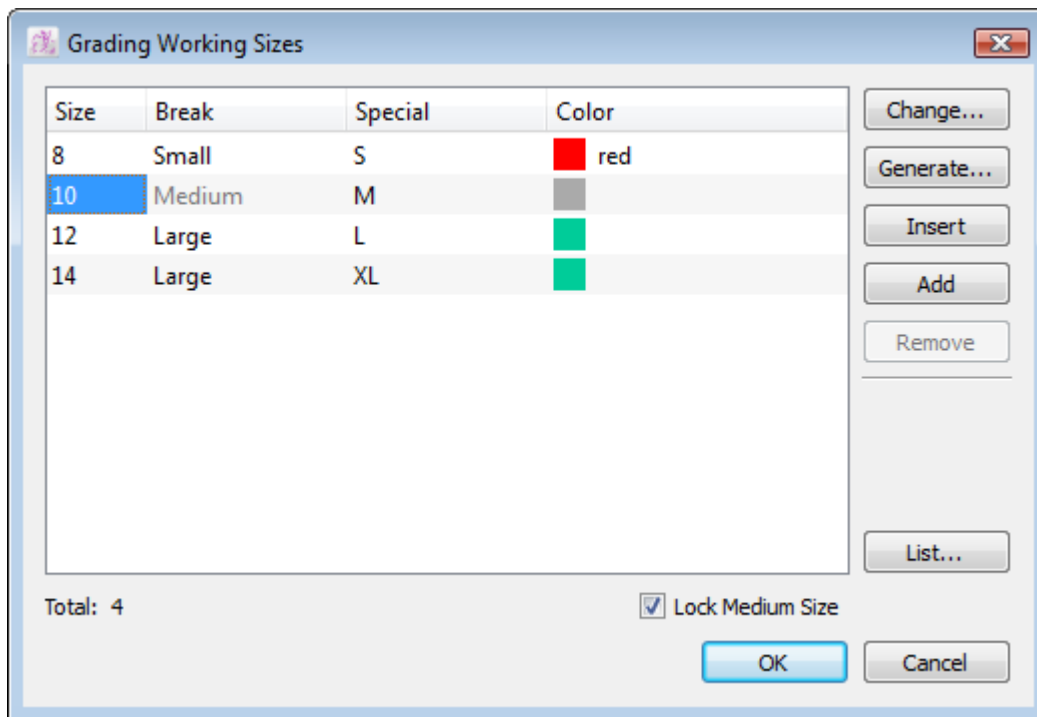
After desizing Without Shape Modification – the Medium size is listed as Size 14:

Original Medium size 10

Desizing Without Shape Modification Medium size 14
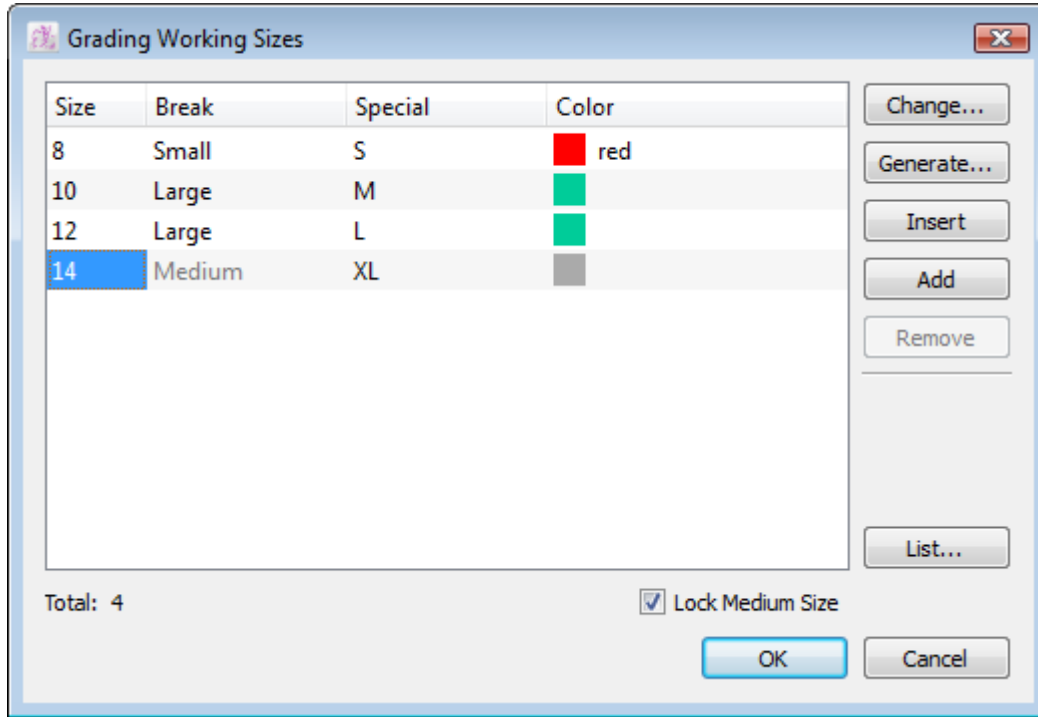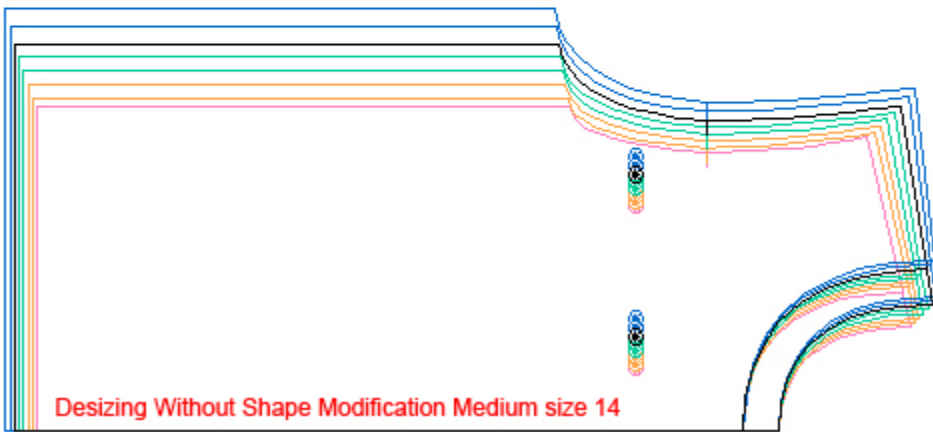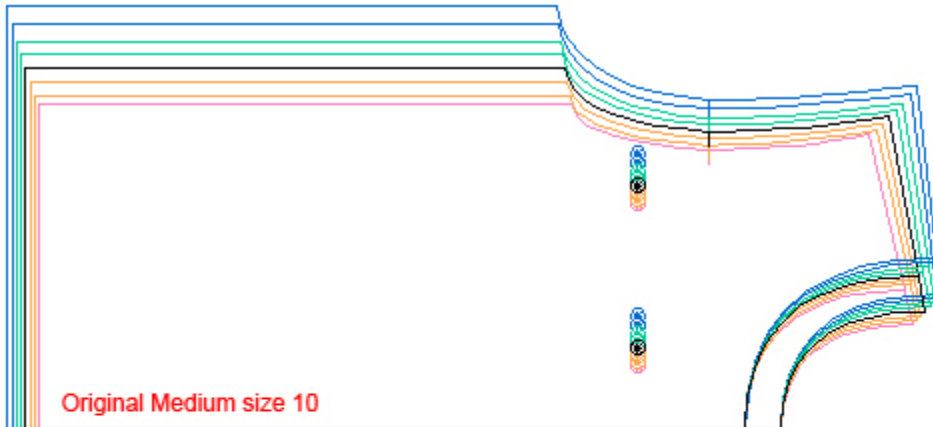
To desize with Shape Modification:

1 Select the *Desizing* item in the *Grade* menu.

The *Desizing* dialog box opens:
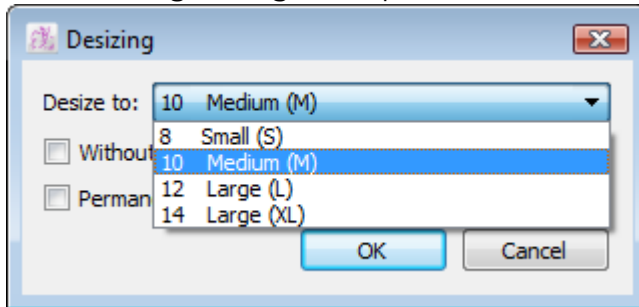
2 From the drop-down menu, select the size that you want to become your working size.

3 Uncheck the *Without Shape Modification* check box.

4 Click the *OK* button to apply the desizing with shape modification.

The desizing with shape modification applies the measurements of the desired size to the medium size for all pieces. The grading nest (*Grading Working Sizes* dialog box) and the grading evolutions (*Grading Info* dialog box) remain the same. The shapes for all sizes are adjusted according to the new shape of the medium size.

For example, if the medium size is size 10, after a desizing with shape modification to the size 14, the working size remains size 10, but with the measurements of size14.

Size 14

Original Medium Size 10

New Medium Size 10 once Desized to Size 14
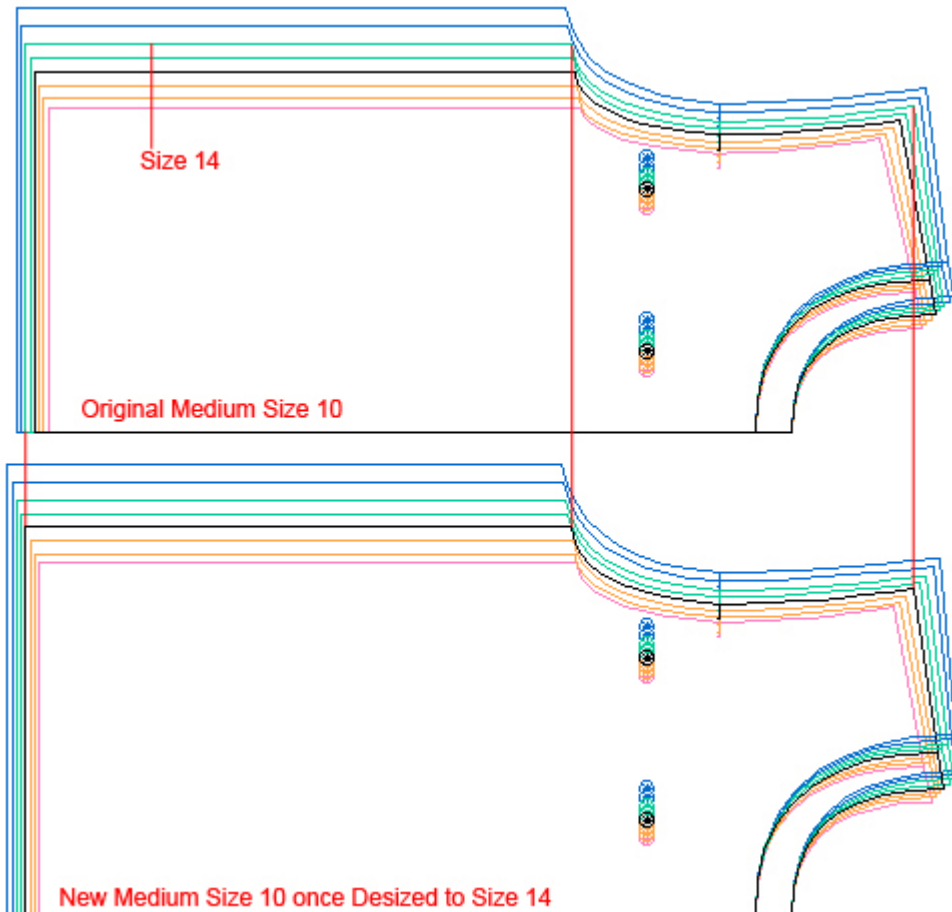
If the *Permanent Desizing* check box is checked, the desizing is permanent.

If the *Permanent Desizing* check box is unchecked, the desizing is temporary. To go back the original shapes, open the *Desizing* dialog box, select the medium size number in the drop-down menu and click the *OK* button.

Desizing must be permanent to use a pattern file for the creation of a new marker file in PAD *Marker* Design. To convert a temporary desizing to a permanent desizing, open the *Desizing* dialog box, check the *Permanent Desizing* check box and click the *OK* button.
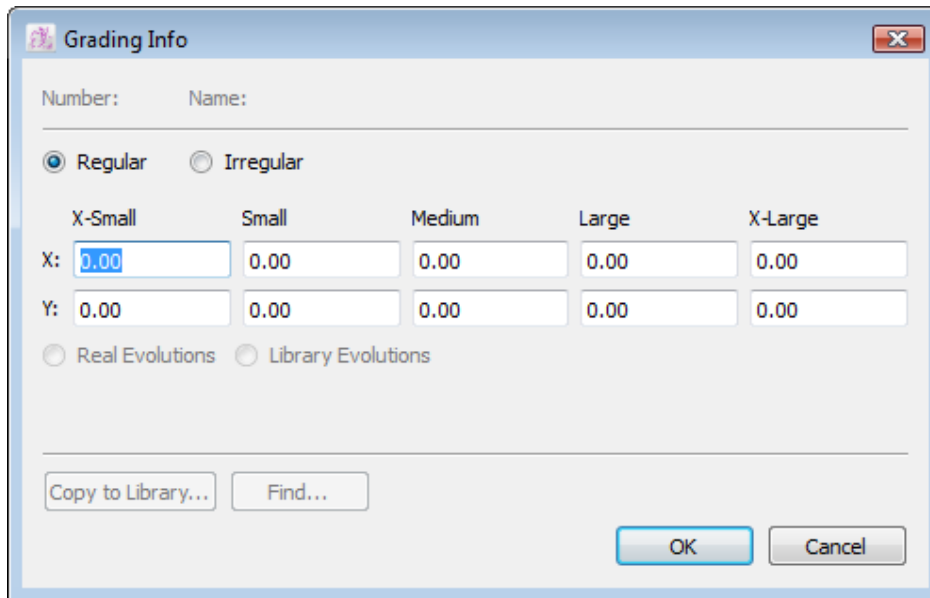
Grade Menu: Library
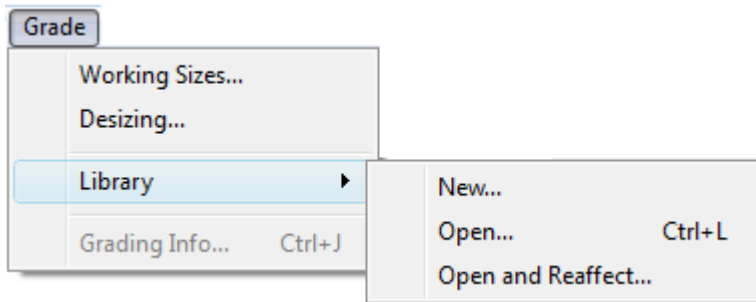
A grading library allows you to keep the grading evolutions, or points, in a database. The Grading Library is explained in the Grading Basics section of this chapter. The three items contained in the *Library* sub-menu of the *Grade* menu are the same as the three first items of the drop-down menu of the *Grading Library* window. Refer to the Grading Basics section for further details about those three items.

Grade Menu: Grading Info...

The *Grading Info...* item in the *Grade* menu allows you to create New Grading Evolutions, and view and/or modify grading coordinates on selected points.

To create a New Regular Grading Evolution:

1 Select the point(s) required on the shape(s).

2 Select the *Grading Info...* item in the *Grade* menu. The *Grading Info* dialog box appears.

3 Enter the X and Y coordinate values of the point(s) in the dialog box.

4 Press on the *OK* button to validate the operation.

The Grading Info dialog box is divided into three sections:

The first section is the Grading Library reference. If Grading Evolutions correspond to an evolution from the Library, the number and name are highlighted in the Grading Library.

The second section contains the Grading Evolution coordinates in X and Y, according to the size group: X-Small, Small, Medium, Large and X-Large. Two radio buttons (Read evolutions and Library evolutions) allow you to verify if the coordinates have been modified according to those found in the open Grading Library.

The third section contains two buttons: the Copy to Library button and the Find button.

The *Copy to Library* button allows you to copy the coordinates of the selected point to an open Library:

1 Open the *Grading Info* dialog box.

2 Select the *Copy to Library* button.

3 Enter the name and the number of the point.

The *Find* button searches for Grading Evolutions in an open library. To find a Grading evolution that already exists:

1 Click the *Find* button.

2 Enter the name or the number of the grading evolutions that you want.

3 Click the *Search* button.

When graded points with Irregular Grading are selected, the Grading Evolutions change and allow you to view and modify grading coordinates independently, on all sizes.
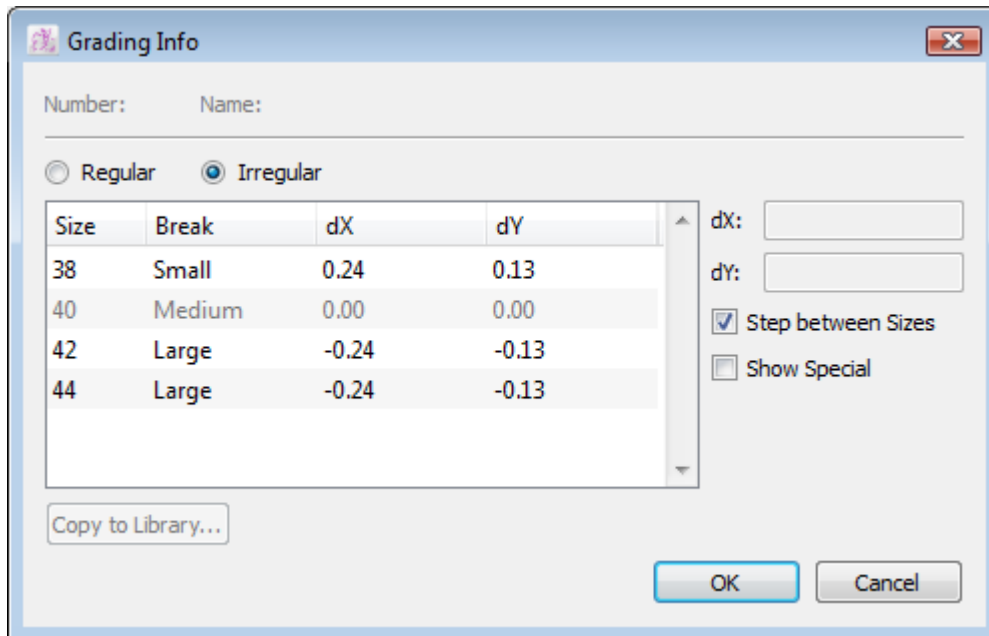
The new *Grading Info* dialog box is divided into three sections:

The first section displays grading library references. If Grading Evolutions correspond to an evolution from the library, the number and name are highlighted in the Grading library.

The second section contains the Grading Evolutions in dX and dY, according to each size on the Grading Nest. The Grading Evolution can be displayed from the Medium size or by Step between Sizes, if you have selected the *Step between Sizes* check box.

The third section contains the *Copy to Library…* button, which copies the coordinates of selected points to an open library.

The *Show Special* check box hides the Break names and displays the Special size names established in the *Working sizes* dialog box.

To create an Irregular Grading:

1 Select the Point(s) required on the shape.

2 Select the *Grading Info…* in from the *Grade* menu.

3 Select the *Irregular* radio button.

4 Enter the desired dX and dY coordinates for each size.

To copy the grading in the Library:

1 Do the steps to create an irregular grading.

2 Select the *Copy to Library* button.

3 A new dialog box appears. Enter the name and number of the point.
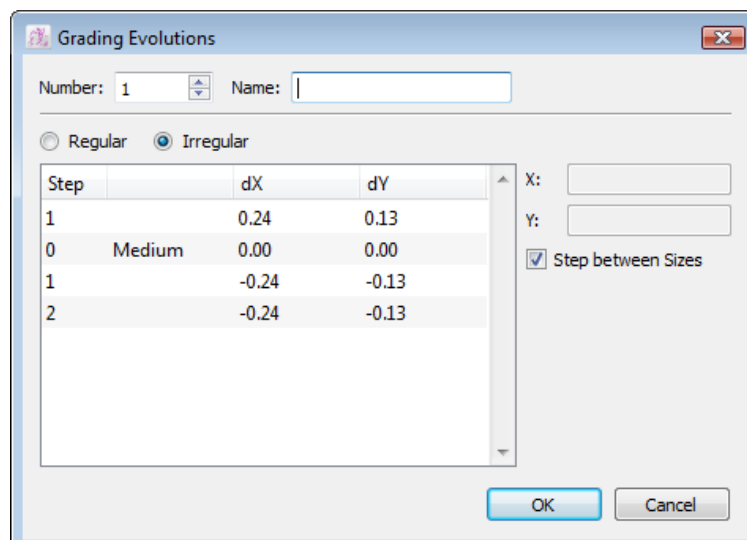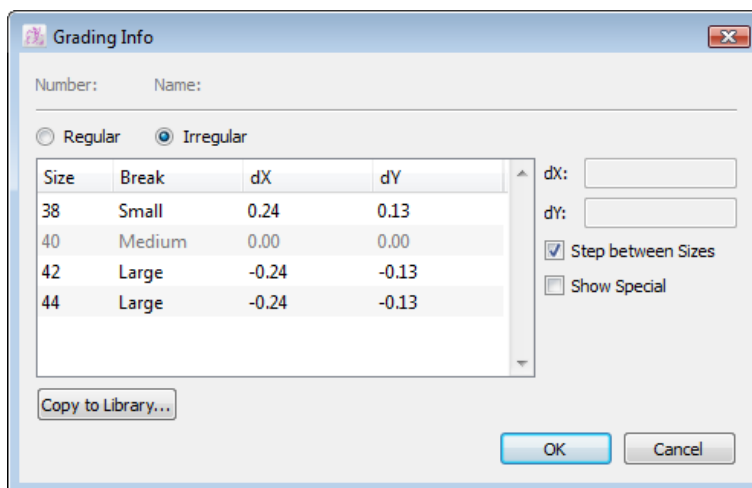
Grading Tools

The Grading Toolbox / Toolbar section allows you to modify the grading coordinates of a grading nest. These tools are useful to further manipulate the grading evolution.

Toolbox

Toolbar

Grading Evolution can be easily modified in four different ways, by:

• Entering coordinates into the information of Grading Evolutions to the dialog box (*Grading Info...* in the *Grade* menu).

• Using the Grading tools.

• Using the Grading Arrows.

• Using a Grading Library.

Note: To use the Grading tools, you must be in Grade View and have a defined grade nest.

Symmetry Grading

The *Symmetry Grading* tool allows you to apply symmetry freehand or with a precise angle.

To symmetry the grading:

1 Activate the piece.

2 Select the *Symmetry Grading* tool.

3 Click a reference point to be modified, click somewhere within the working area and hold down the left mouse button (Windows / Linux) or the mouse button (Macintosh); a line representing the axis of symmetry appears. Drag this line to the desired position.

Hold down the **Shift** key (Windows, Macintosh and Linux) to constrain the symmetry axis to X, Y, ± 15 ° or ±165 °.Constrain a movement in X, Y or every 15°. (Define the angle by the setting "Round Angle" in the Preference menu.)
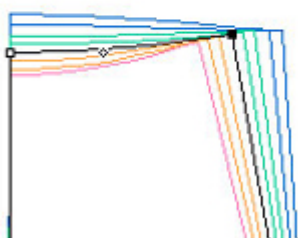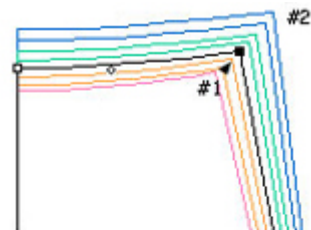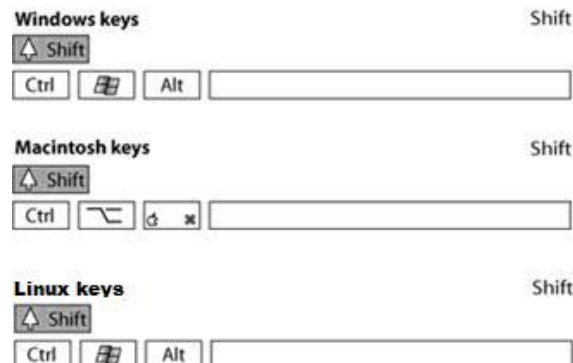
The *Symmetry Grading* tool allows you to reverse the Grading Evolution according to the X axis, the Y axis, or a precise angle.

To symmetry the grading in a precise angle:

1 Activate the piece.

2 Select the *Symmetry Grading* tool.

3 Hold down the **Alt** key (Windows) or the **Option** key (Macintosh) or **Alt +Windows** keys (Linux).

4 Click the point you wish to modify. The *Grading Symmetry* dialog box appears:
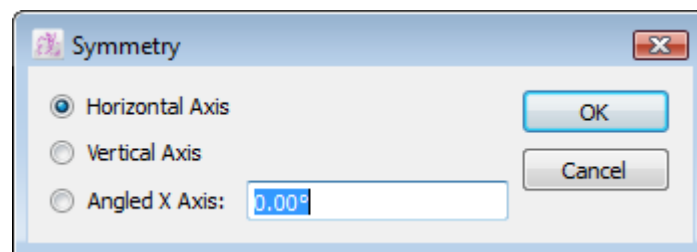
5 Select the appropriate radio button or enter the value of the desired angle in the text box. The angle can be positive or negative, depending of the sign of the value.
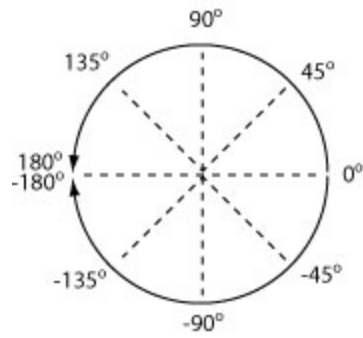
6 Click the *OK* button to execute the function.
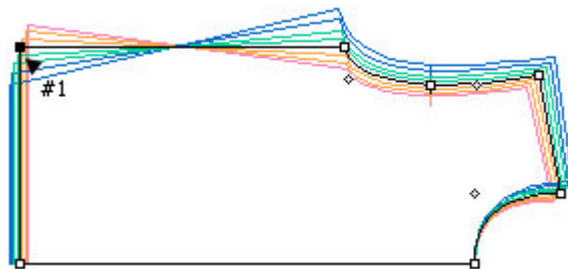
Rotate Grading

The *Rotate Grading* tool allows you to execute a freehand rotation of the grading around the medium point.

To rotate the grading of an activated point:

1 Activate the piece.

2 Select the *Rotate Grading* tool.

3 Click the reference point you wish to modify, click somewhere in the working area and hold down the left mouse button (Windows / Linux) or the mouse button (Macintosh); a line appears. Move this line to the desired position.
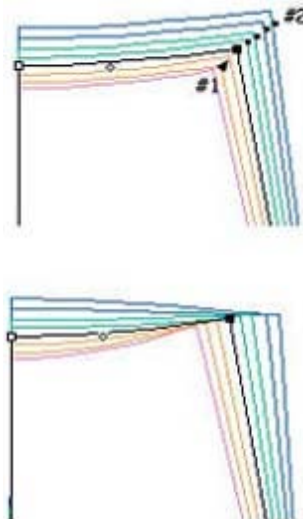
Hold down the **Shift** key (Windows, Macintosh and Linux) to constrain the rotation to X, Y or 15°. (Define the angle by the setting "Round Angle" in the Preference menu.)

The *Rotate Grading* tool allows you to rotate the grading coordinates to 45°, 90° or at a determined angle.

To rotate the grading coordinates in a precise angle:

1 Activate the piece.

2 Select the *Rotate Grading* tool.

3 Hold down the **Alt** key (Windows) or the **Option** key (Macintosh) or **Alt +Windows** keys (Linux) and click the point you wish to modify.

The *Grading Rotation* dialog box opens:
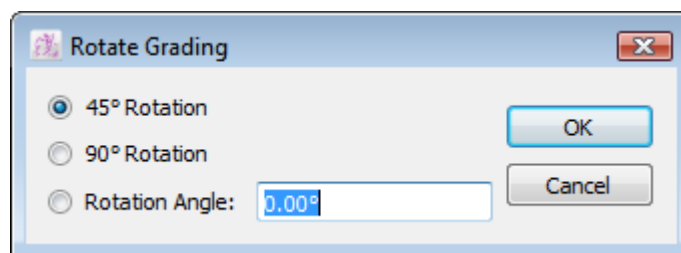
4 Select the appropriate radio button or enter the value of the desired angle in the text box. The angle can be positive or negative, depending of the sign of the value.
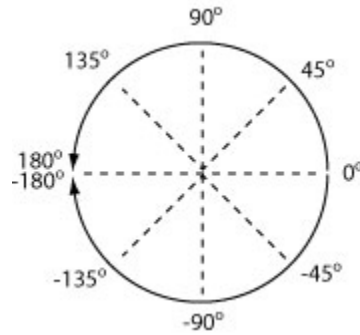
5 Click the *OK* button to execute the function.
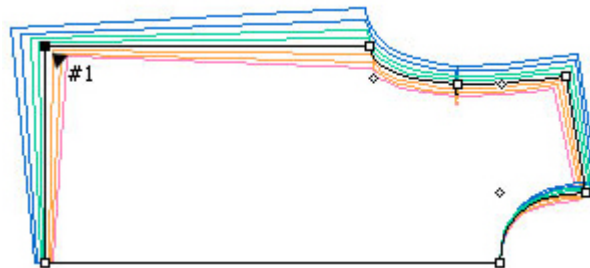
Manipulating Grading

The *Manipulate Grading* tool allows you to move each graded size of a selected point freehand.

To manipulate the grading:

1 Activate the piece and select the *Manipulate Grading* tool.

2 Click a point. A small point appears on each grading line.

3 Select and drag the size point(s) to the required position.

The X and Y evolutions are indicated in the Info bar. You can modify any size.

An Irregular evolution results if the sizes are moved individually.

A Regular evolution remains as a Regular evolution if the selected size is the biggest size in a large or extra-large break size, or if it is the smallest size of a small or extra-small break size.
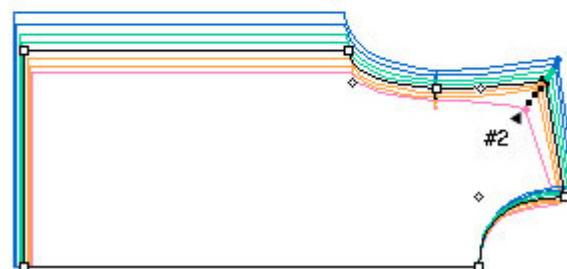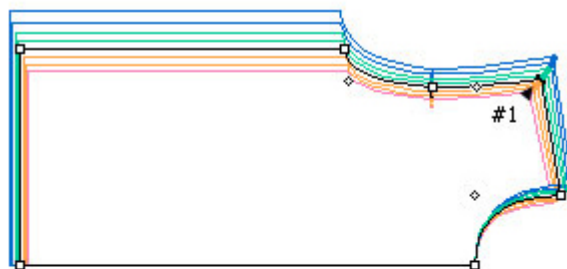
Hold down the **Shift** key (Windows, Macintosh and Linux) to restrain movement on the X or Y axis or at a 15°. (Define the angle by the setting "Round Angle" in the Preference menu.)

Windows keys Shift
Shift
Ctrl Alt

Macintosh keys Shift
Shift
Ctrl

Linux keys Shift
Shift
Ctrl Alt

Copy/Paste Grading

The *Copy/Paste Grading* tool allows you to copy grading evolutions from one point to another.

To copy/paste the grading:

1 Activate the pieces.

2 Select the *Copy/Paste Grading* tool.

3 Click the reference point to copy its information.

A dialog box appears:
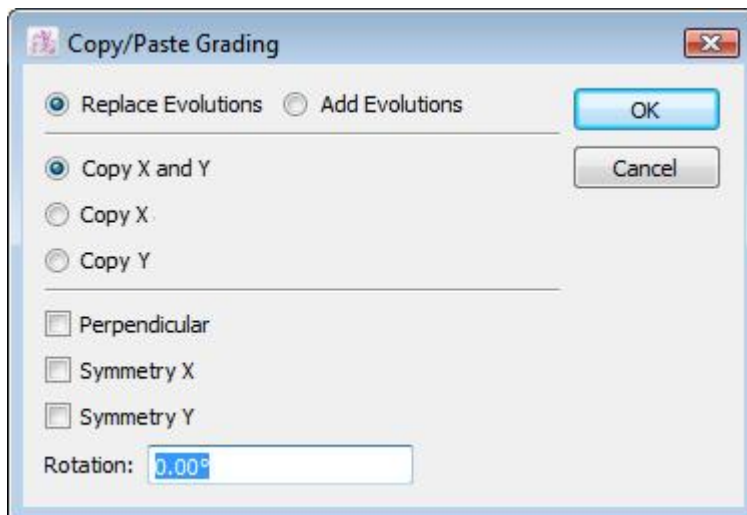
4 Select the appropriate radio buttons and/or edit the text box.

5 Click the *OK* button to execute the function.

6 The cursor changes to a dash cross. Click the point where you want to paste the copied Grading Information. It can be a point of the same piece or a point of another activated piece.

Hold down the Shift key to apply these coordinates on more than one point and on other shapes.

The *Copy and Paste Grading* dialog box offers the following options:

Replace Evolutions: It replaces existing evolutions with those previously copied.

Add Evolutions: It adds previously copied coordinates to grading evolutions that exist.

Copy X and Y: It transfers the coordinates of both X and Y axes.

Copy X: It transfers the coordinates of the X axis.

Copy Y: It transfers the coordinates of the Y axis.

Select one of the optional check boxes to apply the grading:

Perpendicular: It pastes the evolutions perpendicularly on the Points.

Symmetry X: It symmetries the copied coordinates on the X-axis.

Symmetry Y: It symmetries the copied coordinates on the Y-axis.

Rotation: It pastes the evolutions with a degree of rotation.

Copy/Paste Grading, before and after:
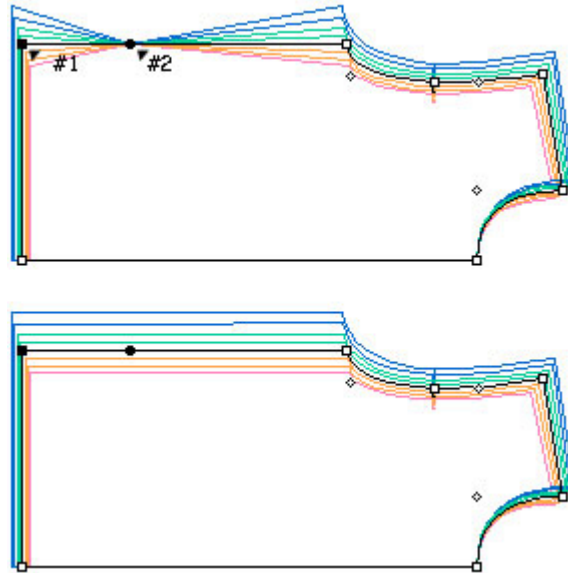
Parallel Grading

The *Parallel Grading* tool allows you to select a segment or an entire shape and assign a *Parallel Grading* to it.

To apply a parallel grading to a segment or an entire shape:

1 Select the segment(s).

2 Select the *Parallel Grading* tool.

3 Click the side (inside/outside the piece) where positive values need to be assigned.
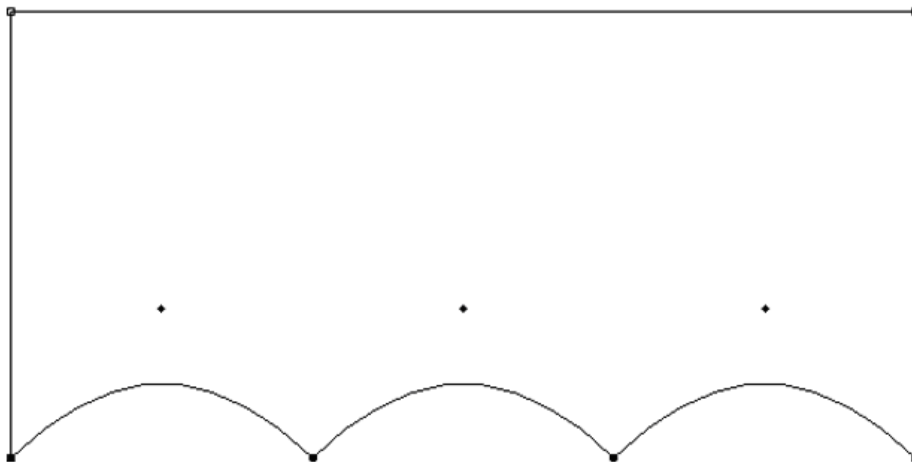
The *Parallel Grading* dialog box opens:
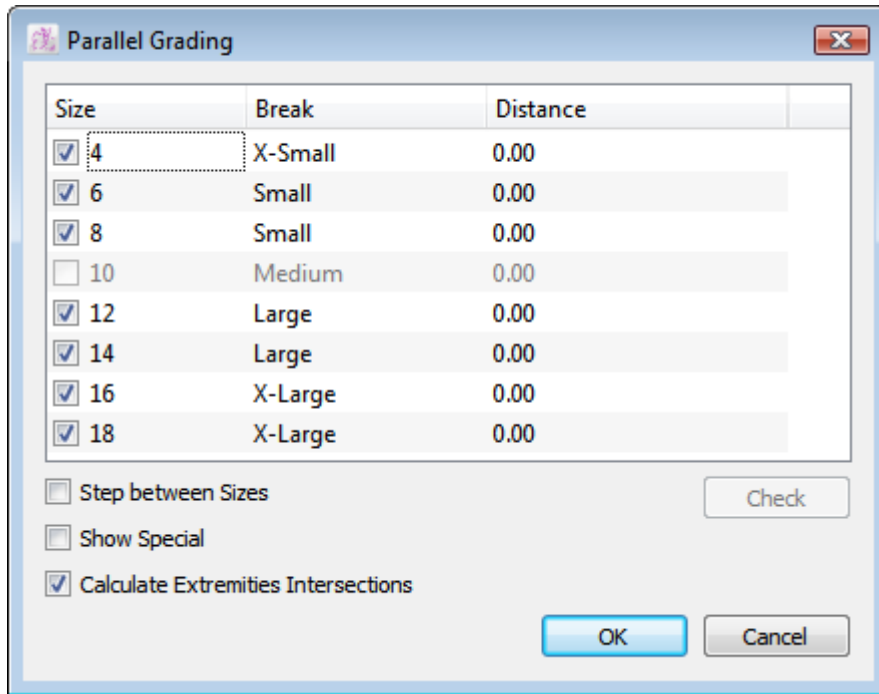
4 Select the size(s) that need parallel grading and enter the desired grading values in the *Distance* text box.

The Result: Parallel Grading
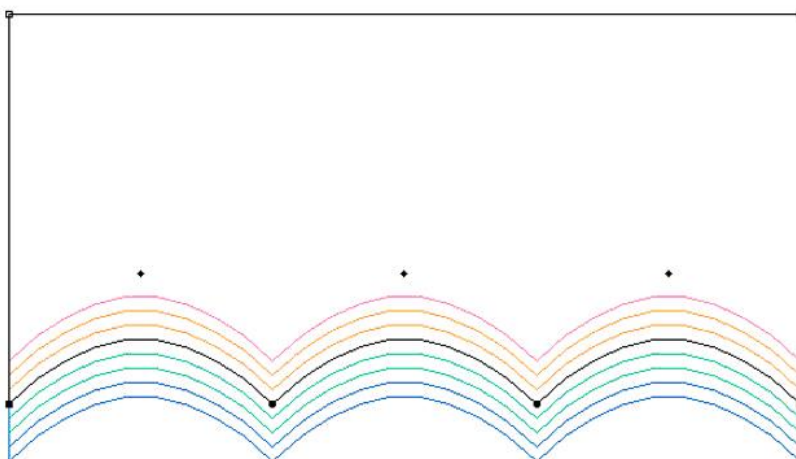
Parallel Grading Dialog box options are defined below:

Step between Sizes: Shows the grading difference from the Medium size (if unchecked) or the difference between each size (if checked) in the dialog box.

Show Special: Allows you to hide the break name and display special characters established in the *Grading working sizes* dialog box.

Check / Uncheck: Allows you to select or deselect sizes on which the *Parallel Grading* should or should not be applied.

Calculate Extremities Intersection:
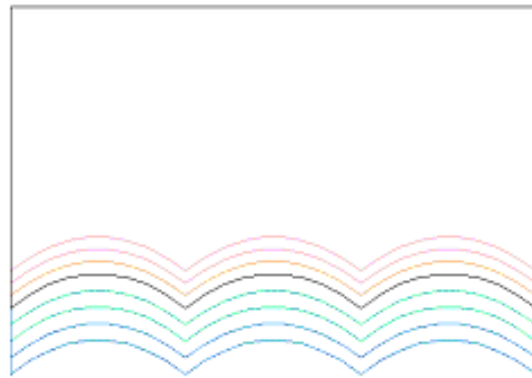
Do not Calculate Extremities Intersection:
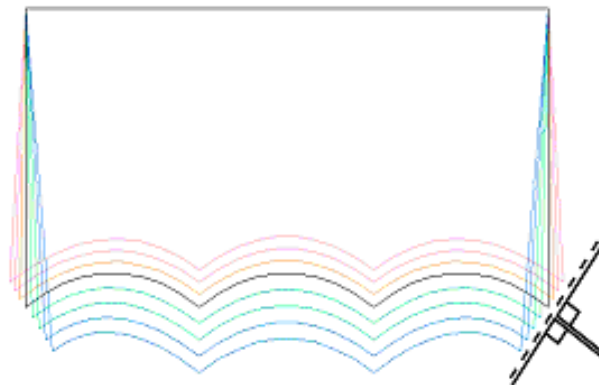
Align Grading

The *Align Grading* tool allows you to change the alignment of a grading evolution.

To align the grading:

1 Activate the piece.

2 Select the *Align Grading* tool.

3 Click the point you wish to adjust.

4 Click a reference point without releasing the mouse button. A guideline appears; drag this guideline to the desired location and release the mouse button.

5 The Grading Evolution is adjusted along the guideline.
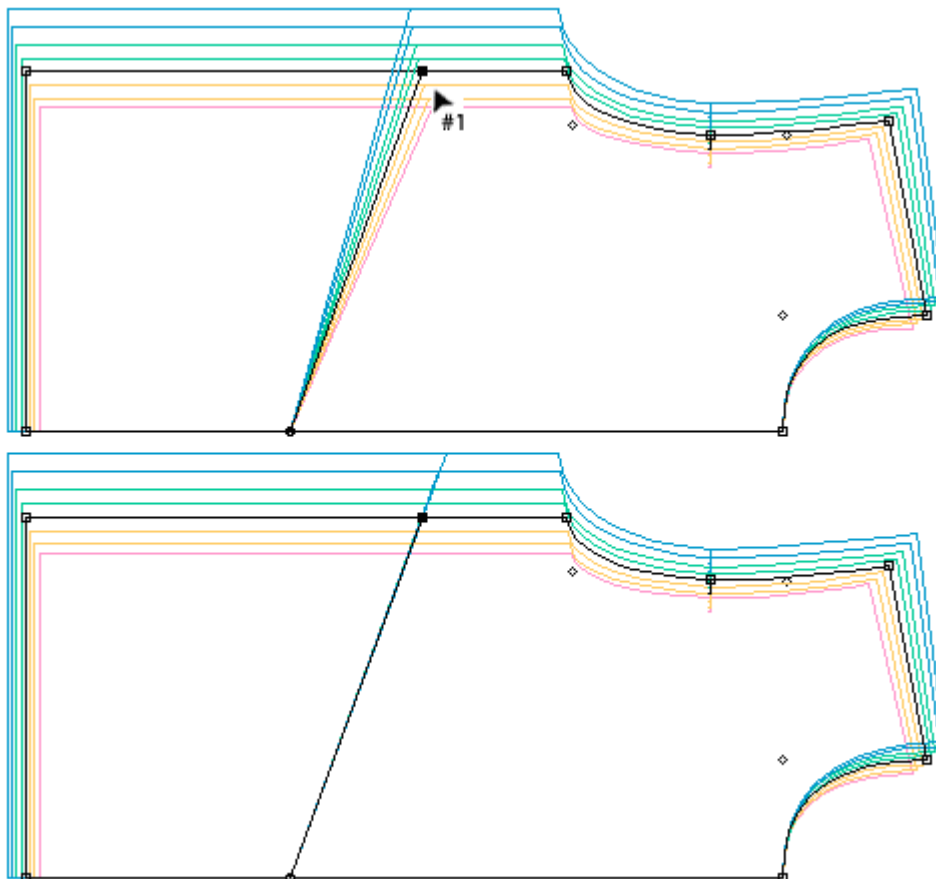
To obtain a straight line, orient the shape on the required axis first. Hold down the **Shift** key (Windows, Macintosh and Linux) on the keyboard to constrain the line movement in X, Y or 15°. (Define the angle by the setting "Round Angle" in the Preference menu.)

Windows keys   Shift

⬆ Shift

| Ctrl | ⊞ | Alt | |

Macintosh keys   Shift

⬆ Shift

| Ctrl | ⌥ | ⌘ ✻ | |

Linux keys   Shift

⬆ Shift

| Ctrl | ⊞ | Alt | |

Copy/Paste Path Grading

The *Copy/Paste Path Grading* tool copies the grading of one path and pastes it to another path. The path of points you want to copy the grading of and the path of points you want to paste the copied grading to must have matching regular points and notches. All intermediate points must be either contour points or mark points without notches.

To copy/paste a grading path if the paths are on a different shape:

1 Select the point(s) of the path you want to copy the grading of.

2 Using the **Shift** key (Windows, Macintosh and Linux), select the point(s) of the path you want to paste the grading to.

Windows keys   Shift
△ Shift
Ctrl ⊞ Alt

Macintosh keys   Shift
△ Shift
Ctrl ⌥ ⌘ ✖

Linux keys   Shift
△ Shift
Ctrl ⊞ Alt

3 Select the *Copy/Paste Path Grading* tool.

4 Click an extremity point of the first path you selected.

5 Click an extremity point of the second path. The grading of the first extremity point you clicked on is pasted to the second point you clicked on, and the grading of every following point on the first path is pasted to the other points on the second path, in sequential order.

Pasting a Path Multiple Times if Paths are on Different Shapes

To paste a path multiple times:

1 Select the path you wish to copy.

2 Select the path(s) to be altered (overwritten by the copied path).

3 Select the *Copy/Paste Path Grading* tool.

4 Hold down the **Shift** key (Windows and Macintosh) and click the starting point of every path where to paste the grading.

Smooth Path Grading

The *Smooth Path Grading* tool allows you to apply grading on a selected path. You can apply grading according to the X or Y axis alone or on both axes simultaneously.

To apply grading on a smooth path:

1 Select one or more segment that form a continuous path.

2 Select the *Smooth Path Grading* tool.

3 Click an extremity point.

The *Smooth Path Grading* dialog box appears:
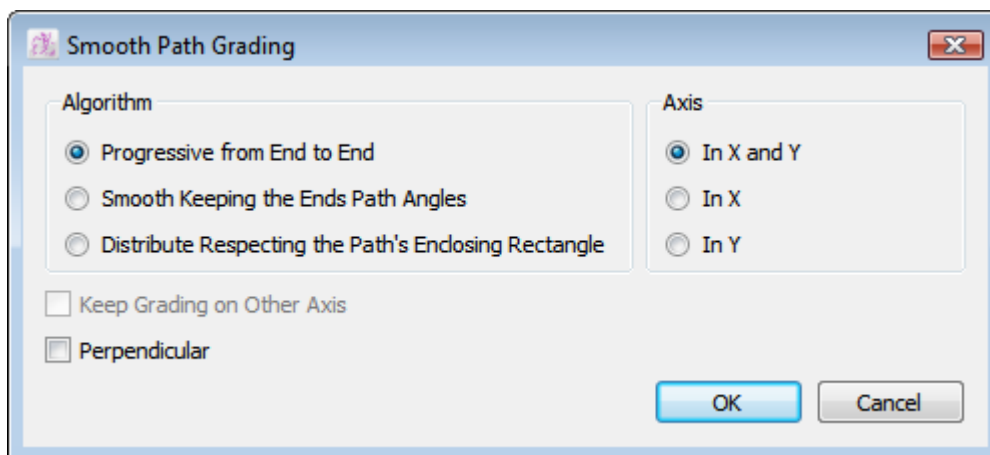
4 Select the appropriate algorithm corresponding to your needs and select the axis that the smoothing is required on.

The *Smooth Path Grading* dialog box offers the following options:

Progressive from End to End: It establishes a progressive grading evolution on a selected path.

Smooth Keeping the Ends Path Angles: It establishes a progressive grading evolution of all sizes on a selected path, keeping the original end path angles.

Distribute Respecting the Path's Enclosing Rectangle: It performs a distributive grading as if you were using the *Distribute Grading Tool* inside a partial selection.

Keep Grading on Other Axis: This option is available when you select the X or Y axis, but not both. Will apply the grading on the selected axis, but will keep the grading as is on the other axis.
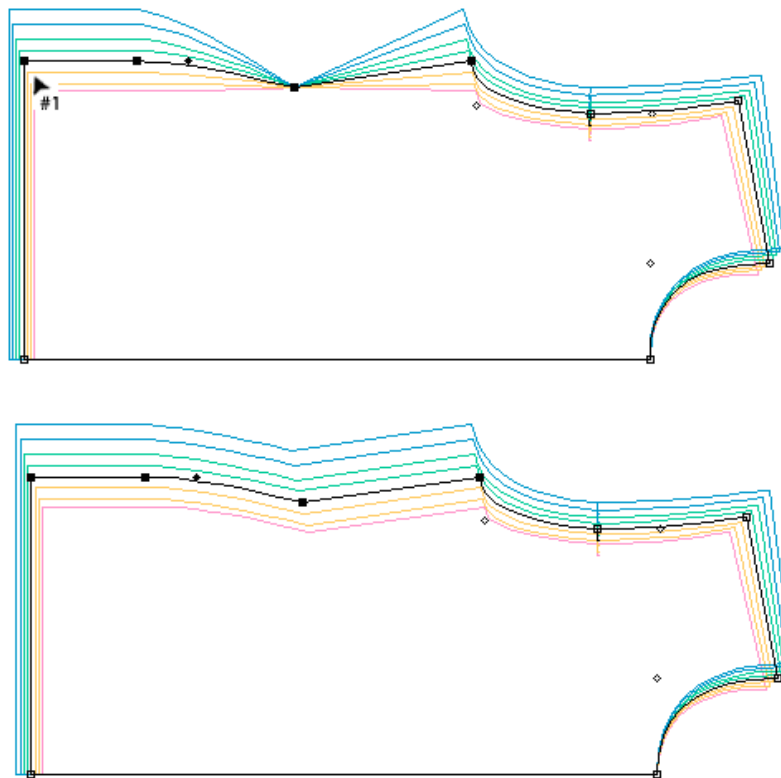
Perpendicular: It applies a perpendicular progression on a segment.
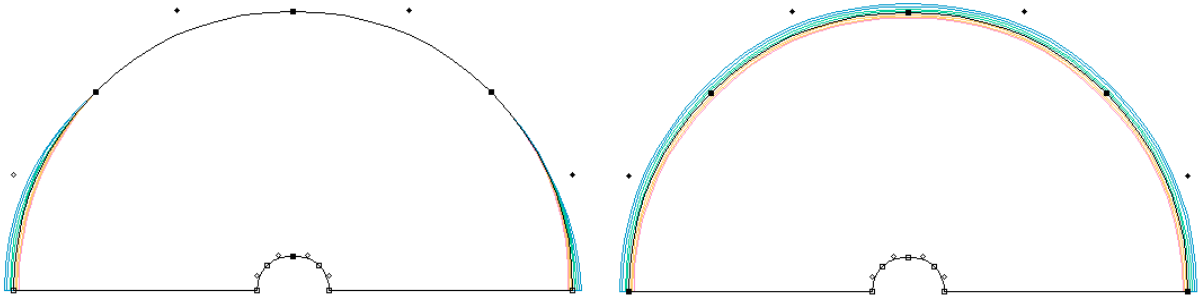
Axis: The axis on which the grading will be appllied. You can apply the grading on both axes.

Distribute Grading

The *Distribute Grading* tool allows you to perform grading distribution tasks within a shape/group or on a selection.

Distribute Grading is available according to two methods of distribution:

• Inside a partial selection of a group or a piece (for armholes, crotches, etc.)
• Inside a group or a piece (for Punch Holes, Style Lines, Internal Darts, etc.)

To distribute the grading inside a partial selection:

This distributes an existing grading, inside a partial selection of a group or a piece to adjust the armholes, crotch, etc.

1 Select the segment(s) and/or point(s) on which the grading is to be distributed.

2 Select the *Distribute Grading* tool.

3 Click two points that represent the enclosing rectangle within which the grading has to be distributed.

4 The *Distribute grading* dialog box opens, allowing you to select on which axis the distribution will be made. Select the Radio button according to the desired grading distribution axis, as follows:

In X and Y: Distributes the grading according to the X and Y axes.
In X: Distributes the grading according to the X axis.
In Y: Distributes the grading according to the Y axis.

The option *Keep grading on other axis* is available with the *In X* and *In Y* distribution methods. When checked, it allows you to modify the grading of the selected axis without affecting the grading of the other axis.

5 Click the *OK* button to execute the function.

Example of distribution inside partial selection:
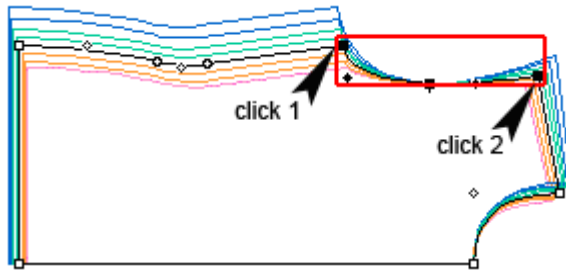
Grading distribution of selected elements will be calculated
from enclosing rectangle of the 2 clicks
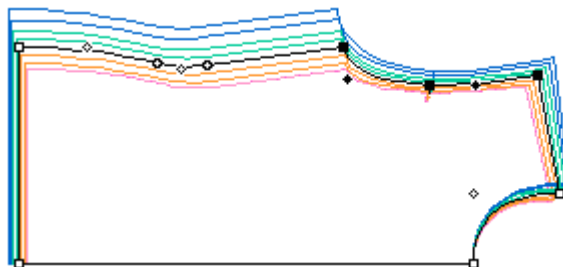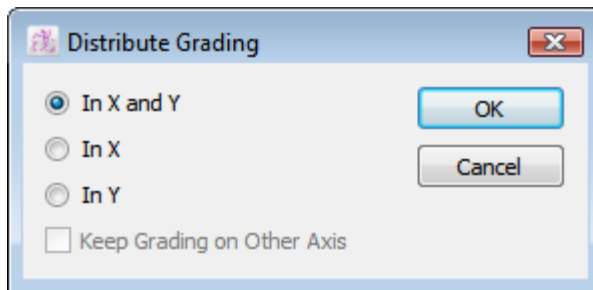
To distribute the grading inside a group:

1 Select the segment(s) and/or point(s) on which the grading is to be distributed.

2 Select the *Distribute Grading* tool.

3 Hold down the **Alt** (Windows) key or the **Option** (Macintosh) or **Alt +Windows** keys (Linux) key and click a selected point.

Windows keys   Alt

Shift

Ctrl | | Alt |

Macintosh keys   Option

Shift

Ctrl | | ⌘ ⌘ |

Linux keys   Windows + Alt

Shift

Ctrl | | Alt |

4 The *Distribute Grading* dialog box opens. Select the Radio button according to the desired grading distribution axis, as follows:

• **In X and Y:** Distributes the grading according to the X and Y axes.
• **In X:** Distributes the grading according to the X axis.
• **In Y:** Distributes the grading according to the Y axis.

The option *Keep Grading on Other Axis* is available with the *In X* and *In Y* distribution methods. When checked, it allows you to modify the grading of the selected axis without affecting the grading of the other axis.

5 Click the *OK* button to execute the function.

Example of distribution inside a group:
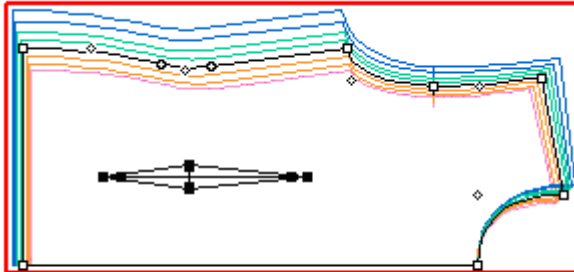
Grading distribution of selected elements will be calculated
from enclosing rectangle of the group when using
Alt (Windows), Command (Macintosh)

Result
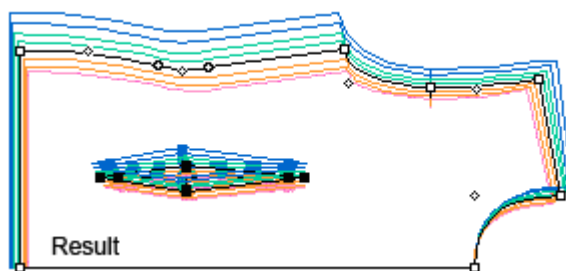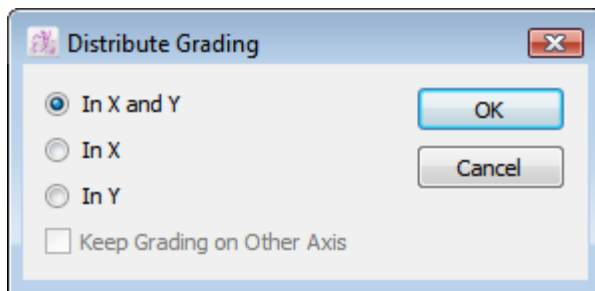
Chapter 5
PAD SYSTEM MTM-FRAMES

• • • • • •
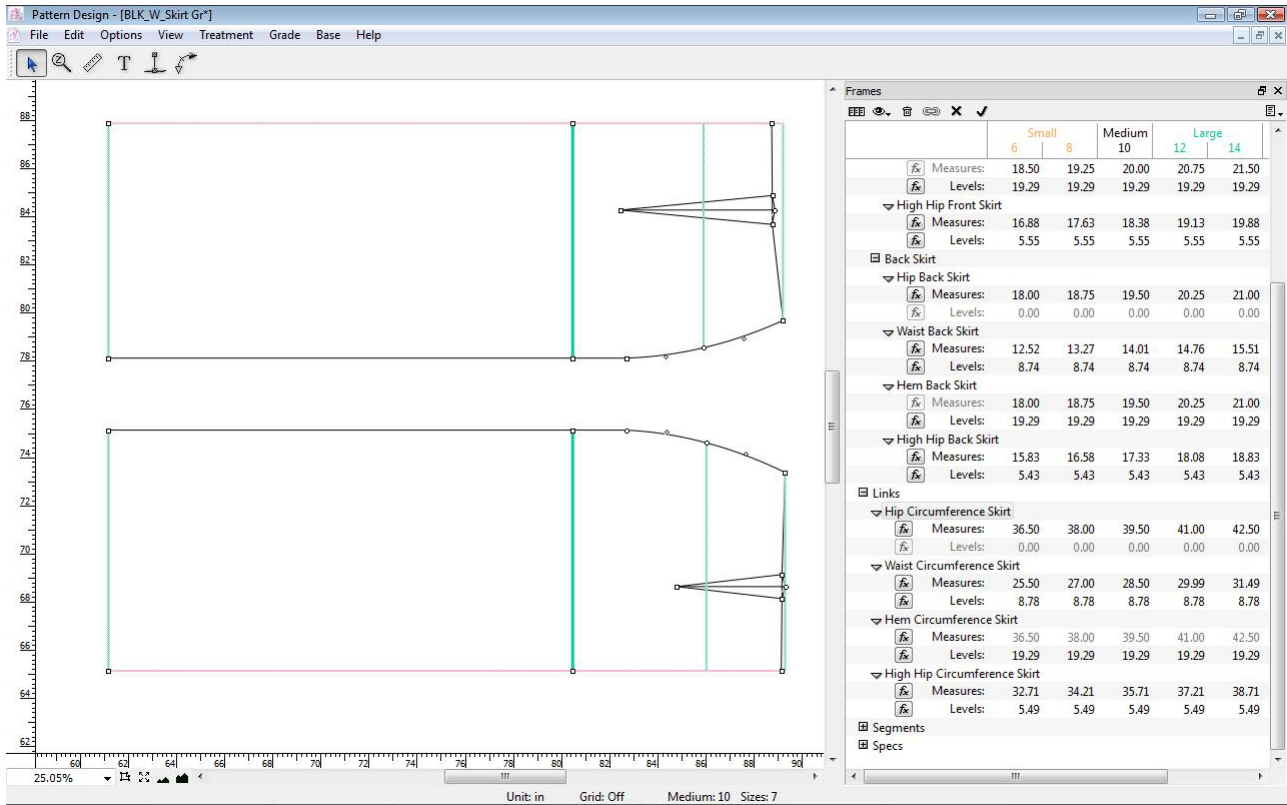
The Frame Environment, available in the *View* menu, contains advanced tools to obtain the precise measurements of the medium size and/or the graded sizes.

Frames are construction lines applied to a construction plan. The Frame values are customizable and allow the user to rapidly change the proportions of the corresponding pieces.

Frames on pieces can be linked together to obtain circumference measurements. They can be related to one another through a formula editor allowing modifications to follow from piece to piece.

Note: The Frame feature is available in *Pattern Enterprise* only.

The User Environment in Frames

Note: Prior to creating the Frame, all the points used to apply the Frames must already be on the Pattern Piece.

To open or close the *Frames* window:

1 Select the *Frame View* item in the *View* menu.

2 From the *Options* menu, select the *Show Frames* item. If this item is already activated, the menu displays with a check mark (✔) next to the item. The *Frames* window should be visible on screen.
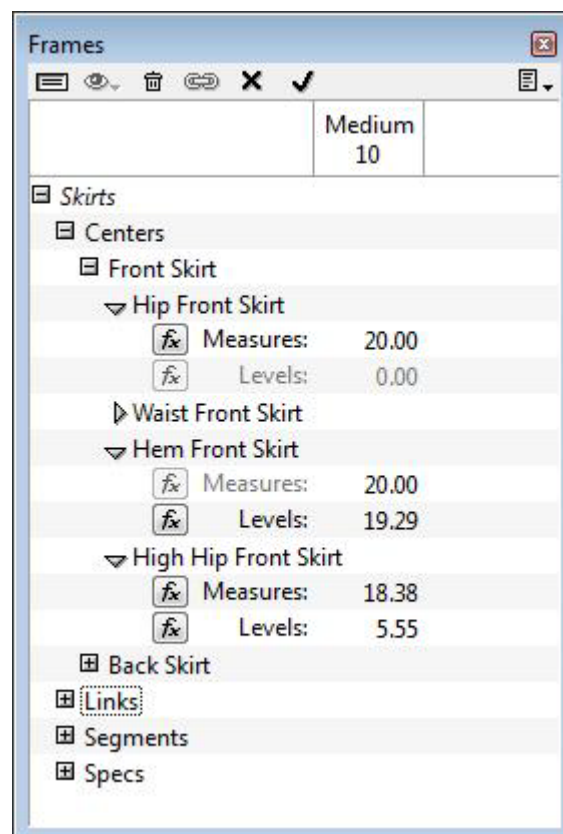
3 You can use the icons located at the top of the window to manipulate the Frames.

	Medium/All sizes: This toggle button allows you to select whether you want to modify the measurements of the medium size or of all the sizes of the Grading nest. When you define the Grading Working Sizes, the *Frames* window displays all the sizes in an edit text box if you click the *Edit Medium/All sizes* icon.
▭	The *Medium* button maintains the grading values between sizes.
▦	The *All Sizes* button allows you to modify the grading values between sizes.
👁▾	**View Options:** It shows the graded measurement: Lengths, Differences or Steps.
🗑	**Delete:** This button erases selected undefined elements.
🔗	**Link Frames**: It links selected Frames to get their combined values.
✕	**Cancel:** It cancels the last entries up until the last Apply.
✓	**Apply:** It applies the last entries in the *Frames* window.

Note: You can undo the changes you made anytime by clicking the *Undo* item in the *Edit* menu.

The *Frames* window sub-menu, on the upper right side of the *Frames* window, features a black arrow with an icon that opens a drop-down menu with the following options:
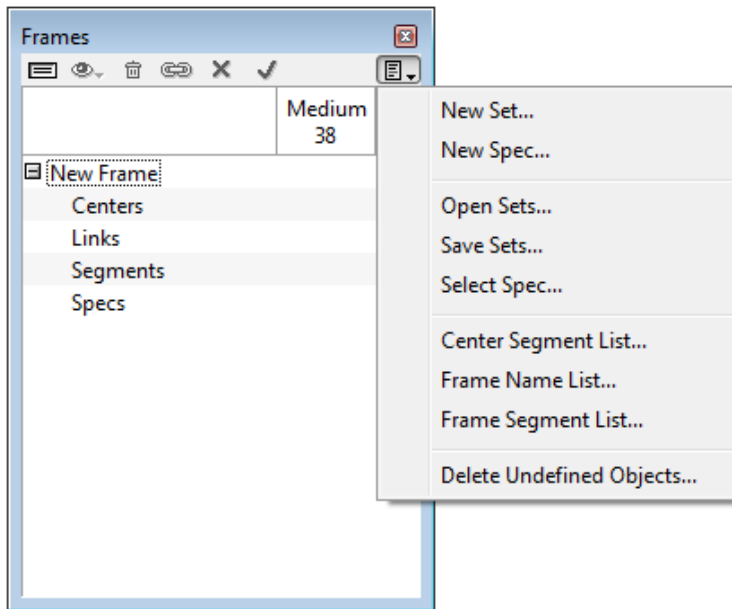
New Set…: It creates or adds a new set of Frames

New Specs…: It assembles combined Frame results to create garment specification sheets for quality control purposes.

Open Sets…: It opens existing Sets (Frame Libraries) to apply and use them on a similar pattern.

Save Sets…: It saves a Frame Set for reuse on similar pattern shapes. In the Save type drop-down menu, select the file that you want to save in V5 or the previous version. Ex: Select the file type to Frame Library File 5.0, it supports in V5. And choose to the file type to Frame Library File 4.80, it supports in 4.8 or below.

Select Spec…: There are four categories (Body, Sleeve, Collar and Bottom) in the dialog box of Select Spec. And each category will pre-set the most used items to each category and let you to choose.
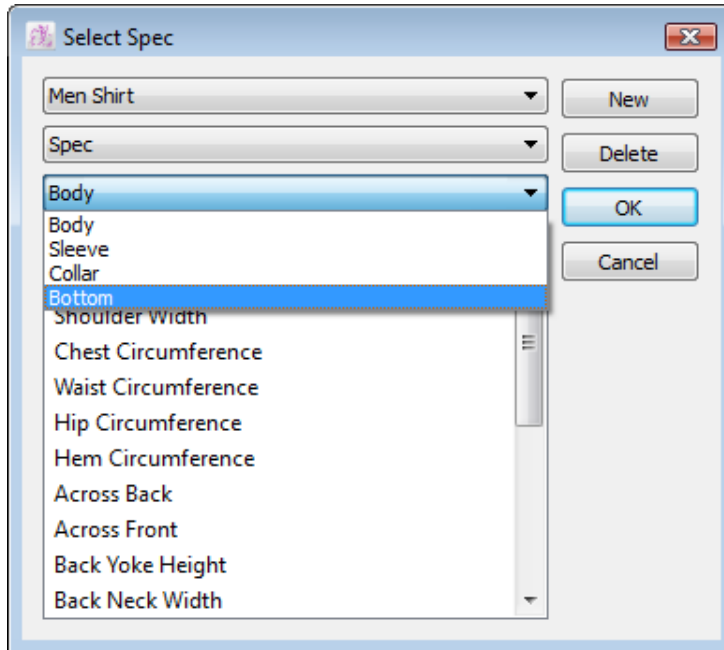
And each category will pre-set the most used items to each category.

The first drop-down menu let you to select all existing sets. You may select the set of the new spec belongs to. If there are no existing sets, Set 1 will be created by default.

New: Add and name a new item at the end of the list.

Delete: Remove the selected item from the list.

Center Segment List...: It allows creating the most used Center Segment into a list.
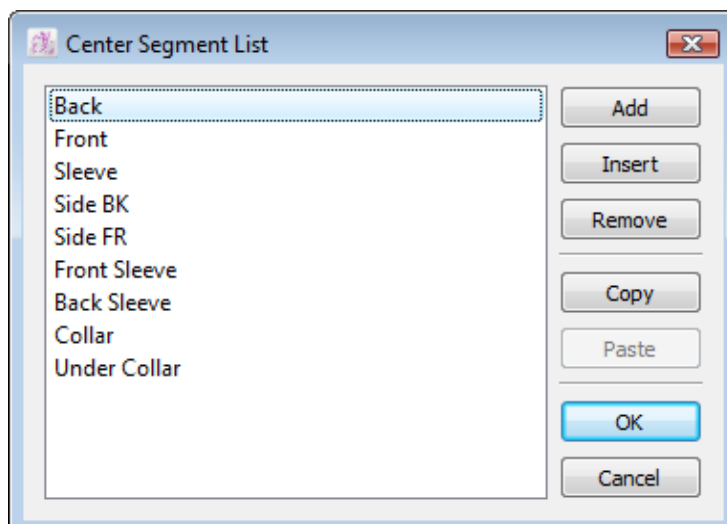
Frame Name List…: It allows creating the most used Frame Name into a list.
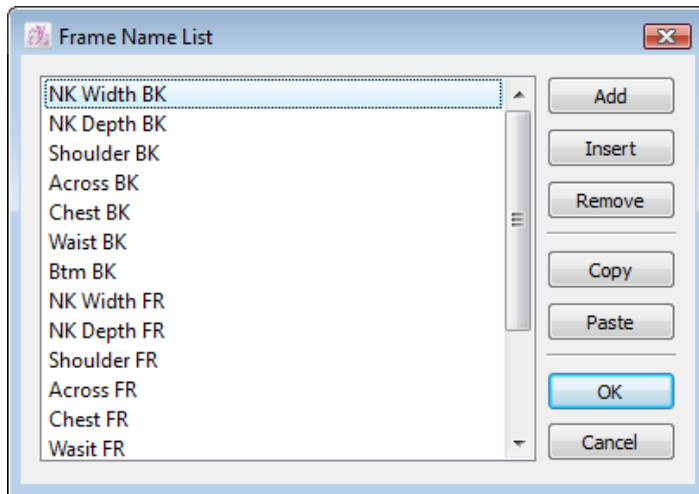
Frame Segment List…: It allows creating the most used Frame Segment into a list.
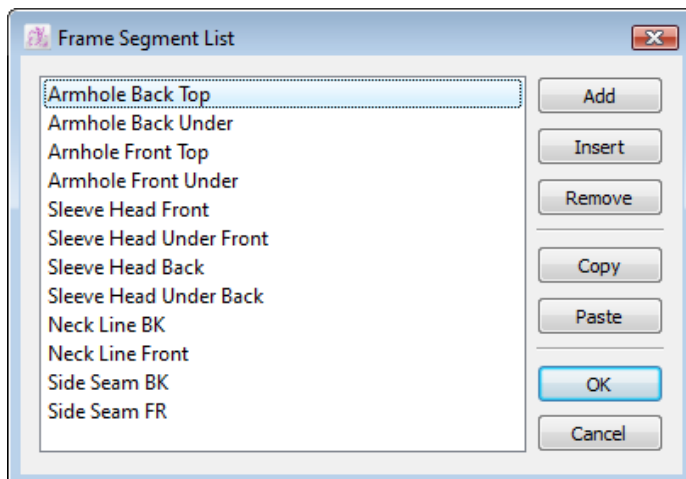
Delete Undefined Objects…: It deletes undefined Frame Sets, Frame Links, Segments and Specs from the *Frames* window list.

*All items in the Center Segment List, Frame Name List, Frame Segment List and Select Spec are saved in the Pattern Preferences file.

The *Frames* dialog box allows you to determine the size details appears in the window. To show the option by choosing mouse right click on the title bar.
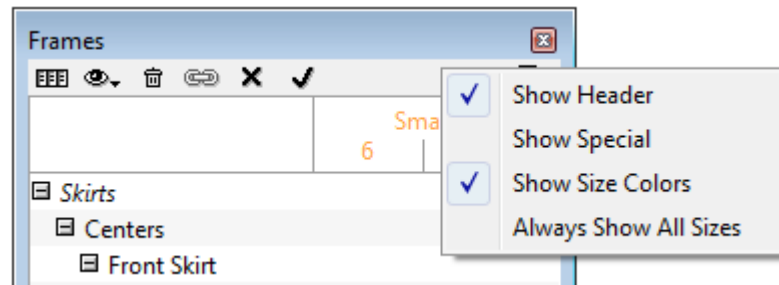
Show Header: It shows or hide the *Frames* window header.

Show Special: It shows or hide the Special name established in the *Working Sizes* dialog box.

Show Break Colors: It shows or hide the break colors established in the *Breaks and Colors* dialog box.

Always Show All Sizes: It works with a complete view of the *Frames* window, showing all the sizes, if checked, or the Medium size only, if not checked.
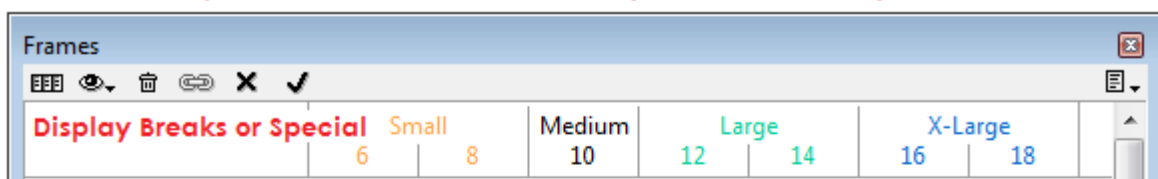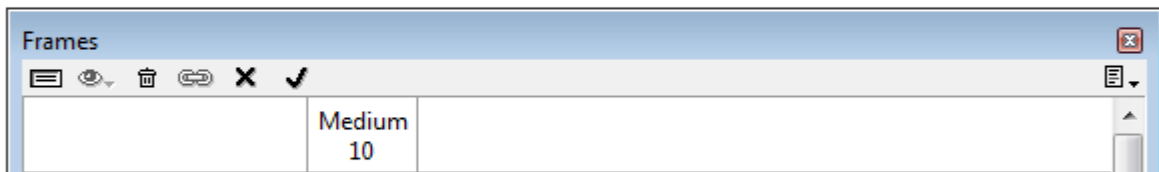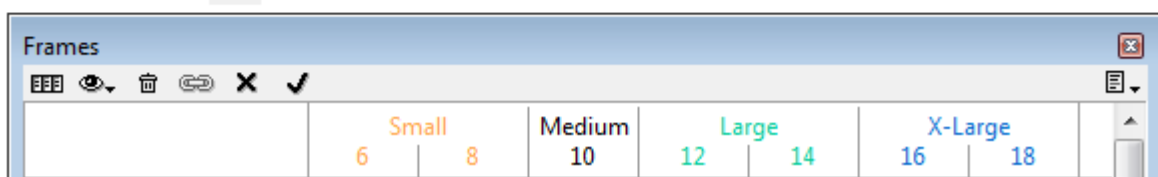
Contextual Menu in Frame View

There are four new items (Item Info, Specify Calculation (Measure), Specify Calculation (Level) and Reverse Segment Orientation) on mouse right click sub-menu.
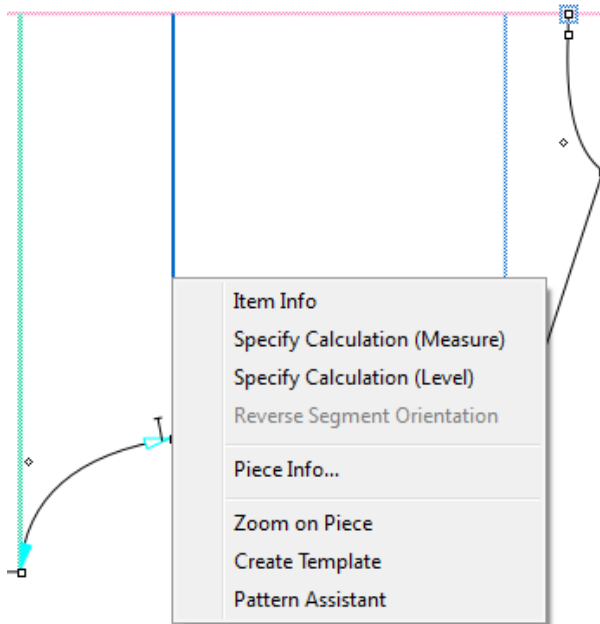
Item Info To select one of the Frames and right click on mouse to choose **Item Info**. A dialog box appears; you can enter the frame name to the text box or click on the Name drop down menu to select the frame name pre-set from **Frame Name List**.
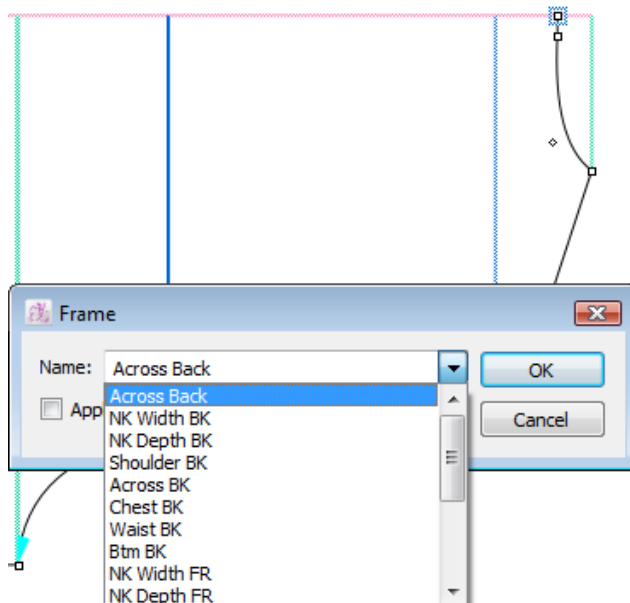
Specify Calculation (Measure) / Specify Calculation (Level)

To select one of the Frames and right click on mouse to choose **Specify Calculation (Measure) / Specify Calculation (Level)**. A dialog box appears as follows.
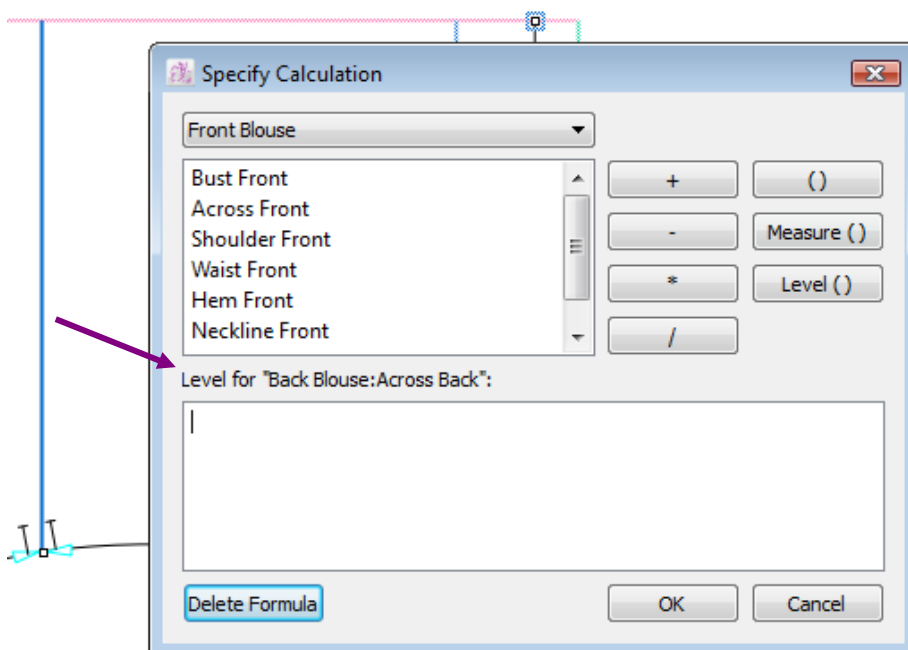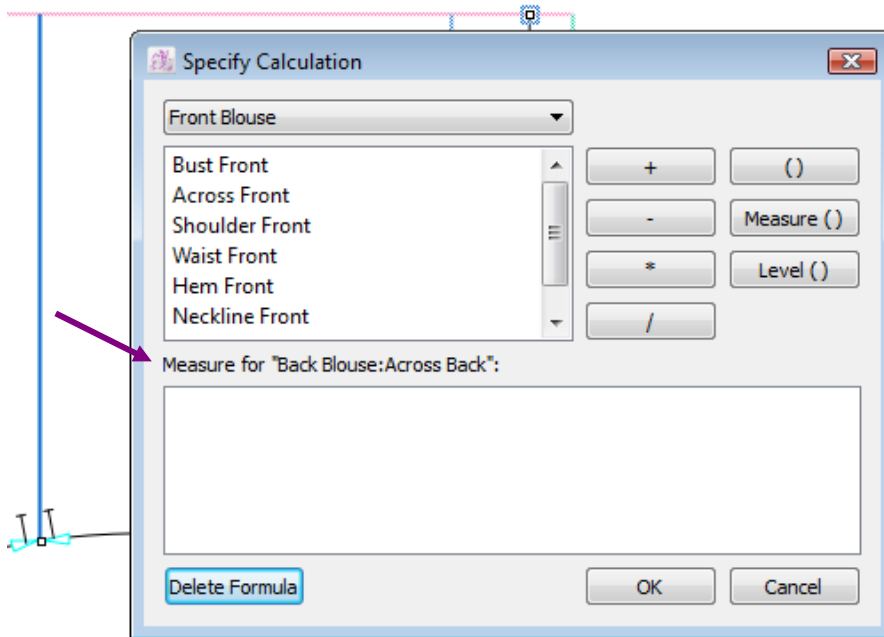
You will get the dialog box if you click on the ƒx icon next to the Measure / Level items.

Reverse Segment Orientation

To select one of the Segment and right click on mouse to choose **Reverse Segment Orientation**. The selected Segment will reverse to opposition direction.

Before

After
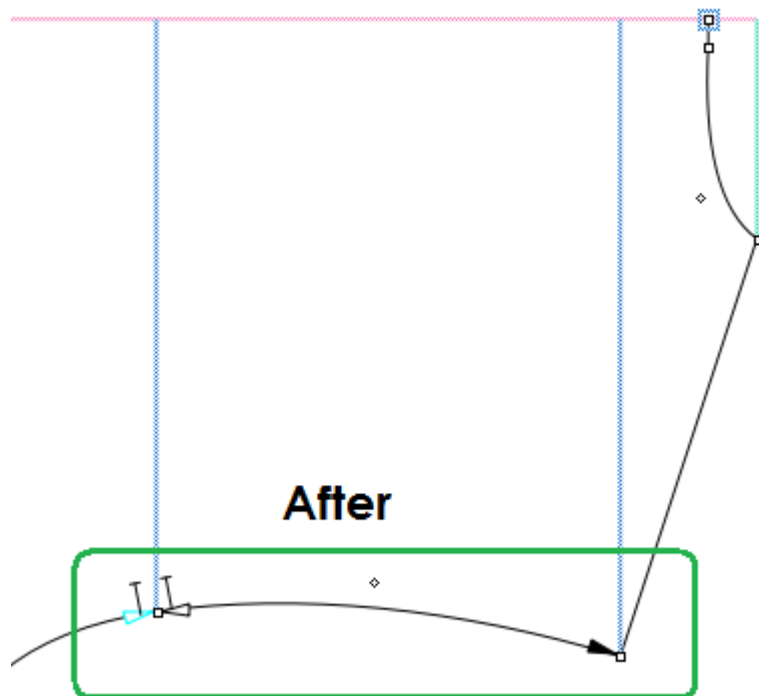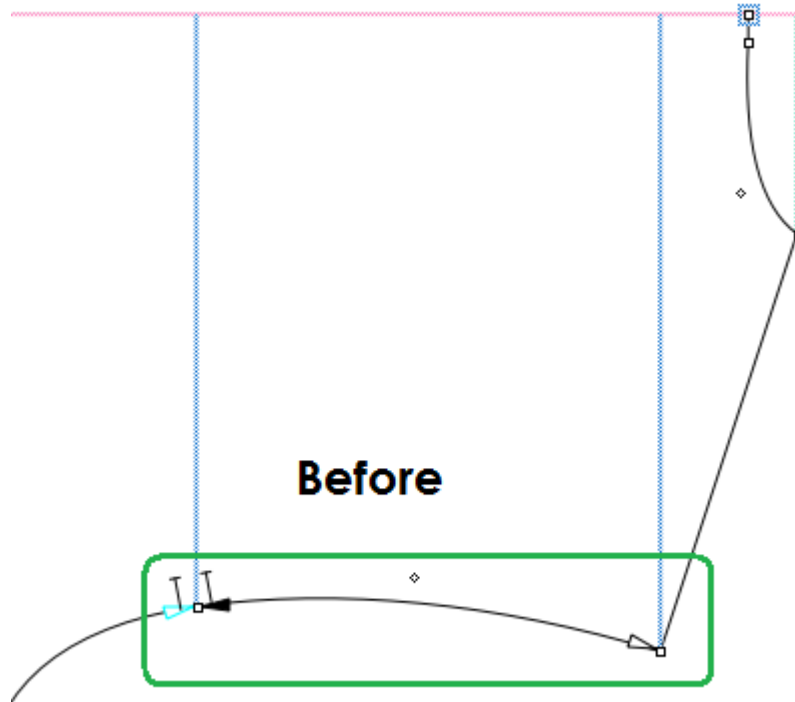
Frame Tools

The toolbox/ toolbar allows you to make any types of action on plan pieces in *Frame* view.

Toolbox

Toolbar

Pointer

The *Pointer* tool activates or selects elements.

Zoom In/ Out

The *Zoom In/ Out* tool allows you to enlarge or reduce the general working area view.

Ruler

The *Ruler* tool allows you to get information on the distance between any two clicks made on reference points, or anywhere else within the working area. It allows you to get the graded length of the selected elements when you click the extremity of one of the selected element while pressing the **Alt** key (Windows) or the **Option** key (Macintosh) or **Alt +Windows** keys (Linux).

Windows keys   Alt

| Shift |
| Ctrl | | Alt | |

Macintosh keys   Option

| Shift |
| Ctrl | | ⌘ ✖ | |

Linux keys   Windows + Alt

| Shift |
| Ctrl | | Alt | |

Text

The *Text* tool allows you to write notes anywhere on the working area.

Create Frame

The *Create Frame* tool creates center frames, level 0 frames and all other construction Frames attached to a piece.

Make Frame Segment

The *Make Frame Segment* tool creates a Frame segment on the perimeter of a piece.

Using Frames

Create a New Set of Frames

To create a New Set in the *Frames* window:

**1** Select the *New Set…* item from the drop-down menu in the *Frames* window.
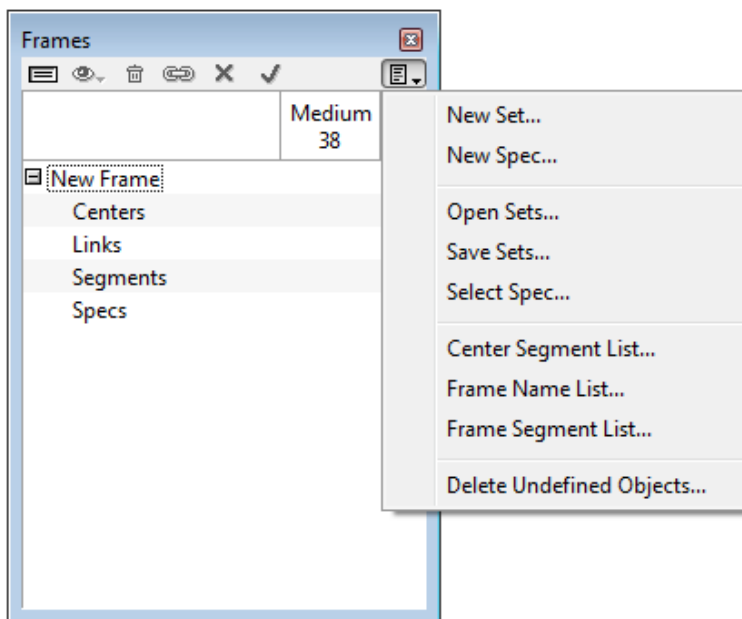
2 The *Set* dialog box opens. Enter the name of the desired Set.

3 Press the *OK* button to validate the information.

Note: You cannot begin the title of a new set with a number, nor can you Insert symbols, such as % : ( ) + - * / .

Your set name appears in the *Frames* window. Press the + icon next to its name to see the set attributes.
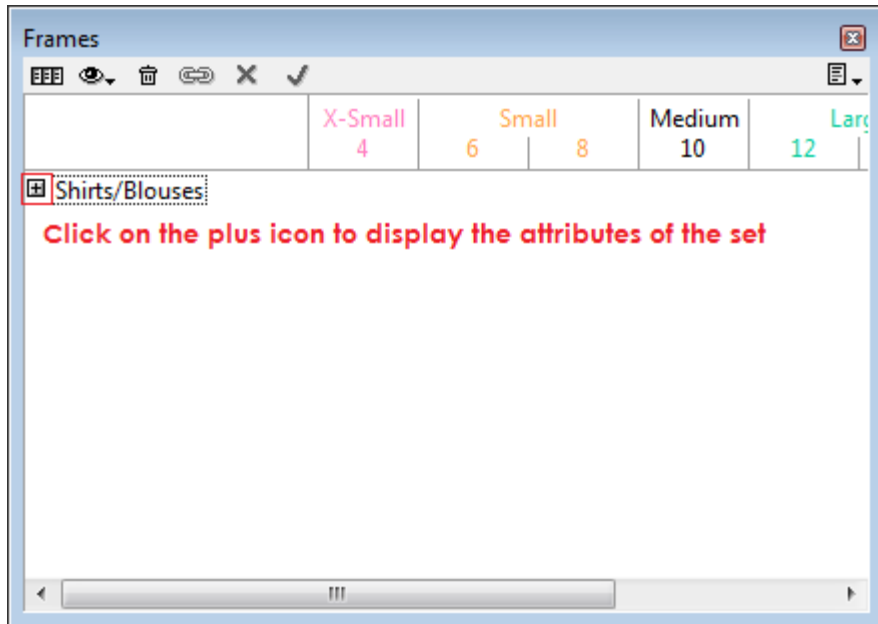
Once you have created a Set, there are four categories listed below the Set name:
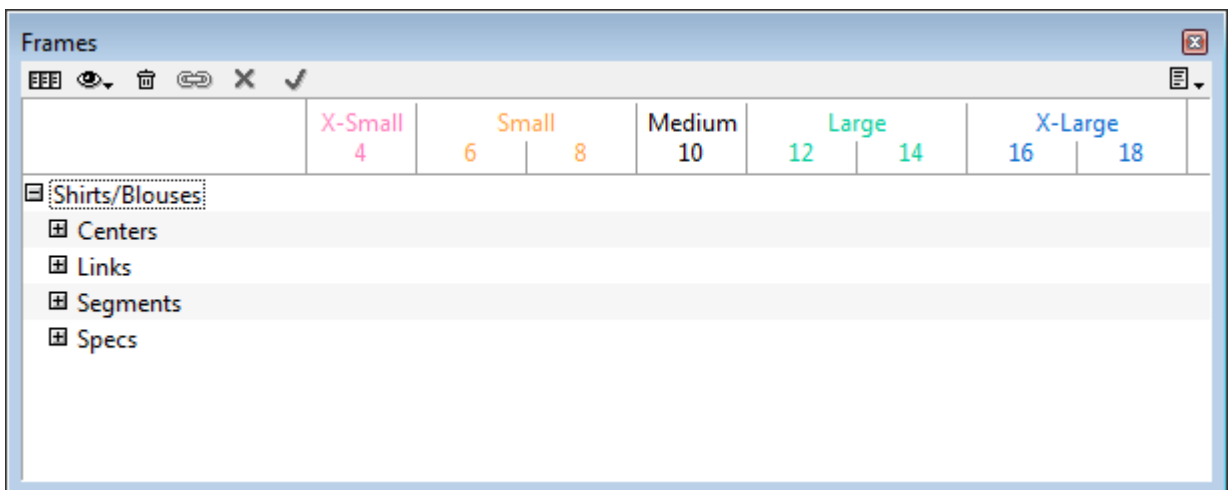
Centers: It identifies the center of a Pattern Piece, gathers the Points of measurements and the levels of a piece.

Links: It gathers dependent frames that are linked together to obtain the total measurement of garment circumferences.

Segments: It gathers the perimeters identified on the pattern pieces. They adjust graded measurements and create formulas and/or specification measurements.

Specs: These are specification measurements by formulas between all of the above. It gathers combined results by adding together different components such as Frame measurements without the Frame Levels or Link measurements to create garment specification sheets for quality control.

Measurement Charts: These are specification measurements by formulas between all of the frames. User can define various items and set value on it accordingly. Once the value of item in Measurement Charts is modified or changed, all corresponding items (Frames, Segments or Links) will be automatically updated.

Create Center Frame

Frames can be applied on plan pieces while in *Frame View*. You must create a first frame which will be the Center Frame for each piece that is part of a Set. This center frame is displayed in pink on the piece. It gives the orientation of the measurement of the other frames related to the piece. The Center Frame is your main construction line, which generally follows the grain line.

To establish a Center Frame:

1 Activate the pattern shape(s)

2 Select the *Create Frame* tool in the Toolbox.

3 Click a first point on the contour of the shape where you want to place your Center Frame.

4 Click the second point on the contour of the shape where you want to place your Center Frame.

The *Center Segment* dialog box opens:
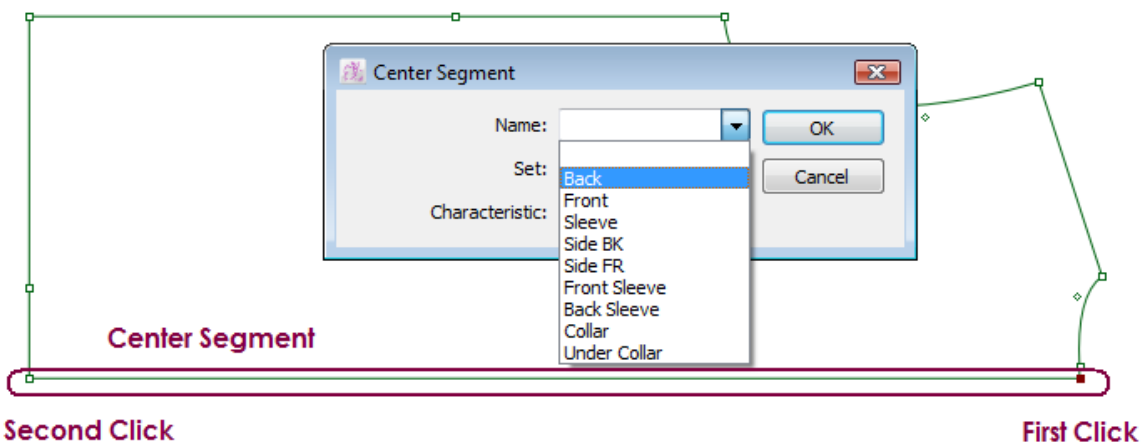
5 Enter the Center Frame name to the text box or click on the Name drop down menu to select the Center Frame name pre-set from **Center Segment List**. Center Frame names within a Set must be unique. Frame names within a Center Frame must be unique.

6 If you have more than one set in the file, use the drop-down menu to select the Set the Center segment belongs to.

7 Select *Center Frame Characteristics* from the drop-down menu.

461

You can select among the following Center segment characteristics:

Folded: For a piece that is folded or symmetrical with an intelligent line (i.e.: The front or back of a shirt).
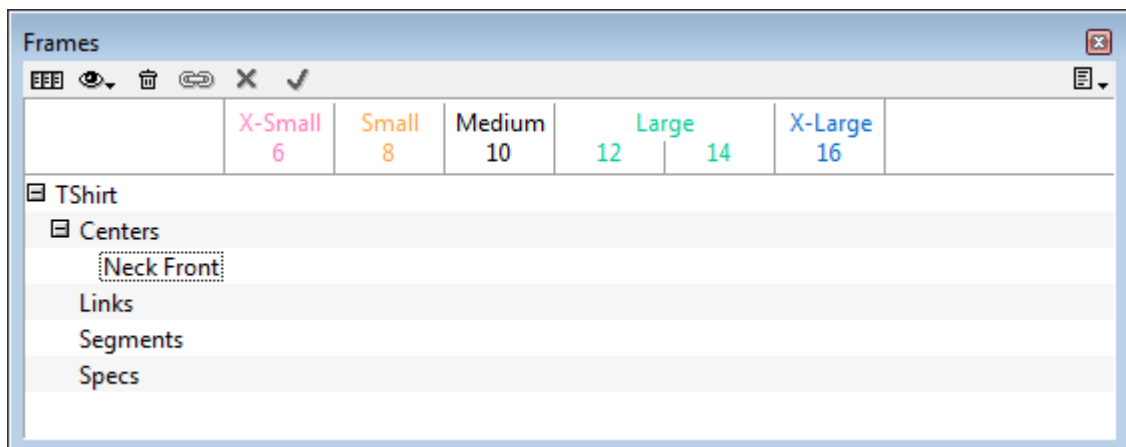
Opened: For a piece that is opened (i.e.: The sleeve).

Half: For an opened piece required twice on the final garment (i.e.: The side piece of a princess skirt).

See the different types of Center Frames section following next for examples on how to select best the appropriate center characteristic for your pieces.

8 Click the *OK* button to execute the function.

Newly created Center frames appear gathered below the Centers category:

	X-Small 6	Small 8	Medium 10	Large 12	14	X-Large 16	
□ TShirt							
□ Centers							
Neck Front							
Links							
Segments							
Specs							

To view the Set Categories or their sub-items:

- Click the plus (+) sign to expand the list.
- Click the minus (-) sign to collapse the list.

Hold down the **Alt** key (Windows) or the **Option** key (Macintosh) or **Alt +Windows** keys (Linux). And click on the plus (+) or minus (-) sign to expand or collapse an entire category, respectively.

Windows keys   Alt

⬆ Shift

| Ctrl | ⊞ | Alt | |

Macintosh keys   Option

⬆ Shift

| Ctrl | ⌥ | ⌘ ✕ | |

Linux keys   Windows + Alt

⬆ Shift

| Ctrl | ⊞ | Alt | |

Place the cursor on the Center name to view its attributes.

Frames ⊠

	X-Small 6	Small 8	Medium 10	Large 12	14	X-Large 16	
⊟ TShirt							
⊟ Centers							
Neck Front							
Links		Defined					
Segments							
Specs							
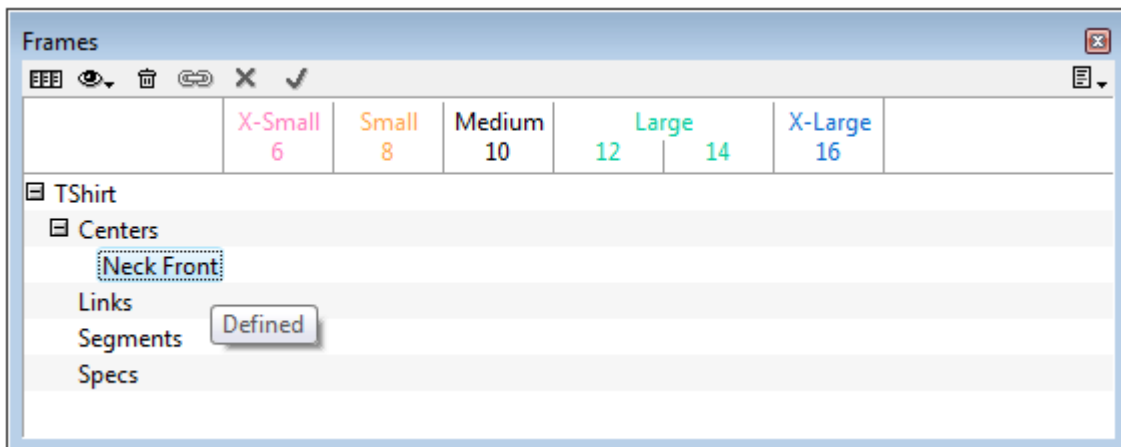
The attributes of a Frame can be:

- Define or Not Define
- Linked or Not Linked
- Level Zero
- Based on a formula

Different Types of Center Frames

There are three types of Center Frames:

• Folded

• Opened

• Half

Folded Type Center Frame

This function is used when Frames are to be applied on one side of a folded Pattern Piece or an open piece with an intelligent mirror. You use it on paired pieces that would be joined at their center point (ex: from jacket).

Since the piece is considered folded, the value calculated on its related frames is doubled to get the total of the finished garment. When a modification to a value of its frame is made, the value to be distributed is divided in two and applied to the side opposite the center. This allows you to obtain the total value once the garment is completed.
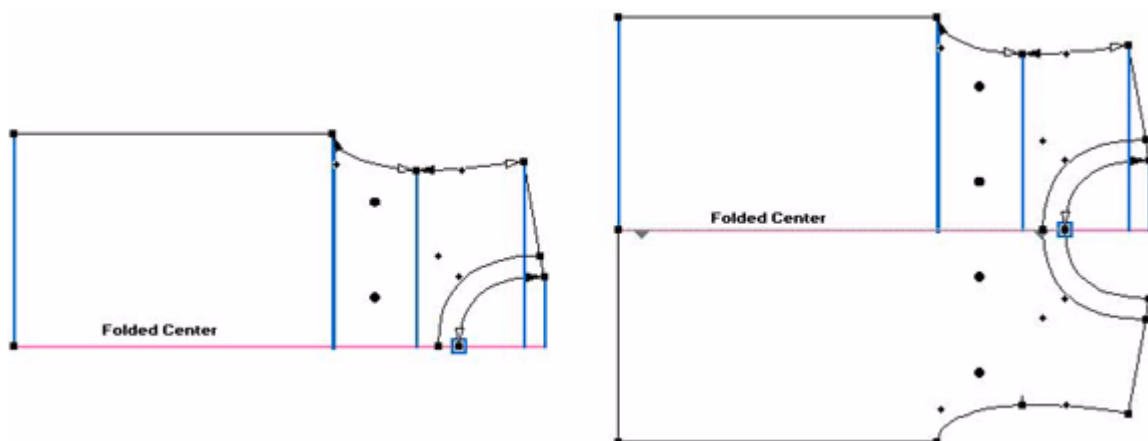
Opened Type Center Frame

For opened pattern pieces (ex: sleeve or pant legs).

When a piece is considered opened, the total value of its frames is the total of the finished piece. When a modification to a value of its frames is made, the value can be distributed in two ways:

• **By Proportion:** The value is divided proportionally. The piece center positioning is compared to the overall geometry of the piece and the values are distributed according to the proportion of each side from the center.

• **By Percentage:** The percentage of the value to be added on each side is determined by the user, using the dialog box.
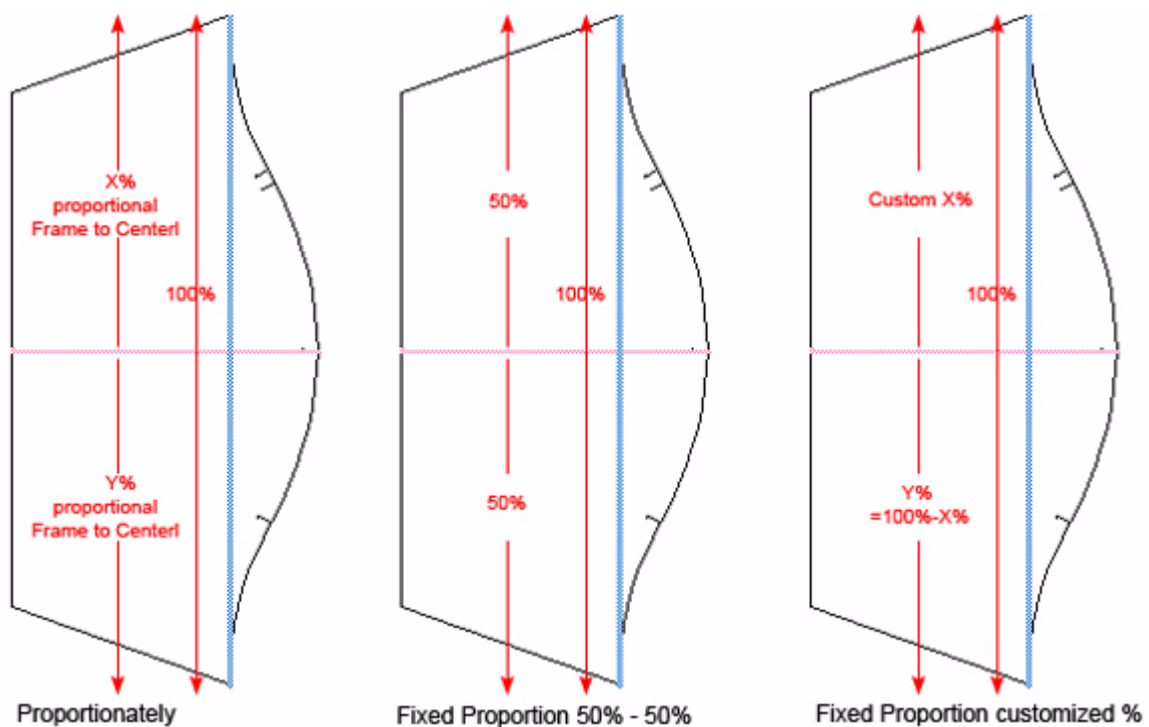
Half Type Center Frame

For an opened piece that is required twice in the final garment (ex: a side panel of a jacket or skirt).

Since the piece is considered half, you need two halves to obtain the total garment value so the frame length is calculated doubled to get the total of the finished garment. When a modification to a value of its frames is made, the value is divided in two and the result distributed in one of two ways:

• By Proportion
• By Percentage

(See *Opened type center frame* on the preceding page for more details about these two options.)

Examples of different types of center frames:

Open center

Open center

Folded center

Half center

Half center
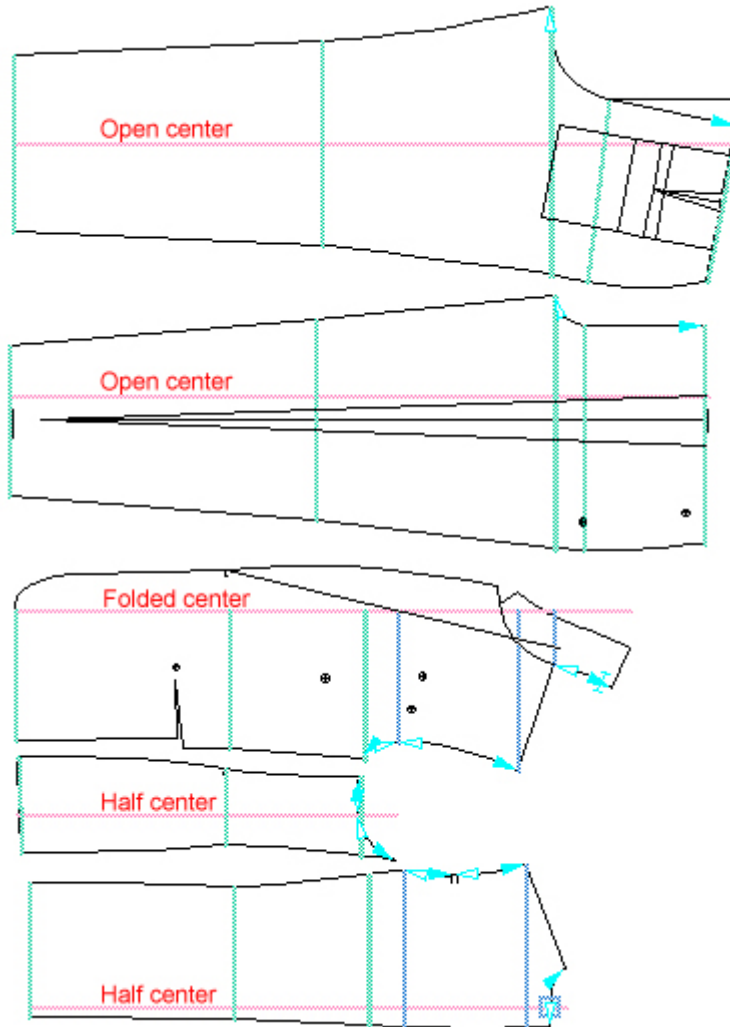
Create Frames Automatically

Frames are added to the piece automatically. And all of Frames details display on the Frames window. The first Frame (First click on the Center Segment) created on a Center Frame is the Level Zero. Level Zero is the starting position for measurements of the pattern pieces according to the length. It should be placed at the same position on all related pattern pieces. The Level Zero frame line appears blue and thicker than other frames on the piece. Once you have defined Level Zero, all other Frame Levels for that pattern piece are calculated from that Level Zero frame.

Once you have defined Level Zero, all other Frame Levels for that pattern piece are calculated from that Level Zero frame.
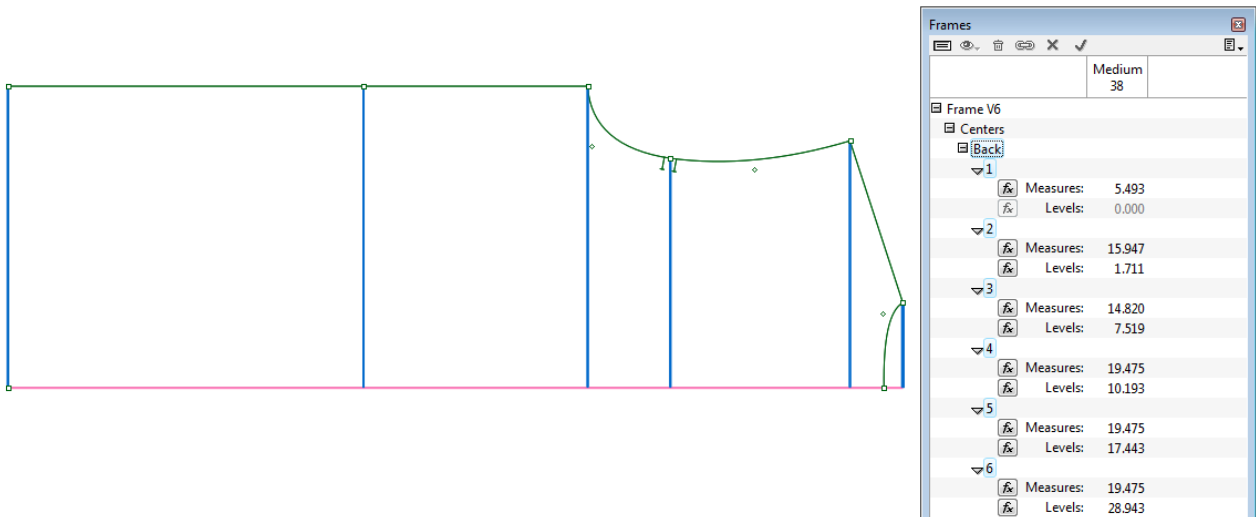
Frames are added and named to be a Digital and display on the Frames window. You may rename the Frames by choosing the Item Info on mouse right click or double click the item on the Frames window.
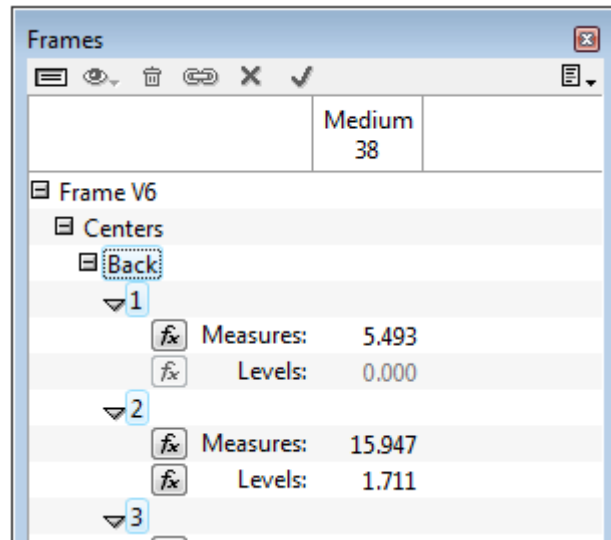
Note: All Frame levels are measured starting from Level Zero, which is the first Frame created. We recommend that you establish Level Zero in a place that is not height graded.

To create Frames Level Zero:

1 Activate the pattern shape(s).

2 Select the *Create Frame* tool.

3 Click an existing point, located on the pattern piece where you want your Level Zero frame to be set.

4 Click the Center segment for a Folded Center or on an existing point on the opposite side of the center for an Opened or Half Center frame.

One of two *Frame* dialog boxes opens, depending on the selected characteristic of the Center Frame.

Folded Center Frame:
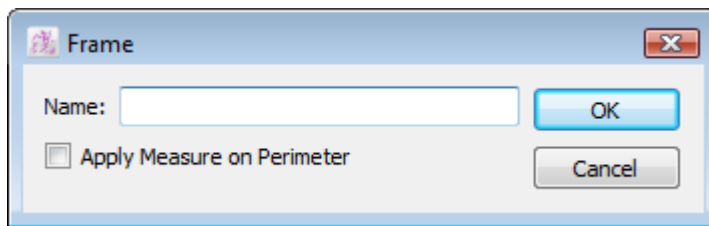
Opened or Half Center Frame:
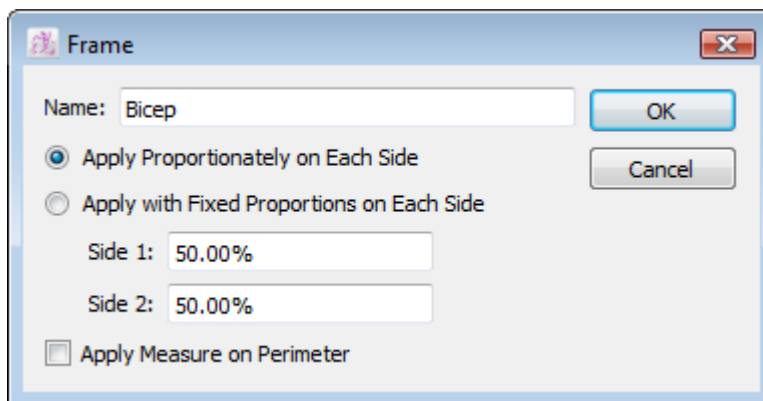
The *Apply Measure on Perimeter* check box measures the perimeter between the starting and ending points of the frame. Otherwise, the straight-line measurement is given on the frame.

5 Enter the name of the Frame.

6 In the instance of an Opened or Half center frame, select the appropriate radio button. The *Apply Proportionately on Each Side and Apply with Fixed Proportions on Each Side* options determine how modifications should be applied on the piece.
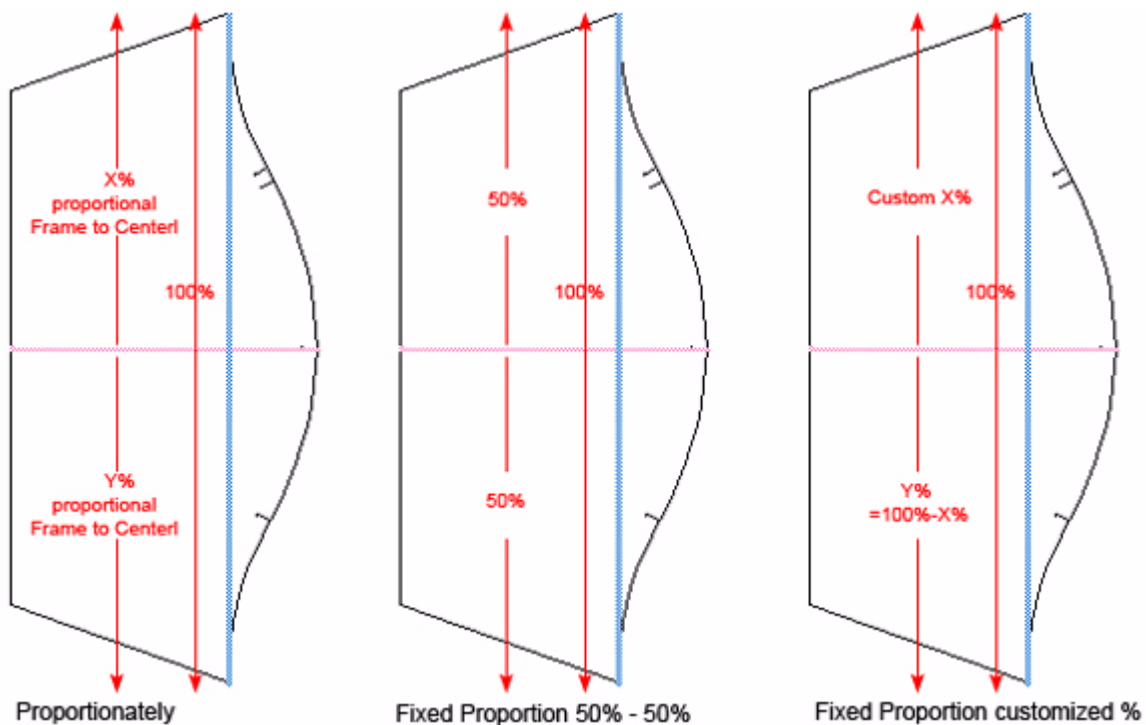
7 Check the *Apply Measure on Perimeter* check box, if needed.

8 Click the *OK* button to execute the function.

The Frame appears beneath the Center Frame it belongs to.

	X-Small	Small		Medium	Large		X-Large	
	4	6	8	10	12	14	16	18
⊟ *Shirts/Blouses*								
⊟ Centers								
⊟ Front Blouse								
▷ Bust Front								
▷ Shoulder Front								
▷ Waist Front								
▷ Hem Front								
⊟ Back Blouse								
▷ Bust Back								
▷ Shoulder Back								
▷ Waist Back								
▷ Hem Back								
⊞ *Sleeve Blouse*								
⊞ Links								
⊞ Segments								
⊞ Specs								
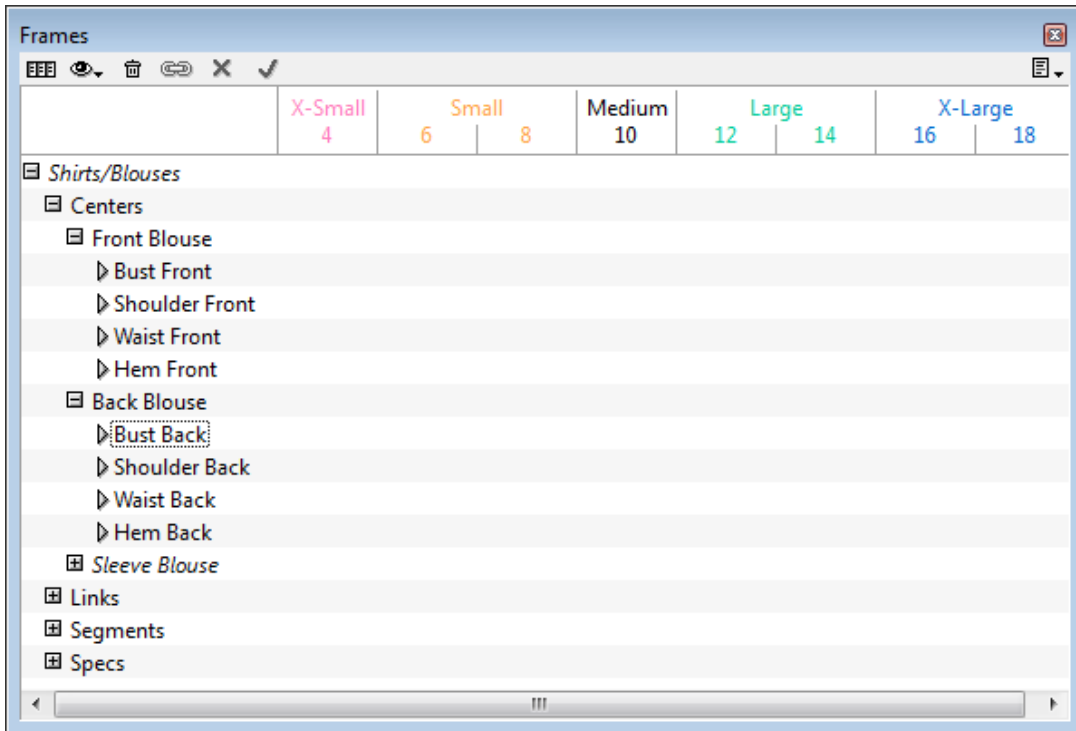
Press the arrow at the left of the name of the Center frame to view its attributes.

	X-Small	Small		Medium	Large		X-Large	
	4	6	8	10	12	14	16	18
⊟ *Shirts/Blouses*								
⊟ Centers								
⊟ Front Blouse								
▽ Bust Front								
fx Measures:	19.10	19.52	20.19	20.86	21.53	22.19	23.11	24.03
fx Levels:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
▷ Shoulder Front								
▷ Waist Front								
▷ Hem Front								
⊟ Back Blouse								
▽ Bust Back								
fx Measures:	17.48	17.98	18.73	19.48	20.23	20.98	21.98	22.98
fx Levels:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
▷ Shoulder Back								
▷ Waist Back								
▷ Hem Back								
⊞ *Sleeve Blouse*								

Items are classified in the order they were created in.

Note: If you click either the word *Measurements* or *Levels* under the title next to the *Formulas* button, you can copy and paste the whole row on selected elements of other levels or measurements. Using the button ▭ or ▭ , you can select to edit the Medium Size or All Sizes.

A Frame can be created on the Center Frame so it controls the level of certain pattern elements like the neckline depth. You create this by clicking a contour point that is positioned on the Center Frame. The frame appears as a square around the point. This frame controls level measurements.
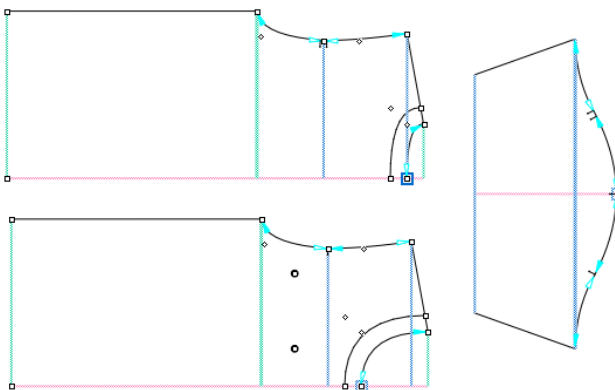
Frames						
	X-Small 4	Small 6	8	Medium 10	Large 12	14
Shirts/Blouses						
Centers						
Front Blouse						
Bust Front						
Across Front						
Shoulder Front						
Hem Front						
Neckline Front						
Neck Depth Front						
fx Measures:	0.00	0.00	0.00	0.00	0.00	0.00
fx Levels:	5.82	5.88	5.94	6.00	6.06	6.13
Back Blouse						
Bust Back						
Across Back						
Shoulder Back						
Hem Back						
Neckline back						
Neck Depth Back						
fx Measures:	0.00	0.00	0.00	0.00	0.00	0.00
fx Levels:	8.82	8.88	8.94	9.00	9.06	9.13
Sleeve Blouse						

Create Internal Frame

Internal Frames could be added to the piece. And all of the Internal Frames details display on the Frames window and the feature is the same as Contour Frames. All Internal Frames level are measured starting from Level Zero, which is the first Frame created.

To create Internal Frames:

1 Activate the pattern shape(s).

2 Select the Create Frame tool.

3 Click an internal point, located in the pattern piece where you want the Internal Frame to be set.

4 Click the Center segment for the fixed position (Center Frame).

First Click on the Internal Point

Second Click on the Center Frame
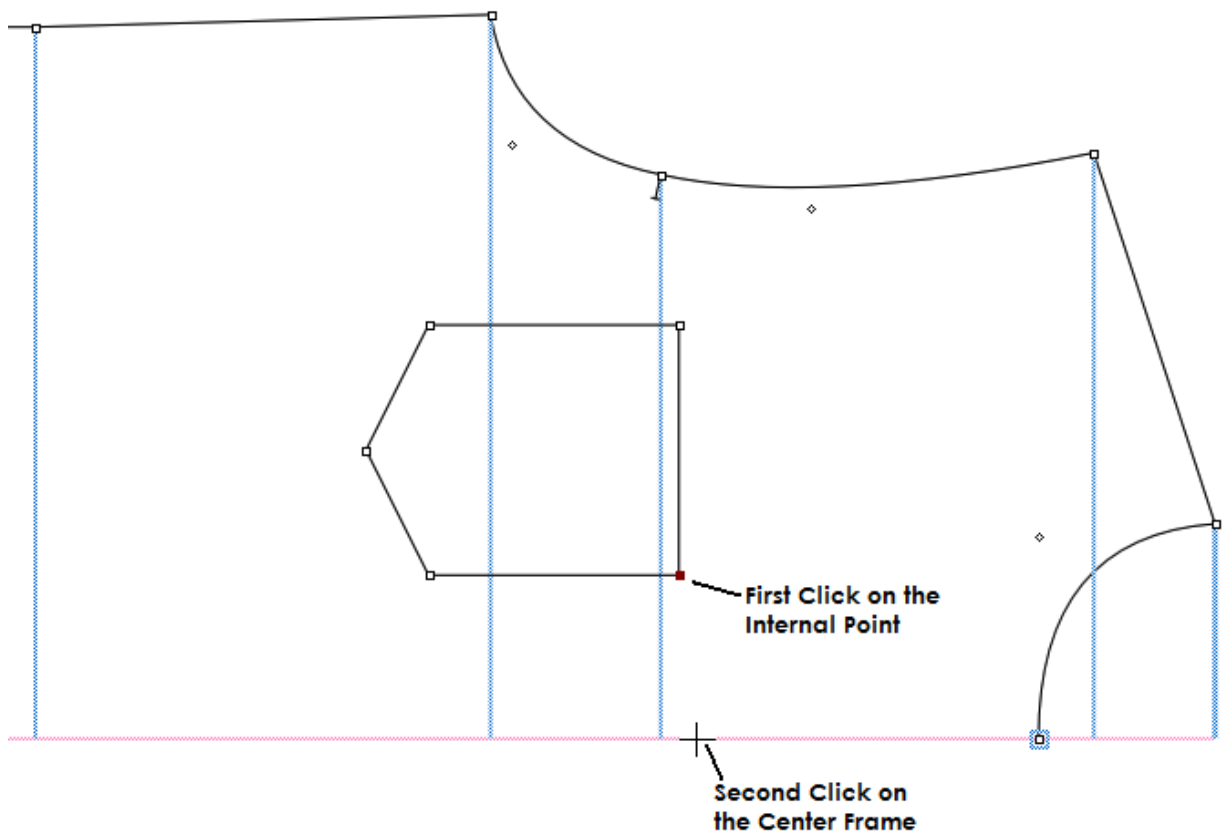
The Frame dialog box opens:
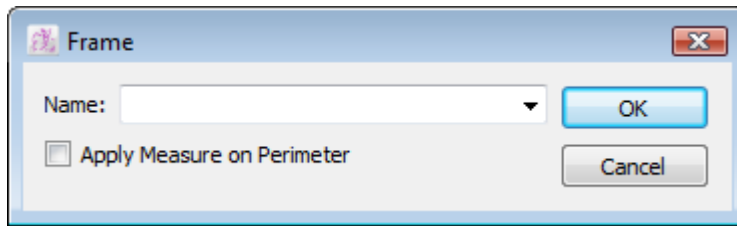
5 Enter the name of the Frame and press OK button to validate.

Internal Frame added on Opened piece or Half piece:
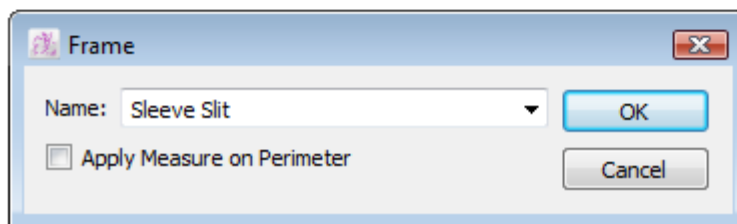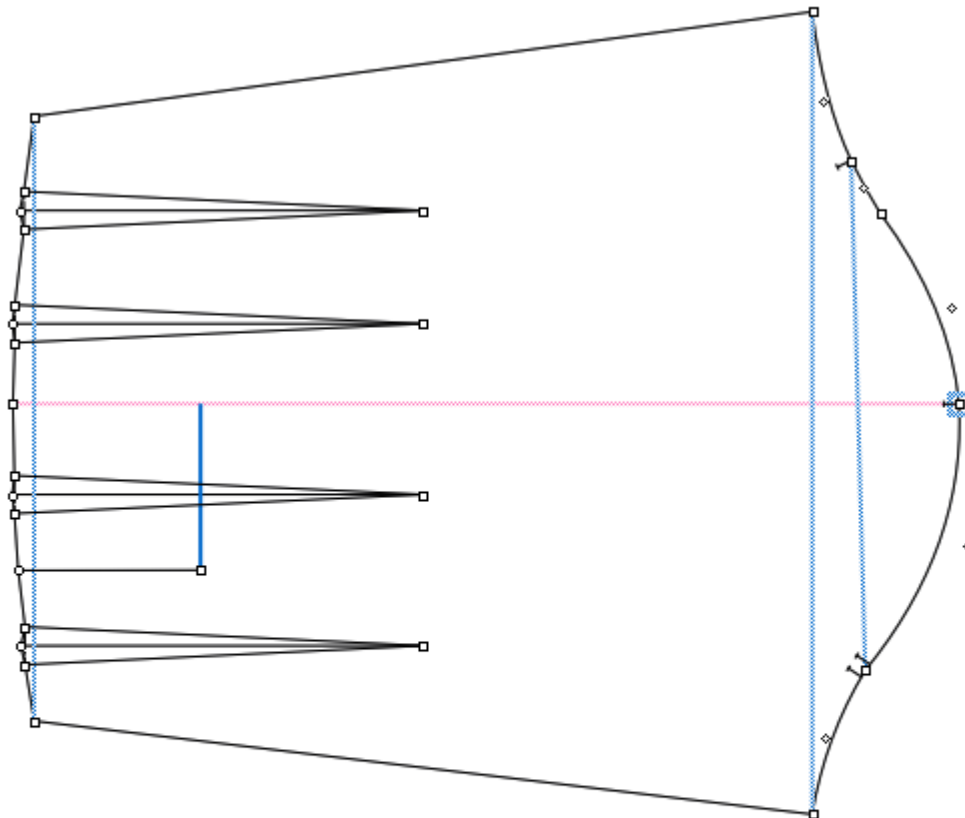
Manipulating the Frames on Pattern Pieces

To remove a Frame item:

The Frame must be deleted from the pattern piece. Select the Frame on the pattern piece and press the **Backspace** key (Windows/Linux) or the **Delete** key (Macintosh) on the keyboard.
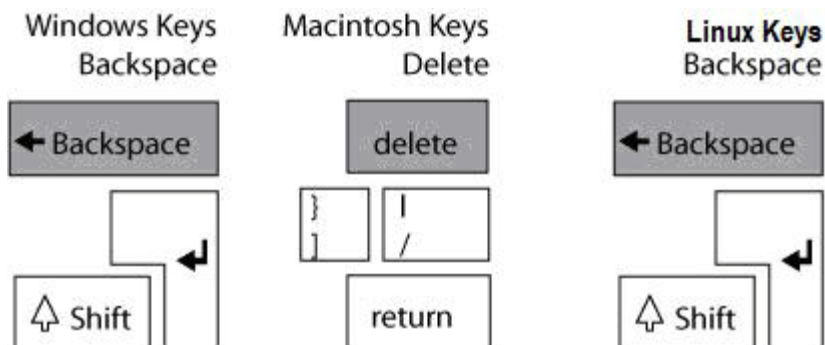
In the *Frame* window list, select the Frame. It should be shown as inactive (in Italic Type) and *Not Defined* should be indicated in the attributes menu. Click the *Delete* icon at the top of the *Frames* window to delete the selected Frame.

> **Note:** To delete a Level Zero frame, all other frames on the piece must be deleted prior as their level is calculated from this one.

To reapply a Frame that is undefined in the list:

1 Activate the pattern piece and select the corresponding existing Frame from the *Frame* window list.

2 With the *Create Frame* tool, click the points where the frame is to be positioned on the pattern. The following dialog box appears:
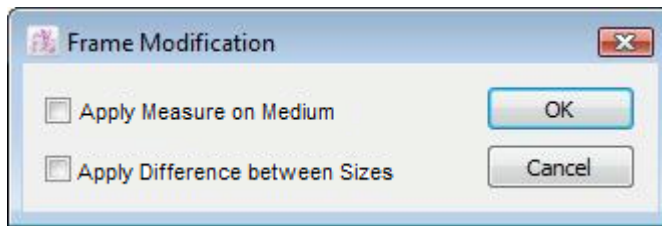
3 Two options are available when reapplying a frame:

• **Apply Measure on Medium:** The position of the new frame takes the measurement already existing in the list for this frame.

• **Apply Difference between Sizes:** The frame takes the graded measurement already existing in the list for this frame.

If none of the options are checked, the frame takes the actual measurement and grading of the pattern for the frame but keep the frame name and attribute already created in the list.

4 Click the *Ok* button to confirm your choice.

Create Links

Frames between pattern pieces may be linked to obtain a total garment measurement. For example, you can obtain bust or chest circumference, waist circumference, hip circumference or any measurement that is continuous on more than one pattern piece.

Frames linked with different levels measurement maintain their level difference. When the link level is modified, the difference between each Frame level retains its proportions.

Frames that belong to a Link are listed in the *Attributes* menu (Place the cursor on the Center name to view its attributes); they can be modified individually in the Center category or modified as a Link in the Links category. Modification of a Link changes all its Frame components.

To link Frames together:

1 Select the Frames to be linked (two or more).
2 Press the *Link Frame* icon located at the bottom of the *Frames* window.

The *Link* dialog box opens:
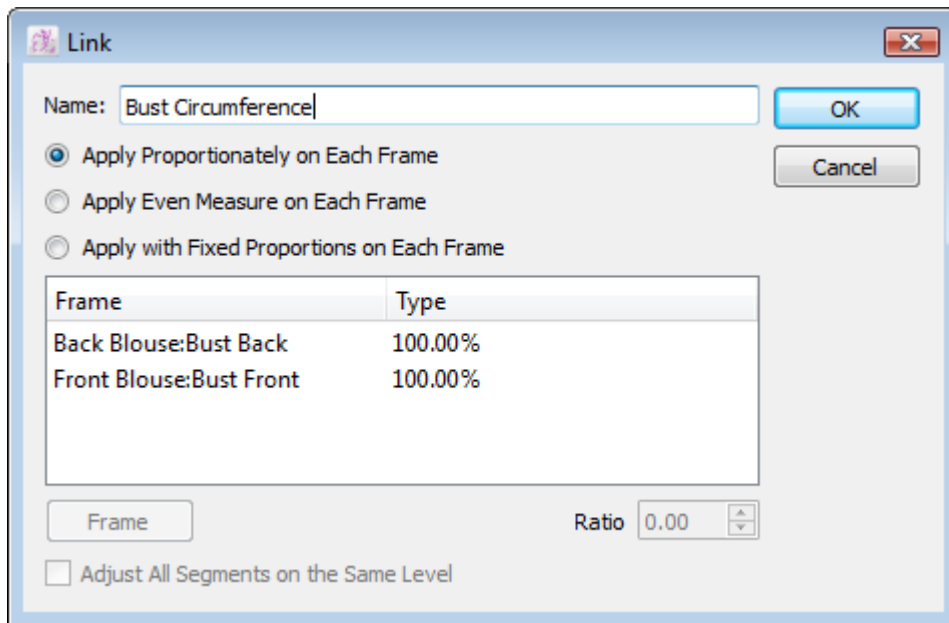
3 Enter the name of the Link.

4 Select the distribution mode for the values of your choice (proportionate, even or percentage).

You can correct the difference between Frame Levels by selecting the *Adjust All Segments on the Same Level* check box. The two levels move to a median position. (For example, if there is a difference of 1 inch between two levels, the system moves a ½-inch level up and a ½-inch level down.)

When the Frames are linked, they turn to green colour.
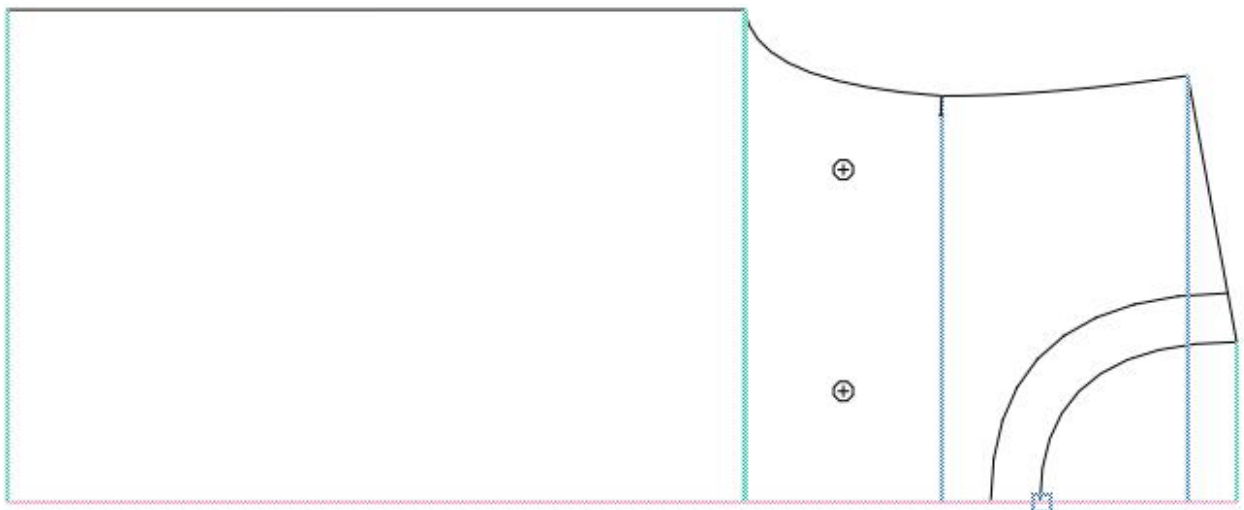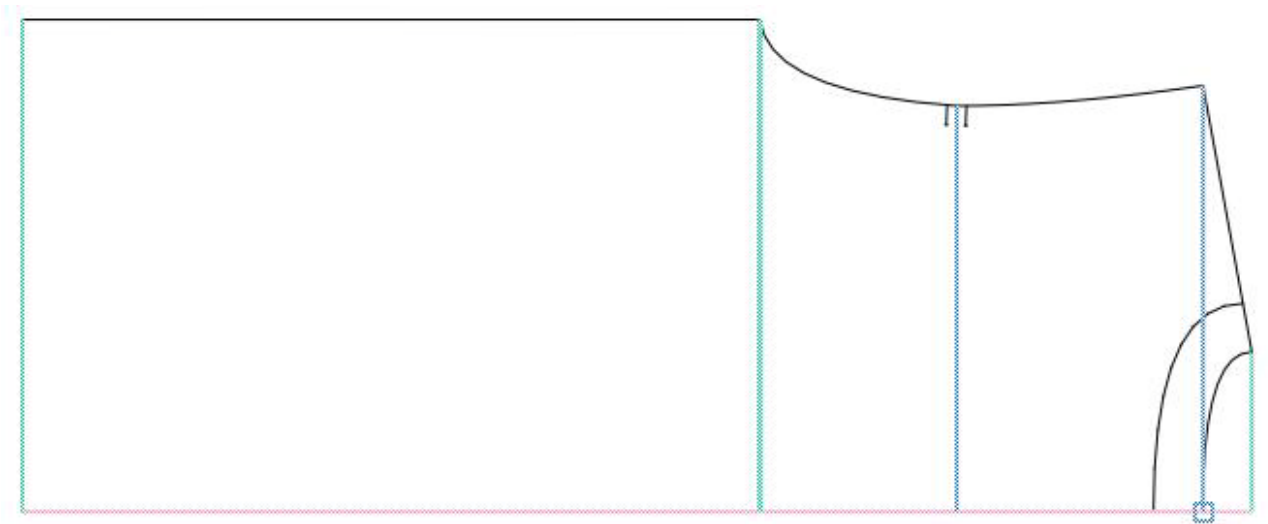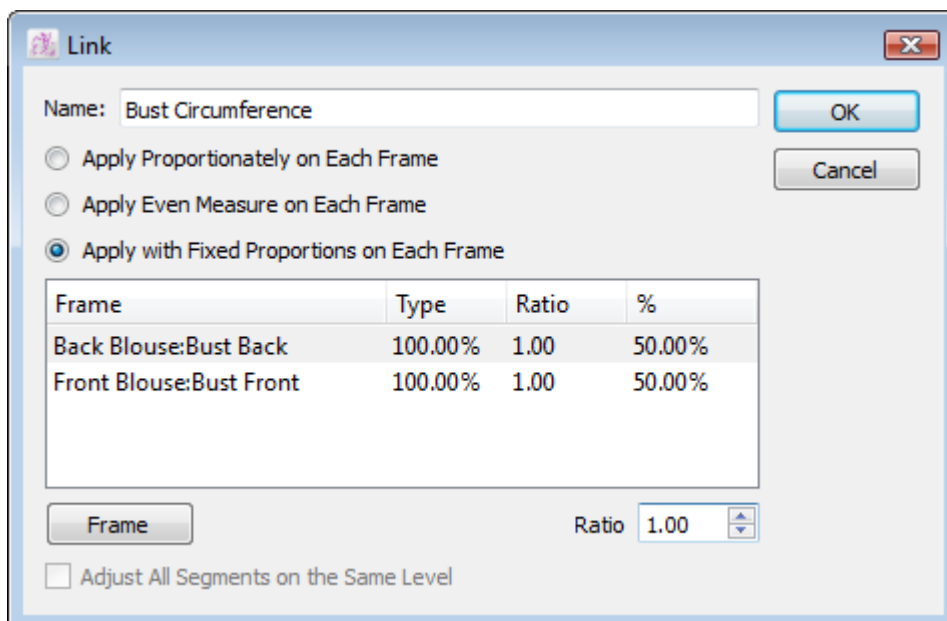
The *Links* dialog box gives you three options about how you can split the modification value on all the frames that are part of a link:

- **Apply Proportionately on Each Frame:** It proportionally distributes the value to be added to or removed from frames that are linked to each other so the length of frames compared to one another justifies how the value is split.
- **Apply Even Measurements on Each Frame:** Adjustments are distributed equally on each linked frame so the quantity of frames justifies the value and an even amount is given/removed to/from each one.
- **Apply with Fixed Proportions on Each Frame:** Adjustments are distributed according to a percentage defined by the user using the Ratio Field. The user decides which frame in the link receives which ratio of the modification.

Adjust All Segments on the Same Level: It adjusts all the selected levels on an average level.

Frame: It displays the selected Frame characteristics in the list above.

Ratio: It is a value in the text box after selecting one of the Frames. This item is available when the *Apply with Fixed Proportions on Each Frame* radio button is selected.

Manipulating the Links on Pattern Pieces

To remove a Link item:

The Link must be deleted from the pattern pieces. Select the Linked Frames on the pattern pieces and press the **Backspace** key (Windows/Linux) or the **Delete** key (Macintosh) on the keyboard.
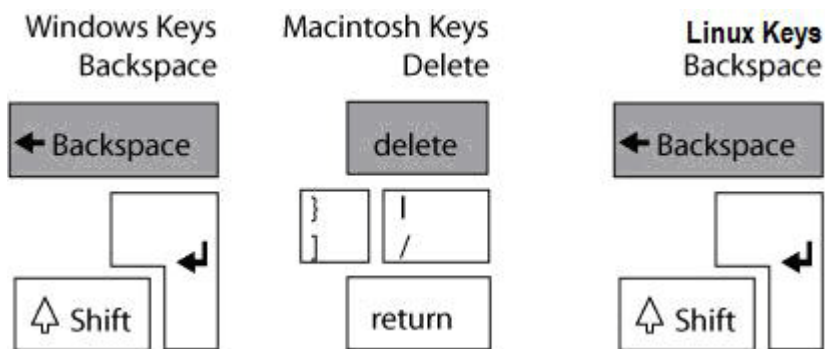
In the *Frames* window select the Link. It should be shown as inactive (in Italic Type) and *Not Defined* should be indicated in the attributes menu. Click the *Delete* icon at the top of the *Frames* window to delete the selected Link.

To reapply an undefined link from the list:

1 Select the Frames to be linked on the pattern pieces and select the corresponding existing Link from the *Frames* window.

2 Click the *Link Frames* icon at the bottom of the *Frame* window to activate the link.
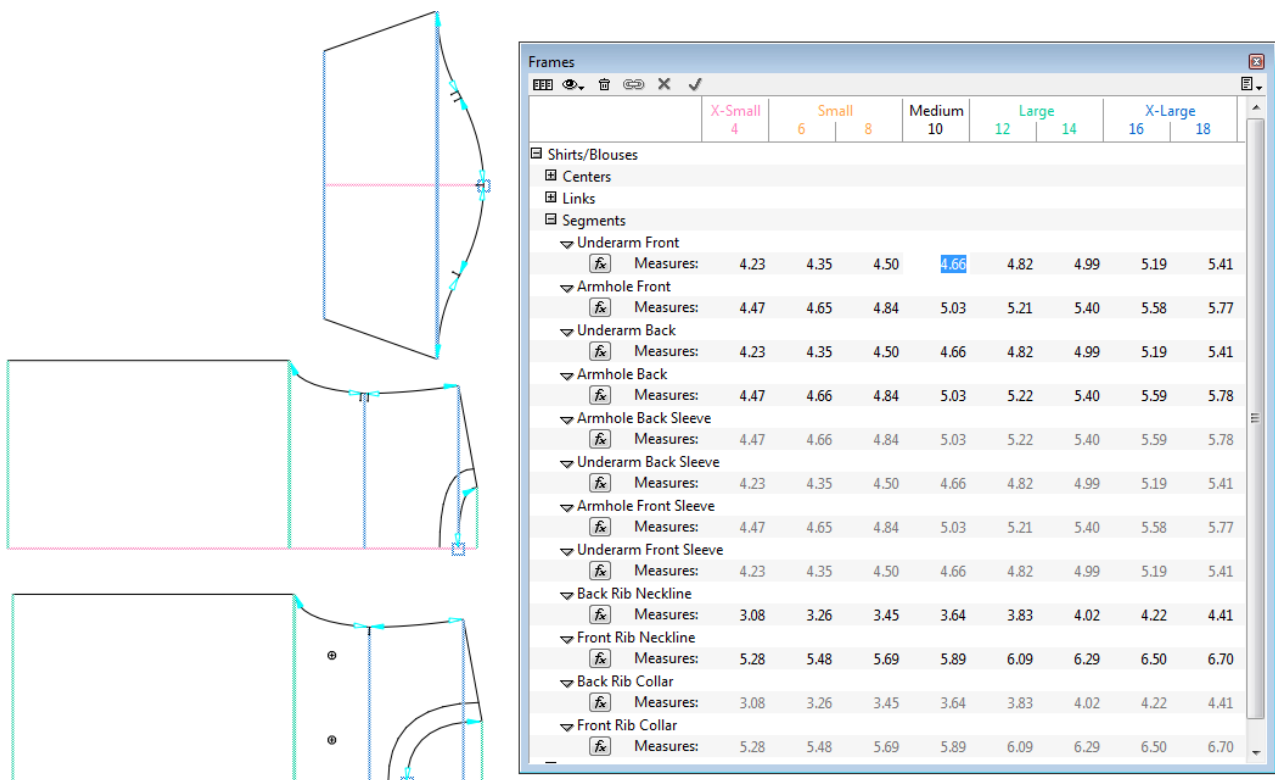
Using Segments

Segments are used to:

Obtain a precise measurement (Medium size and/or All sizes) and create formulas between two sewing lines (for example: sleeves and armholes, waistbands and waists, collars and necklines, etc.) to make sure that all related pieces follow if a modification is made somewhere.

Obtain a precise measurement (Medium size and/or All sizes) for creation of Specs when the required measurement cannot be obtained by the Frames themselves (for example: trousers crotch, armhole value, etc).

Segments can be used on pattern pieces with or without Frames.

Frames	X-Small 4	Small 6	8	Medium 10	Large 12	14	X-Large 16	18
Shirts/Blouses								
Centers								
Links								
Segments								
Underarm Front — Measures:	4.23	4.35	4.50	4.66	4.82	4.99	5.19	5.41
Armhole Front — Measures:	4.47	4.65	4.84	5.03	5.21	5.40	5.58	5.77
Underarm Back — Measures:	4.23	4.35	4.50	4.66	4.82	4.99	5.19	5.41
Armhole Back — Measures:	4.47	4.66	4.84	5.03	5.22	5.40	5.59	5.78
Armhole Back Sleeve — Measures:	4.47	4.66	4.84	5.03	5.22	5.40	5.59	5.78
Underarm Back Sleeve — Measures:	4.23	4.35	4.50	4.66	4.82	4.99	5.19	5.41
Armhole Front Sleeve — Measures:	4.47	4.65	4.84	5.03	5.21	5.40	5.58	5.77
Underarm Front Sleeve — Measures:	4.23	4.35	4.50	4.66	4.82	4.99	5.19	5.41
Back Rib Neckline — Measures:	3.08	3.26	3.45	3.64	3.83	4.02	4.22	4.41
Front Rib Neckline — Measures:	5.28	5.48	5.69	5.89	6.09	6.29	6.50	6.70
Back Rib Collar — Measures:	3.08	3.26	3.45	3.64	3.83	4.02	4.22	4.41
Front Rib Collar — Measures:	5.28	5.48	5.69	5.89	6.09	6.29	6.50	6.70

The Frame segments appear in Aqua color with arrows on both sides. The white arrow identifies the starting point of the Frame segment (reference point) and the colored arrow identifies the ending point of the Frame segment (moving point).

Make Frame Segment

To create a Frame Segment:

1 Activate the pattern shape(s)

2 Select the *Make Frame Segment tool* in the *Frame View* Toolbox.

3 Click the starting point of the segment (the reference point).

4 Click the ending point of the segment (the moving point).

The *Segment* dialog box appears:
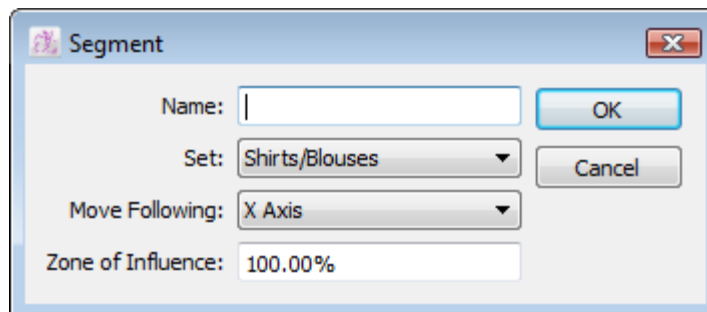
5 Enter the name of the segment.

6 Select the appropriate set from the drop-down menu. This option is available if several sets exist. If there are no existing sets, Set 1 is created by default.

7 Select the appropriate characteristics.

Segment characteristics:

Move Following: Select the modification method: X Axis, Y Axis, Segment Orientation, or following Contour Line. A movement is proposed according to the direction of the segment.

Zone of Influence %: It allows you to establish a percentage where the enclosing points move to the maximum value (for example: shaped collar, center front notches).

8 Click the *OK* button to execute the function.

Frame Segment: Move Following and Zone of Influence

The Frame Segment can move following four different values: the X Axis, the Y Axis, the Segment Orientation or the Contour Line.

Move Following the X Axis constrains pattern modifications and/or grading rules on the X Axis.
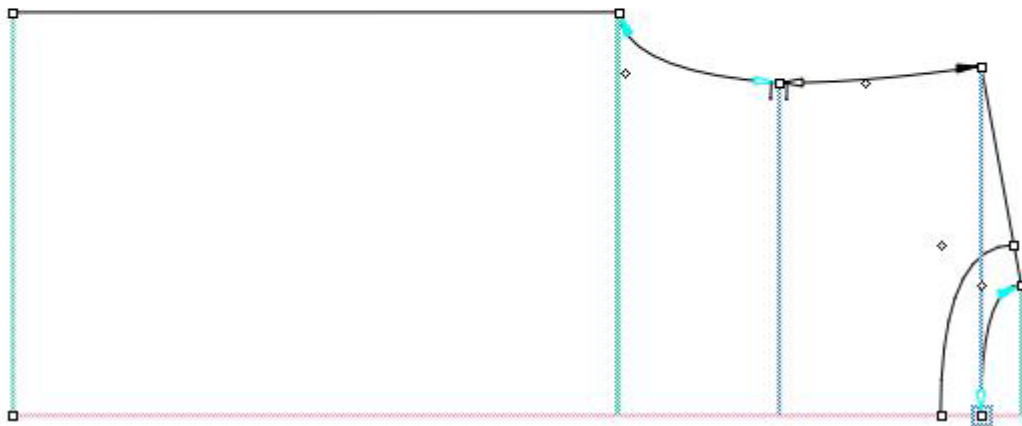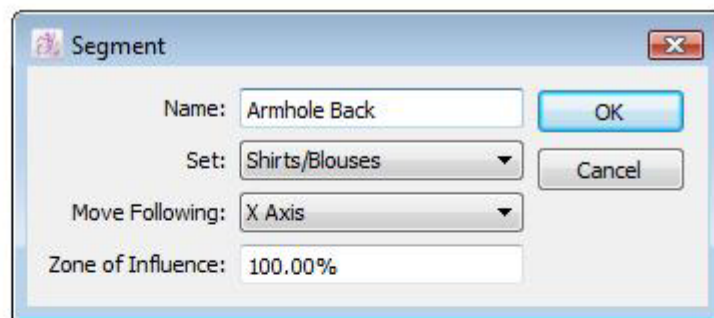
Move Following the Y Axis constrains pattern modifications and/or grading rules on the Y Axis.
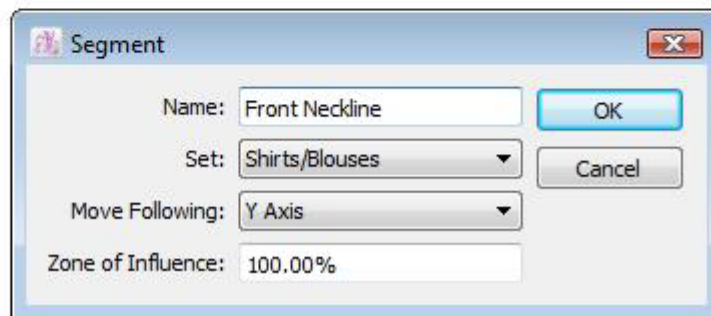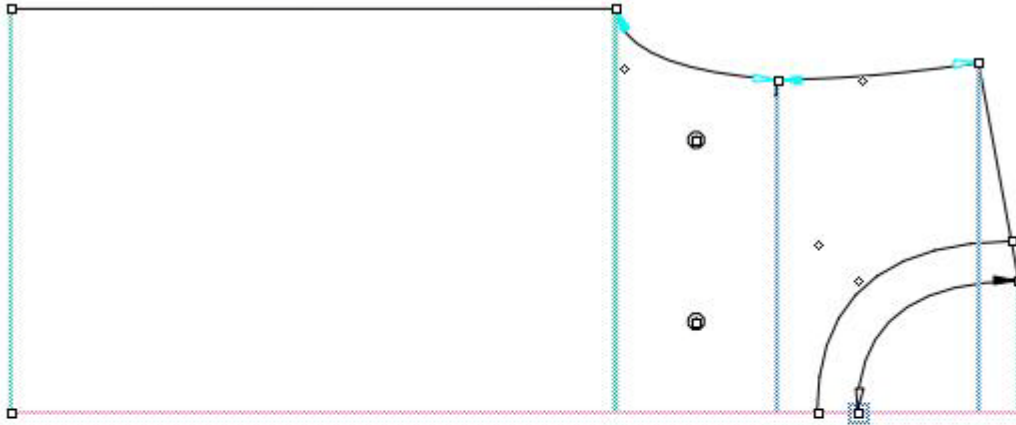
Move Following the Segment Orientation applies pattern modifications and/or grading rules according to the pattern piece position.
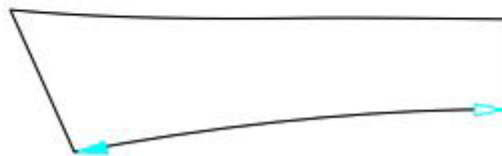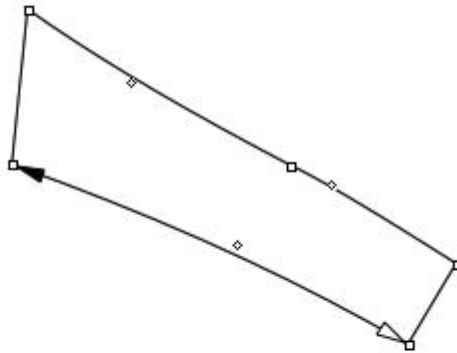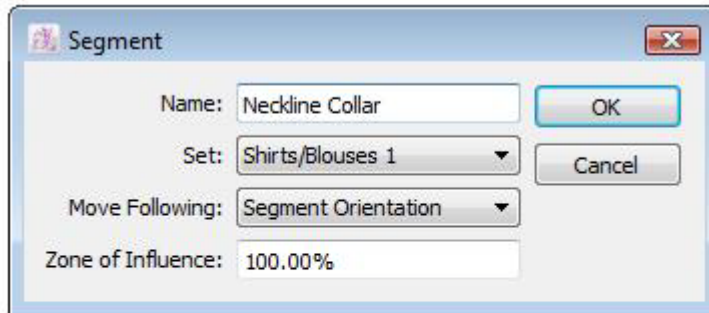
Move Following the Contour Line applies pattern modifications and/or grading rules along the existing contour line. The main use is to match notches.
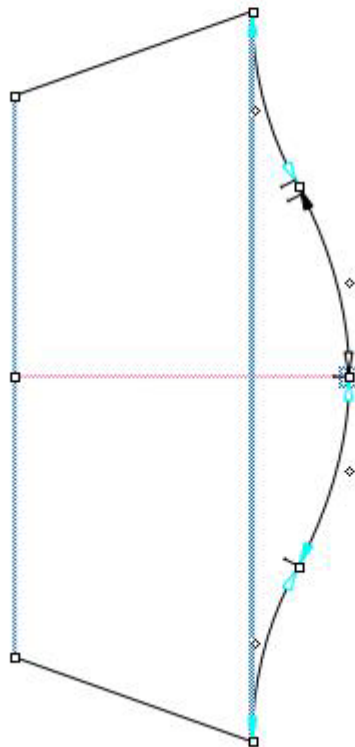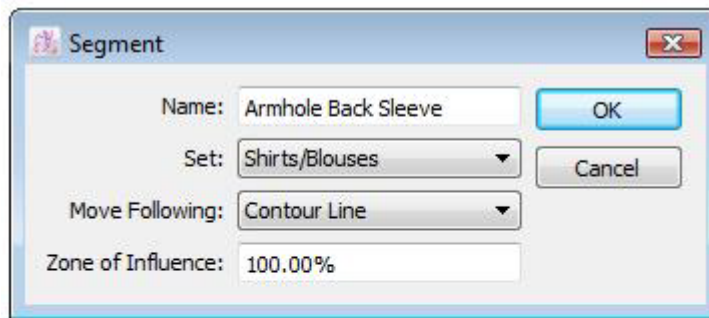
The **zone of Influence** applies full grading rules to a pre-set portion of the pattern piece. The other portion remains the same through all the sizes.

This is useful on collars, waistband tabs and cuff tabs.
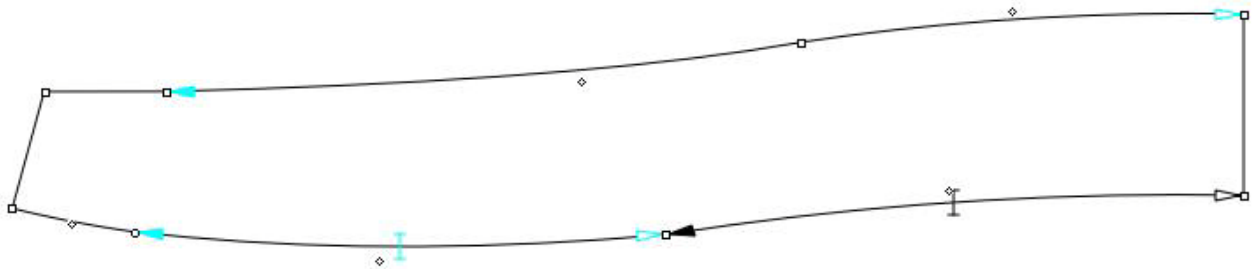
Manipulating Frame Segments

Segments can be re-applied to pattern shapes in the same manner as all other library components.

They are applied on the pattern piece perimeters and follow the original given segment movement of the library.

You can adjust these movements before applying the library.
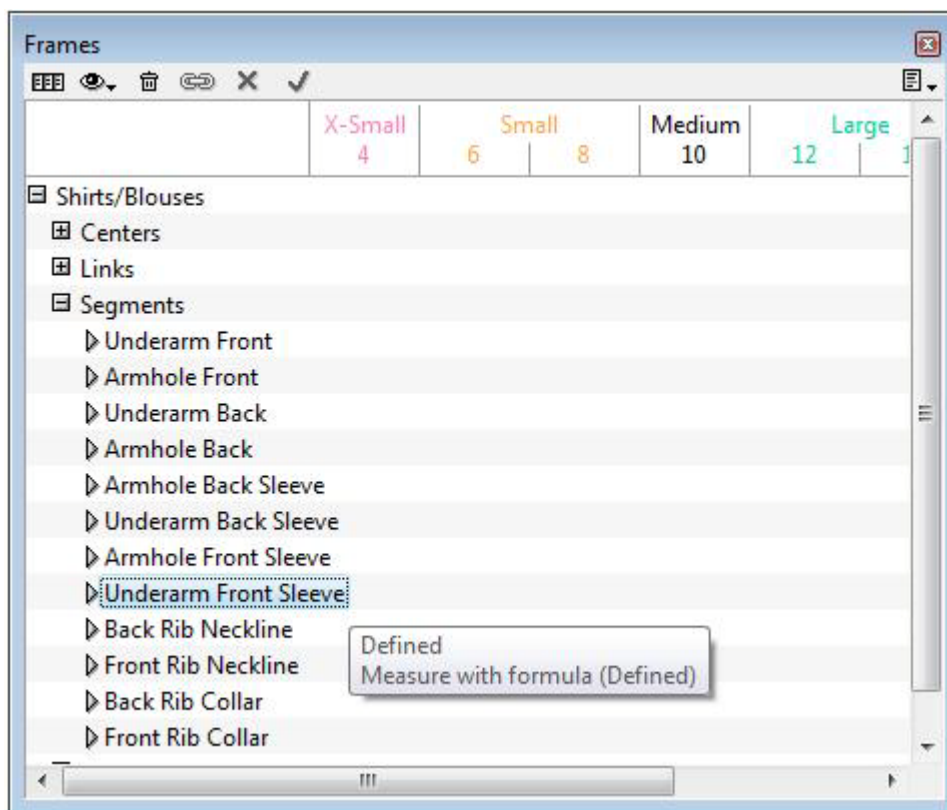
There is no need to have frames to apply segments.

To remove a Frame Segment item:

1 The Frame Segment must be deleted from the pattern piece. Select the Frame Segment item on the pattern piece and press the **Backspace** key (Windows/Linux) or the **Delete** key(Macintosh) on the keyboard.

Windows Keys Backspace	Macintosh Keys Delete	Linux Keys Backspace
← Backspace	delete	← Backspace
⇧ Shift	return	⇧ Shift
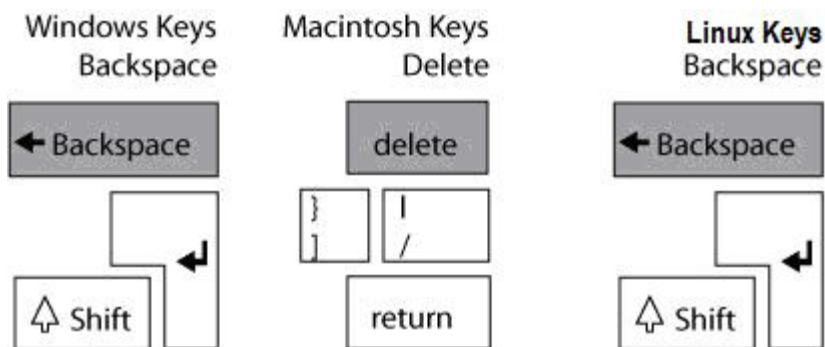
2 In the *Frames* window, select the Frame Segment that you wish to erase. It should be shown inactive (in Italic Type) and *Not Defined* should be indicated in the attributes menu.

3 Click the *Delete* icon at the bottom of the *Frame* window to delete the selected Frame segment.

To reapply a Frame Segment on a pattern piece:

1 In the *Frames* window, select the undefined segment name to be applied on the pattern piece.

2 Select the *Make Frame Segment tool* from the Toolbox.

3 Click the appropriate two reference points on the pattern piece. The first point is the fixed point; the second point is the moving point.

4 A two-headed arrow appears on the selected perimeter.

5 As the current segment is applied to the pattern, the selector moves down the list to the next undefined element. The toolbox is adjusted if the next undefined element is a different type – a Center, Frame or Segment.

Using Formulas

A Formula calculates the target measurements and/or levels by combining Frames, Links, Levels or Segments.

Formulas can be used in four ways:

• Between Frames (Measures and/or Levels)
• Between Segments
• Between Frames (Measures and/or Levels) and Segments
• Between Segments and Frames (Measures and/or Levels)

By definition, a Formula modifies measurements based on the calculations obtained with the measurements of other Frames, Links or Segments.

For example: A formula between front and back armholes and sleeve head with ease would be the same across all sizes. If modifications are made to one item, all related items through the formula follow the modification.

To create a Formula:

1 Press the *Formulas* button fx beside the Frames, Links and/or Segments to modify it by a result of calculation.

The *Specify Calculation* dialog box appears:
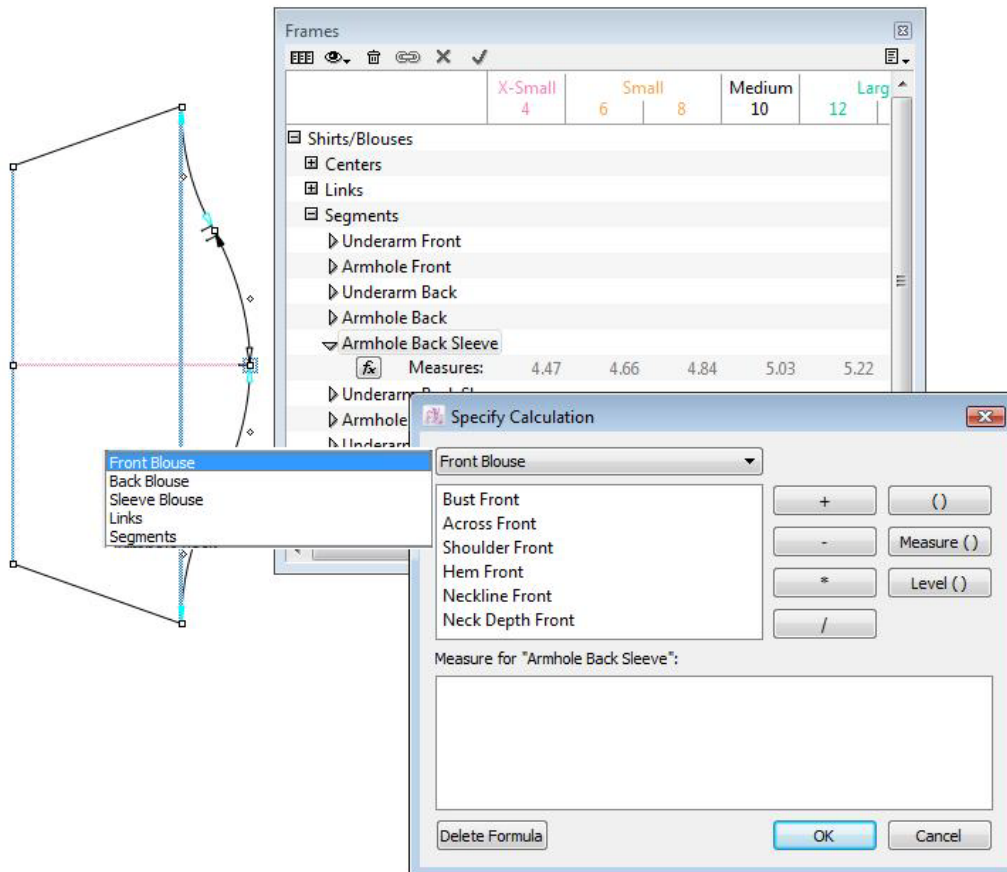
The *Specify Calculation* dialog box displays a specific calculation dialog box for the corresponding Frames, Links, Segments and/or Specs.

The Specify Calculation dialog box is divided into three sections:

The first section lists Frames (divided by their centers), Links and Segments available through the drop-down menu.

The second section contains buttons to create the mathematical formula: add, subtract, multiply and/or divide.
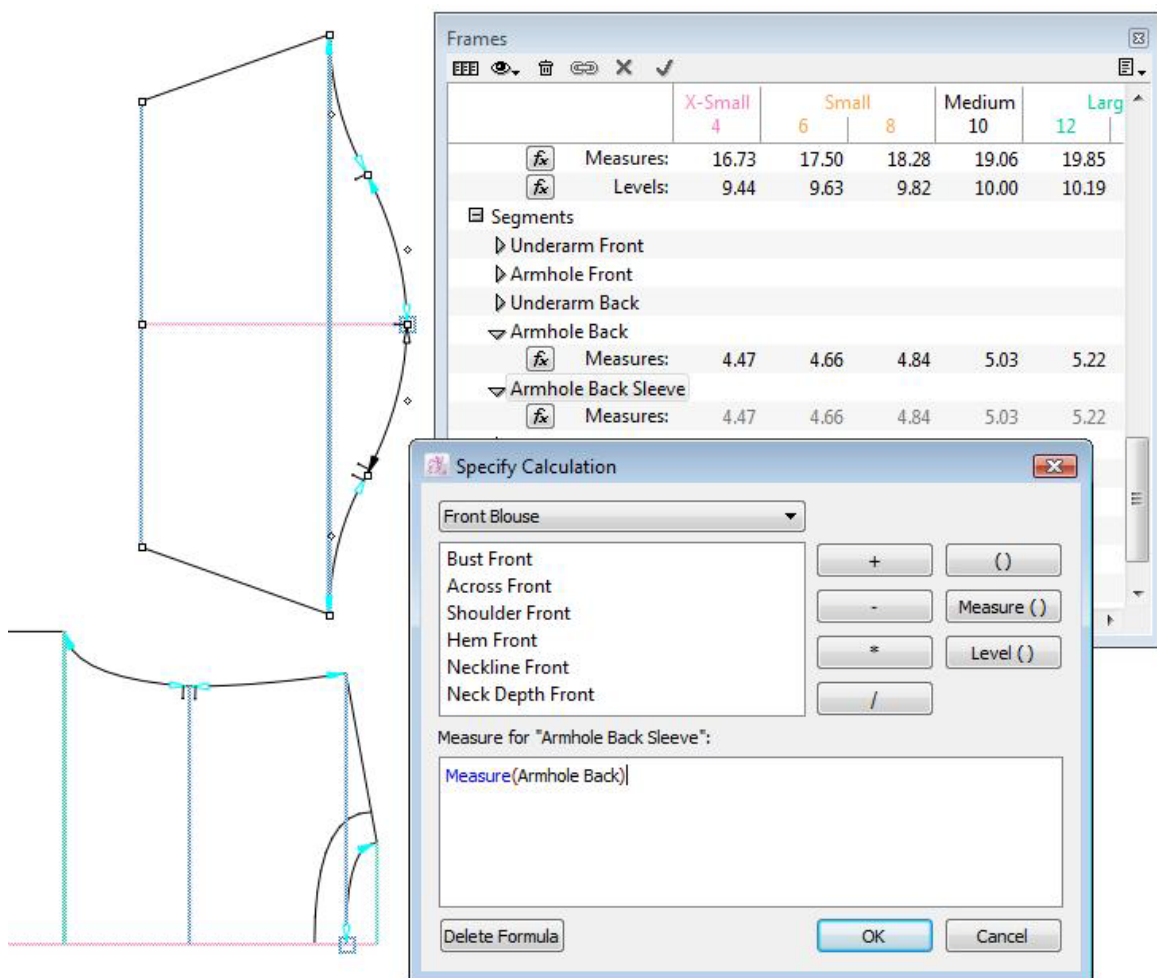
• **( ):** Creates brackets ( ) for longer or more complex formulas.

- **Measure( ):** For Frames, Links and Segments, to specify the measure to take.

- **Level( ):** For Frames and Links, to specify the measure to take.

The third section is the formula box, which displays the formula as it is created. This section includes a *Delete Formula* button, which erases the existing formula.

To understand the Specify Calculation window, follow the example below:

Formulas are created for identified Frames, Links or Segments. The name of the element can be seen at the center of the formula box, identified next to *Measure for*: (i.e.: Armhole Back Sleeve).

1 Click the *Measure( )* button; *Measure( )* appears in the formulas box
(i.e.: Measure()).

2 Select the desired category from the drop-down menu (Centers,
Links and Segments) and select the measured element from the list;
it appears between the brackets (i.e.: Measure(Armhole Back Sleeve)).

3 Establish the desired calculation by pressing the +, -, *, / buttons (i.e.:
Measure(Armhole Back Sleeve)+), if needed.

4 Enter a number (from the keyboard) or a desired *Measure( )* or
Level( ) from the list (i.e.: Measure(Armhole Back Sleeve)+.5), if
needed for ease or shrinkage.

5 Press the *OK* button to validate the formula.

The result of this formula is established and maintain the Armhole Back
Sleeve +.5 (inch or cm) longer than the Armhole Back.

To remove a formula from the formula box, press the *Delete Formula*
button.

Specific conditions to create Formulas:

• Formulas are not available for linked measurements if one of the Frame
measurements, contained in the link, is a result of a formula, for example
A + B is not equal to A.

• Formulas are not available for the Links Level if one of the Frame Levels,
contained in the Link, is a result of a formula.

• Formulas cannot be a set of circular references, for example: A is equal to
B and B is equal to A (A=B and B=A).

• Formulas must be validated after each modification.

• In certain instances, a warning message identifies Formulas that can no
longer be used based on how the Frame library was applied to a new
pattern piece.

Create Formula between Measurements Intelligently

To do so:

1 Activate the Frame needs to be added formula.

2 Right click on mouse to choose **Specify Calculation (Measure) / Specify Calculation (Level)**.

The Specify Calculation dialog box appears:
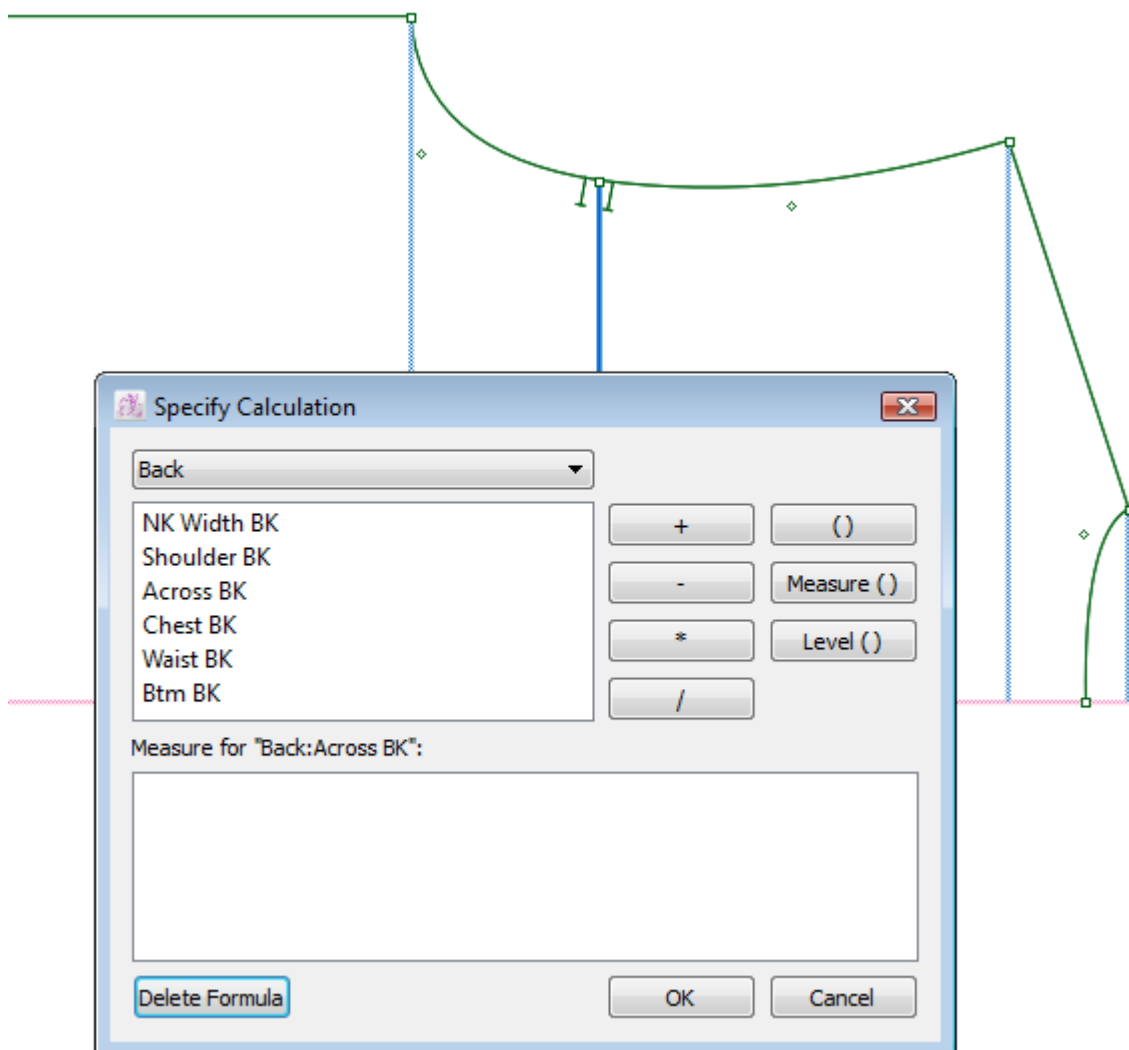
3 Select one of the frames as a Master frame that relates to the corresponding frame "Across BK".

Click on the Master Frame

Specify Calculation

Back

NK Width BK	+
Shoulder BK	( )
Across BK	-
Chest BK	Measure ( )
Waist BK	*
Btm BK	Level ( )
	/

Measure for "Back:Across BK":

Measure(Back:Shoulder BK) - 1.127

Delete Formula   OK   Cancel
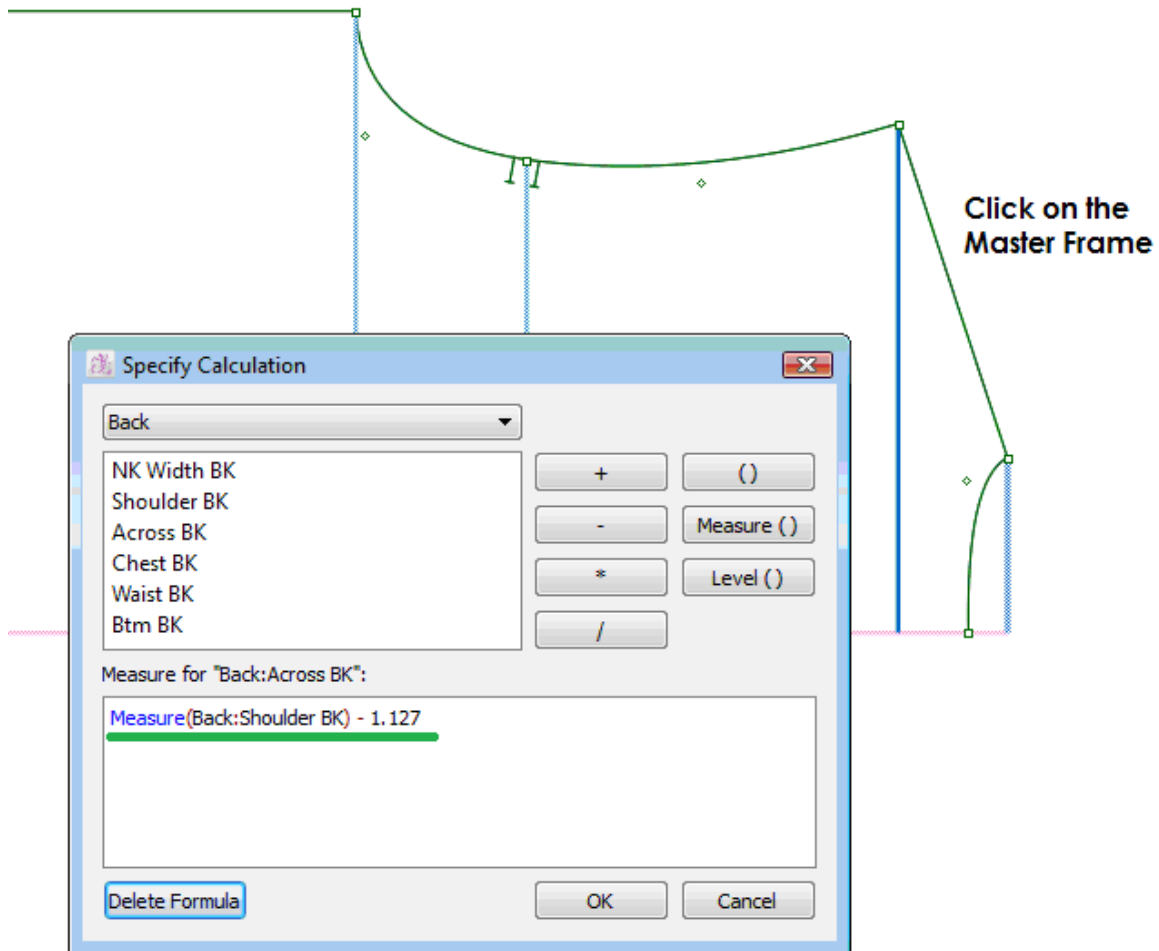
Or,

Click one of the frames from the Frames window as a Master frame that relates to the corresponding frame "Across BK".

Click on the Master Frame (Measures / Levels) on the list.
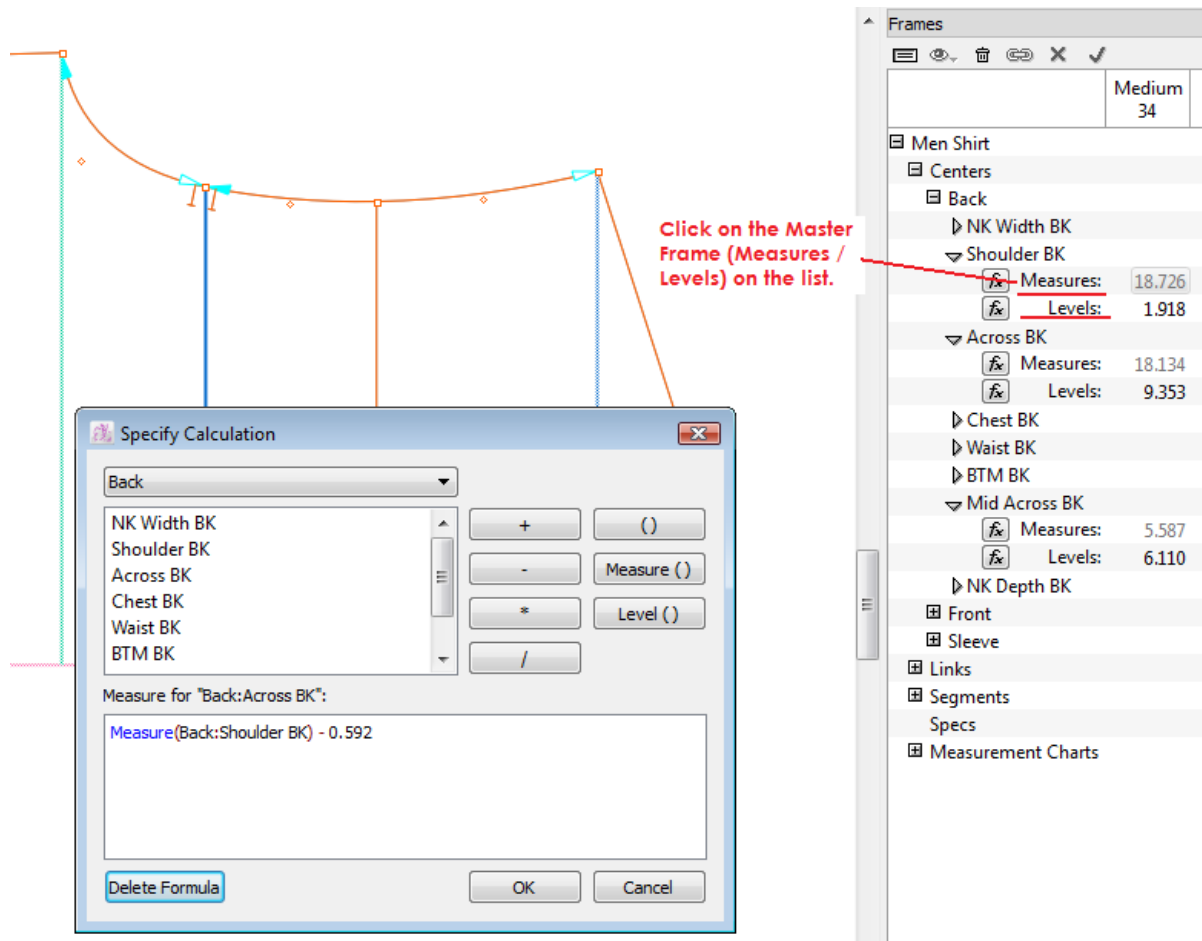
4 The formula is automatically created and displayed on the formula box. Example: Measure(Back:Shoulder BK) - 1.127

That means Across BK measures to Shoulder BK.   And the value (1.127) at the end, that is the difference between Shoulder BK (Master Frame) and Across BK.

5 Press OK button to validate the formula.

6 Put cursor to the corresponding frame "Across BK". A tool tip appears as follows.
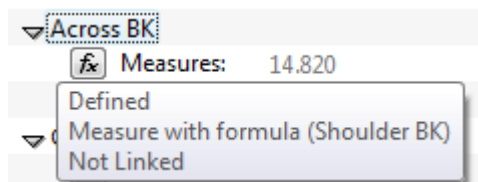
Keep Frames to the piece if Split Piece & Combine Pieces

PAD V6.0 will keep the frames, segments to the piece after splitting and combine. In previous version, the pattern piece set frames in Frame View, but if you may need to split it into 2 pieces, all frames will be removed completely. You have to apply all frames to the piece again.

To split a piece into 2 pieces and keep frames on:

Here is the original piece with setting Frames.
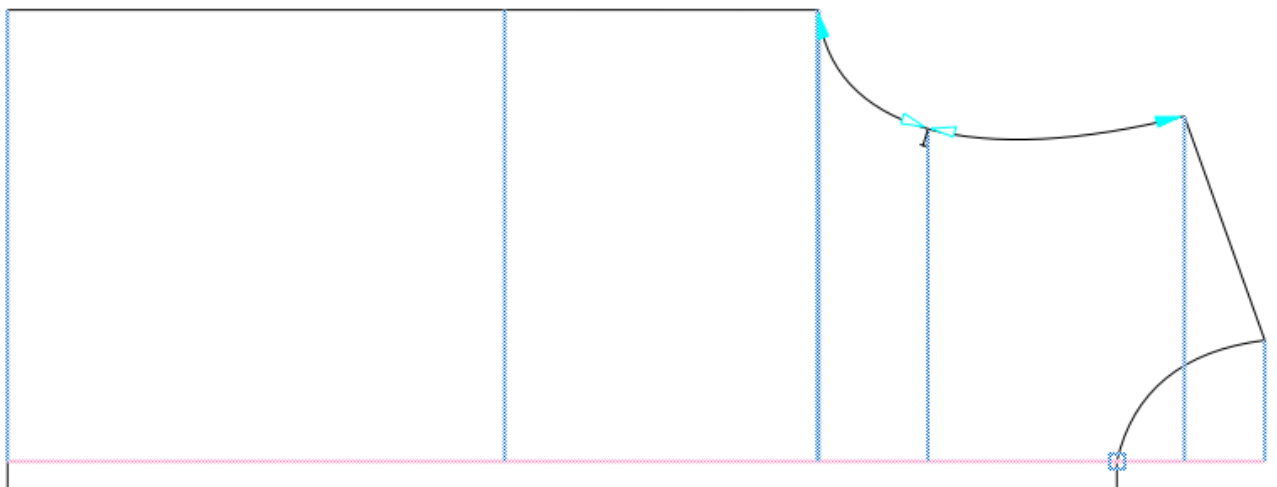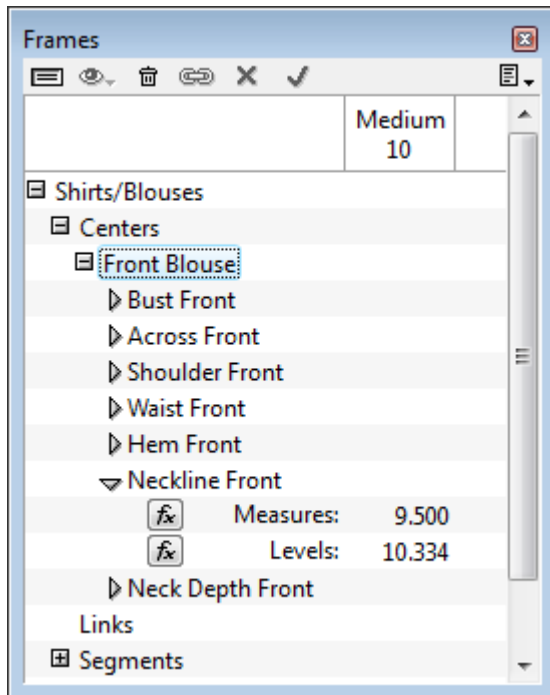
Once it splits to 2 pieces, it creates a new Center items for the split piece in Frame list. It creates a new Center item and adds suffix **C** to the piece name.
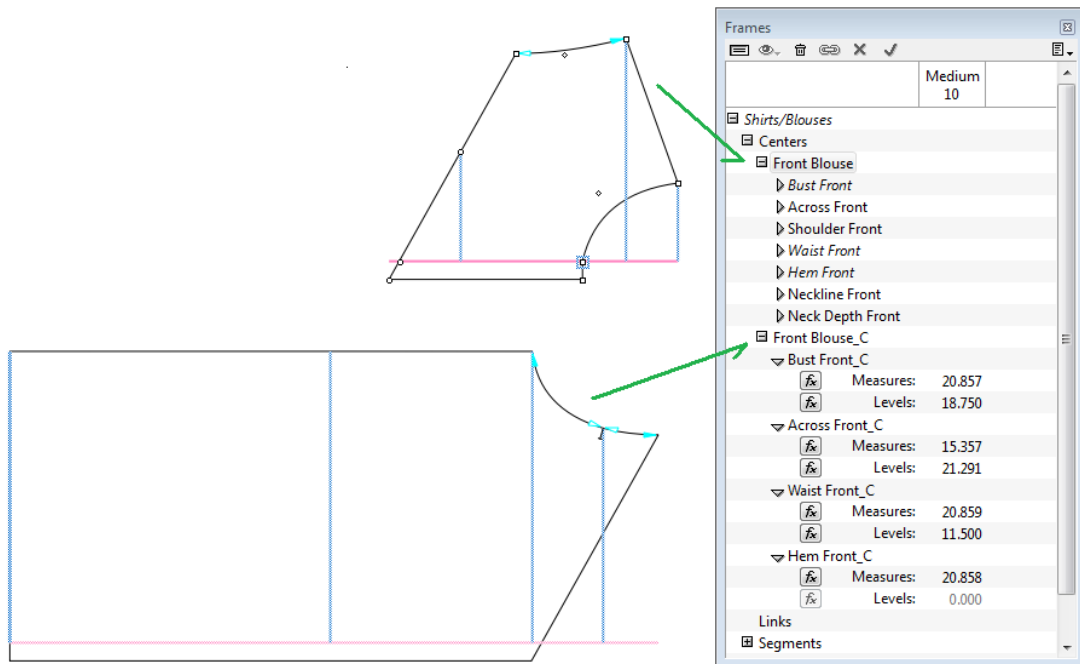
If a piece with Frames is being split into 2 pieces, the split segments will create a point for the position of Frames.
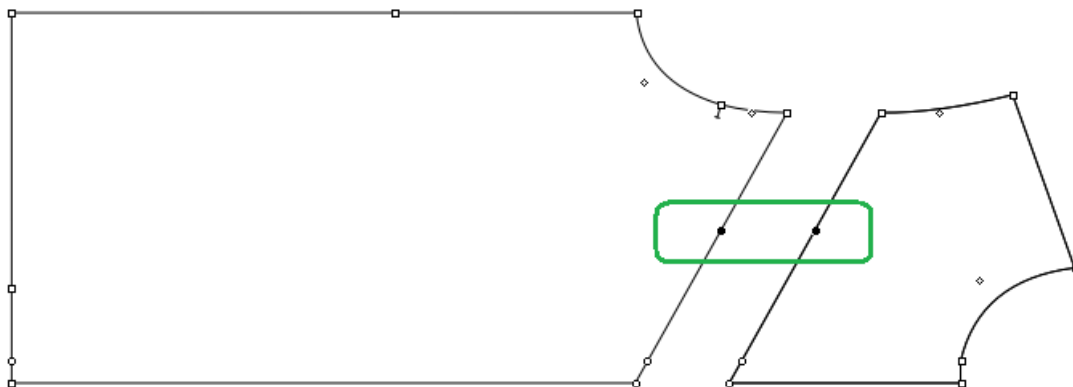
To combine 2 pieces to a piece and keep frame on:

Here is the example for 2 pieces set with frames.

Back Blouse
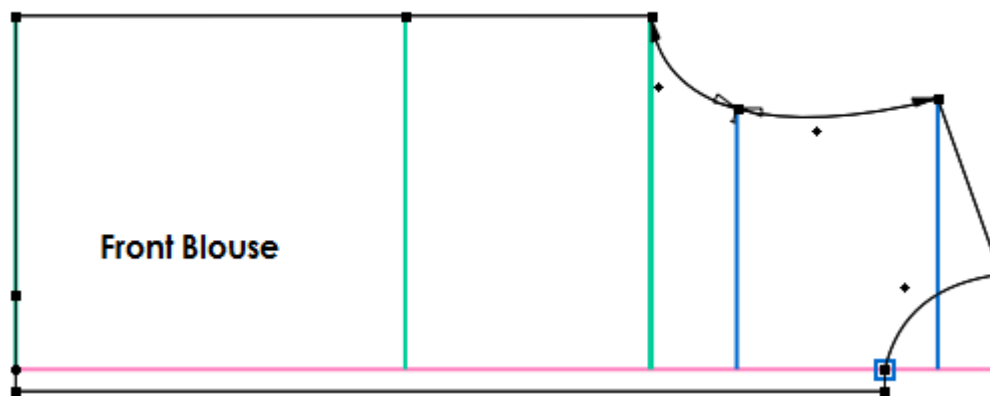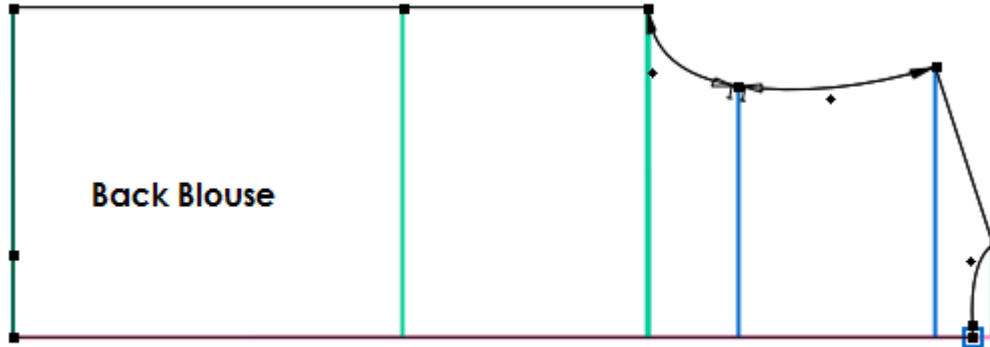
Front Blouse

One of the pieces needs to be split, part of piece in Plan View as follows.

Front Blouse
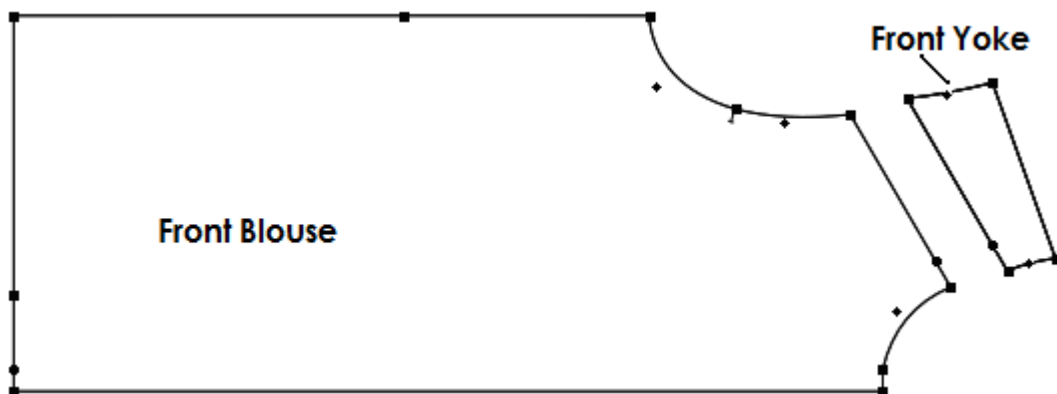
Front Yoke

You will find the frames still keeping to the piece "Front Blouse" and create the new segments on Front Blouse and Front Yoke.
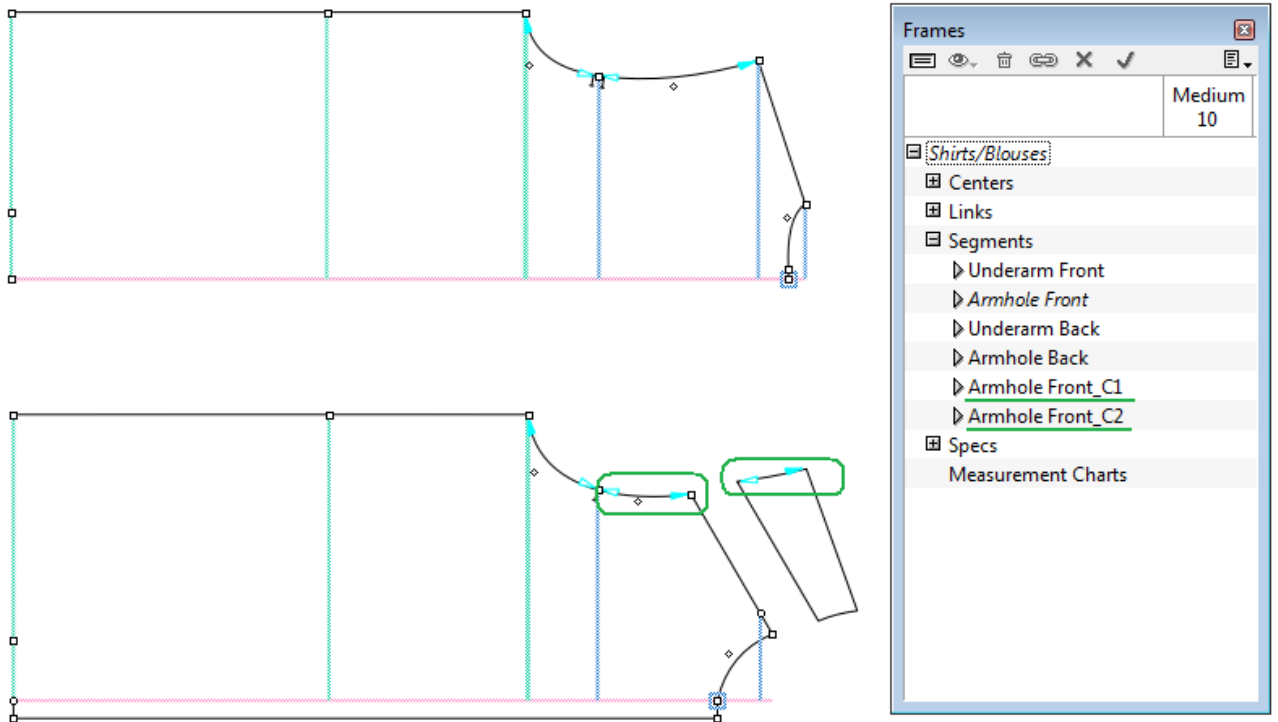
Combine Front Yoke to Back Blouse in Plan View and go back to Frame View. Back Blouse still keeps all frames and segments on.
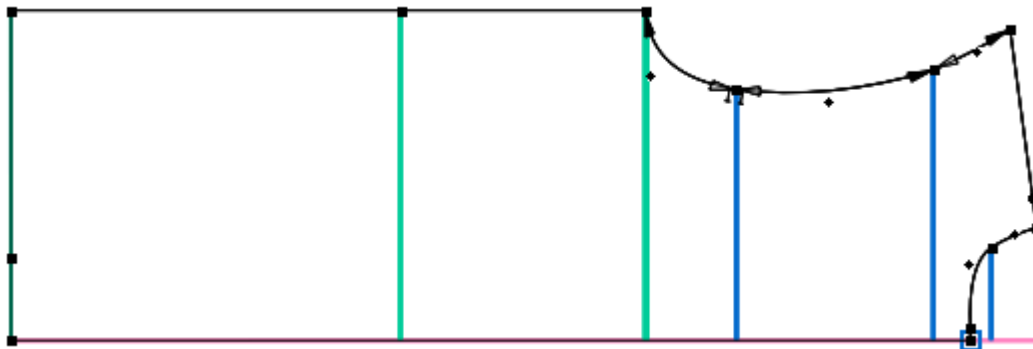
Rearrange the order of Frame items in Frame window

It allows to re-arrange item order at five categories; Centers, Links, Segments, Spec and Measurement Charts in Frame window.

To do so:

1 Select the item need to be moved

2 Click on it and hold down mouse button

3 Move to the desired position and release mouse button
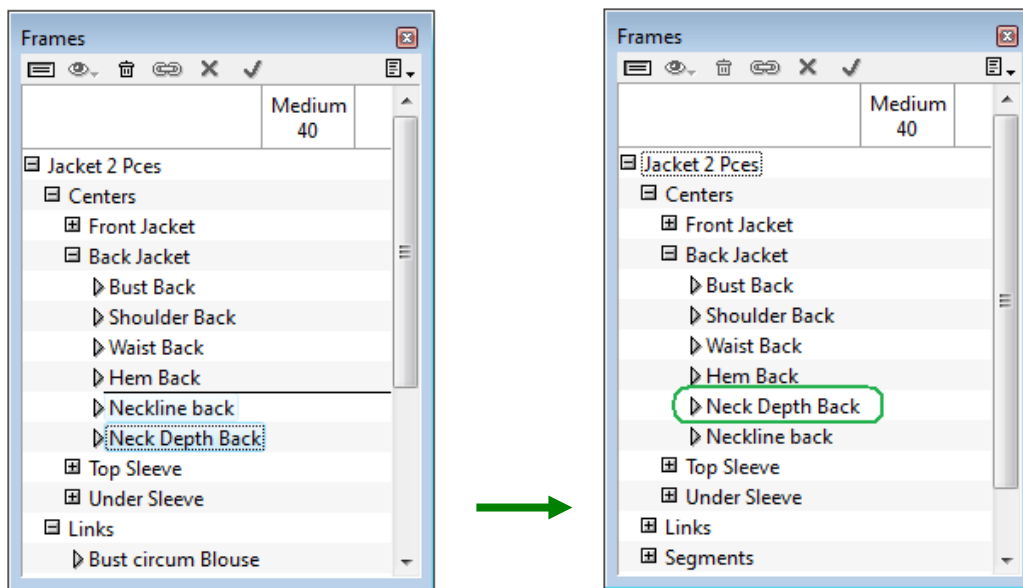
Or it allows moving the item for a pattern piece in Centers category.
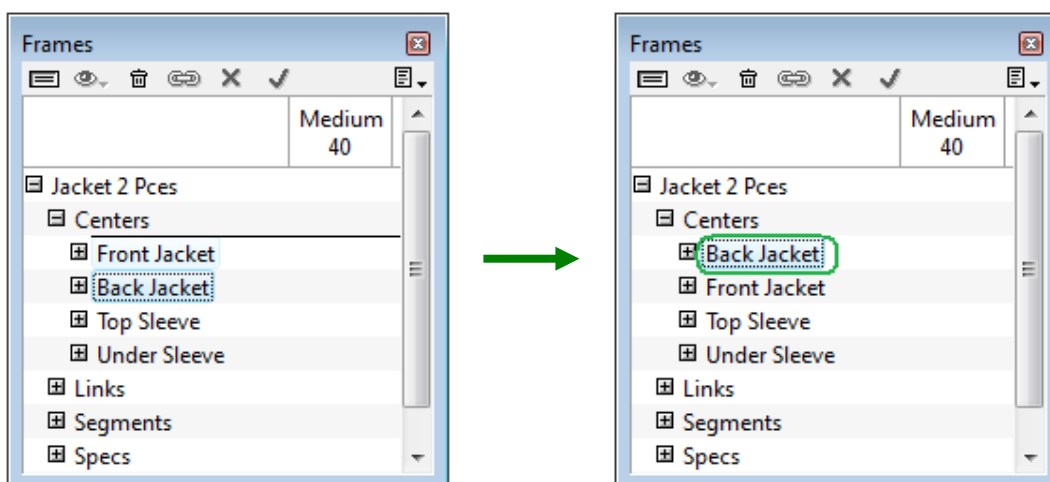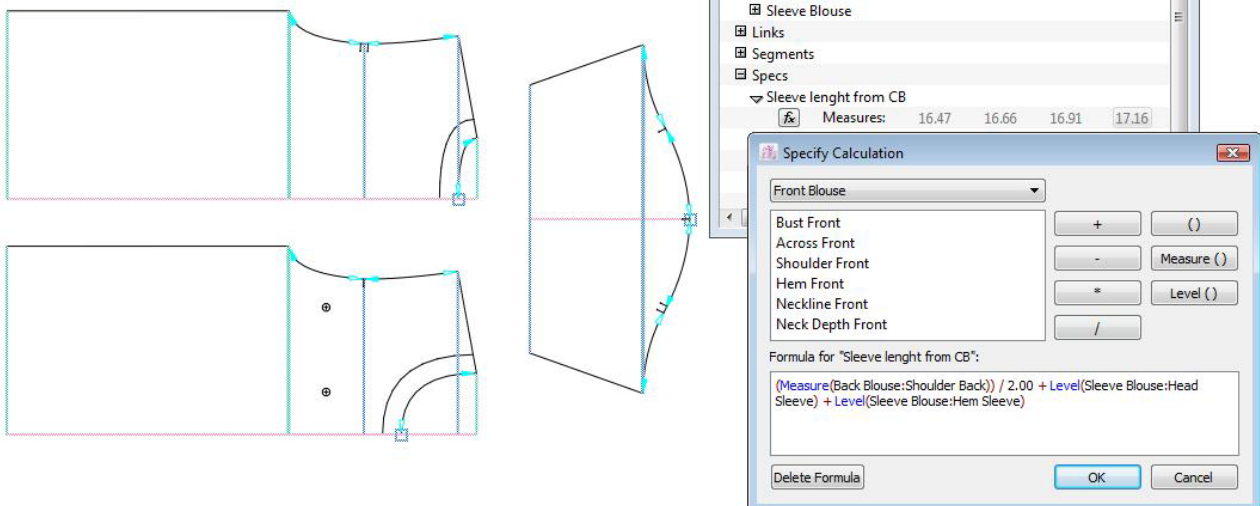
Creating Specs

Each company has its own way of measuring garments. Applying Frames to a Pattern could be compared to measuring a pattern with a measuring tape. Specs(specifications), on the other hand, can be compared to making a combination of garment measurements to obtain overall measurements of the finished garment.

Specs are created by combination, using Formula Editor (Specify Calculation) measurements obtained by Frames (Measures and/or Levels), Links (Measures and/or Level) and/or Segments.

Specs are results and cannot be modified. You can create a Spec for your maximal and minimal tolerance for the finished garment measurement to be used for quality control purposes.

To create a New Spec:

**1** Select *New Spec…* from the drop-down menu in the *Frames* window.
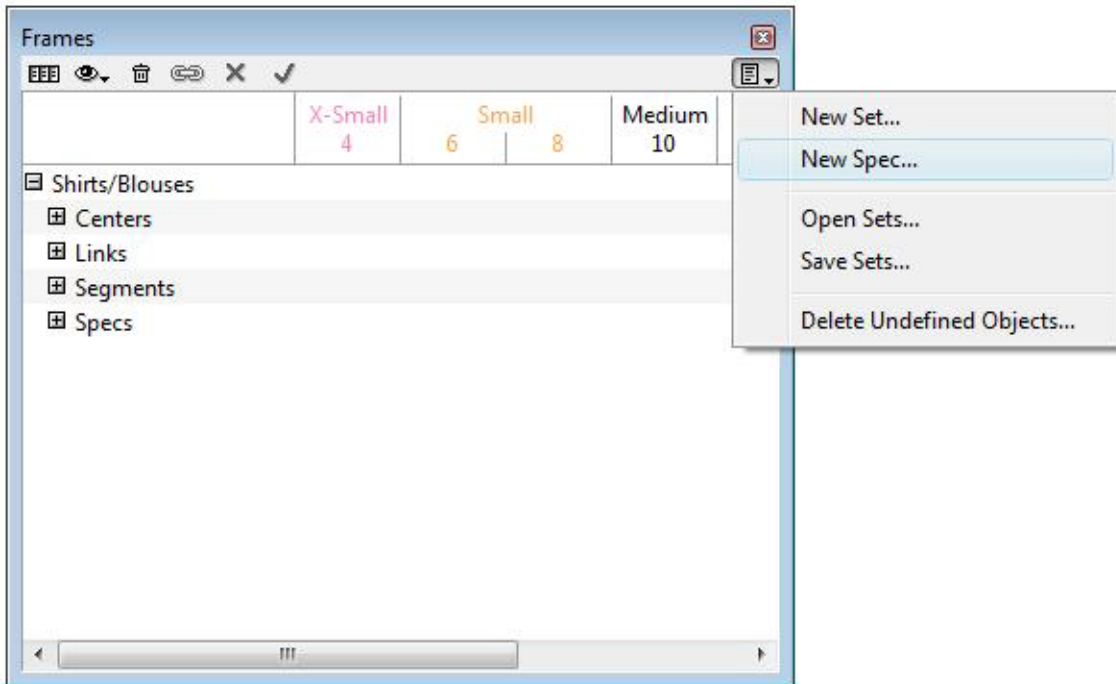
2 In the *Specs* dialog box, enter a name and select the set the new spec belongs to. The *Set* drop-down menu lists all existing sets. If there are no existing sets, Set 1 is be created by default.
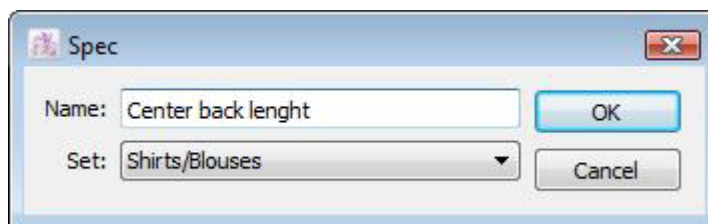
3 Click the *OK* button to execute the function.

Created specifications are listed in the *Frames* window under the Specs category.
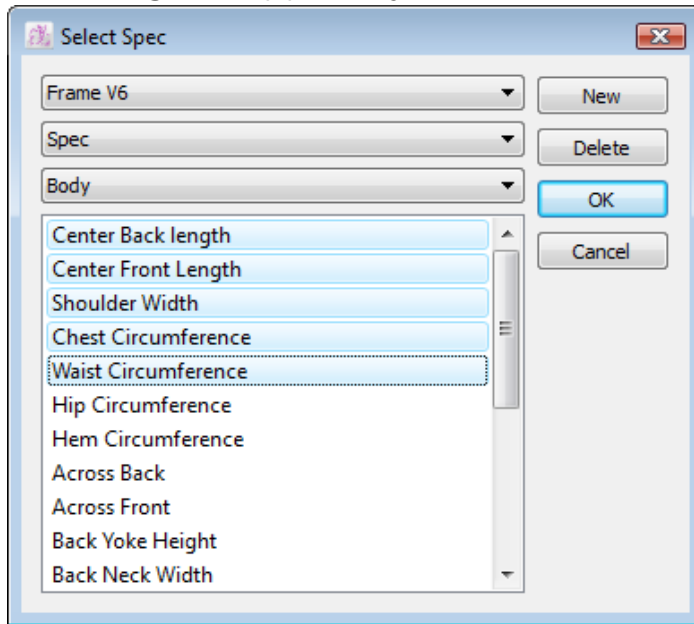
Using the same method as with Formulas, combine necessary Frames (Measures and/or Levels), Links (Measures and/or Levels), and Segments to obtain the specifications measurements you need.
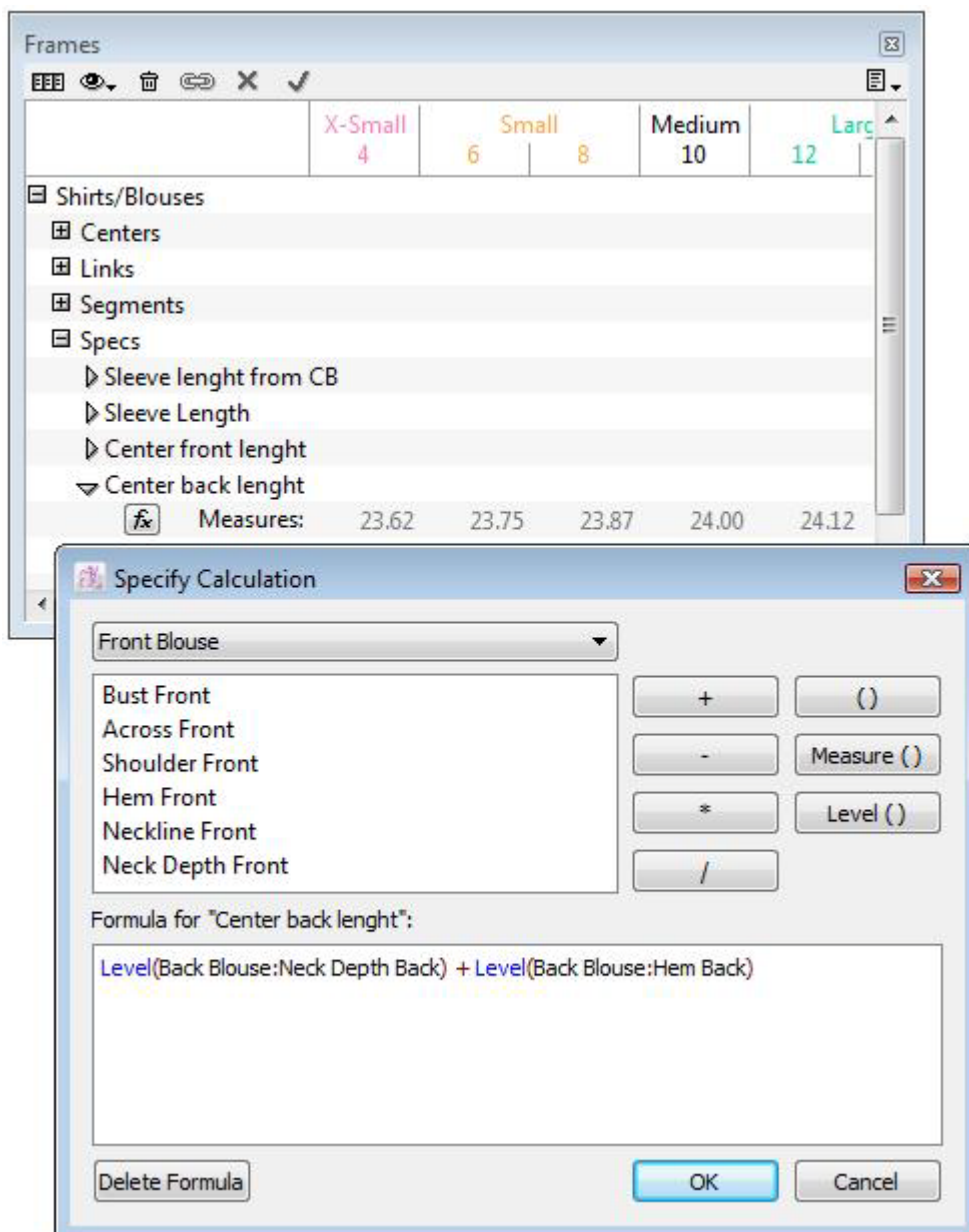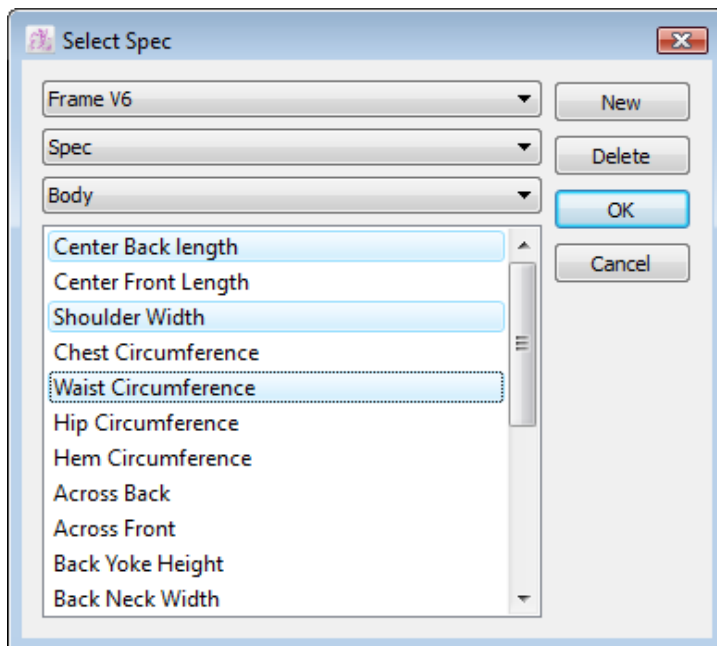
Create Specs by Default Items from Select Spec

To do so:

1 To choose **Select Spec…** from Frames window sub-menu

2 A dialog box appears; you can use mouse drag to select several items.
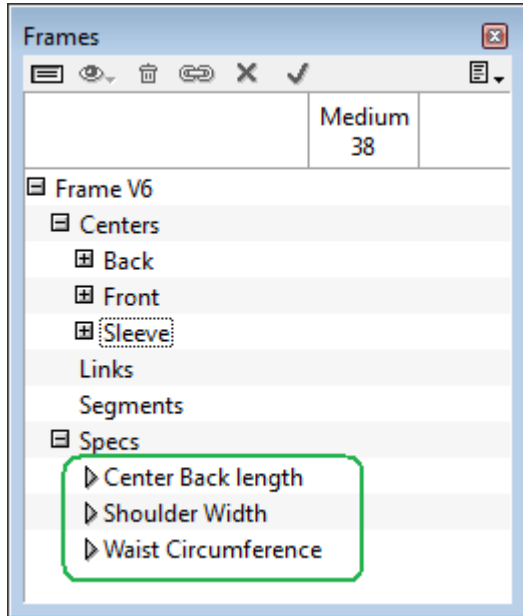

Or hold down Ctrl +Alt keys to choose your desired items from the list.

3 Press OK button to validate. Your desired Specifications are in the Frame window under the Specs category.
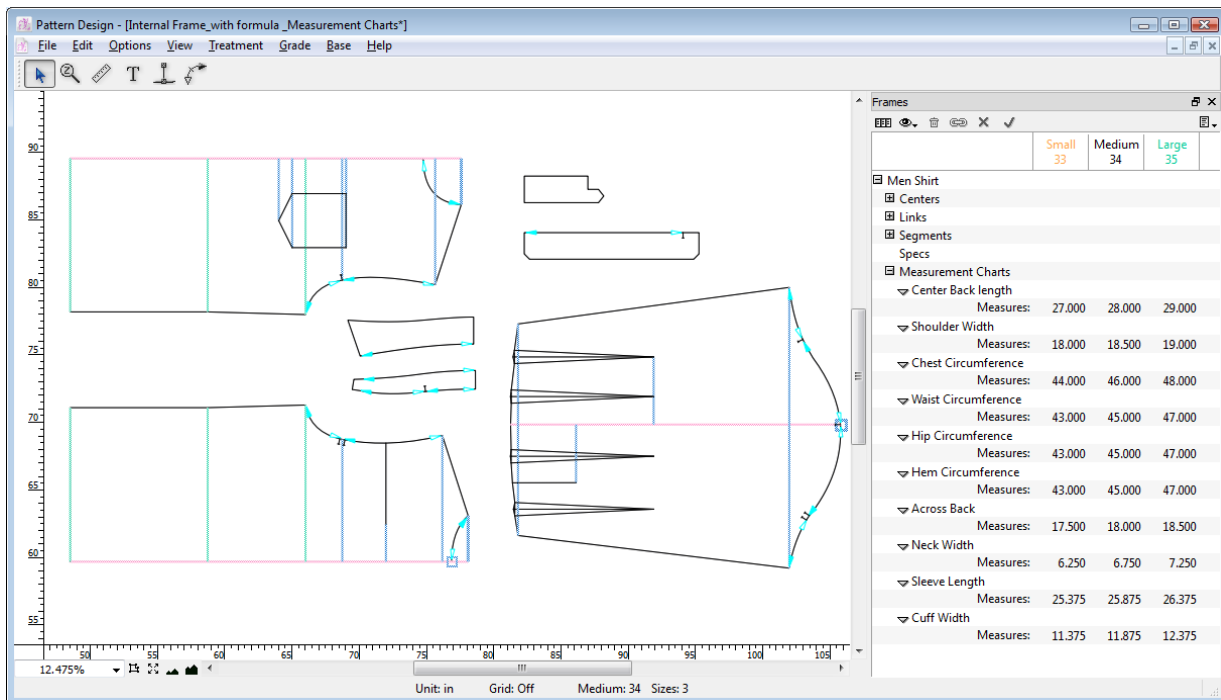

Delete Specs without Adding Formula from Frames Window

It allows deleting the Specs without formula from Specs category by multiple selections. It does not delete Specifications one by one.

Measurement Charts

Measurement Charts is an individual category in Frame View window, user can define various items and set value on it accordingly. Once the value of item in Measurement Charts is modified or changed, all corresponding items (Frames, Segments or Links) will be automatically updated.
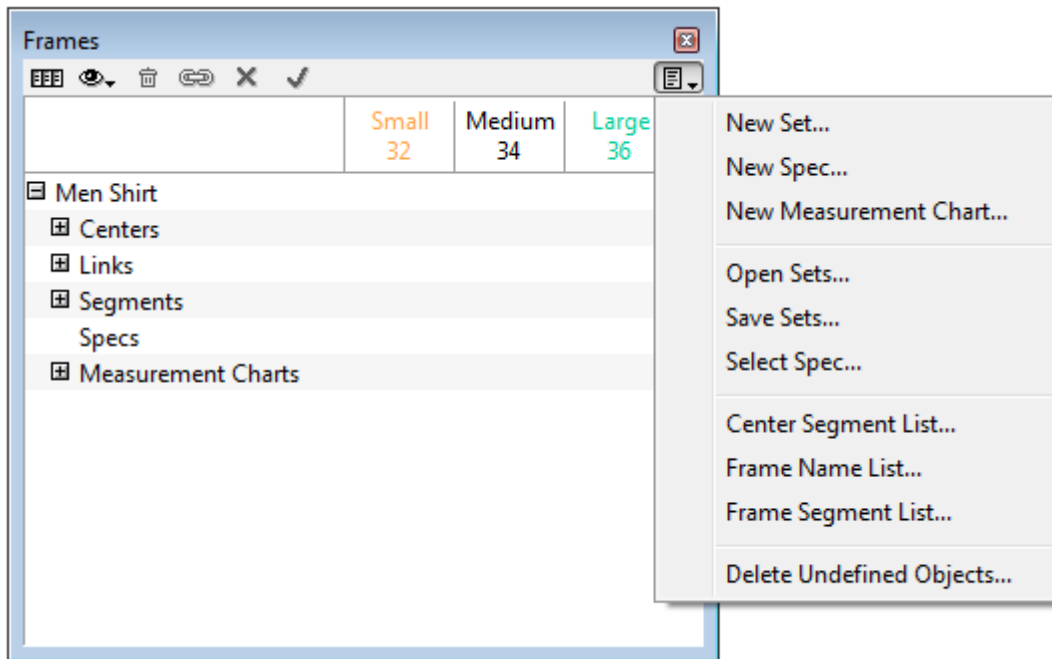
To create a New Measurement Charts:

1 Select *New* Measurement Charts…from the drop-down menu in the Frames window.
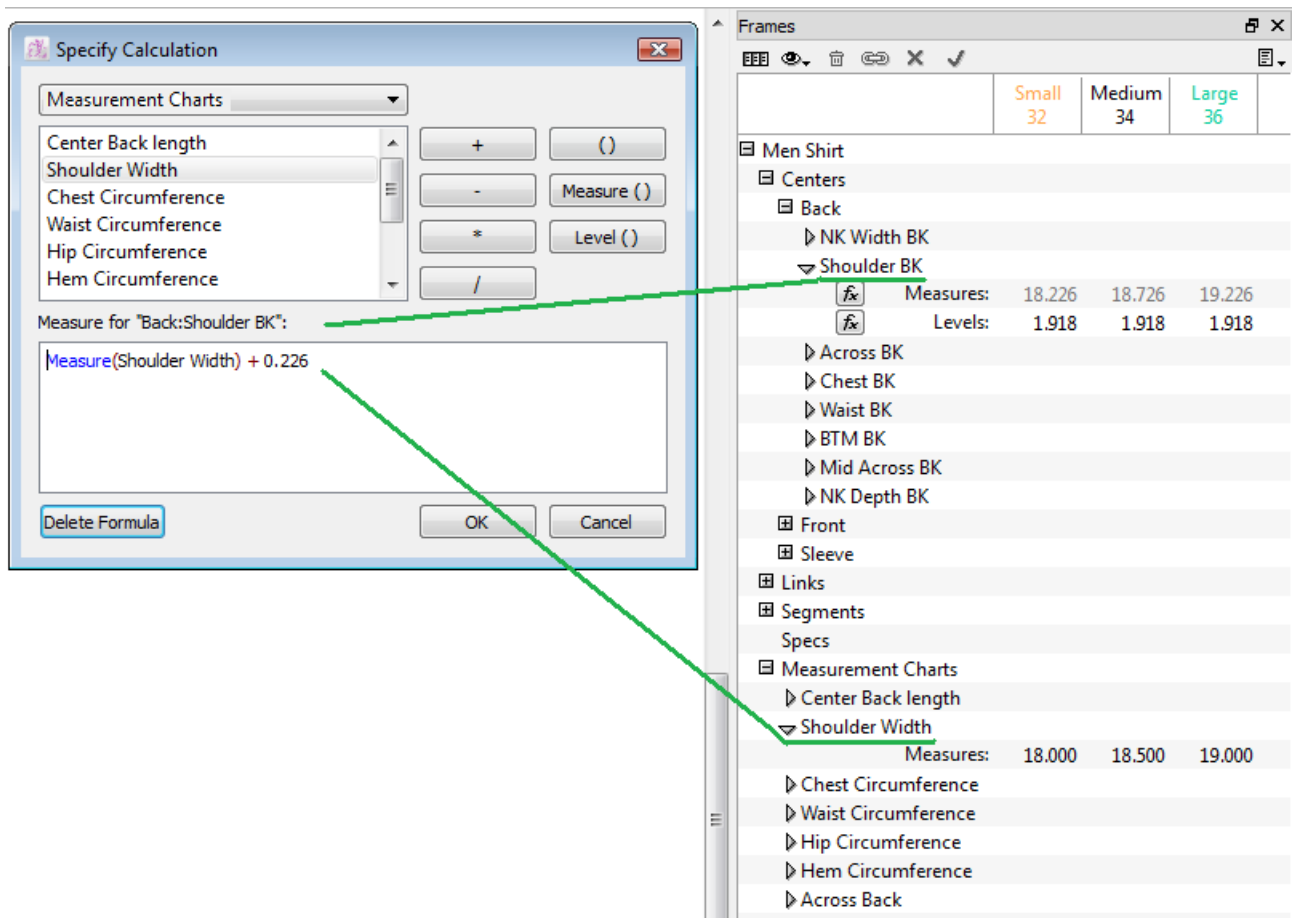
2 In the *Measurement Charts* dialog box, enter a name and select the set for the New Measurement Charts belongs to. The *Set* drop-down menu lists all existing sets. If there are no existing sets, Set 1 will be created by default.
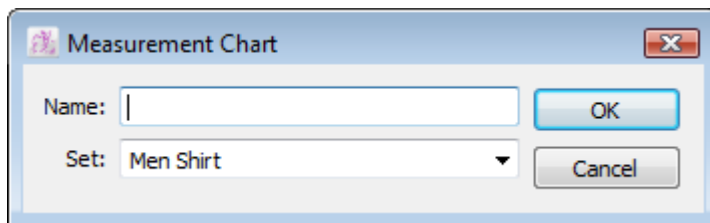
3 Click the OK button to execute the function.

Created items are listed in the Frames window under the Measurement Charts category.

Using the same method as with Formulas, combine necessary Measurement Charts to obtain Frames, Links and Segments value you need.

Once the values in Measurement Charts are modified, all corresponding Frames, Links and Segment are updated automatically.

Exporting Frames

Once you have established Frames on all related pattern pieces, you can export their measurements to an external database.

To export Frame information:

1 Select the *Export…* item in the *File* menu.

The *Export* dialog box opens:
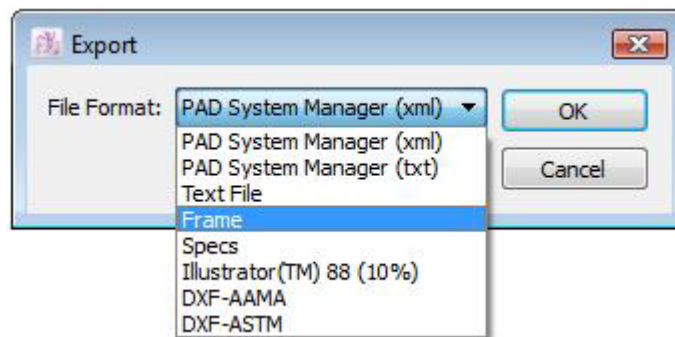
2 Select the *Frame* file format from the *File Format* drop-down menu.

3 Click the *OK* button to execute the function.

4 If more than one set exists in the *Frames* window, select the set you wish to export. More than one set can be exported at once.(If all sets need to be exported, press the *Select All* button.)

5 Click the *OK* button to execute the function. The *Export Document as* dialog box opens.

6 Enter the file name and click the *Save* button.

Once exported, the exported Frame formatted file can be opened in any standard software that supports Text Files.

Importing Frames

If frame information is modified in an external database or any other software that supports text files, it can be imported back in the pattern file.

To import frame information:

1 Select the *Import…* item in the *File* menu. The *Import* dialog box opens:
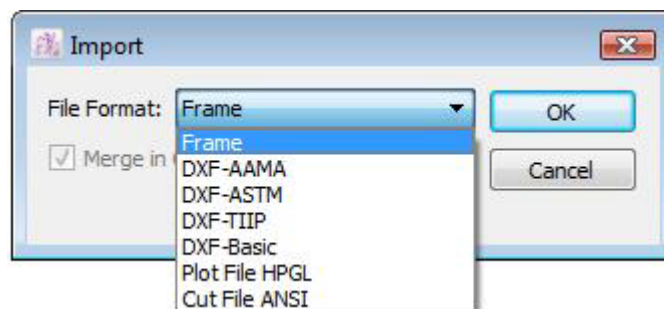
2 Select the *Frame* file format from the *File Format* drop-down menu.

3 Click the *OK* button to execute the function.

4 If more than one set exists in the pattern file, select the corresponding set from the list.

5 Select the set to import and click the *OK* button to execute the function.

Exporting Specs

Once specs are created, their measurements can be exported to an external database.

To export the Specs information:

1 Select the *Export...* item in the *File* menu.

The *Export* dialog box opens:

2 From the *File format* pop-up menu, select the *Specs* file format.

3 Click the *OK* button to execute the function.

4 If more than one set exists in the *Frames* window, a dialog box appears, enabling you to select the set(s) you wish to export. You can export more than one set at once.

5 A *Save* dialog box opens. Enter the *File Name* and click the *Save* button.

Once exported, the Exported Specs formatted file can be opened in any standard software that supports text files.

Exporting Measurement Charts

Once Measurement Charts are created, their measurements can be exported to an external database.

To export the Measurement Charts information:

1 Select the Export... item in the File menu.

The Export dialog box opens:
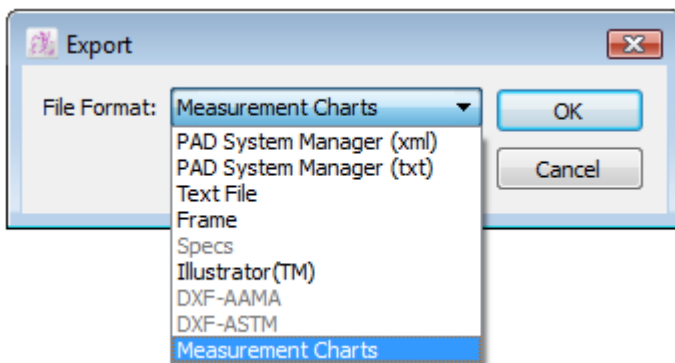
2 From the File format pop-up menu, select the Measurement Charts file format.

3 Click the OK button to execute the function.

4 If more than one set exists in the Export window, a dialog box appears, enabling you to select the set(s) to export. You can export more than one set at once.
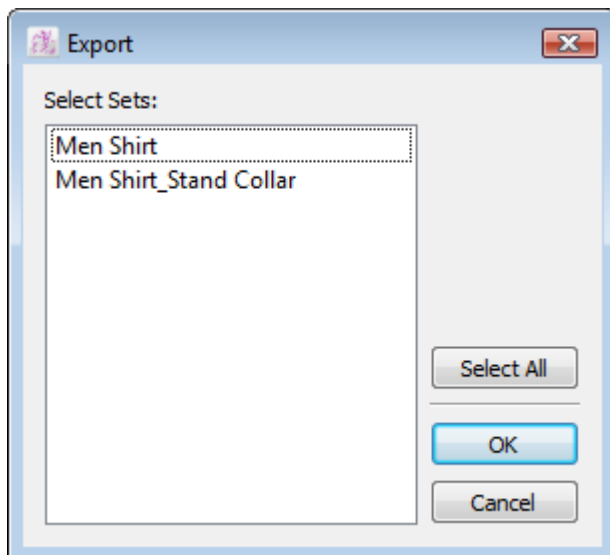
5 A Save dialog box opens. Enter the File Name and click the Save button. Once exported, the Exported file can be opened by any standard software that supports text files.

Importing Measurement Charts

If Measurement Charts information is modified in an external database or any other software that supports text files, it can be imported back in the pattern file.
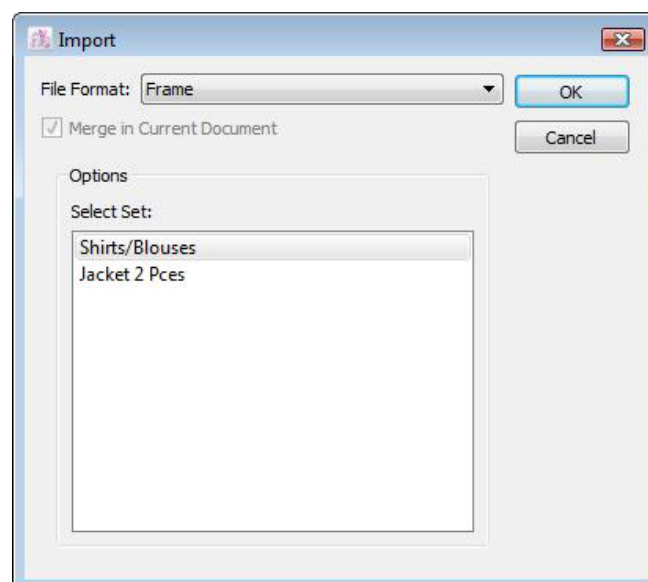
To import Measurement Charts information:

1 Select the Import… item in the File menu. The Import dialog box opens:
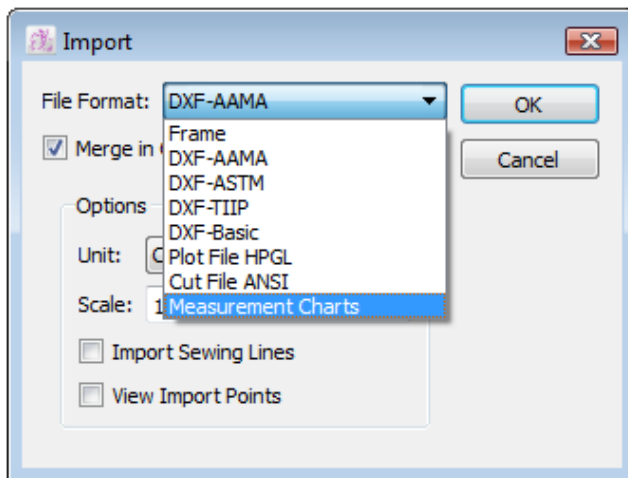
2 Select the Measurement Charts item from the File Format drop-down menu.

3 Click the OK button to execute the function.

4 If more than one set exists in pattern file, select the corresponding set from the list.

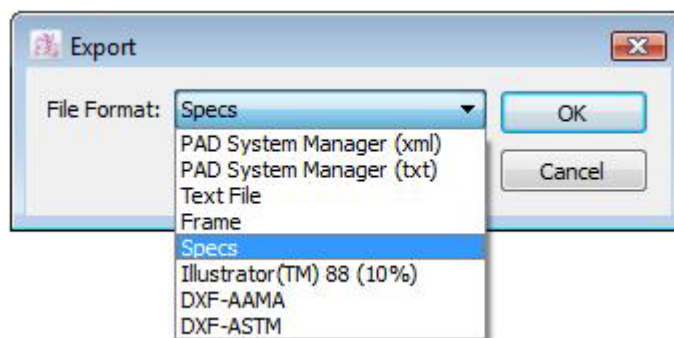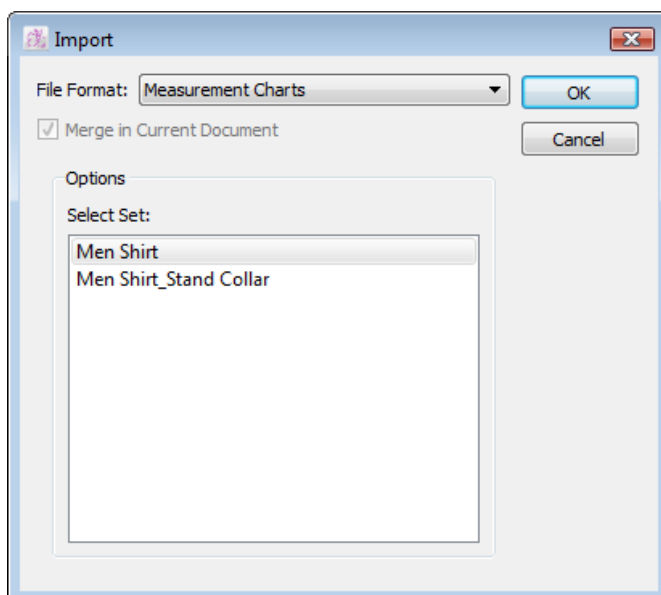**5** Select the set to import and click the OK button to execute the function.

Saving a Frame Library
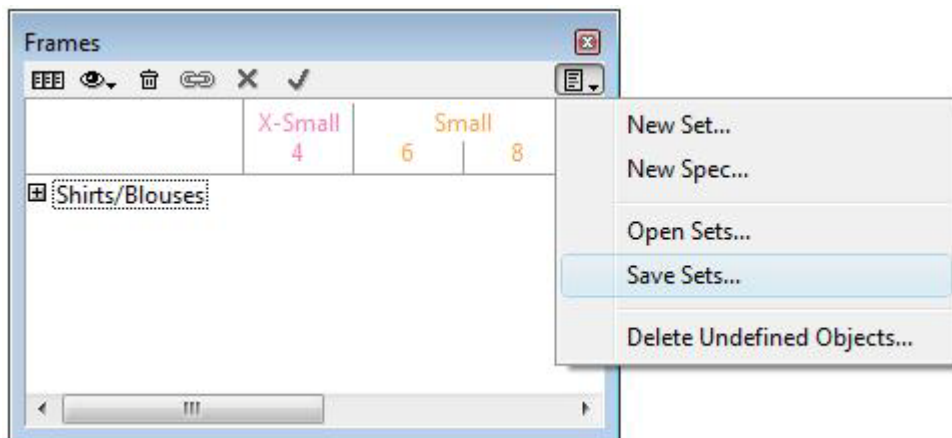
You can save a Set of Frames in a Frame library for future use in another file. For example, the Frame library for Shirts/Blouses can be used on all other top styles.

When a Frame library is applied to a pattern, you can make modifications to obtain the desired results. New Frames can be created to complete the Set and speed up the process. Unnecessary ones can be deleted.

To save a set in a library:

1 In the *Frames* pop-up menu (black arrow with an icon at the upper-right of the *Frames* window), select the *Save sets* item.

2 In the *Save as* dialog box, enter the Frame Library name.

3 Click the *Save* button to save your Frame Library. In the Save type drop-down menu, select the file that you want to save in V5 or the previous version. Ex: Select the file type to Frame Library File 5.0, it supports in V5. And choose to the file type to Frame Library File 4.80, it supports in 4.8 or below.

Deleting Undefined Frames, Links, Segments and/or Specs
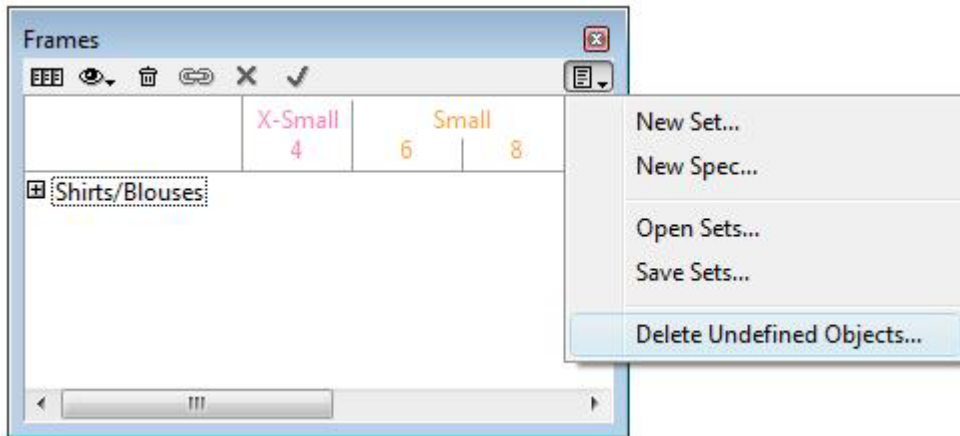
To delete all unused Frames, Links, Segments and/or Specs in a set, select *Delete Undefined Objects…* in the *Frames* window pop-up menu. Press the *Delete* button to validate. Only items that are used in the current pattern remain in the *Frames* window list.

Opening a Frame Library

You can open an existing saved Set of Frames from a Frame Library and use it on your current pattern file.

To open a Set from a Frame Library:

1 In the *Frames* pop-up menu (black arrow with an icon at the upper-right of the *Frames* window), select the *Open Sets* item.

2 In the *Open* dialog box, select the desired Frame Library.

3 A Frame Library may contain several Sets. Select the desired Frame Set from the list and press *OK*.

The selected set appears in Italic Type (undefined) in the *Frame* window. The user needs to define the Frames' position on the pattern.

Using a Frame Library

To apply an existing set to the current pattern file, you must expand the categories or sub-items of the set.

To view a the categories or sub-items of a set:
- The plus (+) sign expands the list.
- The minus (-) sign collapses the list.

To apply Centers to pattern pieces:

1 Activate the piece you wish the center to be applied on.

2 In the list, select the name of the Center Frame that you wish to apply to the pattern pieces.

3 Select the *Create Frame* tool in the toolbox.

4 Click the appropriate reference points on the pattern piece. The Center Frame appears on the pattern piece and be defined in the list (in black).

To apply Frames to pattern pieces:

1 Activate the piece you wish the Frame to be on.

2 In the list, select the name of the Frame that you wish to apply to the pattern pieces.

3 Select the *Create Frame* tool from the toolbox.

4 Click the appropriate reference points on the pattern piece.

A dialog box opens.
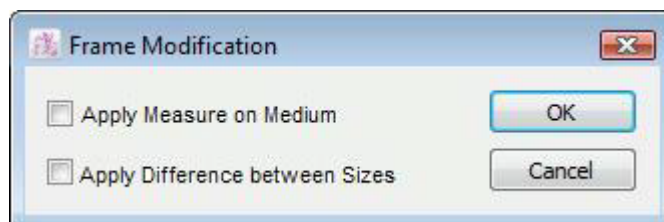
Frames applied to the pattern pieces may alter measurements and/or grading by selecting either the *Apply Measure on Medium* and/or *Apply Difference between Sizes* options.

5 Check the appropriate check box to replace the measurements or grading on the pattern pieces with the measurements or grading from the Frame library if needed.

To apply Segments to pattern pieces:

1 Activate the piece you wish the segment to be on.

2 In the list, select the name of the segment that you wish to apply to the pattern piece.

3 Select the *Make Frame Segment* tool from the toolbox.

4 Click the appropriate reference points on the pattern piece.

As the first frame is applied to the pattern, the selector moves down the list to the next undefined element. The tool adjusts itself according to the type of the next undefined element – Centers, Frames or Segments – to make the process faster.

You can skip elements you do not need in the list for your pattern. You can add new Frames, Links, Segments and/or Specs to the set, according to your needs. When your pattern is completely framed, use the *Delete Undefined Objects* item from the *Frames* window arrow menu to remove all unnecessary items from your Frame Set.

Chapter 6
PAD SYSTEM™ CLONE

• • • • • •

PAD System™ Clone applies modifications to the plan from the pattern development phase to the cloned production pieces phase.

This powerful technology makes the interdependence of the pieces possible and eliminates several stages in the pattern modification process, thus helping to increase your productivity.

The Clone Module allows you to:
• Make automatic plan modifications to all the connected parts (principal fabric, lining, enlacing, etc).
• Update Grading and Seam Allowance modifications.
• Obtain alternating views, between the Construction Pieces (Pieces in Plan View) and their respective Clones (Pieces in Plan / Pieces View).
• Allow creating more Clone generations
• Lock the Cloned Pieces and the Intelligent Mirror.
•The Clone piece can be modified individually, and once the Master piece has been modified, changes will be reflected to the Clone piece again.

Intelligent Mirror

Mirror line

click & drag

Modification on both sides
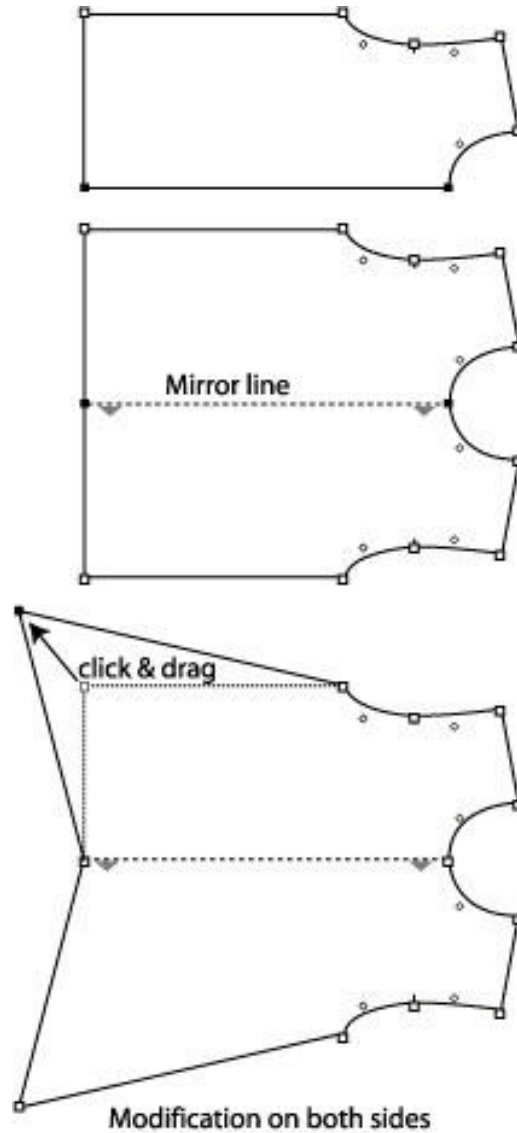
In *Pattern Professional* or *Pattern Enterprise*, when the *Mirror* tool is applied in *Plan View*, it becomes an Intelligent Mirror by default.

A dotted line represents the axis of reflection. When you use the Intelligent Mirror to make modifications to one side, the modifications are applied to the other "mirrored" side.

> **Note:** The *Intelligent Mirror* feature is available in the *Plan View* with Pattern Professional or Pattern Enterprise products.

To make modifications to one side only, remove the Mirror Line.

To do so, activate the mirror on the piece by selecting the Mirror Line and press the **Backspace** key (Windows/Linux) or the **Delete** key (Macintosh) to erase it.
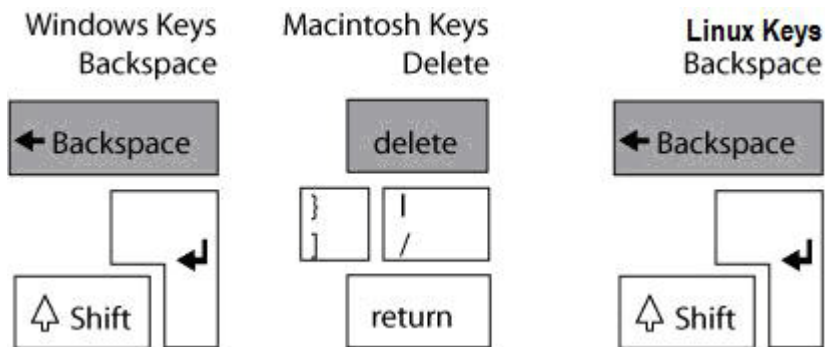
Grading follows the Mirror Line reflection to the other side.

Grading Alignment can be done on points found on the mirror line. In *Grade View*, select the point you want to align the Grading on. Click the *Pointer* tool while pressing the **Ctrl + Alt** keys (Windows/Linux) or the **Command + Option** keys (Macintosh).

To create a Regular Mirror in the Clone module:

1 Select a segment, which serves as the reflection line.

2 Select the *Mirror* tool.

3 Hold down the **Alt** key (Windows) or the **Option** key (Macintosh) or **Alt +Windows** keys (Linux) and click the segment that is your reflection line.

4 The *Mirror* dialog box opens. Click the *OK* button without entering any values in the text box.
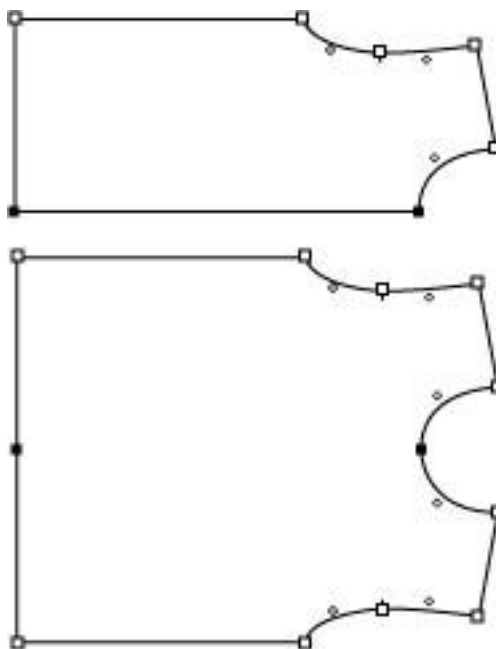
To close a shape that has an intelligent mirror (keeping original side without the reflection):

1 Select the mirror line.

2 Select the *Item Info...* item from the Treatment menu.

3 The *Mirror* dialog box opens. Select the option *Close Piece* and click the *OK* button.

Select and get the Item info
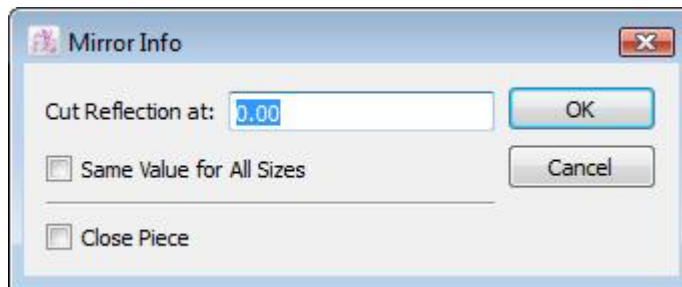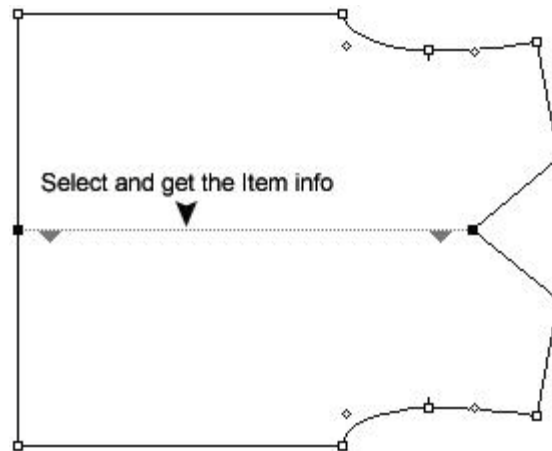
Cut Reflection

To mirror a selected shape and cut the reflection at a certain width:

1 Select the Reflection Segment(s).

2 Select the *Mirror* tool.

3 Hold down the **Alt** key (Windows) or the **Option** key (Macintosh) or **Alt +Windows** keys (Linux) and click the segment that is your reflection line.

The *Mirror* dialog box opens:
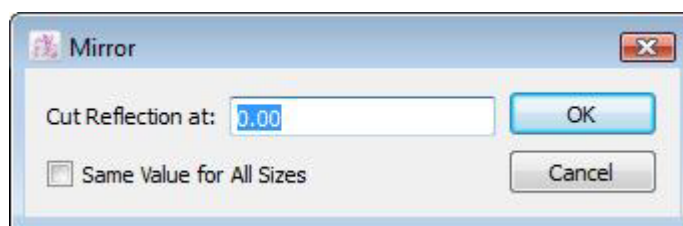
4 Enter the value for the cut reflection in the text box.

5 Select the *Same Value for All Sizes* check box if you want the grading value to remain the same for all sizes of the nest. A proportional grading value is applied by default if the check box is unchecked.

Example of a cut reflection:

Click with Alt key (Windows),
Options key (Mac),
Alt+Windows keys (Linux)

Master and Clone Pieces

To obtain a cloned piece:

1 To obtain a Cloned piece, you must first be in *Plan View*.

2 Select the plan piece you want to clone.

3 Set your piece (*Treatment* menu, *Set Piece...* item).

4 The *Set Piece* dialog box appears. Enter the proper information, as you would do for a regular piece (refer to the *Set Piece* section of this manual for further info). Check *Plan Clone /Piece Clone* at the bottom of the dialog box.

Your piece is cloned. The master plan is visible in *Plan View* and the clone piece is visible in *Plan View / Pieces View.*
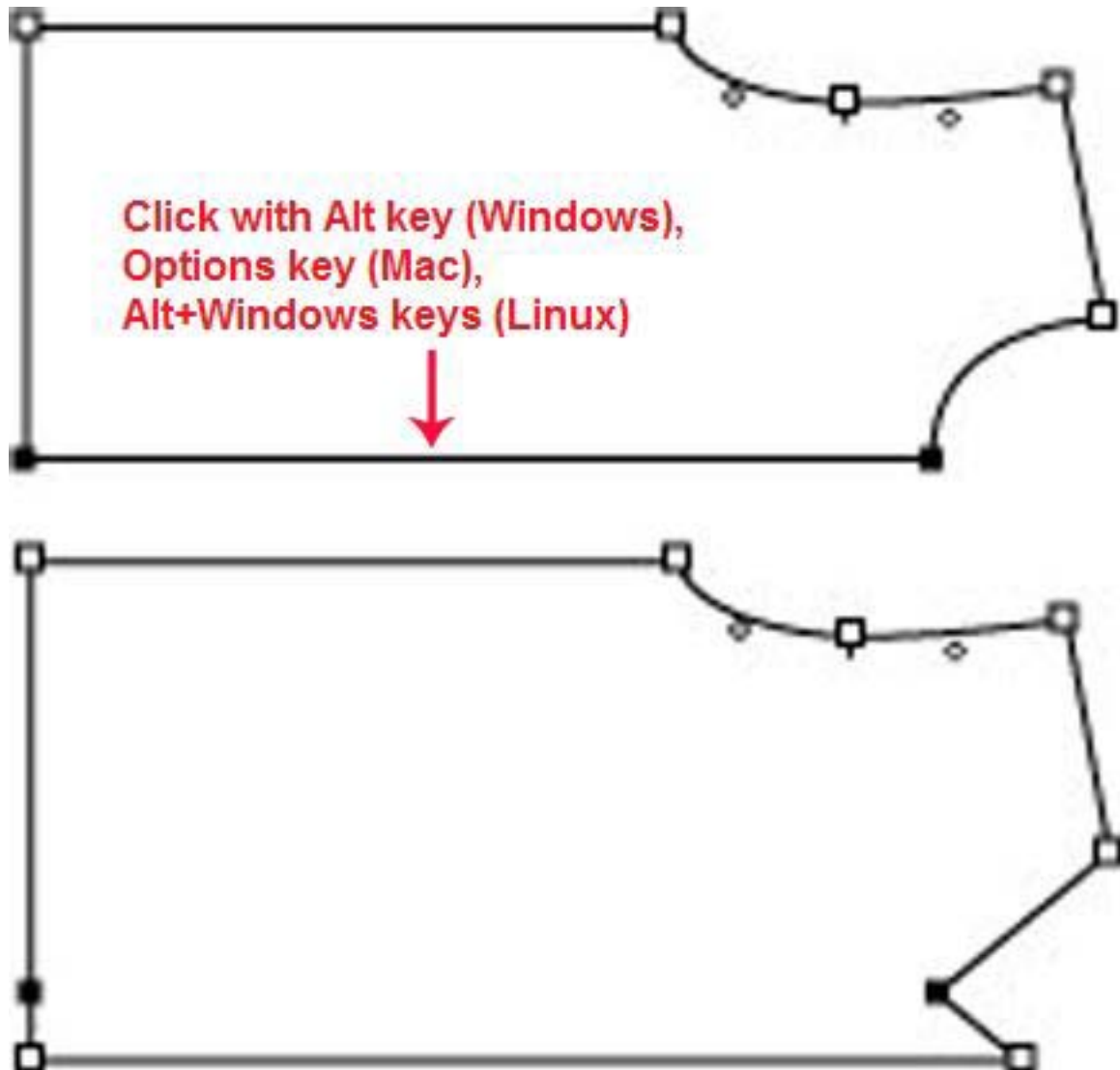
Every modifications made to the Master (the original plan piece) are reflected on the cloned piece(s).
A small symbol appears next to the pieces to show their status of Master or Clone.

The contours of the cloned pieces are modifiable through the master piece. To make a change to the contour of a piece without going through the plan, you have to check the *Piece* option rather than *Piece Clone* in the *Set Piece* dialog box to get a regular piece.

When the Locked box is checked, no modifications can be made to the Clone or the Master.

The Master piece can have many Clone pieces in different fabrics. All Clones of a Master are affected by its modifications.

You cannot modify the geometry of the contour of a clone. However, all internal segments can be modified, added to or deleted. Grading can be modified on the clone. Be careful, as grading modifications made to a master overwrite the grading modifications made to a clone.

If you add internal points or segments to the Master, you can move them onto the Clone, bypassing the Master. If the latter undergoes a transformation, the Clone reflects the same change from its Starting Point, as illustrated in the example on next page.

Example of a Master piece and its Clone:
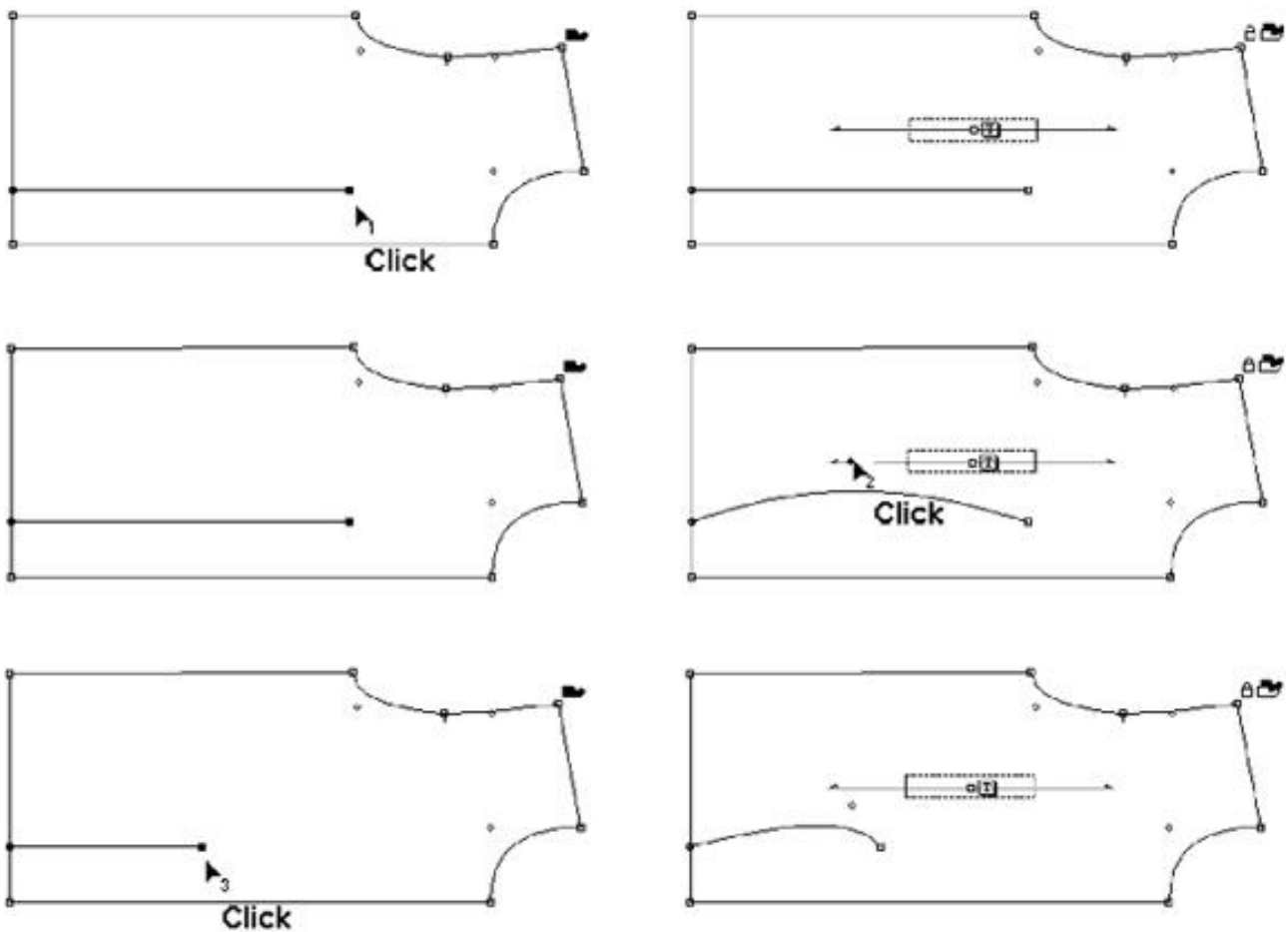
Modification of a Master

In the following examples, the first piece represents the Master and the second piece, the Clone.
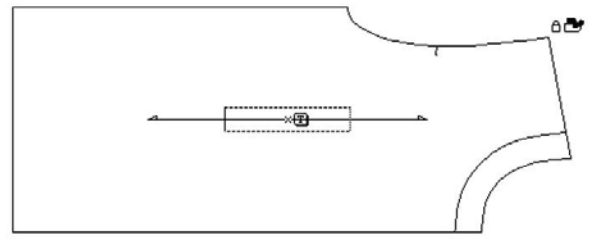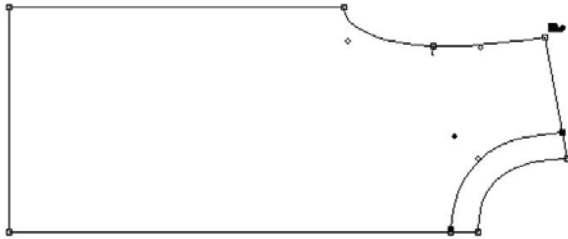
In the above illustration, you can view two identical pieces: the Master Piece and the Clone Piece.
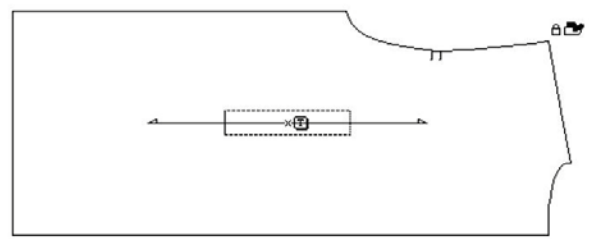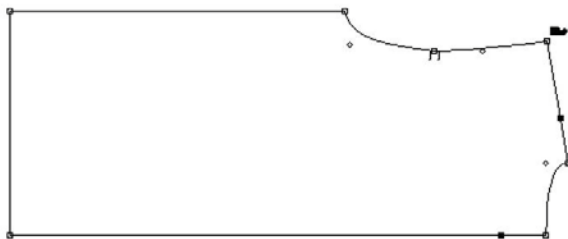
In the above illustration, if the collar facing has been removed from the Master Piece, the modifications are applied to the Clone Piece.
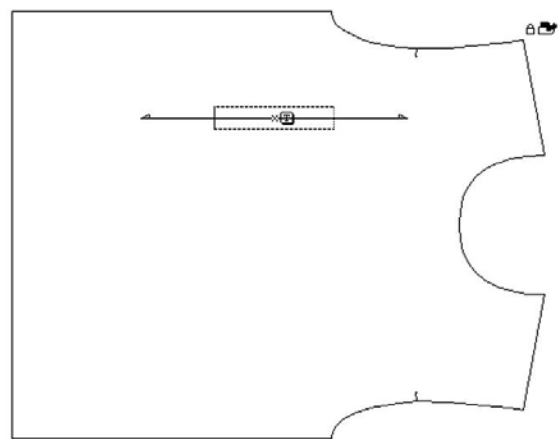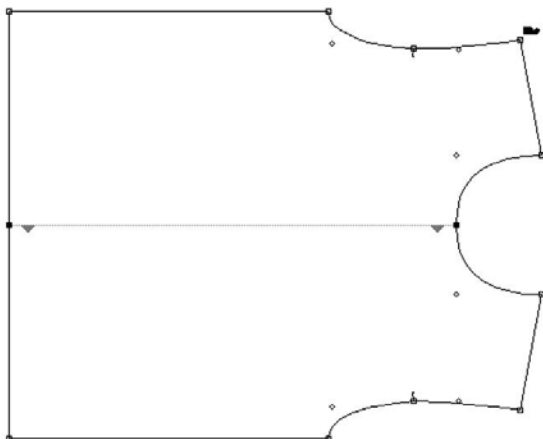
In the above illustration, we have produced an Intelligent Mirror on the median of the Master Piece bodice. The modification is applied to the Clone Piece.
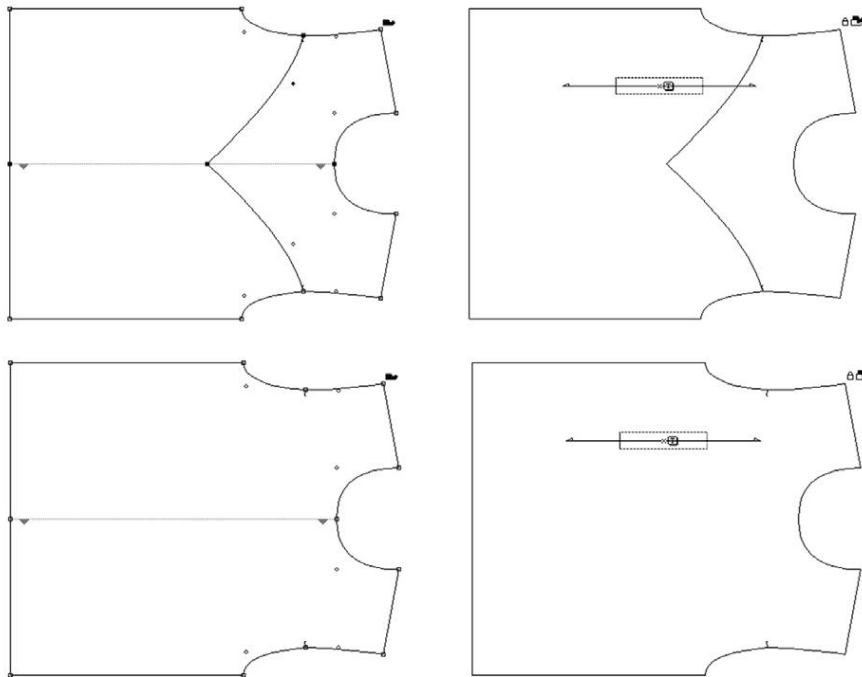
In the above illustration, we have removed the style line on one side of the Master Piece bodice. Because the piece has an intelligent mirror, the modification is applied to the other side of the bodice on both the Master Piece and the Clone Piece.
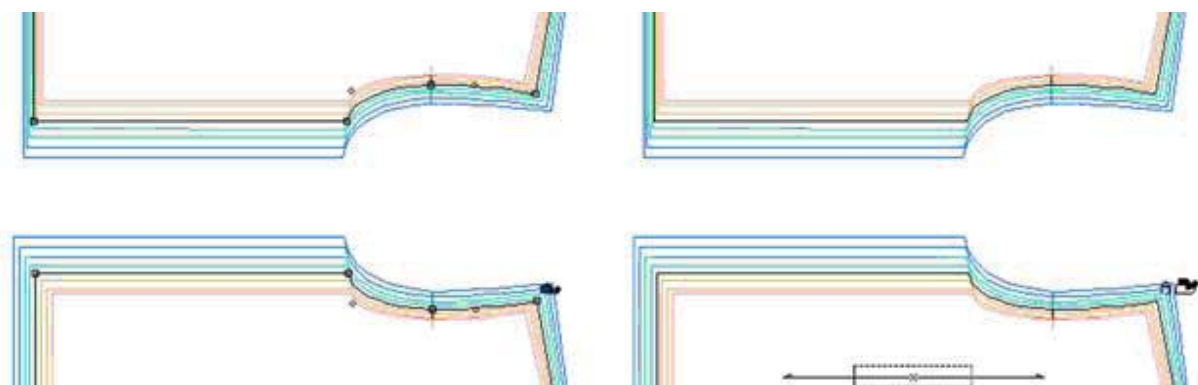
In the above illustration, we have modified the neck area and the modification is applied to the Clone Piece. We have modified the hem grading on one side of the Master Piece bodice. The modifications are applied to the right side of the Master Piece bodice as well as the Clone Piece.

To create more Clone generations in Plan View/ Piece View

You may create the first Clone piece from a Master. A small symbol will appear on the side of Master Piece ☛ .
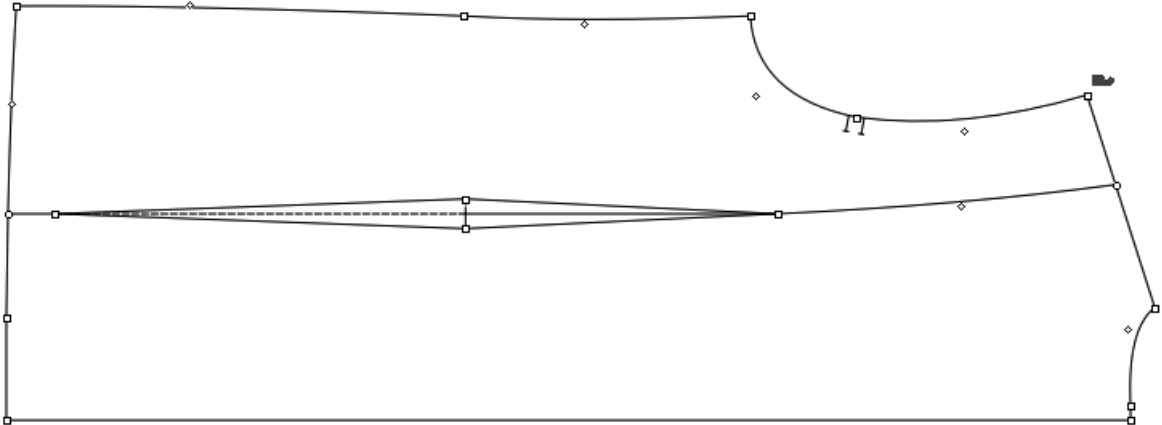
Then you may create the first Clone pieces from the Master piece to identify as Self fabric. A small symbol will appear on the side of Clone pieces ☛ .
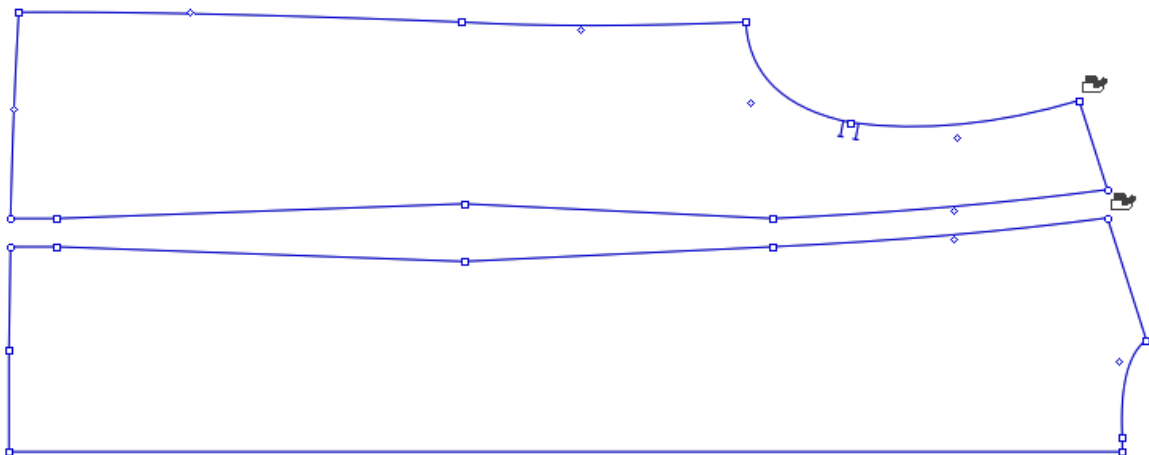
And then you need to create another Clone pieces from the first Clone piece to identify as Lining. A small symbol will appear on the side of Clone pieces.
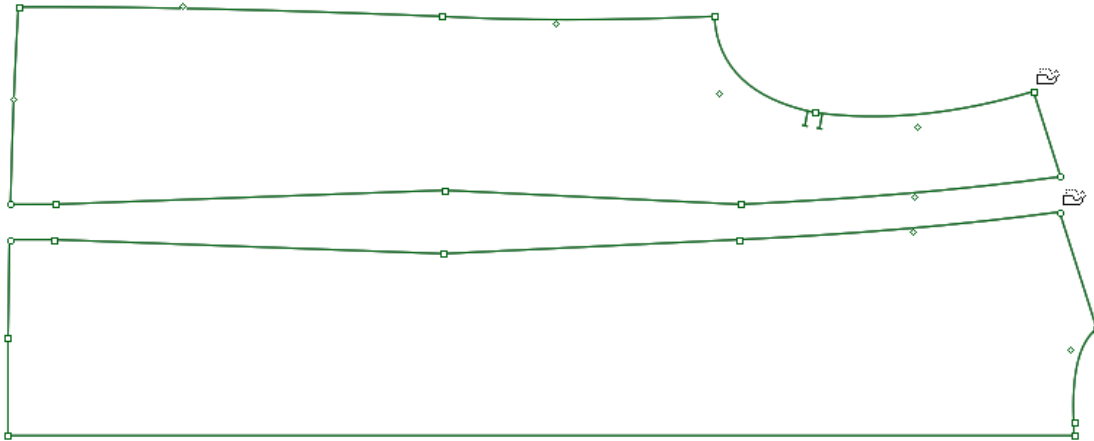
To modify Clone piece individually and (or) modify Clone piece by Master piece

If the option **Unlocked** is checked in the Set Piece's dialog box, you can modify the clone pieces if necessary. For example; you make changing to the second Clone pieces as the following picture shown,
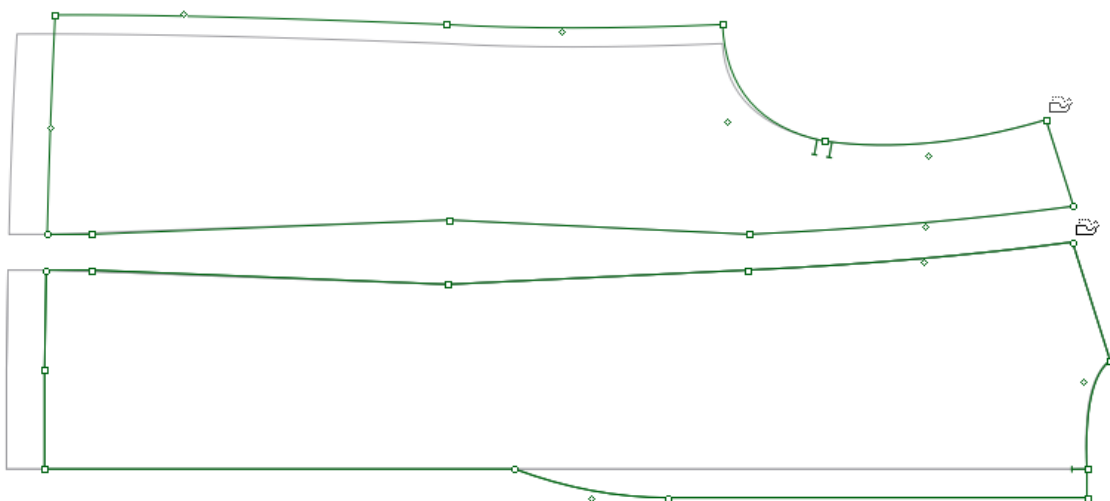
If you need to change the length and the width on the Master piece; it will be affected to the Clone piece again as the following picture.

To change the Length and Width on the Master piece.
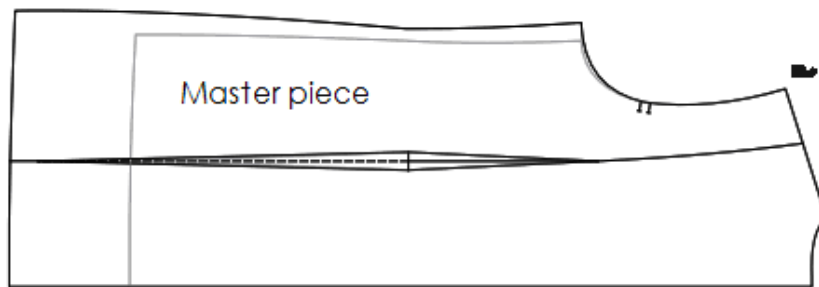
Master piece

The first Clone pieces are affected by Master piece.

Clone pieces from Master
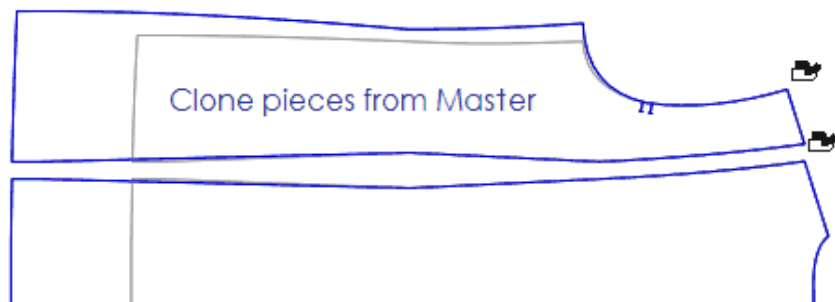
The second Clone pieces are affected by the Master piece and can keep the previous modification on its.

The second Clone pieces from the first Clone pieces
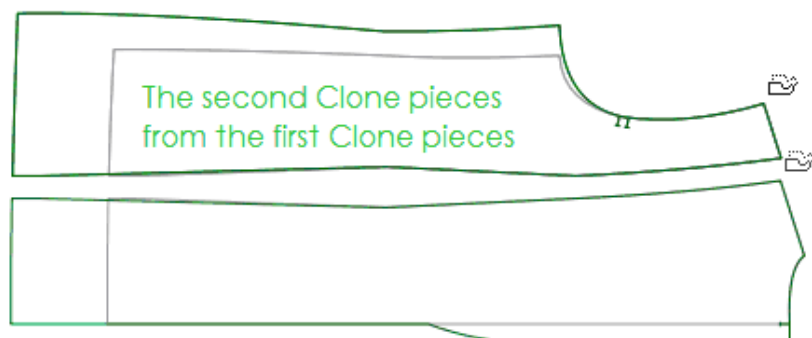
Besides you can do the same modification in Pieces View, it supports the Clone pieces with Seam Allowance and Intelligent Mirror.

For working on Grading View, all of Clone grading must be affected by the Master pieces. Ex: If Clone pieces are graded, then you makes grading to the Master Piece, all of the Grading modification will be affected to all Clone pieces again.

Note: If the pieces are generated from Clone piece. When adding Seam Allowance, it should apply to the Master Clone piece. Then seam value will apply the same to the corresponding Clone pieces.

Copying a Master or a Clone

You can copy a Master or a Clone. However, if you do, the copy does no save the attributes of its predecessor and the two are not interdependent. Furthermore, the Master copy is a plan and the Clone copy is a piece. If you copy them together, the copies retain the attributes of their predecessors.

Grading

Clone Grading always follows that of the Master, even though you can modify the Clone Grading without passing through its Master first. However, if you modify the grading of the Master, the Clone assumes the same grading as the Master, without taking its own grading into account.

Frame

Modification to Plan Master Pieces resulting from Frame modifications are reflected to their cloned piece.

Seam Allowances

The seam allowances are always recalculated to adjust to any piece modifications they may have undergone following the transformation of their master plan pieces.

Appendix A
PAD System Software License Agreement

· · · · · · · ·

PAD System International Limited
Software License

PLEASE READ THIS SOFTWARE LICENSE AGREEMENT ("LICENSE") CAREFULLY. BY CLICKING "Yes", YOU ARE AGREEING TO BE BOUND BY THE TERMS OF THIS LICENCE. IF YOU DO NOT AGREE TO THE TERMS OF THIS LICENCE, OR IF YOU PURCHASED OR OBTAINED THE PAD SYSTEM SOFTWARE FROM AN UNAUTHORISED REPRESENTATIVE OF PAD SYSTEM INTERNATIONAL LIMITED, CLICK "No" AND (IF APPLICABLE) RETURN THE PAD SYSTEM SOFTWARE TO THE PLACE WHERE YOU OBTAINED IT FOR A REFUND.

1. License.   The software, documentation and materials accompanying this License whether on disk, in read only memory, on any other media or in any other form (the "PAD System Software") are licensed to you by PAD System International Limited. You own the media on which the PAD System Software is recorded but PAD International Limited is the owner of the PAD System Software. The PAD System Software in this package and any copies which this License authorizes you to make are subject to this License.

2. Permitted Uses and Restrictions.   This License allows you to install and use the PAD System Software on a single computer(s) with the appropriate hardware protection device provided at the time of initial purchase of PAD System software upon the terms and subject to the conditions contained herein. This License does not allow the PAD System Software to be loaded, installed or used on any other computer. You may make one copy of the PAD System Software in machine readable form for backup purposes only. The backup copy must include all copyright information contained on the original. Except as expressly permitted in this License, you may not decompile, reverse engineer, disassemble, modify, rent, lease, loan, sublicense, distribute or create derivative works based upon the PAD System Software in whole or part. This license allows you to install or operate the PAD System Software only on a computer system with the appropriate hardware protection device. THE PAD SYSTEM SOFTWARE IS NOT INTENDED FOR USE IN THE OPERATION OF NUCLEAR FACILITIES, AIRCRAFT NAVIGATION, COMMUNICATION SYSTEMS, OR AIR TRAFFIC CONTROL MACHINES IN WHICH CASE THE FAILURE OF THE PAD SYSTEM SOFTWARE COULD LEAD TO DEATH, PERSONAL

INJURY, OR SEVERE PHYSICAL OR ENVIRONMENTAL DAMAGE AND PAD SYSTEM INTERNAITONAL Limited WILL NOT BE LIABLE FOR ANY DAMAGES OR LOSSES SO CAUSED. This Licence will terminate automatically without notice from PAD System International if you fail to comply with any term(s) of this License.

3. Proprietary Rights.   You acknowledge that the PAD System software and related materials provided by PAD System International Limited are the exclusive property of PAD System International Limited and said materials are furnished solely to assist you in the installation, operation and use of the PAD System software. The only right which obtains from purchasing the PAD System software and related materials is the right of use in accordance with the terms and conditions of this License. Title to or ownership of all applicable rights in patent, copyright, trademark and trade secrets in PAD System software and related materials shall remain exclusively with PAD System International Limited.

4. Limited Warranty on Media (if applicable).   PAD System International Limited warrants the media on which the PAD System Software is recorded to be free from defects in materials and workmanship under normal use for a period of ninety (90) days from the date of original retail purchase. Your sole remedy under this provision shall be, at PAD System International Limited's discretion, a refund of the purchase price of the product containing the PAD System Software or replacement of the PAD System Software when returned to PAD System International Limited or a PAD System International Limited's authorized representative with a copy of a valid purchase receipt. A valid purchase receipt means a receipt issued by an authorized representative of PAD System International Limited. THIS LIMITED WARRANTY AND ANY IMPLIED WARRANTIES ON THE MEDIA INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE LIMITED TO A PERIOD OF NINETY (90) DAYS FROM THE DATE OF ORIGINAL RETAIL PURCHASE. SOME JURISDICTIONS DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THIS LIMITATION MAY NOT APPLY TO YOU.TO THE EXTENT PERMITTED BY APPLICABLE LAW, PAD SYSTEM INTERNATIONAL LIMITED SPECIFICALLY DISCLAIMS ALL OTHER WARRANTIES ON THE MEDIA , WHETHER VERBAL OR WRITTEN, EXPRESS OR IMPLIED.

5. Disclaimer of Warranty on PAD System Software.   You expressly acknowledge and agree that use of the PAD System Software is at your sole risk. The PAD System Software is provided "AS IS" and without warranty of any kind and PAD System International LIMITED EXPRESSLY DISCLAIMs ALL WARRANTIES AND/OR CONDITIONS, EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES AND/OR CONDITIONS OF

MERCHANTABILITY OR SATISFACTORY QUALITY AND FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT OF THIRD PARTY'S RIGHTS. PAD SYSTEM INTERNATIONAL LIMITED DOES NOT WARRANT THAT THE FUNCTIONS CONTAINED IN THE PAD SYSTEM SOFTWARE WILL MEET YOUR REQUIREMENTS, OR THAT THE OPERATION OF THE PAD SYSTEM SOFTWARE WILL BE UNINTERRUPTED OR ERROR-FREE, OR THAT DEFECTS IN THE PAD SYSTEM SOFTWARE WILL BE CORRECTED. FURTHERMORE, PAD SYSTEM INTERNATIONAL LIMITED. DOES NOT WARRANT OR MAKE ANY REPRESENTATIONS REGARDING THE USE OR THE RESULTS OF THE USE OF THE PAD SYSTEM SOFTWARE OR RELATED DOCUMENTATION IN TERMS OF THEIR CORRECTNESS, ACCURACY, RELIABILITY, OR OTHERWISE. NO ORAL OR WRITTEN INFORMATION OR ADVICE GIVEN BY PAD SYSTEM INTERNATIONAL LIMITED OR A PAD SYSTEM INTERNATIONAL LIMITED'S AUTHORIZED REPRESENTATIVE SHALL CREATE A WARRANTY OR IN ANY WAY WIDEN THE SCOPE OF THIS WARRANTY. SHOULD THE PAD SYSTEM SOFTWARE PROVE DEFECTIVE, YOU (AND NOT PAD SYSTEM INTERNATIONAL LIMITED OR ITS AUTHORIZED REPRESENTATIVE) ASSUME THE ENTIRE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION. SOME JURISDICTIONS DO NOT ALLOW THE EXCLUSION OF IMPLIED WARRANTIES, SO THE ABOVE EXCLUSION MAY NOT APPLY TO YOU. PAD SYSTEM INTERNATIONAL LIMITED SHALL BE UNDER NO LIABILITY TO YOU WHATSOEVER IN RESPECT OR THE PAD SYSTEM SOFTWARE IF YOU PURCHASED OR OBTAINED IT FROM AN UNAUTHORISED REPRESENTATIVE OF PAD SYSTEM INTERNATIONAL LIMITED. THE TERMS OF THIS DISCLAIMER DO NOT AFFECT OR PREJUDICE THE STATUTORY RIGHTS OF A CONSUMER ACQUIRING PAD SYSTEM INTERNATILNA LIMITED'S PRODUCTS OTHERWISE THAN IN THE COURSE OF A BUSINESS, NEITHER DO THEY LIMIT OR EXCLUDE ANY LIABILITY FOR DEATH OR PERSONAL INJURY CAUSED BY PAD SYSTEM INTERNATIONAL LIMITED'S NEGLIGENCE.

6. Limitation of Liability. UNDER NO CIRCUMSTANCES, INCLUDING NEGLIGENCE, SHALL PAD SYSTEM INTERNATIONAL LIMITED. BE LIABLE FOR ANY INCIDENTAL, SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES ARISING OUT OF OR RELATING TO THIS LICENSE. SOME JURISDICTIONS DO NOT ALLOW THE LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES SO THIS LIMITATION MAY NOT APPLY TO YOU. In the event that any exclusion contained in this provision shall be held to be invalid for any reason and PAD System International Limited becomes liable for loss or damage that may lawfully be limited, such total liability to you for all damages shall not exceed the amount of [one thousand Hong Kong dollars (HK$1.000.00)].

7. Term and Termination. PAD System International Limited shall have the right to terminate this Licence if you fail to comply with the terms and conditions herein contained.

PAD System International Limited shall give written notice to you of such defaults and if such defaults have not been cured within thirty (30) days after such notice, then PAD System International Limited shall be entitled, in addition to any other rights it may have under this Licence or in law, to terminate this Licence. You agree, upon expiration of the term of the present Licence or upon termination by reason of your default, to immediately return or destroy the PAD System software and copies thereof and related materials as directed by PAD System International Limited and, if requested by PAD System International Limited, to certify in writing as to the destruction or return of the PAD System Software and all copies thereof.

8. Compliance.   You agree that PAD System International Limited may perform such tests as PAD System International Limited shall deem necessary to monitor compliance with this Licence at any time, with or without notice, during normal business hours.

9. Controlling Law and Severability.   This License shall be governed by the laws of Hong Kong SAR. If for any reason a court of competent jurisdiction finds any provision, or portion thereof, to be unenforceable, the remainder of this License shall continue in full force and effect.

10. Complete Agreement.   This License constitutes the entire agreement between the parties with respect to the use of the PAD System Software and supersedes all prior or contemporaneous understandings regarding such subject matter. No amendment to or modification of this License will be binding unless in writing and signed by PAD System International Limited.

PAD SYSTEM INTERNATIONAL LIMITED

Appendix B
About PAD System International Limited

· · · · · · · ·

PAD System was founded in 1988, in Montreal Canada by creative people from the apparel industry.

A leader in CAD/CAM integrated solutions and dedicated to the apparel, textile and leather industry, PAD System is present on all five continents through its international distribution network.

Today PAD System is active in more than 50 countries and available in 8 languages.

From virtual design to integrated production, PAD System and its partners provide service, support and training to thousands of satisfied customers worldwide—from freelancers to large scale producers.

With a complete design suite—pattern, placement, production—the software offered by PAD System represents a set of cutting-edge modules that are complete, coherent, and compatible with the competition.   PAD System software may also be used with the majority of standard peripherals on the market, such as digitizing tables, plotters, automated knives and even scanners.

PAD System's mission is to produce complete, high-tech CAD/CAM solutions that are simple, efficient and flexible for companies and individuals working in the clothing, textile, and leather industries, as well as the 3D graphic design industry.

PAD System™ International Limited (Head Office)
Flat A, 2/F, Cheung Wing Industrial Building,
109-115 Wo Yi Hop Road, Kwai Chung,
New Territories, Hong Kong

Tel: (852) 2370-9063
Fax: (852) 2370-9085

padinfo@padsystem.com
http://www.padsystem.com/

Other countries:

Please locate the distributor near to you by consulting our website:
www.padsystem.com, distributors section.