

# Chapter 3 “Screen work and pattern output”

### Contents

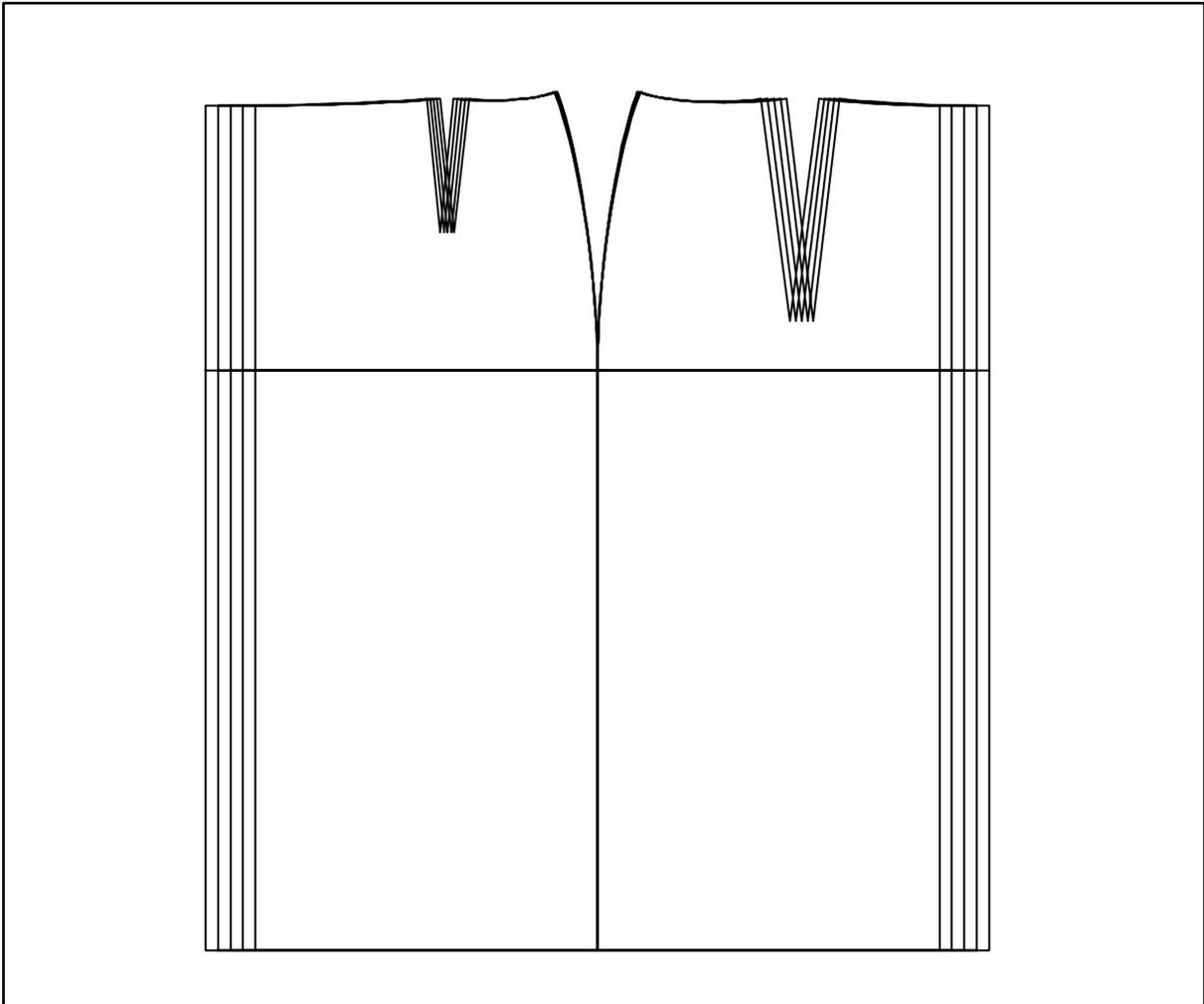
- 3.1 Alter screen display ..... 2
- 3.2 When help is needed..... 3
- 3.3 Pattern output..... 4
- 3.4 Stack..... 7
- 3.5 Exercises ..... 8

Zoom in (magnifying function), zoom out and moving the screen content is the subject of the first paragraph of this chapter, followed by the help func-

tions in GRAFIS. Then, you will learn how to output the constructed pattern to a printer or plotter. The last part of this chapter deals with stacking graded patterns.

Please use the exercises at the end of the chapter to solidify your knowledge gained in this chapter.

After having successfully completed this chapter you are able to grade and output the basic blocks contained in GRAFIS and to stack the patterns.



### 3.1 Alter the screen display

#### Overview

The patterns can be displayed on screen in scales from approx. 100:1 to 1:100. The setting is infinitely variable or can be controlled with certain values. The function keys F2, F3, F4, F6 and the arrow keys are used for screen adjustment. They have the following significance:

	Function
<b>F2</b>	Zoom in/zoom out screen contents
<b>F3</b>	Drag/turn parts towards one another (chapter 13 or 14)
<b>F4</b>	Refresh screen
<b>F6</b>	Centre screen contents

**The construction is not influenced by the changes to the screen display.**

#### Drag / Zoom

With the *Drag//Zoom* function in the *Edit* pull-down menu patterns can be enlarged/reduced in stages or moved on the screen. After having clicked  *Drag/Zoom* a magnifying glass with the following functions appears:

**enlarge** click left mouse button  
**reduce** click right mouse button  
**move** keep left mouse button pressed

Enlarging and reducing ensues with the magnifying glass as the centre. Click the relevant points or lines with . Reduce with  and move the mouse with pressed left mouse button.

#### Centre picture with <F6>

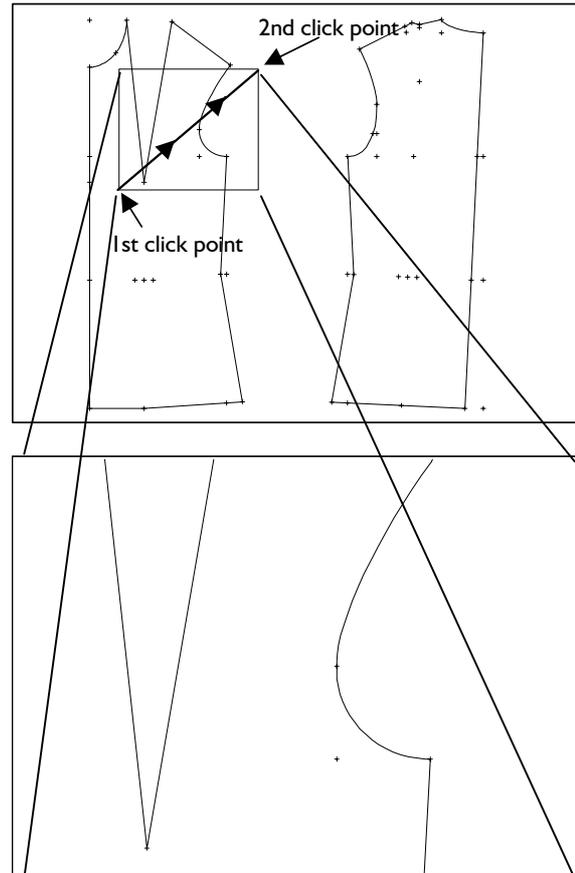
Pressing the <F6>-key automatically adjusts the scale and position of the whole construction to display all objects on the screen. The construction is centred on screen.

#### Zoom in with <F2>

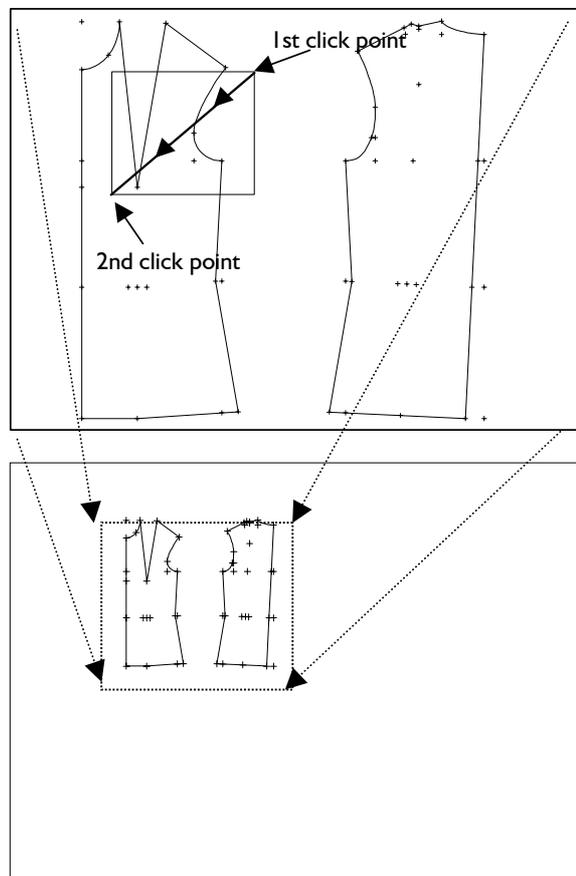
Press <F2> to zoom into the screen contents. A small arrow appears on screen which you can move with the mouse. Move the cursor to the lower left corner of the area to be enlarged and click . Move the mouse to see how a rectangle is opened. Extend the rectangle to the top right (picture 3-1) and click again .

The rectangle content becomes the screen contents. Press the <F6> - key and your complete construction re-appears on screen.

Practise zooming in on various areas of your construction. Press <F6> after each zoom operation.



Picture 3-1



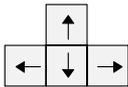
Picture 3-2

**Zoom out with <F2>**

Press the <F2>-key to zoom out, also, click  the upper right corner, extend the rectangle to the lower left and click  (picture 3-2).

The complete screen content is reduced to fit the rectangle. With <F6> the screen is completely filled again, the construction is centred.

Practise zoom out on various areas of your basic block and centre the basic block again with <F6> each time.

**Move with arrow keys**

Use the    keys to move the picture. The moving speed is increased by keeping the keys pressed down.

Reduce the construction and move the screen contents with the arrow keys.

**Refresh screen with <F4>**

The <F4>-key rebuilds the whole screen content. Identical objects lying on top of each other twice, four or six times cannot be seen on screen as they delete each other's image. Objects lying once, three

or five times on top of each other can be seen. After pressing <F4> objects deleting each other's image are always displayed.

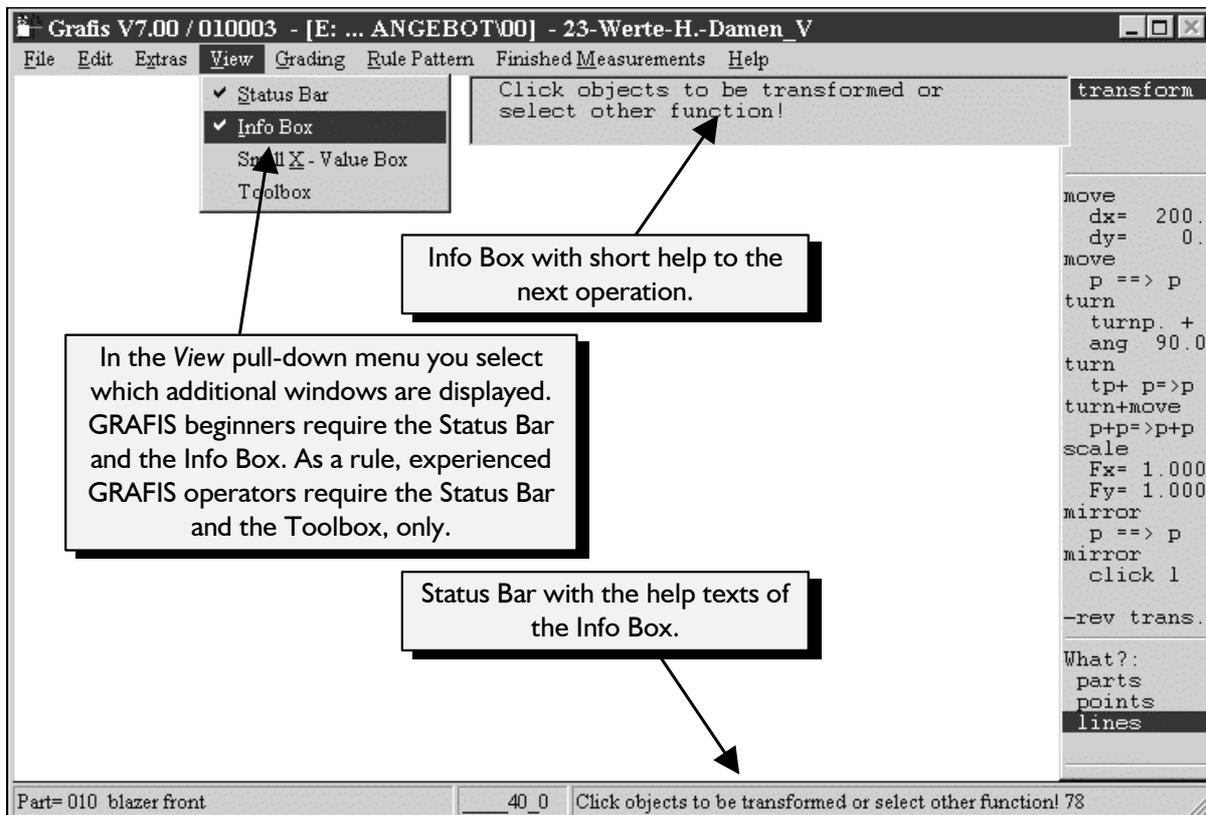
Please use this key from time to time as a means of control.

**3.2 When help is needed****Overview**

- ⇒ Constant help in the instructions window or the status line (picture 3-3)
- ⇒ Extensive help with the GRAFIS help function

**Constant help**

Constant help is given in the instructions window or the status line where the next steps required are explained. The instructions window is located in the top right corner of the working area. The status line makes up the lower border of the GRAFIS screen (see picture 3-3). Click *delete*  in the basic menu. Read the instructions and close the *delete* menu with .



Picture 3-3

## The GRAFIS help function

**Context related help** can be found by pressing the <F1>-key or via the pull-down menu *Help | Context*.

**All contents** of the help function can be obtained with *Help | Contents*. A picture of the basic menu appears from which further help topics can be opened.

A **topic search** is possible with *Help | Search*.

The following applies: As soon as the cursor changes to a hand you can obtain more information about the respective topic. Sensitive texts are generally underlined in green or dotted. Sensitive areas in picture are not highlighted specifically. Move the cursor over the relevant areas of the picture and click when the cursor changes to a hand.



Exercise:

Press the <F1>-key in the basic menu, move the cursor over the picture and click the sensitive picture areas. Read the information. To return to the overview page click the *Contents* card. Close the help function via *File | Exit* or by clicking the cross in the upper right corner of the help window.

Open the *delete* menu in GRAFIS by clicking on *delete* in the basic menu. Press <F1> and read the help information about the *delete* menu. Close the help window. Read also the help topics on *separate* and *parallel*.

## 3.3 Pattern output

### 3.3.1 Clipboard

GRAFIS supports the Windows clipboard for processing patterns in other Windows applications. The function *Copy (clipboard)* in the *Edit* pull-down menu copies the visible contents of the GRAFIS screen to the clipboard. The contents of the clipboard can be inserted into other Windows applications such as Word for Windows95, Paint or Excel to create further material about the style or teaching material for example.

Grade a basic block in 5 sizes, centre with <F6> and copy the graded nest to the clipboard via *Edit | Copy (clipboard)*. Now start a different Windows application (e.g. Paint) and insert the contents of the clipboard into this application. Process the graded nest by changing the line colour, fill in the shapes or add annotation for example.

### 3.3.2 Output to plotter/printer

Output of patterns to plotters (drawing devices) or printers ensues via the *Pattern output* menu. A special feature of the pattern output function in GRAFIS is the automatic wrap. It allows for quick output of full size patterns to small scale printers by dividing the pattern into partial pictures which can be joined subsequently.

The *Pattern output* menu is opened via the *File | Plot/ Print...* pull-down menu.

#### Preparation of plot picture

- ⇒ Set up or change the plotter/printer (plotter type, paper format,...)
- ⇒ Click *formatposit centred* and press <F6> to get an overview
- ⇒ Adjust the following settings:
  - portrait or landscape
  - plot scale with *enlargement*
  - Activate the automatic wrap
  - Position the plot frame with *formatposit centred* and/or dragging
- ⇒ Position the frame text
- ⇒ Select +/- *frame*
- ⇒ Select +/- *formfeed*

#### Output of plot picture

- ⇒ Click *plot* (plot picture is generated internally)
- ⇒ if required: output of formfeed
- ⇒ with automatic wrap: select the pages for output and *start* the plot output

#### Change plotter/printer

The selected output device is displayed under *plot device*. The extensions mean:

**to LPT1** direct output to the parallel port LPT1

**to File** a file with control information for the output device is generated

**(WIN)** output to a device with Windows95/NT driver

**(DOS)** output to a device without Windows95/NT driver

Plot/Print
----- plot device HP LaserJet 5P an LPT1 (WIN)  change ----- enlargement 1.0000 adapt ----- plotformat: 297x210  p <=> 1 ----- automatic wrap <   > <   > ----- textpositn. < 4 > ----- formatpos. centred ----- plot - frame - formfeed - cut -----

Further information about set up or changing a plotter/ printer can be found in the GRAFIS help function. For the following exercises an A4 printer installed under Windows95/NT is sufficient.

### The plot format

The measurements of the active format are displayed in millimetres under *plotformat*. Other plot formats of your output device can be selected via *plot device change*.

The plot frame on your screen corresponds with the printable area of your output device. The contents of the plot frame is printed. Press the <F6>-key to display the plot frame as well as the plot picture.

### Selection of portrait or landscape

Clicking *p* <=> *l* toggles between portrait and landscape.

### Selection of plot scale

The plot scale is adjusted by entering the scale factor in the *enlargement* line. The pattern will be reduced/enlarged for output according to this scale. The scale factors mean the following:

- 1.0 scale 1:1
- 0.5 scale 1:2
- 0.25 scale 1:4 etc.

Adjust to scale 1:2 by entering 0.5 into the field below *enlargement* (click, type, <ENTER>) and press the <F6>-key. You will notice that the plot frame now covers a greater are of the pattern. Repeat with other scales. Change also between portrait and landscape.

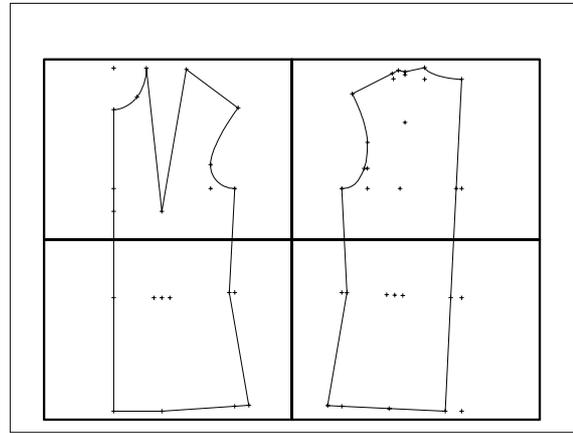
The **adapt** option adjusts the scale so that the whole screen content fits the plot frame. Use this option for scaled printouts and sketches, especially.

### Position the plot frame

Position the plot frame by dragging (cursor on plot frame, press left mouse button and move mouse) or clicking the menu function *centred*. Practise both options. *Centred* positions the plot frame centrally onto the picture. Practise positioning the plot frame in conjunction with changes in scale and format.

### Activating automatic wrap

The automatic wrap is useful for output of full size patterns to devices with small format, i.e. A4 printers. A raster is superimposed onto the pattern (pictures 3-4 and 3-5) and each field is output separately. The partial pictures can then be joined to-



Picture 3-4

gether frame by frame. The raster is set up or eliminated by clicking ">" or "<" below *automatic wrap*. The number of fields in vertical and horizontal direction is given between the symbols ">" and "<". Practise the automatic wrap in conjunction with adjustment of plot scale, portrait / landscape and positioning of the plot frame. Apply scale 1:1 also and press the <F6>-key from time to time.

### Positioning the frame text

A standard annotation at the plot frame can be output with the picture for easy identification of the plot, especially on partial pictures when using automatic wrap. It contains collection and style name, part number and field co-ordinates (picture 3-5). The number below *textpositn.* defines the position of the annotation at the right, left, upper or lower corner of the plot frame. "0" means no frame text is output. The text position number can be changed by clicking "<" or ">".

Position the text at the left plot frame.

### Adjustment of +/-frame

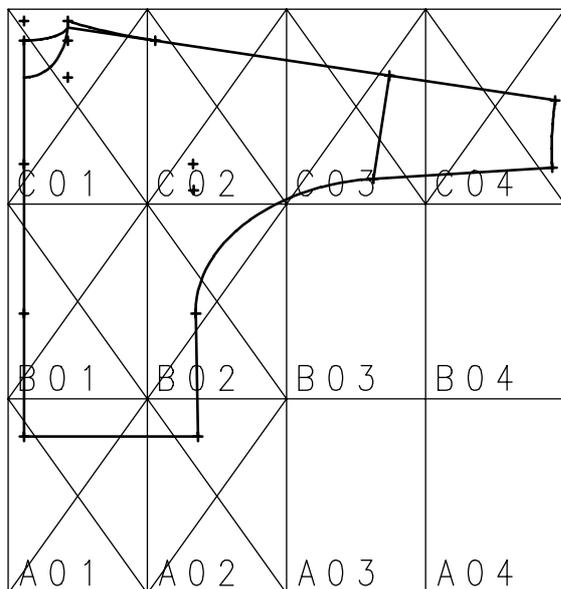
Clicking *+/-frame* determines whether the picture is plotted with or without a frame.

- +frame* frame is plotted
- frame* frame is not plotted.

When using the automatic wrap the setting should be *+frame*. The function *formfeed* relates to plotters with automatic paper feed only.

### Output of plot picture

Output of the plot picture(s) (automatic wrap) ensues after having clicked *plot* only. GRAFIS creates the control information for the selected output device and opens the sub-menu plot output (right). When working with automatic wrap the fields for output have to be selected now. Fields can be selected for output by clicking *single*. Selected fields are marked by two diagonals (see picture 3-5). Clicking *select all* will mark all fields for output; clicking *delete all* will deselect all fields.



Picture 3-5

#### Only marked fields are output !

Click **start** to send the control information to the output device (printer/plotter) directly connected to your PC for output of a picture or partial pictures. Naturally, the output device must be on-line.

#### Output to file

If output to file is selected the control information is saved to one or more files (automatic wrap creates

Plot/Print
-----
select plot frames
single
select all
delete all
-----
plot output start
formfeed
-----

a number of files). You are requested to enter the file name. If you enter A:\KATHRIN2.HGL for example the control information is saved in the file KATHRIN2.HGL on the disk in drive A:. The following is possible with control information saved in this way:

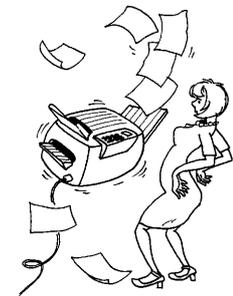
1. The file(s) can be output on a different computer with an attached output device by copying the control file(s) to the port of the output device. Under Windows95/NT the file is sent to the output device. The MS-DOS instruction to output the created file to an output device connected to LPT1: is for example:  
COPY A:\KATHRIN2.HGL LPT1:
2. The file(s) can be read into Word for Windows or CorelDraw for further processing given that the relevant graphics filter is installed. As opposed to the clipboard, with this option the scale remains the same.
3. The file(s) can be sent to a different company via floppy disk or data transfer for plotting or creation of templates. This can ensue after adjustment to the company's output device.

Note: When using automatic wrap, i.e. output of various partial pictures, the extension (here: HGL) is automatically replaced by consecutive numbers.

### Exercises

#### 1st Exercise

Output the basic block "skirt after Hohenstein" in size 40 in full scale to an A4-printer. Use *+frame* and frame text to be able to join the partial pictures frame by frame afterwards.



#### 2nd Exercise

Output the following basic blocks:

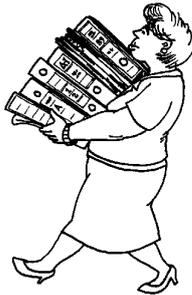
- "trousers after Hohenstein" scale 1:2,
- "kimono" scale 1:3,
- "bodice after Hohenstein" scale 1:5.

If you know how to use Word for Windows or CorelDraw, import the plot pictures into these systems via the clipboard for processing.

### 3.4 Stack

#### The stack menu

The *stack* menu is opened via the *Extras* | *stack* pull-down menu or from the toolbox. With the menu functions patterns can be stacked at the pattern surround or at a construction point or point of a line. The **outlay** function spreads all sizes next to one another in the order in which they are listed in the size table. The outlay is reset with repeated stacking or *test run*.



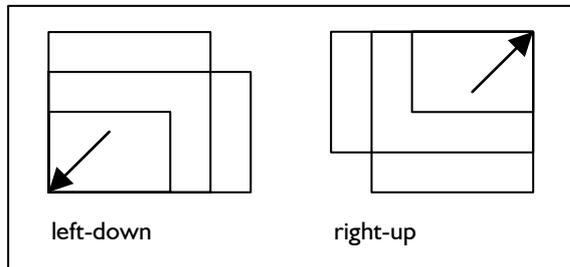
#### Step-by-step guide

- Stack at pattern surround:
  - ⇒ Select the *stack corner* (*le-down*,...) and click the piece
- Stack at a construction point or point of a line:
  - ⇒ Select *click p*, *click l* or *click pl* (below *stack p*;) and click the stack point in the construction
  - ⇒ if required: determine direction point in the same way

stack at boundary
le-down
ri-down
le-up
ri-up
stack point
pick P
pick L
pick PL
stack direc
pick P
pick L
pick PL
outlay
measure

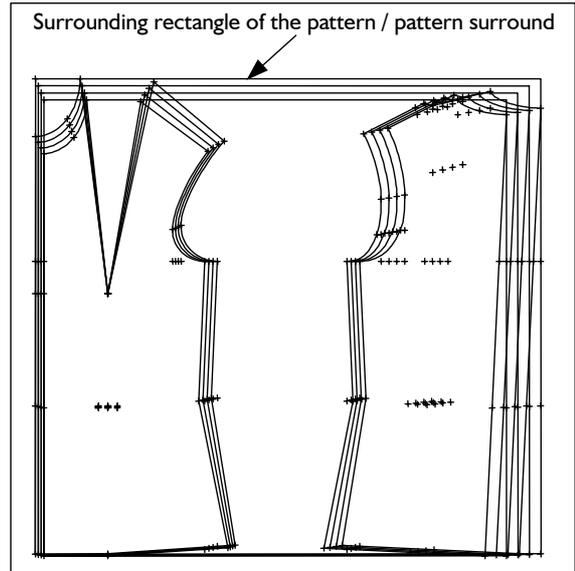
#### Stack at pattern surround

When stacking at the pattern surround GRAFIS imperceptibly calculates the surrounding rectangle of the piece. The surrounding rectangle, also called pattern surround for the basic block „bodice after Hohenstein“ is shown in picture 3-7. The pattern surrounds in the different sizes are stacked at the corner selected in *stack at pattern surround* (see picture 3-6). The option *le-down* stacks at the lower left corner of the surrounding rectangle for example.



Picture 3-6

First, determine the *stack corner*. The active option is highlighted in red. Clicking  selects a different option. After having clicked an object of the construction GRAFIS will stack the patterns at the selected corner.

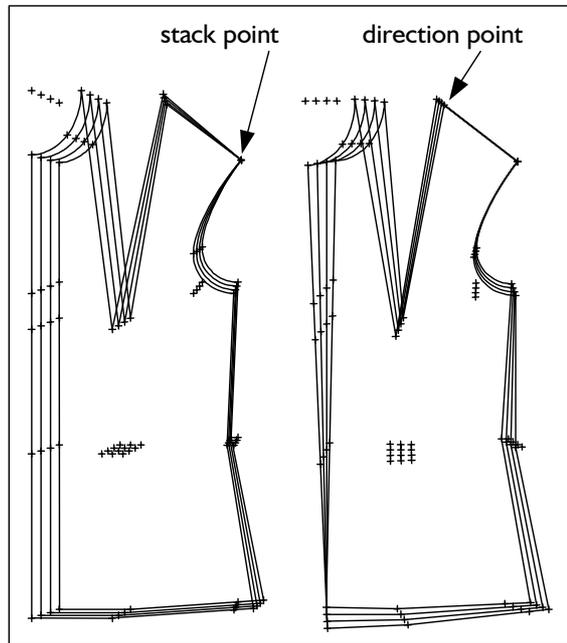


Picture 3-7

#### Stack at a construction point or point of a line

With the option *click p* you determine that the cursor can select points of the construction as stack points, only. With *click l* only lines and with *click pl* only line fulcrums can be clicked (for more information see Chapter 6).

First, the required selection option (*click p*, *click l* or *click pl* below *stack p*) is to be selected. Then click the desired stack point in the construction.



Picture 3-8

Then, a direction point can be determined, additionally. The patterns remain stacked at the stack point. They are rotated about the stack point so that the direction from stack point to direction point is identical in all sizes (Picture 3-8)

**Exercise**

Grade the basic block 001 "bodice after Hohenstein with normal dart" in the sizes 38, 40, 42 and 44 without proportion class. Stack the patterns at the pattern surround and then, at the bust point.

*call*

*Extras* | *Edit Measurement Charts*

*Extras* | *Size Table*

*grading*

*Extras* | *stack*

*stack at pattern surround: le-up* activate  
and click the construction

The patterns are stacked at the construction point of the neck in the front (no picture).

*stack p: click p* activate

Click the bust point (Picture 3-7).

Now stack at the corner shoulder/armhole and align the nest so that the shoulders are positioned on top of each other

*stack p: click p* activate

Click the corner point shoulder/armhole (Picture 3-8 left nest).

*direction p: click p* activate

Click the corner point shoulder/neck (Picture 3-8 right nest).

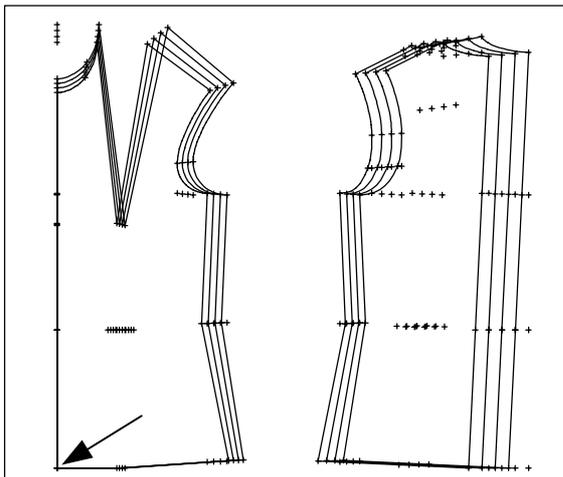
Stack at the lower end of the centre front

*stack p: click p* activate

Click the corner point centre front/hem. The patterns are still aligned along the shoulder. Only after

*direction p: click p* activate

and clicking the corner point centre front/neck will you receive the nest according to Picture 3-9.

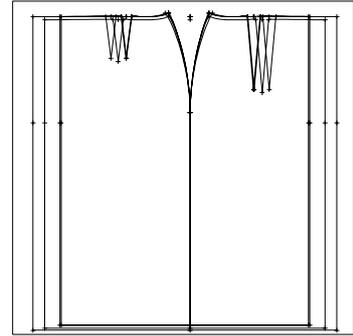


Picture 3-9

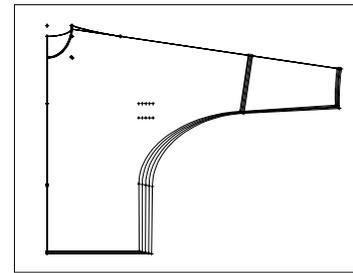
Stack the patterns at different lines, different points and at the pattern surround. The bodice construction (front and back) is treated as one part in GRAFIS. Deriving pieces from the draft is content of Chapters 13 and 14.

**3.5 Exercises****1st Exercise**

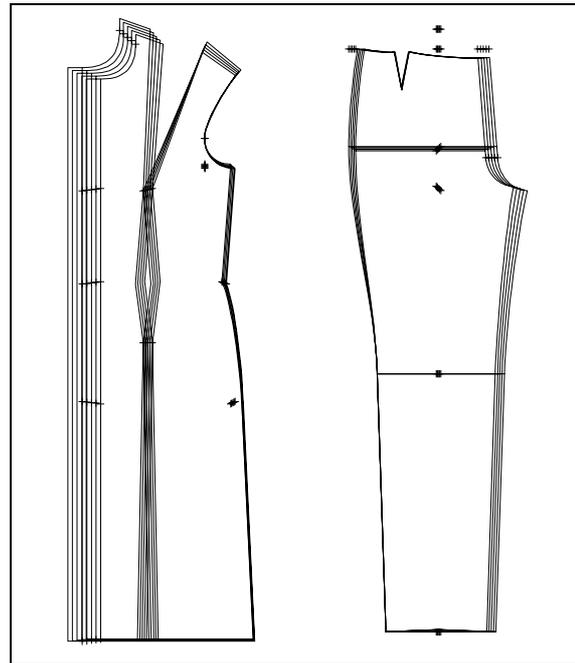
Grade the basic block 017 "skirt after Hohenstein" in four sizes and stack the patterns at the hip point of the side seam. Print the patterns in A4-format in scale 1:3 with plot frame so that you can join the patterns.

**2nd Exercise**

Grade the basic block "kimono" in 5 sizes and stack the patterns at different points or lines.

**3rd Exercise**

Grade the shirt dress (ft) in 5 sizes and stack it at the sleeve point (see picture below).

**4th Exercise**

Grade the standard trousers (ft) in 5 sizes and stack the trousers at the knee line, left-down (see picture above).