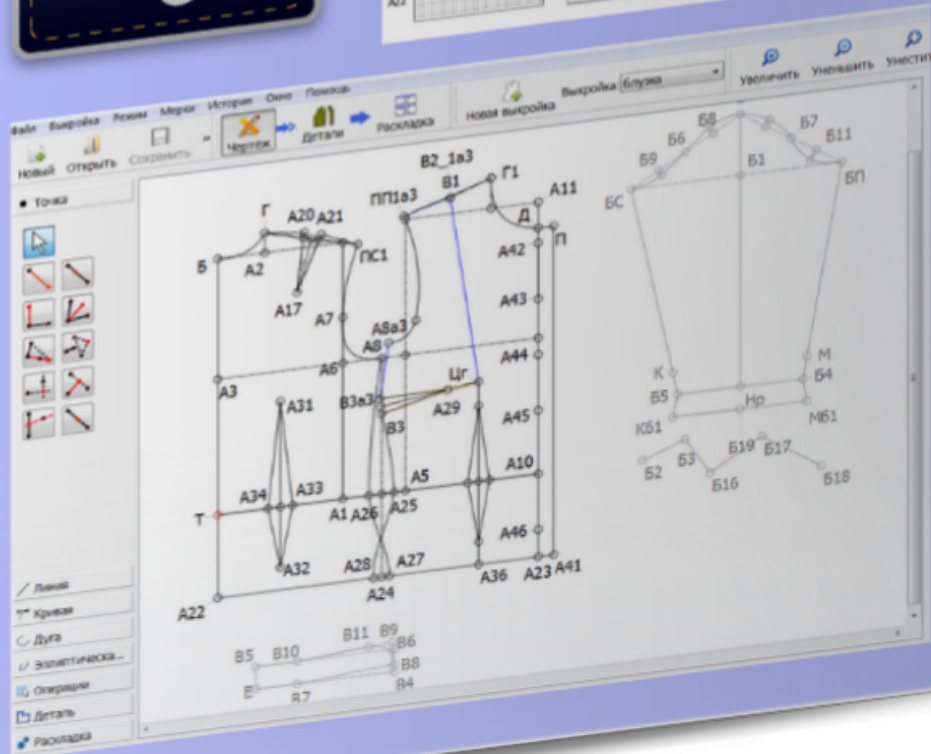
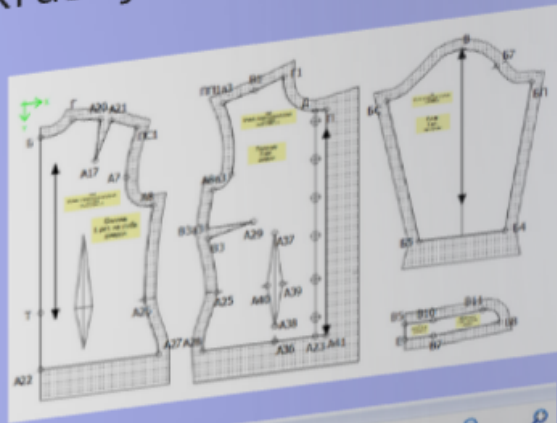




Program "Valentina" **USER MANUAL** Release 0.6

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USER MANUAL





Program for creating and modeling clothing patterns “Valentina”

Roman Telezhynskyi, Olga Krasnyashchikh

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Content

Dedication.	1
1. Introduction.	2
2. What is Valentina?	3
3. Downloading and installing the program, contacts.	4
3.1. Download.	4
3.2. Installation.	6
3.3. Contacts.	7
4. Keyboard shortcuts and mouse actions.	9
4.1. Shortcut Keys.	9
4.2. Mouse actions.	9
5. General overview of the program, review of measurements and settings.	11
5.1. General overview of the program and measurements.	11
5.2. Setting program properties.	14
5.3. Setting the pattern properties.	22
6. Program interface, basic functions. Getting started. The order of construction of the drawing.	23
6.1. Program interface, modes and overview of the main functions.	23
6.2. Drawing objects.	23
6.3. Getting started. The drawing object point, its label and parameters of the point. Parameters of objects in the program.	23
6.4. The procedure for constructing a drawing. The sequence of operations in the program.	23
6.5. Measuring of angles in the program. The angles of the lines.	23
6.6. Deleting objects.	24
6.7. Saving the pattern file.	24
7. Creating a measurement file. Increments and calculated values. Import of measurements. Export of measurements and increments.	25
7.1. Working with measurements files.	25
7.1.1. Measurements.	25
7.1.2. Create a file with measurements.	25
7.1.3. Import Measurements.	25
7.1.4. Templates of measurements.	25
7.1.5. Export measurements.	25
7.1.6. Synchronization of measurements.	25
7.2. Increments and calculated values.	26
7.2.1. Adding increments and calculated values.	26
7.2.2. Entering data by formula.	26
7.2.3. Using mathematical functions.	26
7.2.4. Using a logical (conditional) operator.	26
7.2.5. Local variables.	26

7.2.6. Export of increments and calculated values.....	26
8. Drawing and operation tools.	27
8.1. "Point" tab.	27
8.1.1. "Point at the end of the segment" tool.....	27
8.1.2. "Point at distance along line" tool.	27
8.1.3. "Perpendicular point" tool.....	27
8.1.4. "Point along bisector" tool.	27
8.1.5. "Special point on shoulder" tool.....	27
8.1.6. "Triangle" tool.....	27
8.1.7. "Point from X and Y coordinates of two other points" tool.	27
8.1.8. "Perpendicular point along line" tool.	28
8.1.9. "Point intersect line and axis" tool.....	28
8.1.10. "Midpoint between two points" tool.....	28
8.2. "Line" tab.....	28
8.2.1. "Line between points" tool.....	28
8.2.2. "Point at line intersection" tool.....	28
8.3. "Curve" tab.	28
8.3.1. "Simple curve" tool.	28
8.3.2. "Simple Split Curve" tool.	29
8.3.3. "Curve which uses a point as a control handle" tool.....	29
8.3.4. "Curved path" (complex curve) tool.	29
8.3.5. "Segmenting a curved path" tool.	29
8.3.6. "Tools for creating curves"	29
8.3.7. "Point at the intersection of curves" tool.	29
8.3.8. "Point at the intersection of curve and axis" tool.....	29
8.4. "Arc" tab.....	29
8.4.1. "Arc" tool.	29
8.4.2. "Segmenting an arc" tool.	30
8.4.3. "Point at the intersection of arc and axis" tool.	30
8.4.4. "Point at the intersection of arcs" tool.	30
8.4.5. "Point at the intersection of circles" tool.	30
8.4.6. "Circle and tangent point" tool.	30
8.4.7. "Arc and tangent point" tool.	30
8.4.8. Tool "Arc of a given length."	30
8.4.9. "Point at the intersection of circle and segment or line" tool.	30
8.5. "Elliptical arc" tab.	30
8.5.1. "Elliptical arc" tool.....	31
8.6. "Operations" tab.....	31
8.6.1. "Create New Group" tool.	31
8.6.2. "Object rotation" tool.....	31
8.6.3. "Flipping objects by line" tool.....	31

8.6.4. "Flipping objects by axis" tool.....	31
8.6.5. "Moving objects" tool.	31
8.6.6. "True darts" tool.....	31
9. Creating pattern details and actions with details.	32
9.1. Creating a new piece.....	32
9.1.1. Creating the outer contour of the piece.	32
9.1.2. Changing the direction of the objects.	32
9.1.3. Creating the internal path of the piece. Parameters of the internal path.	32
9.1.4. Inserting missing objects into a piece.....	32
9.1.5. Creating seam allowances.	32
9.1.6. Adding notches on the piece.	33
9.1.7. Setting the grainline on a piece.	33
9.1.8. Mark the buttons location.	33
9.1.9. Inscriptions on pattern pieces. Creating label templates.....	33
9.2. Setting other pieces parameters.	33
9.2.1. "Paths" section, "Main path" tab.....	33
9.2.2. Setting pins.	33
9.3. Actions with created pieces.....	34
9.3.1. Merging pieces.	34
9.3.2. Creating a copy of the part.	34
9.3.3. Deleting pieces.	34
10. Layout of pattern pieces, saving the pattern file, paper printing of the pattern. Final measurements.	35
10.1. Further actions with pieces and printing.	35
10.1.1. Exporting a pattern from the Details mode.....	35
10.1.2. Selection and exclusion of pieces in the layout.	35
10.1.3. Creating a pattern layout. Setting the layout parameters.	35
10.1.4. Paper printing of the pattern.	35
10.1.5. Printing the layout directly from the program.....	35
10.2. Final measurements.....	36
11. Errors in drawings when working with the program.	37
11.1. Restoring pattern files.	42
12. Frequently asked questions.	44
Appendix A: Command line keys.....	47
A.1. Valentina application command line keys.	47
A.2. Tape application command line keys.....	54

Dedication.

The person who supported me all this time. As well as my family and all the people who took part in the writing of this book and the development of the project.

Chapter 1. Introduction.

The development of computer technology and the widespread expansion of the Internet has changed our lives forever. Many areas of our lives have been radically transformed. In this very dynamic time, considering the opportunities that computer technology offers us is a matter of life and death for industries and individual enterprises. Many of them have already taken up the challenge and successfully adapted to these new conditions. Others have only taken too meagre steps to realize their full potential.

As for the garment industry, things are not going as fast as we would like them to. Not all industry has yet realized the importance of this transition. Because of the complexity of the solutions, their cost, the fragmentation and the general weakness of information literacy, integration takes place at a much smaller pace. Most of the time, it is quite difficult to convince your interlocutor that it makes sense to study and use one of the available solutions. Major players have long recognized the importance of this transition, but the solutions available to them, because of their high cost, are not available to most.

In many industries, the solution to the problem of high software costs has become developing free/open source software. If you were interested in the history of the GNU/Linux operating system, you know what prompted its authors to create a fundamentally new operating system. The proliferation of proprietary software has created a new problem for the end user. In pursuit of profit, in order to protect their intellectual property, software developers try to limit user rights as much as possible. Many people disagree with this approach and try to change the situation somehow. They decided to offer users softwares that anyone can distribute and modify at their own discretion.

Currently, open source projects are successfully used in various industries. In practice, they have shown their effectiveness in difficult situations. Some source code projects are undisputed leaders in their field. Others successfully compete with proprietary solutions and due to this competition improve the quality of software solutions in general. Examples of successful open source projects include operating systems, Internet browsers, office suites, graphics editors, web servers and much more.

People around the world have realized how much it is important that solutions are accessible in order to continue progress. Successful experiences in other industries have inspired us to follow the same path, and create by common work an accessible software for everyone.

The book you hold is unique. It provides the first complete description of all the functions of the open source project "Valentina" in English. We thank you for purchasing this user manual and thus supporting the further development of the project. Without you, further development of the project would be impossible.

The purpose of this book is to familiarize the reader with the basics of working in the program, a detailed description of all the functions and operations that may seem ambiguous. It is designed for people familiar with the design of clothing, as well as having good computer skills. Use it to put your knowledge into practice and enter a new digital era.

Chapter 2. What is Valentina?

"Valentina" ([Valentina](#)) is a cross-platform software for drawing patterns using traditional methods and 2D system, which allows patternmakers and designers to design and fashion their own patterns of clothing. The program allows to create patterns using both standard (multi-dimensional) as well as individual measurements tables. Valentina combines new technologies with traditional methods, which makes this program truly unique.

A catastrophically insufficient number of computer tools for creating patterns is available. Many people, faced with a similar task, resort to using CAD-systems or graphic editors. However, it is obvious that these programs were originally designed for completely different purposes and cannot be effectively used to accomplish specific tasks (for example, adding seam allowances). Adaptation of such systems to the needs of patternmaking is only a partial solution. Even after adaptation, such programs can be used for qualitative creation of patterns in one size, but quickly adapting the pattern to another person in another size becomes difficult. The pattern has to be re-created from scratch. At this stage, "Valentina" proves to be indispensable. Properly designed patterns must allow simple change of parameters (for example, other dimensional values), to achieve automatic adjustment in accordance with the new values, and to get the same product for another person from a different size, without having to build the pieces again manually, nor having to use other methods of gradation.

"Valentina" provides a system allowing to generate templates, where the lengths and positions of lines in a drawing are set independently by using mathematical formulas, functions, and conditional operators. This makes the program suitable for all clothing design techniques.

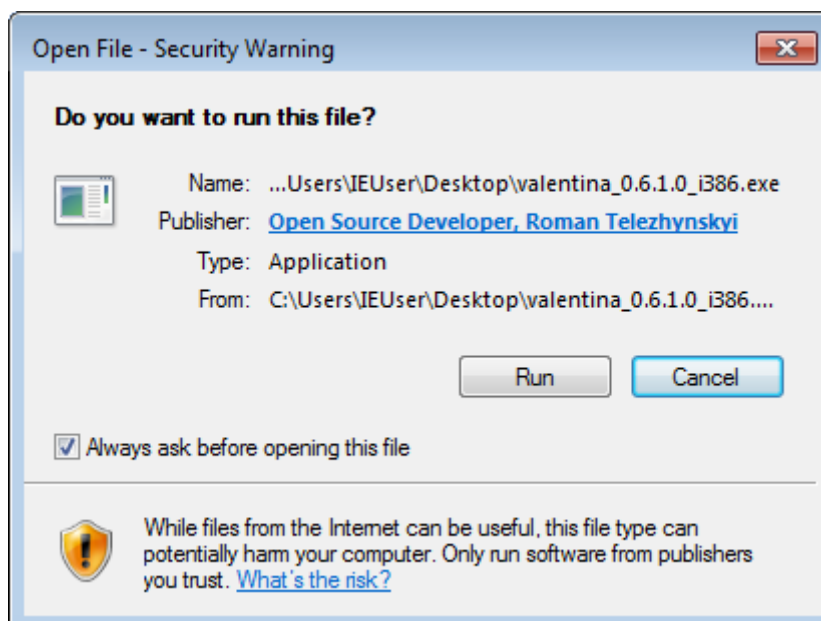
At the moment the program is moving towards suitability for use in the garment industry. However, "Valentina" is a universal program and can be used not only in production, but also in small studios, for training, and by private tailors and sewing lovers. It facilitates the work of tailors and reduces the time spent on tailoring.

Chapter 3. Downloading and installing the program, contacts.

3.1. Download.

"Valentina" is a cross-platform software. Therefore, the user is provided several versions of installers and packages for different operating systems. All officially supported packages can be downloaded on the official website of the project - <https://valentinaproject.bitbucket.io>.

Windows users can check the publisher's identity of the program at startup. When Windows (in its modern versions) requests confirmation, information on the publisher is provided at the same time.



Installation of the program from third-party resources is not recommended. This may entail security risks. Always check for developer signatures to detect spoofing. Exceptions are the official distribution repositories, as well as app stores.

There are two branches to choose from when downloading the program:

- Stable, tested, well functioning version (current release is **0.6.1**). This suits to users who don't want to deal with a lot of errors, but do not care about not obtaining the newest functions;
- Regular builds of the test version. The test version includes new additional features and functions, but at the same time it may contain errors. The test version is regularly updated and corrected, new publications are provided on Mondays. It is recommended to choose the test version only if you want to participate in testing or you need new features and do not want to wait for the next release.



Pay attention to the names of the downloaded files, they can also tell you a lot about the program. Each such file has information about the version of the program, OS requirements, the program architecture (32 or 64 bit), special marks about the build status (alpha or beta), as well as time marks. For example, this is the name that the test version file may have: valentina_0.7.0.0a-20190306101946_i386.exe.



Files created in newer versions of the program are not likely to open in older versions. In contrast, new versions of the program fully support files created in older versions.

Valentina releases (currently v0.5.0)	
Windows 7+ self-extracting archive (.exe)	32-bit and 64-bit
Mac OS X 10.9+ package (.dmg)	64-bit
Ubuntu PPA	32-bit and 64-bit
Debian packages (.deb)	32-bit and 64-bit
OpenSUSE packages (.rpm)	32-bit and 64-bit
Fedora packages (.rpm)	32-bit and 64-bit
Gentoo (.ebuild)	32-bit and 64-bit
Slackware (SlackBuild)	32-bit and 64-bit
Old releases (not maintained)	link

Test builds	
Windows 7+ self-extracting archive (.exe)	32-bit and 64-bit
Windows XP+ self-extracting archive (.exe)	32-bit and 64-bit
Windows XP+ latest builded commits (.zip)	32-bit and 64-bit
Mac OS X 10.9+ package (.dmg)	64-bit
Mac OS X 10.9+ latest builded commits (.tar.gz)	64-bit
Ubuntu PPA	32-bit and 64-bit
Debian packages (.rpm)	32-bit and 64-bit
OpenSUSE packages (.rpm)	32-bit and 64-bit
Fedora packages (.rpm)	32-bit and 64-bit

Here, files to install the stable version of the program

Here, files to install the test version of the program



The project uses a classic numbering scheme. The version numerical label consists of three numbers separated by a dot: for example, 0.6.1. The first number refers to the older version (major), the second one to the minor version, the third one to minor changes (such as maintenance, micro). At the moment, the older version is not used, because it should indicate the implementation of all functions and the maturity of the project. The minor version indicates a release. The third refers to correction(s) within the release. Such corrections do not carry any new functions since they are intended to correct detected errors. When a new version is released, support and patches for the previous release are no longer available.

3.2. Installation.

To install the program, select one of the supported operating systems. The installation method depends on which operating system you are using. In general, you will be prompted to download the installer, package, or connect the repository.

Windows OS users are provided a dedicated installer, they just have to follow the instructions of installation on their computer.

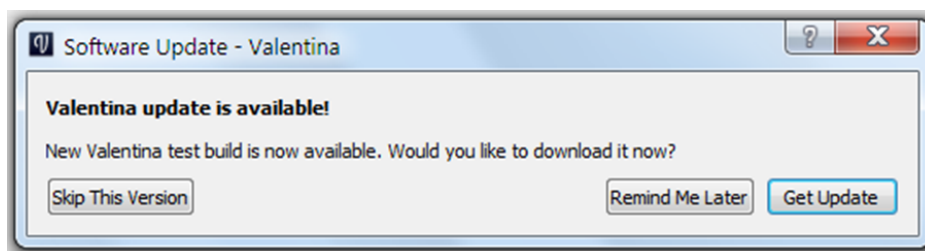


Several options will be available during installation. You can choose the language of the installer that is convenient for you, the necessary set of translations, and you will also be able to delete the previous program settings.

This is also the case for Mac OS X users. To install the program, Mac OS X users have to download the archive with the program, open it and move the program icon to the programs folder.

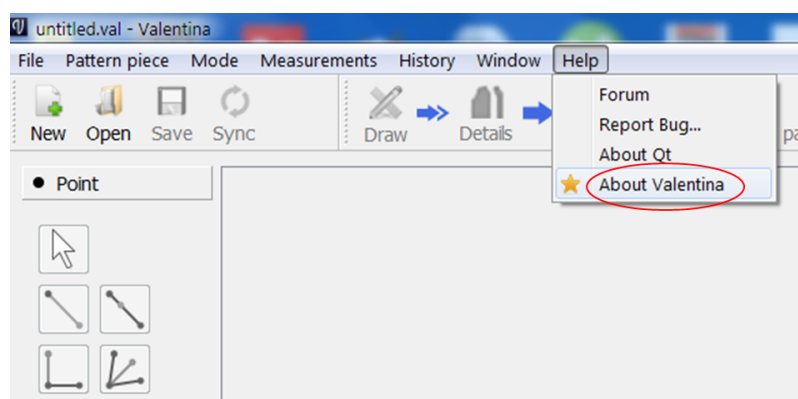
Users of Linux distributions are provided dedicated packages, some of which are available from native repositories.

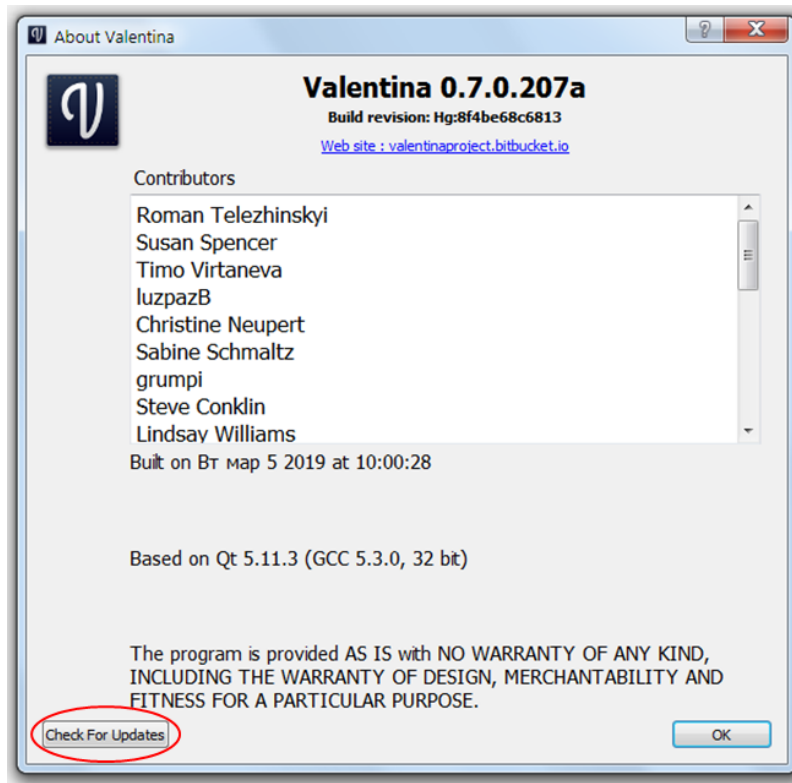
The program provides information to the user when updates are released, for both stable and test versions (this works only when online). This information is displayed by a specific message when the program is launched.



Then, when clicking the "Get Updates" button, the user is taken to the official website of the "Valentina" project, where he can select and download the appropriate installation file.

It is also possible to check for updates and see the characteristics of the installed version of the program through the program window (**Help** > **About Valentina** - button "Check for updates").





Uninstalling the program to upgrade a previously installed version is not required, the files of the previous version are automatically replaced with new ones during the installation process. To do this, you have to start the installation process of the previously downloaded update file.



Simultaneous installation of multiple versions is not supported for regular installers and packages.

Since January 2018, Windows OS users are also provided a portable version of the program. It is suitable for those who want to test the program or experiment with several versions at once. The portable version is provided in a single file. This file does not require installation, since it is not registered in the system. Accordingly, it can be easily transferred from computer to computer. Using this option has its evident disadvantages. For example, there is no automatic association with the drawing files (this has to be set up manually). Remember also that the program always accesses the same place to read the settings file. This makes the settings file common to all versions, consider this when changing settings.

3.3. Contacts.

"Valentina" is not yet a fully completed software product. It is constantly updated and supplemented. That's why there are inevitable mistakes in it. In order to eliminate any errors and problems in the program, it is recommended to contact the program developer directly and report your problem.

To do this, the official website provides a list of resources and contact information.

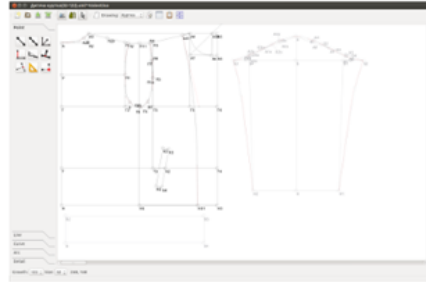


Valentina

open source pattern drafting software
current release v0.5.0

[home](#) | [current release](#) | [test builds](#) | [code](#) | [dev blog](#) | [community](#) | [contact](#)

Join our new forum [http://valentinaproject.forumotion.me/!](http://valentinaproject.forumotion.me/)



coverity passed 10 new defects | codeship passing | BUILD PASSING | build passing



Valentina is an open source pattern drafting software tool, designed to be the foundation of a new stack of open source tools to remake the garment industry.

Small-batch and custom-sized clothing manufacturing is essential to create a sustainable future, preserve small- to medium-sized textile spinning and weaving manufacturers, enable independent and small designers and manufacturers to scale up to make a decent living, rebuild local garment districts, and reduce or eliminate

Chapter 4. Keyboard shortcuts and mouse actions.

4.1. Shortcut Keys.

"Valentina" supports various key combinations for allowing the most productive patternmaking work.

The list is not complete and will be extended. Keyboard shortcuts may not work if they are already reserved by the operating system or other system applications (e.g., Explorer). Keyboard shortcuts are not supported in Qt-based applications in some operating systems.



Mac OS X users have to use the **Command** key instead of the **Ctrl** key.

Shortcut	Action
Ctrl+N	New File
Ctrl+S	Save
Ctrl+Shift+S	Save As
Ctrl+L	Create a Layout
Shift+Ctrl+N	New pattern piece
Ctrl+H	History
Ctrl++	Zoom in
Ctrl+-	Zoom out
Ctrl+=	Zoom fit best (scale by content)
Ctrl+0	Original zoom (100% scale)
Ctrl+Z	Undo (cancel action)
Shift+Ctrl+Z	Redo action
Ctrl+T	Table of variables
Del	Delete the selected object
Ctrl+Q	Quit the program
L	Activate the last used tool
Ctrl+PgUp	Previous pattern piece
Ctrl+PgDown	Next pattern piece
Esc	Deselect tool

4.2. Mouse actions.

Shortcut	Action
Ctrl+Wheel Up	Zoom in

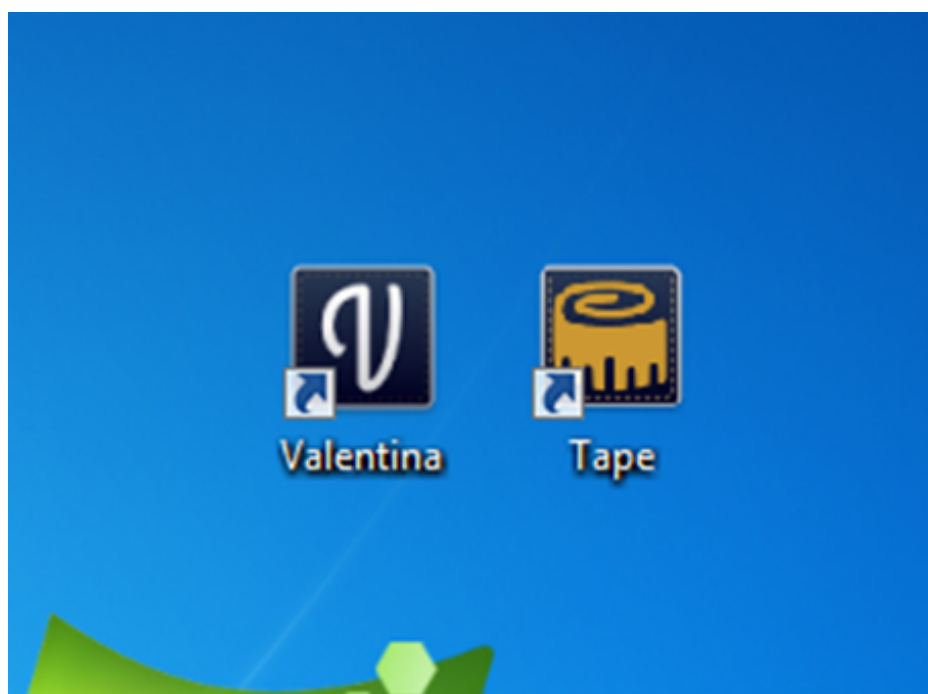
Shortcut	Action
Ctrl+Wheel Down	Zoom out
Hold on Wheel	Move
Double mouse left click	Zoom fit best (scale by content)

Chapter 5. General overview of the program, review of measurements and settings.

Starting from this section, the user manual describes how the program works on a desktop computer, using the example of the operating system **Windows 7**. Features of working with other operating systems will be noted separately when necessary.

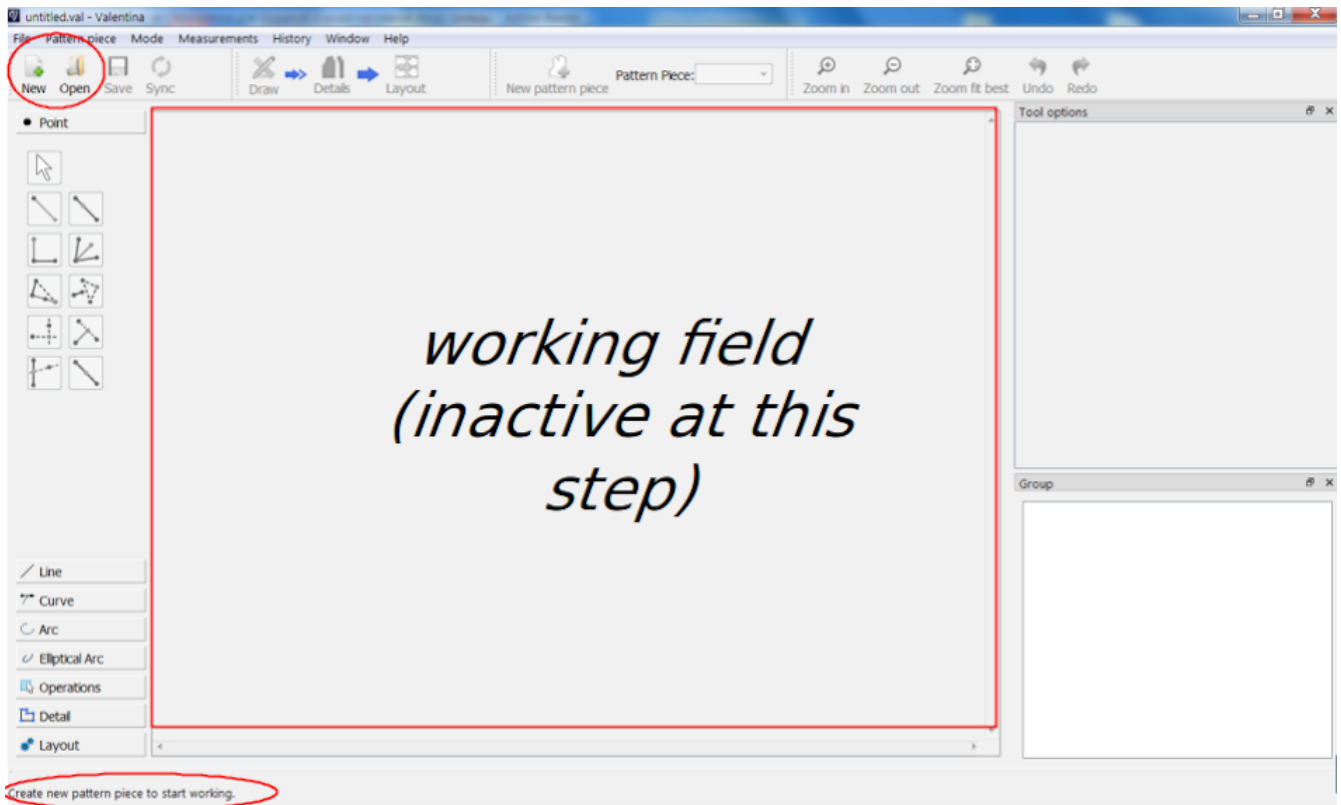
5.1. General overview of the program and measurements.

"Valentina" work is performed in two programs: Valentina app for creating pattern files and Tape app for managing measurements files. The shortcuts of each application look like this on the desktop (if you have checked the appropriate box when installing the program):

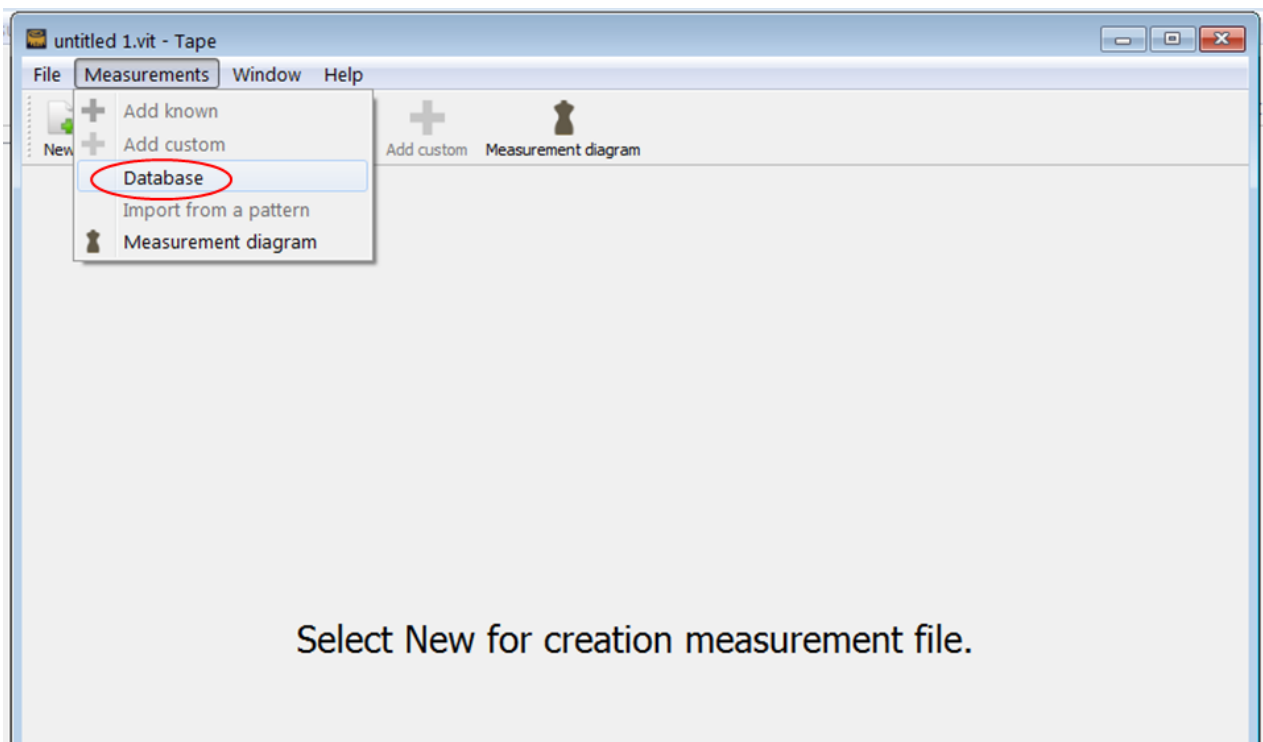


In the Mac OS X version, as well as the portable version, Tape is not provided as a separate application. Opening the file of measurements and, accordingly, the launch of Tape, is done through the launch of Valentina.

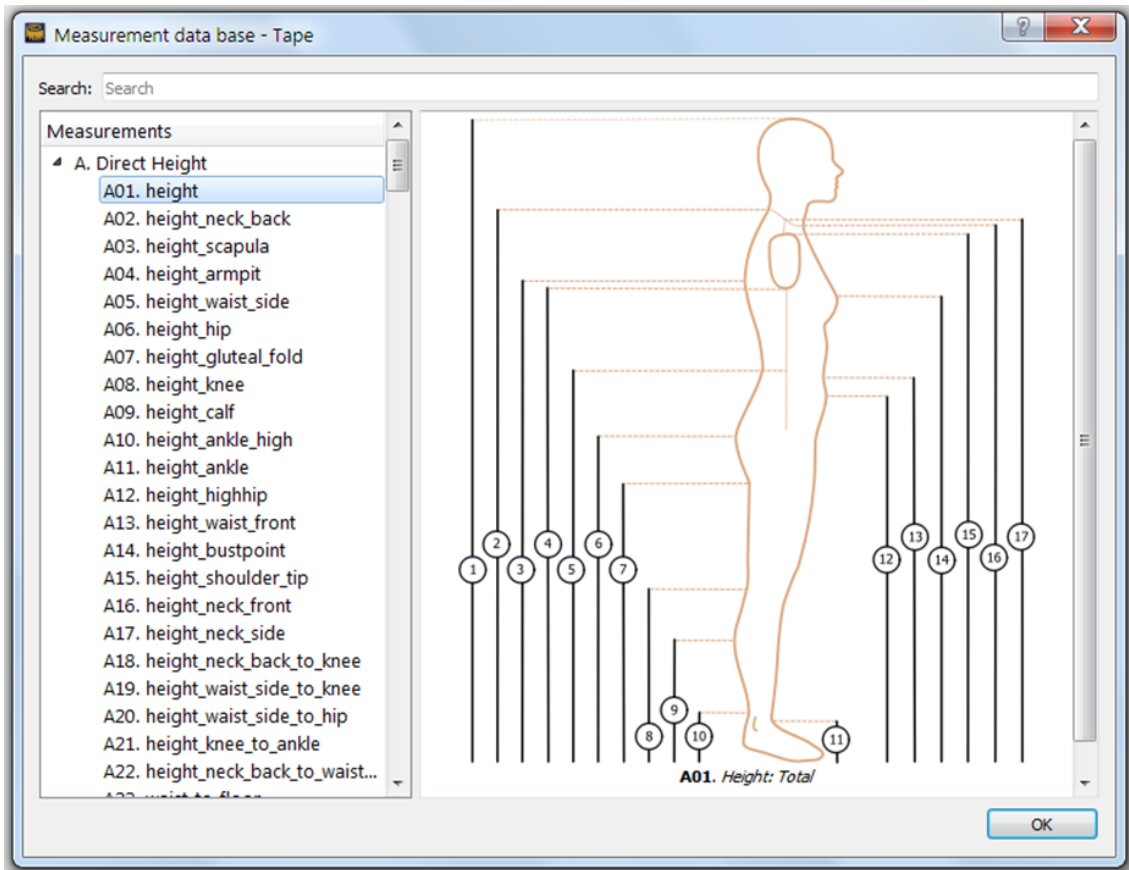
Valentina displays a working field including different drawing tools. When launching Valentina, this field is inactive. The field is activated when creating a new drawing or opening a pre-existing file containing a previously drafted pattern. Hints are displayed at the bottom left of the window during the user's work for his convenience.



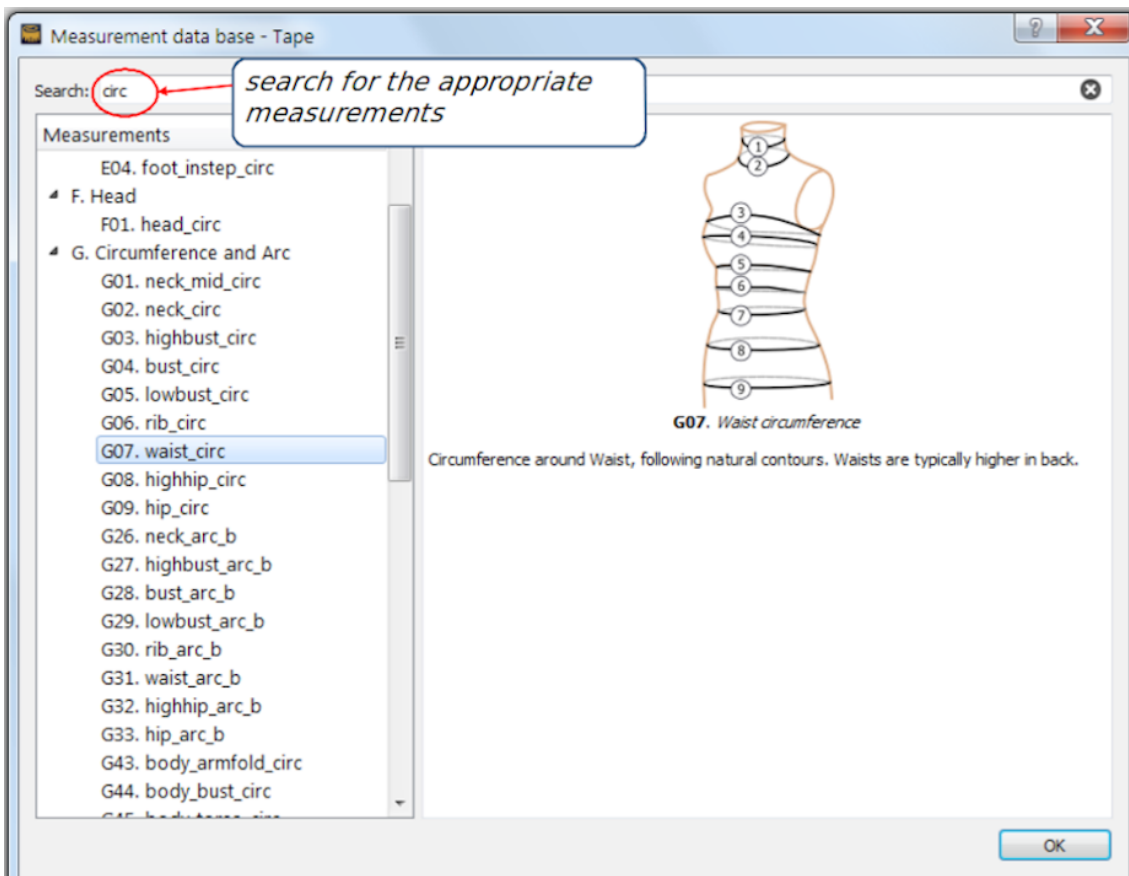
Tape application contains a database of the main known measurements that exist in various design techniques. Open it for complete study.



All measurements in the database are divided into convenient groups. When pressing any measure, the program displays a hint image next to its name. When working with the program, each user can choose amongst all measures provided by the database and select only the necessary ones for his purpose by checking the boxes in front of them, then create a separate file from them. If necessary measures are not available in the database, individual measurements labelled as whatever may be created. Detailed description - in [p. 7.1.2, "Create a file with measurements."](#)



A measurements filter field is located at the top of the measurements base window. Type in this field the some letters of a word characterising a needed measurement. The program searches for matches not only in the names and text of measurements, but also in the descriptions of all measurements of the database.



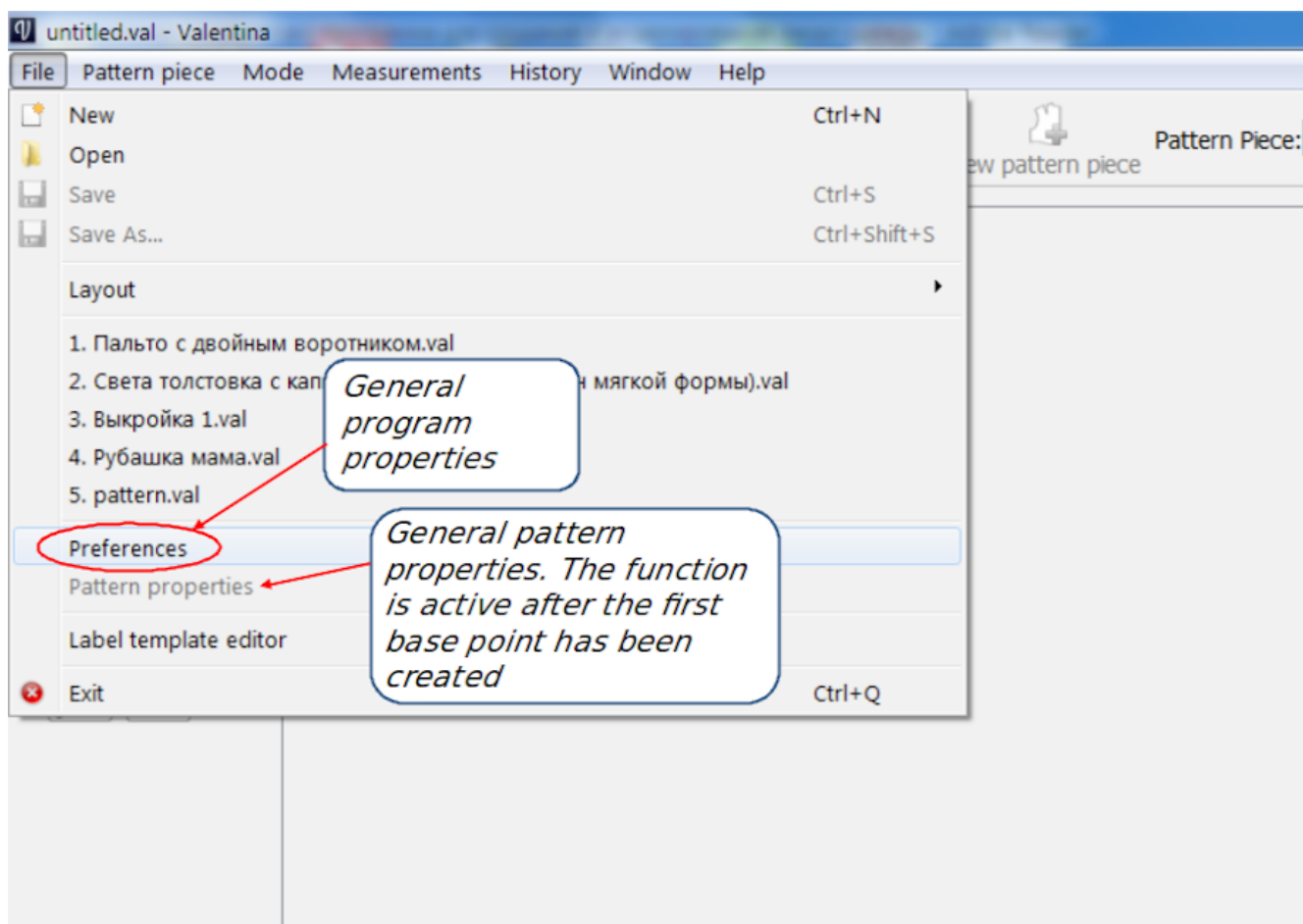
You can start working with Valentina from any measurements file. If you start working with a drawing file, you can create a measurement file as you go along: you can open the created measurement file from the drawing file or create a new measurement file - see [p. 7.1.2, "Create a file with measurements."](#)

5.2. Setting program properties.

The program has to be correctly configured when being run for the first time.

Valentina and Tape have to be configured separately. Both programs have their own default settings, you can leave them unchanged, or change those settings and add your own data for a more correct and complete work in the program.

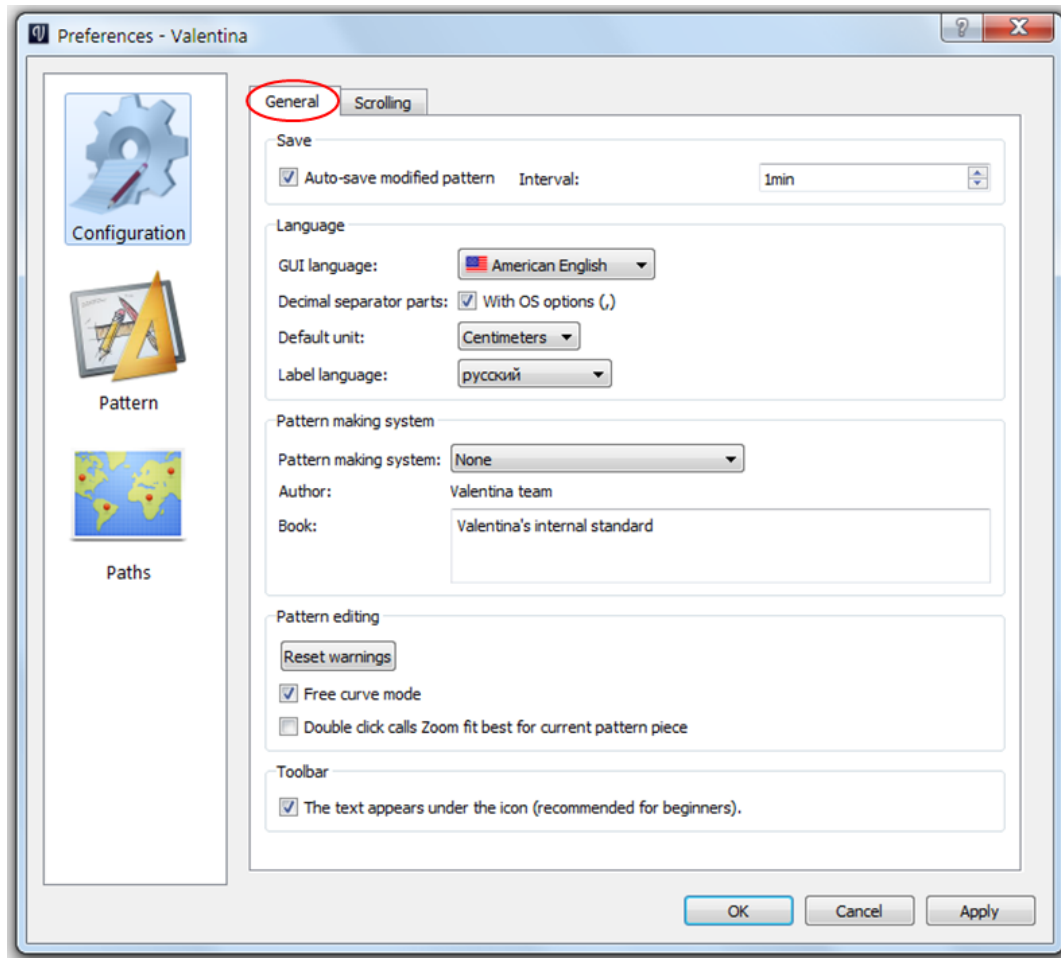
To set up the preferences in pattern files, go to the working area in the **File > Preferences**.



The "Preferences" window displays global settings of the program. It is necessary to configure these settings for further good work.

The program preferences window includes three sections:

- Configuration;
- Pattern;
- Paths.



The "Configuration" section contains two sub-windows labelled "general" and "scrolling".

The **General** tab contains all general settings of the program to configure. The basic settings are clear and standard and can be left as default.



To change the program interface language, select a language from the "**GUI language**" list and click the [**Apply**] button.



Choosing a "**patternmaking system**" does not affect the course of drawings. The function of this option is only to provide the names of famous measurements in various pattern systems. If the list does not contain the name of the system you are using, you can leave the default value.

The "Interface language" list allows you to configure the current language of the program interface. By default, your operating system settings will be activated. The program will select it if supported. If your system language is not available, the interface language will be English. Also note that the list of the supported languages may not be "complete" if the appropriate languages were not selected during the installation. The list of languages is generated automatically every time the settings dialog window is opened, and if there are no necessary files, these languages will disappear from the list.

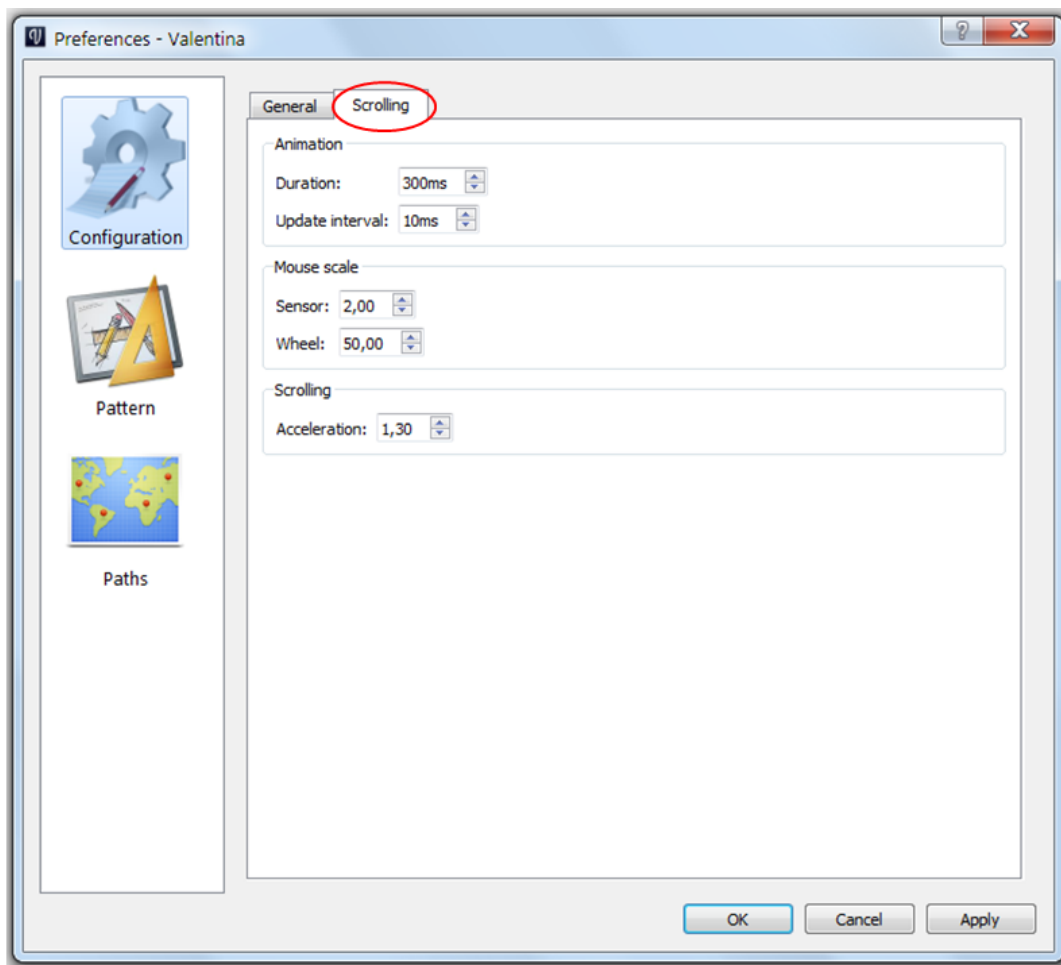
"Valentina", as many programs, displays windows for confirmation of actions. For example, when deleting objects, the program asks for confirmation of deletion: "Do you really want to delete?".

If you check the box in front of the "Don't ask anymore" line, this window will not appear again. However, if you want to return back such warning windows in the program again, you have just to press the **"Reset warnings"** button in the program settings and these windows will appear on the screen again.

The program supports **"Free curve"** optimization. This mode is designed to make the user's work more comfortable when manipulating large drawings. Recalculation and updating of the drawing after curve modification will occur only after the user will have released the left mouse button, that is will have released a curve. This mode is enabled by default. This function speeds up the responsiveness of the curve. This mode is disabled by unchecking the corresponding box.

When working with drawings in the program, it is possible to scale the drawing for convenience of use; when double-clicking with the left mouse button on the working area, the drawing completely fits on it ("zoom fit best" function). This mode is enabled by default (see the check mark in **"Double-click calls Zoom fit best for current pattern piece"** line). However, sometimes when working with a sensitive mouse, or when the user is inexperienced and bothered by this mouse behavior, it is recommended to disable this mode. To do this, uncheck the box before the corresponding line in this section of the program settings.

The **"Scrolling"** tab contains the mouse settings for comfortable work with the program. These settings apply to touch as well as wheel mice.



This tab contains default settings, set empirically by the developers of the program, which you can leave the same or change if something affects the mouse job. The mouse scale and acceleration values can be freely changed as needed. It is however recommended to keep the default animation

settings, or to change them with caution.

Animation:

- animation duration is set in milliseconds - the higher the value, the longer and smoother the scrolling will be (available interval is 100-1000 ms).
- update interval is set in milliseconds - this determines after which time interval the next scroll step will occur.

These settings allow you to create a smooth scrolling effect.

The mouse scale:

- scale for touch mice (e.g., Apple Magic mouse);
- scale for wheel mice.

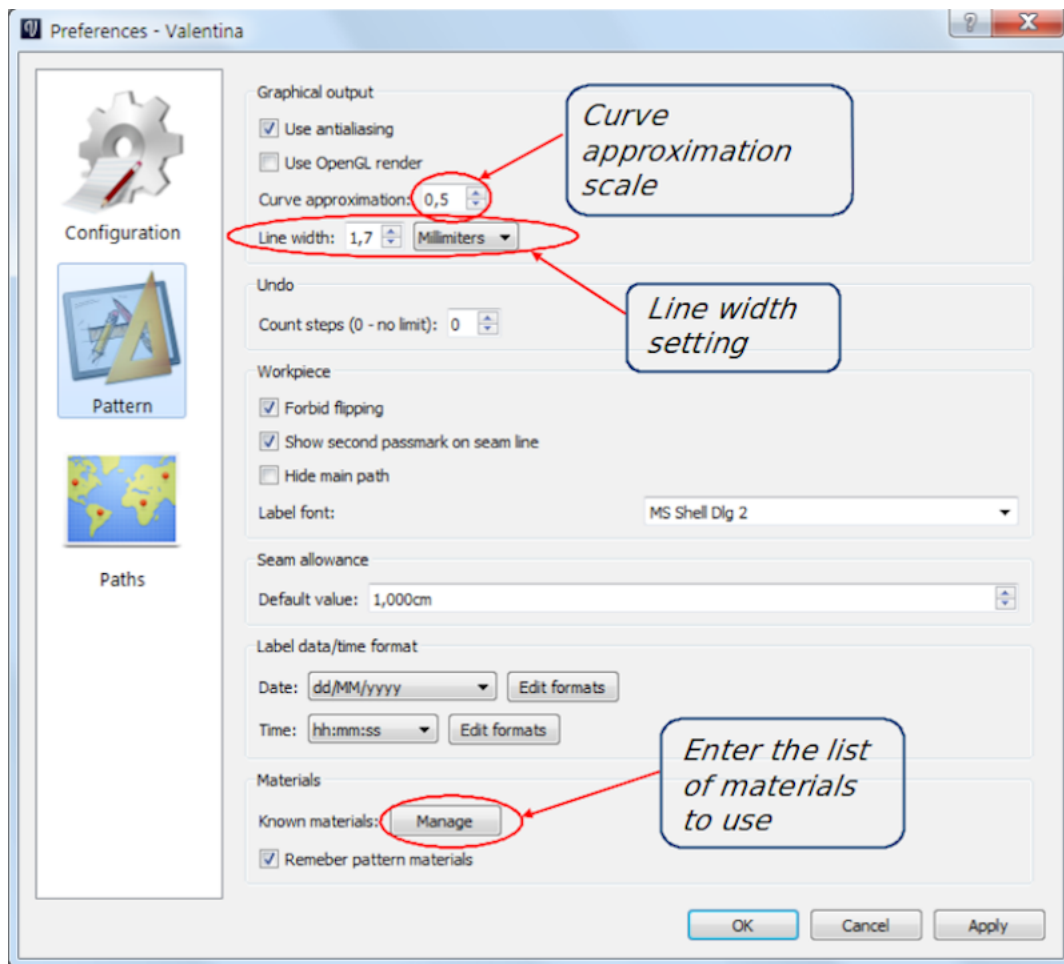
The scale mouse determines the speed of scrolling and, therefore, the speed of the drawing movement on the screen. It has been empirically determined that the original scrolling value was not enough. In such cases, the scale mouse options may help. Depending on the type of mouse used, you can increase or decrease the zoom values to get the desired scroll speed (the available interval is from 1 to 100).

Scrolling:

- acceleration - the more active the scrolling is, the higher the speed will be, and the faster the drawing will move around the screen.

The scrolling speed normally remains the same, regardless of how actively the wheel itself is scrolled. In the program, uniform motion speed is achieved by setting the acceleration value to 1. When the acceleration value exceeds 1, this forces uneven movement speed on the screen depending on the activity of the mouse movement. For wheel mice users, this means that the higher acceleration of the wheel, the higher the speed at which the drawing moves across the screen from one object to another, will be. When reducing the speed of the wheel, the movement of the drawing on the screen will automatically decrease. The acceleration function is convenient for large drawings when it is necessary to cover significant "distances", for example, to get from one end of the drawing to another. The available setting interval is from 1 to 10.

The section "Pattern" contains all general settings of the patterns drawing and pieces.



If the “**Use antialiasing**” box is checked, the program will smooth lines when they will be drafted. This option should be unchecked if the user has an old computer with a weak video card. Disabling this option does not affect print quality of patterns, this function determines only the drafted lines quality on the computer screen.

The program supports “**OpenGL render**”. By default, this feature is disabled, as it may cause unstable process. A compatible video card is required to obtain correct OpenGL render. It allows you to transfer drawing operations to the video card side and, thus, free up CPU resources.



If the screen turns black, it means that your configuration does not allow using this feature. Just disable this function in the global settings of the program to go on working.

The **curve approximation scale** command applies to curves and arcs (except for elliptical arcs). The higher the scale, the more accurately and smoothly the curve will be drawn. But the program has to work with a greater number of points. And at the same time it takes more time to process, which will affect performance. Possible values are from 0.1 to 10.0. The default value is quite small, that is - 0.5. It is possible both to set the value globally (in this settings box), as well as change the value for a particular curve (in the curve parameters, while working on a particular drawing); in this case, the “zero” value corresponds to the global value. That is, if you set the approximation value on the drawing to 0.0 for a particular curve, this value will not be 0, but the value that you have previously set in the global settings of the program. For an approximation scale example, see [in the figure in paragraph 6.1](#).



Setting too small approximation values may affect the accuracy of the calculations.

Line width in the drawing. There are only two types of lines in Valentina: thick and thin. Bold lines are used to highlight objects when performing some actions. In all other cases, only thin lines are visible. Adjusting the line thickness allows you to adjust the width of the bold lines to your needs. Values from 0.5 mm to 5.0 mm inclusive are allowed. The default value is 1.2 mm. The thin line width is automatically 1/3 of the bold one. When the line width value is changed, the radius of the point and the direction indicators of the curves widths are affected as well. NOTE: "Valentina" does not allow you to set arbitrary line widths for different parts of the drawing, as in conventional CAD systems or vector editors. But you can achieve this in other ways, by selecting any object in the drawing and choosing amongst different line types (including different dotted lines) and different line colors in the parameters toolbox of the selected object.

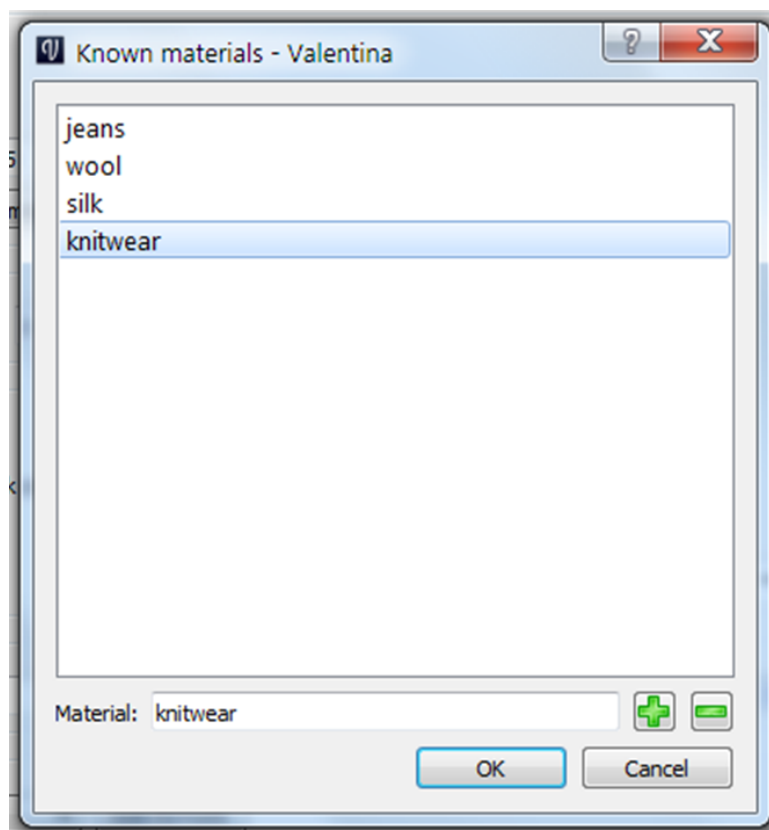
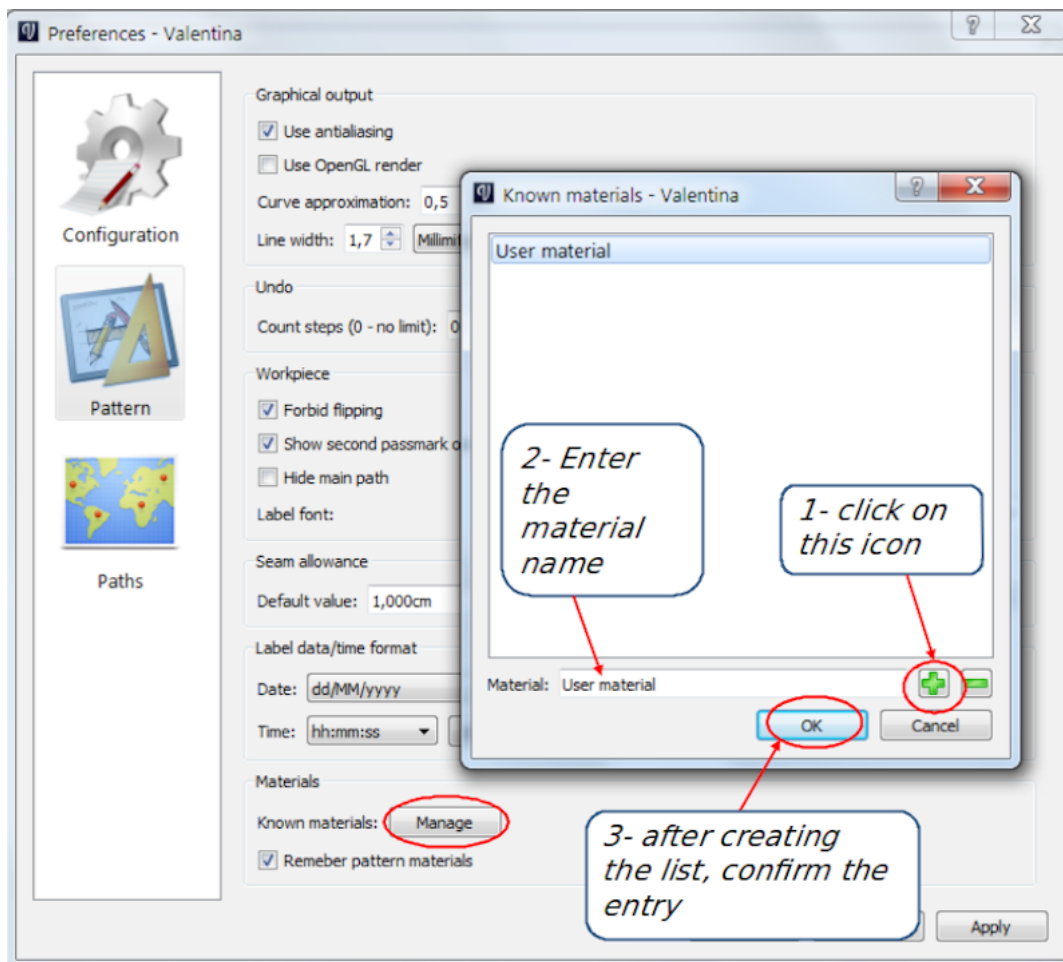
When checking "**Forbid flipping**" box, all the pieces in the layout and prints are prevented from flipping (this can be compared with turning the paper pattern on the reverse side - face down).

If checking the "**Show second passmark on the seam line**" box, the set notches will be displayed twice on the patterns: on the pattern sewing line and on the seam allowance line.

If checking "**Hide main path**" line, in all the pattern pieces, the contours of the drafted patterns will not be visible, but only the seam allowances paths. Thus, the pieces will be printed according to the seam allowance only.

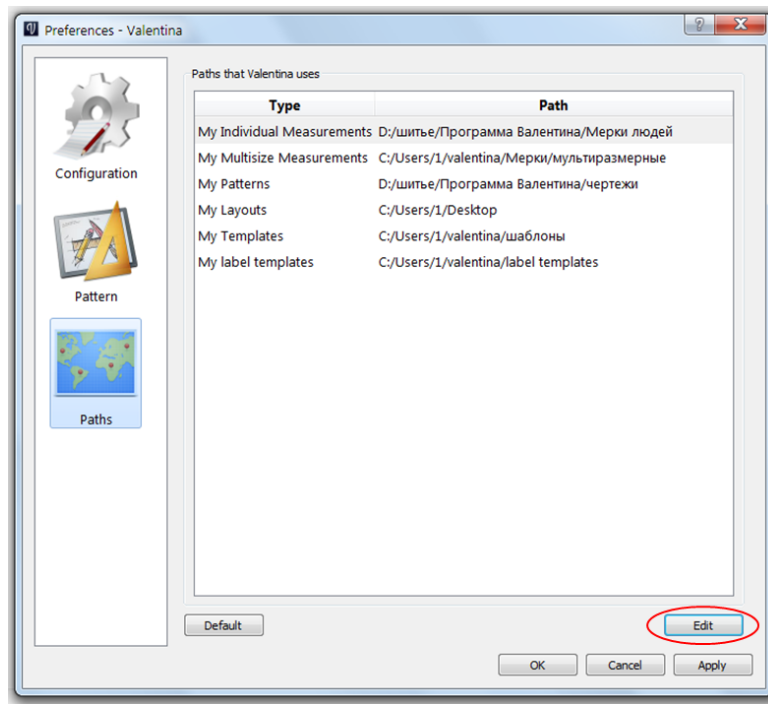
The bottom of the window displays the string "**Known Materials**". If you press the "Manage" button, an additional window opens, where you can add all materials used in the work. Process as follows:

1. Click on the green cross icon (thus, add a new line);
2. Type the material name in the line below. Automatically this material is displayed at the top of the window.
3. Repeat these 2 steps as many times as necessary to add all the materials.
4. Click [**OK**].



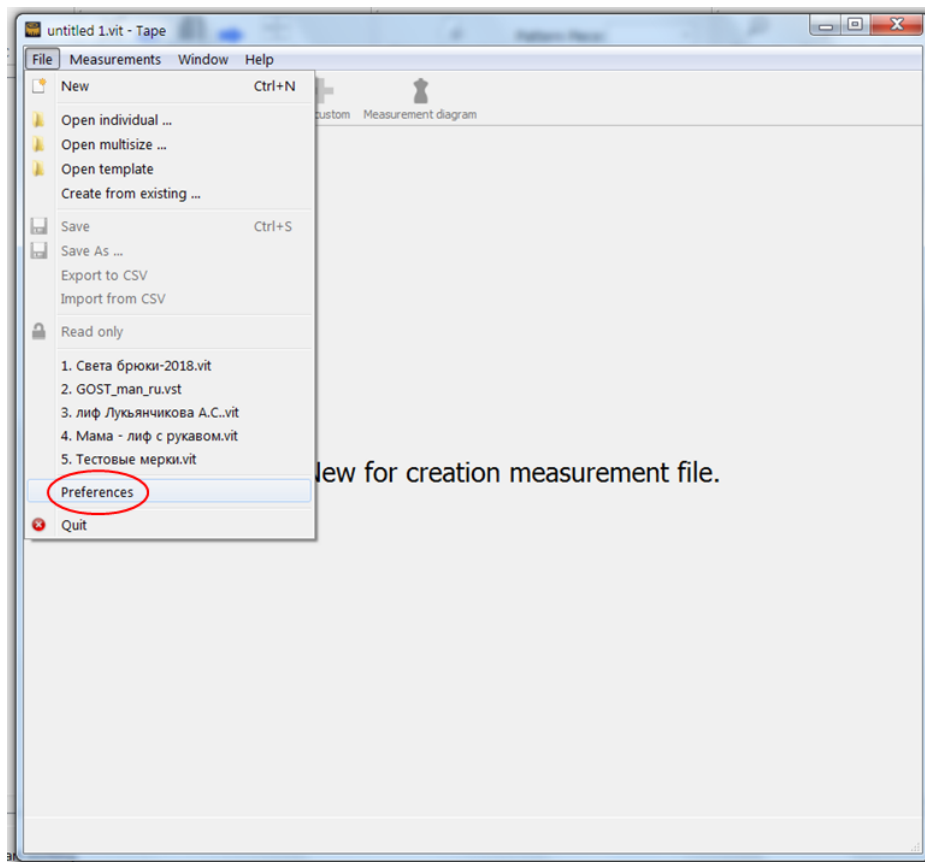
Later on, you can select the desired material from this list in the pattern properties or the pieces options, and the information about it will be displayed on the pattern pieces (for more information, see [p. 9.1.9, "Inscriptions on pattern pieces. Creating label templates."](#)).

The "Paths" section allows to set up the paths to the files loaded by the program.



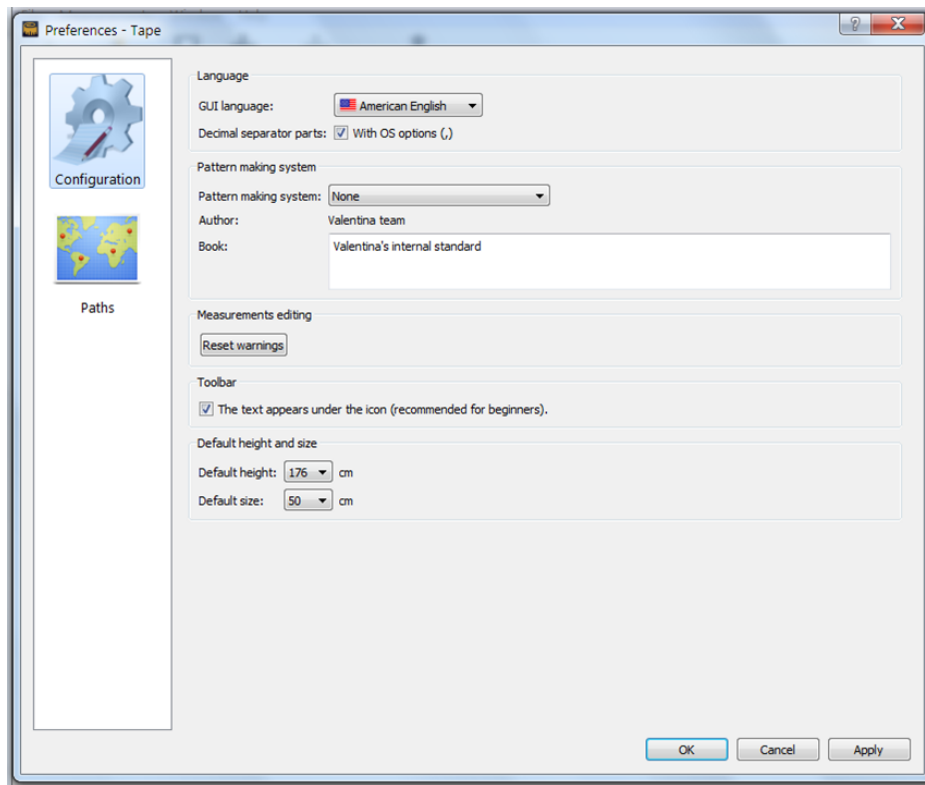
Tape files are set up similarly to Valentina files.

When opening "Tape", go to the **File > Preferences**.



The Tape properties window is similar, but contains fewer sections and settings.

The "Paths" sections of both Valentina and Tape program files are interdependent. If you change paths parameters in one program, these changes will immediately apply in the other application.



5.3. Setting the pattern properties.

In addition to the preferences of the program itself, you can also configure the properties of the pattern - **File > Pattern Properties**. This section stores information common to all the pieces of a single pattern file. After filling in the settings in this window and the template settings storing information on the pieces, the necessary mentions may be displayed later on all the created pattern pieces.

For a detailed discussion of this issue - see [p. 9.1.9, “Inscriptions on pattern pieces. Creating label templates.”](#).

Chapter 6. Program interface, basic functions. Getting started. The order of construction of the drawing.



This section is not available in the presentation version of the document. Buy the full version in order to access the missing parts.

6.1. Program interface, modes and overview of the main functions.



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6.2. Drawing objects.



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6.3. Getting started. The drawing object point, its label and parameters of the point. Parameters of objects in the program.



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6.4. The procedure for constructing a drawing. The sequence of operations in the program.



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6.5. Measuring of angles in the program. The angles of the lines.



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6.6. Deleting objects.



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6.7. Saving the pattern file.



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Chapter 7. Creating a measurement file. Increments and calculated values. Import of measurements. Export measurements and increments.



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7.1. Working with measurements files.



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7.1.1. Measurements.



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7.1.2. Create a file with measurements.



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7.1.3. Import Measurements.



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7.1.4. Templates of measurements.



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7.1.5. Export measurements.



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7.1.6. Synchronization of measurements.



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7.2. Increments and calculated values.



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7.2.1. Adding increments and calculated values.



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7.2.2. Entering data by formula.



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7.2.3. Using mathematical functions.



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7.2.4. Using a logical (conditional) operator.



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7.2.5. Local variables.



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7.2.6. Export of increments and calculated values.



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Chapter 8. Drawing and operation tools.



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8.1. "Point" tab.



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8.1.1. "Point at the end of the segment" tool.



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8.1.2. "Point at distance along line" tool.



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8.1.3. "Perpendicular point" tool.



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8.1.4. "Point along bisector" tool.



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8.1.5. "Special point on shoulder" tool.



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8.1.6. "Triangle" tool.



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8.1.7. "Point from X and Y coordinates of two other points" tool.



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8.1.8. "Perpendicular point along line" tool.



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8.1.9. "Point intersect line and axis" tool.



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8.1.10. "Midpoint between two points" tool.



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8.2. "Line" tab.



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8.2.1. "Line between points" tool.



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8.2.2. "Point at line intersection" tool.



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8.3. "Curve" tab.



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8.3.1. "Simple curve" tool.



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8.3.2. "Simple Split Curve" tool.



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8.3.3. "Curve which uses a point as a control handle" tool.



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8.3.4. "Curved path" (complex curve) tool.



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8.3.5. "Segmenting a curved path" tool.



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8.3.6. "Tools for creating curves"



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8.3.7. "Point at the intersection of curves" tool.



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8.3.8. "Point at the intersection of curve and axis" tool.



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8.4. "Arc" tab.



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8.4.1. "Arc" tool.



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8.4.2. "Segmenting an arc" tool.



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8.4.3. "Point at the intersection of arc and axis" tool.



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8.4.4. "Point at the intersection of arcs" tool.



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8.4.5. "Point at the intersection of circles" tool.



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8.4.6. "Circle and tangent point" tool.



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8.4.7. "Arc and tangent point" tool.



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8.4.8. Tool "Arc of a given length."



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8.4.9. "Point at the intersection of circle and segment or line" tool.



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8.5. "Elliptical arc" tab.



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8.5.1. "Elliptical arc" tool.



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8.6. "Operations" tab.



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8.6.1. "Create New Group" tool.



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8.6.2. "Object rotation" tool.



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8.6.3. "Flipping objects by line" tool.



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8.6.4. "Flipping objects by axis" tool.



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8.6.5. "Moving objects" tool.



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8.6.6. "True darts" tool.



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Chapter 9. Creating pattern details and actions with details.



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9.1. Creating a new piece.



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9.1.1. Creating the outer contour of the piece.



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9.1.2. Changing the direction of the objects.



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9.1.3. Creating the internal path of the piece. Parameters of the internal path.



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9.1.4. Inserting missing objects into a piece.



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9.1.5. Creating seam allowances.



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Automatic seam allowance



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Custom seam allowance



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"Corners" design.



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9.1.6. Adding notches on the piece.



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9.1.7. Setting the grainline on a piece.



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9.1.8. Mark the buttons location.



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9.1.9. Inscriptions on pattern pieces. Creating label templates.



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9.2. Setting other pieces parameters.



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9.2.1. "Paths" section, "Main path" tab.



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9.2.2. Setting pins.



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9.3. Actions with created pieces.



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9.3.1. Merging pieces.



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9.3.2. Creating a copy of the part.



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9.3.3. Deleting pieces.



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Chapter 10. Layout of pattern pieces, saving the pattern file, paper printing of the pattern. Final measurements.



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10.1. Further actions with pieces and printing.



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10.1.1. Exporting a pattern from the Details mode.



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10.1.2. Selection and exclusion of pieces in the layout.



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10.1.3. Creating a pattern layout. Setting the layout parameters.



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10.1.4. Paper printing of the pattern.



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10.1.5. Printing the layout directly from the program.



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Exporting layout to a separate file and printing the pattern.



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File formats for export.



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10.2. Final measurements.



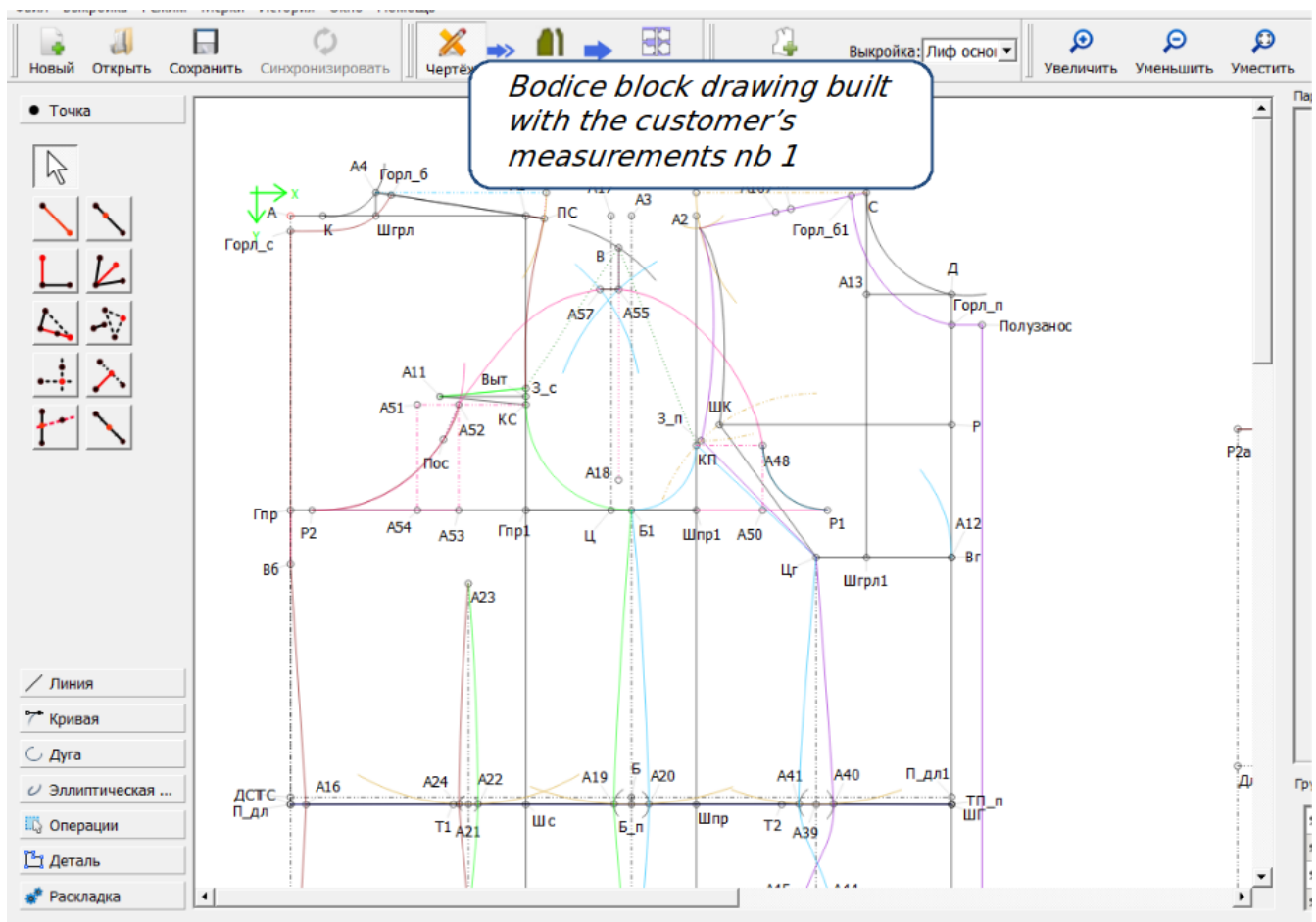
This section is not available in the presentation version of the document. Buy the full version in order to access the missing parts.

Chapter 11. Errors in drawings when working with the program.

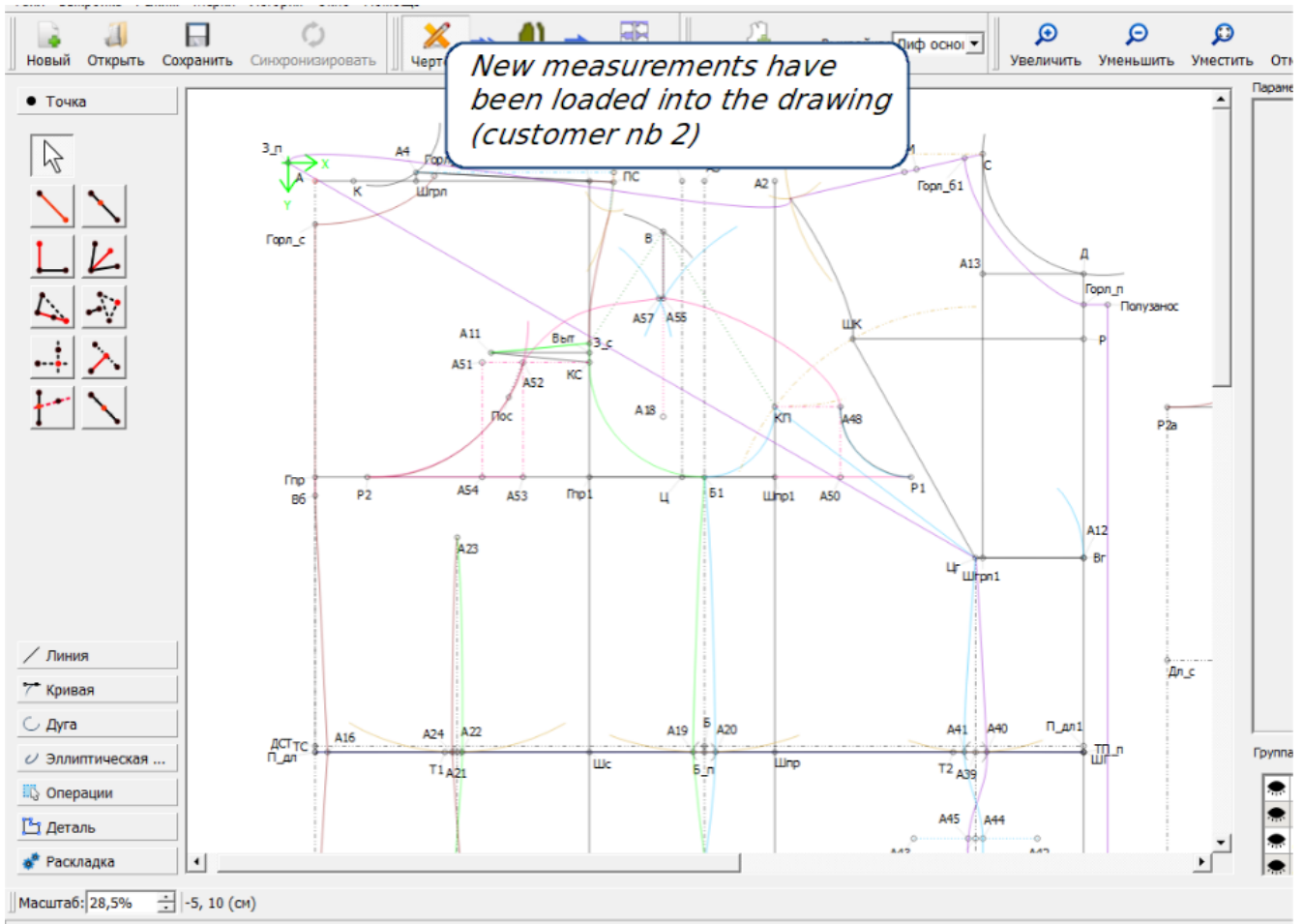
As with any drawing program, the user may experience various kinds of errors when working in "Valentina". And as the drawings in the Valentina program are parametrical, errors often arise when new measurements are loaded into a previously drafted pattern. This often happens when working with individual measurements.

Take a look at the following example.

A correct bodice block has been built, based on the measurements of a first customer.



However, when loading the measurements of another customer into this drawing, this results in frequent distortions of the drawing as well as potential obvious errors.



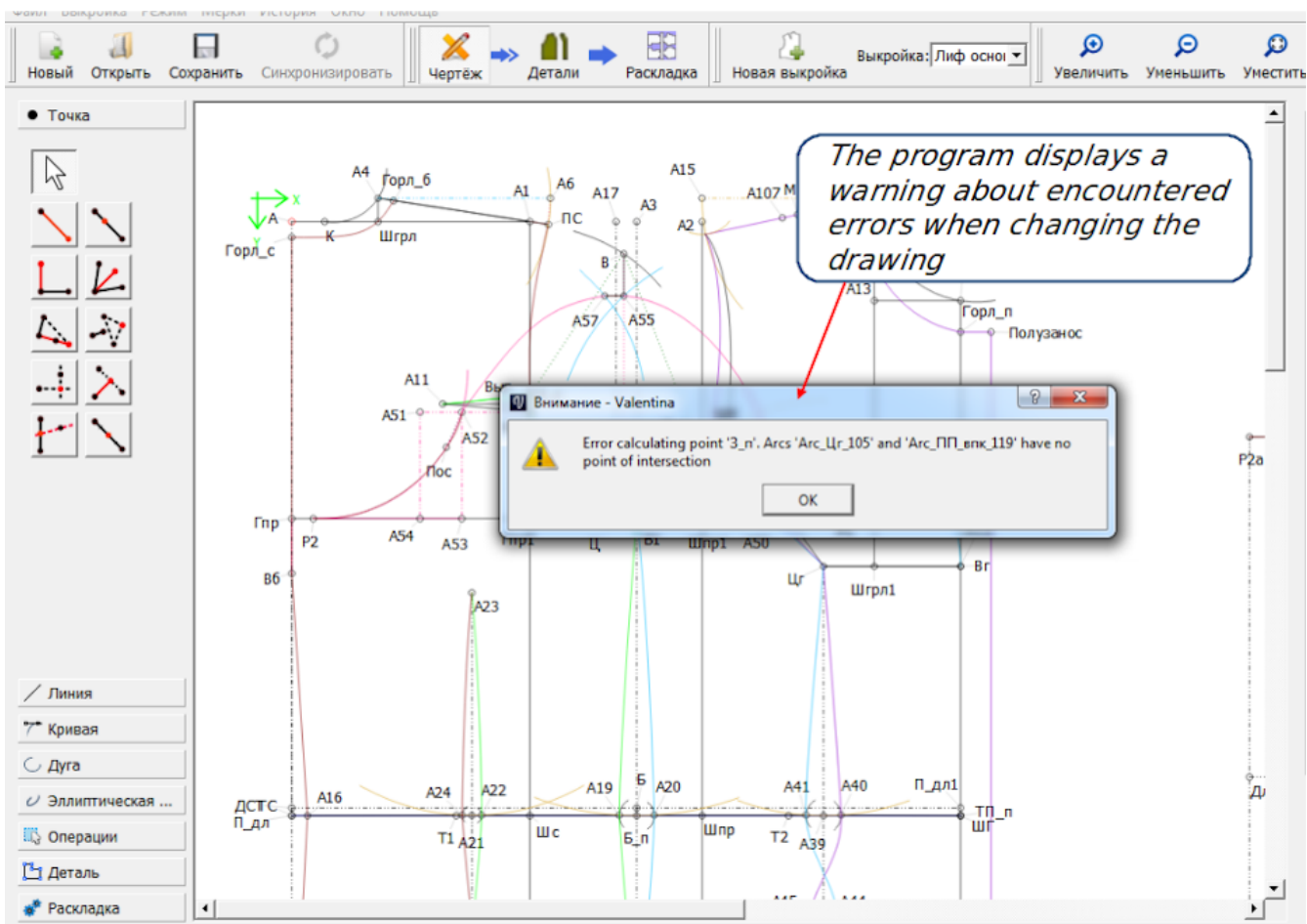
The following figure shows that an error has occurred when the drawing was rebuilt on other measurements.

In order to attract the attention of the designer to the error, before changing the drawing, “Valentina” displays a warning window. Its emergence clearly signals the existence of problems in the drawing. This window will appear on the screen until the error is fixed.



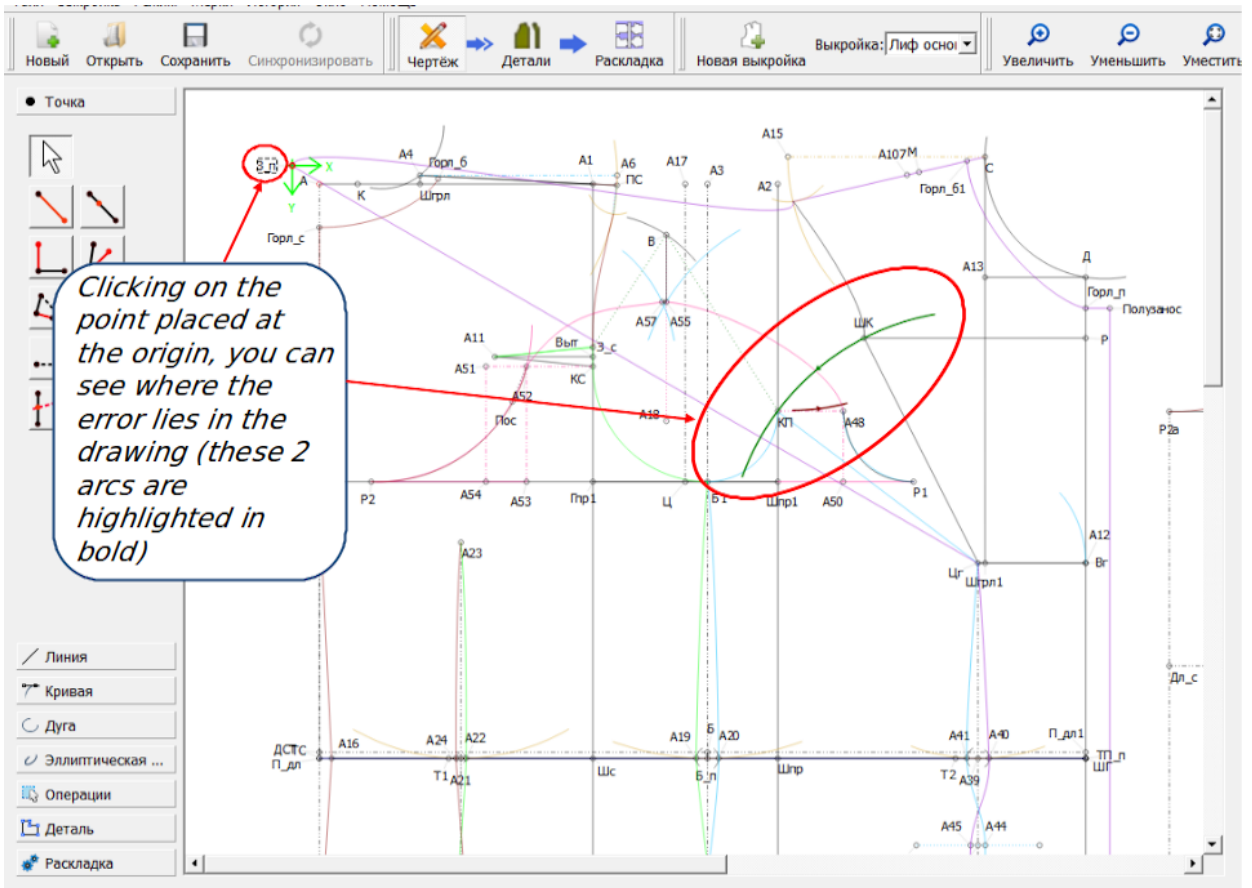
The list of error situations is constantly updated. This function will be fully functional only from version 0.7.

The warning window gives a hint to the user what kind of error has occurred. This helps to quickly find the error and fix it.

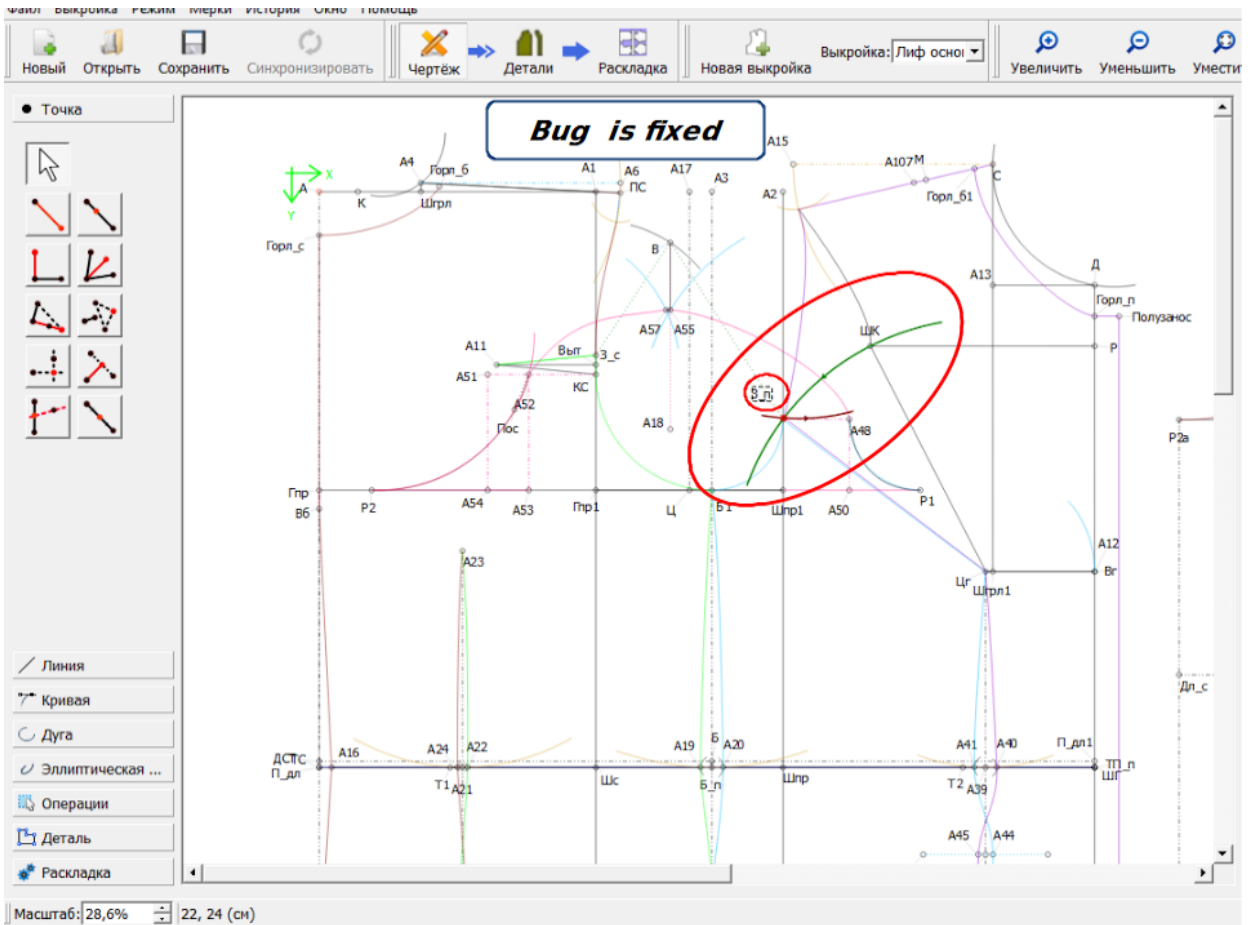


In this example, two arcs and their point of intersection were built in the drawing. When changing the measurements, the arcs have diverged and can no longer have intersection points. This is an error. The program does not know how to place the previously built arc intersection point (i.e., point 3_п) on the arcs that do not intersect anymore. In order not to interrupt the drawing creation and to give the designer an opportunity to correct the error, such points, affected by an error, are placed at the beginning of coordinates (0:0).

When clicking on the point placed at the origin, you can visually identify the two arcs and fix the error.



In this case, to correct the error, one of the arcs must be lengthened so that the two arcs cross each other again, and the point 3_п can be placed at their intersection by the program.



So, there are no more errors in the drawing. Further, it remains to slightly correct the drawing by making the necessary additions, to adjust the smoothness of the curves, and the pattern with the new measurements is ready.

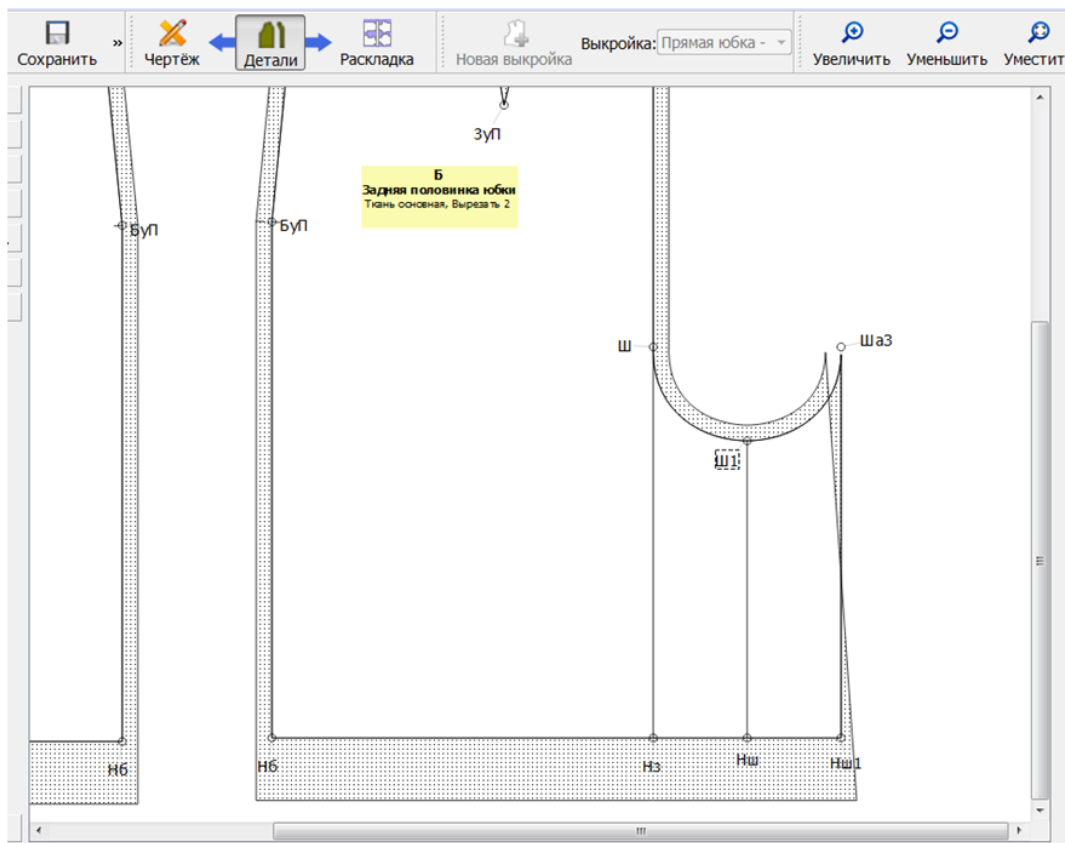
Similar error warning windows may be triggered by other drawing tools.

Here is a complete list of these tools:

- point of intersection of lines;
- point of intersection of arcs;
- point of intersection of circles;
- point of intersection of curves;
- point of intersection of a circle and a segment;
- point from an arc and a tangent;
- point from a circle and a tangent;
- point of intersection of a curve and an axis;
- point of intersection of a line and an axis;
- point built with the triangle tool.

Errors that occur when using these tools are fixed in the same way as in the above example.

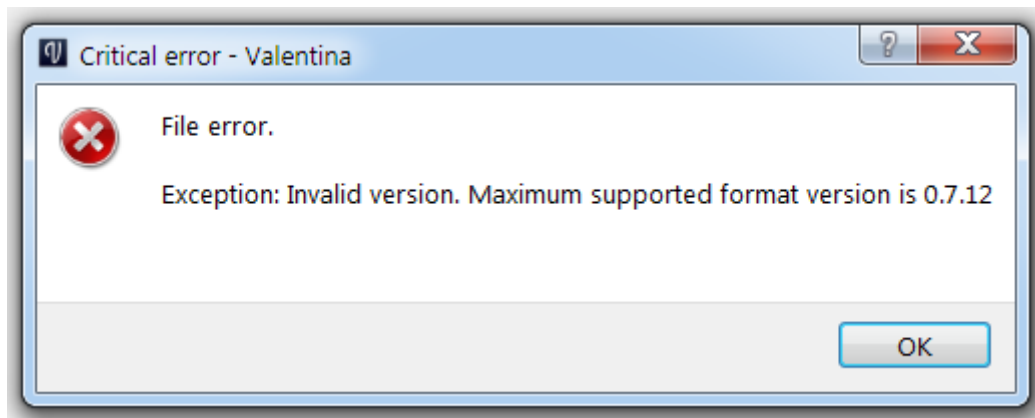
Also in the "Valentina" program, errors of a different kind may occur: distortion of some piece seam allowance.



The correction of this error is described in detail in the chapter ["Creating the main path of a](#)

pattern".

The next likely type of error may be caused by an unsupported version of the pattern file format.



As the development process continues, the project team is constantly adding new changes to the file format, which allows you to use new features and improve existing ones. To separate different sets of changes, these are grouped by numbers, thus forming the different versions of file formats. Each version of the program has a minimum and maximum version that it supports. If you encounter such an error, you have to install a newer version of the program in order to open the file. Typically, such errors occur when users return to the stable version after using the test version, or download a file created on the test version.



"Valentina" supports backward compatibility with files created in older versions of the program.

11.1. Restoring pattern files.

Some file may stop opening due to malfunctions or damage program. In such cases, we recommend that you contact the developers for assistance in restoring the damaged file. Information on how to reproduce the error will also be of great help in preventing such errors in the future. Therefore, when contacting the developers, send your materials about the detected error—screen screenshots, video files or detailed descriptions of how the error occurred, etc.

Experienced users can try to recover files on their own.



Always back up files before experimenting with them.

Here are some tips on how to try to restore a pattern file: To do this, you must carefully read the error message and understand the principles of the file working.

Since the pattern file is a regular text file, it can be opened in a text editor such as Notepad. In general, the structure of the pattern file is as follows:

```
<?xml version="1.0" encoding="UTF-8"?>
<pattern>
  <!--Pattern created with Valentina v0.6.2.0
  (https://valentinaproject.bitbucket.io).-->
  <version>0.7.12</version>
  <unit>cm</unit>
  <description/>
  <notes/>
  <measurements/>
  <increments/>
  <previewCalculations/>
  <draw name="Piece 1">
    <calculation/>
    <modeling/>
    <details/>
  </draw>
  <draw name="Piece 2">
    <calculation/>
    <modeling/>
    <details/>
  </draw>
</pattern>
```

As you can see, in this example, the file includes two pattern pieces. In most cases the errors will occur in the 'Draw' mode. It is important to remember the following: everything that is in the **Layout** and **Details** modes is optional. Typically, Valentina reports the location of the error in the file. If the error is located in one of the above mentioned modes, you can try to clear their contents and create pieces from scratch. Thus, you will lose some of your work, but you can continue to work further with the file.

Since this method is not a panacea for all errors, we strongly recommend you to contact the developers for support.

Chapter 12. Frequently asked questions.

This chapter provides short answers to frequently asked questions.

What types of clothing can be designed with "Valentina"?

You can design any type of clothing, the program limits none. The kernel of the system provides you with the tools through which you implement your ideas. If for technical reasons you are unable to implement something, we recommend that you contact the developers and inform them of your problem. Depending on the complexity, your example will be included in the project development plan.

I use the "X" design method, does "Valentina" support it?

"Valentina" has no binding to any of the design systems.

How does the gradation work in "Valentina"?

When creating a drawing, it is parameterized. The more skillfully the drawing is designed, the better the grading is done. The basis of parametrization is the recording of formulas and logical expressions, as well as the laws of geometry. Gradation is done due to recalculation of parameters with new input data: measurements and increments.

Can I sell my drawings or teach others how to use the project?

The short answer is yes. The authors of the program do not restrict your freedom in any way. But it is always recommended to follow the changes and keep up to date with the latest developments.

Do I have to pay for using "Valentina"?

No, the project is distributed in an open source model. You can help the project with a voluntary donation, bug reports, information spreading about the project, purchase of this guide and much more!

My file stopped opening, what should I do?

Don't panic! If you are an experienced user, you can learn how to recover files by reading the chapter on errors. We recommend that you contact the developers for help. In most cases, files are very easy to recover. They are going to help you!

Does "Valentina" support modeling?

Yes, "Valentina" supports modeling. But by their nature, modeling operations are much more complicated than in classical CAD systems, which can scare away many newbies. However, after overcoming the barrier, the program itself will rebuild your drawing, which is not achieved in classical systems.

Can I export to CAD to continue?

"Valentina" supports exporting the pieces separately as well as the entire layout to multiple file formats. Some of them are perfect to continue working with pieces in other programs.

Can I print my patterns on a home printer?

Yes, "Valentina" supports a special printing mode - tiled printing. It allows you to split large sheet

formats into smaller sheets for printing.

What types of printers/plotters does Valentina support?

"Valentina" does not limit the choice of any printer or plotter. Any printer that your operating system supports, will do the job.

Can I run "Valentina" on a tablet?

Only if one of the supported desktop operating systems is installed on the tablet.

Why and for what reason do weird files appear when I open the Valentina program?

While working, "Valentina" creates several auxiliary types of files.

- Files with the extension *.autosave* are active backups, they store the latest unsaved changes. "Valentina" creates such a file within the interval specified in the settings. If there is such a file, the program will prompt you to restore the state of the file the next time you start.
- Files with the extension *.bak* are backup files. Such files are created every time you change the file format version. For example, when switching between one version of "Valentina" to a newer one. You can safely delete these files or, if necessary, restore files by deleting the extension. This is nothing more than reinsurance for developers.
- Files with the extension *.lock*. The presence of such files signals that the file is already open in one version of the program, and opening in another version may result in loss of data. You can either ignore the warning or interrupt the opening. The program will delete the file after you finish working with it. In rare cases of crashes, it may be necessary to manually delete such a file if the program determines the file is busy and you are sure that it is not open in another copy.

How can I restore a file from a backup?

"Valentina" creates two types of backups: automatic saving of the last changes at specified intervals (*.autosave*) and backup before conversion to the new format (*.bak*). In both cases, restoring is easy : rename the files by deleting the extensions *.autosave* or *.bak*. In case of automatic saving, "Valentina" will offer to restore the data itself, if after starting a file with such an extension *.autosave* is found by the program.

What is the difference between "Valentina" and Seamly2D?

Valentina and Seamly2D are two open source projects that have gone through the separation process - they forked -. This is the standard way to resolve disagreements in a community if they cannot be resolved in another way. In this process, members of the community who disagree with the position of another part of the community initiate a process of separation. In this case, the original "Valentina" project was divided into two branches: "Valentina" and Seamly2D. This fork has resulted in a renaming process. The project, which split up, left its former name, and the original project replaced it with Seamly2D.

Both communities have expressed a desire to further develop their projects. In practice, it resulted in a series of accusations, black PR and silence about the obvious. Unfortunately for us, we have to admit the complete absence of any significant progress on the part of the Seamly2D project.

At the moment, Valentina is the undisputed leader in the number of patches and available innovations. This makes it possible to give a clear recommendation to people who make a choice

between the two projects.

And is it possible to make suggestions for Valentina?

Yes. The project community is open. You can write your proposals both directly to the authors and to the public areas of the project.

Appendix A: Command line keys.

A.1. Valentina application command line keys.

Launch format: `valentina [options] file name`

Supported keys:

- `-h, --help` — Displays the message with help
- `-v, --version` — Displays information on the program version.
- `-b, --basename <layout files base name>` — Base file name of exported layout files. Use it to enable export mode.
- `-d, --destination <destination folder>` — Path to save the exported layout. By default, the directory in which the application is launched.
- `-m, --mfile <measurements file>` — Path to custom measurements file (in export mode). Use it to open a file with a path different from the path to the measurements file initially stored inside the file.
- `-f, --format <format number>` — Number corresponding to the output format (default = 0, in export mode):
 - Svg file (*.svg) = 0,
 - PDF file (*.pdf) = 1,
 - Image file (*_en-EN.png) = 2,
 - Wavefront OBJ (*.obj) = 3,
 - PS file (*.ps) = 4,
 - EPS file (*.eps) = 5,
 - AutoCAD DXF R10 (flat) file (*.dxf) = 6,
 - AutoCAD DXF R11/12 (flat) file (*.dxf) = 7,
 - AutoCAD DXF R13 (flat) file (*.dxf) = 8,
 - AutoCAD DXF R14 (flat) file (*.dxf) = 9,
 - AutoCAD DXF 2000 (flat) file (*.dxf) = 10,
 - AutoCAD DXF 2004 (flat) file (*.dxf) = 11,
 - AutoCAD DXF 2007 (flat) file (*.dxf) = 12,
 - AutoCAD DXF 2010 (flat) file (*.dxf) = 13,
 - AutoCAD DXF 2013 (flat) file (*.dxf) = 14,
 - AutoCAD DXF R10 AAMA file (*.dxf) = 15,
 - AutoCAD DXF R11/12 AAMA file (*.dxf) = 16,
 - AutoCAD DXF R13 AAMA file (*.dxf) = 17,
 - AutoCAD DXF R14 AAMA file (*.dxf) = 18,

- AutoCAD DXF 2000 AAMA file (*.dxf) = 19,
 - AutoCAD DXF 2004 AAMA file (*.dxf) = 20,
 - AutoCAD DXF 2007 AAMA file (*.dxf) = 21,
 - AutoCAD DXF 2010 AAMA file (*.dxf) = 22,
 - AutoCAD DXF 2013 AAMA file (*.dxf) = 23,
 - PDF tiled file (*.pdf) = 33.
- **-b, `--bdfx** — DXF binary export.
 - **-t, --text2paths** — Export text as paths.
 - **-e, --exportOnlyDetails** — Export only pieces. Export pieces as they are in Details mode. Any layout related options will be ignored.
 - **-e, --exportSuchDetails <regular expression>** — Export only pieces whose names correspond to the regular expression.
 - **-x, --gsize <size value>** — Sets the size value in the pattern file that was opened with multisize measurements (in export mode). Valid values: 22, 24, 26, 28, 30, 32, 34, 36, 38, 40, 42, 44, 46, 48, 50, 52, 54, 56, 58, 60, 62, 64, 66, 68, 70, 72 cm.
 - **-e, --gheight <gheight value>** — Sets the height value in the pattern file that was opened with multisize measurements (in export mode). Valid values: 50, 56, 62, 68, 74, 80, 86, 92, 98, 104, 110, 116, 122, 128, 134, 140, 146, 152, 158, 164, 170, 176, 182, 188, 194, 200 cm.
 - **--userMaterial <user materials>** — Use this option to override the custom material defined in the pattern. The value must be in the form **<number>@<name of the user material>**. The number must be in the range of 1 to 20. For example, **1@Fabric2**. The key can be used several times. It has no effect in the graphical interface mode.
 - **-p, --pageformat <template number>** — The number corresponding to the layout page format (default = 0, in export mode):
 - A0 = 0,
 - A1 = 1,
 - A2 = 2,
 - A3 = 3,
 - A4 = 4,
 - Letter = 5,
 - Legal = 6,
 - Roll 24 inches = 7,
 - Roll 30 inches = 8,
 - Roll 36 inches = 9,
 - 42 inch roll = 10,
 - Roll 44 inch = 11,
 - Roll 48 inch = 12,

- Roll 62 inch = 13,
- Roll 72 inch = 14.
- **-W, --pagew <page width>**—Page width in current units, e.g. 12.0 (cannot be used with "pageformat", in export mode).
- **-H, --pageh <page height>**—Page height in current units, e.g. 12.0 (cannot be used with "pageformat", in export mode).
- **-U, --pageunits <units of measure>**—Page units (in export mode). Allowed values: mm, cm, inch, px.
- **-i, --ignoremargins**—Ignore printer margins (in export mode). Use it if you want to use the entire paper space. In case of subsequent printing, you have to consider the margins yourself.
- **-L, --lmargin <printer left margin>**—Printer left margin in the current units, for example, 3.0 (in export mode). If not set, the default printer value will be used, or the 0 value if no printer is found.
- **-R, --rmargin <printer right margin>**—Printer right margin in the current units, for example 3.0 (in export mode). If not set, the default printer value will be used, or the 0 value if no printer is found.
- **-T, --tmargin <Printer top margin>**—Printer top margin in the current units, for example 3.0 (in export mode). If not set, the default printer value will be used, or the 0 value if no printer is found.
- **-B, --bmargin <printer bottom margin>**—Printer bottom margin in the current units, for example 3.0 (in export mode). If not set, the default printer value will be used, or the 0 value if no printer is found.
- **-r, --rotate <angle>**—Rotation in degrees (one of the predefined, export mode). The default value is 180; if set to 0, no rotation. Valid values: 0, 1, 2, 3, 4, 5, 6, 8, 9, 10, 12, 15, 18, 20, 24, 30, 36, 40, 45, 60, 72, 90, 180. Each value shows how many times the pattern will be rotated. For example, using 180 implies 2 rotations by 180 degrees ($360/180 = 2$).
- **-c, --crop**—Automatic trimming of unused length (export mode).
- **-u, --unite**—Merge pages if possible (in export mode). The maximum value is limited by the QImage class, which only supports a maximum of 32768x32768 pixels of the image.
- **-S, --savelen**—Save the sheet length (in export mode). The program is told to use the maximum possible sheet width. The layout quality may be negatively affected when using this option.
- **-l, --layounits <layout units>**—Layout units (same units as paper units, except px, export mode).
- **-s, --shiftlen <shift length>**—Shift value in the layout, expressed in the units of the layout (export mode). This option defines the maximum distance between the pieces.
- **-G, --gapwidth <gap width>**—Layout gap width x2, expressed in layout units (in export mode). Sets the distance between pieces.
- **-g, --groups <priority type>**—Sets the type of pieces selection order based on their area (in export mode):
 - Three groups: large, medium, small = 0;

- Two groups: large, small = 1;
- In descending order of area = 2.
- **-t, --test** — Runs the program in test mode. In this mode, the program loads one pattern file and silently exits without showing the main window. The key has priority over the **basename** key.
- **--pedantic** — Translates all parsing warnings into errors. This works only in console mode. Use it to force Valentina to shut down immediately if the pattern contains a warning on parsing.
- **--no-scaling** — Disables high-resolution scaling. Call this option if you encounter a scale problem (scaling is enabled by default).

Alternatively, you can use the environment variable `QT_AUTO_SCREEN_SCALE_FACTOR = 0`.

- **--csvWithHeader** — Export to CSV with a headers line. Disabled by default.
- **--csvCodec <codec name>** -- Indicates the codec that will be used to store data in a CSV file. List of supported codecs provided by Qt. The default value depends on the system. On Windows, the codec will be based on the system locale. On Unix systems, the codec may revert to using the iconv library if no built-in codec for the locale is found. Acceptable values (examples):
 - US-ASCII,
 - ISO-8859-1,
 - ISO-8859-2,
 - ISO-8859-3,
 - ISO-8859-4,
 - ISO-8859-5,
 - ISO-8859-6,
 - ISO-8859-7,
 - ISO-8859-8,
 - ISO-8859-9,
 - ISO-8859-10,
 - ISO-2022-JP-1,
 - Shift_JIS,
 - EUC-JP,
 - US-ASCII,
 - windows-949,
 - ISO-2022-KR,
 - windows-949,
 - ISO-2022-JP,
 - ISO-2022-JP-2,
 - GBK,
 - ISO-8859-6,

- ISO-8859-6,
- ISO-8859-8,
- ISO-8859-8,
- ISO-2022-CN,
- ISO-2022-CN-EXT,
- UTF-8,
- ISO-8859-13,
- ISO-8859-14,
- ISO-8859-15,
- GBK,
- GB18030,
- UTF-16,
- UTF-32,
- SCSU,
- UTF-7,
- UTF-16BE,
- UTF-16LE,
- UTF-16,
- CESU-8,
- UTF-32,
- UTF-32BE,
- UTF-32LE,
- BOCU-1,
- hp-roman8,
- Adobe-Standard-Encoding,
- IBM850,
- IBM862,
- IBM-Thai,
- Shift_JIS,
- GBK,
- Big5,
- macintosh,
- IBM037,
- IBM273,
- IBM277,

- IBM278,
- IBM280,
- IBM284,
- IBM285,
- IBM290,
- IBM297,
- IBM420,
- IBM424,
- IBM437,
- IBM500,
- cp851,
- IBM852,
- IBM855,
- IBM857,
- IBM860,
- IBM861,
- IBM863,
- IBM864,
- IBM865,
- IBM868,
- IBM869,
- IBM870,
- IBM871,
- IBM918,
- IBM1026,
- KOI8-R,
- HZ-GB-2312,
- IBM866,
- IBM775,
- KOI8-U,
- IBM00858,
- IBM01140,
- IBM01141,
- IBM01142,
- IBM01143,

- IBM01144,
 - IBM01145,
 - IBM01146,
 - IBM01147,
 - IBM01148,
 - IBM01149,
 - Big5-HKSCS,
 - IBM1047,
 - windows-1250,
 - windows-1251,
 - windows-1252,
 - windows-1253,
 - windows-1254,
 - windows-1255,
 - windows-1256,
 - windows-1257,
 - windows-1258,
 - TIS-620,
 - TSCII.
- **--csvSeparator <separator character>**— Specifies the csv separator character. The default value is `,`. Valid symbols:
 - **Tab**,
 - **;**,
 - **Space**,
 - **,**.
 - **--csvExportFM <path to the CSV file>**— Calling this command includes the final measurements in the export CSV file. Specify the path to the CSV file with the final measurements. The path must contain the path to the directory and the file name. It can be absolute or relative. In case of a relative path, the current working directory will be used.
 - **--tiledPageformat <template number>**— Number corresponding to the page template in tiled format (default = 0, export mode in tiled format in pdf):
 - A0 = 0,
 - A1 = 1,
 - A2 = 2,
 - A3 = 3,
 - A4 = 4,

- Letter = 5,
- Legal = 6.
- `--tiledlmargin <printer left margin>` — Printer left margin in the current units, for example 3.0 (in export mode). If not set, the default value will be 1 cm.
- `--tiledrmargin <Printer right margin>` — Printer right margin of the tiled page in the current units, for example 3.0 (in export mode). If not set, the default value will be 1 cm.
- `--tiledtmargin <Printer top margin>` — Printer top margin of the tiled page in the current units, for example 3.0 (in export mode). If not set, the default value will be 1 cm.
- `--tiledtmargin <Printer bottom margin>` — Printer bottom margin of the tiled page in the current units, for example 3.0 (in export mode). If not set, the default value will be 1 cm.
- `--tiledLandscape` — Sets the orientation of the tiled page to landscape (in export mode). The default orientation is portrait.

Arguments:

- `filename` - the path to the pattern file.

A.2. Tape application command line keys.

Launch format: `tape [options] file name`

Parameters:

- `-h, --help` — Displays help.
- `-v, --version` — Displays version information.
- `-e, --height <base height>` — Opens with base height. Valid values: 50, 56, 62, 68, 74, 80, 86, 92, 98, 104, 110, 116, 122, 128, 134, 140, 146, 152, 158, 164, 170, 176, 182, 188, 194, 200 cm.
- `-s, --size <base size>` — Opens with base size. Valid values: 22, 24, 26, 28, 30, 32, 34, 36, 38, 40, 42, 44, 46, 48, 50, 52, 54, 56, 58, 60, 62, 64, 66, 68, 70, 72 cm.
- `-u, --unit <units of pattern measurements>` -- Sets pattern measurements units: cm, mm or inch.
- `--test` — Use it for software testing. Starts the program and opens the file without showing any window.
- `--no-scaling` — Disables high-resolution scaling. Call this option if there is a scale problem (by default, scaling is enabled).

Or you can use the environment variable `QT_AUTO_SCREEN_SCALE_FACTOR=0`.

Arguments:

- `filename` — Measurements file.