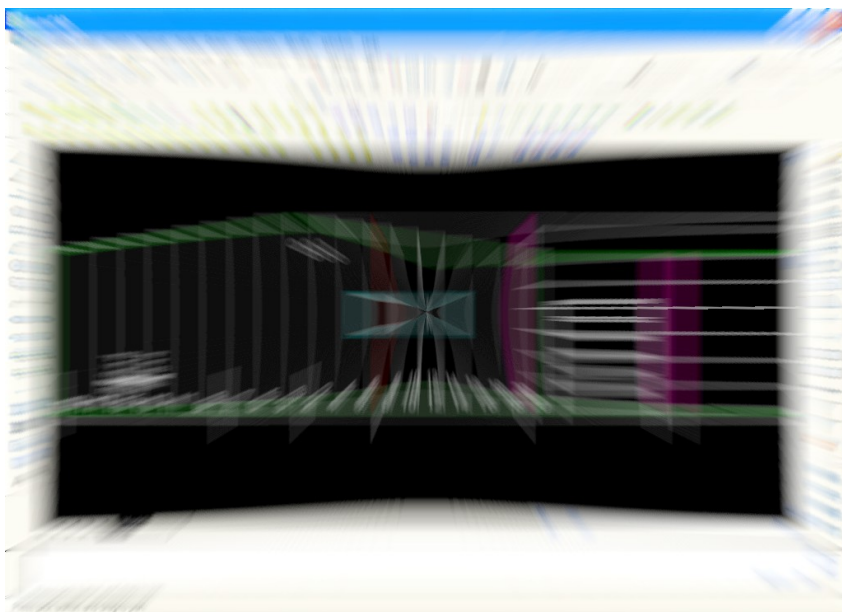


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Fast **Specifier**

v.3.01

tutorial guide



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Introduction

This tutorial guide was developed to cover the functions of Fast Specificator v.3.0.1. Fast Specificator is an application for 2D claddings and specifications. It is designed to run under AutoCAD environment for increased compatibility with drawings provided by the client. This application is capable of functioning with any drawing supported by AutoCAD that meets certain requirements, presented further.

Chapter 1. Installation and authentication

To install Fast Specificator you must have a working copy of AutoCAD in your computer. Fast Specificator's compatibility covers all versions of AutoCAD starting with AutoCAD 2000. Since Fast Specificator works with two dimensional drawings only, it will work correctly with limited versions of AutoCAD as well.

Installation of the application begins with extracting data from the provided archive to your computer. Since the program will always run from the location it is installed to, it is better to place it in a separate folder. Once the folder is placed in the desired location, the installation continues by running AutoCAD. *Note: if you are using Windows Vista, it is required to run AutoCAD in administration mode (it is done by right clicking on AutoCAD icon and selecting "Run as administrator".* In the main window of AutoCAD select *File* → *Open* (or *Ctrl+O* shortcut) and open file "Fast-Specificator-setup.dwg" in the installation directory (Fig. 1).

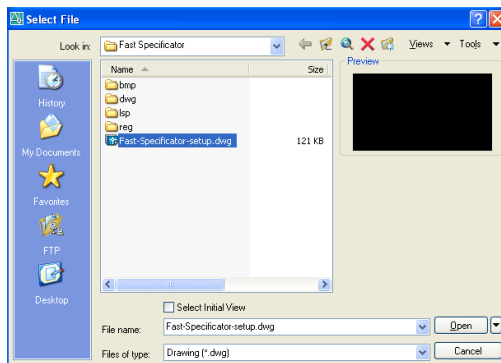


Fig. 1. Installing Fast Specificator

Once the file is opened select *Tools* → *AutoLISP* → *Load* and load "Fast-Specificator-setup.vlx" (Fig. 2)

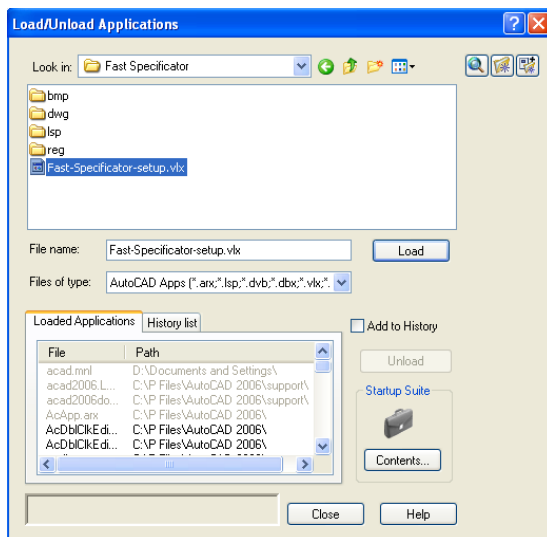


Fig. 2. Installing Fast Specificator 2

After following these steps the application is installed. To avoid third party usage of this application, it is protected by an authentication system. To run this application you need to identify yourself to the developer of the application. Once you have provided the information, received the confirmation file and placed it in certain directory, your copy of Fast Specificator is fully functional.

To identify yourself click on any button of Fast Specificator. Once you have clicked, a message pops up as in fig. 3.

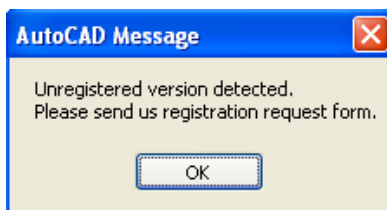


Fig. 3. AutoCAD Message

Pressing the "OK" button will take you to the registration form that has to be filled correctly. (Fig. 4)

Fast-Specificator license request form

Fast-Specificator status:
 User Id :XXXXXXXXXXXX
 Fast-Specificator status : v3.0.1 installed

Customer data (All fields required) :
 All Customer provided information is required for Registration only and will be undisclosed to any third part.

First Name:
 Last Name:
 Company:
 Address:
 City:
 State/Province:
 Country:
 ZIP/Postal Code:
 Email:

Email is required for licence activation and delivery of requested newsletters.

Newsletters:
 Subscribe to Fast-Specificator newsletter (recommended)
 Subscribe to "In axis" company newsletter (optional)

OK Cancel

Fig. 4. Fast Specificator license request form

After filling the form and clicking “OK” you will be taken to your default e-mail client window, where you will be asked to attach the newly created registration file “order_XXXX-XXXX-XXXX.dat” and send it to the predefined address. (Fig. 5)

Fast-Specificator license request No. XXXX-XXXX-XXXX

File Edit View Insert Format Tools Message Help

Send Cut Copy Paste Undo Check Spelling Attach

To: info@in-axis.com
 Cc:
 Subject: Fast-Specificator license request No. XXXX-XXXX-XXXX
 Attach: order_XXXX-XXXX-XXXX.dat

Arial 10

Fig. 5. Fast Specificator license request e-mail

Once your identity is approved you will receive an e-mail with a license file "Fast-Specificator_XXXX-XXXX-XXXX.vlx" attached. Save this file in Fast Specificator's \reg directory. After saving restart AutoCAD.

Now Fast Specificator is installed and fully functional.

Chapter 2. Preparing the drawing

Fast Specificator application only functions correctly if the drawing that has to be processed meets the following requirements:

- a) drawings have to be provided in AutoCAD dwg format;
- b) drawings units have to be millimeters;
- c) cladding areas must be predefined as closed contours;
- d) elevations must be predefined as closed contours;
- e) openings (windows, doors) must be predefined as closed contours;
- f) building axes must be predefined as lines;
- g) possible cladding orientation : vertical / horizontal

Therefore if the provided drawing is finished in non-complex objects (e.g. lines) it has to be modified for Fast Specificator. There are several methods to achieve it.

Joining separate lines into a polyline

First method is joining separate lines into a closed polyline. It is relatively fast and simple, but it changes the structure of the original drawing. So there is a possibility that it will not be possible to modify the drawing by other programs in the next steps of development.

To join separate lines into one closed polyline a command "*pedit*" has to be entered in the AutoCAD command line and press the *Enter* button (Fig. 6).

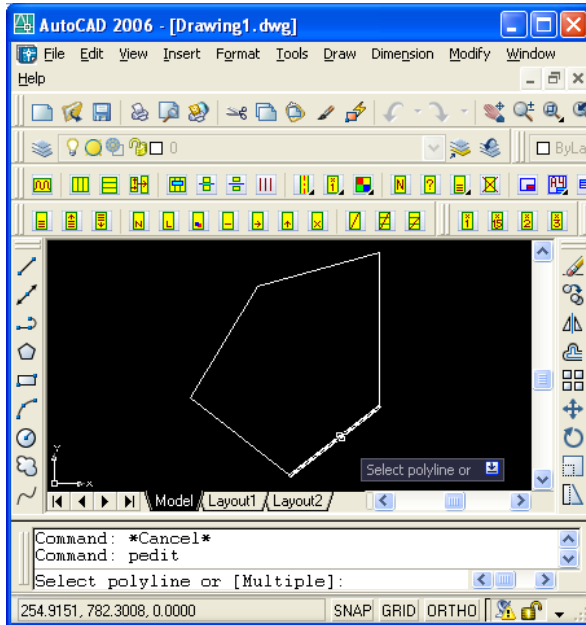


Fig. 6. Making a closed polyline of separate lines

After taking this action the program requires you to select a polyline to start from. Every separate line is considered a simple polyline. Using a mouse select whichever line you like that includes in the closed contour that you need to clad and press *Enter*. If the program claims that object selected is not a polyline and asks if you want to turn it in to one press *Y* and *Enter* again. After that the program gives options of polyline editing (Fig. 7).

```
Enter an option [Close/Join/Width/Edit
vertex/Fit/Spline/Decurve/Ltype
gen/Undo]:
```

Fig. 7. Polyline editing options in AutoCAD command window

In the command field enter *Join* and press *Enter*. The command line asks to select source object. Click any line of the closed contour. Then the program asks to select objects to be joined to source. Click each and every line that forms a closed contour (Fig 7). *Note: all the lines have to be connected together and form a closed contour.*

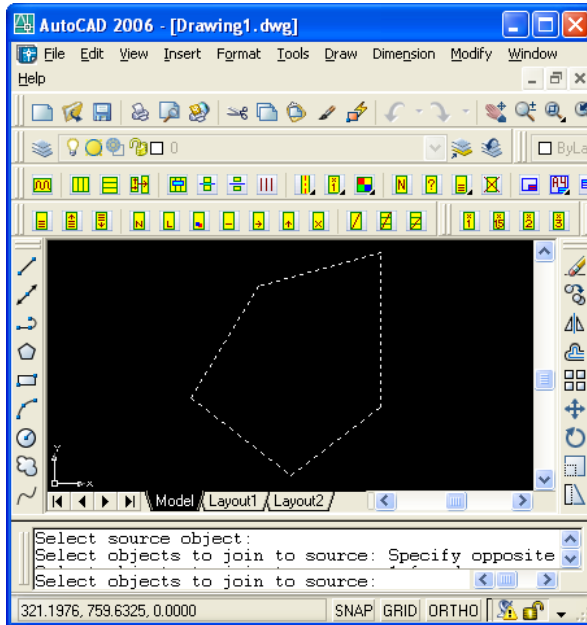


Fig. 7. Making a closed polyline of separate lines 2

When all the lines are selected press *Enter*. From now on the lines are considered as one closed contour polyline.

Adding a new layer with polylines

The second method is less effective to the original drawing, as a new special layer is created on the top of the drawing without any intervention to the original one.

To fulfill this method first create a new layer in the drawing. To create a new layer, go to *Format* → *Layer*, or click the red marked button in Fig. 8.



Fig. 8. Layer Properties Manager button

The Layer Properties Manager is loaded, where you have to press the New Layer button (Fig. 9) or use the *Alt+N* shortcut. Name the layer with a name of your choice. For easier usage of your layer you can

customize it by changing the color, line type, or line weight. It can be done by clicking on these options

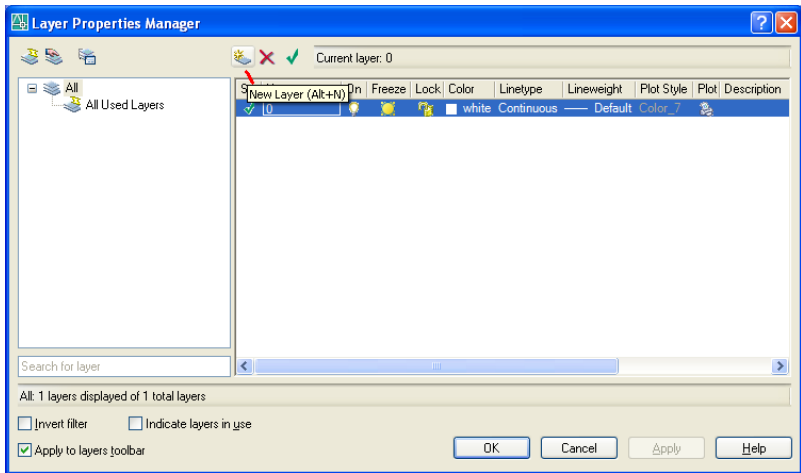


Fig. 9. Creating a new layer in AutoCAD

Once the layer is created click OK in the Layer Properties Manager. In the main AutoCAD window select your layer (Fig 10).

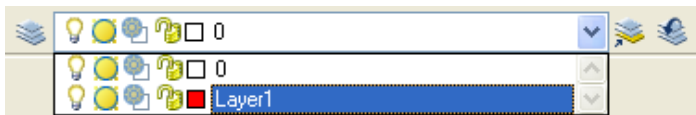


Fig. 10. Selecting a new layer

Turn the *Object Snap* ON. The button is located at the bottom of the window (Fig. 11).

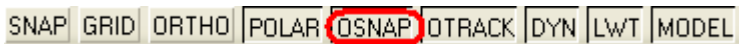


Fig 11. Object Snap ON

Select *Draw* → *Polyline*. Follow the original contour with a new line until it is complete and closed (Fig. 12).

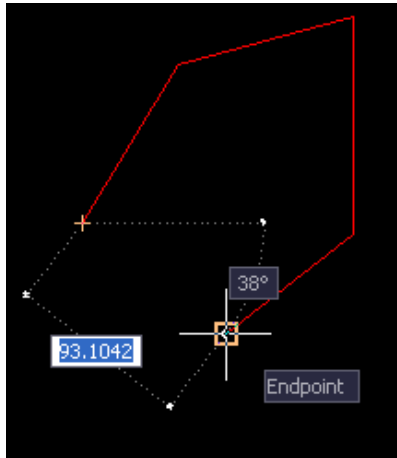


Fig. 12. Drawing a closed contour polyline

Modifying round objects for Fast Specificator processing

Fast Specificator application needs a base line and a corner to define the beginning of cladding, so it is not possible to clad or do an opening when there is a round object or an ellipse.

To solve this you have to follow the method above: create a new layer and select a polyline. Then you have to set *Object Snap* to OFF and redraw the current round shape object in many straight lines as close as possible (Fig. 13).

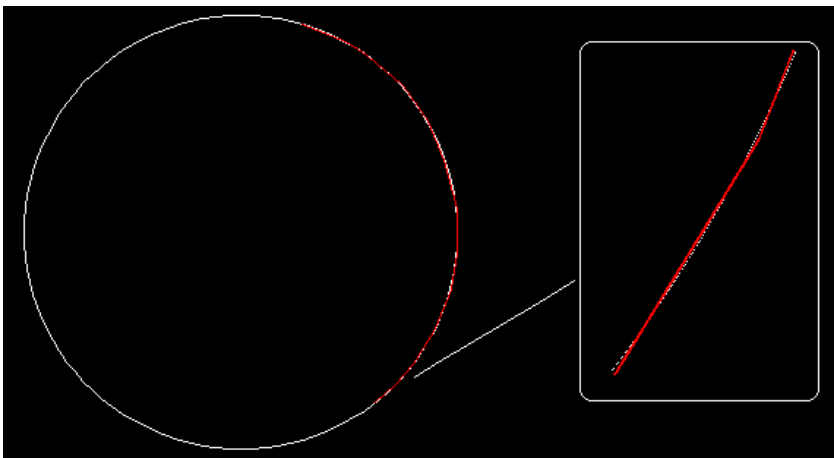


Fig. 13. Coping with round objects in Fast Specificator

Chapter 3. Selecting and laying out the profiles

In order to know the exact button that is being described later in this tutorial, an index for all available buttons is presented in Fig. 14. From now on every time a button is described by number it will be based on this figure. The buttons needed to achieve results of each chapter will be presented separately in the beginning of every chapter.

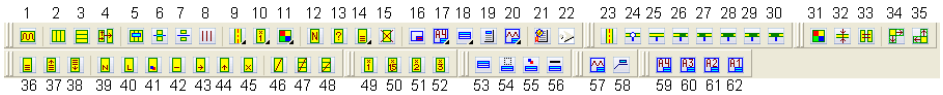


Fig. 14 Index of Fast Specificator buttons

To start working using Fast Specificator you must have a proper drawing (described in chapter 2) loaded in AutoCAD (Fig 15). Once the drawing is loaded press the 16th button and enter the initial data of the drawing. It opens in a text editor. Do not edit any lines that are closed in square brackets. You may adjust the length rounding value in *mm*. Minimal length in *mm* is a parameter that sets the minimal length of a profile. If there is a space shorter than this length, the application will not add a profile there. You may change the names of complex, object, customer and drawer and add drawing description. If this data is entered, it will be presented later in the information box of the drawing frame (see chapter 8).

After setting up the initial settings click the 1st button. It will load the profile database to select your product from (Fig. 16).

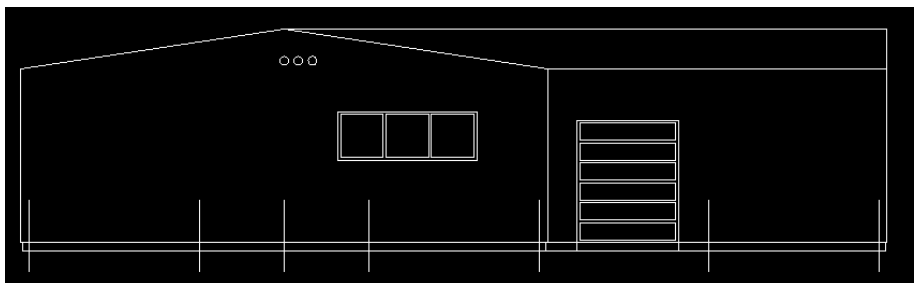


Fig. 15. A proper AutoCAD drawing of a façade for Fast Specificator

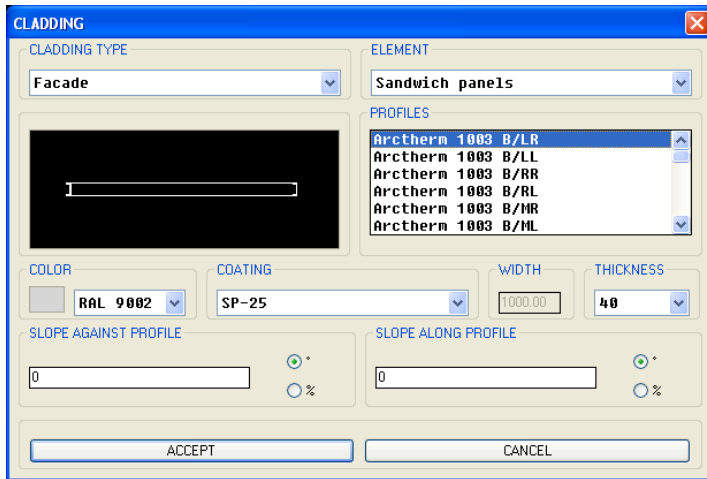


Fig. 16. Profile selection

In this window you can select a profile you will be using for certain area. You can choose between Façade and Roofing cladding type and Sandwich panel, Trapezoidal profile, Waveform profile, Cassette profile and Façade panel elements.

Once these selections are made profile database presents you profiles matching these criteria. When you pick a profile from database it previews the profile under the cladding type selection menu.

The color can be selected from RAL (color space created by *Reichsausschuß für Lieferbedingungen*) and other colors. Coating and thickness choices are available for every type that is being produced, as for width is automatically set by the program. Slope against and along profile will treat the marked area as a horizontal projection of surface with an incline. After configuring all the parameters click *ACCEPT*.

2nd and 3rd buttons define if the profiles are to be installed horizontally or vertically. 2nd button is for vertical and 3rd is for horizontal. Press the button of your choice. The program command line asks to select façade contour. Click on the border of a closed contour. Once clicked the program asks to select the alignment point, from which the program should start to clad the profiles. It is highly recommended to do that with *Object Snap* on (see chapter 2, fig. 11). The result should look like in Fig. 17.

To overlap the profiles click the button for the preferred overlapping ratio: 49th to clear overlapping, 50th to make 1,5x overlapping, 51st to make 2x overlapping and 52nd to make 3x overlapping of the profiles.

Note: since it is impossible to overlap sandwich panels, to prevent this error, application will not allow this procedure automatically.

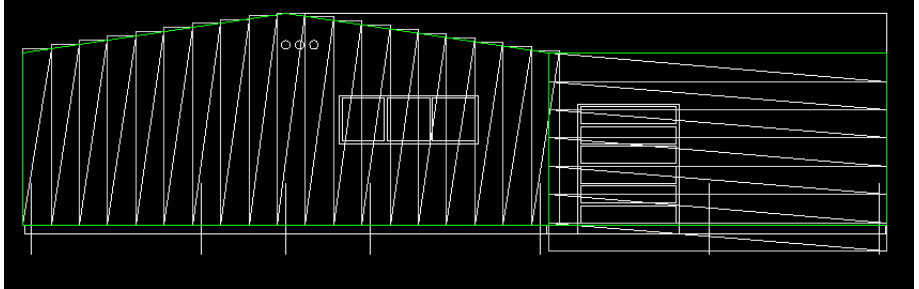
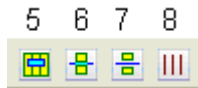


Fig. 17. Façade with profiles installed

If there is a surface with equal slopes on the drawing you can convert it into a plane by pressing the 4th button.

Chapter 4. Openings and division of the profiles



If there are openings in the drawing (e.g. doors, windows) they can be cut out. *Note: Only objects full width intersecting with opening contour will be divided automatically.* To do this click 5th button, select the contour that needs to be cut out and click *Enter*. The profiles will be rearranged immediately.

If the profile has to be divided, a polyline boundary edge must be in a drawing. To draw a boundary edge select *Draw* → *Polyline*. Once a boundary line is drawn click 6th button. The program now requires you to select an opening (dividing) contour. Select the polyline and press *Enter*. Now objects that have to be divided must be defined. Select all profiles you want to divide and press *Enter*. The profiles are now divided depending to your boundary line.

If there is a need to leave a gap between profiles when dividing, click the 7th button. It acts the same as the 6th button, except for after selecting boundary line and profiles to be divided, it asks to specify the gap between the sheets that are being divided.

If you want to divide profiles using axes as bounds, click the 8th button, select the façade contour, press *Enter*, select the axes that have to be converted to dividing boundary lines, press *Enter*. Now that the axes are converted into boundary lines it is possible to divide profiles as described in the two paragraphs above.

The result of dividing profiles is presented in Fig. 18.

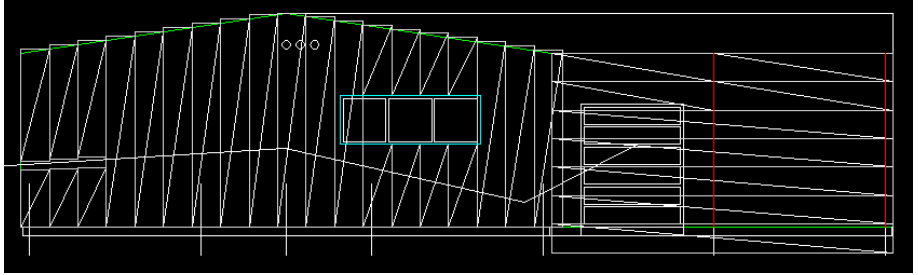


Fig. 18. Drawing of a façade after division

Chapter 5. Adding supports



To add supports the axes of the façade have to be drawn all across façade. If the axes are shorter they can be lengthened using 8th button as described in the last paragraph of chapter 4. To add supports click on the 9th or 23rd button (they act the same). The program will ask to select axis. Once the axis have been selected press *Enter*. Define the width of support and press *Enter*.

To make a support $B/2+B/2$ click the 24th button, select axis and press *Enter*. Select a continuous profile that is divided by the axis and press *Enter*.

To create a continuous support click the 25th button, select axis and press *Enter*. Select the two profiles that have to be appended and press *Enter*.

To add a $B/2+0,1L$ support click the 26th button, select axis then select the nearest axis to the right. Select the profiles that have to be divided.

To make a $0,1L+B/2$ support click the 27th button, select axis then select the nearest axis to the left. Select the profiles that have to be divided.

To create a $0,1L+0,1L$ support click the 28th button, select axis then select the nearest axis to the left, select the nearest axis to the right. Select the profiles that have to be divided.

To create a $0,1L+0,2L$ support click the 29th button, select axis then select the nearest axis to the left, select the nearest axis to the right. Select the profiles that have to be divided.

To create a $0,2L+0,1L$ support click the 30th button, select axis then select the nearest axis to the left, select the nearest axis to the right. Select the profiles that have to be divided.

Fig. 19 shows a façade with supports.

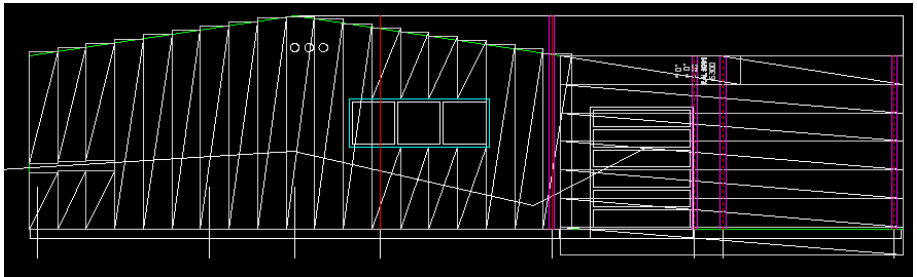


Fig. 19. Façade with supports

Chapter 6. Final adjustments

31 32 33 34 35



Settings of each profile can be changed. Clicking the 31st button allows to change every separate profiles color choosing from RAL palette, true colors, or indexed colors. Pick the needed color, click *OK*. Select the profiles and press *Enter*.

If the thickness of a profile needs to be changed click the 32nd button, select the profiles and press *Enter*. Enter new thickness and press *Enter*.

33rd button matches the properties of profiles. Click this button, click on a profile that will be the source of properties, click the profiles that need to have the same properties.

If you need to lengthen any profile, this is done by 34th and 35th buttons, depending whether you have to lengthen: the beginning or the end of profile. If the profile is placed horizontally, the start of the profile is on the left, and the end is on the right. If the profile is placed vertically, the start of the profile is the lower side, and the end is the upper. Click the button, select the profile you need to lengthen and press *Enter*. Define the lengthening value and press *Enter*. If you need to shorten the profile, enter a negative lengthening value.

Chapter 7. Labels



Once the profiles are positioned correctly on the drawing, the labels need to be applied. The application stores the information about the selected profiles, so it can be done automatically.

To turn the labeling on/off, use 14th or 36th button. They act the same.

When the labeling is turned on, you can adjust the position of it by clicking 37th button and the profile, that's label needs to be placed higher, or 38th button and the profile, that's label needs to be placed lower. Finish the command by pressing *Enter*.

By default labels in the drawing are presented as in fig. 20.

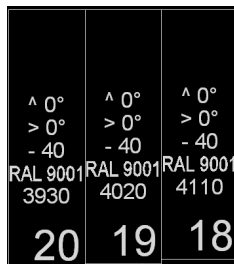


Fig. 20. Default presenting of the labels in the drawing

The default label includes (starting with the first line):

- Slope against profile (on/off using 43rd button and selecting profiles);
- Slope along profile (on/off using 44th button and selecting profiles);
- Profile thickness (on/off using 42nd button and selecting profiles);
- Profile color (on/off using 41st button and selecting profiles);
- Profile length (on/off using 40th button and selecting profiles);
- Profile number (on/off using 39th button and selecting profiles);
- Show overlap (on/off using 45th button and selecting profiles).

Command is finished by pressing *Enter*.

Profile number is generated automatically. The numbering is generated decreasingly by profile length and other differing parameters (e.g. color). Profiles that have all properties matching will be given the same number. Since the quantity of some profiles change when making openings, or divisions, profile numbering must be done after every change.

To show/hide construction line click 46th button, select objects and press *Enter*.

To set an automatic grouping line click 47th button, select one of the objects of the group of objects you need to group and press *Enter*.

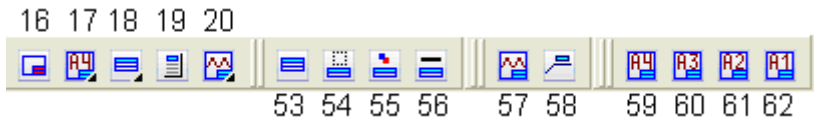
To manually set the grouping line click the 48th button click on any of the objects that are to be grouped, click on the lower left corner of the profiles to be grouped then click on the upper right corner.

To renumber the profiles click the 12th button.

To get information about a profile click the 13th button and then click on the profile.

To remove everything that Fast Specicator has done to the drawing click the 15th button.

Chapter 8. Setting page layout and generating specification tables



The management of page layout is automatic as well as the choice of the drawing scale.

Before setting up the frame for the drawing *ORTHO* function must be turned OFF (Fig. 21).

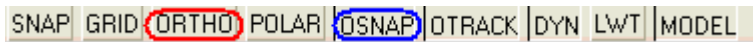


Fig. 21 Setting ORTHO off

Choose the page size from the four available presets: A4 (17th or 59th button), A3 (60th button), A2 (61st button), A1 (62nd button). Click on the upper left corner of the drawing then click on the lower right corner of the drawing (Fig. 22), or alternatively press *Enter*. If you pressed *Enter* instead of defining the bounds the frame will be added with drawing scale set to 1:100.

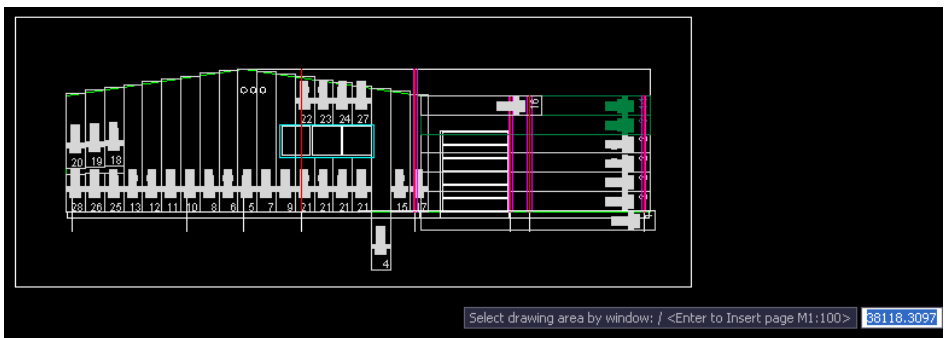


Fig. 22. Selection of frame area

The frame is now set. There are two ways of editing the information fields in the lower right side of the frame. You can change the text by double-clicking it on the drawing frame, or by pressing the

16th button. This calls up a text editor where you can edit the information, as mentioned in chapter 3.

To create a general specification table click on a new frame button (59th-62nd), press *Enter* for scale 1:100 and place the new frame near the original drawing. Turn the *Object Snap* ON (Fig. 21). Press 18th or 53rd button (they are the same). Click on the upper left corner of the inner frame of newly created frame (Fig. 23).

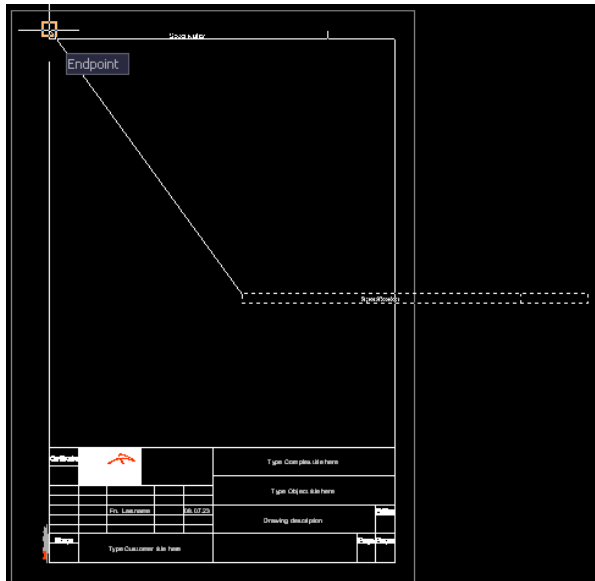


Fig. 23. Generating the specification table

Window of attribute editing pops up (Fig. 24).

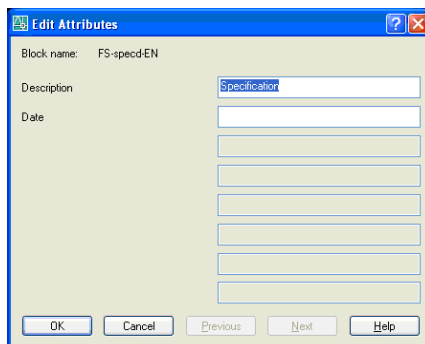


Fig. 24. Edit Attributes window

Enter the name and date of the specification and click *OK*.

It is also possible to make a specification for elements using specific criteria. The 54th button allows specification generating for selected areas. The sequence of making this specification is similar to the general specification, except after clicking the 54th button you have to select the profiles that have to be included in the specification.

If a specification for a particular color profiles is needed, click the 55th button, select a profile that has the color needed for specification, and follow the steps of the general specification.

If a specification for a particular thickness profiles is needed, click the 56th button, select a profile that has the thickness needed for specification, and follow the steps of the general specification.

The legend of profiles used in the object can be created automatically. Press 20th or 57th button (they are the same). Place the new sheet anywhere near the original drawing using your mouse.

If you notice that the drawing is too complex and the label of a certain profile is hard to read, it is possible to make an external cladding label. Click the 58th button, click on a profile and click on a place, where the label should be exported to (Fig. 25). *Note: Due to the fact that this label is created as dimension object in AutoCAD, it is possible that it will be too small to read in some versions of the drawings. Increasing the dimension scale should fix the problem. (e.g. in the command window enter “dimscale” press Enter, enter number 1000 and press Enter again.*

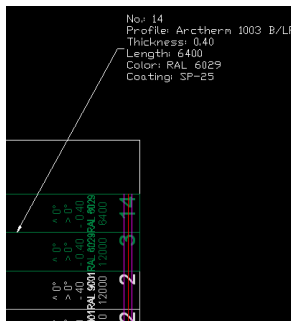


Fig. 25. External cladding label

To export the specification, click the 19th button. A new text editor window should pop up. Select all text in the editor (shortcut *Ctrl+A*). Access your preferred spreadsheet application (e.g. *Microsoft Office* or *OpenOffice Calc*) and paste the data (shortcut *Ctrl+V*).